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

December 2019

FSMA
FINANCIAL SERVICES AND MARKETS AUTHORITY

NationalBank OF BELGIUM
Eurosystem

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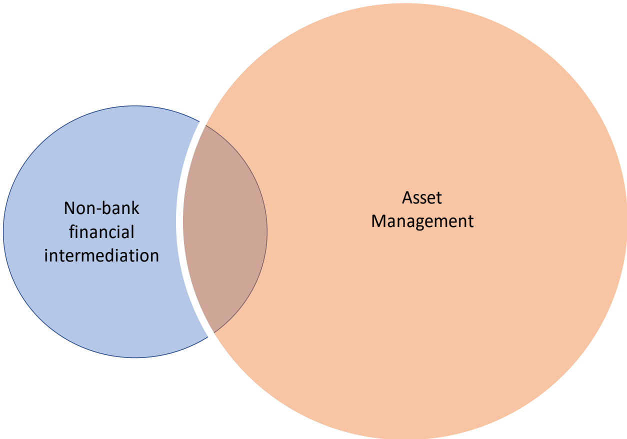
I. Introduction

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) will henceforth use 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 and its update in 2018. It is reminded that the 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 update of 2018 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 two previous reports (with all the updated quantitative data in the statistical annex). 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 and revisits the five recommendations included in the report of 2017.

[1] See https://www.fsma.be/en/news/report-asset-management-and-shadow-banking and https://www.nbb.be/en/articles/press-release-report-asset-management-and-shadow-banking

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 2018. 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.[2]

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 at the end of 2018 and the two preceding years, as discussed in the following sections.

2.1 Belgian investment funds[3]

The net asset value of Belgian investment funds decreased from € 175 billion at the end of 2017 to € 164 billion at the end of 2018. The decrease is mainly driven by the decline in market valuations of assets in the fund portfolios at the end of 2018. Despite the pronounced market turbulence witnessed at the end of 2018, Belgian investment funds proved to be resilient and no Belgian fund had difficulties to redeem the holdings of its investors.

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 € 147 billion or about 90% of the net asset value of the Belgian investment fund sector at the end of 2018 (Table 2.2 and Chart 2.3).[4] The size of the public open-ended investment funds decreased by 5% as compared to one year before. UCITS represent 84% of the segment of Belgian public open-ended investment funds, compared to 68% at the end of 2016, and 74% at the end of 2017. The increase in the relative importance of UCITS has been accompanied by an increase in the number of UCITS (sub-)funds as well as an expansion of the UCITS' total net assets. UCITS net assets have increased from € 81 billion at the end of 2016 to € 114 billion at the end of 2017 and € 124 billion at the end of 2018. Simultaneously, the number of public open-ended (sub-)funds that qualify as AIFs, as well as their total net assets, continued to decrease (from € 46 billion at the end of 2016 to € 41 billion at the end of 2017 and € 39 billion at the end of 2018).

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. First, a large part of the sub-funds of Belgian AIFs are 'structured' (sub-)funds[5], which were historically not established as UCITS.

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2 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.

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

4 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.

5 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.

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.[6] During 2018, net assets of AIF structured funds have further decreased from € 3.7 billion to € 2.1 billion, while net assets of UCITS structured funds have decreased to a lesser extent, from € 4.5 billion to € 3.8 billion (Table 2.3 and Chart 2.4).

Second, 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 during the first half of 2018. 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[7] 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").[8]

Third, and in line with the first two explanations, all public open-ended investment funds launched in 2018 were set up under the UCITS regime. The same holds true for public open-ended investment funds launched in 2017 and 2016. Pension savings funds remain the largest category of public open-ended AIFs with close to € 11 billion (49 %) of net assets. The UCITS segment is dominated by mixed funds (€ 54 billion or 44%) which often invest indirectly into several asset classes by investing in units of other investment funds (€ 44 billion or 36%). Equity funds are the second largest category within the UCITS segment, with net assets amounting to € 34 billion (27%). However, funds of this type have witnessed a sharp decline in net assets at the end of 2018. The net assets of equity funds amounted to € 43 billion at the end of 2017. The drop in equity market valuations, as well as net outflows out of equity funds, caused this decline. This stands in contrast to the growing importance of UCITS money market funds, as their net assets have increased from € 2 billion to € 9 billion at the end of 2018. AIF money market funds have experienced a similar growth. Their growth is driven by net inflows as money market funds attract relatively more investors during turbulent market conditions. Bond funds are the third largest category within the UCITS segment. Their net assets amount to € 16 billion (13%), about half of which is invested indirectly through fund-of-fund structures. Overall, fund of funds or feeder funds account for 41% of the gross net asset value of the Belgian public open-ended investment funds (€ 60 billion out of € 147 billion).

Table 2.4 and Chart 2.5 show the balance sheet composition of Belgian public open-ended investment funds at the end of 2018 by fund category. The composition is in line with their investment policy. Because of their high reliance on fund-of-fund structures, mixed funds invest up to 85% of their net assets in units of other investment funds. Bond fund portfolios also contain a significant share of units of other investment funds (51%). Pension savings funds are mixed funds, with the majority invested in shares or similar instruments (56%) and the remaining part of the portfolio largely invested in bonds, money market instruments or other debt instruments. Structured funds and non-classified ("other") funds invest the bulk of their assets in fixed-income instruments, while a smaller part is invested in

6 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.

7 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.

8 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.

derivatives. For structured funds, the aggregated market value of these derivatives was positive, while it was negative for the non-classified 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 analyses concerning the investment's contribution to the fund's portfolio composition, liquidity and risk and reward profile.

Box 1 : Leveraged loans and CLOs

On 10 September 2019, ESMA (European Securities and Markets Authority) published an article on the exposures of the European Union (EU) fund industry to leveraged loans and collaterised loan obligations (CLOs). ESMA estimates these exposures to be € 54 billion for CLOs and € 78 billion for leveraged loans, which it judges to be limited overall. The total exposures of UCITS to loans (which includes leveraged loans) amounted to € 7.4 billion as of the end of 2018, while exposures to CLOs were larger, but still limited, at around € 36 billion at the end of 2018 across 3,843 funds. Based on data from the end of 2017, AIFs exposures to leveraged loans amount to € 71 billion, and exposures to CDOs/CLOs to € 17 billion.

The FSMA has also conducted an investigation concerning potential investments by Belgian open-ended public investment funds in leveraged loans or CLOs. Based on the data periodically reported to the FSMA, which include a detailed breakdown of the portfolio into certain (sub-)asset classes, and a targeted limited survey of managers, the FSMA found that Belgian public open-ended investment funds have not recently invested in leveraged loans or CLOs.

The Belgian public open-ended investment fund industry is characterised by a high degree of concentration (Table 2.5 and Chart 2.6). At the end of 2018, 42% of the total net assets were held by the 30 largest sub-funds (sub-funds with more than € 1 billion net assets, 4% of the total number of sub-funds), while the smallest sub-funds (sub-funds with less than € 100 million net assets, 69% of the total number of sub-funds) held only 11% of the total net assets. All structured sub-funds are classified into the smallest size bucket, but as they only account for 4% of the total net assets, a similar picture emerges when structured sub-funds are excluded.

2.1.2. Other AIFs

Non-public AIFs (€ 16.5 billion at the end of 2018) continue to be dominated by the institutional open-ended AIFs, with 127 sub-funds registered and an estimated size of their net assets of € 13.8 billion (lower bound).[9] This is a notable decline from the € 17.5 billion net assets at the end of 2017 (Table 2.2). Another important specific category of non-public AIFs are the private privaks/pricafs (€ 0.7

[9] 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.

billion), which have grown to 65 privaks/pricafs registered at the end of 2018 (up from 52 registered at the end of 2017). During the course of 2018, 27 new specialised real estate funds were registered by the FPS Finance, which brings the total number of specialised real estate funds to 37.

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 new AIF types have been designed against the background of the EU Capital Markets Union (CMU): EuVECAs, EuSEFs, ELTIFs and (public and private) starter funds. No Belgian investment funds of these types have been yet registered or authorised in Belgium.

A final category of Belgian AIFs are those for which the manager has not opted for the AIF to be registered or authorised as one of the above specific regulated structures. Alternative investment fund managers (AIFMs) registered or authorised by the FSMA have reported information to the FSMA on 45 of those AIFs, with net assets of € 2 billion.

Box 2 : ESMA statistical report on EU Alternative Investment Funds

On 7 March 2019, **ESMA** published its **first statistical report** on EU **Alternative Investment Funds (AIFs)**. The statistics in the report are based on data reported by AIFMs (to their National Compentent Authorities) on the AIFs they were managing at the end of 2017. The objectives of the report are to contribute to the risk assessment work at ESMA, to facilitate the oversight of entities by National Competent Authorities and to contribute to supervisory convergence. The latter objectives are primarily achieved through the data standardisation and development of statistical methods, including risk indicators.

ESMA estimates that the EU AIF industry had a net asset value (NAV) of € 4.9 trillion at the end of 2017. Funds of funds accounted for 16% of the NAV, followed by real estate funds (11%), hedge funds (5%) and private equity funds (4%). The residual category ‘other AIFs’ accounted for 63% of the NAV. Most AIFs were sold to professional investors (81%). Use of leverage by AIFs was found to be limited, with the notable exception of hedge funds. Hedge fund leverage stems mainly from their use of derivatives to increase their exposure (synthetic leverage), rather than from direct borrowing. There are signs of potential liquidity risks at short-term horizons as the liquidity offered to investors is greater than the liquidity of the assets. Real estate funds are exposed to significant liquidity risk as they invest in illiquid assets while allowing investors to redeem their shares over a short time-frame.

The report indicates that the AIF industry is concentrated in a few countries, with the top five accounting for more than 85% of the NAV: Germany, the United Kingdom, the Netherlands, France and Luxembourg. The size of the AIF industry is relatively modest in Belgium (see section 2.1 of Chapter II and Table 2.2). As such, the report does not specifically focus on Belgium.

ESMA notes in the report that it aims at improving the data coverage (which currently stands at 80%), as well as the data quality.

2.2 Belgian asset managers

The number of Belgian asset managers (UCITS management companies and authorised AIFMs) has grown from 9 to 13 asset managers during 2018 (Table 2.6), with 8 of the 13 authorised Belgian asset managers holding a double authorisation. The total assets under management (AuM) of the 13 Belgian asset managers amounted to € 219 billion (€ 292 billion at the end of 2017), of which € 130 billion were in the form of collective management and € 90 billion in the form of discretionary management, while the assets for which they provide investment advice amounted to € 3 billion. Apart from the end-of-year drop in market valuations, the decline in assets under management is also related to an improvement in the quality of the data reported by some asset managers. In particular, some assets are no longer double-counted.

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 2018, 4,327 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 2017 (Table 2.7). Since the supervisor of the home country is the competent authority for these funds, no exact statistics on the size of these foreign UCITS' net assets are available.

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 2018 (of which 4 sub-funds were registered). Their net assets amounted to around € 0.3 billion.[10] 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 has declined from 40 registered sub-funds at the end of 2016 to 4 registered sub-funds at 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 allow to identify the amount of foreign investment funds *held by Belgian residents* (Table 2.8, providing a breakdown by holding sector and by issuing country). According to this data source, investments by Belgians in foreign funds amounted to € 201 billion at the end of 2018, of which € 95 billion is estimated to be held by households. The major share of these foreign investment funds held by Belgian residents are funds from Luxembourg (€ 157 billion), followed by funds from France (€ 19 billion), Ireland (€ 16 billion) and Germany (€ 6 billion).

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. 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.

Belgian banks earned an annual fee and commission income of around € 2.4 billion on their asset management activities in 2017, rising to an annualised € 2.6 billion in 2018 (Table 2.9). This is the

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

result of banks' commercial efforts to develop their asset management activities in order to mitigate the pressure on their net interest income in the low interest rate environment. 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 € 545 billion at the end of 2018, compared to € 582 billion at the end of 2017.

Around two-thirds of the amount end 2018 relates to assets managed within Belgian banks (€ 350 billion). 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 2.7). 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 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 € 350 billion can be broken down into € 209 billion of assets under collective management and € 141 billion of assets under discretionary management. The amount of collective investment products distributed by Belgian banks but issued by entities outside of their consolidation scope reached € 195 billion at the end of 2018.

Belgian banks also earn fee and commission income on custodian and central administrative services. Jointly, the income earned on these services in 2018 (€ 836 million) was somewhat lower than in 2017 as the assets involved in these services declined. The latter was mainly due to assets under custody, and more specifically those other than for collective investment (which declined from € 3,589 billion end 2017 to € 2,375 billion end 2018 following a restructuring at a large depository bank).

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 (so-called “class 23” contracts in the Belgian law) or as part of the non-unit-linked investment portfolios (Chart 2.8 and 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 investment fund. As regards the Belgian unit-linked insurance business, Belgian insurers’ technical provisions for class 23 contracts amounted to € 35.8 billion at the end of 2018 on an unconsolidated basis (up from € 31.4 billion in 2016), covered almost entirely by units of investment funds (€ 31.6 billion) and a small amount of (mainly term) deposits (€ 2.4 billion). Class 23 premiums reached € 3.5 billion in 2018 (versus € 2.2 billion in 2016). 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 can partly be 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 external funds in the context of their class 23 business, Belgian insurers also invest in units of collective investment (UCIs) as part of their covering assets for life and non-life insurance products (other than class 23) or as free investment assets. At the end of 2018, these marked-to-market investments amounted to € 12.5 billion, compared to € 14.0 billion in 2017, reflecting the downturn in global financial markets in the last quarter of 2018. Broken down by type of fund, the larger share was located in debt funds (€ 5.2 billion), equity funds (€ 1.5 billion), real estate funds (€ 1.4 billion) and money-market funds (€ 1.0 billion). Around € 4 billion of these funds were issued in Luxembourg and France, € 2 billion in Belgium and € 1 billion each in the Netherlands and Ireland. Their custodian was mainly located in Belgium (€ 9 billion) and Luxemburg (€ 1 billion).

2.6 Belgian institutions for occupational retirement provision and asset management activities

At the end of 2018, there were 193 Belgian institutions for occupational retirement provision (or "pension funds") authorised, accounting for about € 34 billion total assets (Table 2.12). Belgian pension funds had invested 73% of those assets (€ 25 billion) in investment funds.

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 (the new term for the former FSB-terminology shadow banking) 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 the NBFI sector escapes from regulatory requirements, rather that the sector is regulated in a different manner than 'regular' banks.

The NBFI sector as such is not defined in the financial accounts, hence its approximation by adding the financial assets of several entities. Different definitions for the Belgian NBFI sector can be used and this report focuses on the following two main definitions provided by the EBA and FSB (for the situation at the end of 2018): € 24.7 billion for the EBA framework and € 142 billion according to the FSB framework.

The delineation of the Belgian NBFI sector starts from the very broad FSB-defined aggregate called the monitoring universe of non-bank financial intermediation (MUNFI), which is the sum of financial assets of non-bank financial entities, pension funds and insurance companies and is calculated using flow of funds data in financial accounts. The Belgian MUNFI amounted to € 1,166 billion at the end of 2018, compared to € 963 billion of banking sector assets (Chart 3.1). However, this MUNFI 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 group. These bank-like risks are: maturity and liquidity transformation, leverage and credit risk transfer. This narrowing down is interpreted in different ways and leads to a diverging magnitude of the NBFI sector.

The narrowing down of the Belgian NBFI sector according to the framework developed by the FSB is based on five economic functions (EF).[11] If non-bank financial entities and activities are assessed by authorities to present bank-like risks (e.g. maturity/liquidity transformation and 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 narrow NBFI sector, delineated according to this FSB methodology, amounted to € 142 billion at the end of 2018** (versus € 144 and € 128 billion at the end of 2017 and 2016 respectively), representing 31 % of GDP or 15 % of the size of the Belgian banking sector (Chart 3.2).

The bulk of the Belgian narrow NBFI sector still consists of investment funds, which are classified under economic function 1 (Chart 3.3). This EF1 is the main reason for the observed decline of the NBFI aggregate and this is entirely due to a price effect related to developments in global financial markets as reflected in the measured market value of the investment funds included in the NBFI aggregate. EF1 includes the Belgian money market and non-equity investment funds (€ 129 billion versus € 132 billion at the end of 2017), which are almost all open-ended and hence susceptible to run risk. The second category of the NBFI sector relates to EF2 — loan provision that is dependent on short-term funding — and is done by financial intermediaries such as leasing and factoring companies, lenders in consumer and mortgage credit and other entities that are not consolidated in a banking/insurance group. This EF2 has been stable at a low level (€ 7 versus € 5 billion at the end of 2017). The third and

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[11] 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; EF5: Securitisation-based credit intermediation and funding of financial entities.

last category of the NBFI sector is categorised under EF5 and consists of securitisation activities by financial vehicle corporations that are not retained on the balance sheets of Belgian banks (€ 6 billion, broadly similar to the level recorded at the end of 2017).

Under the European Banking Authority (EBA) framework, the Belgian NBFI sector amounted to € 24.7 billion at the end of 2018 (versus € 17.5 billion at the end of 2017), as the Belgian asset management entities included in the NBFI sector (the EF1 above) only take into account the Belgian money market funds (€ 11.6 billion) and AIFs with a leverage that exceeded 300% or that were granting/purchasing loans (€ 0.12 billion).[12]

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 on Non-Bank Financial Intermediation*.[13] Chart 3.4 uses these data to compare the size of the Belgian NBFI sector with those of other euro area and non-euro area countries. The results of the last monitoring exercise (for the situation as at the end of 2018) confirm in this connection that the size of the Belgian NBFI sector represents a tiny part of the global NBFI universe and is also more or less in line, in relative terms (as measured in % of GDP), with the levels seen in Belgium's neighbouring countries (France, Germany and the Netherlands). The results of the FSB monitoring exercise shown in Chart 3.4 also cover Luxembourg and Ireland, two countries in Europe with a very large NBFI sector due to their key role in the European investment fund market and the large number of special-purpose entities (often with non-domestic sponsors) located within their jurisdictions.

[12] AIFs with a leverage that exceeded 300% that were identified based on the reporting to the FSMA.
[13] The reports are available at https://www.fsb.org/publications/key-regular-publications/.

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, a number of FSMA and NBB initiatives have improved the available data and the granularity of the analyses for delineating and assessing developments within the Belgian asset management and NBFI sectors.

In an effort to close the data gaps on NBFI entities and activities (in particular investment funds) identified by the FSB and the ESRB, new and improved Belgian reporting requirements for certain public investment funds have entered into force on 1 October 2017. These data can be used, among others, to calculate risk indicators for the Belgian investment fund industry, segments of the fund industry, or specific funds. These risk indicators allow for a better assessment of leverage and liquidity risks.[14] However, current data quality problems still lead to interpretation issues. The FSMA has been working on improving the data quality by organising workshops with representatives from the investment fund industry, during which the principles of the reporting were explained, as well as the FSMA's findings concerning the data quality, and a number of good practices. The FSMA is currently further engaging with investment funds on a case-by-case basis in order to improve the data quality.

Over the last few years, the NBB has also closed important data gaps in the subsector of the *other financial intermediaries* (OFIs) by (1) looking at the activities of the entities involved and hence excluding those entities from the NBFI sector that do not pose NBFI-like risks and (2) by distinguishing entities within the consolidation perimeter of banks and insurance companies and excluding them from the NBFI sector.

[14] For an overview of potential risk indicators see ESMA's first statistical report on EU Alternative Investment Funds (AIF), as discussed in section 5.1.1.2 of Chapter V of this report.

The NBB also remains actively involved in the ongoing work at ECB/ESRB level to extend this approach to other countries, which aims at a better understanding and mapping of the NFBI risks in the large subsegment of the so-called "other financial intermediaries". On an international level, one of the recommendations of the G20 Data Gaps Initiative is aimed at better capturing the NBFI sector within the financial statistics, by providing — in the financial accounts — more detailed information on the subsectors covered in the sector of financial corporations.

4.2 Risk assessment of the Belgian NBFI sector

Table 4.1 provides an update of a number of 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 NFBI entities, as classified according to the FSB economic functions. The risk metrics are provided for the three economic functions, with a distinction of three different types of investment funds under EF1 (bond funds, mixed funds and other non-equity funds). This allows a granular assessment of the metrics for different subsegments of the NBFI aggregate, which have been quite stable over time.

The risk metrics calculated for the Belgian investment funds (excluding money market and equity funds) for EF1 confirm that liquidity transformation remains the most important risk. It is essentially a redemption risk, linked to the fact that the liabilities of the funds are mostly composed of units redeemable on a daily basis that 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.

For the entities falling under EF2 and EF5, the risk metrics reveal that their 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. 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 bank system to NBFI entities according to the financial accounts data (€ 73 billion) or to OFIs using the consolidated supervisory data (€ 50 billion or 5% of the total assets) remained, at the end of 2018, close to the levels observed in the NBB-FSMA report of last year, including as regards its composition (share of loans and debt securities).

More than half of the € 50 billion FINREP-exposure is constituted of loans and advances (€ 33 billion), representing around 4% of the total loan portfolio of Belgian banks. These loans to other financial institutions are to a certain extent 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 € 12 billion of debt securities issued by other financial institutions. These debt securities represent 9 % of the total bond portfolio of Belgian banks and the bulk of these exposures are toward foreign counterparties (resp. € 2.3, 1.5, 1.5, 1.4, 1.3 for ES, UK, US, FR and NL OFIs). Some of these securities are securitisations or structured products issued by financial vehicle corporations (FVCs).

When intra-conglomerate transactions are included in the analysis, as in the case of an analysis based on the financial accounts data, Belgian banks' loans to NBFI entities are higher than in FINREP. The data from the financial accounts reconfirm in this way that part of banks' loans to domestic and foreign other financial intermediaries are in fact intra-group or intra-conglomerate transactions (e.g. a bank loan to the leasing company that is a subsidiary of the bank itself or of the financial group to which both belong). On the basis of the financial accounts data, Belgian banks' loans to the NBFI sector are estimated at € 54 billion and most of these loans are claims on domestic OFIs. The central corporate credit register (CCCR) allows a further detail on Belgian banks' portfolio of loans to these domestic non-bank financial intermediaries (Chart 4.2) and shows a stock of loans to various types of OFIs — such as leasing, mortgage, consumer credit, private equity and trade and export finance companies — that has been close to € 30 billion in total since 2017.

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. Since then, deposits from domestic and foreign OFIs have been relatively stable at around € 25 and € 60 billion respectively, according to the consolidated data. Still, with € 82 billion at the end of 2018 (of which € 79 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 (8 % 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 remained stable around € 6 billion in 2018.

4.3.2. Insurance companies and pension funds

In 2018, according to financial accounts data, NBFI exposures amounted to around € 19 billion for the pension funds sector — mainly in the form of shares in investment funds, not including equity funds — and € 53.5 billion for the insurance sector.

According to Solvency II prudential data (Chart 4.6), the exposure of insurance companies towards NBFI amounted to € 43.3 billion at the end of 2018 (or 14 % of total assets), compared with € 40.2 billion at the end of 2017. As explained before, this increase is mainly due to the rising premium amounts related to class 23 that are collected by insurance companies and which are in turn mainly invested in UCIs. Consequently, out of the € 43.3 billion of NBFI exposures, more than € 20 billion correspond to assets covering class 23 contracts.

Investment funds account for a significant share of the NBFI exposures and amounted to € 28 billion in 2018 (these assets being held as counterpart for unit-linked 23 contracts or other life or non-life technical insurance provisions), while the remaining € 15 billion of NBFI exposures mainly represent holdings of debt securities (corporate bonds, including bonds guaranteed by international institutions like the European Investment Bank) and a small amount of equity issued by other NBFI entities.

Finally, data show that a large share of the assets corresponding to NBFI exposures is actually managed within the financial group to which the insurance company belongs (e.g. an insurer outsourcing the unit-linked fund management to the asset manager of the group). This proportion is however higher for assets covering unit-linked contracts (€ 15.1 billion managed intragroup out of € 20.3 billion) than for other NBFI exposures not related to unit-linked contracts (€ 2.9 billion out of € 23.0 billion).

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 2018. Chart 4.8 confirms that the total market value of households' participations in investment funds was affected by the financial market turbulence in the last quarter of 2018, translating in a negative price effect estimated at € 16 billion according to the financial accounts statistics. Nonetheless, that episode of stock market volatility did not give rise to significant withdrawals. At the end of 2018, the amount of households’ holdings in investment funds, reached € 181 billion (down from € 197 billion at the end of 2017) or 13.9% of their total financial assets. That amount consists of € 82.9 billion of participations in domestic funds and € 98.2 billion in foreign funds.

Securitised loans and loans from OFIs still account for a sizeable share of the household sector’s debt, with 14.6 % and 3.2%, 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. The major players in that sector in Belgium are subsidiaries of two of the main resident banks, namely Alpha credit, which is part of the BNP Paribas Group, and Record Credit Services, a subsidiary of ING.

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 1.3% of their total financial assets at the end of 2018, whilst equity and intragroup loans to corporations included among the OFIs accounted for 1.0%. These proportions have been stable in recent years. The same holds true for NFCs’ liabilities, where securitised loans account for 1.6% of the outstanding amount. Constituting 2.0% 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 2018).

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

5.1.1.1 Licensing and consumer protection issues

Initiatives at international level

The European Securities and Markets Authority (ESMA) has issued on 19 July 2019 two sets of **guidelines regarding money market funds** aimed at ensuring a coherent application of the Money Market Fund (MMF) Regulation.

The updated **Guidelines on stress tests scenarios** under Article 28 of the MMF Regulation establish common reference parameters for the stress test scenarios that MMFs or managers of MMFs should include in their stress scenarios for 2019. The updated guidelines introduce new scenarios that need to be considered in the performance of stress tests and contain new requirements on how the stress tests should be calibrated in order to establish common reference parameters within the EU.

The **Guidelines on the reporting** to competent authorities under Article 37 of the MMF Regulation provide guidance on how to fill in the reporting template on money market funds. The objectives of these guidelines are to establish consistent, efficient and effective supervisory practices. Managers of MMFs will transmit the reporting to competent authorities as of the first quarter of 2020.

On 20 June 2019, the EU Parliament and the Council introduced a more **harmonised framework on cross-border distribution of funds**. The new Directive 2019/1160 and the Regulation 2019/1156 aim to reduce regulatory barriers that hinder cross-border distribution of funds within the EU and to enhance investors' and fund managers' ability to benefit fully from the internal capital market. The new Directive and Regulation provide for:

- a harmonised definition of "pre-marketing" for AIFs,
- a de-notification process for the marketing of units or shares of AIFs/UCITS,
- the creation of a new central database on cross-border marketing of AIFs and UCITS,
- common principles concerning fees and charges levied by competent authorities in relation to cross-border activities of AIFs and UCITs,
- similar standards of marketing communications for AIFs and UCITS to ensure they are consistent, and fair, clear and not misleading,
- amendments to the Regulation (EU) No 1286/2014 of 26 November 2014 on key information documents for packaged retail and insurance-based investment products (PRIIPS) in order to extend the UCITS exemption to produce a PRIIPs key information document (KID) to 31 December 2021.

5.1.1.2 Main risks

The key structural vulnerabilities identified by international bodies in the area of the asset management industry are liquidity risk and leverage. The risk metrics calculated for Belgian investment funds also highlight liquidity risk as the most important risk, even though the report published in 2017 mentioned several elements to nuance its magnitude. The risk metrics also suggest that Belgian investment funds have no financial leverage. However, the leverage ratios calculated can understate the true riskiness as synthetic exposures are not well reflected in the balance sheet statistics used.

Initiatives at international level

At the end of 2018, the International Organization of Securities Commissions (**IOSCO**) has issued a consultation paper on a **proposed framework to help assess leverage** used by investment funds. The consultation is an answer to the identification of leverage as a key structural vulnerability of asset management activities by the Financial Stability Board (FSB). The two-step framework facilitates a more meaningful monitoring of leverage in funds for financial stability purposes in a consistent manner across jurisdictions. The framework provides a holistic approach to capture significant leverage-related risks of a fund (or group of funds) to give regulators the tools to assess these risks for financial stability purposes. The framework achieves overarching consistency through a 2-step analysis. Step 1 offers a means of efficiently identifying the funds that are more likely to pose risks to the financial system, using at least one notional exposure metric including debt and synthetic leverage. Furthermore, information on directionality of positions is captured through the collection of data broken down by asset class, and long and short exposures. This enables identification of a subset of investment funds that can be taken forward for further risk-based analysis. The Step 2 risk-based analysis of the subset of funds identified in Step 1, involves relevant and risk-based adjusted metrics, that can be employed – either in combination or on a standalone basis – depending on the characteristics of a fund.

On 2 September 2019, the European Securities and Markets Authority (**ESMA**) published its **final guidance regarding liquidity stress tests of investment funds**.[15] ESMA's guidelines apply to managers and, to a lesser extent, to depositaries. The guidelines require fund managers to regularly stress test the assets and liabilities of the funds they manage, in order to assess the resilience of their funds to different types of market risks, including for liquidity risk. Liquidity stress tests (LST) are considered as an important part of the liquidity management framework during all stages of the fund's lifecycle. Managers of AIFs and UCITS must use stress testing as a tool to mitigate this risk by using the outcomes of the LST to ensure the fund is sufficiently liquid and to identify potential liquidity weaknesses.

ESMA proposes to fund managers a comprehensive set of guidelines when designing hypothetical and historical scenarios for the liquidity stress tests of the assets, of the liabilities and the combined asset and liability LST. The guidelines recommend to carry out LST on a quarterly basis, or more frequently, depending on the fund's characteristics. The guidelines also give a special attention to less liquid assets (such as real estate) and to other types of liabilities which arise from e.g., derivatives or securities financing transactions.

Finally, the guidelines recommend managers to notify National Competent Authorities of material risks and actions taken to address them. One guideline applies to depositaries, requiring verification that the fund manager has in place documented procedures for its liquidity stress testing program.

The ESMA guidelines follow recommendations by the European Systemic Risk Board (ESRB) published in April 2018 on how to address liquidity and leverage risk in investment funds.

[15] ESMA guidelines on liquidity stress testing in UCITS and AIFs, (ESMA34-39-882)

Initiatives at national level

The **Royal Decree** of 15 October 2018[16] **makes additional liquidity management tools available** to all Belgian public open-ended funds: swing pricing, anti-dilution levies and redemption gates. The liquidity risk resulting from the liquidity transformation feature of some investment funds is one of the potential risks for investment funds and their investors. The legislative changes mitigate this risk and promote an effective liquidity risk management process.

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 European Commission's legislative package[17] (estimated implementation date June 2021) for 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) — will have a bearing on the future regulatory framework for asset management and NBFI entities. This new regime is calibrated to the size and nature of investment firms, in order to boost competition and improve the management of risks.

Up until now, investment firms have been subject to EU prudential rules alongside credit institutions. The prudential framework for investment firms is set out in the CRR/CRD IV and works in conjunction with MiFID (and as of January 2018 with MiFID II / MiFIR) which sets 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 would still be subject to the CRR/CRD IV framework, 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 will address the problems of the existing 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 would be set either 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. They set capital requirements according

[16] Royal Decree of 15 October 2018 amending the Royal Decree of 7 March 2006 on securities lending by certain undertakings for collective investment, the Royal Decree of 10 November 2006 on the accounting, annual accounts and periodic reports of certain public undertakings for collective investment with variable number of units, the Royal Decree of 12 November 2012 on management companies of collective investment undertakings which meet the conditions of Directive 2009/65/EC, the Royal Decree of 12 November 2012 on collective investment undertakings which meet the conditions of Directive 2009/65/EC and the Royal Decree of 25 February 2017 on certain public alternative collective investment undertakings and their management companies, and containing various provisions

[17] Final version of the legislative package voted by the European Parliament on the 9th of October 2019, publication on the Official Journal foreseen on the 6th of December 2019.

to the volume of each activity. The initial capital required for their authorisation or a quarter of their fixed costs for the previous year, would act as a floor to their minimum capital requirement.

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

5.1.3 Loan provision that is dependent on short-term funding

At the end of 2017, the FSMA published a paper to provide **insight into the Belgian financial return-based crowdfunding landscape**. The paper analyses the crowdfunding campaigns launched on five major platforms during the period from 2012 to 2017.

During that period, 273 crowdfunding campaigns were launched. However, only 232 campaigns were funded, i.e. 41 failed to get financed. The 232 campaigns covered by this study raised € 40 million in total. Since the launch of the first campaigns, Belgian crowdfunding has grown steadily over time. In 2017, about €20 million was raised. **Compared to deposits and loans this limited amount shows that crowdfunding is still a marginal form of investment and source of funding.** The larger part of the campaigns were debt campaigns (57% of the number of campaigns and 78% of the amounts raised). For the majority of crowdfunding campaigns, the amount targeted was raised within 13 days or less.

The average campaign was financed by 100 different investors. Investors seem to have adopted a relatively cautious approach when investing in crowdfunding campaigns, regardless of the type and the category of campaign. The average amount invested per investor and per campaign is € 2,870. More than 50% of the investors invested € 500 or less on a per campaign basis. Less than 3% of the investors invested more than € 5,000 per campaign. Debt campaigns offered an average yield-to-maturity of 7.42%. Out of the 148 crowdlending campaigns, 5 were associated with a payment default.

5.1.4 Non-retained securitisation

The new European horizontal securitisation regulation, adopted in December 2017, has come into force on 1 January 2019.[18] The regulation replaces all sector/entity specific regulation and provides for requirements related to risk retention, transparency, due diligence and reporting. It also implements the criteria for simple, transparent and standardised (STS) securitisations (equivalent to simple, transparent, comparable (STC) securitisations as defined by Basel).

A CRR amendment that specifies capital requirements for credit institutions and investment firms that are exposed to STS and non-STS securitisations came into force at the same time.[19] Further level 1 regulation has been issued to define sector-specific regulatory requirements for exposures to STS and non-STS securitisations: In October 2018, the European Commission published a Delegated Act amending the Commission Delegated Regulation on the Liquidity Coverage Ratio ('LCR')[20], making STS securitisations eligible as Level 2B assets as of April 2020. In September 2018, the European Commission published a Delegated Regulation regarding revised calibrations for securitisation

[18] 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.

[19] Regulation (Eu) 2017/2401 of 12 December 2017 amending Regulation (EU) No 575/2013 on prudential requirements for credit institutions and investment firms

[20] Commission Delegated Regulation (EU) 2018/1620 of 13 July 2018 amending Delegated Regulation (EU) 2015/61 to supplement Regulation (EU) No 575/2013 of the European Parliament and the Council with regard to liquidity coverage requirement for credit institutions

investments by insurance and reinsurance undertakings under Solvency II applying as of January 2019.[21]

ESMA and EBA have completed work on a series of mandates to implement the general and STS-related requirements of the securitisation regulation. ESMA's mandates related to the reporting requirement to trade repositories, while EBA's mandates covered the areas of risk retention and STS criteria interpretation, as well as capital requirements for banks using internal models.[22] ESMA is also publishing a register with a list of all securitisations that comply with the STS criteria on its website.

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**.[23] As mentioned in the 2017 report (p. 32), step-in risk is the risk that a bank decides 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 that are expected to enter into force no later than in 2020, the BCBS aims to mitigate potential spillover effects from the NBFI system to banks. This work was part of the G20 initiative to strengthen the oversight and regulation of the 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, the new art. 18.8 of the CRR[24] amending the European single rulebook on banking regulation (CRR II) will enable competent authorities to require full or proportional consolidation of NBFI undertakings, other than insurance undertakings, where there is a substantial risk that the bank could decide to provide financial support to these undertakings in stressed conditions, in the absence of, or in excess of any contractual obligations to provide such support.

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[21] Commission Delegated Regulation (EU) 2018/1221 of 1 June 2018 amending Delegated Regulation (EU) 2015/35 as regards the calculation of regulatory capital requirements for securitisations and simple, transparent and standardised securitisations held by insurance and reinsurance undertakings

[22] See for an overview of the ESMA and EBA mandates, respectively, https://www.esma.europa.eu/policy-activities/securitisation and https://www.eba.europa.eu/regulation-and-policy/securitisation-and-covered-bonds

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

[24] Regulation (EU) N°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) N°648/2012 and Regulation (EU) 2019/876 of the European Parliament and of the Council of 20 May 2019 amending Regulation (EU) N° 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) N° 648/2012.

EBA will in this context publish a Regulatory Technical Standard on the methods for prudential consolidation that will include several indicators that should be used by institutions in order to identify which undertakings can be prone to step-in risk.

The guidelines are expected to enter into force no later than 2020. On their side, banks will be expected to put into place policies and procedures for identifying and managing step-in-risk as part of their risk management framework. On the basis of a specific reporting, supervisory authorities will then assess the adequacy of banks' self-assessments and mitigating measures taken in this regard.

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

The Joint Committee of the European Supervisory Authorities (EIOPA, EBA, ESMA) is finalising 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.

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. A transition period preceding the entry in force of the ITS shall allow the financial conglomerates to adjust their data management and reporting tools to the new requirements.

VI. Key findings, policy conclusions and recommendations

This monitoring report on asset management and non-bank financial intermediation in Belgium constitutes the second annual update of the publication, in 2017, of the first NBB-FSMA report on asset management and NBFI. The main goal of this joint FSMA-NBB monitoring report is to present the annual 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.

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 capital market developments. Net assets of Belgian investment funds, at the core of the asset management sector, have decreased between the end 2017 and 2018 (from € 175 billion to € 163 billion), while assets under management of Belgian asset managers dropped to € 219 billion. Assets generating fee and commission income for Belgian banks, which include also foreign investment funds distributed to Belgian residents, also fell and reached € 545 billion at the end of 2018. 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.

Developments in the total market value of Belgian investment funds also explain the slight decline in one of the two metrics of the size of the Belgian NBFI sector: under the FSB framework, it falls from € 147 billion at the end of 2017 to € 142 billion at the end of 2018, while under the narrower EBA framework[25], on the contrary, it increased to € 24.7 billion over the same period. Within the frameworks defined by the FSB and EBA, views diverge as to what extent investment funds should be considered part of the NBFI sector. While under the EBA framework, the eligible Belgian investment funds (€ 11.7 billion out of € 24.7 billion) represent 50% of the NBFI sector, this is close to 90 % under the FSB framework of the NBFI sector (€ 132 billion out of € 147 billion).

Aggregate numbers on the size of 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.

[25] 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.

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. As competent authorities, the FSMA and the NBB therefore remain committed to an annual updating of the key statistics of this monitoring report.

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).

In an effort to close the data gaps on NBFI entities and activities (in particular investment funds) identified by the FSB and the ESRB, new and improved Belgian reporting requirements for certain public investment funds have entered into force on 1 October 2017. These new reporting requirements are the result of a fruitful cooperation between the FSMA and the NBB. The FSMA uses these newly collected data as the basis of an additional quantitative risk assessment tool, complementing its existing supervisory approaches.

The FSMA also periodically shares aggregate statistics on the investment fund sector with the NBB.

The NBB has closed data gaps in the Belgian OFI sector and continues to be involved in ongoing work at ECB/ESRB level to gain a better understanding of this large subsector of the NBFI universe.

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.

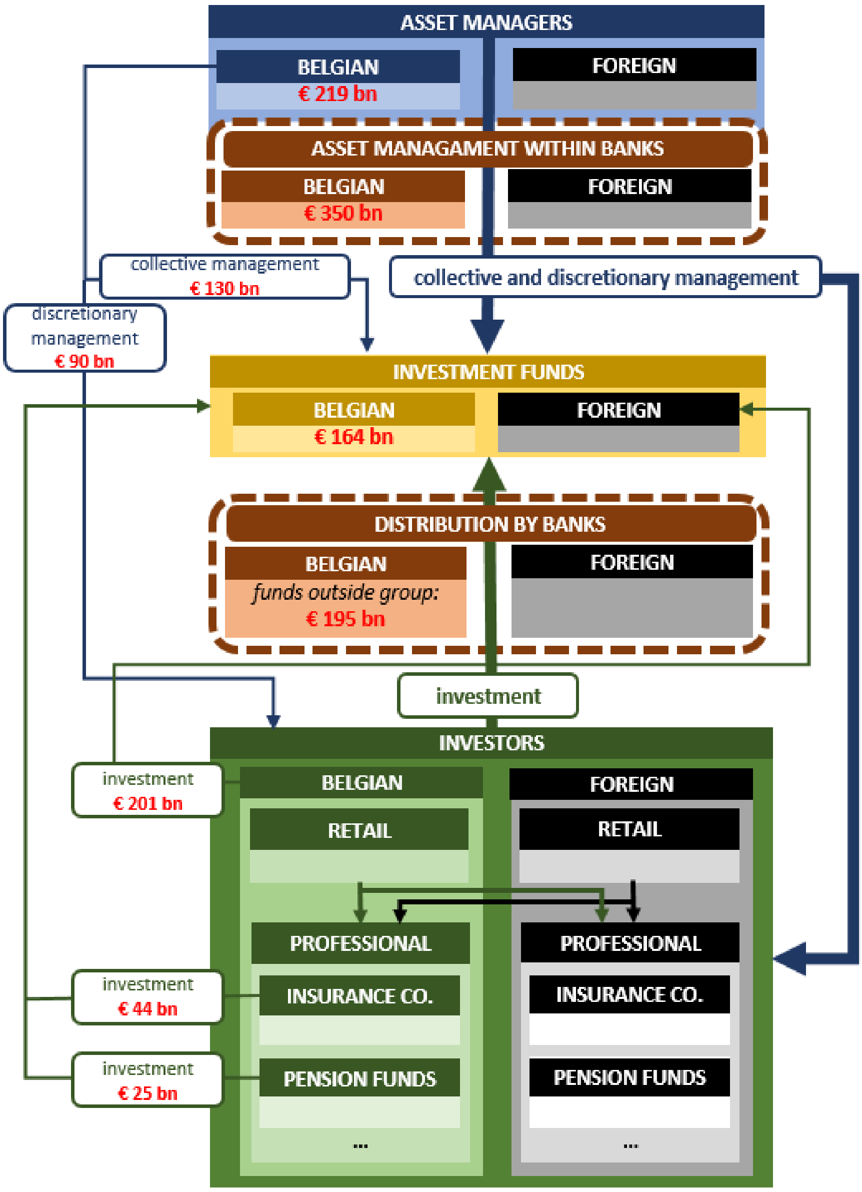
The FSMA has therefore continued its efforts to promote an effective liquidity risk management process and to make swing pricing, anti-dilution levies and redemption gates available as additional liquidity management tools for all Belgian investment funds. New legislation has made the implementation of these additional liquidity management tools possible.

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 continued to closely monitor and analyse 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 2018)*



Sources: FSMA, NBB.

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

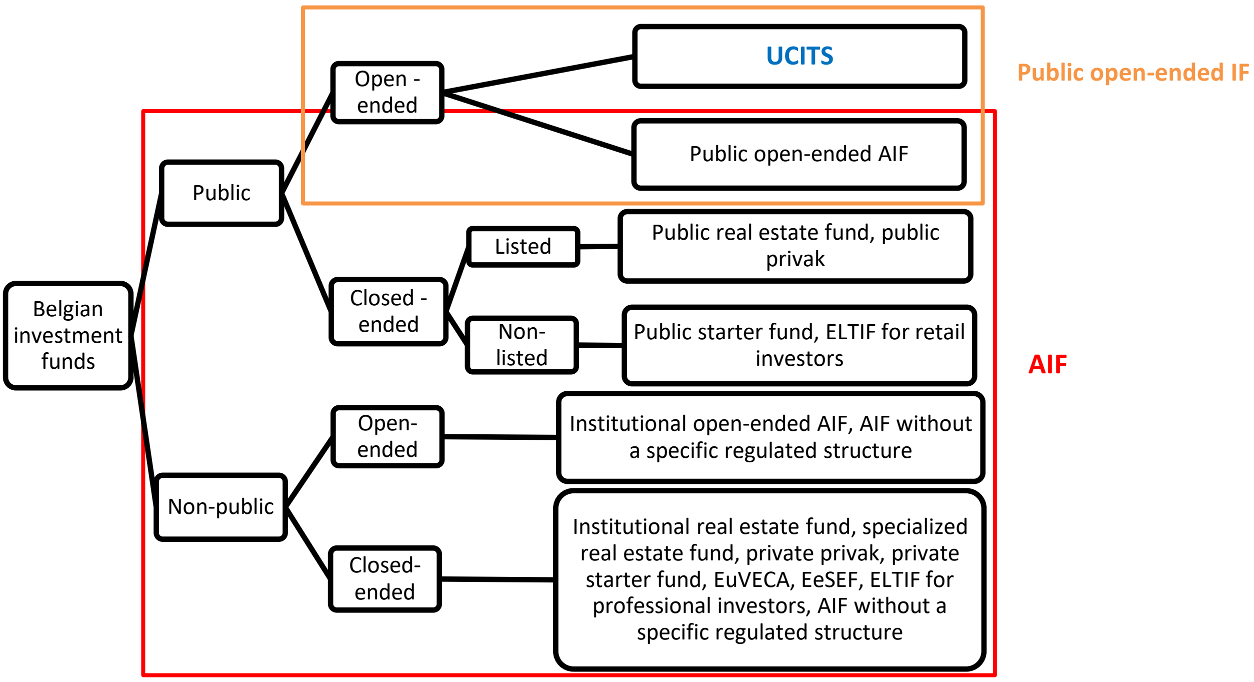
	(Net) Assets [1]		
	2016	**2017**	**2018**
Belgian investment funds	**144**	**175**	**164**
Public	127	155	147
Non-public	17	19	17
Belgian asset managers	**248**	**292**	**219**
Assets under collective management	146	181	130
Assets under discretionary management	103	111	90
Assets under investment advice	2	2	3
Assets generating fee and commission income for Belgian banks	**531**	**582**	**545**
Assets managed in the bank	336	365	350
Collective management	193	214	209
Discretionary management	143	151	141
Collective investment products distributed but not managed	195	217	195
Foreign investment funds held by Belgian residents (end-June data for 2016 and 2017)	**189**	**214**	**201**
Households	100	114	95
Other investors	89	100	106
Investments of Belgian insurance companies in investment funds	**42**	**45**	**44**
Investments of Belgian institutions for occupational retirement provision in investment funds	**21**	**25**	**25**

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.

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)

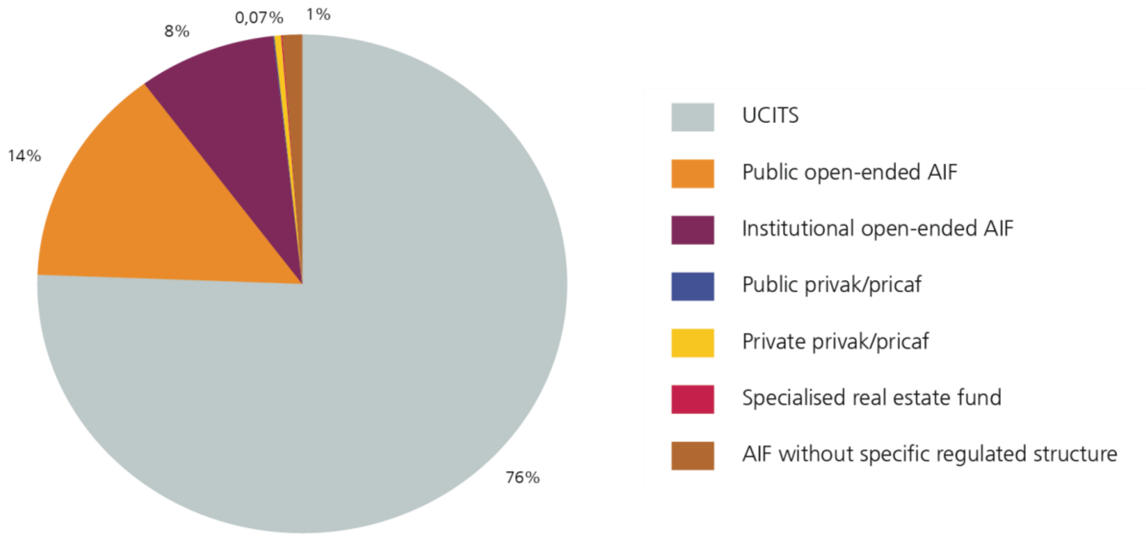
	Registered (sub-)funds (number)			**Net asset value** (€ million)		
	2016	**2017**	**2018**	**2016**	**2017**	**2018**
UCITS	**71 (627)**	**74 (688)**	**85 (715)**	**81,165**	**114,449**	**123,639**
AIF	**147 (748)**	**186 (638)**	**218 (490)**	**62,905**	**60,195**	**39,937**
Public open-ended AIF	57 (540)	51 (370)	31 (204)	45,646	40,619	23,313
Public *privak/pricaf*	1	1	1	135	162	120
Public real estate fund	0	0	0	0	0	0
Public starter fund	0	0	0	0	0	0
Institutional real estate fund	0	0	0	0	0	0
Institutional open-ended AIF **[1]**	31 (145)	32 (165)	28 (127)	16,210	17,500	13,750
Private *privak/pricaf* **[1]**	41	52	65	59	439	674
Specialised real estate fund **[1]**	0	10	37	0	12	120
Private starter fund **[1]**	0	0	0	0	0	0
EuVECA	0	0	0	0	0	0
EuSEF	0	0	0	0	0	0
ELTIF (retail investors)	0	0	0	0	0	0
ELTIF (professional investors)	0	0	0	0	0	0
AIF without specific regulated structure **[2]**	17 (21)	40	56	855	1,462	1,960
Total	**218 (1,375)**	**260 (1,326)**	**303 (1,205)**	***144,070***	***174,643***	***163,576***

Source: FSMA, FPS Finance.

Notes:

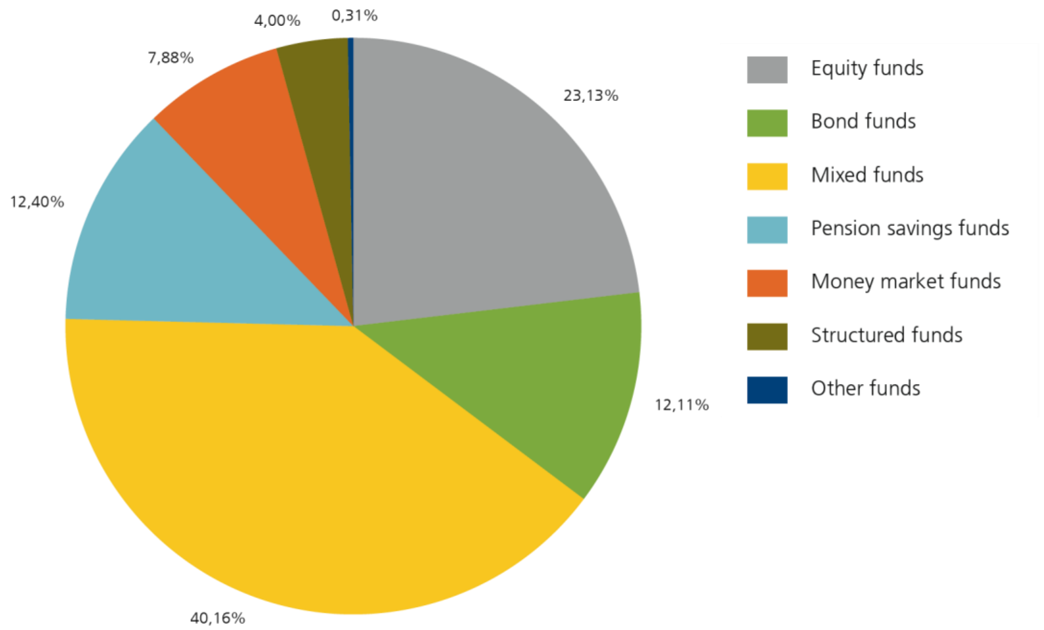
This table presents the number of registered (sub-) funds and their net asset value (in € million) of the Belgian investment fund industry, classified according to the applicable regulatory regime. **[1]** The estimated net asset value of the institutional open-ended AIFs, specialised real estate funds, private privaks/pricafs and private starter funds is only a *lower bound*. It is the net asset value of these entities for which the FSMA is the competent authority receiving the reports concerning these AIFs (under the reporting requirements of the AIFMD). 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. **[2]** The number (net asset value) of registered (sub-) funds of AIFs without a specific regulated structure is the number (net asset value) of Belgian AIFs for which their managers reported data to the FSMA and which were not registered as an AIF of one of the above types. 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 2018)*



Source: FSMA.

Chart 2.4: Breakdown of the NAV of public open-ended investment funds by investment policy *(end 2018)*



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**		
	2016	**2017**	**2018**	**2016**	**2017**	**2018**	**2016**	**2017**	**2018**
Equity funds	34,116	43,063	33,822	470	892	165	34,586	43,955	33,986
o/w fund of funds or feeder		*1,467*	*2,321*		*557*	*151*		*2,024*	*2,472*
Bond funds	5,467	14,439	15,581	3,971	4,694	2,220	9,438	19,133	17,801
o/w fund of funds or feeder		*7,103*	*8,510*		*1,846*	*197*		*8,949*	*8,707*
Mixed funds	9,582	49,862	53,886	462	11,016	5,129	10,044	60,878	59,016
o/w fund of funds or feeder		*39,628*	*44,123*		*10,606*	*4,894*		*50,234*	*49,017*
Pension savings funds	0	0	6,868	18,059	19,651	11,360	18,059	19,651	18,228
o/w fund of funds or feeder					*274*	*279*		*274*	*279*
Money market funds	756	1,898	9,279	1,184	619	2,308	1,940	2,517	11,587
Structured funds	4,638	4,545	3,811	6,121	3,654	2,070	10,759	8,199	5,882
Other funds	514	643	391	120	92	60	634	735	451
Fund of funds **[1]**	26,092			15,259			41,351		
Total	**81,165**	**114,449**	**123,639**	**45,646**	**40,619**	**23,313**	**126,811**	**155,067**	**146,951**
o/w fund of funds or feeder		***48,198***	***54,954***		***13,283***	***5,522***		***61,418***	***60,475***

Source : FSMA.

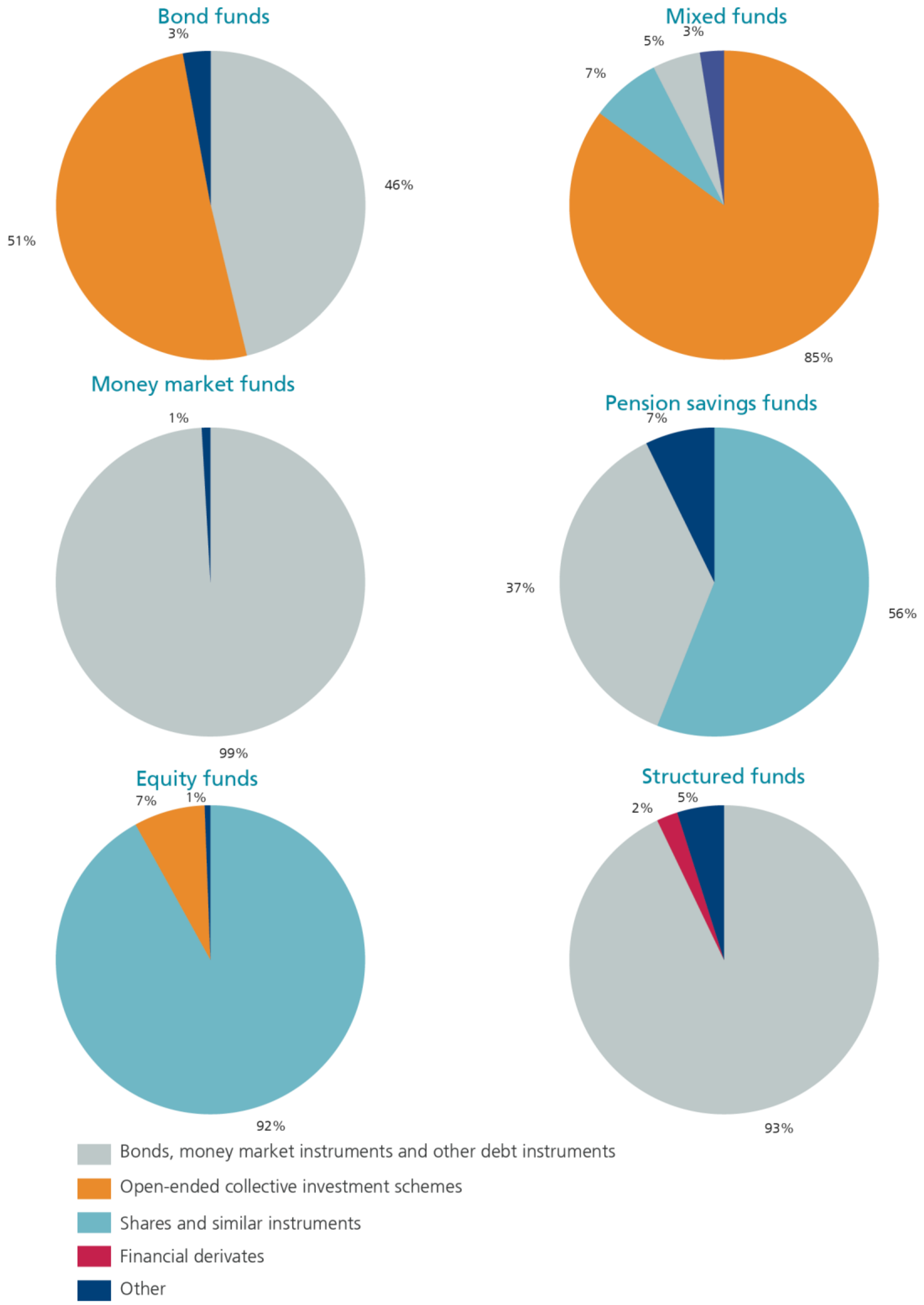
Notes:
This table presents a breakdown of the net asset value (in € million) of the Belgian public open-ended investment funds, classified according to their investment policy and the applicable regulatory regime (UCITS or AIF). **[1]** As of the end of 2017 the FSMA no longer classifies investment funds solely into the investment policy 'fund of funds'. 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 *(€ million, end 2018)*

	Deposits	**Bonds, money market instruments and other debt instruments**	**Shares and similar instruments**	**Other securities**	**Open-ended collective investment schemes**	**Financial derivatives**	**Receivables and remaining assets**	**Payables and remaining liabilities**	**Total net assets**
Bond funds	342,64	8 232,68	60,87	112,85	9 053,77	-8,65	158,30	-151,21	**17 801,26**
Mixed funds	1 515,25	2 952,68	4 337,41	100,44	50 249,12	-8,75	413,26	-543,62	**59 015,79**
Money market funds	7,47	11 482,94	0,00	0,00	0,00	0,00	736,04	-639,11	**11 587,34**
Other funds	33,09	436,25	1,62	0,00	0,00	-12,64	116,09	-123,62	**450,77**
Pension savings funds	809,70	6 698,09	10 210,93	1,40	478,70	0,00	666,48	-637,28	**18 228,02**
Equity funds	733,99	86,91	31 256,11	59,03	2 528,21	11,03	836,98	-1 525,90	**33 986,36**
Structured funds	124,53	5 463,92	0,00	0,00	0,22	130,08	430,90	-267,95	**5 881,70**
Total	**3 566,65**	**35 353,47**	**45 866,94**	**273,73**	**62 310,02**	**111,06**	**3 358,05**	**-3 888,69**	**146 951,24**

Source : FSMA.

Chart 2.5: Breakdown of the NAV of Belgian public open-ended investment funds according to investment policy and investments *(€ million, end 2018)*



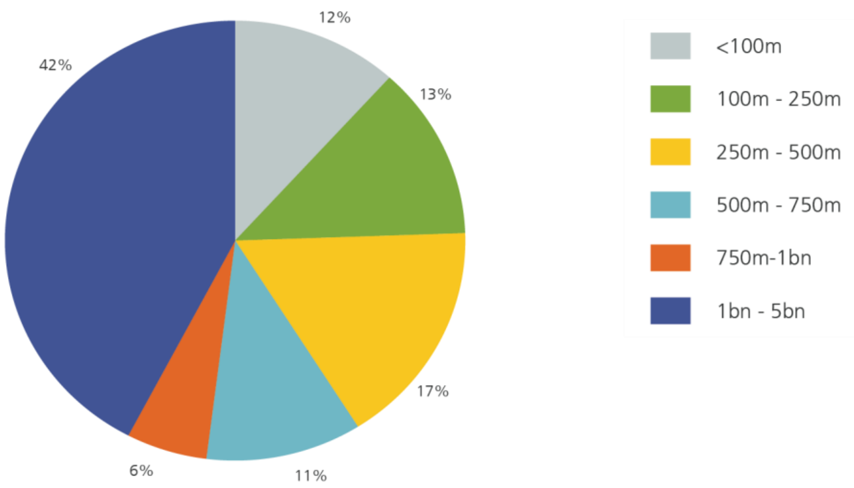
Source : FSMA.

Table 2.5: Breakdown of the total NAV of Belgian public open-ended investment funds according to investment fund size *(€ million, end 2018)*

Size bucket	**Total net assets**	**Number of sub-funds**
<100m	17,205	656
100m - 250m	18,735	120
250m - 500m	24,375	68
500m - 750m	16,104	27
750m-1bn	8,344	10
1bn - 5bn	62,185	30
Total	**146,951**	**911**

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 2018)*



Source : FSMA.

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

	2016	2017	2018
Number of authorised management companies	9	9	13
Assets under management	**248.3**	**291.6**	**219.4**
Collective management	145.7	181.0	129.7
Discretionary management	102.5	110.6	89.7
Assets under investment advice	**2.4**	**1.9**	**3.4**
Assets under management and under advice	**250.7**	**293.5**	**222.8**

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. 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.

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)		
		2016	2017	2018	2016	2017	2018
UCITS	Umbrella funds	528	531	550	N.A.	N.A.	N.A.
	Sub-funds	3,819	3,992	4,327			
Public open-ended AIF	Umbrella funds	5	4		5,624	5,018	318
	Sub-funds	40	17				
Total	Umbrella funds	533	535	552	5,624	5,018	318
	Sub-funds	3,859	4,009	4,331			

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.

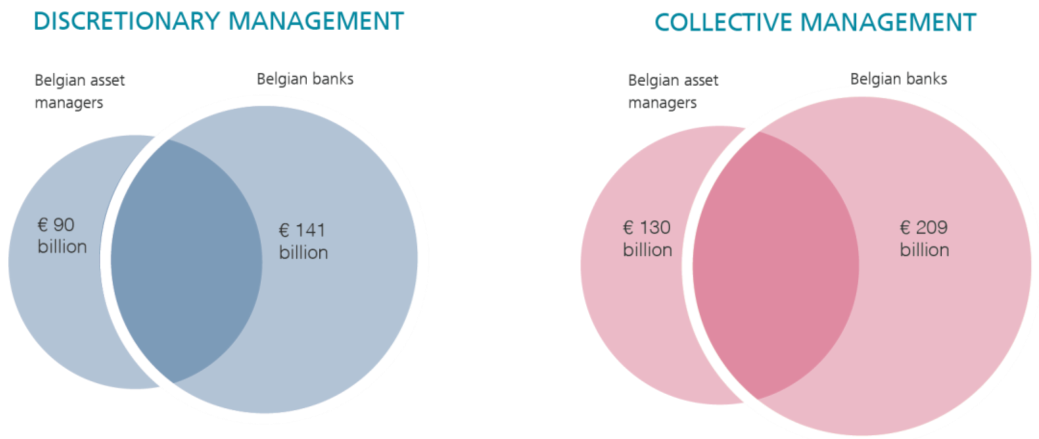
__Table 2.8: Investments by Belgian residents in foreign investment funds__ (€ billion, end of period)

	June 2017			December 2018		
	MMFs	Non-MMF IFs	Total	MMFs	Non-MMF IFs	Total
Total	**12.5**	**201.8**	**214.2**	**11.4**	**189.8**	**201.2**
By holding sector						
Households	1.9	112.3	114.2	2.6	92.1	94.7
Other non-financial investors (incl. general government)	2.9	9.9	12.8	2.1	9.3	11.4
Banks	0.0	0.2	0.2	0.0	0.0	0.0
Non-MMF investment funds	1.6	42.5	44.0	2.6	46.2	48.8
Insurance corporations	3.1	21.8	24.9	2.3	24.7	27.0
Pension funds	0.2	13.7	13.8	0.2	16.1	16.3
Other financial corporations	2.8	1.4	4.2	1.7	1.3	3.0
By issuing country						
DE	0.0	10.9	10.9	0.0	6.1	6.1
FR	8.4	13.1	21.5	6.3	12.5	18.8
IE	0.0	13.2	13.2	0.0	16.1	16.1
LU	4.0	159.7	163.7	5.0	152.2	157.2
NL	0.0	1.4	1.4	-	1.1	1.1
Other countries	0.0	3.4	3.5	0.0	1.9	1.9

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 (CSDB).

__Chart 2.7: Overlap between AuM of Belgian banks and AuM of Belgian asset managers__ (end 2018)



Source: FSMA, NBB.

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

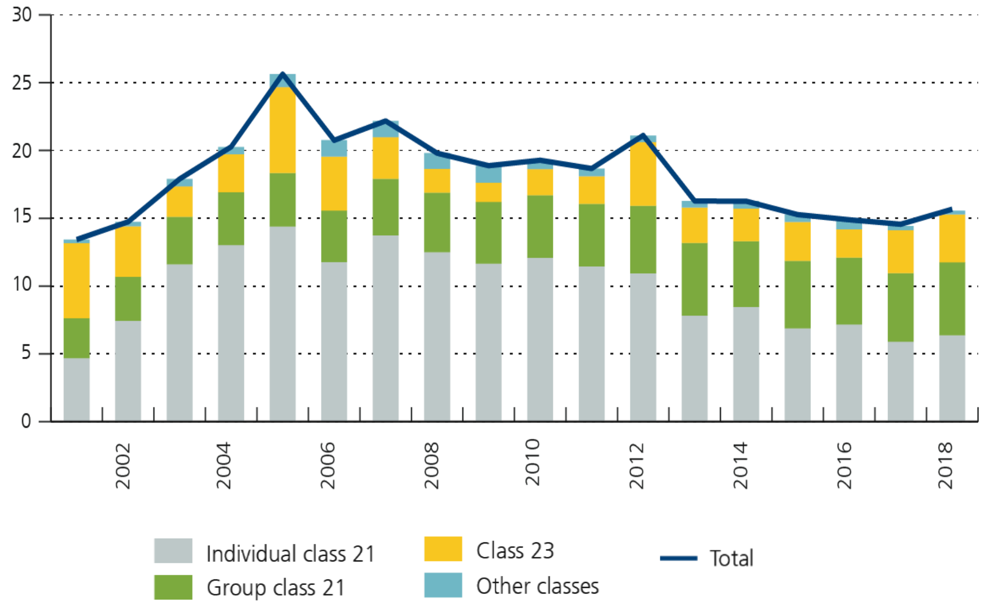
	2017			2018		
	Assets involved	**F&C income**	**Average remuneration**	**Assets involved**	**F&C income**	**Average remuneration**
	€ billion, year-end	*€ million, full year*	*bps*	*€ billion, year-end*	*€ million, full year*	*bps*
Assets managed within the bank **[1]**	365	1,710	*47*	350	1,881	*54*
Collective management	214	N.A.	N.A.	209	N.A.	N.A.
Discretionary management	151			141		
Collective investment products distributed by the bank (but not managed within the bank) **[2]**	217	720	*33*	195	781	*40*
Total of the activities above	**582**	**2,430**	***42***	**545**	**2,662**	***49***
Custody **[3]**	4,395	738	*2*	3,089	714	*2*
Collective investment	806	N.A.	N.A.	715	N.A.	N.A.
Other	3,589			2,375		
Central administration services for collective investment **[4]**	174	114	*7*	162	122	*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). **[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 2.8: Belgian insurers' life insurance premiums *(€ billion)*



Source: NBB.

Table 2.10: Assets for class 23 contracts' technical provisions of Belgian insurers *(€ million, year-end)*

	2016	**2017**	**2018**
Collective investment undertakings	27,735	31,431	31,615
Equity funds	11,511	9,304	8,371
Asset allocation funds **[1]**	6,668	6,264	6,638
Other funds **[2]**	6,493	11,649	11,895
Debt funds	2,605	3,763	4,041
MMFs, real estate funds and alternative funds **[3]**	457	450	670
Cash and deposits	2,416	2,697	2,403
Deposits with term longer than 1 year	2,310	2,127	1,856
Transferable deposits and cash	106	569	547
Corporate bonds	600	797	995
Other **[4]**	672	612	778
Total	**31,423**	**35,536**	**35,791**

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 undertakings for collective investment other than in the context of their unit-linked life insurance business *(€ million, year-end)*

	2016	2017	2018
Debt funds	5,870	5,335	5,155
Money Market Funds (MMFs)	2,997	2,108	1,045
Equity funds	1,495	1,840	1,548
Real estate funds	1,102	1,315	1,359
Alternative funds	859	1,018	986
Other funds	809	1,089	1,078
Private equity funds	669	761	858
Asset allocation funds	223	315	268
Infrastructure funds	162	251	226
Total	**14,187**	**14,032**	**12,523**

Source: NBB, Solvency II reporting.

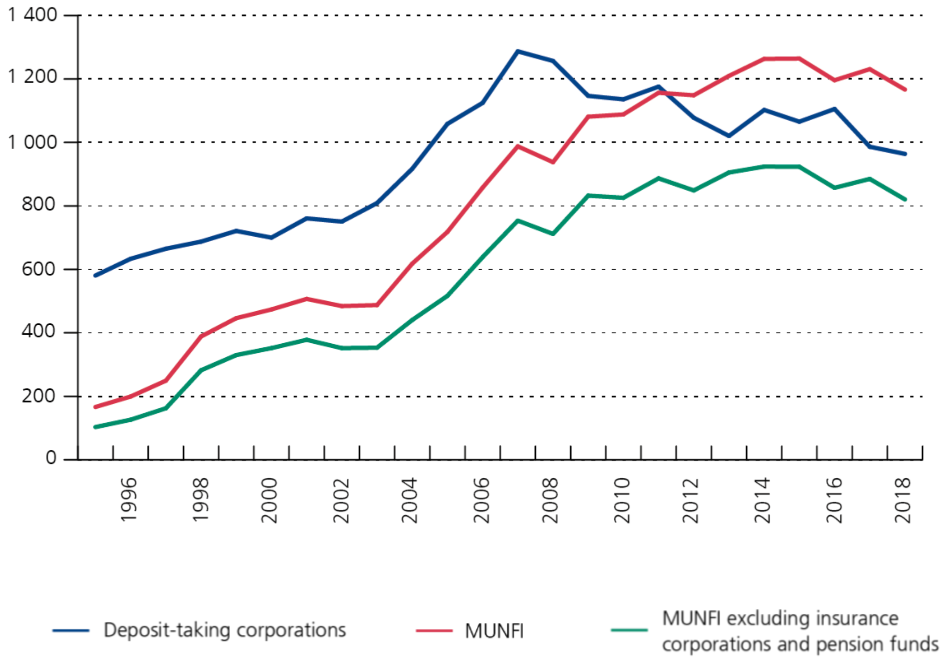
Table 2.12: Total assets and investments by Belgian institutions for occupational retirement provision *(€ million, year-end)*

	2015	2016	2017	2018
Investments	22,529	27,373	32,486	31,936
Investment fund units	17,330	20,914	25,256	24,975
Total assets	**24,693**	**29,781**	**35,147**	**34,314**

Source: FSMA.

III. Overview of the Belgian NBFI sector

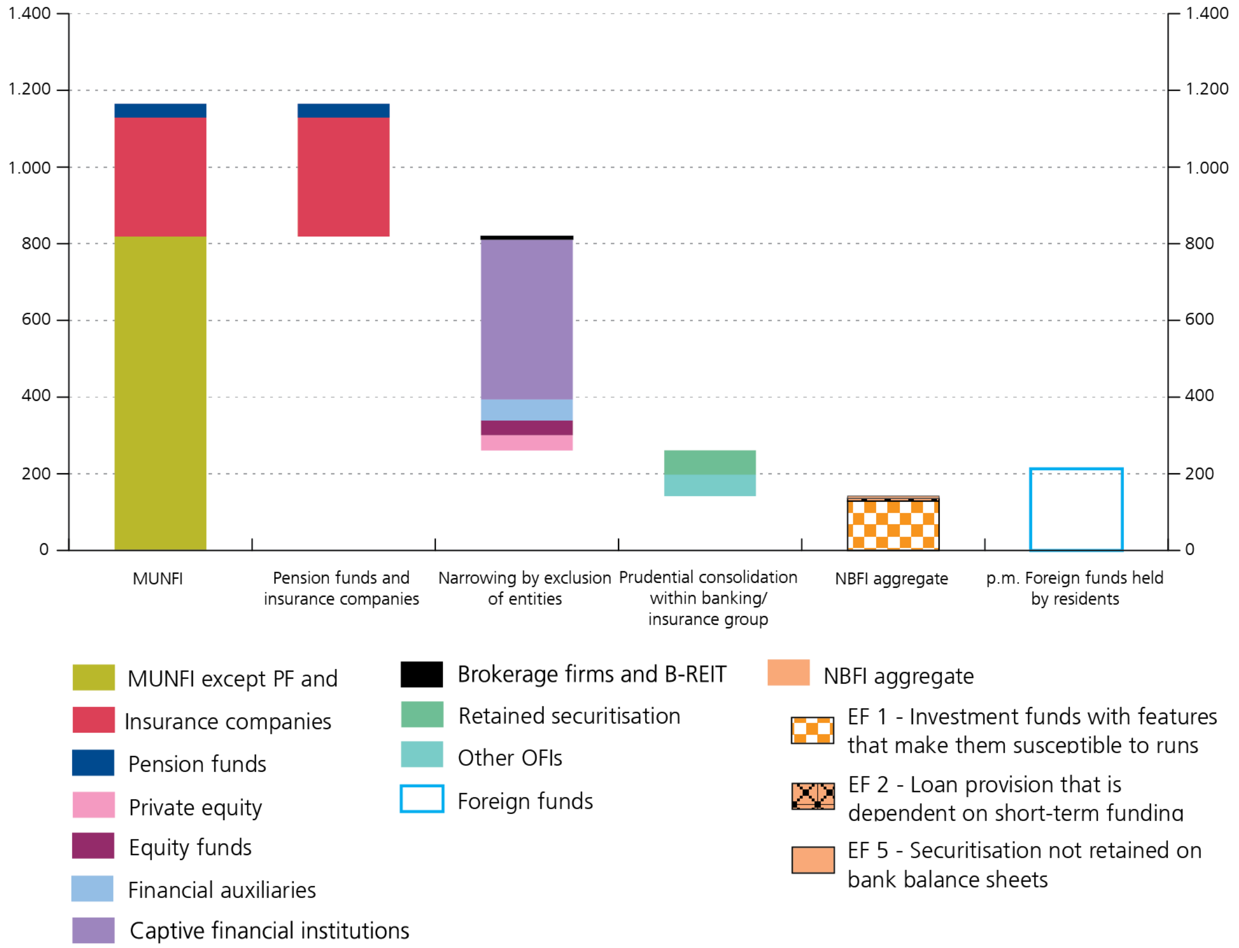
Chart 3.1: Total financial assets of the Belgian financial sector *(in € billion)*



Source: NBB calculations based on NAI data.

Notes: MUNFI = Monitoring universe of non-bank financial intermediation.

Chart 3.2: Delineation of the Belgian NBFI sector according to the narrow FSB definition *(€ billion, end 2018)*

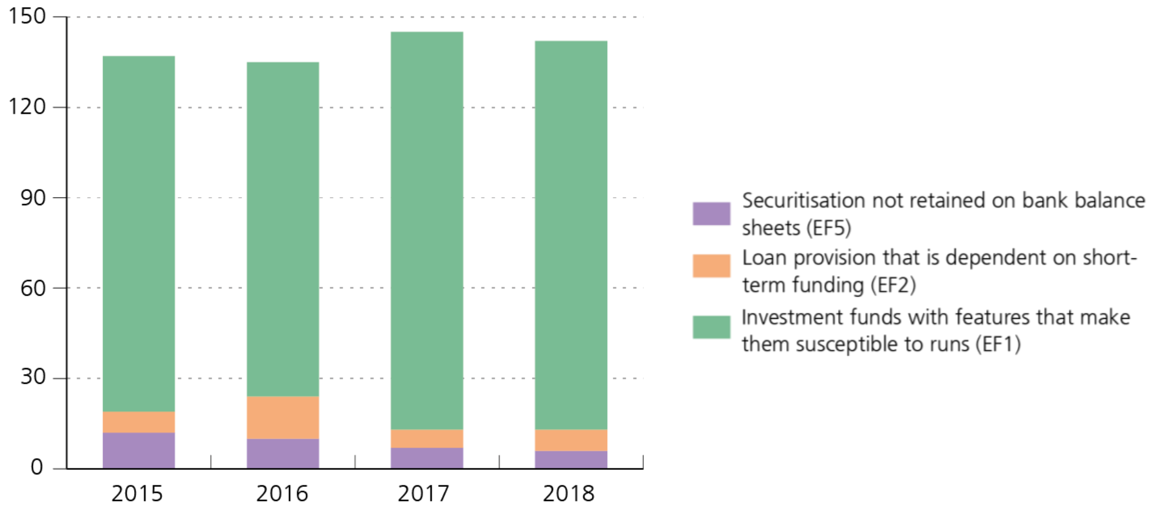


Source: NBB calculations based on NAI data.

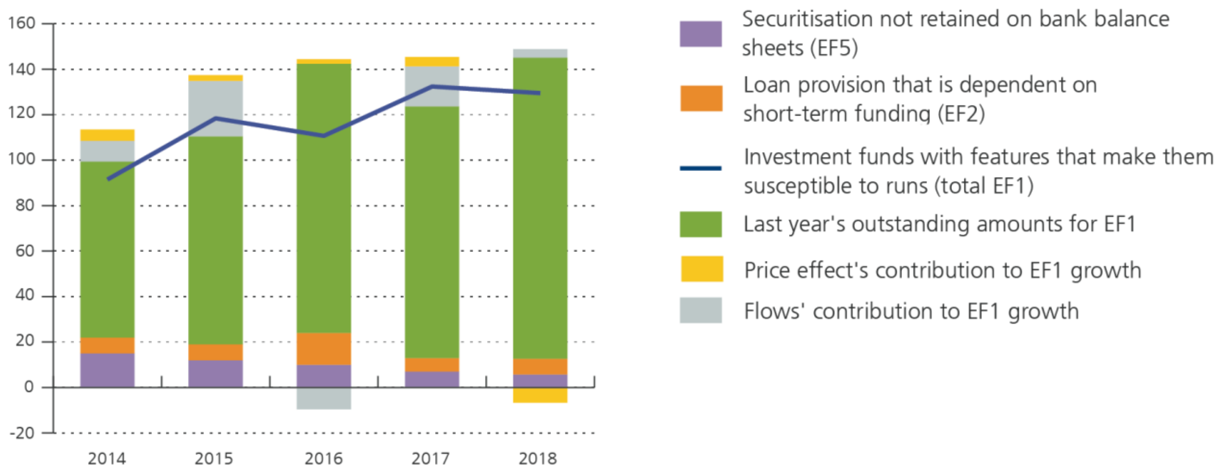
Notes: MUNFI = Monitoring universe of non-bank financial intermediation ; PF = Pension fund; IC = Insurance company; OFIs = Other financial intermediaries

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

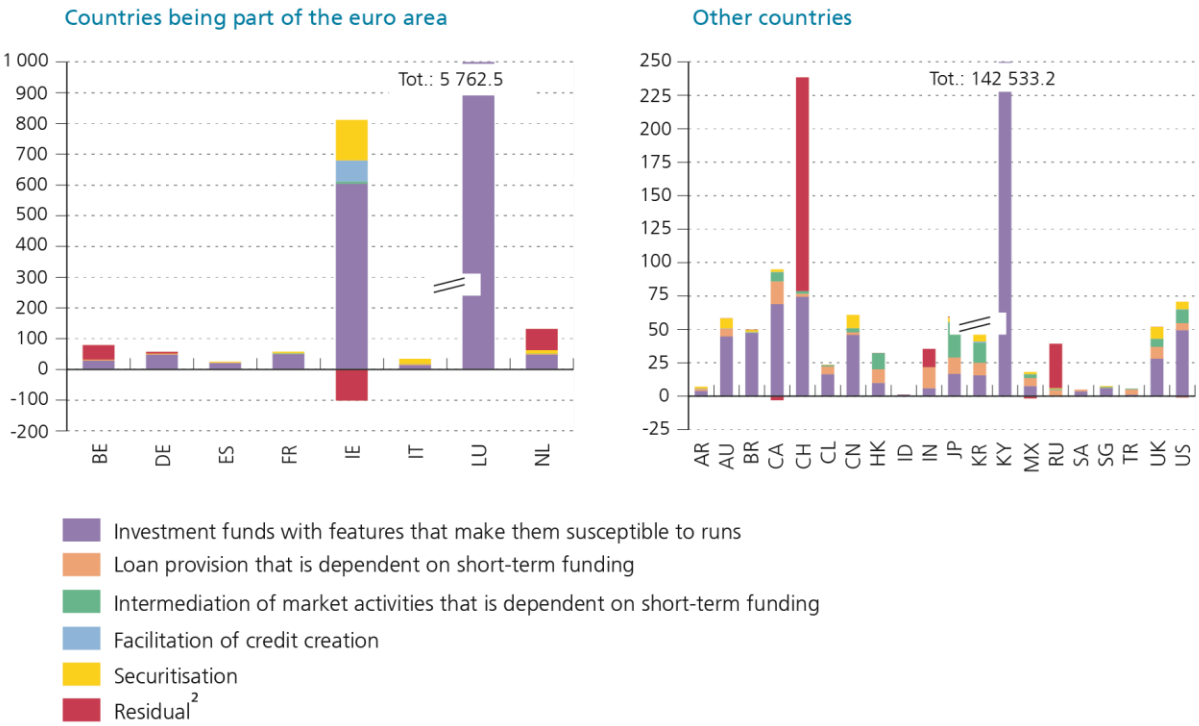


(b) End-of-period outstanding amounts and distinction between flow and price effect for EF 1



Source: NBB calculations based on NAI data.

Chart 3.4: International comparison of the NBFI sector: narrow FSB measure* [1] *(% GDP, end 2018)

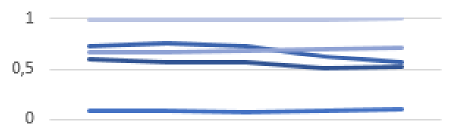
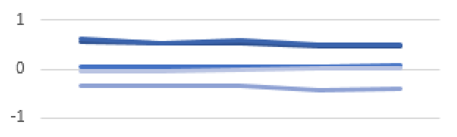
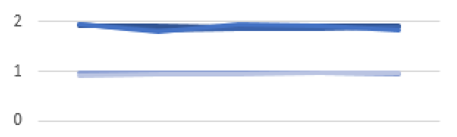
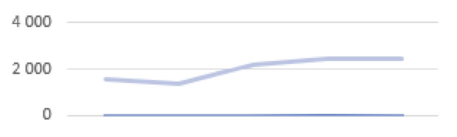


Sources: FSB, NBB.

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.

V. Monitoring framework

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

	Risk Metric	2014	2015	2016	2017	2018	Trend	Intrepretation
Credit Intermediation 1 (CI1) **[1]**	EF1 (Other non-Equity Funds)	0,6	0,57	0,56	0,51	0,52		Between 0 and 1 ; higher values show more involvement in credit intermediation
	EF1 (Fixed Income Funds)	0,72	0,76	0,72	0,62	0,56		
	EF1 (Mixed Funds)	0,08	0,08	0,07	0,08	0,1		
	EF2 (Finance companies)	0,67	0,67	0,68	0,69	0,71		
	EF5 (SFV's)	0,99	0,99	0,99	0,99	1,00		
Credit Intermediation 2 (CI2) **[2]**	EF1 (Other non-Equity Funds)	0	0	0	0	0		
	EF1 (Fixed Income Funds)	0	0	0	0	0		
	EF1 (Mixed Funds)	0	0	0	0	0		
	EF2 (Finance companies)	0,43	0,42	0,44	0,47	0,49		
	EF5 (SFV's)	0,91	0,94	0,94	0,95	0,96		
Maturity Transformation 1 (MT1) **[3]**	EF1 (Other non-Equity Funds)	0,55	0,52	0,51	0,47	0,46		Between -1 and +1 ; 0 means no maturity transformation, negative value implies negative maturity transformation
	EF1 (Fixed Income Funds)	0,61	0,53	0,59	0,50	0,48		
	EF1 (Mixed Funds)	0,05	0,05	0,05	0,06	0,07		
	EF2 (Finance companies)	-0,33	-0,35	-0,34	-0,42	-0,40		
	EF5 (SFV's)	-0,05	-0,03	-0,03	0,00	0,00		
Maturity Transformation 2 (MT2) **[4]**	EF1 (Other non-Equity Funds)	2,19	2,07	2,05	1,88	1,86		Between 0 and 2 ; 1 means ST liabilities fully covered by ST assets, value moving to 2 means ST funding dependence, value between 0 and 1 indicates negative maturity transformation
	EF1 (Fixed Income Funds)	2,64	2,13	2,42	2,00	1,93		
	EF1 (Mixed Funds)	1,05	1,05	1,05	1,06	1,07		
	EF2 (Finance companies)	0,57	0,59	0,60	0,49	0,50		
	EF5 (SFV's)	0,43	0,49	0,53	1,09	1,05		
Liquidity Transformation 1 (LT1) **[5]**	EF1 (Other non-Equity Funds)	1,91	1,91	1,89	1,92	1,93		Between 0 and 2 ; =1: ST liabilities equal to liquid assets, no liquidity transformation; >1: substantial liquidity mismatch
	EF1 (Fixed Income Funds)	1,93	1,84	1,85	1,87	1,88		
	EF1 (Mixed Funds)	1,96	1,80	1,93	1,93	1,83		
	EF2 (Finance companies)	0,97	0,97	0,97	0,97	0,96		
	EF5 (SFV's)	0,92	0,95	0,95	0,96	0,96		
Leverage 1 (L1) **[6]**	EF1 (Other non-Equity Funds)	0,61	0,53	0,59	0,50	0,48		1= no leverage ; the higher, the more leverage
	EF1 (Fixed Income Funds)	0,98	1,01	1,01	1,01	1,01		
	EF1 (Mixed Funds)	1,00	1,00	1,01	1,01	1,01		
	EF2 (Finance companies)	1,98	1,87	1,90	1,74	1,86		
	EF5 (SFV's)	1574,67	1365,60	2168,10	2442,04	2445,75		

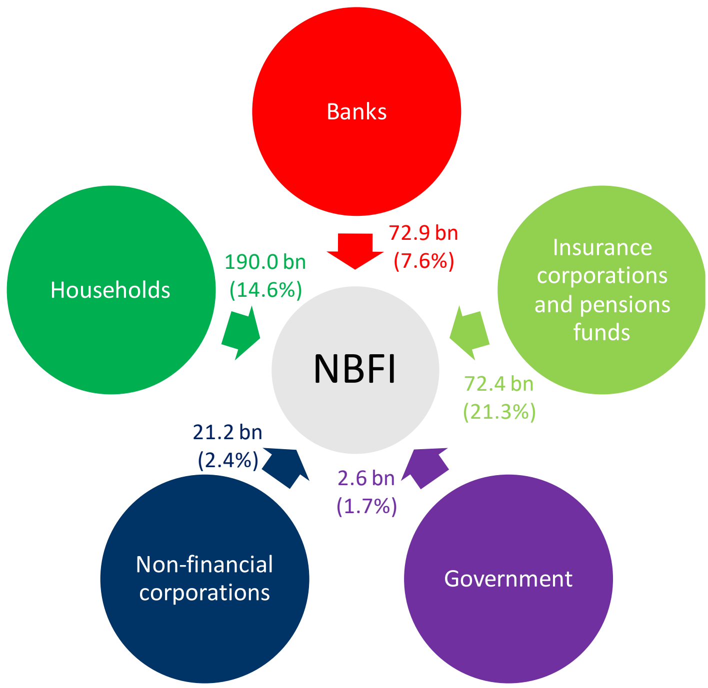
Source : FSB, NBB.

Notes:

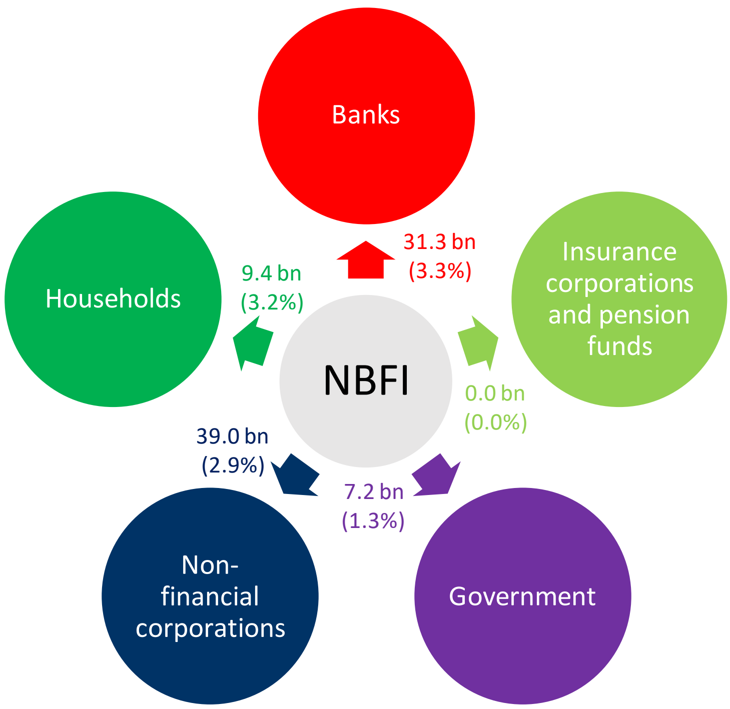
[1] Credit assets/assets under management or total financial assets. Credit assets is the amount of debt securities,loans and cash on deposit. **[2]** Loans/assets under management or total financial assets. **[3]** (Long-term assets of > 12 months – long-term liabilities of > 12 months – equity)/assets 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 EF 1: assets under management/net asset value. For other EF: total financial assets/equity.

*Chart 4.1: **Interconnectedness mapping – starting point** [1] (end 2018, in % of the originating sectors' consolidated assets [2])*

INVESTMENT LINKS



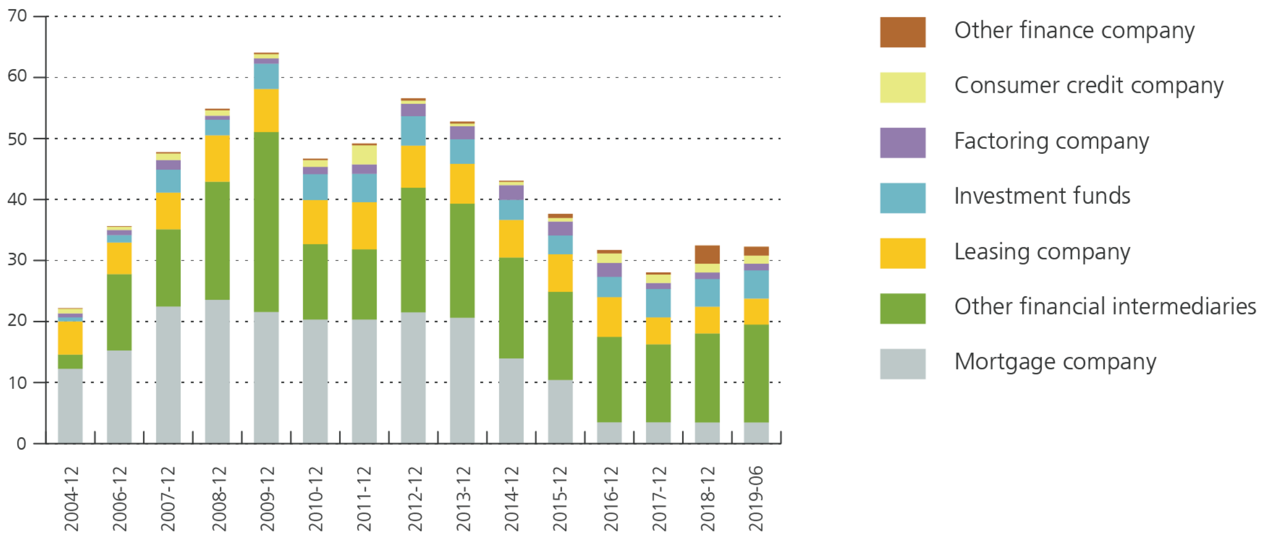
FUNDING LINKS



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. ICPF = Insurance companies and pension funds. NFCs = Non-financial corporations

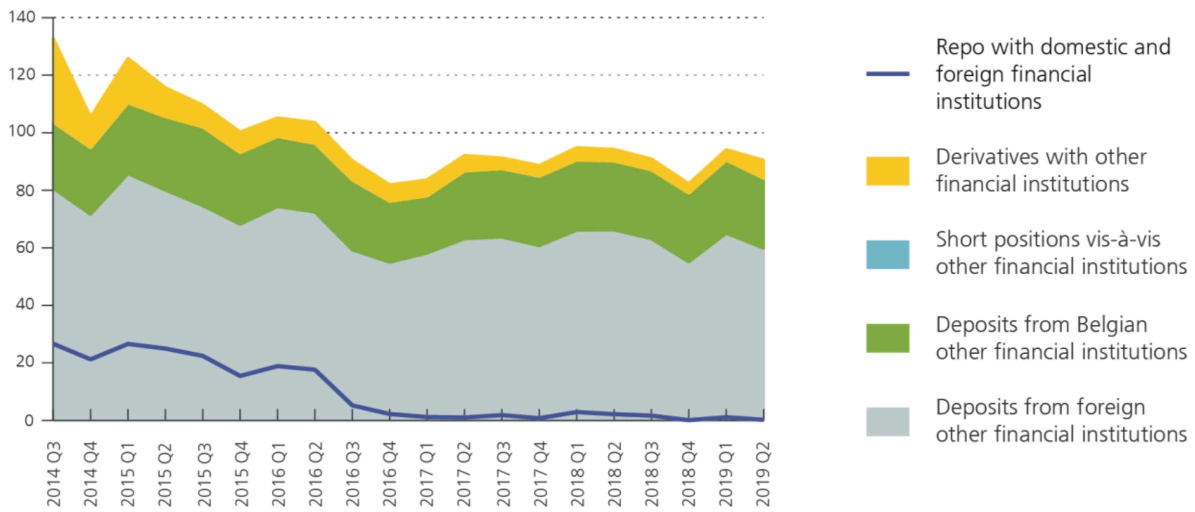
***Chart 4.2: Belgian banks' loans to other financial intermediaries [1]** (€ billion, unconsolidated data)*



Sources: NBB, Central Corporate Credit Register.

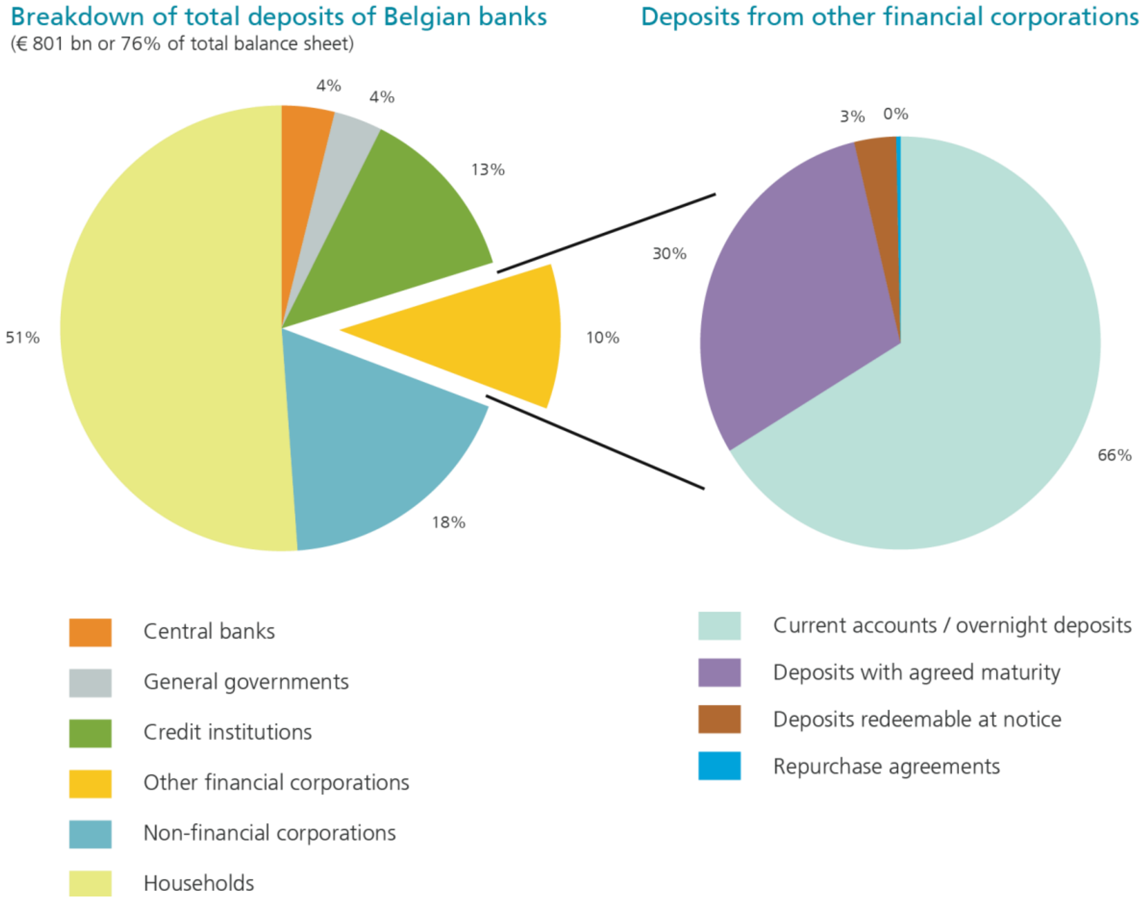
<u>Notes:</u> [1] Excluding central banks, deposit-taking corporations, holding companies and investment companies which fall outside of the scope of the shadow banking sector.

***Chart 4.3: Belgian banks' funding received from other financial institutions** (€ billion, consolidated data)*



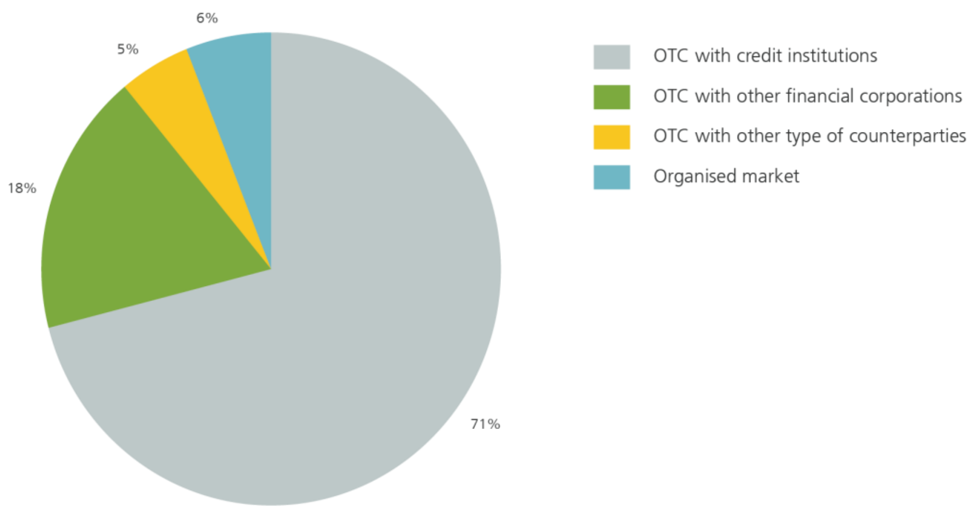
Source: NBB, FINREP.

Chart 4.4: Breakdown of total deposits of Belgian banks *(end 2018, consolidated data)*



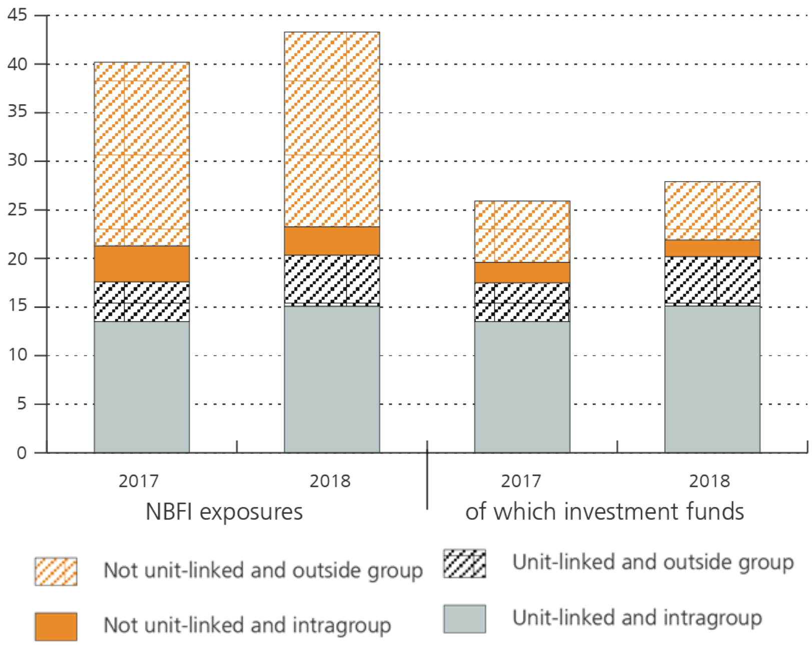
Source: NBB, FINREP.

Chart 4.5: Breakdown of the notional amount of the derivative portfolio of Belgian banks *(end 2018)*



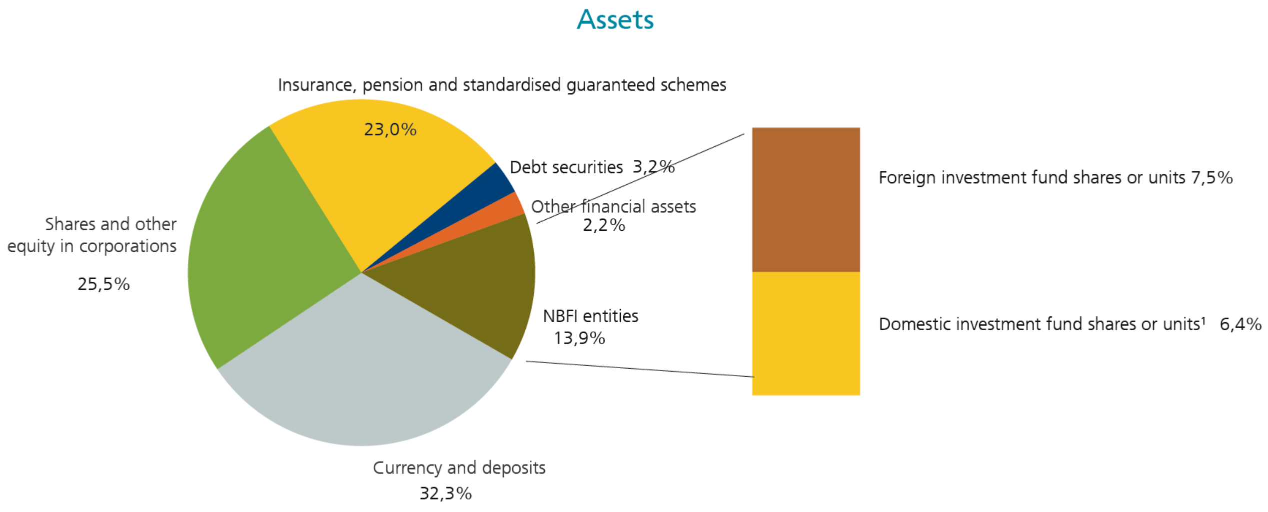
Source: NBB, FINREP.

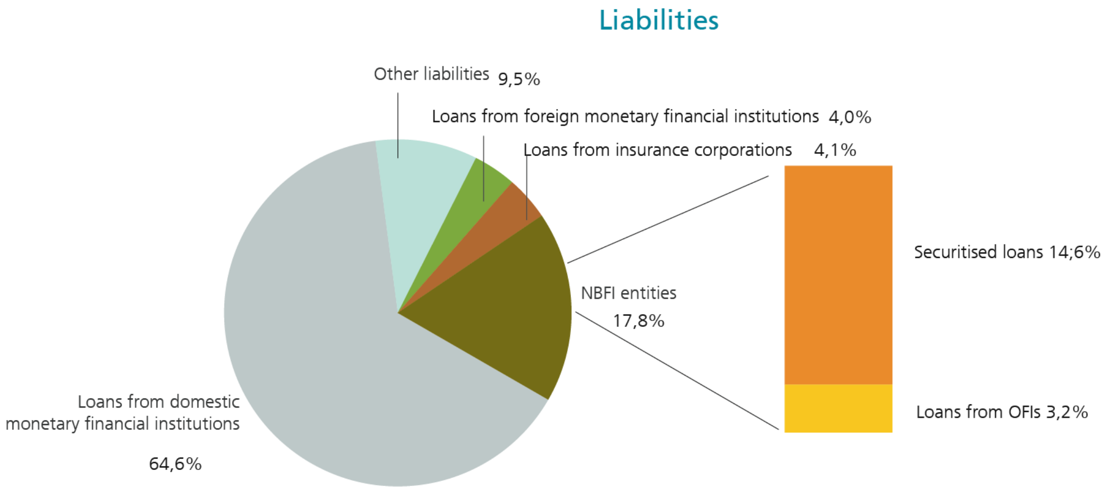
Chart 4.6: Insurance sector's NBFI exposures *(€ billion, end 2018)*



Source: NBB, Solvency II reporting.

Chart 4.7: Breakdown of households' financial assets and liabilities *(% of total, end 2018)*

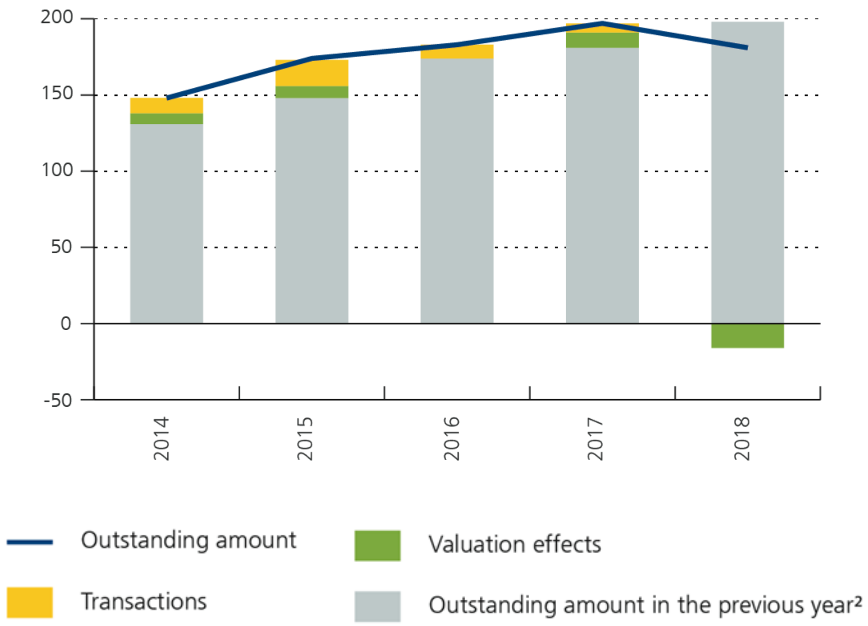




Source: NBB (Financial accounts statistics).

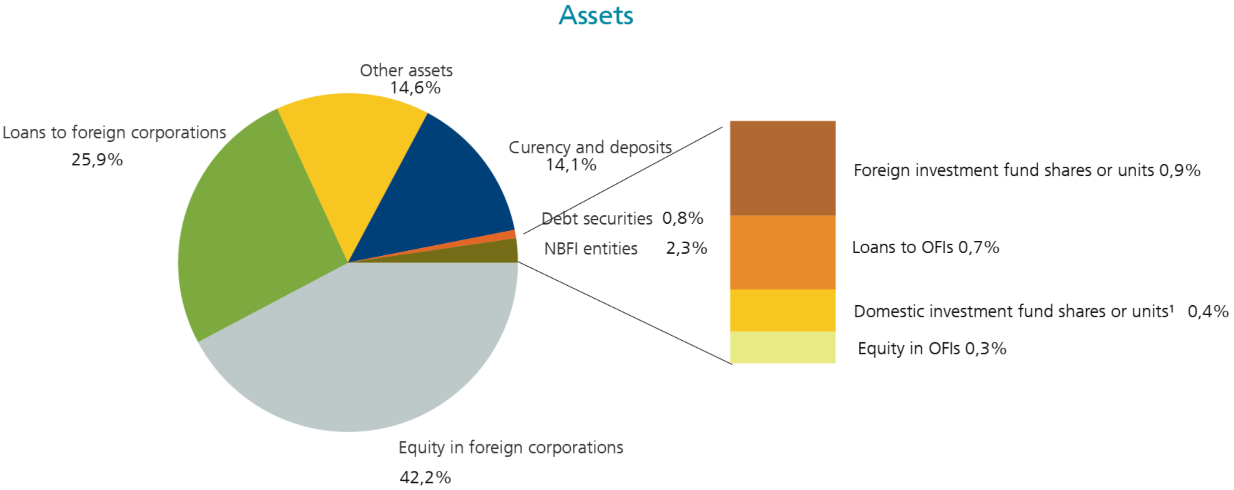
Notes: **[1]** Excluding equity investment funds.

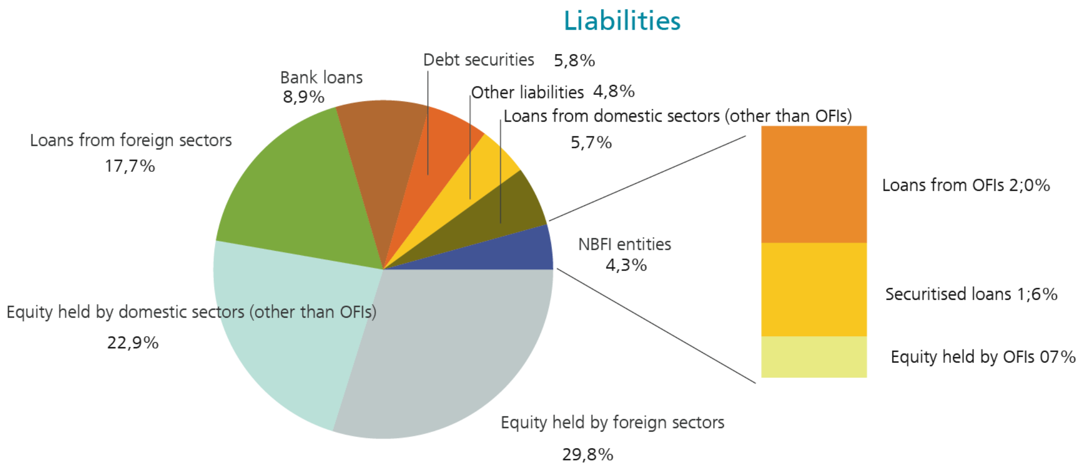
Chart 4.8: Households' holdings of domestic and foreign investment fund shares or units[1]



Source: NBB (financial accounts statitics).
Notes: **[1]** Excluding equity investment funds. **[2]** 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 2018, consolidated data)*





Source: NBB (Financial accounts statistics).

__Notes:__

[1] Excluding equity investment funds.