Update on Asset management and Non-bank financial intermediation in Belgium

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FSMA
FINANCIAL SERVICES AND MARKETS AUTHORITY

NationalBank OF BELGIUM
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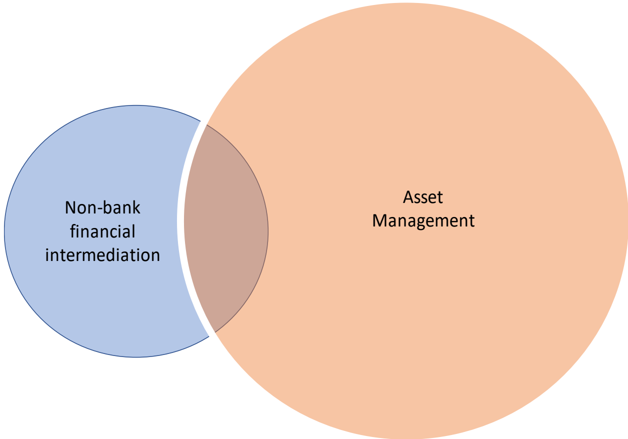
I. Introduction

In line with the Financial Stability Board (FSB)'s decision in October 2018 to change the terminology, this annual joint report of the National Bank of Belgium (NBB) and the Financial Services and Markets Authority (FSMA) henceforth uses the better-suited term *Non-Bank Financial Intermediation* (NBFI) for what was previously called *shadow banking*. This terminology change does not affect the substance or the coverage of the current report compared to the first extensive report published in 2017. It is reminded that this initial report constituted the follow-up of a recommendation included in the report that the High Level Expert Group (HLEG) on the Future of the Belgian Financial Sector submitted to the Minister of Finance in 2016. The joint NBB-FSMA report of 2017 and the subsequent updates are available on the websites of the NBB and FSMA[1].

Non-bank financial intermediation and asset management



The current edition analyses and documents the most recent developments in asset management and non-bank financial intermediation in Belgium along the same lines as the previous reports (with all the updated quantitative data in the statistical annex)[2]. Chapter II starts with an overview of the Belgian asset management sector, based on various definitions and data sources that can be used to document the size of different forms and types of asset management-related activities. Chapter III then proceeds to the analysis of the Belgian NBFI sector according to two delineation methodologies (FSB and EBA definition), together with an international comparison. This is followed, in Chapter IV, by a description of the NBB-FSMA monitoring framework for the — partly overlapping — Belgian asset management and NBFI sectors and for the interconnectedness between Belgian residents and NBFI entities worldwide. A review of the relevant national and international regulations and ongoing policy work can be found in Chapter V. A final chapter contains the main conclusions and policy findings.

[1] www.nbb.be ; www.fsma.be

[2] Previous reports showed data from 2016 until the most recent period for which data were available. This approach allowed trends to be displayed and analysed in the reports. The current report shows data from 2018 to the most recent period for which data are available (year-end 2021, and for some data, June 2022).

II. Overview of the Belgian asset management sector

This chapter discusses the asset management sector and its ‘ecosystem’ in Belgium, with a focus on key developments in 2021 and, if applicable, the first half of 2022. The chapter reviews the size and composition of the Belgian investment fund sector, the assets under management and investment advice of the Belgian asset managers and Belgian residents' investments in foreign investment funds. It further discusses the importance of asset management for Belgian banks, insurance companies and institutions for occupational retirement provision. While the former interact with the asset management sector in a variety of ways, the latter two types of institutions invest significant amounts of their assets in investment funds.[3]

Chart 2.1 presents a schematic overview of the asset management ecosystem with an estimated size of these activities. Table 2.1 presents gross statistics on the assets involved in the different asset management entities and activities from 2018 to 2021 and June 2022 (if available), as discussed in the following sections.

2.1 Belgian investment funds[4]

The net asset value of Belgian investment funds increased from € 191 billion at the end of 2020 to € 243 billion at the end of 2021. The increase is mainly driven by higher market valuations of assets in the fund portfolios since the end of 2020. This uptrend reversed partially in the first half of 2022, following a market correction.

2.1.1. Belgian public open-ended investment funds

Public open-ended investment funds — i.e. undertakings for collective investment in transferable securities (UCITS) and public open-ended alternative investment funds (AIFs) — represented € 212 billion or about 87% of the net asset value of the Belgian investment fund sector at the end of 2021 (Table 2.2b and Chart 2.3)[5] and € 188 billion at the end of June 2022. The size of the public open-ended investment funds at the end of 2021 increased by 24% as compared to 2020 and subsequently decreased by 11% in the first half of 2022. UCITS now represent 99% of the segment of Belgian public open-ended investment funds, compared to 84% at the end of 2018, and 94% at the end of 2020. Despite the large increase in net assets over the period 2018 to 2021, the number of UCITS sub-funds remained relatively stable (from 715 sub-funds at the end of 2018 to 659 at the end of 2021 with a peak at 777 at the end of 2019). Simultaneously, the number of public open-ended sub-funds that qualify as AIFs, as well as their total net assets, continued to decrease (from 204 sub-funds and € 23 billion at the end of 2018 to 17 sub-funds and € 3 billion at the end of 2021).

The growing size of the segment of the Belgian UCITS, both in relative and in absolute terms, appears to be a longer-term trend, for which there are a number of explanations.

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3 The data used in this chapter to measure different aspects related to asset management in Belgium are a combination of financial accounts data of the National Accounts Institute (NAI), data reported to the FSMA by the entities under its supervision and prudential supervisory data available at the NBB for banks and insurance companies.

4 The different types of Belgian investment funds are reminded in Chart 2.2.

5 The reported total size of the Belgian investment fund sector is an estimated lower bound because for some Belgian non-public investment funds statistics are not reported to the FSMA. However, the total size of the industry is in line with statistics from the national accounts data from the NBB.

First, a large part of the sub-funds of Belgian AIFs were 'structured' (sub-)funds[6], which were historically not established as UCITS. These funds were, generally, intended for the Belgian retail market and no European passport was needed. As the number of structured funds has declined over the past years, so has the importance of public open-ended AIFs[7]. Net assets of structured public open-ended AIFs still amounted to € 2.1 billion at the end of 2018, with no such funds remaining at the end of 2021.

Second, since 2018, a number of Belgian public open-ended investment funds initially established as AIFs, including some of the largest pension savings funds, have requested an authorisation as UCITS. While these investment funds need to comply with the rules set out in the UCITS framework after their new authorisation, in practice this was already the case. Belgian public open-ended AIFs are subject to a regulatory regime highly similar to that of UCITS in order to ensure an equal level of investor protection for retail investors. The conversion of some investment funds to UCITS is likely to have been driven, at least partially, by the rules with regard to the provision of investment services introduced under Mifid II[8] which apply since 3 January 2018. Under those new rules, shares or units of AIFs are considered to be 'complex' and cannot qualify anymore as financial instruments for which investment firms are allowed to provide investment services that only consist of execution or reception and transmission of certain client orders ("execution only")[9]. As a result, AIF pension savings funds' net assets have decreased from € 11 billion at the end of 2018 to € 0.3 billion at the end of 2021.

Third, and in line with the first two explanations, all but one public open-ended investment funds launched since 2018 were set up under the UCITS regime.

At the end of June 2022, the public open-ended investment funds segment is dominated by mixed funds (42%) which often invest indirectly into several asset classes by investing in units of other investment funds (37%) (Table 2.3 and Chart 2.4). Equity funds are the second largest category within the public open-ended investment funds segment (33%). Pension savings funds and bond funds are respectively the third and fourth largest categories within the public open-ended investment funds segment (12% and 6%, respectively). Net assets of money market funds have increased from € 3 billion in 2020 to € 10 billion at the end of June 2022 driven by net inflows following turbulence in the market.

Overall, fund of funds and feeder funds account for 41% of the total net asset value of the Belgian public open-ended investment funds (€ 78 billion out of € 188 billion at the end of June 2022).

Table 2.4 and Chart 2.5 show the asset class exposures of Belgian public open-ended investment funds at the end of 2021 by fund category. Compared to previous reports, a more granular breakdown of asset classes is now presented. Asset classes are based on those included in the AIFMD reporting scheme[10], which have to be reported for all Belgian public open-ended funds.

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6 Structured sub-funds provide investors, at certain predetermined dates, with algorithm-based payoffs that are linked to the performance, or to the realisation of price changes or other conditions, of financial assets, indices or reference portfolios or sub-funds with similar features. See Box 2.1 of the report published in 2017 for more information on structured products.

7 The number of structured sub-funds has decreased during recent years because there are relatively fewer structured sub-funds established compared to existing structured sub-funds reaching maturity each year.

8 Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU.

9 Article 25 (4) of Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU.

10 See Annex IV of Commission Delegated Regulation (EU) No 231/2013 of 19 December 2012 supplementing Directive 2001/61/EU of the European Parliament and of the Council with regard to exemptions, general operating conditions, depositaries, leverage, transparency and supervision. Classification into asset classes is based on a self-assessment by the responsible entity.

For derivatives, specific conversion methods are used to calculate the exposure of the funds[11]. For short exposures, the absolute value is used.

Fund exposures are in line with their investment policy. At sector level, 41% of exposures are to equities, while 38% of exposures are to units in other open-ended investment funds. Funds of funds and feeders invest up to 88% in units of other investment funds. Equity funds are highly exposed to equities (97%), while bond fund portfolios are mainly exposed to corporate bonds (56%) and sovereign bonds (31%), and money market funds are exposed to cash and cash equivalents (97%). Pension savings funds are mixed funds, with the majority invested in equities (62%) and the remaining part of the portfolio largely invested in sovereign bonds (21%) and corporate bonds (12%). Remaining fund types are exposed to a broad variety of asset classes, including a significant exposure to equity derivatives (13%), which is mainly caused by investments of structured funds into those instruments, in order to generate a potential return at the funds' maturity dates. At sector level, the exposure to derivatives remains limited (6%), with the largest exposures pertaining to foreign exchange derivatives (3%), which are primarily used for hedging purposes. Together, fixed income derivatives and interest rate derivatives account for 1% of exposures, while equity derivatives account for 2% of exposures. Across all funds, the proportion of cash and cash equivalents in the portfolio is 4%, ranging between 1% for equity funds and 5% for pension savings funds, with an outlier of 97% for money market funds.

It should be noted that UCITS and Belgian public open-ended AIFs are subject to detailed asset eligibility rules, in order to ensure that they invest in liquid assets. In addition, these funds are subject to strict diversification requirements. Their managers are also subject to due diligence requirements before carrying out investments: where it is appropriate after taking into account the nature of a foreseen investment, managers should formulate forecasts and perform analysis concerning the investment's contribution to the fund's portfolio composition, liquidity and risk and reward profile.

Box 1 : The invasion of Ukraine by Russia – overview of the impact on Belgian public open-ended investment funds

In its NBFI Monitor n°7 from July 2022[12], the European Systemic Risk Board (ESRB) addresses the direct and indirect impact on investment funds of the invasion of Ukraine by Russia at the end of February 2022.

Direct impact

The ESRB report concludes that the direct impact was rather small and concentrated in a few institutions. The invasion has not triggered large-scale outflows, especially compared to the outflows experienced during the start of the COVID-19 pandemic. However, various sanction and banning regimes, have resulted in valuation challenges for funds holding Russian instruments. As of 7 April 2022, 123 EU funds with net assets amounting to € 13.5 billion suspended redemptions, as managers were unable to determine the fair value of the portfolios.

In Belgium, the FSMA surveyed at the end of February 2022 all Belgian public open-ended investment funds in order to quickly identify any problems that may arise, such as operational difficulties, valuation challenges, large outflows or illiquidity of certain assets. It quickly became apparent that the exposure to Russian, Belarusian or Ukrainian assets was limited (€ 115 million or 0.06% of the net assets) and that most funds had not encountered any significant operational issues, with the exception of one fund which had to suspend redemptions due to valuation challenges. The portfolio of this equity fund with an investment policy focused on Eastern European

[11] For foreign exchange derivatives and interest rate derivatives notional amounts are reported. For other derivatives, conversion methodologies are applied. As a result, total fund exposures are generally above the total net asset value.

[12] NBFI Monitor - EU Non-bank Financial Intermediation Risk Monitor 2022, ESRB, July 2022.

equities was substantially invested in Russian equities. The size of this regionally focused fund was limited (€ 41 million before the invasion). For all other funds, individual exposures to such assets were limited or non-existent.

Indirect impact

The ESRB report shows that high level of volatility and price increases in commodity markets resulted in large margin calls for cleared derivatives. Exposures to energy derivatives are small at the European level (less than € 3 billion in notional values in April 2022) and are mostly concentrated in hedge funds and commodity funds.

In Belgium, the only fund that, in line with its investment policy, had an exposure to commodity derivatives (for a notional value of € 50 million in April 2022) has not encountered any liquidity or operational issue.

The Belgian public open-ended investment fund industry is characterised by a high degree of concentration (Table 2.5 and Chart 2.6) as far as the number of sub-funds is concerned. At the end of 2021, nearly 56% of the total net assets were held by the 53 largest sub-funds (sub-funds with more than € 1 billion net assets, 8% of the total number of sub-funds), while the smallest sub-funds (sub-funds with less than € 100 million net assets, 54% of the total number of sub-funds) held only 7% of the total net assets. All structured sub-funds are classified into the two smallest size buckets, but as they only account for 1% of the total net assets, a similar picture emerges when structured sub-funds are excluded.

The availability and use of liquidity management tools (LMTs) allows for a mitigation of any first mover advantage and a reduction of potential liquidity mismatches in investment funds, as LMTs allow to better align the liquidity profile on the redemption side to the liquidity profile on the portfolio side. LMTs could help fund managers to deal with redemption pressures, in particular during stressed market conditions and allow fund managers to ensure the fair and equal treatment of investors.

The FSMA has strongly requested that fund managers make LMTs available for the majority of the Belgian publicly offered open-ended funds[13]. Chart 2.7 shows the types of LMTs that were available, at the end of 2021, for the Belgian publicly offered open-ended funds for which the FSMA has recommended that LMTs should be made available. LMTs were available for 98.6% of all funds (99.5% of net assets) for which FSMA has recommended LMTs. The funds mainly have price-based (anti-dilution) tools available, an anti-dilution levy (61% of net assets) or swing pricing (47%), while redemption gates can be used for 19% of funds (often combined with other LMTs).

2.1.2. Other AIFs

Non-public AIFs represented € 18.7 billion at the end of 2020 and € 30.7 billion at the end of 2021 (both are lower bounds)[14]. This is an increase from the € 16.5 billion net assets at the end of 2018 (Table 2.2b). The number of institutional open-ended AIFs (at sub-fund level) registered by the Federal

[13] For more information, see also the 2021 Update on Asset management and Non-bank financial intermediation in Belgium 2021, Chapter V.

[14] Not all entities that take the legal form of an institutional open-ended AIF, a specialised real estate fund, a private privak/pricaf or a private starter fund under Belgian law are classified as AIFs under the provisions of AIFMD. In addition, Belgian AIFs may have a manager for which the FSMA is not the competent authority. The FSMA only receives a reporting for Belgian AIFs classified as AIFs under the provisions of the AIFMD, provided that the FSMA is the competent authority of the manager of the AIF. As such, the estimated size of the net assets of these types of AIFs constitutes only those that qualify as AIF under the provisions of the AIFMD, and which are managed by a manager for which the FSMA is the competent authority receiving the reporting, and it is thus a lower bound.

Public Service Finance decreased from 114 at the end of 2020 to 104 at the end of June 2022 (Table 2.2a). Specialised real estate funds and private privak/pricaf registered by the FPS Finance experienced an opposite trend, as their numbers increased from 149 to 183 and 114 to 170 respectively over the same period.

Some Belgian closed-ended types of AIFs (with a listing requirement) can also be publicly offered in Belgium. Of these fund types currently only one public privak/pricaf is authorised, while currently there are no public real estate funds anymore (and neither are there institutional real estate funds).

A number of AIF types have been designed against the background of the EU Capital Markets Union (CMU): EuVECAs, EuSEFs, ELTIFs and (public and private) starter funds. 5 EuVECAs were registered in Belgium at the end of June 2022. No Belgian investment funds of the other types have been yet registered or authorised in Belgium.

Box 2: Recent work on leverage in investment funds

In 2017, the Financial Stability Board (FSB) identified leverage within investment funds as a structural vulnerability from asset management activities that could potentially present financial stability risks, and issued policy recommendations intended to address residual risks associated with leverage within funds[15]. The International Organization of Securities Commissions (IOSCO) operationalized two recommendations by first issuing its Recommendations for a Framework Assessing Leverage in Investment Funds[16] and then through its annual data collection on investment fund statistics and associated publication of reports[17].

In Europe, Article 25 of the AIFMD[18] provides competent authorities with a mandate to assess and mitigate the systemic risks that the use of leverage by alternative investment funds managers (AIFMs), with respect to the alternative investment funds (AIFs) they manage, could entail[19]. The European Securities and Markets Authority (ESMA) issued Guidelines on the application of this article of the AIFMD, which entered into force during 2021[20]. The Guidelines specify how competent authorities should assess the extent to which the use of leverage contributes to the build-up of systemic risk in the financial system, and provides competent authorities with guidance on how they should impose leverage limits or other restrictions (where deemed necessary).

Assessment of leverage-related systemic risks in Belgium under Article 25 of the AIFMD

In Belgium, the FSMA performs the risk assessment under Article 25 of the AIFMD for all AIFs managed by Belgian authorised AIFMs.

15 Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities, FSB, 12 January 2017.

16 Recommendations for a Framework Assessing Leverage in Investment Funds, IOSCO, December 2019. For more information, see also the 2021 Update on Asset management and Non-bank financial intermediation in Belgium, Chapter V.

17 IOSCO Investment Funds Statistics Report, IOSCO, January 2022. For more information, see also the 2021 Update on Asset management and Non-bank financial intermediation in Belgium, Chapter V, as well as Chapter V below.

18 Directive 2011/61/EU of the European Parliament and of the Council of 8 June 2011 on alternative investment fund managers and amending Directives 2003/41/EC and 2009/65/EC and Regulations (EC) No 1060/2009 and (EU) No 1095/2010.

19 Transposed into Belgian legislation by article 75, § 1 of the Law of 19 April 2014 on alternative investment funds and their managers.

20 Guidelines on Article 25 of Directive 2011/61/EU, ESMA, 23 June 2021. For more information, see also the 2021 Update on Asset management and Non-bank financial intermediation in Belgium, Chapter V.

At the end of 2021, 151 funds were in scope of the risk assessment, representing € 30 billion net assets (around 12% of net assets of the combined AIFM and UCITS sector within the supervisory scope of the FSMA)[21].

In the first step of the risk assessment, 25 funds that are more likely to pose risks to the financial system, were identified, representing € 11 billion or 37% of the net assets of the funds within scope:

- 1 fund employing leverage on a substantial basis (less than 1% of the net assets of the 25 funds);
- 10 funds employing leverage and with regulatory assets under management (AuM) greater than € 500 million (92% of the net assets);
- 14 additional funds whose unusually high use of leverage may pose risks to financial stability (8% of the net assets).

The second step of the risk assessment is based on a number of indicators, complemented by qualitative information.

No immediate risks of market impact, risks of fire sales, risks of direct spill-overs to financial institutions and risks of interruption in direct credit intermediation requiring the imposition of leverage limits have been identified. A limited number of attention points emerged, which are taken into account as appropriate throughout recurring risk assessments.

Belgian investment fund statistics for IOSCO's global data collection

IOSCO has published its first annual report with global statistics on the investment fund sector in January 2022. The annual publication of this data should allow the monitoring of trends regarding the activities of this sector, including the use of leverage and related risks.

Contributing to IOSCO's global data collection, the FSMA reported information on 790 open-ended investment funds ($ 225 billion), and 18 closed-ended investment funds ($ 1 billion), while IOSCO's report assembles information on 61.120 open-ended funds ($ 43 trillion) and 19.072 closed-ended funds ($ 2.6 trillion).

Aggregated gross leverage is limited for Belgian open-ended funds, amounting to 1.08 x net asset value (NAV) when interest rate and foreign exchange derivatives are included, and 1.04 x NAV when they are excluded, compared to 1.68 x NAV and 1.2 x NAV for the global open-ended fund universe respectively. Borrowing is close to zero for the global open-ended fund universe (4%) and even more so for the Belgian open-ended funds (0.1%).

Aggregated gross leverage is limited for Belgian closed-ended funds, amounting to 1.37 x NAV, which is somewhat higher than leverage at global closed-ended fund sector level, which stands at 1.12 x NAV.

2.2 Belgian asset managers

The number of Belgian asset managers (UCITS management companies and authorised AIFMs) has grown to 16 asset managers at the end of 2021 and 17 at the end of June 2022 (Table 2.6), with 11 of the 17 authorised Belgian asset managers holding a double authorisation. The total assets under management (AuM) of the Belgian asset managers amounted to € 258 billion at the end of 2021 and € 227 billion at the end of June 2022, of which € 131 billion were in the form of collective management

[21] These conclusions are based on the data reported to the FSMA and known at the end of April 2022, when the analysis for the relevant reference period was finalised.

and € 96 billion in the form of discretionary management. The assets for which they provide investment advice increased further to almost € 17 billion.

Box 3: Sub-threshold managers

Sub-threshold managers are alternative investment fund managers (AIFMs) managing alternative investment funds (AIFs) whose assets under management (AuM) do not exceed a threshold of either € 100 million or € 500 million. The € 500 million threshold can be applied when the AIFs are unleveraged and have no redemption rights exercisable during a period of 5 years following the dates of initial investments. Sub-threshold managers are exempt from the provisions of the AIFMD[22], with the exception of registration and reporting obligations[23]. Hence, sub-threshold managers are also referred to as 'registered' managers, as opposed to 'authorised' managers. Sub-threshold managers are not allowed to manage publicly offered AIFs.

The majority of sub-threshold managers have a regional investment focus on Belgium or Europe, while they invest in a variety of sectors, with some managers focusing on science and technology, real estate, impact investing, infrastructure or nutrition and agriculture.

A subset of the funds managed by sub-threshold managers is registered by the FPS Finance as private privak/pricaf or specialised real estate fund (see Table 2.2a of this report). Some of the sub-threshold managers are internally managed funds, which means that the manager and the fund are the same legal entity.

Table 2.6b shows the evolution of the number of registered sub-threshold managers and their AuM. Both the number of managers and the AuM have increased during recent years. The number of managers rose from 51 at the end of 2016 to 176 at the end of 2021, while their AuM increased from less than € 2 billion to more than € 7 billion over the same period. Overall, although the size of this segment of the asset management sector has grown, it remains relatively limited.

2.3 Foreign investment funds distributed in Belgium

Investment funds from other Member States of the European Economic Area (EEA) that can be publicly offered in Belgium consist of UCITS and AIFs. For UCITS, a passport regime exists to facilitate the trading of units in these funds across borders. UCITS from other Member States of the EEA need to be notified at the FSMA before their units can be publicly distributed in Belgium. At the end of 2021, 4,649 UCITS sub-funds from other Member States of the EEA were notified and subsequently registered by the FSMA. This figure represents an increase compared to 2020 (Table 2.7). In terms of umbrella-funds, the number increase slightly from 550 in 2020 to 559 in 2021. Since the supervisor of the home country is the competent authority for these funds, no exact statistics on these foreign UCITS' net assets are available in the present report.

Open-ended AIFs from other Member States of the EEA that have the intention to publicly offer units in Belgium need to be registered with the FSMA. These AIFs need to comply with the relevant Belgian legislation and the FSMA monitors their activities. Two open-ended public AIFs from other Member States of the EEA were registered at the end of 2021 (of which 3 sub-funds were registered). Their net

[22] Directive 2011/61/EU of the European Parliament and of the Council of 8 June 2011 on alternative investment fund managers and amending Directives 2003/41/EC and 2009/65/EC and Regulations (EC) No 1060/2009 and (EU) No 1095/2010.

[23] Sub-threshold managers are also subject to AML/CTF supervision.

assets amounted to around € 0.02 billion[24]. While the number of notified UCITS from other Member States of the EEA has been steadily increasing, the number of registered public open-ended AIFs from other Member States of the EEA remained relatively stable since the end of 2018.

Although the net asset value (NAV) of foreign investment funds distributed in Belgium is not as such available, the securities holdings statistics (SHS) allow to identify the amount of foreign investment funds *held by Belgian residents* (Table 2.8 provides a breakdown by holding sector and by issuing country). According to this data source, holdings of foreign funds by Belgians increased between 2018 and 2021, rising from € 201 billion up to € 300 billion, with households making up a significant proportion of these holdings as they increased from € 95 billion up to € 139 billion. The most recent data up to June 2022 show a decline in these amounts (to € 277 billion, of which € 122 billion held by households) following valuation effects from the correction in financial markets.

Another contribution of the SHS data is that they allow to identify the *source* of foreign investment funds held by Belgian residents. These funds are mainly concentrated in six issuing countries (of which five are European) and this has been stable over time. Luxembourg is by far the biggest source of foreign investment fund holdings with € 223 billion at the end of June 2022 (€ 200 billion at end 2020). It is followed by Ireland with € 25 billion (€ 20 billion at end 2020), France with € 21 billion (€ 19 billion) and Germany with € 7 billion (€ 8 billion). The Netherlands and USA are the fifth and sixth issuing countries with total holdings for each amounting to less than € 1 billion in the same period.

2.4 Belgian banks and asset management activities

Belgian banks deploy different types of asset management-related activities. First, Belgian banks, including their subsidiaries worldwide, provide management for assets belonging to their customers (which even might be funds). Second, they also distribute investment funds which are issued by entities outside the bank. Besides that, Belgian banks also provide some auxiliary services within the asset management sector, such as custodian services and central administration services for investment funds. These activities generate fee and commission income for the banks.

In the past few years, banks have put a commercial effort to develop their asset management activities with the aim of diversifying their income sources. While Belgian banks earned an annual fee and commission income of € 2.0 billion on their asset management activities in 2016, this increased to € 3.3 billion in 2021. The amount remained high so far in 2022, at € 1,6 billion for the first half of the year, which is a small further increase compared to the same period in 2021 (Table 2.9).

The amount of client assets involved in these activities is sensitive to changes in the market value of these assets, so that developments between periods can be volatile. Taking all client assets together, they reached € 728 billion at the end of 2021 and € 647 billion in June 2022, compared to € 639 billion at the end of 2020. The recent decline is mainly due to the decrease in market value of these assets stemming from the correction in financial markets.

Around two-thirds of the amount end June 2022 relates to assets managed within Belgian banks (€ 405 billion) which is a percentage that remained quite stable during the last years. Since the figures provided are based on consolidated accounts, this amount also includes assets managed by subsidiaries of Belgian banks. Given that some Belgian asset managers are full subsidiaries of Belgian banks, there thus exists an overlap with the AuM of Belgian asset managers as mentioned in section 2.2 (Chart 2.8). However, the assets managed within Belgian banks are broader in scope, since they also include assets managed by foreign subsidiaries of those Belgian asset managers, as well as assets

[24] This amount is the total size of their net assets, and not the value of their units held by Belgian residents. Should these AIFs also be offered in other countries, the value of public open-ended AIF units held by Belgian residents is necessarily lower.

managed by other foreign asset managers that are in the consolidation scope of Belgian banks. In addition, Belgian banks also provide discretionary management of portfolios directly, without the intervention of a (consolidated) asset manager.

The above-mentioned € 405 billion can be broken down into € 272 billion of assets under collective management and € 133 billion of assets under discretionary management. The figures show that there has been a continuous increase in the contribution of collective management over the last 5 years at the expense of discretionary management. The amount of collective investment products distributed by Belgian banks but issued by entities outside of their consolidation scope reached € 242 billion at the end of June 2022.

Belgian banks also earn fee and commission income on custodian and central administrative services. Jointly, the income earned on these services increased to € 364 million in 2021 and 180 million in the first half of 2022. Recent changes in the market value of the assets involved in these services are, just like the assets under management, mainly driven by developments in financial markets.

2.5 Belgian insurance companies and asset management activities

Belgian insurance companies invest significant amounts in investment funds, be it as covering assets for the unit-linked life insurance business (the so-called "class 23" contracts in the Belgian law) or as part of the non-unit-linked investment portfolios (Tables 2.10 and 2.11). Insurers can also give a (discretionary) investment mandate to a bank or asset manager in order to manage a certain portfolio of assets, which can e.g. be the case for some of the internal insurance funds offered in class 23 contracts.

In unit-linked life insurance contracts, insurers offer a non-guaranteed return to their policyholders, which is linked to the performance of an internal or external investment fund. As regards the Belgian unit-linked insurance business, Belgian insurers' technical provisions for class 23 contracts amounted to € 51.2 billion at the end of 2021 on an unconsolidated basis (€ 45.7 billion by the end of June 2022), covered almost entirely by units of investment funds (€ 48.7 billion) and a small amount of (mainly term) deposits (€ 1.1 billion).

Class 23 premiums reached € 4.1 billion in 2021 (Chart 2.9). Although statistics on class 23 premiums are not yet available for the full year 2022, indications based on quarterly Solvency II reportings suggest that gross premiums collected for unit-linked contracts are increasing since 2020, partly due to the good performances on the financial markets, despite some episodes of market volatility during the covid-19 crisis. As a reminder, for some years now, life insurers have tried to direct their policyholders and new life insurance production towards class 23 products, for which the investment risk is borne by the policyholder. This is largely explained by the low interest rate environment that affects the attractiveness of the more traditional products offering minimum guaranteed rates of return (with profit-sharing).

Apart from their investments in investment funds in the context of their class 23 business, Belgian insurers also invest in funds as part of their covering assets for life (other than class 23) and non-life insurance products or as free investment. At the end of 2021, these investments amounted to € 22.4 billion, compared to € 12.5 billion in 2018, reflecting insurers' search-for-yield behaviours in the context of the low interest rate environment. This increasing investment continued in June 2022, by reaching € 23.3 billion. Broken down by type of funds, the largest shares of investments by the end of 2021 were in debt funds (€ 7.7 billion), money-market funds (€ 2.9 billion), real estate funds (€ 2.3 billion) and equity funds (€ 2.1 billion). Around € 8.1 billion of these funds were issued in Luxembourg, € 6.2 billion in France, € 3.3 billion in Ireland, € 2.3 billion in Belgium and € 1.5 billion in the Netherlands. Their custodian was mainly located in Belgium and Luxembourg.

2.6 Belgian institutions for occupational retirement provision and asset management activities

At the end of 2021, there were 160 Belgian institutions for occupational retirement provision (or "pension funds") authorised, accounting for about € 47 billion total assets (Table 2.12). Belgian pension funds invested 78% of those assets (€ 36.5 billion) in investment funds.

Box 4: Liability Driven Investment (LDI) strategies

Pension funds use LDI strategies to match the duration of liabilities to that of assets.

The FSMA analysed Belgian IORPs to determine to what extent they could be exposed to a similar situation as in the UK[25]. The analysis focused on IORPs that use LDI and derivatives (particularly interest rate swaps) in their hedging strategies.

The FSMA further conducted a deep dive on IORPs that use LDI and/or IRS derivatives in their investment strategy. A number of these IORPs were requested to simulate a similar crisis in the eurozone as in the UK, i.e. a rise of interest rates of 50 bps over 3 consecutive days (150 bps in total). The purpose was to determine the impact on the IORPs' liquidity position if a similar situation would occur.

No IORPs reported liquidity issues following the UK crisis and none would have been faced with additional requests for collateral or sponsor support in case of a similar crisis as in the UK.

Additionally, positions in derivatives are limited to non-existent in the Belgian IORP sector and exposure to gilts is small across the sector.

[25] For more information on the UK gilt market stress, see for instance the letter by the Bank of England to the Chair of the Treasury Committee (5 October 2022).

III. Overview of the Belgian NBFI sector

3.1 Delineation of the Belgian NBFI sector

The Financial Stability Board (FSB) defines non-bank financial intermediation (NBFI)[26] as "*credit intermediation that involves entities and activities outside the regular banking system, and therefore lacking a formal safety net*". This definition does not mean that NBFI escapes from regulatory requirements, rather that it is regulated in a different manner than 'regular' banks.

The NBFI aggregate as such is not defined in the financial accounts, hence it is approximated by adding the financial assets of several entity types. Different definitions for the Belgian NBFI aggregate can be used and this report focuses on the following two main definitions: the EBA framework and the FSB framework.

The delineation of the Belgian NBFI aggregate starts from the very broad FSB-defined "NBFI sector"[27] which is the sum of the financial assets of all non-bank financial entities, pension funds and insurance companies. It is calculated by using flow of funds data in the financial accounts. The broad Belgian NBFI sector amounted to € 1,320 billion at the end of 2021 and € 1,231 billion at the end of June 2022 (Chart 3.1). This is a 7% increase between end-2020 and end-2021, followed by a 7% decrease by end-June 2022. In comparison, the financial assets of the banking sector[28] amounted to € 1,166 billion and € 1,277 billion at the same dates, which is an increase by 5% and then by 10%. However, the broad NBFI sector consists of a wide variety of financial entities and not all of them should be considered as posing bank-like financial stability risks. Therefore, the FSB narrows down this concept towards non-bank credit intermediation that poses bank-like risks to the financial system and is undertaken by entities that are *not* part of the prudential consolidation scope of a banking/insurance group. These bank-like risks are maturity transformation, liquidity transformation, leverage, and credit risk transfer. The main difference between the FSB and EBA methodologies is the narrowing down which is interpreted in different ways and thus leads to a diverging magnitude of the NBFI aggregate. The NBFI aggregate is then referred to as the "narrow measure".

The narrowing down of the Belgian NBFI broad measure according to the framework developed by the FSB is based on five economic functions (EF).[29] If non-bank financial entities and activities are assessed by authorities to present bank-like risks (e.g. maturity/liquidity transformation and/or leverage), they are classified in an economic function (see the 2017 report for more details about the economic functions and the methodology underlying the process of narrowing down to the Belgian NBFI aggregate). **The Belgian NBFI narrow measure, delineated according to this FSB methodology, amounted to approximately € 171 billion at the end of 2021 and € 161 billion at the end of June 2022** (versus € 149 billion and € 144 billion at the end of 2020 and 2019, respectively), representing roughly 33 % of Belgian GDP or 14 % of the size of the Belgian banking sector (Chart 3.2).

The bulk of the Belgian NBFI narrow measure consists of investment funds, which are classified under economic function 1 (Chart 3.3). EF1 includes the Belgian money market and non-equity investment

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[26] Since the 2019 FSB Global Monitoring Report on Non-Bank Financial Intermediation, this has become the new term for the former FSB-terminology *shadow banking*.

[27] Previously called "MUNFI", i.e. the Monitoring Universe of Non-bank Financial Intermediation. For the 2020 FSB Global Monitoring Report on Non-Bank Financial Intermediation, the FSB decided to modify this terminology to be less technical and gain better public accessibility.

[28] Excluding central banks.

[29] The five economic functions are defined as follows : EF1: Management of collective investment vehicles with features making them susceptible to runs; EF2: Loan provision that is dependent on short-term funding; EF3: Intermediation of market activities that is dependent on short-term funding or on secured funding of client assets; EF4: Facilitation of credit creation/insurance or guarantees of financial products; EF5: Securitisation-based credit intermediation and funding of financial entities.

funds, which are almost all open-ended and hence susceptible to run risks. After remaining stable between 2017 and 2020 at roughly € 130 billion, they significantly increased to € 157 billion in 2021. This move reverted during the first half of 2022 (€ 148 billion). EF1 being the largest EF in Belgium, its development has a great impact on the NBFI narrow measure. In 2021, it was mainly the non-equity investment funds component of EF1 that explained nearly all of its development (Chart 3.4). Starting at € 131 billion at end 2020, the amount rose to € 151 billion one year later while MMFs remained roughly unchanged (from € 3.2 billion to € 3.9 billion over the same period). Investment funds with mixed investment policy were the driver of the increase (growing from € 82 billion to € 104 billion in 2021), as the amount of other funds (excluding equity funds) remained relatively unchanged (at € 49 billion). At the end of the first half of 2022, the situation had somewhat reverted with financial assets of MMFs reaching € 10.5 billion and those of non-equity investment funds decreasing to € 137 billion. As observed in previous years, there is a tendency towards an increase in financial assets of MMFs at times of economic uncertainty while other funds generally shrink (Chart 3.4b). The ongoing war in Ukraine at the time of writing and the general rate-hiking environment to fight inflation, are the main sources of the recent uncertainty in financial markets.[30]

The second category of the Belgian NBFI narrow measure is EF2 (loan provision that is dependent on short-term funding). This bank-like loan intermediation is performed by financial entities such as leasing and factoring companies, lenders in consumer and mortgage credit and other entities that are not consolidated in a banking/insurance group. Since 2016, the measure of EF2 has remained stable at a low level around € 10 billion. More precisely, it was estimated to amount to € 9.1 billion at the end of 2021 and € 9.0 billion at the end of June 2022.

The third and last category of the Belgian NBFI narrow measure is classified under EF5 and consists of securitisation activities by financial vehicle corporations that are not retained on the balance sheets of Belgian banks. At the end of 2021, this EF amounted to € 5.3 billion, which is very similar to the levels recorded since the end of 2017 (that is, roughly € 6 billion). The latest available data (at end June 2022) show that EF5 decreased to € 4.2 billion. Overall, it remains stable at a low level.

Under the European Banking Authority (EBA) framework, **the Belgian NBFI narrow measure amounted to € 18.3 billion at the end of 2021 and € 23.7 billion at the end of June 2022**, compared to € 18.3 billion at the end of 2020. This is lower than the FSB narrow measure, since only Belgian money market funds and AIFs with a leverage that exceeded 300% or that were granting/purchasing loans[31] are included in EF1 of the EBA narrow measure.

3.2 International comparison

The FSB conducts annual monitoring exercises to assess global trends and risks in non-bank financial intermediation and publishes the results in the *Global Monitoring Report* (GMR) *on Non-Bank Financial Intermediation*[32]. The NBB has been actively participating since 2016 to this international exercise which allows to assess where Belgium stands in the global landscape.

The last version of the FSB's GMR, which was published in December 2021 and reports on the situation until end 2020, stated that total financial assets of the participating jurisdictions[33] amounted to roughly $ 469 trillion. This is a 16% increase since the last level observed before the pandemic in 2019. The global NBFI sector stood at $ 227 trillion, accounting for approximately 50% of the global financial

[30] For more details on (Belgian) MMFs, see also Chapter V below and the 2021 Update on Asset management and Non-bank financial intermediation in Belgium, Box 4.

[31] The NAV of AIFs with a leverage that exceeded 300% amounted to € 0.12 billion in 2018. In 2019, 2020 and 2021, no Belgian AIFs with a leverage that exceeded 300% were identified based on the reporting to the FSMA.

[32] The reports are available at https://www.fsb.org/publications/key-regular-publications/.

[33] There are 29 individual participating jurisdictions and 8 international organizations. For more details, please refer to the 2020 GMR.

assets, while banks[34] made up roughly 38% ($ 180 trillion). According to the report, the NBFI narrow measure amounted to $ 63 trillion at the end of 2020, which represents around 13% of the global financial assets and 28% of the global NBFI sector.

These findings are similar to what is observed in Belgium, with some small differences though. Although the new GMR – which covers developments in 2021 – will only be published in December 2022, no major changes to the above are expected. The entire Belgian financial system grew relatively fast between 2020 and 2021 by roughly 8%, to reach € 2,853 billion. The broad NBFI sector grew faster (7%; up to € 1,320 billion) than the banking sector in 2021 (5%; to reach € 1,166 billion). This means that the NBFI *broad* measure also represents roughly 50% (46%, to be precise) of the financial sector in Belgium. On the contrary, the NBFI *narrow* measure is relatively smaller in Belgium. Standing at around € 171 billion at the end of 2021, it accounts for roughly 6% of Belgium's total financial assets and 13% of the Belgian NBFI broad measure, which is two times less than what is observed globally.

The report shows that, like in Belgium, the main component of the NBFI narrow measure worldwide is made out of collective investment vehicles with features that make them susceptible to runs (EF1). In 2020, this economic function amounted to roughly 75% of the worldwide narrow measure. Securitisation-based credit intermediation (EF5) is the second-largest group in the narrow measure, accounting for 7.5% worldwide while intermediation of market activities dependent on short-term funding (EF3) accounted for 7%. Loan provision that is dependent on short-term funding (EF2) represents nearly 7% of the narrow measure. Finance companies are the main entity type found in EF2 worldwide (80%). Facilitation of credit creation/insurance or guarantees of financial products (EF4) represents the smallest fraction of the narrow measure (0.3%)[35]. According to the GMR, investment funds (EF1) have been the main driver of the growth in the narrow measure since the Great Financial Crisis, unlike prior to this event where the main drivers were structured financial vehicles (EF5) and broker-dealers (EF3).

When comparing Belgium to this global landscape, the conclusions from this report's previous editions can be reiterated and remain broadly unchanged. That is, the Belgian NBFI narrow measure represents a tiny part of the global NBFI universe (around 0.25% of the global NBFI narrow measure) at the end of 2021. Compared to other euro area and non-euro area countries, the FSB data show that the identified levels of NBFI in Belgium are more or less proportionate but somewhat smaller (as measured in % of GDP) than the levels seen in Belgium's neighboring countries (notably France, Germany and the Netherlands). Luxembourg and Ireland remain the two exceptions in Europe. They have a very large NBFI sector due to their key role in the European investment funds market and the large number of special-purpose entities (often with non-domestic sponsors) located within their jurisdictions (Chart 3.5).

[34] More precisely: banks' total financial assets are $ 180 trillion (38%) and central banks' total assets are $ 42 trillion (9%). The residual is made out of public financial institutions ($ 20 trillion or 4%).

[35] The GMR warns that due to difficulties in correctly assessing off-balance sheet exposures, the size of EF4 could be highly understated.

IV. Monitoring framework

This chapter uses the mapping and sizing of the Belgian NBFI and asset management sectors to undertake an analysis — as allowed based on the available data — of the risks *within* these sectors of the Belgian financial system *and in terms of potential spill-overs to other sectors* of the Belgian economy due to *interconnectedness with them*.

The asset management and the NBFI sectors form part of a more market-based financial system where part of the financial intermediation takes place outside the banking sector. This method of financing offers a valuable alternative to bank financing, and thus creates greater diversity in credit sources and investment opportunities for investors. Yet, it may also create systemic risks, particularly if it is involved in bank-like activities — such as liquidity and maturity transformation and/or creation of credit and leverage — and may raise points for attention concerning investor protection.

For the part of the NBFI sector that overlaps with the asset management sector, the main risk is liquidity risk, and particularly the risk of sudden, large-scale redemptions. While most of these funds are open-ended and therefore comprise a variable number of units, the associated liquidity risks are already partly addressed by legislation in force through rules on asset diversification and the introduction of additional liquidity management tools for asset managers.

Apart from the direct risks, the asset management sector and the NBFI sector may also generate (systemic) risks indirectly, notably via their links with other financial institutions and the real economy. Those links, which may take the form of both contractual and non-contractual debts and claims, tend to be limited for households and non-financial corporations (for example, through investment funds). However, in the case of financial institutions they are larger and more complex, particularly as regards links within conglomerates.

4.1 Data and data gaps

Since the publication of the first report in 2017, several FSMA and NBB initiatives have improved the availability of data and the granularity of the analyses for delineating and assessing developments within the Belgian asset management and NBFI sectors.

Among these initiatives is the introduction by the FSMA of new reporting requirements, which have entered into force on 1 October 2017, for certain public investment funds. These data allowed to calculate new risk indicators for the Belgian investment fund industry, segments of the fund industry, or specific funds which in turn led to a better understanding and assessment of leverage and liquidity risks[36]. Although these new reporting requirements suffered from data quality problems leading to interpretation issues, the FSMA has been continuously working on improving the quality of the data with the fund industry (for more detail, see this report's previous editions).

The reporting framework has been reinforced with the entry into force of the Regulation of the Financial Services and Markets Authority of 15 February 2022 on 1 June 2022. This new framework requires the communication of a limited set of data relating to the liquidity risk at a more frequent frequency (see section 5.1.1).

The NBB, on its side, has been working on improving data and closing data gaps at various levels over the last few years. This has been the case for the *other financial intermediaries* (OFIs) sector at national level, for which improvements were made in identifying the activities and the group structure of the entities populating the sector. This allowed, among others, to better classify entities in the above-

[36] For an overview of potential risk indicators, see ESMA's second statistical report on EU Alternative Investment Funds (AIF).

mentioned economic function 2 group (see section 3.1) and to distinguish between those entities belonging or not to the consolidation scope of a bank or insurance company. Although some improvements are still needed, a better assessment could already be made by taking entities out of the NBFI sector if no NBFI-like risks were identified within these entities. The NBB has also been actively involved in international initiatives to better capture the global developments in the financial sector and more specifically in the NBFI sector. This has notably been the case at ECB/ESRB level, to improve other countries' access to more granular data in the OFI sector, and at FSB level, where the NBB has become more and more involved in the drafting and analyses of the Global Monitoring Report.

4.2 Risk assessment of the Belgian NBFI sector

Table 4.1 provides an update of some of the risk metrics suggested by the FSB to monitor the degree of credit intermediation as well as the aforementioned bank-like risks for the main types of NBFI entities. The risk metrics are provided for the three economic functions of the Belgian NFBI sector, with a distinction between four different types of investment funds under EF1 (fixed-income funds, mixed funds, other non-equity funds and money market funds). This allows a granular assessment of the risks for different subsegments of the NBFI aggregate. The metrics have been quite stable over time, so that the conclusions from the last report remain broadly unchanged.

The risk metrics calculated for the Belgian investment funds (excluding equity funds) in EF1 confirm that liquidity transformation remains the most important risk for all types of investment funds (the values are close to the maximum). It is essentially a redemption risk, linked to the fact that the liabilities of the funds are mostly composed of units redeemable daily and are not (fully) covered by liquid assets. The second most important risk for these investment funds relates to maturity transformation, as they invest to some extent in long-term assets financed with short-term liabilities. Maturity transformation mostly applies to fixed-income and other funds as it is very limited for mixed and money market funds. Those two risks remain relatively low as long as the sector remains closely monitored and has access to efficient liquidity management tools to mitigate the risk of fire sales.

For the entities falling under EF2 and EF5, the conclusions are the same as in the last update of the report. Indeed, the risk metrics reveal that these entities' positions with respect to liquidity transformation are rather comfortable and that maturities on both sides of the balance sheet are relatively balanced. While the securitisation vehicles under EF5 are associated with high leverage, this risk is mitigated by the absence of significant maturity or liquidity mismatches (in principle, there will never be a need to liquidate the assets in a disorderly way).

4.3 Interconnectedness of the Belgian economy with NBFI entities worldwide

Chart 4.1 provides a first broad — though incomplete — overview of the links between Belgian residents and potential NBFI entities worldwide on the basis of financial accounts data for the second quarter of 2022. These financial accounts are established on the basis of unconsolidated and territorial financial reports (thus showing also "links" that are in fact links within consolidated financial groups, while not capturing links of Belgian entities' foreign subsidiaries and branches) and only capture links with potential NBFI entities residing in euro area countries (financial accounts data do not allow to capture the NBFI subsegment of the OFI sector outside the euro area). The financial accounts data moreover only capture the size of on-balance sheet exposures at the time of the reporting date (leaving out off-balance sheet links and potential future exposures in the case of derivative transactions).

By complementing the aggregates shown in Chart 4.1 with various complementary sources of information, it is possible to distil an informed assessment of the orders of magnitude of the size of Belgian residents' links with NBFI entities and of the nature of the financial transactions involved. The updated analysis for the Belgian banks, insurance companies, households and non-financial corporations in the subsections below reconfirms the main findings of the previous reports as regards this interconnectedness: while links with the OFI sector can be important in some cases, the interconnectedness with what one could call "real NBFI entities" is limited and concentrated in activities that are generally part and parcel of normal business affairs.

4.3.1. Banking sector

Due to its central role in the payment system and the financial intermediation chain, the banking sector has traditionally been characterised by a high degree of interconnectedness with other financial institutions, including banks and non-banks, and in line with the development of the Capital Markets Union in the EU, it can be expected that this interconnectedness with non-bank financial institutions could expand further in the future.

As regards the links on the asset side, the exposure of the Belgian banking system to NBFI entities according to the financial accounts data has declined over the past two years from € 73 billion in 2018 to € 43 billion at the end of the second quarter of 2022. As such, this figure – which also includes intraconglomerate transactions – came closer to the exposure to the so-called "other financial institutions" (OFIs) obtained using the consolidated supervisory data (FINREP). This OFI exposure – which is the best proxy that is available based on consolidated data but has a somewhat larger scope than NBFI entities (e.g. including also insurance companies) – has remained stable in the past years around € 50 billion (or 4% of total assets).

The composition of this FINREP-exposure has somewhat evolved in the past years towards a larger share of loans and a lower share of debt securities. Around 70% of the € 50 billion exposure is constituted of loans and advances (€ 34 billion in June 2022), representing around 4% of the total loan portfolio of Belgian banks. The majority of these loans to other financial institutions are towards Belgian institutions (€ 23 billion). To a certain extent, these loans are related to securities financing transactions (SFTs), such as repurchase agreements and securities lending with investment funds, (related) insurance companies or CCPs. Besides loans, Belgian banks also owned about € 8 billion of debt securities issued by other financial institutions. These debt securities represent 5% of the total bond portfolio of Belgian banks (compared to 9% in 2018) and the bulk of these exposures are toward foreign counterparties (resp. € 1.1, 0.8, 0.7, 0.5, 0.4 for NL, FR, US, LU and UK OFIs). Some of these securities are securitisations or structured products issued by financial vehicle corporations (FVCs).

On the basis of the financial accounts data, Belgian banks' loans to the NBFI sector are estimated at € 35,7 billion and most of these loans are claims on domestic OFIs (€ 24,1 billion). Since it appears from both the financial accounts data and the FINREP data that the majority of the NBFI or OFI exposure of Belgian banks consists of loans to domestic non-bank financial intermediaries, the central corporate credit register (CCCR) can be consulted to obtain a further detail on the type of counterparties in this specific portfolio of loans (Chart 4.2). The available data (with again a slightly different scope than the other two data sources) show an exposure that has been close to € 30 billion in total since 2017. A breakdown by NACE code shows that the exposure consists of loans to various types of OFIs — such as leasing, mortgage, consumer credit, private equity and trade and export finance companies.

As regards the liabilities side, the available data in the financial accounts (Chart 4.1) and the consolidated supervisory data (Chart 4.3) showed a sharp fall in repo-related funding and a more moderate decline in overall funding from OFIs in the period up to end 2016. Still, with € 115 billion at the end of June 2022 (of which € 106 billion in deposits), funding from OFIs — including non-NBFI entities, such as insurance companies or other financial intermediaries that should be excluded from the NBFI sector — remains an important source of funding (9% of total liabilities and 11% of total deposits according to FINREP; Chart 4.4). Part of the deposits from other financial institutions reflect banks' securities financing transactions and can be seen as the counterpart of the securities financing transactions already highlighted on the asset side. Deposits from *related* asset management entities declined from € 6 billion in 2018 to € 2 billion in June 2022.

The majority of funding from OFIs in the Belgian banking sector thus consists of deposits (€ 106 billion, of which almost 90% are sight deposits, Chart 4.4). Using an additional data source (i.e. Schema A), it is possible to have a more detailed view on the type of counterparties. These data – available for around € 40 billion of OFI deposits on territorial (not-consolidated) basis – show a variety of counterparties including insurance companies, captive financial institutions, financial auxiliaries, investment funds, FVCs etc. (Chart 4.3, right-hand panel). Nevertheless, the OFI deposits included in this data source are significantly lower than in FINREP due to differences in scope and accounting basis. While deposits from Belgian OFIs are around € 25 billion in both data sources, deposits from foreign OFIs are much higher on consolidated basis (€ 83 billion) than on territorial basis (€ 15 billion). This difference suggests that a large share of the foreign OFI deposits in the Belgian banking sector is related to (the funding of) subsidiaries abroad. A further breakdown shows they are mainly sourced from OFIs in LU (€ 40 bn), IE (€ 17 bn), NL (€ 5 bn), US (€ 4 bn) and DE (€ 4 bn).

4.3.2. Insurance companies and pension funds

At the end of the second quarter of 2022, according to financial accounts data, NBFI exposures amounted to around € 25.4 billion for the pension funds sector — mainly in the form of shares in investment funds, not including equity funds — and € 77.6 billion for the insurance sector.

According to Solvency II prudential data (Chart 4.6), the exposure of insurance companies towards NBFI amounted to € 34.7 billion at the end of 2021 (or 9 % of insurance companies' total assets), a decrease compared with € 43.3 billion at the end of 2018. Out of the € 34.7 billion of NBFI exposures, approximately € 21.9 billion corresponded to assets covering class 23 contracts.

Investment funds accounted for a significant share of the NBFI exposures and amounted to € 21.5 billion in 2021, while the remaining € 13.2 billion of NBFI exposures mainly represented holdings of debt securities and equity issued by NBFI entities.

4.3.3. Households

The first report published in 2017 documented the importance of domestic and foreign investment funds in the total financial assets held by Belgian households, in particular the wealthiest among them. Chart 4.7 provides an update on the breakdown of Belgian households' financial assets as at the end of the second quarter of 2022. Chart 4.8 confirms that the total market value of households' participations in investment funds was strongly affected by the fall in stock and bond prices following the Russian invasion in Ukraine, translating into negative price effects. Nonetheless, despite the high volatility on the financial markets, Belgian households continued to acquire participations in investment funds. Their net purchases of such assets totalled € 6.5 billion in the first half of 2022. At the end of the second quarter of 2022, the amount of households' holdings in investment funds, reached € 228.7 billion or 15.5% of their total financial assets. That amount consists of € 99.0 billion of participations in domestic funds and € 129.7 billion in foreign funds.

Securitised loans and loans from OFIs still account for a sizeable share of the household sector's debt, with 8.0 % and 2.9%, respectively (Chart 4.7). Yet, most of the loans remain linked to the traditional banking sector. Indeed, virtually all of the securitised mortgage loans are actually retained in the balance sheets of the banks from which they originate. Moreover, OFIs' loans to households are essentially granted by consumer credit institutions.

4.3.4. Non-financial corporations

The links between non-financial corporations (NFCs) and the NBFI sector remain tenuous (Chart 4.9). Participations in domestic and foreign investment funds represented only 1.5% of their total financial assets at the end of second quarter of 2022. Equity and intragroup loans to corporations included among the OFIs also accounted for 1.5%. The same holds true for NFCs' liabilities, where securitised loans account for 1.4% of the outstanding amount. Constituting 1.7% of that same total, loans received from OFIs consist mainly of leasing and factoring, a large part of which originates from subsidiaries of the four major credit institutions (see the report of 2017 for more details). The share of equity investment from OFIs, notably domestic private equity companies, and similar enterprises in NFCs liabilities has remained stable as well (0.7% at the end of the second quarter of 2022).

V. Current regulation and ongoing policy work

This section provides an update of recent developments in the regulation as regards NBFI entities, activities or their interconnectedness with banks and insurance companies and should be read in conjunction with the more comprehensive description of the regulatory framework included in the first report published in 2017. NBFI entities and activities are indeed far from being an unregulated sector, even if their regulation is different from the ones for banks and insurance companies and mainly focuses on investor protection. The update in this section shows moreover that further progress is being made in refining the regulatory and policy framework for resilient non-bank finance.

5.1 Regulation of entities

5.1.1 Asset managers and investment funds

FSB policy proposals to enhance money market fund resilience

Money market funds (MMFs) play an important role in short-term funding markets. However, the period of market turbulence in March 2020, at the onset of the Covid-19 pandemic, has shown that, despite previous reforms, they continue to exhibit a number of vulnerabilities. On the liability side, MMFs are susceptible to sudden redemption requests, while on the asset side they may face difficulties in selling the instruments they invest in, especially under stressed market conditions. The FSB, in collaboration with IOSCO, has therefore proposed a set of policy options to address these vulnerabilities to increase the resilience of money market funds[37].

The FSB groups the policy options it identified according to the main mechanisms by which they aim to increase the resilience of MMFs, notably passing on to redeeming investors the costs associated with their redemption, loss absorption, reducing so-called threshold effects and reducing liquidity transformation. The set of policy options identified by the FSB can be viewed as a toolkit available to FSB members to address MMF vulnerabilities in their jurisdictions. The FSB recognises that tailoring policy options to specific circumstances requires flexibility. The extent of vulnerabilities in individual jurisdictions may depend on the market structures, uses and characteristics of MMFs.

ESRB policy recommendation and ESMA opinion to enhance EU money market funds resilience

The European Systemic Risk Board (ESRB) has published on January 25th 2022 a policy recommendation aimed at increasing the resilience of money market funds. On February 16th, ESMA proposed, in an opinion, reforms to achieve the same objective.

Both recommendations follow the liquidity problems experienced by some MMFs in March 2020 (see above). Although the recommendations may differ in the specific proposals, the main principles are similar and can be summarised as follows:

- reduce threshold effects that create first mover advantages, which can lead to large redemptions in times of market stress;
- reduce the liquidity transformation by amending the rules on portfolio composition and liquidity;
- make it mandatory to have at least one liquidity management tool available;
- strengthen monitoring capacity and stress testing.

[37] Final Report on Policy Proposals to Enhance Money Market Fund Resilience (November 2021), FSB.

Continuous monitoring of Belgian MMFs

The EU MMF Regulation[38] has established uniform rules for money market funds to ensure their proper functioning. The MMF regulation defines precise risk management requirements for portfolios. Firstly, the regulation introduced maturity limitations such as the maximum allowable weighted average maturity (WAM) and weighted average life (WAL). Continuous monitoring since the entry into force of these new requirements has shown that most Belgian MMFs are well below these two thresholds. Secondly and in order to strengthen MMFs' ability to face redemptions and prevent their assets from being liquidated at heavily discounted prices, the regulation requires also the MMFs to hold, on an ongoing basis, a minimum percentage of liquid assets that mature daily and weekly. These minimum percentages have been respected at all times by Belgian MMFs, including in 2021 and 2022, when the Belgian MMFs experienced significant subscriptions.

Proposal to review AIFMD and UCITS Directive

In November 2021, the European Commission proposed amendments to the AIFM and UCITS directives. This proposal aims in particular to increase the supervision and monitoring of risks related to financial stability. In this respect, it contains the following measures:

- introduction of requirements for managers of loan-originating AIFs (policies and processes, restrictions, reduction of potential conflicts of interest and moral hazard, reduction of liquidity mismatch);
- introduction of a reporting framework under the UCITS Directive and removing limitations in the current AIFMD reporting;
- harmonisation of rules on the use of LMTs for open-ended funds, both UCITS and AIFs.

Global report on leverage in investment funds

In response to a recommendation of the FSB intended to address residual risks associated with leverage within funds, IOSCO collects aggregate statistics on investment funds, including data on leverage[39]. In January 2022, IOSCO published its first annual report with global statistics on the investment fund industry[40]. The report aims to provide an insight into this sector, as well as potential risks arising within it. The annual publication of this data should enable the monitoring of trends regarding the activities of this sector, including the use of leverage and related risks.

The report is based on data collected by IOSCO members and reported by them, on an aggregated basis, to IOSCO. The report draws on the experience IOSCO has already accumulated as part of its biennial data collection on hedge funds. The report includes both an update of statistics on hedge funds and a first publication of statistics on other types of investment funds, in particular open-ended funds and closed-ended funds.

The FSMA reported the data at its disposal to IOSCO and contributed to the development of the report (see Box 2). In total, 50 IOSCO members reported data to IOSCO, accounting for $50 trillion, or about 67% of global assets under management. For hedge funds, assets under management amount to $4.07 trillion; for open-ended funds, $43 trillion; and for closed-end funds, $2.6 trillion[41].

The report states that leverage within the investment fund sector remains relatively low. Open-ended funds and closed-ended funds are not meaningfully leveraged, according to the metrics used. Future

38 Regulation (EU) 2017/1131 of 14 June 2017 on money market funds

39 Recommendation 12 of the Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities (12 January 2017), FSB.

40 IOSCO Investment Funds Statistics Report (January 2022), IOSCO.

41 25 of the 50 participating IOSCO members reported under an opt-out regime, accounting for $5.5 trillion.

versions of the report are likely to include more data as local reporting requirements are expanded. This will further improve the picture of the global investment fund industry and the risks arising from asset management activities.

Thematic note on ETFs during the COVID-19 induced market stresses

IOSCO published a thematic note analysing the behaviour of ETFs (Exchange-Traded Funds) during the period of market turbulence at the time of the Covid-19 pandemic outbreak[42]. IOSCO examined the impact of the market stress on the structure and operation of ETFs, including the causes of the differences between secondary market prices and the net asset value of some fixed-income ETFs. IOSCO's analysis did not reveal any significant risks or vulnerabilities in the ETF structure, although some of the ETFs temporarily showed unusual trading behaviour. The report also notes that there is a growing consensus that fixed income ETFs can provide useful price information on the broader market. The report also describes some of the difficulties that derivatives-based ETFs faced during the period of increased volatility, which may indicate specific risks associated with these ETFs. It is worth mentioning here that no ETFs are domiciled in Belgium.

Enhanced monitoring framework for Belgian public open-ended investment funds

The COVID-crisis and the related “dash for cash” in financial markets in March 2020 showed a number of vulnerabilities in specific sub-segments of the open-ended investments funds investing in less liquid assets, such as certain segments of the corporate bond market and real estate. Following the market turmoil and concerns related to the potential materialisation of liquidity risks, Belgian public open-ended investment funds were monitored very closely as of March 2020. The monitoring allowed the FSMA to track net inflows or outflows into certain segments and specific funds.

The Regulation of the Financial Services and Markets Authority of 15 February 2022[43] entered into force on 1 June 2022 and provides a framework to carry on the monitoring. The new framework is based on the communication of a limited number of data relating to the evolution of the assets and the liquidity risk of Belgian public UCIs at monthly frequency.

5.1.2 Investment firms

As investment firms can also play a significant role in activities related to the NBFI and asset management sector, the Directive (EU) 2019/2034 on the prudential supervision of investment firms (IFD)[44] and the Regulation (EU) 2019/2033 on the prudential requirements of investment firms (IFR)[45] implementing a more effective prudential and supervisory framework for investment firms — as one of the priorities to strengthen capital markets and build a capital markets union (CMU) — are

42 Exchange Traded Funds Thematic Note - Findings and Observations during COVID-19 induced market stresses (August 2021), IOSCO.

43 The Regulation of the Financial Services and Markets Authority of 15 February 2022 amending the Regulation of the Financial Services and Markets Authority of 16 May 2017 on the statistical information to be transmitted by certain public undertakings for collective investment with a variable number of units was approved by the Royal Decree of 15 March 2022.

42 Directive (EU) 2019/2034 of the European Parliament and of the Council of 27 November 2019 on the prudential supervision of investment firms and amending Directives 2002/87/EC, 2009/65/EC, 2011/61/EU, 2013/36/EU, 2014/59/EU and 2014/65/EU. This directive is transposed in Belgian law via notably the law of 20 July 2022 on the legal status and supervision of stockbroking firms and bearing various provisions, and by the law of 20 July 2022 modifying the law of 25 October 2016 on the access to the activity of investment services and on the legal status and supervision of portfolio management and investment advice companies.

45 Regulation (EU) 2019/2033 of the European Parliament and of the Council of 27 November 2019 on the prudential requirements of investment firms and amending Regulations (EU) No 1093/2010, (EU) No 575/2013, (EU) No 600/2014 and (EU) No 806/2014.

discussed in this section. This new regime is calibrated to the size and specific nature of investment firms, in order to boost competition and improve the management of risks.

Up until now, investment firms had been subject to EU prudential rules alongside credit institutions. The prudential framework for investment firms was set out in the CRR/CRD IV set of rules[46] and worked in conjunction with MiFID II / MiFIR which set out the conditions for authorisation and organisational and business conduct requirements under which investment services can be provided to investors as well as other requirements governing the orderly functioning of financial markets. However, credit institutions and investment firms are two qualitatively different institutions with different primary business models but with some overlap in the services they can provide.

Therefore, under the revised framework for investment firms, only systemic investment firms are still subject to the CRR/CRD IV set of rules[47], including any future amendments, given these firms typically incur and underwrite risks on a significant scale throughout the single market therefore constituting a greater risk to financial stability given their size and interconnectedness.

For the other investment firms, the new framework is designed to address some issues arising from the previous framework (regulatory complexity, risk-insensitive and fragmented regulatory landscape) while facilitating the take-up and pursuit of business by investment firms where possible. Specifically, it sets out a prudential framework that is better adapted to their business models. It consists of more appropriate and risk-sensitive requirements for investment firms, better targeting the risks they actually pose and incur across different types of business models in order to protect the stability of the EU's financial markets.

The minimum capital for investment firms is consequently set according to a newly designed 'K-factor approach' which specifically targets the services and business practices that are most likely to generate risks to the firm, to its customers and to the market. Capital requirements are set according to the volume of each activity. The minimum initial capital as required for authorization, or if higher a quarter of the fixed overheads requirement of the preceding year, act as a floor to the applicable minimum capital requirement.

The very small and non-interconnected firms are subject to an even less complex regime in terms of capital, governance and reporting requirements.

5.1.3 Non-retained securitisation

Securitisation is the financial practice of pooling various types of contractual debt together and selling their related cash flows to third party investors as securities. The Securitisation Regulation[48]entered into force on 1 January 2019 and provides a general framework for all securitisations which includes requirements related to risk retention, transparency, due diligence and reporting and a specific framework for securitisations that qualify as simple, transparent and standardised (STS) (equivalent to simple, transparent, comparable (STC) securitisations as defined by the Basel framework).

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[46] CRD IV has been modified by Directive (EU) 2019/878 of the European Parliament and of the Council of 20 May 2019 amending Directive 2013/36/EU as regards exempted entities, financial holding companies, mixed financial holding companies, remuneration, supervisory measures and powers and capital conservation measures.

[47] By formally transforming them into credit institutions based on the amended article 4(1)(1)(b) of CRR. IFD and IFR further foresee the application of a significant part of CRD IV-CRR provisions to larger investment firms and the possibility to apply such part to investments firms that are included in the supervision on a consolidated basis of a banking group.

[48] Regulation (EU) 2017/2402 of 12 December 2017 laying down a general framework for securitisation and creating a specific framework for simple, transparent and standardised securitisation, and amending Directives 2009/65/EC, 2009/138/EC and 2011/61/EU and Regulations (EC) No 1060/2009 and (EU) No 648/2012

On the 24th of July 2020, the European Commission published the capital markets recovery package (CMRP) which forms an integral part of its COVID-19 recovery strategy. The package included changes to the securitisation framework, namely Regulation (EU) 2021/557 amending[49] the Securitisation Regulation[50] and Regulation (EU) 2021/558[51] amending the Capital Requirements Regulation[52], which entered into force on the 9th of April 2021.

The proposed changes to the securitisation Regulation aim to extend the current EU rules for simple, transparent, and standardised (STS) securitisations to synthetic securitisations. A synthetic securitisation is a securitisation whereby the risk on a group of loans is transferred to investors via a credit protection contract. By transferring the risk, banks can free up additional capital for lending to the real economy. Extending the STS label to synthetic securitisations is a deviation from the Basel framework where only traditional securitisations can qualify as simple, transparent, and comparable securitisations.

The proposed changes to the capital requirements regulation include : i) a preferential risk weight for senior positions in STS synthetic securitisations held by the originator institution ii) a regulatory treatment specific for securitisations of non-performing exposures which aims to eliminate the regulatory obstacles in the current regulatory framework and to better take into account the characteristics of non-performing exposures. The latter adjustments should enable banks to remove non-performing exposures from their balance sheet without prejudice to compliance with high prudential standards.

5.2 Regulation to mitigate spill-over risks (interconnectedness)

Risks originating in NBFI entities can spill over to banks, insurance companies, pension funds, households and non-financial companies through the financial interconnectedness between them. These linkages are for example created when non-bank financial entities are directly owned by banks or benefit from explicit (contractual) or implicit (non-contractual) bank support. Such amplification of risks can have consequences for financial stability.

5.2.1. Step-in risk

As regards the interconnectedness of banks, the final guidelines of the Basel Committee on Banking Supervision (BCBS) on the identification and management of step-in risk were published on 25 October 2017.[53] As mentioned in the 2017 report , step-in risk is the risk that a bank decides, mainly to avoid reputational risk, to provide financial support to an unconsolidated entity that is facing stress, in the absence of, or in excess of, any contractual obligations to provide such support.

Through these guidelines, the BCBS aims to mitigate potential spill-over effects from the NBFI system to banks. This work was part of the G20 initiative to strengthen the oversight and regulation of the

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[49] Regulation (EU) 2021/557 of the European Parliament and of the Council of 31 March 2021 amending Regulation (EU) 2017/2402 laying down a general framework for securitisation and creating a specific framework for simple, transparent and standardised securitisation to help the recovery from the COVID-19 crisis

[50] Regulation (EU) 2017/2402 of the European Parliament and of the Council of 12 December 2017 laying down a general framework for securitisation and creating a specific framework for simple, transparent and standardised securitisation, and amending Directives 2009/65/EC, 2009/138/EC and 2011/61/EU and Regulations (EC) No 1060/2009 and (EU) No 648/2012.

[51] Regulation (EU) 2021/558 of the European Parliament and of the Council of 31 March 2021 amending Regulation (EU) No 575/2013 as regards adjustments to the securitisation framework to support the economic recovery in response to the COVID-19 crisis

[52] Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012.

[53] BCBS Guidelines - Identification and management of step-in risk: https://www.bis.org/bcbs/publ/d423.htm

NBFI system to mitigate systemic risks, in particular risks arising due to banks' interactions with NBFI entities.

This is the reason why, from 28 December 2020, a new paragraph 8 of art. 18 of the CRR, as introduced by Regulation (EU) 2019/876[54] (CRR II), enables competent authorities to require full or proportional consolidation of an NBFI subsidiary, other than an insurance undertaking, where there is a substantial risk that the bank could decide to provide financial support to this undertaking in stressed conditions, in the absence of, or in excess of any contractual obligations to provide such support.

A Specific Regulatory Technical Standard specifying the conditions in accordance with which consolidation is to be carried out in the case referred to in above mentioned paragraph 8 of art. 18 of the CRR, published in April 2022[55], includes several indicators that should be used by institutions in order to identify which undertakings can be prone to step-in risk.

Such regime has further been completed to enhance flexibility to include undertaking in the scope of consolidation, notably in case of step-in risk. Without prejudice to the above-mentioned EU regulation, Belgian banking law now contains an additional new specific provision[56] empowering the competent authority to require the consolidation of any undertaking, regulated or not, if such an inclusion would more adequately reflect the risk profile of a credit institution on a consolidated basis, including at parent (mixed) financial holding company level.

5.2.2. Intragroup transactions and risk concentration reporting templates for financial conglomerates

The Joint Committee of the European Supervisory Authorities (EIOPA, EBA, ESMA) has finalised implementing technical standards (ITS) aiming to fully align the reporting under the Financial Conglomerates Directive (FICOD) in order to enhance supervisory overview regarding group specific risks, in particular contagion risk. The standards have been reviewed by the EU Commission and will be published shortly.

Under these standards, regulated entities and mixed financial holding companies will be required to report significant intragroup transactions and significant risk concentration in a consistent manner. This will help coordinators and other relevant authorities to identify relevant issues and exchange information more efficiently.

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[54] Regulation (EU) 2019/876 of the European Parliament and of the Council of 20 May 2019 amending Regulation (EU) No 575/2013 as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposures to collective investment undertakings, large exposures, reporting and disclosure requirements, and Regulation (EU) No 648/2012.

[55] Commission delegated regulation (EU) 2022/676 of 3 December 2021 supplementing Regulation (EU) N°575/2013 of the European Parliament and of the Council with regard to regulatory technical standards specifying the conditions in accordance with which consolidation is to be carried out in the cases referred to in Article 18(3) to (6) and Article 18(8) of that Regulation.

[56] Article 149, subparagraph 3 of the Banking law of 25 April 2014.

VI. Key findings, policy conclusions and recommendations

This monitoring report on asset management and non-bank financial intermediation in Belgium constitutes the fourth follow-up of the publication, in 2017, of the first NBB-FSMA report on asset management and NBFI. The main goal of this joint monitoring report is to present the update of the key statistics used in the 2017 report and of the related assessments and conclusions regarding potential systemic risks.

As market-based financing provides a valuable alternative to bank funding and helps to support real economic activity, it is a welcome diversification of credit supply from the banking system, and provides healthy competition for banks. The shift towards more market-based financing also provides investors with valuable investment opportunities. This is also the reason why the European Commission continues to foster a further development of market-based financing as part of its action plan on the Capital Markets Union (CMU). Yet, if market-based financing is involved in bank-like activities such as maturity or liquidity transformation and facilitating or creating leverage, it may nevertheless contribute to risks to financial stability and create additional risks for investors, directly or through its interconnectedness with other sectors. In particular, the use of leverage can create risks and has the potential to amplify shocks through the financial system. This is especially the case in periods of stress or increased market volatility. This is not restricted to leverage within the investment fund sector, as illustrated by the Archegos case, where leverage risks were building up within a US family office[57]. Recently, the use of leverage through Liability Driven Investment (LDI) strategies may also have contributed to strains in the gilt market. In addition, leverage may also have been building up through corporate debt, in particular through the leveraged loan market[58]. During a period characterised by rising interest rates, leverage risks warrant a close monitoring.

The size of the asset management sector in Belgium depends on the yardstick used to measure it and on the mark-to-market changes in the value of the assets under management in line with global financial market developments. Net assets of Belgian investment funds, at the core of the asset management sector, rose to € 243 billion at the end of 2021 (up from € 191 billion at the end of 2020), while assets under management of Belgian asset managers to € 258 billion (from € 269 billion at the end of 2020).[59] Assets generating fee and commission income for Belgian banks, which include also foreign investment funds distributed to Belgian residents, reached € 728 billion in 2021 (compared to € 639 billion at the end of 2020). Most of these assets are part of authorised or registered investment funds, life-insurance policies, or Belgian institutions for occupational pensions, while part of them are simply clients' portfolios managed on a discretionary basis by the banks themselves.

The Belgian NBFI sector that undertakes "*credit intermediation involving entities and activities outside the regular banking system, and therefore lacking a formal safety net*" has been relatively stable in recent years: under the FSB framework, its size amounted to € 171 billion at the end of 2021, compared to € 149 billion at the end of 2020). Under the narrower EBA framework[60], it amounted to € 18.3 billion at the end of 2021 (same amount as at the end of 2020). In both aggregates, the main

[57] For more information on the Archegos case, see for instance the NBFI Monitor N° 7 (ESRB, 15 July 2022) and Enhancing the Resilience of Non-Bank Financial Intermediation (FSB, 10 November 2022).

[58] For more information on the leveraged loan market, see for instance Vulnerabilities associated with leveraged loans and collateralised loan obligations (FSB, 19 December 2019).

[59] This decrease is largely attributable to a change in the reporting methodology for funds of funds investing in other funds managed by the same asset manager. The new methodology limits double counting of the same assets.

[60] Under the EBA framework, only MMFs and some AIFs are considered to fall within the scope of the definition of NBFI. The FSB framework encompasses not only MMFs and highly leveraged investment funds but all investment funds, with the exception of equity funds.

component of the total is accounted for by the eligible Belgian non-equity investment funds (close to 95 % under the FSB framework of the NBFI sector: € 157 billion out of € 171 billion in 2021).

Aggregate numbers on the size of the asset management and NBFI sectors should not be used as a *prima facie* measure of underlying risks (or changes therein). They can only serve as a starting point for delving deeper in the — very heterogeneous — nature of the underlying assets and liabilities and their links with other sectors of the economy. In that perspective, and following an assessment of the drivers of recent changes in the key statistics for the Belgian asset management and NBFI sectors, it appears that the qualitative findings and conclusions from the 2017 report on the systemic risks associated with asset management and NBFI still remain broadly unchanged. The dynamic development of some of the key indicators underscores nevertheless again the need for maintaining a close monitoring of both sectors going forward, including for the interconnectedness with other financial and non-financial sectors in Belgium.

6.1 General policy recommendations: follow-up

The importance of the asset management and NBFI sectors, as well as the interconnectedness of the NBFI sector with the banking sector and other sectors of the economy demand a continuation of the current monitoring efforts of both sectors by the FSMA and the NBB.

Since 2017, the reporting requirements of the asset management sector, the largest part of the Belgian NBFI sector, have continually been improving, in term of scope, quality and frequency. The data availability and consistency have significantly increased, as has the data analysis. This allowed for a closer monitoring of the asset management sector, which in turn enabled to strengthen its risk monitoring, in line with the first recommendation from the 2017 report. In line and ahead of European developments, the data collection and data analysis of Belgian public funds have been enhanced.

Both the FSMA and the NBB have also continued their efforts to contribute to the work done by international/supranational institutions involved in the monitoring, risk assessment and policy implementation for NBFI (including, but not limited to, the FSB, IOSCO, ESRB, EBA and ESMA). The European and international efforts to address remaining vulnerabilities in the global NBFI-sector are also supported through the work in these international fora.

6.2 Specific policy recommendations: follow-up

Mismatches between the liquidity of open-ended investment funds' assets and their redemption profiles have been identified by the FSB, IOSCO and the ESRB as a potential risk to financial stability. Furthermore, if liquidity mismatches in investment funds are not managed properly, they may adversely impact investors in those funds. The international bodies therefore propagate a wider availability of so-called liquidity management tools, which allow illiquidity costs to be passed on to those investors that cause them and/or to partially restrict the execution of redemption requests under certain conditions. The FSMA strongly recommended making at least one of the above-mentioned liquidity management tools available to most Belgian public funds.

In line with the specific recommendation of the first NBB-FSMA report on asset management and NBFI, one or more liquidity management tools were available, at the end of 2021, to the vast majority of the Belgian public funds for which the introduction was recommended.

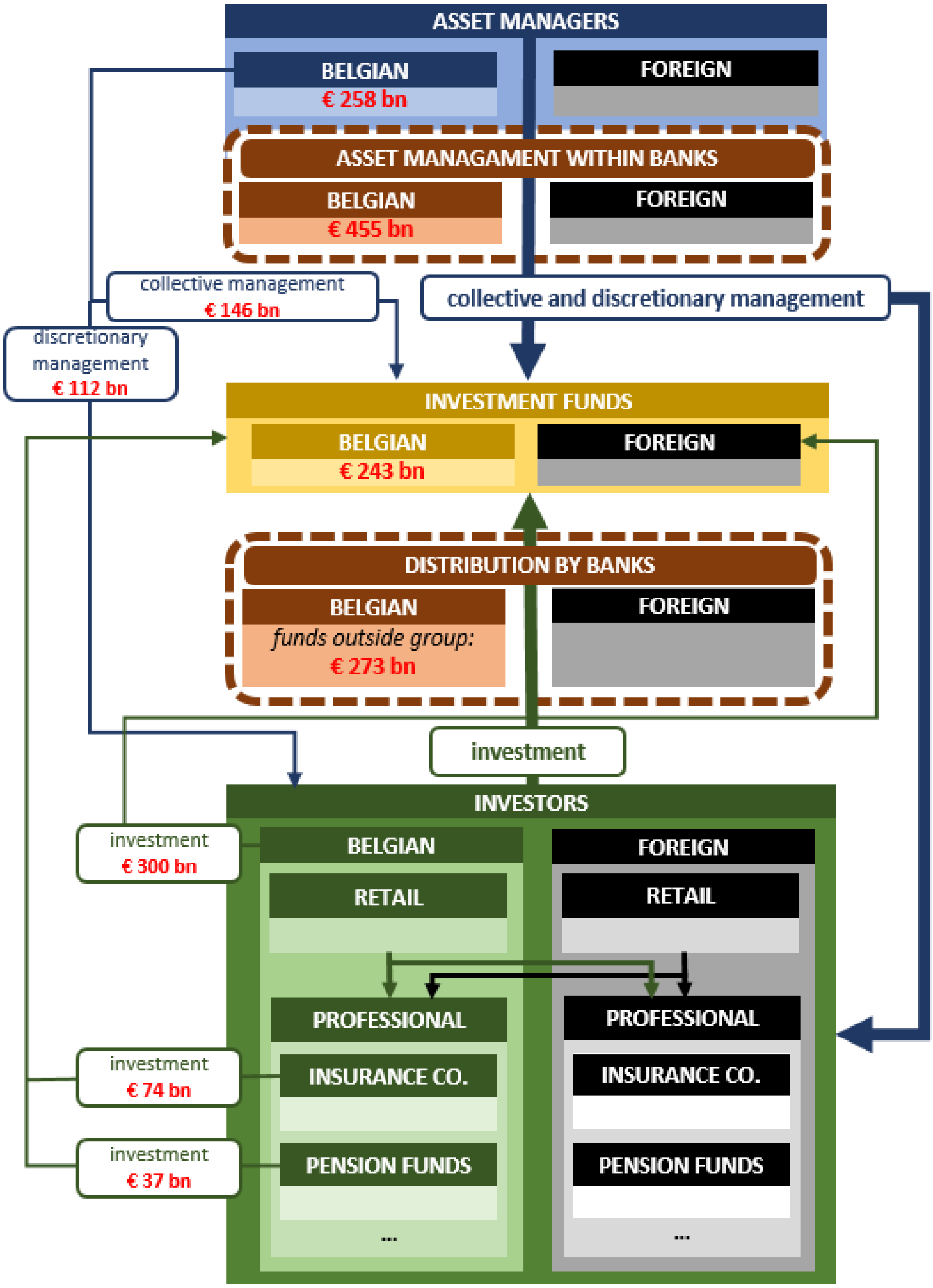
The 2017 report on asset management and NBFI also identified the need to mitigate potential risks related to the interconnectedness between the NBFI sector and asset management vehicles and other sectors of the Belgian economy (banks, insurance companies and pension funds, households and non-financial corporations). The importance of conglomerate supervisors to focus on such interlinkages and on regulatory arbitrage opportunities and the need to ensure that off-balance sheet activities are scoped into the perimeter of financial group supervision was also flagged by the International

Monetary Fund (IMF) in 2018 when it published its Financial Sector Assessment (FSAP) report assessing the Belgian financial sector. The NBB has in that regard monitored and analysed both the contractual and non-contractual links between NBFIs and asset management vehicles on the one side and banks and insurance companies on the other side, especially within financial groups. These efforts have been complemented by further developments in the regulatory field regarding bank supervisors' capabilities to deal with so-called "step-in risks" where supervised entities decide to provide financial support to an unconsolidated entity that is facing stress, in the absence of, or in excess of, any contractual obligations to provide such support in order to avoid reputational risk.

Statistical annex

II. Overview of the Belgian asset management sector

Chart 2.1: Schematic overview of the Belgian asset management sector *(€ billion, end 2021)*



Sources: FSMA, NBB.

Table 2.1: Gross statistics of asset management activities relevant for Belgium *(€ billion)*

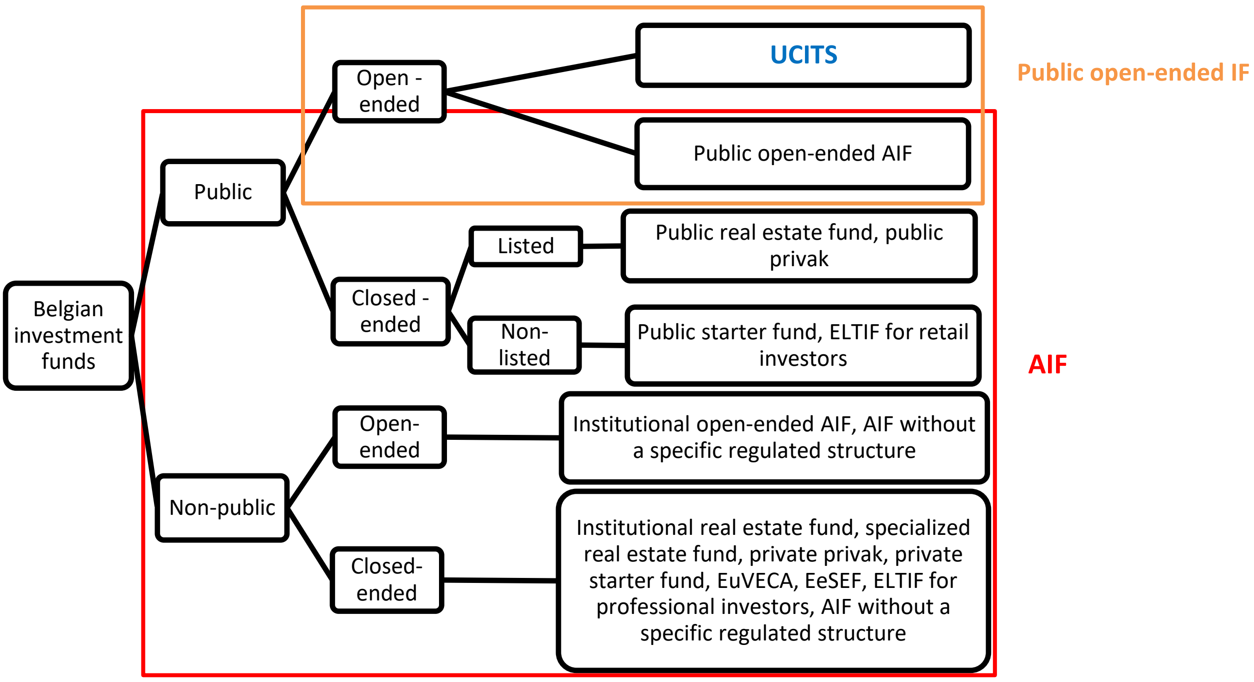
	(Net) Assets [1], [2]				
	2018	**2019**	**2020**	**2021**	**June 2022**
Belgian investment funds	**164**	**185**	**191**	**243**	**N.A.**
Public	147	165	172	212	188
Non-public	17	20	19	31	N.A.
Belgian asset managers	**219**	**246**	**269**	**258**	**227**
Assets under collective management	130	144	165	146	131
Assets under discretionary management	90	102	104	112	96
Assets under investment advice	3	5	9	11	17
Assets generating fee and commission income for Belgian banks	**545**	**617**	**639**	**728**	**647**
Assets managed in the bank	350	396	406	455	405
Collective management	209	243	262	307	272
Discretionary management	141	153	144	148	133
Collective investment products distributed but not managed	195	221	233	273	242
Foreign investment funds held by Belgian residents [2]	**201**	**236**	**250**	**300**	**277**
Households	95	107	115	139	122
Other investors	106	129	135	161	155
Investments of Belgian insurance companies in investment funds [2]	**48**	**60**	**63**	**74**	**69**
Investments of Belgian institutions for occupational retirement provision in investment funds	**25**	**30**	**33**	**37**	N.A.

Source: FSMA, NBB.

Notes:

This table presents the gross statistics (€ billion) that are discussed in this report concerning the assets involved in the Belgian asset management sector and asset management related activities in Belgium. **[1]** For the Belgian investment fund sector the net asset value (NAV) is reported. For Belgian asset managers the assets under management (AuM) are reported. For Belgian banks the assets involved in asset management activities that generate fee and commission income are reported. For foreign investment funds held by Belgian residents the size of the holdings by households and other investors is reported; for insurance companies and institutions for occupational retirement provision (pension funds), the size of their holdings of investment funds is reported. **[2]** "N.A." means these data were not yet available at the time of publication.

Chart 2.2: Overview of investment fund types in Belgium



Source: FSMA.

Table 2.2: Registered (sub-)funds and NAV of investment fund types in Belgium *(year-end)*

(a) Number of authorised or registered investment funds with a specific regulatory structure (at sub-fund level)

	2018	2019	2020	2021	June 2022
UCITS	715	777	740	659	625
Public open-ended AIF	204	76	34	17	17
Public privak/pricaf	1	1	1	1	1
Public real estate fund	0	0	0	0	0
Public starter fund	0	0	0	0	0
Institutional real estate fund	0	0	0	0	0
Institutional open-ended AIF	127	110	114	105	104
Private privak/pricaf	65	86	114	150	170
Specialised real estate fund	37	121	149	170	183
Private starter fund	0	0	0	0	0
EuVECA	0	0	0	2	5
EuSEF	0	0	0	0	0
ELTIF (retail investors)	0	0	0	0	0
ELTIF (professional investors)	0	0	0	0	0
Total	**1,149**	**1,171**	**1,152**	**1,104**	**1,105**

(b) Net asset value (€ million)

	2018	2019	2020	2021	June 2022
Belgian public open-ended investment funds					
UCITS	123,639	152,373	162,207	209,852	186,389
Public open-ended AIFs	23,313	12,496	9,541	2,619	2,100
Other AIFs					
Other public AIFs	120	136	153	180	155
Non-public AIFs	16,504	19,683	18,652	30,697	N.A.
Total	**163,576**	**184,688**	**190,553**	**243,348**	**N.A.**

(c) Number of reporting investment funds (at sub-fund level)

	2018	2019	2020	2021	June 2022
Belgian public open-ended investment funds					
UCITS	715	777	740	659	625
Public open-ended AIF	204	76	34	17	17
Other AIFs					
Other public AIFs	1	1	1	1	1
Non-public AIFs	168	207	241	284	N.A.
Total	**1,088**	**1,061**	**1,016**	**961**	**N.A.**

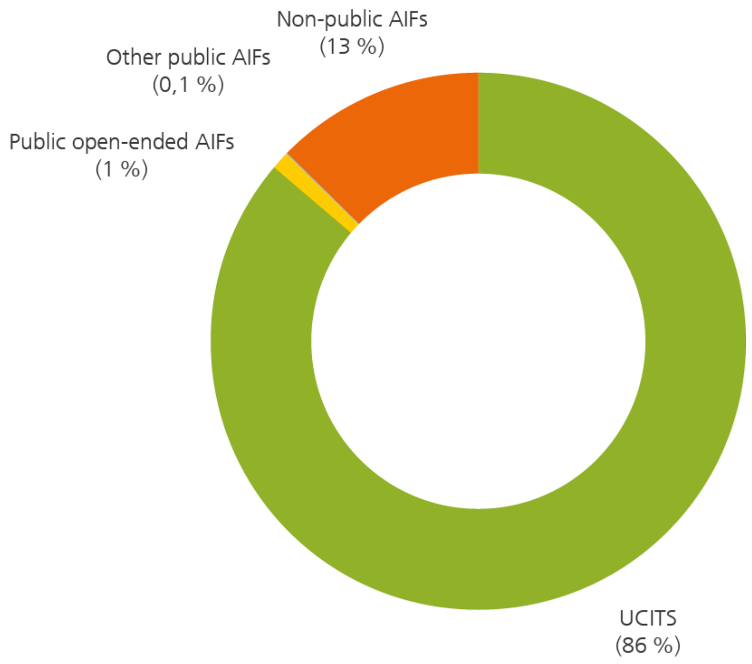
Source: FSMA, FPS Finance.

<u>**Notes:**</u>

This table presents the number of registered (sub-) funds and their net asset value (in € million) of the Belgian investment fund industry, classified according to the applicable regulatory regime. Panel (a) shows the number of authorised or registered investment funds with a specific regulatory structure (at sub-fund level). These funds are either authorized or registered by the FSMA or registered by the FPS Finance. Panel (b) shows the net asset value of Belgian investment funds for which the FSMA is the competent authority receiving the reports concerning these funds. Panel (c) shows the number of investment funds for which the net asset value is reported and included in Panel (b).

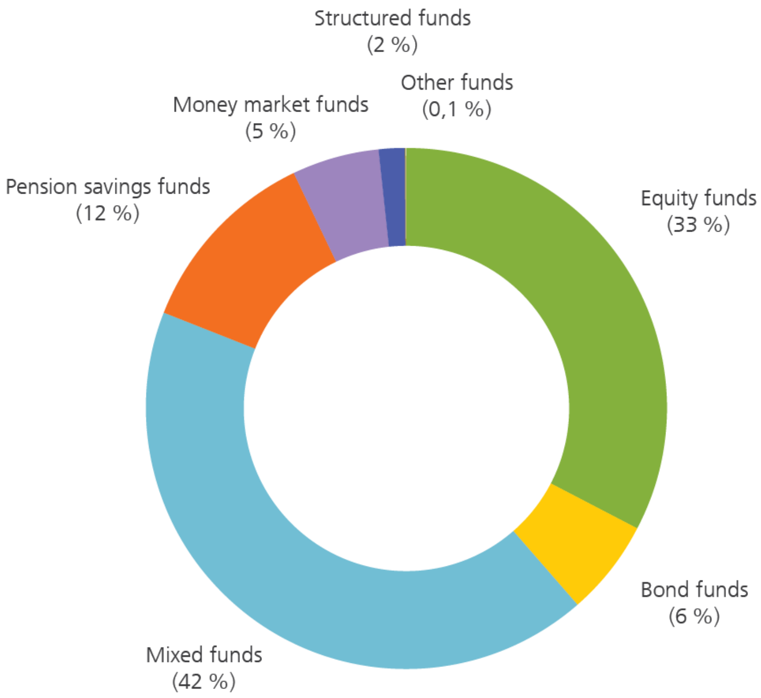
There is a distinction between the number of funds shown in Panel (a) and (c) because not all entities that take the legal form of an institutional open-ended AIF, a specialised real estate fund, a private privak/pricaf or a private starter fund under Belgian law: (1) are classified as AIFs under the provisions of AIFMD, or (2) have a manager for which the FSMA is the competent authority (it is possible that Belgian AIFs have a manager for which the FSMA is not the competent authority).

Chart 2.3: Breakdown of the NAV of Belgian investment funds according to fund type *(end 2021)*



Source: FSMA.

Chart 2.4: Breakdown of the NAV of public open-ended investment funds by investment policy *(end June 2022)*



Source: FSMA.

Table 2.3: Breakdown of the NAV of Belgian public open-ended investment funds according to investment policy and legal form *(€ million, year-end)*

	UCITS					**Public open-ended AIF**					**Total**				
	2018	**2019**	**2020**	**2021**	**June 2022**	**2018**	**2019**	**2020**	**2021**	**June 2022**	**2018**	**2019**	**2020**	**2021**	**June 2022**
Equity funds	33,822	51,567	54,691	77,285	62,949	165	120	121	151	127	33,986	51,687	54,813	77,437	63,076
o/w fund of funds or feeder	*2,321*	*3,366*	*4,414*	*4,016*	*5,199*	*151*	*120*	*121*	*151*	*127*	*2,472*	*3,487*	*4,535*	*4,167*	*5,326*
Bond funds	15,581	18,271	19,034	13,308	11,503	2,220	14	10	7	4	17,801	18,285	19,045	13,315	11,507
o/w fund of funds or feeder	*8,510*	*8,445*	*8,409*	*1,798*	*2,094*	*197*	*14*	*10*	*7*	*4*	*8,707*	*8,459*	*8,419*	*1,805*	*2,098*
Mixed funds	53,886	62,736	66,237	86,447	77,581	5,129	2,694	2,360	2,123	1,685	59,016	65,430	68,598	88,571	79,266
o/w fund of funds or feeder	*44,123*	*52,153*	*54,725*	*76,633*	*68,606*	*4,894*	*2,578*	*2,239*	*2,090*	*1,654*	*49,017*	*54,731*	*56,964*	*78,723*	*70,260*
Pension savings funds	6,868	12,505	15,246	25,231	21,396	11,360	8,804	6,998	337	284	18,228	21,309	22,244	25,568	21,680
o/w fund of funds or feeder				*479*	*420*	*279*	*359*	*400*			*279*	*359*	*400*	*479*	*420*
Money market funds	9,279	2,309	3,188	3,932	9,821	2,308					11,587	2,309	3,188	3,932	9,821
Structured funds	3,811	4,657	3,756	3,167	2,939	2,070	864	52			5,882	5,521	3,808	3,167	2,939
Other funds	391	328	54	160	138	60					451	328	54	160	138
Fund of funds **[1]**															
Total	**123,639**	**152,373**	**162,207**	**209,531**	**186,326**	**23,313**	**12,496**	**9,541**	**2,619**	**2,100**	**146,951**	**164,869**	**171,749**	**212,150**	**188,426**
o/w fund of funds or feeder	***54,954***	***63,964***	***67,548***	***82,926***	***76,319***	***5,522***	***3,071***	***2,771***	***2,248***	***1,785***	***60,475***	***67,036***	***70,319***	***85,174***	***78,104***

Source : FSMA.

Notes:

This table presents a breakdown of the net asset value (in € million) of the Belgian public open-ended investment funds, classified according to their investment policy and the applicable regulatory regime (UCITS or AIF). Investment funds investing primarily indirectly in securities or money market instruments, by investing into units of other funds, are first classified according to the asset class(es) they intend to gain (indirect) exposure, and secondly labeled as 'fund of funds' and/or 'feeders'. A feeder fund is a (sub-)fund which invests at least 85% of its assets in units of another (sub-)fund (the master fund). Some investment funds have been subject to statistical reclassification in 2017.

Table 2.4: Breakdown of the NAV of Belgian public open-ended investment funds according to investment policy and investments

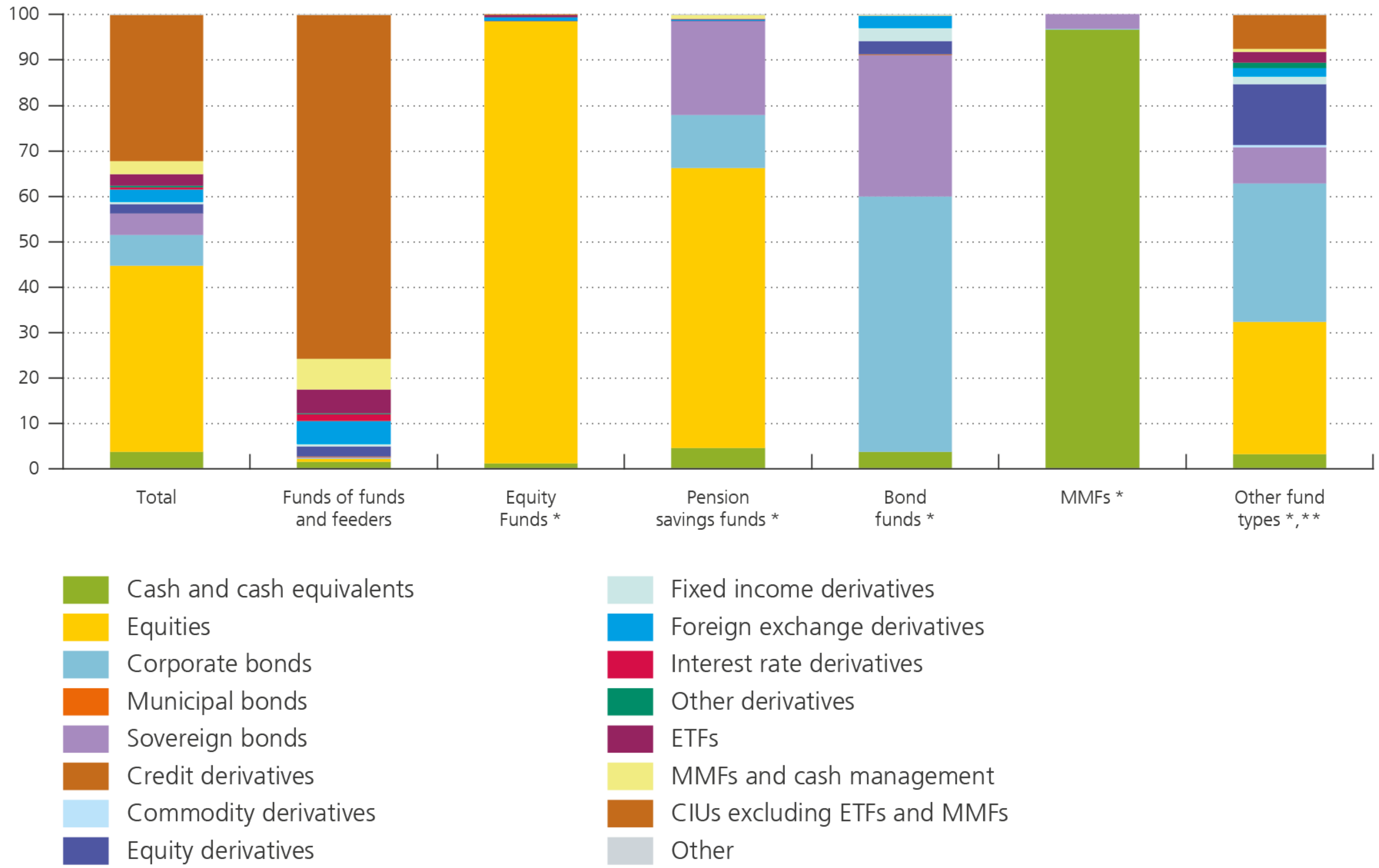
Asset class	Total	Funds of funds and feeders	Equity Funds [1]	Pension savings funds [1]	Bond funds [1]	MMFs [1]	Other fund types [1] [2]
Cash and cash equivalents	3.70%	1.58%	1.26%	4.64%	3.76%	96.66%	3.27%
Equities	41.02%	0.54%	97.28%	61.51%	0.00%	0.00%	29.04%
Bonds	11.44%	0.47%	0.06%	32.44%	87.28%	3.34%	38.49%
Corporate bonds	6.69%	0.25%	0.05%	11.75%	56.12%	0.12%	30.42%
Municipal bonds	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Sovereign bonds	4.75%	0.22%	0.01%	20.69%	31.16%	3.22%	8.07%
Derivatives	6.07%	9.61%	0.76%	0.25%	8.65%	0.00%	18.65%
Credit derivatives	0.03%	0.04%	0.00%	0.00%	0.22%	0.00%	0.00%
Commodity derivatives	0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.45%
Equity derivatives	2.09%	2.33%	0.04%	0.14%	2.88%	0.00%	13.34%
Fixed income derivatives	0.44%	0.38%	0.00%	0.00%	2.88%	0.00%	1.69%
Foreign exchange derivatives	2.65%	5.10%	0.69%	0.12%	2.67%	0.00%	1.92%
Interest rate derivatives	0.64%	1.54%	0.00%	0.00%	0.00%	0.00%	0.00%
Other derivatives	0.19%	0.23%	0.04%	0.00%	0.00%	0.00%	1.25%
Collective Investment Undertakings	37.70%	87.74%	0.64%	1.01%	0.13%	0.00%	10.49%
ETFs	2.56%	5.26%	0.57%	0.13%	0.03%	0.00%	2.29%
MMFs and cash management	2.98%	6.78%	0.00%	0.85%	0.10%	0.00%	0.71%
CIU excluding ETFs and MMFs	32.16%	75.70%	0.07%	0.03%	0.00%	0.00%	7.49%
Other	0.06%	0.07%	0.00%	0.15%	0.17%	0.00%	0.05%
Total exposures	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source : FSMA.

Notes :

This table presents the gross exposures of Belgian public open-ended investment funds. Asset classes are based on the AIFMD reporting scheme. Derivatives exposures are converted based on a pre-specified methodology. **[1]** Excluding funds of funds and feeders. **[2]** This category includes mixed funds that are not classified as funds of funds, structured funds and other funds.

Chart 2.5: Breakdown of the NAV of Belgian public open-ended investment funds according to investment policy and investments



Source : FSMA.

Notes :

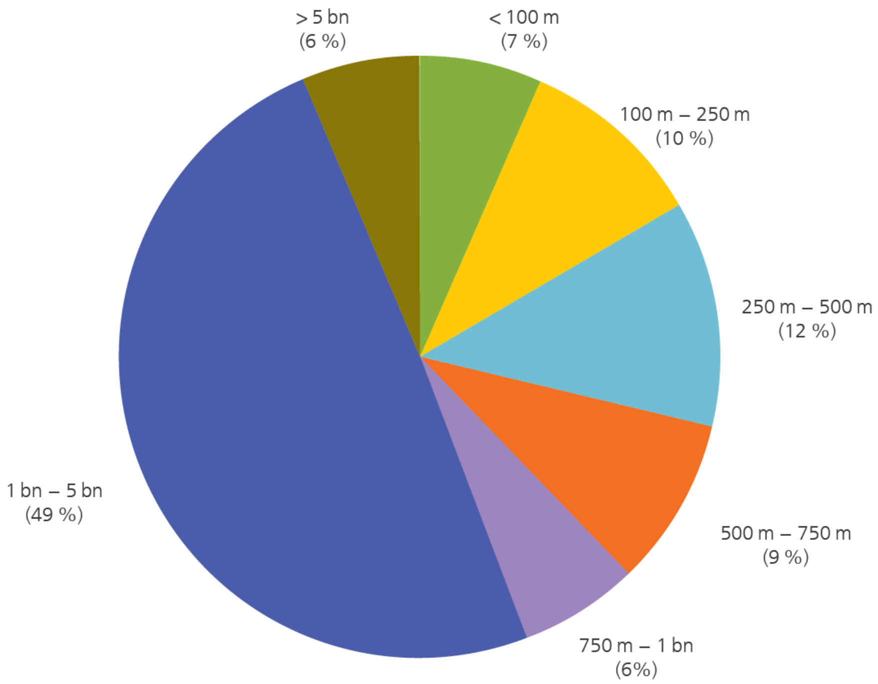
This Chart presents the gross exposures of Belgian public open-ended investment funds. Asset classes are based on the AIFMD reporting scheme. Derivatives exposures are converted based on a pre-specified methodology. ***** Excluding funds of funds and feeders. ****** This category includes mixed funds that are not classified as funds of funds, structured funds and other funds.

Table 2.5: Breakdown of the total NAV of Belgian public open-ended investment funds according to investment fund size *(end 2021)*

Size bucket	Total net assets (€ million)	Number of sub-funds
<100m	14,006	365
100m - 250m	21,245	131
250m - 500m	25,816	74
500m - 750m	19,243	32
750m-1bn	13,603	16
1bn - 5bn	105,082	51
>5bn	13,475	2
Total	**212,471**	**671**

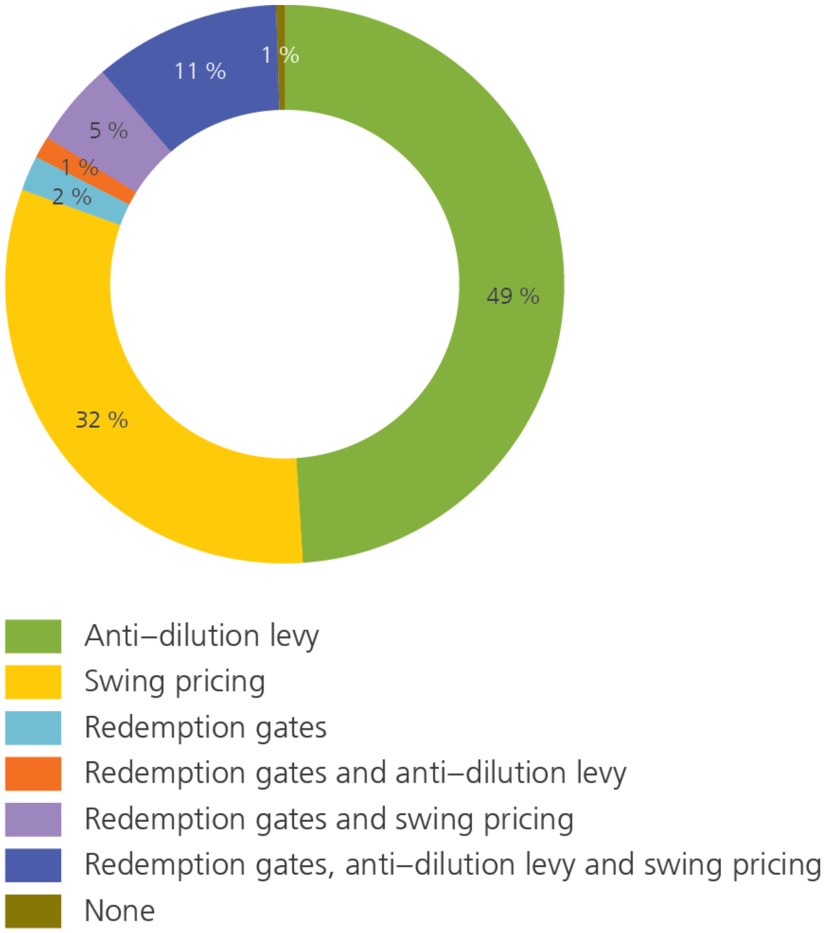
Source : FSMA.

Chart 2.6: Breakdown of the NAV of Belgian public open-ended investment funds according to investment fund size *(% of total net asset value, end 2021)*



Source : FSMA.

Chart 2.7: Liquidity management tools of Belgian public open-ended investment funds *(% of total net asset value, end 2021)*



Source : FSMA.

Note:

This chart presents the breakdown of liquidity management tools available for Belgian public open-ended investment funds for which the FSMA has recommended that liquidity management tools should be available, according to their constitutional documents and/or pre-contractual information. The breakdown is based on the total net asset value.

Table 2.6: Number of Belgian UCITS and AIF management companies, their total assets under management and assets under investment advice *(year-end)*

(a) UCITS and AIF management companies

	2018	**2019**	**2020**	**2021**	**June 2022**
Number of authorised management companies	13	14	15	16	17
Assets under management (€ billion)	**219.4**	**245.6**	**268.5**	**257.9**	**227.2**
Collective management (€ billion)	129.7	143.7	164.6	146.3	131
Discretionary management (€ billion)	89.7	101.8	103.9	111.6	96.2
Assets under investment advice (€ billion)	**3.4**	**4.6**	**8.7**	**10.6**	**16.6**
Assets under management and under advice (€ billion)	**222.8**	**250.2**	**277.2**	**268.4**	**243.7**

Source : FSMA.

Notes :

This table presents the number of authorised Belgian management companies (UCITS management companies and/or AIF managers), their assets under management and assets under investment advice. The table does not contain statistics on registered ('small') AIF managers (they are included in part (b) of this table). The assets under management exclude the following amounts: (1) management of the assets delegated to another asset manager governed by foreign law, (2) management of UCITS and AIFs governed by Belgian law that is carried out abroad, (3) the amount managed by branches registered in Belgium of asset managers governed by another EU Member State, (4) management carried out by small AIF managers. The investment advice included in these figures refers to investment advice given in the context of a specific portfolio (structural investment advice). Ad hoc investment advice at the request of the client is therefore excluded.

(b) Sub-threshold AIF managers

	2018	**2019**	**2020**	2021	June 2022
Number of registered management companies	81	112	140	176	N.A.
Assets under management (€ million)	**3,026**	**4,360**	**6,145**	**7,271**	N.A.

Source : FSMA.

Notes :

This table presents the number of Belgian sub-threshold AIF managers and their assets under management. "N.A." means these data were not yet available at the time of publication.

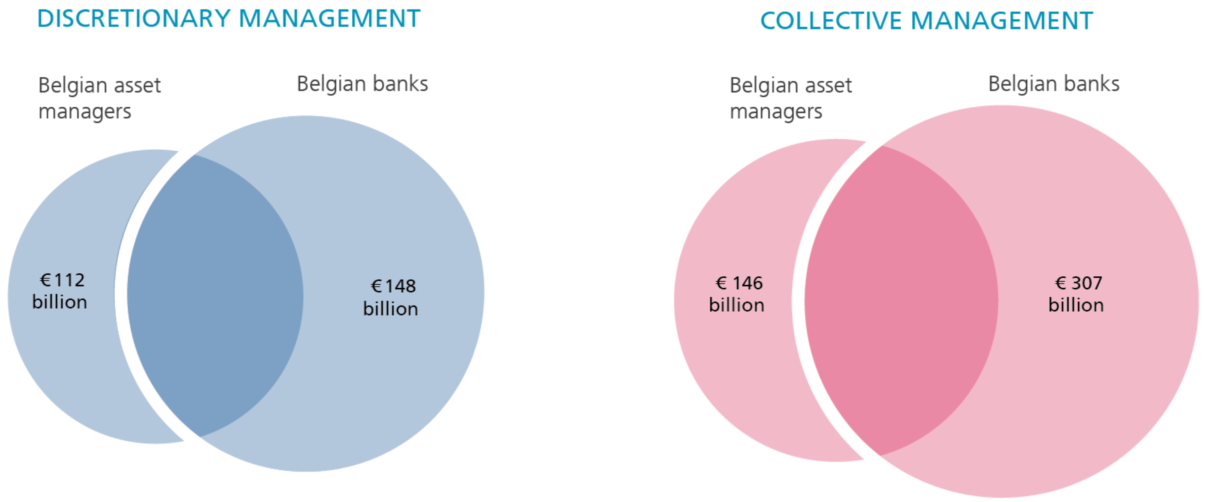
Table 2.7: Number of registered (sub-)funds and net asset value of publicly offered open-ended foreign investment fund types in Belgium *(year-end)*

		Registered/ notified (sub-) funds				Net asset value (€ million)			
		2018	**2019**	**2020**	**2021**	**2018**	**2019**	**2020**	**2021**
UCITS	Umbrella funds	550	544	550	559	N.A.	N.A.	N.A.	N.A.
	Sub-funds	4,327	4,492	4,513	4 ,649				
Public open-ended AIF	Umbrella funds	2	2	2	2	318	558	427	16
	Sub-funds	4	4	4	3				
Total	Umbrella funds	552	546	552	561	318	558	427	16
	Sub-funds	4,331	4,496	4,517	4,652				

Source : FSMA.

Notes:
This tables presents the number of registered (sub-) funds and their net asset value (in € million) of the foreign open-ended investment funds publicly offered in Belgium, classified according to the applicable regulatory regime. The table does not contain statistics on foreign investment funds distributed, but not publicly offered, in Belgium.

Chart 2.8: Overlap between AuM of Belgian banks and AuM of Belgian asset managers *(end 2021)*



Source: FSMA, NBB.

Table 2.8: Investments by Belgian residents in foreign investment funds *(€ billion, end of period)*

	2020			**2021**			**June 2022**		
	MMFs	**Non-MMF IFs**	**Total**	**MMFs**	**Non-MMF IFs**	**Total**	**MMFs**	**Non-MMF IFs**	**Total**
Total	**12.1**	**237.7**	**249.8**	**10.6**	**289.7**	**300.4**	**9.4**	**267.8**	**277.2**
By holding sector									
Households	1.8	113.1	115.0	1.1	137.7	138.9	0.9	121.0	121.9
Other non-financial investors (incl. general government)	2.3	11.8	14.2	2.1	14.1	16.2	1.6	17.0	18.7
Banks	0.1	0.1	0.2	0.0	0.1	0.1	0.0	0.1	0.1
Non-MMF investment funds	1.9	60.4	62.4	4.3	63.7	68.0	3.1	58.7	61.8
Insurance corporations	2.1	31.7	33.7	2.7	49.2	51.9	3.0	50.6	53.6
Pension funds	0.3	18.9	19.3	0.2	21.5	21.7	0.7	18.8	19.5
Other financial corporations	3.5	1.6	5.1	0.2	3.3	3.5	0.1	1.6	1.7
By issuing country									
DE	0.0	7.8	7.8	0.0	7.8	7.8	0.0	6.5	6.5
FR	7.2	11.4	18.6	5.7	17.9	23.6	4.6	16.5	21.2
IE	0.2	20.2	20.4	0.2	26.3	26.5	0.8	23.7	24.6
LU	4.7	195.6	200.3	4.7	234.9	239.6	3.9	218.8	222.6
NL	-	0.8	0.8	-	1.0	1.0	-	0.8	0.8
Other countries	0.0	1.9	1.9	0.0	1.9	1.9	0.0	1.5	1.5

Source: NBB, ECB (CSDB).

Notes:
This table presents a breakdown, by holding sector and by issuing country, of the investments by Belgian residents in foreign investment funds. The figures are based on the securities holdings statistics (SHS).

Table 2.9: Fee and commission (F&C) income and assets involved in asset management-related activities of Belgian banks

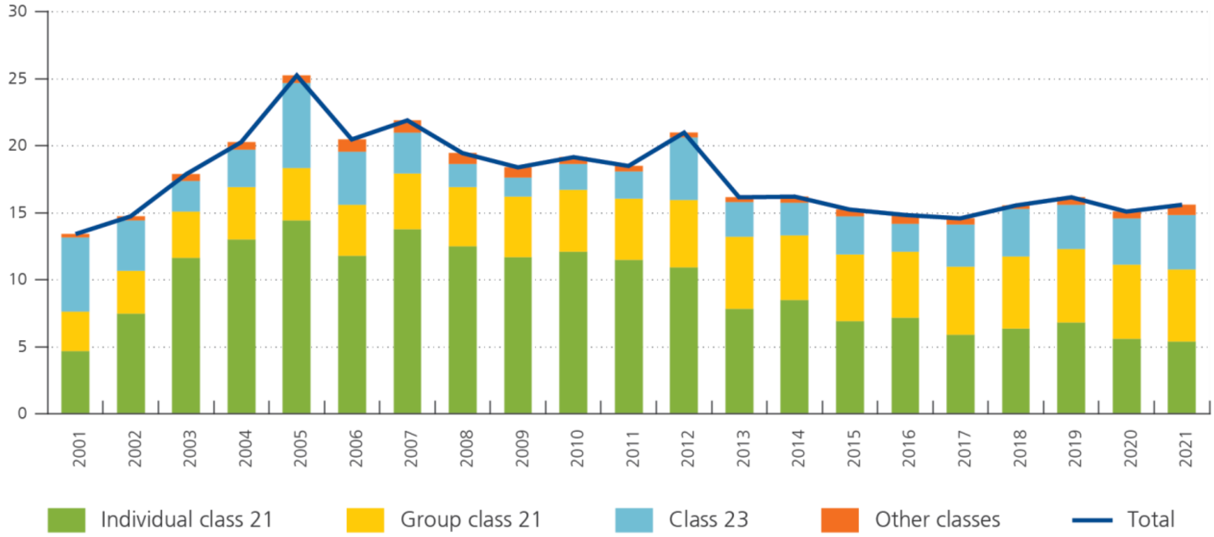
	2020			2021			June 2022		
	Assets involved	**F&C income**	**Average remuner -ation**	**Assets involved**	**F&C income**	**Average remuner-ation**	**Assets involved**	**F&C income**	**Average remuner-ation**
	€ bn, year-end	*€ mln, full year*	*bps*	*€ bn, year-end*	*€ mln, full year*	*bps*	*€ bn, year-end*	*€ mln, half year*	*bps*
Assets managed within the bank **[1]**	406	1,905	*47*	455	2,416	*53*	405	1,214	*60*
Collective management	262	N.A.	N.A.	307	N.A.	N.A.	272	N.A.	N.A.
Discretionary management	144			148			133		
Collective investment products distributed by the bank (but not managed within the bank) **[2]**	233	716	*31*	273	860	*32*	242	424	*35*
Total of the activities above	**639**	**2,621**	***41***	**728**	**3,276**	***45***	**647**	**1,639**	***51***
Custody **[3]**	857	169	*2*	997	190	*2*	876	95	*2*
Collective investment	265	N.A.	N.A.	324	N.A.	N.A.	281	N.A.	N.A.
Other	592			673			594		
Central administrative services for collective investment **[4]**	191	151	*8*	248	174	*7*	221	84	*8*

Source: NBB, FINREP.

Notes:

This table presents statistics of the asset management related activities of Belgian banks on a consolidated basis. It shows, by type of activity, the assets involved, the (gross) fee and commission income earned and the average remuneration (calculated as the ratio of the assets involved and the (gross) fee and commission income). These data exclude two banks that are specialised in custodian activities. **[1]** "Assets managed within the bank" refers to assets belonging directly to the customers, for which the institution is providing management. The consolidated figures also include assets managed by subsidiaries of Belgian banks. **[2]** "Collective investment products distributed by the bank (but not managed within the bank)" refers to collective investment products issued by entities outside the group that the institution has distributed to its current customers. **[3]** "Custody" refers to the services of safekeeping and administration of financial instruments for the account of clients provided by the institution and services related to custodianship such as cash and collateral management. **[4]** "Central administrative services for collective investment" refers to the administrative services provided by the institution to collective investment undertakings. It includes, among others, the services of transfer agent; of compiling accounting documents; of preparing the prospectus, financial reports and all other documents intended for investors; of carrying out the correspondence by distributing financial reports and all other documents intended for investors; of carrying out issues and redemptions and keeping the register of investors; as well as of calculating the net asset value.

***Chart 2.9: Belgian insurers' life insurance premiums** (€ billion)*



Source: NBB.

***Table 2.10: Assets covering class 23 contracts' technical provisions of Belgian Life insurers** (€ million, end of period)*

	2018	**2019**	**2020**	**2021**	**June 2022**
Collective investment undertakings	31,615	40,12	42,093	48,741	43,607
Equity funds	8,371	13,512	11,856	15,878	13,414
Asset allocation funds **[1]**	6,638	8,924	9,355	10,607	9,637
Other funds **[2]**	11,895	12,885	11,906	11,149	9,167
Debt funds	4,041	3,962	7,823	10,045	10,105
MMFs, real estate funds and alternative funds **[3]**	670	837	1,153	1,063	1,284
Cash and deposits	2,403	2,218	1,368	1,098	1,014
Deposits with term longer than 1 year	1,856	1,647	1,3	977	874
Transferable deposits and cash	547	571	68	121	140
Corporate bonds	995	1,168	1,091	937	721
Other **[4]**	778	790	477	401	306
Total	**35,791**	**44,297**	**45,029**	**51,177**	**45,648**

Source: NBB, Solvency II reporting.

Notes:

This table presents a breakdown of the assets covering the technical provisions for class 23 contracts of Belgian insurers. **[1]** "Asset allocation funds" are collective investment undertakings which invest their assets pursuing a specific asset allocation objective, e.g. primarily investing in the securities of companies in countries with nascent stock markets or small economies, specific sectors or group of sectors, specific countries or other specific investment objective **[2]** "Other funds" are funds other than equity, debt, money market, asset allocation, real estate, alternative, private equity and infrastructure funds **[3]** "Alternative funds" are collective investment undertakings whose investment strategies falling under categories such as hedging, event driven, fixed income directional and relative value, managed futures, commodities etc. **[4]** "Other" includes structured notes, mortgages and loans, government bonds, equity, etc.

Table 2.11: Belgian insurers' investments in CIUs other than in the context of their unit-linked life insurance business *(€ million, end of period)*

	2018	2019	2020	2021	June 2022
Debt funds	5,155	6,593	6,995	7,680	6,905
Money Market Funds (MMFs)	1,045	1,522	1,249	2,860	3,236
Equity funds	1,548	1,564	1,885	2,091	1,709
Real estate funds	1,359	1,928	1,828	2,340	2,615
Alternative funds	986	652	1,002	861	927
Other funds	1,078	2,053	2,692	3,710	3,264
Private equity funds	858	900	955	1,309	1,918
Asset allocation funds	268	553	556	727	1,709
Infrastructure funds	226	444	509	807	1,018
Total	**12,523**	**16,209**	**17,672**	**22,384**	**23,301**

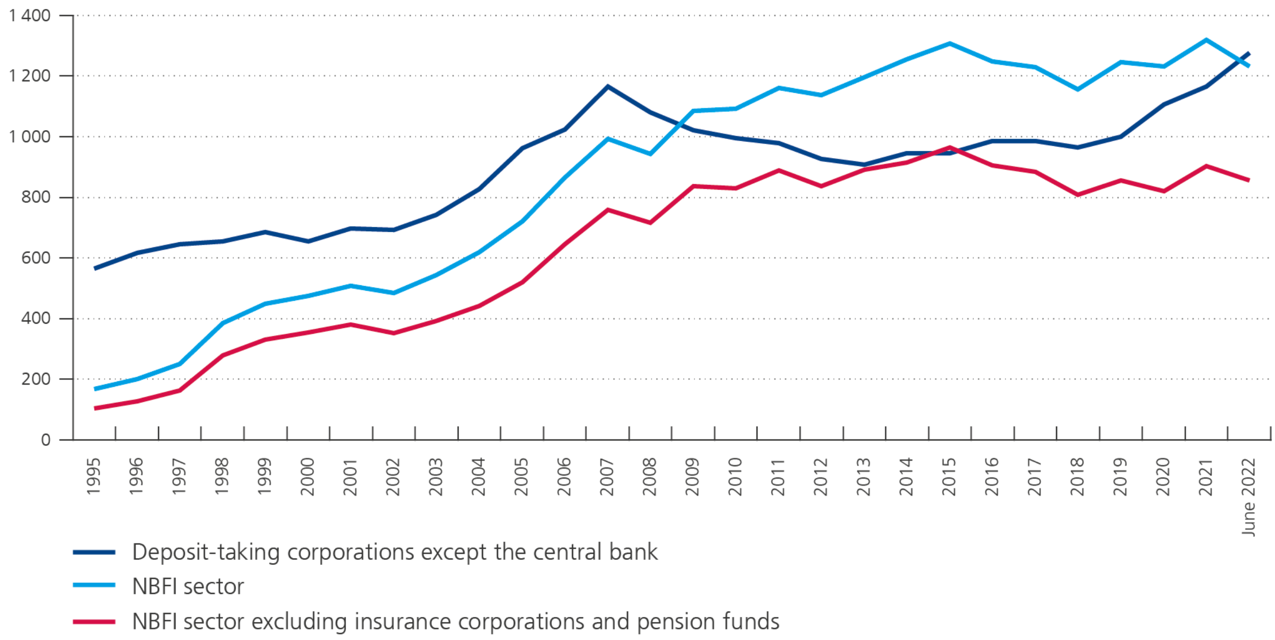
Source: NBB, Solvency II reporting.

Table 2.12: Total assets and investments by Belgian institutions for occupational retirement provision *(€ million, year-end)*

	2018	2019	2020	2021
Investments	31,936	37,819	40,868	44,909
Investment fund units	24,975	30,007	32,947	36,507
Total assets	**34,314**	**40,209**	**42,675**	**47,093**

Source: FSMA.

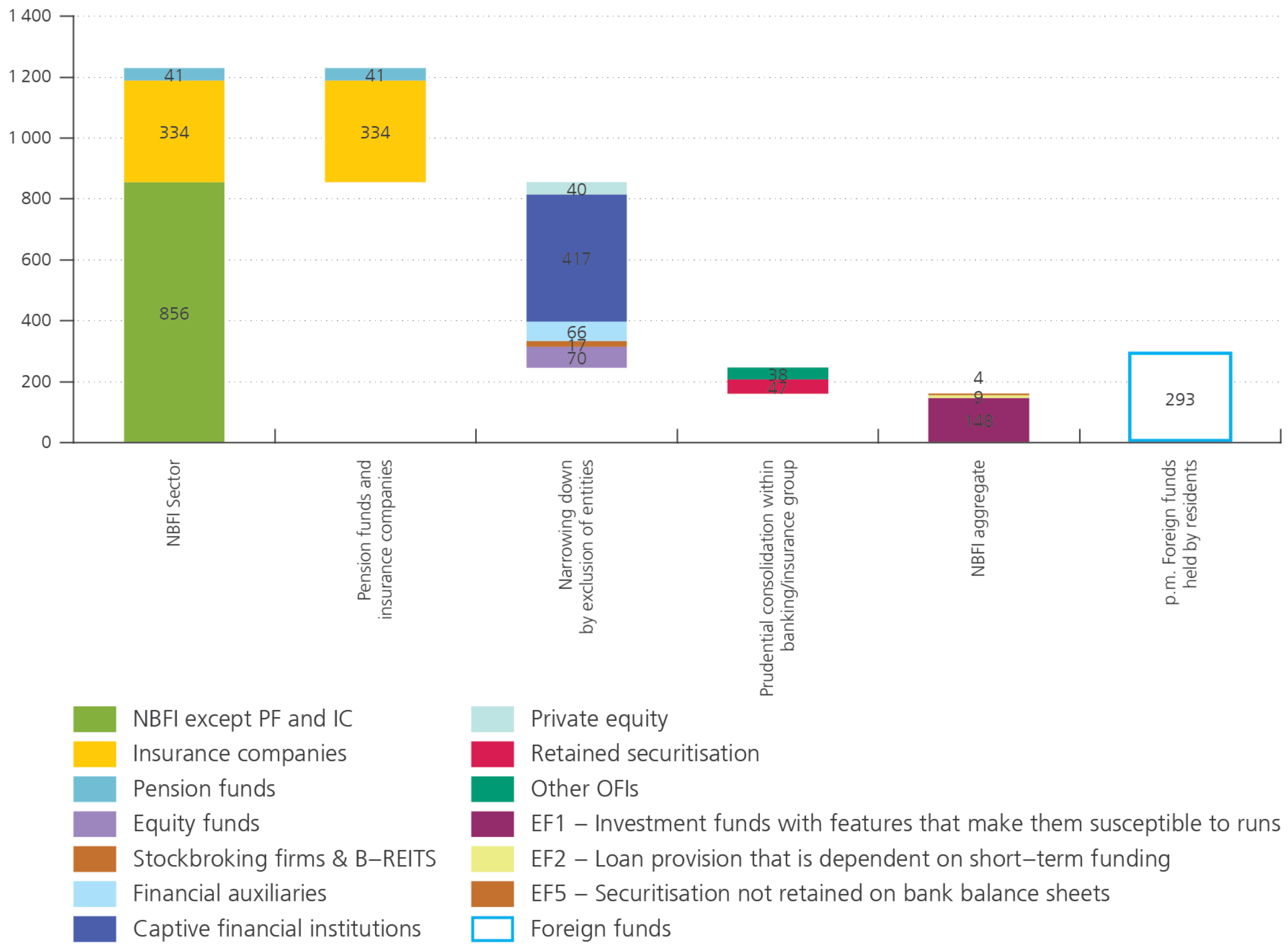
Chart 3.1: Total financial assets of the Belgian financial sector *(in € billion)*



Source: NBB calculations based on NAI data.

Notes: NBFI = Non-bank financial intermediation.

***Chart 3.2: Delineation of the Belgian NBFI sector according to the narrow FSB definition** (€ billion, June 2022)*

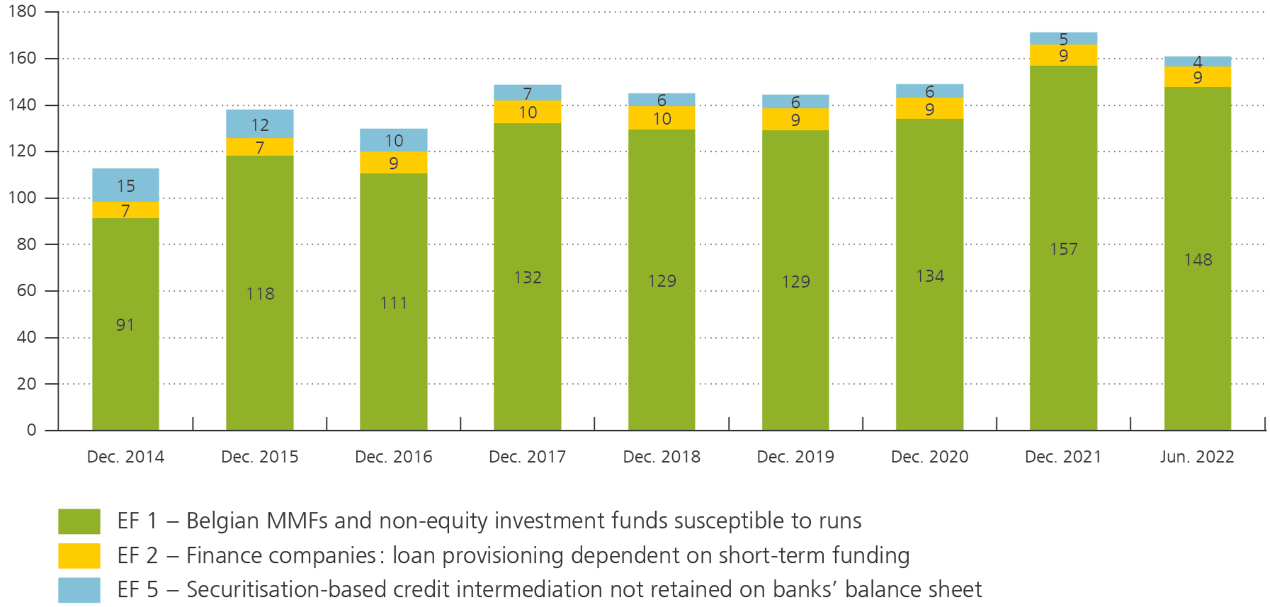


Source: NBB calculations based on NAI data.

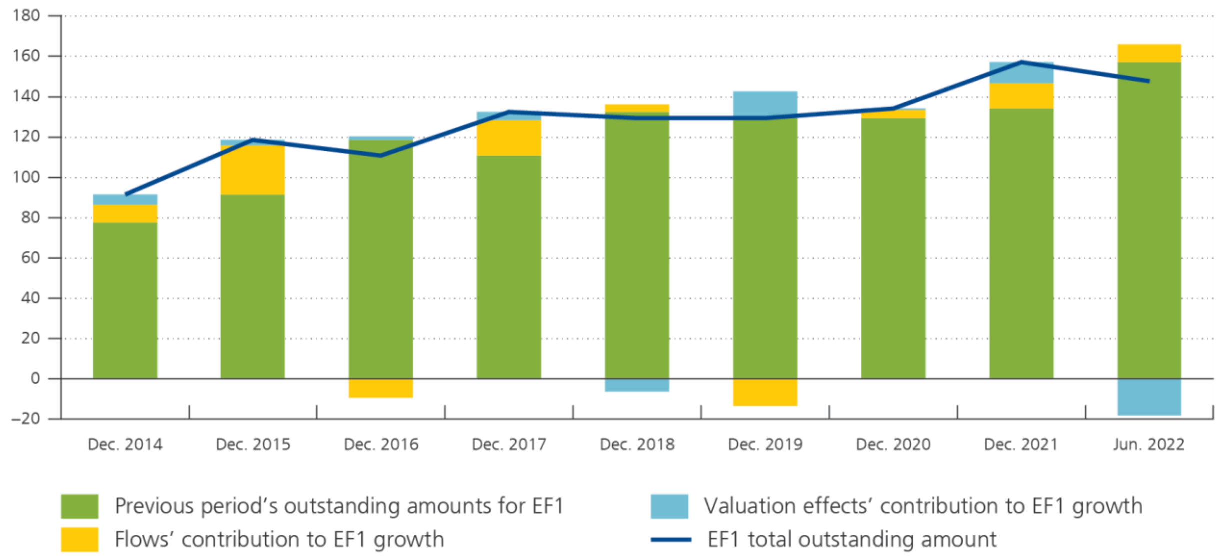
__Notes:__ NBFI = Non-bank financial intermediation ; PF = Pension fund; IC = Insurance company; OFIs = Other financial intermediaries; B-REIT = Belgian Real Estate Investment Trust

***Chart 3.3: Belgian NBFI sector, broken down by economic function, according to the narrow concept of the FSB** (€ billion)*

(a) End-of-period outstanding amounts



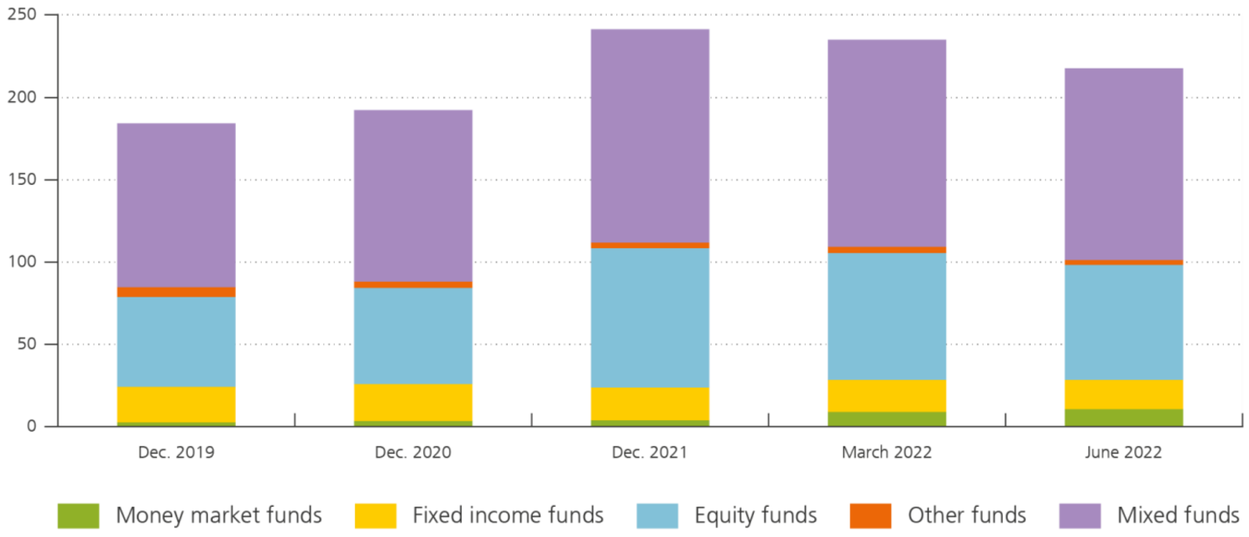
(b) End-of-period outstanding amounts and distinction between flows and price effect for EF 1



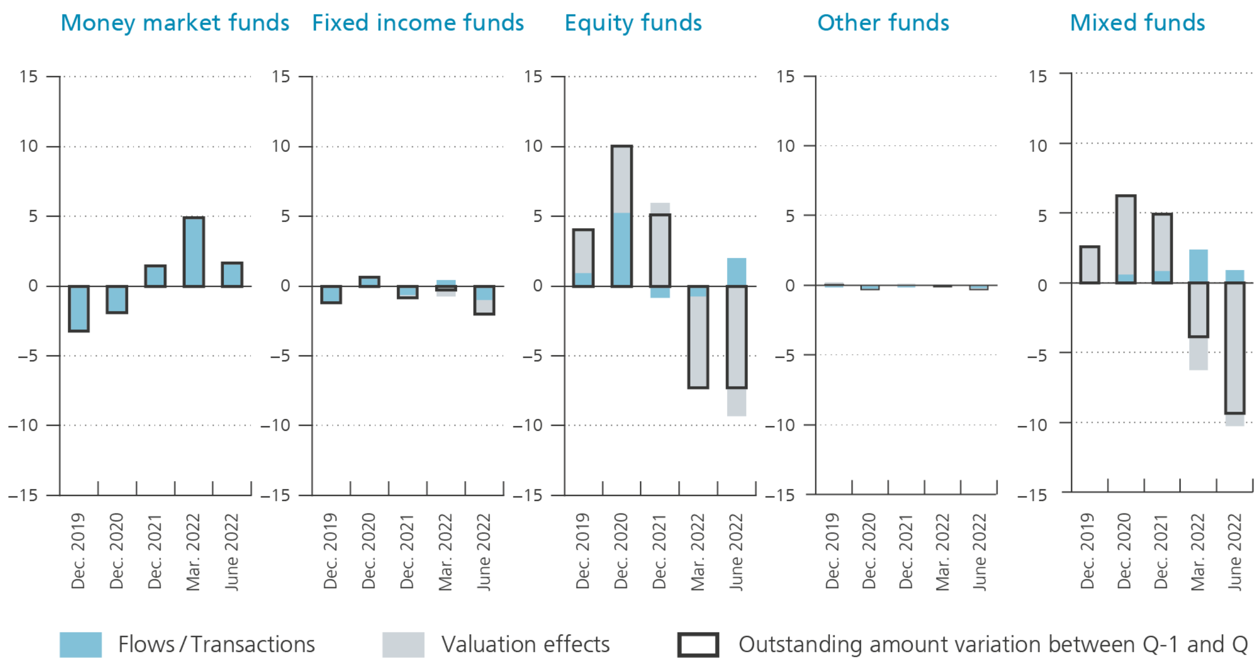
Source: NBB calculations based on NAI data.

Chart 3.4: Belgian investment funds' total financial assets) *(€ billion)*

(a) End-of-period outstanding amounts

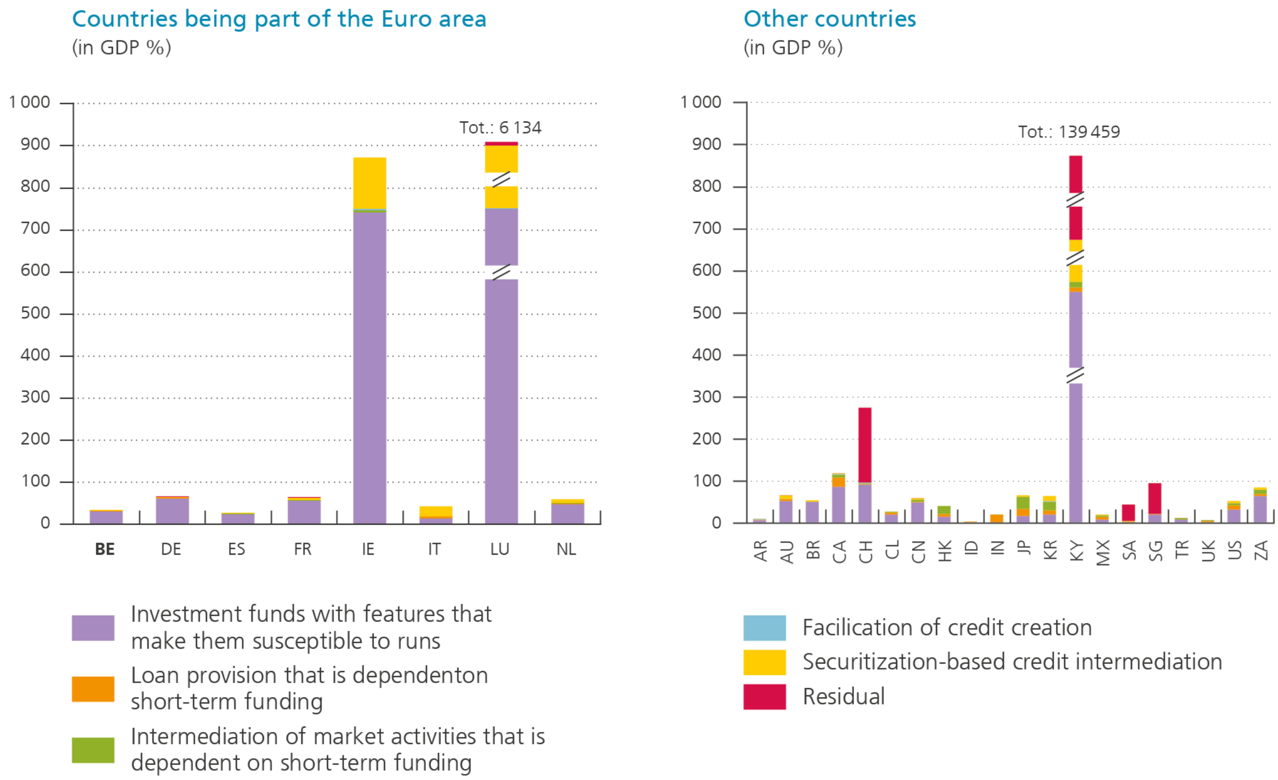


(b) Quarterly outstanding amount variation distinguished between flows and valuation effect



Source: NBB calculations based on NAI data.

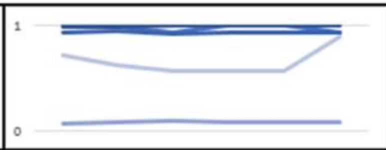
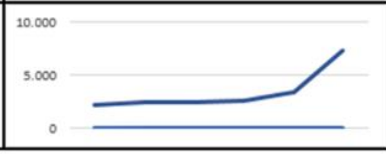
Chart 3.5: International comparison of the NBFI sector: narrow FSB measure*[1] *(% GDP, end 2020)



Sources: FSB, NBB.

__Notes:__ **[1]** Entities consolidated in banking groups are excluded if these data are available; **[2]** Residual = part of the NBFI sector that is not classified in an economic function.

Table 4.1: Risk metrics for the Belgian NBFI sector according to type of risk and economic function *(ratios)*

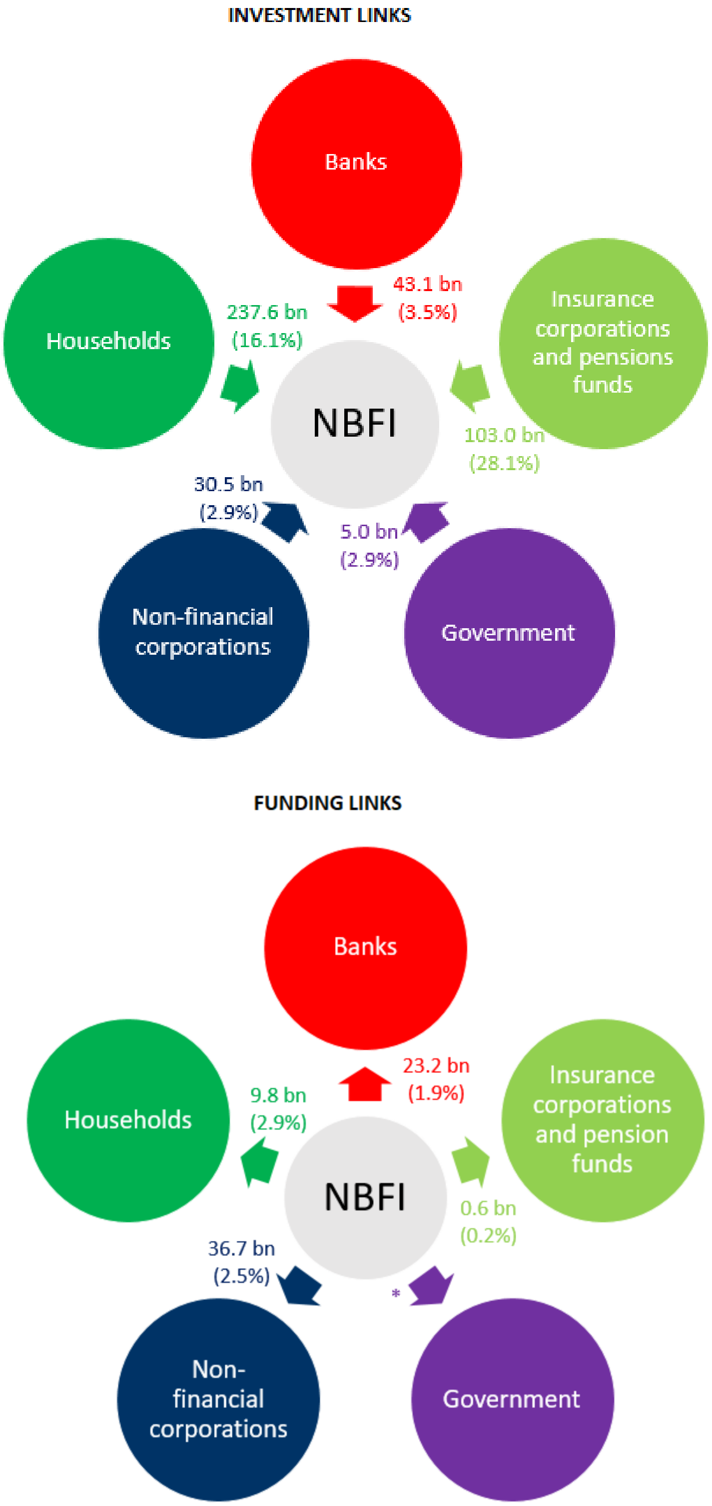
	Risk Metric	2016	2017	2018	2019	2020	2021	Trend (2016 - 2021)	Intrepretation
Credit Intermediation 1 (CI1) **[1]**	EF1 (Fixed Income Funds)	0,7	0,6	0,6	0,6	0,6	0,9		Between 0 and 1 ; Higher values show more involvement in credit intermediation
	EF1 (Mixed Funds)	0,1	0,1	0,1	0,1	0,1	0,1		
	EF1 (Money Market Funds)	1,0	1,0	0,9	1,0	1,0	0,9		
	EF2 (Finance companies)	0,9	0,9	0,9	0,9	0,9	0,9		
	EF5 (SFV's)	1,0	1,0	1,0	1,0	1,0	1,0		
Credit Intermediation 2 (CI2) **[2]**	EF1 (Fixed Income Funds)	0,0	0,0	0,0	0,0	0,0	0,0		
	EF1 (Mixed Funds)	0,0	0,0	0,0	0,0	0,0	0,0		
	EF1 (Money Market Funds)	0,0	0,0	0,0	0,0	0,0	0,0		
	EF2 (Finance companies)	0,9	0,9	0,9	0,8	0,8	0,9		
	EF5 (SFV's)	0,9	0,9	1,0	1,0	1,0	1,0		
Maturity Transformation 1 (MT1) **[3]**	EF1 (Fixed Income Funds)	0,6	0,5	0,5	0,5	0,5	0,8		Between -1 and +1 ; 0 means no maturity transformation, negative value implies negative maturity transformation
	EF1 (Mixed Funds)	0,0	0,1	0,1	0,1	0,1	0,1		
	EF1 (Money Market Funds)	0,1	0,1	0,1	0,0	0,0	0,0		
	EF2 (Finance companies)	-0,5	-0,4	-0,4	-0,4	-0,4	-0,3		
	EF5 (SFV's)	0,0	0,0	0,0	0,0	0,0	0,0		
Maturity Transformation 2 (MT2) **[4]**	EF1 (Fixed Income Funds)	0,0	0,0	0,0	0,0	0,0	0,0		Value =1 means ST liabilities fully covered by ST assets ; Value >1 means ST funding dependence ; Value between 0 and 1 indicates negative maturity transformation
	EF1 (Mixed Funds)	0,0	0,0	0,0	0,0	0,0	0,0		
	EF1 (Money Market Funds)	0,0	0,0	0,0	0,0	0,0	0,0		
	EF2 (Finance companies)	0,6	0,6	0,6	0,6	0,6	0,5		
	EF5 (SFV's)	0,4	0,4	0,5	0,4	0,4	0,4		
Liquidity Transformation 1 (LT1) **[5]**	EF1 (Fixed Income Funds)	1,9	1,9	1,9	1,9	1,9	2,0		Between 0 and 2 ; Value =1 means ST liabilities equal to liquid assets, no liquidity transformation ; Value >1 : substantial liquidity mismatch
	EF1 (Mixed Funds)	1,9	1,9	1,8	1,9	2,0	1,9		
	EF1 (Money Market Funds)	1,9	1,9	1,9	1,8	1,9	1,9		
	EF2 (Finance companies)	0,9	0,9	0,9	0,9	0,9	0,9		
	EF5 (SFV's)	1,0	1,0	1,0	1,0	1,0	1,0		
Leverage 1 (L1) **[6]**	EF1 (Fixed Income Funds)	1,0	1,0	1,0	1,0	1,0	1,0		1= no leverage ; the higher, the more leverage
	EF1 (Mixed Funds)	1,0	1,0	1,0	1,0	1,0	1,0		
	EF1 (Money Market Funds)	1,0	1,0	1,1	1,1	1,0	1,0		
	EF2 (Finance companies)	2,6	2,7	3,7	2,9	2,9	3,2		
	EF5 (SFV's)	2168	2442	2446	2613	3360	7271		

Source : FSB, NBB.

Notes:

[1] Credit assets/assets under management or total financial assets. Credit assets is the amount of debt securities, loans and cash on deposit. **[2]** Loans/assets under management or total financial assets. **[3]** (Long-term assets of > 12 months – long-term liabilities of > 12 months – equity)/assets under management or total financial assets. **[4]** (Short-term liabilities of ≤ 12 months + redeemable equity of ≤ 12 months)/short-term assets of ≤ 12months. **[5]** (Assets under management or total financial assets – liquid assets (narrow) + short-term liabilities ≤ 30 days + redeemable equity ≤ 30 days)/assets under management or total financial assets. Liquid assets in a narrow definition include cash and cash equivalents. **[6]** For EF1: assets under management/net asset value. For other EF: total financial assets/equity.

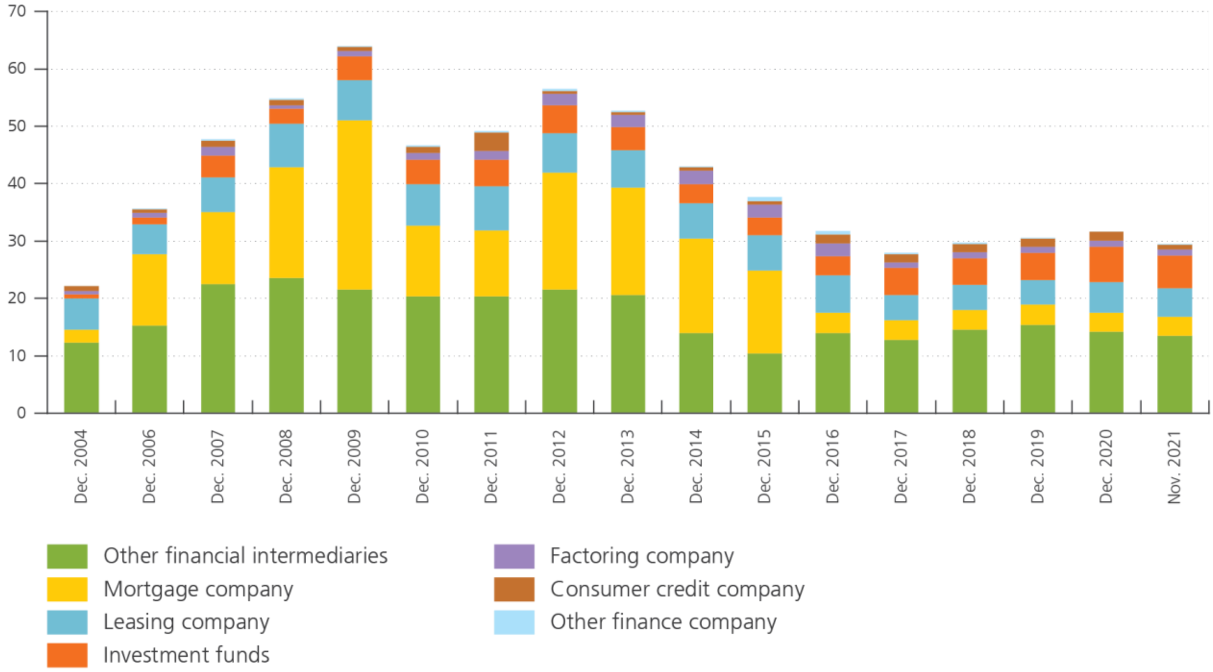
Chart 4.1: Interconnectedness mapping – starting point [1] *(outstanding amount at the end of June 2022, in euro billion and in % of institutional sectors' consolidated assets/liabilities*[2]*)*



Sources: FSB, NBB.

__Notes:__ **[1]** NBFI = BE: S123 + S124 excluding equity funds + S125-1 excluding retained securitisations + S125-4 + S125-9+EMU: S123 + S124 (total) + S125 (total). **[2]** Data for households are expressed in % of total unconsolidated assets/liabilities.
* The ventilation of the National Accounts does not allow an estimation of this interconnection.

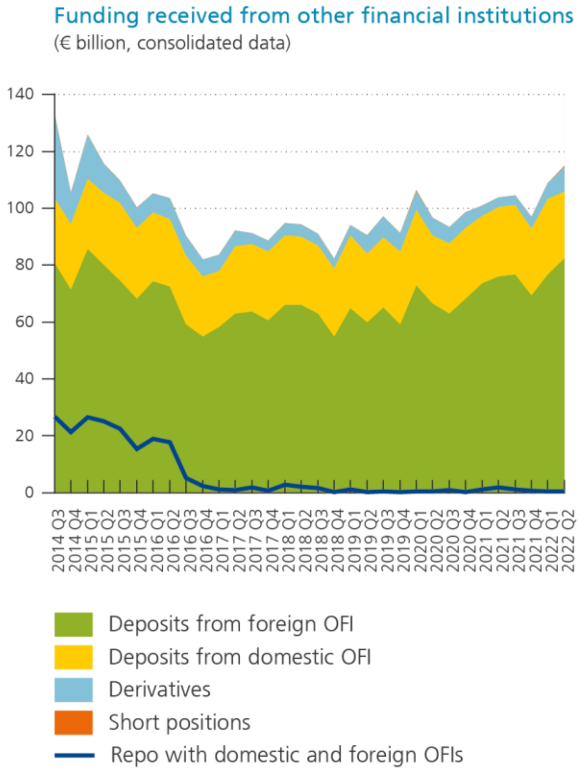
Chart 4.2: Belgian banks' loans to other financial intermediaries[1] *(€ billion, unconsolidated data)*

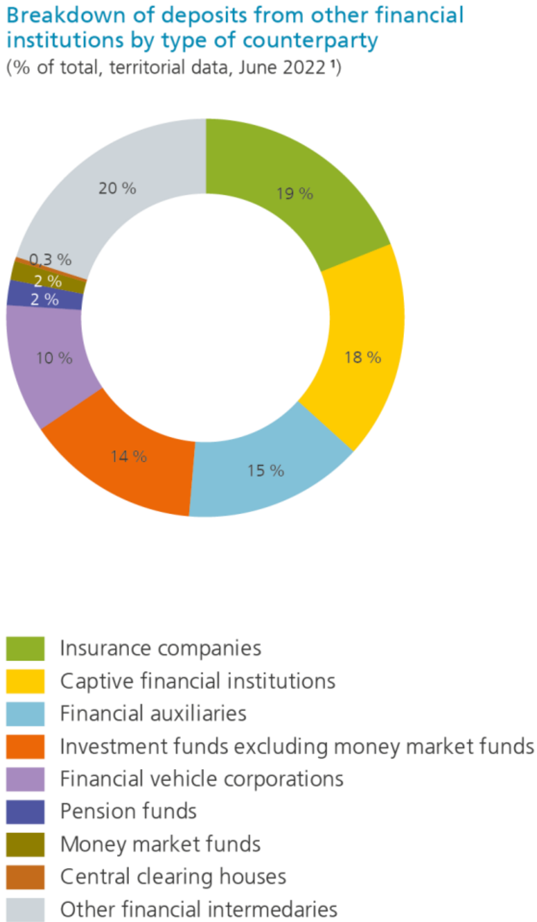


Sources: NBB, Central Corporate Credit Register (CCCR).

Notes: **[1]** Excluding central banks, deposit-taking corporations, holding companies and investment companies which fall outside of the scope of the NBFI sector.

__Chart 4.3: Belgian banks' funding received from other financial institutions__



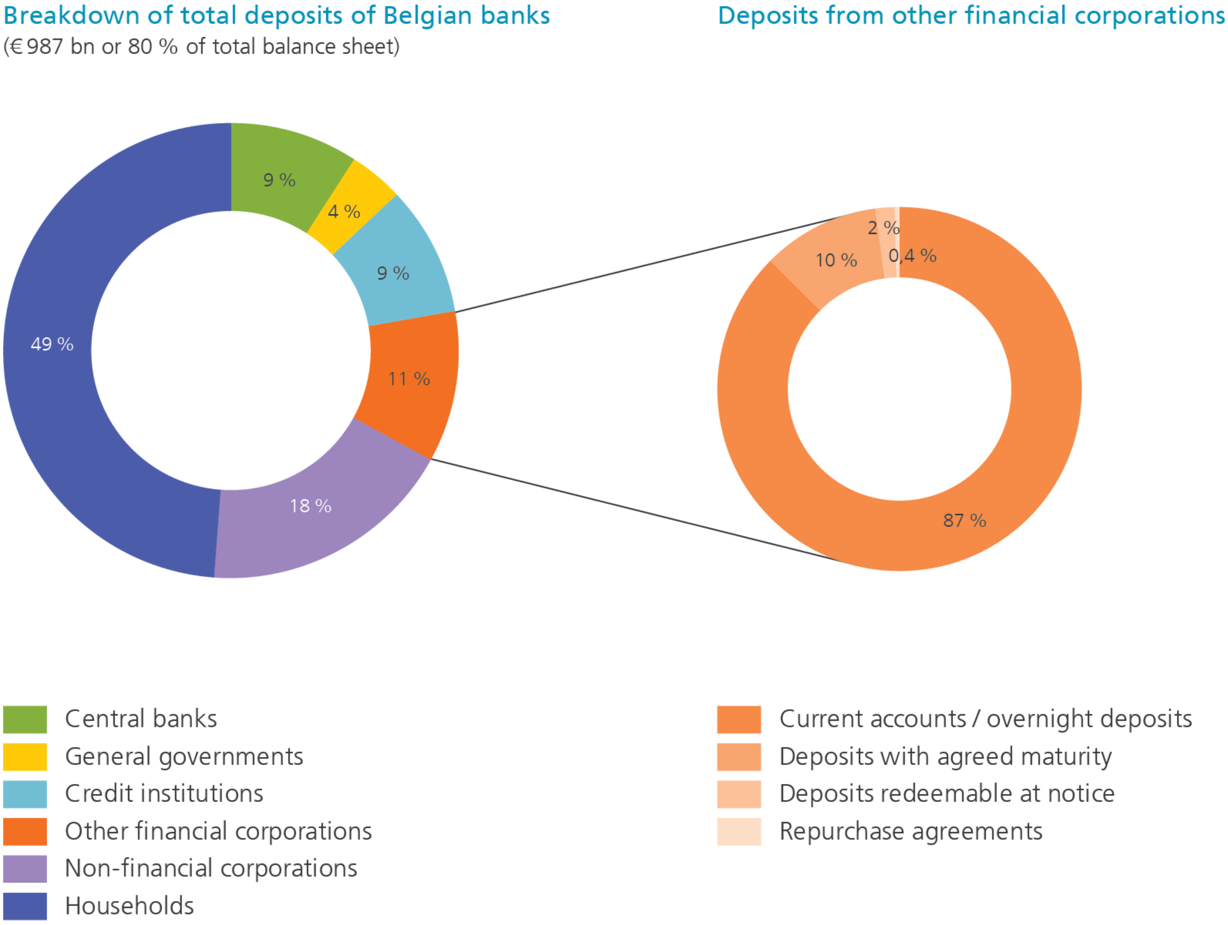


Source: NBB, FINREP, Schema A.

__Notes:__

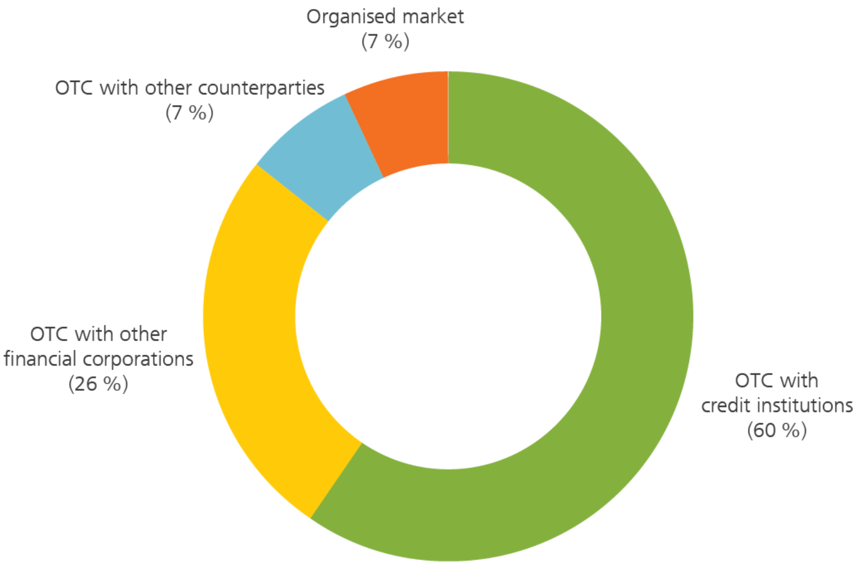
[1] The right-hand chart is based on territorial data from Schema A and encompasses a smaller amount of deposits from other financial institutions than the amount shown in the left-hand chart (which is based on consolidated data from FINREP).

Chart 4.4: Breakdown of total deposits of Belgian banks *(June 2022, consolidated data)*



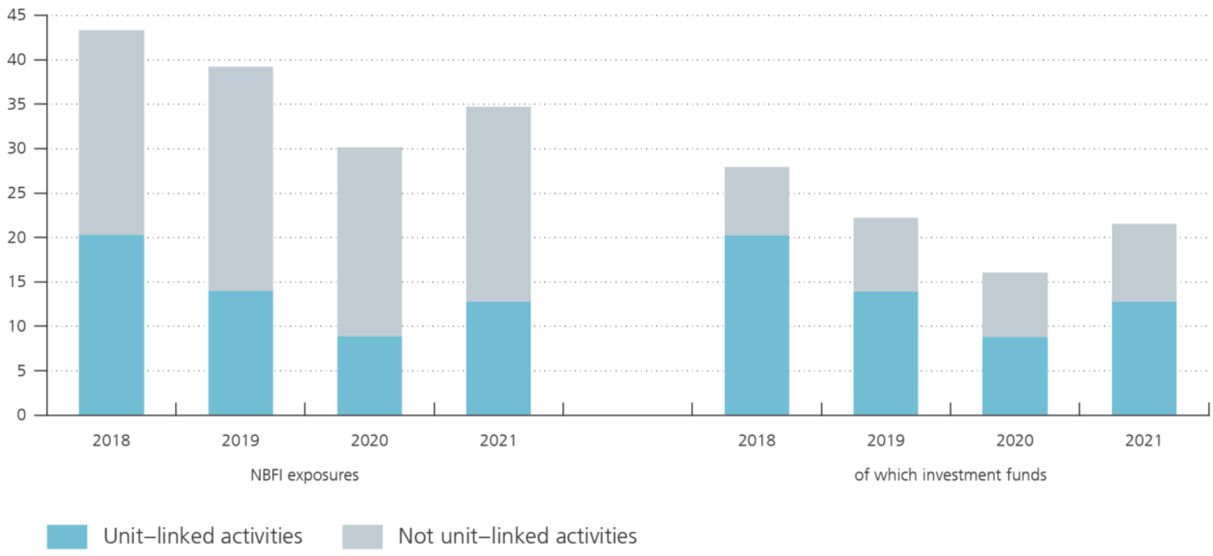
Source: NBB, FINREP.

Chart 4.5: Breakdown of the notional amount of the derivative portfolio of Belgian banks *(June 2022)*



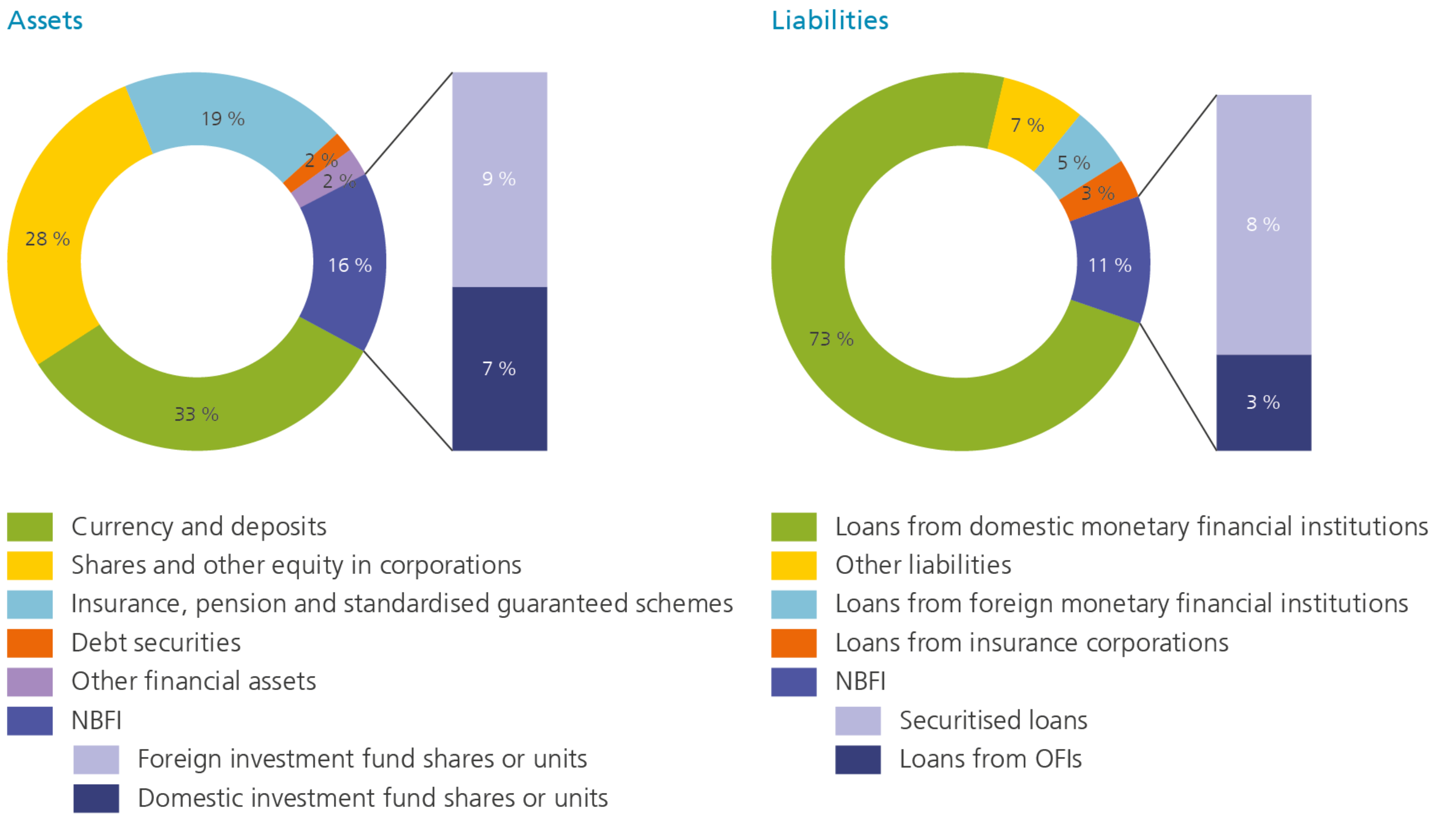
Source: NBB, FINREP.

Chart 4.6: Belgian insurance sector's NBFI exposures *(€ billion)*



Source: NBB, Solvency II reporting.

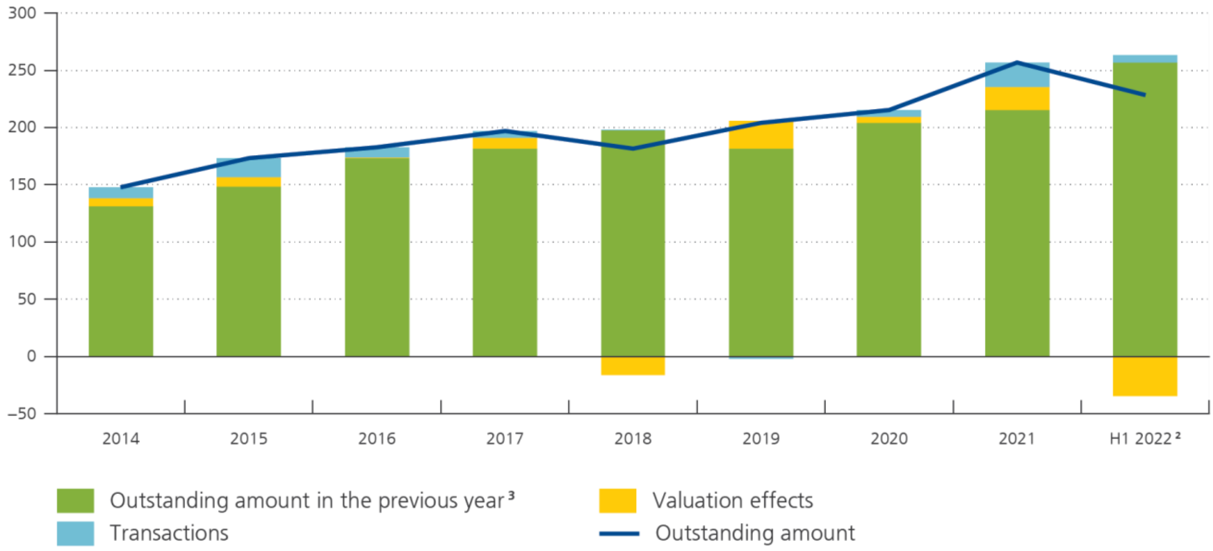
Chart 4.7: Breakdown of households' financial assets and liabilities *(% of total, end of June 2022)*



Source: NBB (Financial accounts statistics).

Note: Shares of equity investment funds are excluded in the investment fund holdings shown in the chart (in line with the NFBI narrow measure).

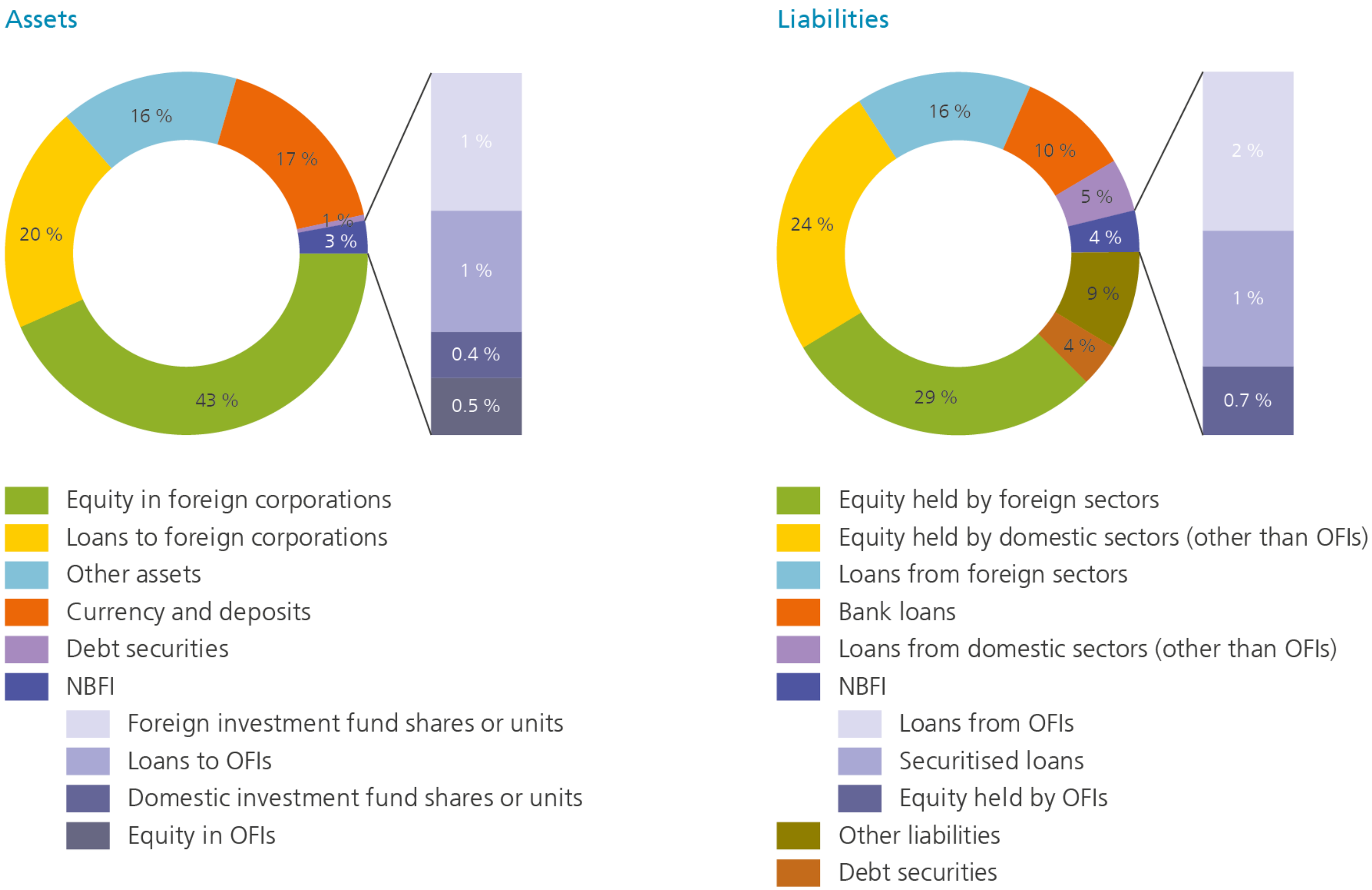
Chart 4.8: Households' holdings of domestic and foreign investment fund shares or units [1]
(outstanding amount at the end of the year, unless otherwise stated)



Source: NBB (financial accounts statistics).

Notes: **[1]** Excluding equity investment funds. **[2]** Data for June 2022. **[3]** Includes also the other changes in volume since the previous year.

Chart 4.9: Breakdown of non-financial corporations' financial assets and liabilities *(% of total, end of June 2022)*



Source: NBB (Financial accounts statistics).

Note: Shares of equity investment funds are excluded in the investment fund holdings shown in the chart (in line with the NFBI narrow measure).

List of abbreviations

AIF	Alternative Investment Fund
AIFM	Alternative Investment Fund Manager
AIFMD	Alternative Investment Fund Manager Directive
AuM	Assets Under Management
BCBS	Basel Committee for Banking Supervision
CCCR	Central Corporate Credit Register
CCP	Central Counterparty
CIU	Collective Investment Undertakings
CMU	Capital Markets Union
CRD	Capital Requirements Directive
CRR	Capital Requirements Regulation
EBA	European Banking Authority
EC	European Commission
ECB	European Central Bank
EEA	European Economic Area
EF	Economic Function
EIOPA	European Insurance and Occupational Pensions Authority
ELTIF	European Long Term Investment Fund
EMIR	European Market Infrastructures Regulation
EMU	Economic and Monetary Union
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
ETF	Exchange-Traded Fund
EU	European Union
EuSEF	European Social Entrepreneurship Fund
EuVECA	European Venture Capital Fund
FICOD	Financial Conglomerates Directive
FINREP	Financial Reporing Framework
FSB	Financial Stability Board
FSMA	Financial Services and Markets Authority
FPS	Federal Public Service
FVC	Financial Vehicle Corporation
GDP	Gross Domestic Product
HLEG	High-Level Expert Group
IORP	Institution for Occupational Retirement Provision
IOSCO	International Organization of Securities Commissions
ITS	Implementing Technical Standards
LDI	Liability Driven Investment
LMT	Liquidity Management Tool
MiFID	Markets in Financial Instruments Directive
MIFIR	Markets in Financial Instruments Regulation
MMF	Money Market Fund
MMFR	Money Market Fund Regulation
MUNFI	Monitoring Universe of Non-bank Financial Intermediation

NAI	National Accounts Institute
NAV	Net Asset Value
NBB	National Bank of Belgium
NBFI	Non Bank Financial Intermediation
NFC	Non-Financial Corporation
OFI	Other Financial Institution/Intermediary
PRIVAK/PRICAF	Private equity closed-end investment fund
REIT	Real Estate Investment Trust
SFT	Securities Financing Transactions
SHS	Securities Holdings Statistics
SME	Small and Medium-sized Enterprise
STC	Simple, Transparant, Consistent/Comparable Securitisations
STS	Simple, Transparent and Standardised Securitisations
UCI	Undertaking for Collective Investment
UCITS	Undertaking for Collective Investment in Transferable Securities
WAL	Weighted Average Life
WAM	Weighted Average Maturity