

Nonbank financial intermediation in Austria – developments since 2008

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Nonbank finance is an alternative to bank finance that fosters competition in the supply of financing and supports economic activity. However, nonbank finance may also become a source of systemic risk, both directly and through its interconnectedness with the banking system, if it involves activities that are typically performed by banks, such as maturity or liquidity transformation and the creation of leverage. While in the EU, the relative importance of nonbank finance vis-à-vis traditional banking has increased noticeably in the past decade, the Austrian financial system is still dominated by the bank finance model. Overall, the fractional growth of nonbank finance assets is not seen as a concern in itself, as the risks from nonbank financial intermediation seem contained. Neither the structure nor the size of nonbank financial intermediation in Austria are currently considered to pose a threat to financial stability.

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In response to the financial crisis of 2008, policymakers worldwide substantially expanded the regulatory and supervisory perimeter over the financial system and its most important actors. The area most acutely concerned by these efforts was the banking sector, i.e. the credit institutions fully regulated and supervised under traditional banking laws. Consequently, traditional banks are deemed safer and sounder today than before the global crisis, e.g. in terms of institutions' capital or liquidity resources.²

However, over the past decade, asset volumes in markets of nonbank financial intermediation grew markedly in size compared to banking assets. Part of this growth stems from taking over risk positions from banks, but it is also the result of genuine credit intermediation activities by nonbanks, such as the granting of loans and purchases of debt securities. Thus, nonbank finance has become an increasingly important funding source for the real economy over the past decade. In the European context, the importance of nonbank finance can be expected to increase further with the progress of the capital markets union.³ But this also means that some types of risks associated with the traditional banking business have shifted into other areas of the financial market that are differently or less strictly regulated than banks. Much of the related work since the financial crisis has been conducted under the heading “shadow banking,” but recently this term with its somewhat pejorative connotation has increasingly been replaced by the neutral term “nonbank financial intermediation.”

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² See, e.g., FMA (2019) and Carmassi et al. (2019).

³ Pires (2019).

Given the enhanced supervisory attention given to financial intermediation outside the traditional banking sector that has resulted from these developments, this study attempts to replicate for Austria the benchmark monitoring exercise for nonbank financial intermediation in the EU conducted by the European System Risk Board (ESRB). It also follows up on a previous analysis carried out by the OeNB in 2017.⁴ We made some adjustments to the international monitoring methodology to account for national specificities. In particular, in the context of the Austrian financial system, it makes sense to take the assets of insurance corporations and pension funds into account when analyzing “bank-like activities” of nonbank financial institutions.

1 Risks and vulnerabilities of nonbank finance

Nonbank finance potentially brings benefits to the financial system, for instance a greater diversity of funding sources for the economy and increased risk-sharing across the financial system. This can mean more competition for traditional banking services and, hence, more choices for investors and consumers, e.g. in terms of product innovation and better or cheaper services. However, these developments may also go hand in hand with increased risk-taking in potentially less regulated parts of the financial sector, thereby possibly circumventing the prudential requirements applicable to banks, and can involve new forms of risks to financial stability.

Such systemic risk may stem directly from credit intermediation activities of particular nonbank financial entities, for instance, which may involve maturity and liquidity transformation, imperfect credit risk transfer and leverage.⁵ Furthermore, issues may arise directly and indirectly through the interconnectedness of the nonbank financial intermediation sector with the regular banking system. Other interlinkages such as connections created through the repo or securities lending market might not always be visible from aggregate statistics and because of existing data gaps. In addition, the current low interest rate environment may incentivize search for yield and might render nonbank financial intermediaries and investors vulnerable to a sudden repricing of risk. Finally, vulnerabilities can build up unnoticed among entities where statistical information is not readily available or not granular enough, e.g. in some parts of the other financial intermediaries (OFI) sector.

2 Nonbank financial intermediation in the international context

At the global level, the Financial Stability Board (FSB) has adopted a two-pronged strategy to address risks and vulnerabilities from outside traditional banking to financial stability.⁶ The FSB put in place an annual system-wide monitoring exercise to assess global trends and risks from the growing role of nonbank financial intermediation. The FSB also works on developing policies commensurate with the financial stability risks inherent in these activities.

According to the FSB global monitoring report on nonbank financial intermediation,⁷ the broad measure of the monitoring universe of nonbank finance comprises insurance corporations, pension funds, financial auxiliaries and OFIs. The latest

⁴ *Wagner et al. (2017).*

⁵ *For a thorough discussion of the risks and vulnerabilities of nonbank finance, see ESRB (2019).*

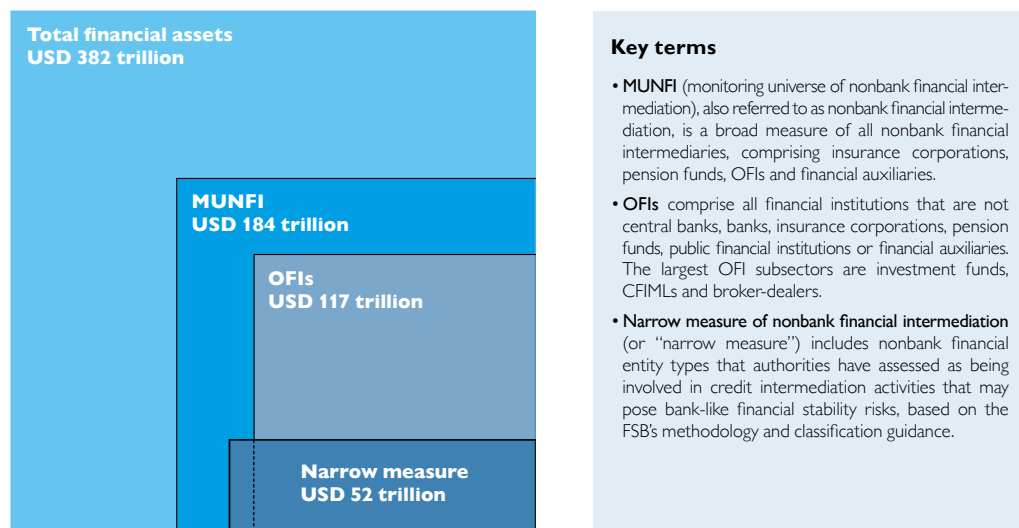
⁶ *FSB (2018).*

⁷ *The FSB recently decided to replace the somewhat pejorative term “shadow banking” with the neutral term “non-bank financial intermediation.”*

Global financial assets by FSB monitoring aggregates

Monitoring aggregates at end-2017

Narrowing down



Source: FSB, *Global Monitoring Report on Nonbank Financial Intermediation 2018*, 4 February 2019, p. 7.

issue of this report⁸ shows that the broad universe of worldwide nonbank financial intermediation grew to an aggregate USD 184.3 trillion in 2017, up by roughly 79% since the inception of the financial crisis in 2007, when it stood at around USD 103 trillion. Thus, the share of the broad aggregate in total global financial assets (i.e. including banking assets), which the FSB estimated at USD 382 trillion, increased for the sixth consecutive year, reaching 48.2%.

The assets of the OFI category alone, which includes all financial institutions that are not central banks, banks, insurance corporations, pension funds, public financial institutions or financial auxiliaries, grew to USD 116.6 trillion globally in 2017. OFI assets currently represent 30.5% of total global financial assets.

The FSB methodology also defines a “narrow measure” of nonbank finance, which aims at depicting all nonbank financial entity types that authorities have assessed as being involved in credit intermediation activities that may pose bank-like financial stability risks. This narrow measure of nonbank finance expanded to altogether USD 51.6 trillion worldwide at end-2017, which is an increase of around 57%, up from USD 32.8 trillion in 2007.

Chart 1 displays the broad measure, the narrow measure and the OFI category of nonbank finance according to the FSB terminology and contrasts these aggregates with the overall volume of total financial assets worldwide, estimated at USD 382 trillion by the end of 2017.

⁸ FSB (2019).

3 Macropprudential oversight of the financial system in the European context

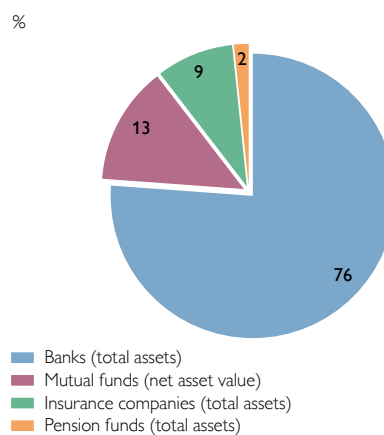
In the EU, the ESRB has been responsible for the macroprudential oversight of the financial system and the prevention of systemic risk since 2011.⁹ Therefore, the mandate of the ESRB has a wide scope, encompassing credit institutions as well as insurers, asset managers, nonbank financial intermediaries, financial market infrastructures and other financial institutions and markets. Since 2016, the ESRB has issued an annual report about developments, risks and vulnerabilities in the nonbank financial sector. The ESRB also works on tools regarding the macroprudential supervision of nonbank financial entities and activities in order to mitigate systemic risks to financial stability.¹⁰

The ESRB measures the size of the nonbank financial intermediation universe by total assets under management. At year-end 2018, this measure stood at EUR 41.9 trillion EU-wide, while in the euro area, it amounted to EUR 33.6 trillion.¹¹ Assets in the investment fund (IF) and OFI sectors in relation to the banking sector in the EU were 96.4% at the end of 2018. The share of the IF and OFI sectors in the overall financial sector, thus, accounted for 38.1% and 42.8% of the EU and the euro area financial sector, respectively, in 2018. Overall, the size of nonbank finance in the EU grew from approximately EUR 23 trillion in 2008 to EUR 41.9 trillion in 2018,¹² an increase of roughly 82% within a decade. However, only six Member States (Luxembourg, the U.K., the Netherlands, Ireland, Germany and France) account for around 80% of this measure of nonbank finance in the EU.¹³

4 Nonbank financial intermediation in Austria since 2008

In the Austrian financial system, the total assets of the consolidated banking sector decreased by roughly 16% over the course of the last decade, from EUR 1,176 billion (year-end 2008) to EUR 986 billion (year-end 2018). In comparison, the asset volume of the other main financial sectors grew substantially during the same period. Investment funds (IFs) increased their assets under management from EUR 127.4 billion to EUR 173.5 billion (+36%), insurance corporations (ICs) from approximately EUR 107 billion to EUR 133.2 billion (+24%) and pension funds (PFs) from EUR 11.6 billion to EUR 21.1 billion (+82%). This shows that altogether, the

Chart 2
The Austrian financial sector at a glance



Source: OeNB Financial Stability Report 37, p. 36.

Note: Data as of end-2018.

⁹ Regulation (EU) No 1092/2010, Official Journal of the European Union, December 15, 2010, L331/1-11.

¹⁰ ESRB (2016).

¹¹ ESRB (2019).

¹² ESRB (2019).

¹³ ESRB (2019).

nonbank financial sector has gained importance relative to the traditional banking system also in Austria over the past decade. That said, the banking system still accounts for approximately 76% of the financial system's assets (see chart 2).¹⁴

4.1 Credit intermediation by nonbank financial entities

This study focuses particularly on financial intermediation in Austria that relates to credit intermediation in a broad sense, i.e. granting loans and buying debt securities by nonbank entities as a funding channel outside the banking system. The European System of National and Regional Accounts (ESA 2010) uses definitions of subsectors of the financial system which are not identical, but very similar to the FSB definitions. Therefore, Austria's financial accounts data structured in accordance with ESA 2010 can be used for a nonbank financial intermediation classification. These data are available for money market funds (MMFs), IFs, OFIs, financial auxiliaries, captive financial institutions and money lenders as well as ICs and PFs. Nevertheless, money market funds are not taken into account, as they do not play a relevant role in Austria. OFIs according to ESA 2010 comprise financial vehicle corporations engaged in securitization transactions, security and derivative dealers, financial corporations engaged in lending and specialized financial corporations. Thus, the measure of credit intermediation in a broad sense by nonmonetary financial institutions in Austria encompasses mainly IFs, ICs and PFs, but also some other financial intermediaries. In the OFI category, for instance, leasing companies that provide leasing finance and do not report as part of a banking group are of relevance in the context of credit intermediation in a broad sense outside the banking system.

Chart 3 depicts the stock data regarding ICs and PFs separately from the aggregate measure in accordance with the ESRB "broad approach" because in Austria, ICs and PFs are included in the measurement of nonbank credit intermediation, while in the international context, they are often excluded. The transactions-based growth rate since the first quarter of 2008 shows the development of all these sectors together.

The stock of loans (excluding trade loans) and debt securities under management by nonbank financial entities including ICs and PFs increased by roughly 22% from EUR 134.5 billion at year-end 2008 to a volume of EUR 163.8 billion at year-end 2018. Within the broad measure excluding ICs and PFs (yellow part in chart 3), IFs play a dominant role. Of the stock of approximately EUR 104 billion, roughly EUR 78 billion in assets belong to IFs. About EUR 26 billion are attributable to the OFI category and are basically only loans. The relative importance of nonmonetary financial institutions vis-à-vis monetary financial institutions regarding credit intermediation in a broad sense, thus, expanded from around 18% in 2008 to approximately 22% in 2018. Since the first quarter of 2008 there have been cumulative net transactions of EUR 11.9 billion.

Changes in stocks have been caused not only by transactions but also by price and other effects and other changes (e.g. reclassifications). Although there have been several periods with negative growth rates, the overall importance of loans and debt securities under management by nonbank financial intermediaries increased steadily at an overall growth rate of 8.4%. Compared to nonbank financial entities, banks have recorded cumulative net transactions of loans granted to nonbanks as well as investments in debt securities issued by nonbanks of EUR 55.7 billion

¹⁴ OeNB (2019).

since the first quarter of 2008. For issuers of debt securities outside the euro area, no counterparty split is available. Therefore, the above-stated net transactions may also include some debt securities issued by banks outside the euro area.

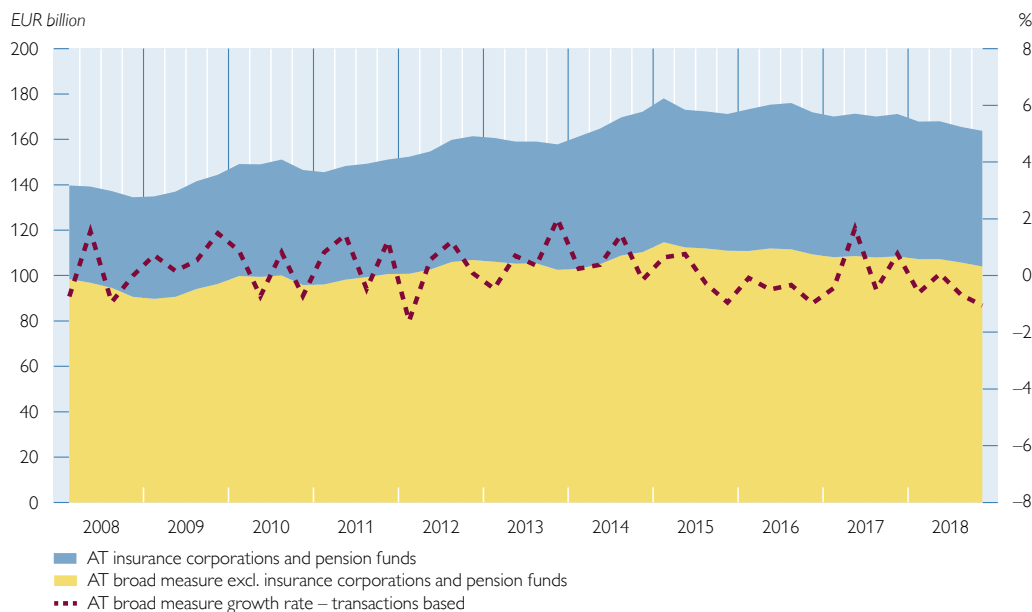
4.2 Highest increases for insurance corporations and pension funds

The growth rates of these types of assets under management by Austrian nonbank financial intermediaries show higher increases for ICs and PFs than for other nonbank financial entities. However, it must be emphasized that loans and debt securities are first and foremost held by ICs rather than PFs. The asset side of PFs mainly consists of investment fund shares. By analyzing these investment fund shares with a look-through approach,¹⁵ it can be shown that parts of PFs' assets are indirectly invested in debt securities.

While the loans shown in chart 3 are granted to nonbanks, debt securities held by nonbank financial entities can also include issues placed by banks. Thus, nonbank financial intermediaries also play a role in providing various forms of wholesale funding to banks, particularly through purchases of bank debt securities and depositing funds. In this respect, developments over the last ten years in wholesale funding provided by nonbank financial entities to the banking sector have led to slight changes in the interconnectedness between the banking sector and the nonbank financial sector in Austria. Investment volumes have shifted from certain counterparty sectors to others, while overall volumes of deposits and debt securities have hardly changed. Exposures of ICs toward banks stood at 18.43% as of end 2018, which is slightly above the average in the EU, due to holdings of equities and participations in credit institutions as part of the same group.¹⁶

Chart 3

Debt securities and loans under management by nonbank financial intermediaries



Source: OeNB.

¹⁵ The look-through approach analyzes the assets of funds and thus outlines the indirect holding of financial assets through investments in fund shares.

¹⁶ EIOPA (2019).

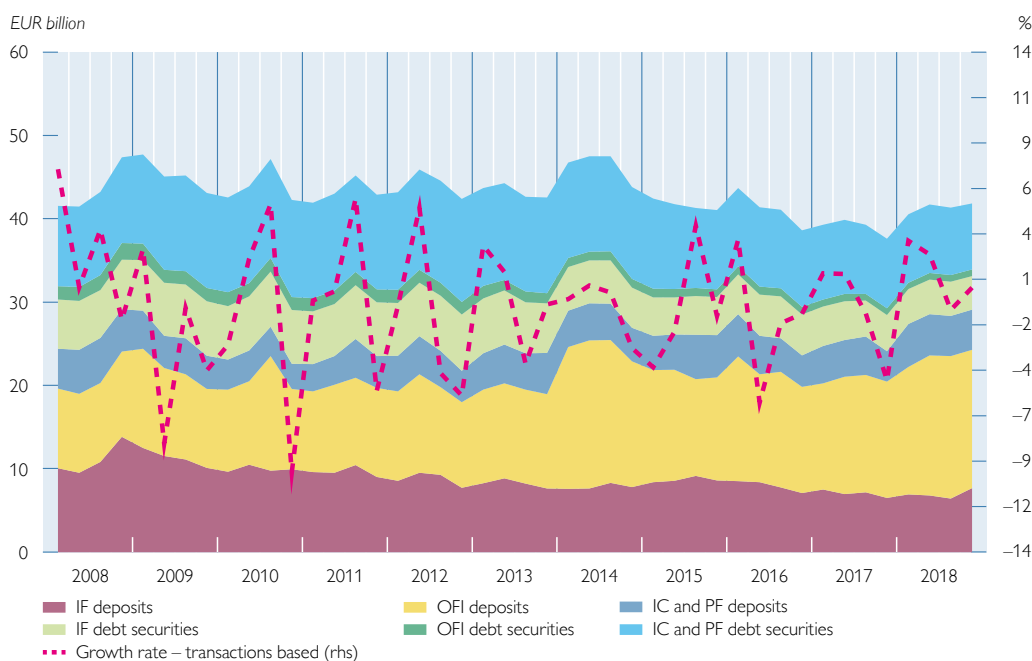
4.3 Wholesale funding of banks by nonbank financial entities

The total volume of wholesale funding of the Austrian banking sector by domestic nonbank financial entities, both through deposits and purchases of bank debt, increased only slightly from EUR 41.5 billion in the first quarter of 2008 to EUR 41.8 billion at year-end 2018. This amounts to approximately 19% of the total volume of domestic wholesale funding in the form of deposits and debt securities in the Austrian banking sector. The major amount of domestic wholesale funding can be attributed to interbank funding.¹⁷ Due to the current accommodative stance of monetary policy in the euro area, the need for banks to issue bonds has been very subdued for the past ten years. Especially for OFIs, holdings of bank debt are negligible. However, increased volumes of bank deposits from entities of the nonbank financial sector have compensated for the overall decline of investment into bank debt.

In this regard, OFIs have gained more importance than traditional financial institutions like IFs, ICs and PFs. OFIs increased their outstanding volume of bank deposits from EUR 9.5 billion to EUR 16.6 billion during the observation period. Bank deposits of ICs and PFs remained stable, while bank deposits of IFs decreased. Consequently, within the nonbank financial sector OFIs became the largest category of providers of deposit funding for banks, leading to a higher interconnectedness between banks and OFIs, e.g. in the form of leasing companies and holding companies.

Chart 4

Wholesale funding provided by nonbank financial entities to the banking sector



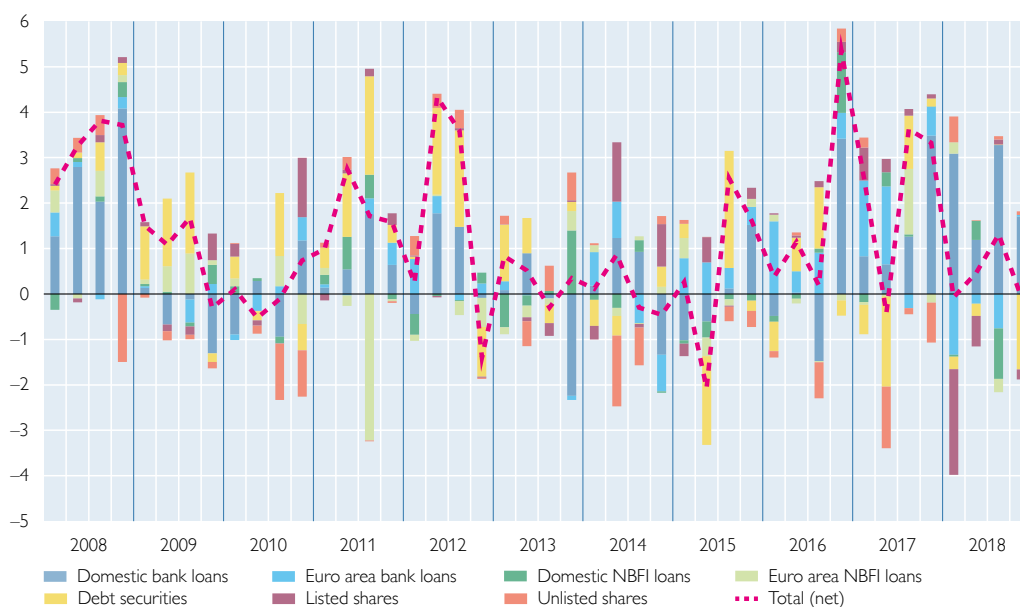
Source: OeNB.

¹⁷ In this calculation “wholesale funding” is assumed to consist of all domestic funding in the form of deposits and debt securities except deposits from nonfinancial corporations and deposits and debt securities from households and nonprofit institutions serving households.

Chart 5

Net finance raised by NFCs

EUR billion



Source: OeNB.

4.4 Financing of the nonfinancial corporate sector

On the creditor side, however, banks are still the most important counterparty sector as regards the financing of nonfinancial corporations. Nevertheless, financing via the capital market has also gained importance. Especially the issuance of debt securities has been an important alternative source of financing after the peak of the financial crisis. Debt securities issued by nonfinancial corporations are to a major part held by nonbank sectors, including a large proportion of nondomestic investors, leading to a diversification of counterparty sectors. But altogether, debt securities issued by nonfinancial corporations in Austria are limited to a few issuers, and shares (listed or unlisted) are generally a less important form of financing. Most small and medium-sized companies in Austria do not issue shares at all. Their equity positions are classified as other equity. However, especially since 2015, traditional financing in the form of bank loans has again become disproportionately important compared to financing via the capital market.

Chart 5 depicts the growth and distribution of net finance raised by nonfinancial corporations across various financing instruments, i.e. bank loans, loans from nonbank financial entities, debt securities and shares.

4.5 Interconnectedness between sectors of financing

The following chord diagrams (charts 6 and 7) show the interconnectedness between sectors of financing provided by Austrian financial entities through loans and debt securities to domestic as well as foreign debtors (located in the euro area).¹⁸ The

¹⁸ The figures are based on data from three different ECB statistics, namely those on financial accounts, investment funds and balance sheet items (statistics on monetary financial institutions).

diagrams highlight the distinction between traditional financial intermediation by banks and funding provided by other financial entities. The flows within the diagrams indicate funding through loans on the one hand and debt securities on the other hand; they are drawn in the color of the corresponding finance provider (creditor). The outer edge of each sector thus denotes the sum of the funding it provided (i.e. the creditor side) and received (i.e. the debtor side), thereby illustrating its relative importance in this process.

Charts 6 and 7 focus solely on the financing provided by financial entities. All other sectors (i.e. nonfinancial corporations, general government and the household sector) are represented only as recipients of financing in these illustrations, while financial institutions provide and receive funding, that is, they play an active and passive role at once within the charts. The sectors comprise all relevant entities according to the ESA 2010 definitions, with one exception: In line with the FSB's definition of the narrow approach for nonbank financial intermediation, we only include open-end funds due to the fact that closed-end funds have different risk characteristics. This adjustment, however, concerns only a small amount in the Austrian investment fund population.

4.6 Interconnectedness through funding via loans

Chart 6 presents outstanding loans granted by Austrian financial entities and their borrower structure at the end of 2018. Credit intermediation via security financing is depicted in chart 7. Not surprisingly, in Austria, deposit-taking entities (i.e. banks) dominate funding via loans, accounting for an outstanding amount of loans of EUR 398.4 billion. All other nonbank financial entities together only account for a fraction of the loan supply side, i.e. an amount of EUR 20.3 billion in total. The main debtors of bank loans are nonfinancial corporations (EUR 179 billion) and households (EUR 166.4 billion), while loans to other financial entities (EUR 27 billion), general government (EUR 24.8 billion) and IFs, ICs and PFs (EUR 1.2 billion in total) only account for a much smaller amount.

Altogether, loan financing still represents the largest part of funding in Austria, accounting for an outstanding amount of EUR 418.7 billion at the end of 2018. At the same time, funding through bonds (held by Austrian financial entities) accounts for only EUR 117.3 billion. The data do not show a significant increase of loan origination through nonbank financial institutions in the last ten years. Although the total volume of loans supplied by nonbank financial institutions rose from EUR 17.3 billion in 2008 to EUR 20.3 billion in 2018, this type of funding still only accounts for roughly 5% of total loan funding provided by the Austrian financial sector, while deposit-taking corporations still account for 95% of the total amount.

4.7 Interconnectedness through funding via debt securities

Chart 7 presents the sectoral holding of debt securities (at the end of 2018), linking the creditor side (i.e. investors in debt securities) with the debtor side (i.e. issuers of debt securities). With an investment amount of EUR 51.7 billion in debt securities, Austrian deposit-taking corporations (DTC excluding the central bank) are the biggest creditors, providing most of their funding to the general government (EUR 40.8 billion). However, overall debt security-based funding through nonbank financial institutions as creditors exceeds bond funding provided by the traditional banking sector: Domestic investment funds and insurance corporations provide a

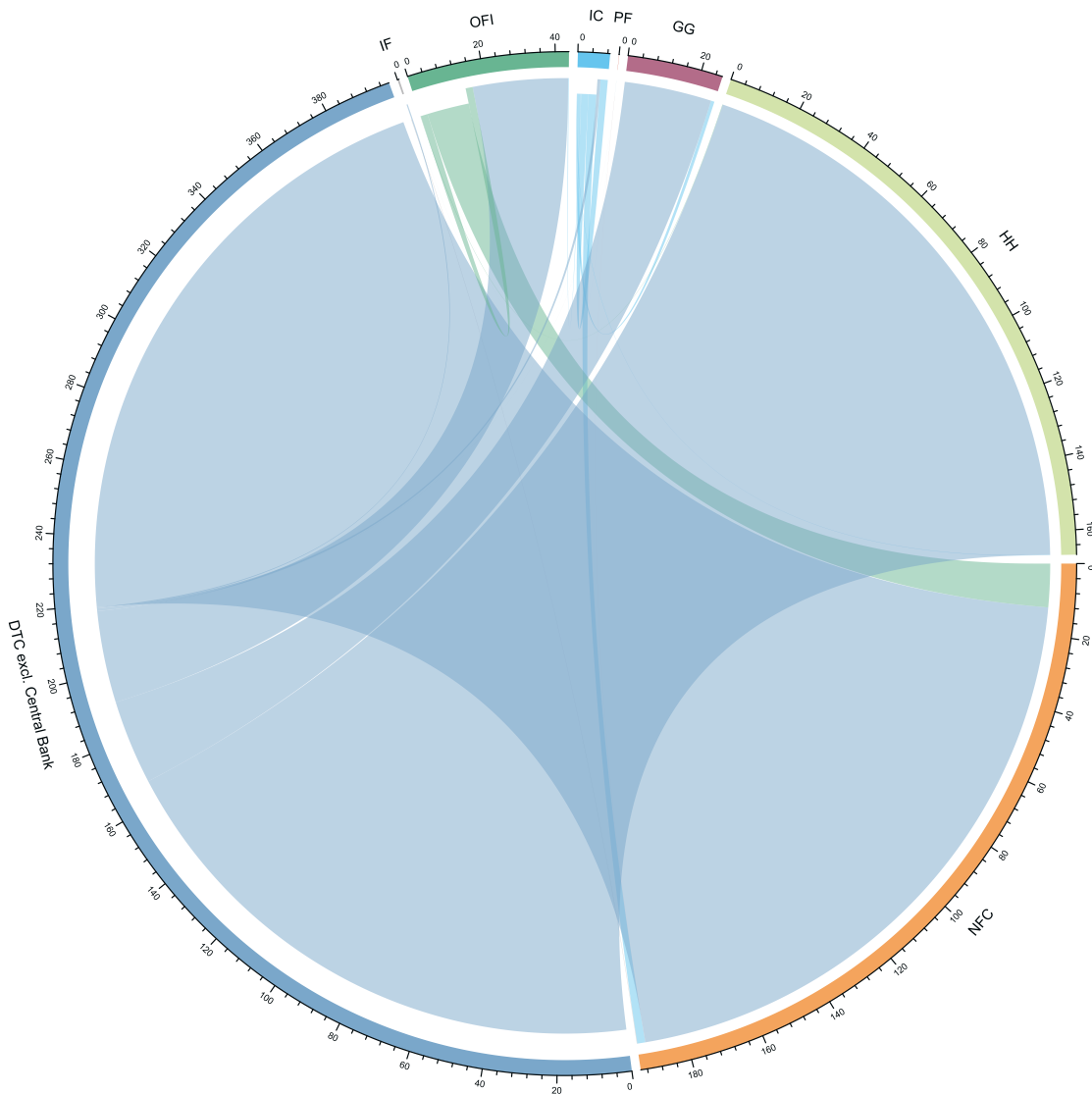
substantial amount of financing via investments in debt securities (EUR 40.2 billion and EUR 23.7 billion, respectively), primarily through the holding of general government bonds (EUR 24.9 billion and EUR 14.2 billion, respectively), while pension funds and other financial intermediaries (including financial auxiliaries and captive financial institutions) account for EUR 1.6 billion in total. Regarding the debtor side, i.e. bonds issued by nonfinancial corporations, the holdings of both investment funds (EUR 7.2 billion) and insurance corporations (EUR 4.9 billion) account for the largest part, while the holdings of banks (EUR 4.3 billion) only represent a quarter of the total amount.

Like in the previous section on loans, we do not see a large increase of debt security-based funding by the nonbank financial sector over the last ten years.

Chart 6

Sectoral borrowing structure of lending by Austrian entities

EUR billion



Source: OeNB.

Note: NFC=nonfinancial corporations; DTC=deposit-taking corporations; IF=open-end investment funds; OFI=other financial intermediaries incl. financial auxiliaries, captive financial institutions and money lenders; IC=insurance corporations; PF=pension funds; GG=general government; HH=households incl. nonprofit institutions serving households.

Although the total amount of bond funding by entities outside the traditional banking sector increased from EUR 49.6 billion to EUR 65.6 billion between 2008 and 2018, the relative importance of the nonbank financial sector even declined (accounting for 56% in 2018, compared to 60% in 2008).

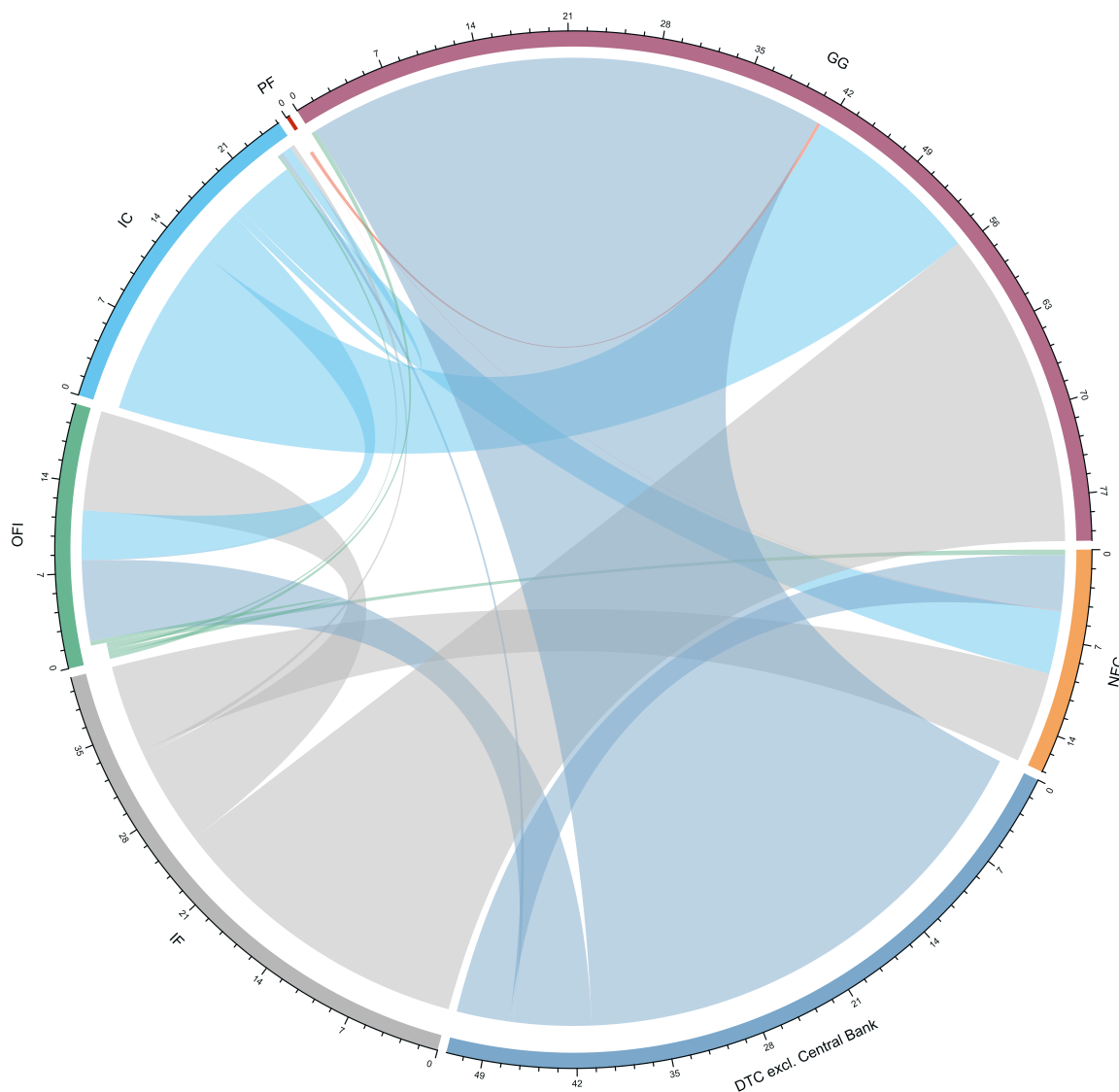
4.8 Funding: the debtor perspective

From the debtor perspective, the funding of general government heavily depends on the issuance of bonds (in 2018, EUR 80.5 billion of euro area government bonds were held by Austrian nonbank financial entities), while loans to the general government sector (of euro area countries including Austria) play a much smaller role (in 2018, EUR 25.8 billion of loans were in the books of domestic nonbank

Chart 7

Sectoral holding of debt securities issued by Austrian entities

EUR billion



Source: OeNB.

Note: NFC=nonfinancial corporations; DTC=deposit-taking corporations; IF=open-end investment funds; OFI=other financial intermediaries incl. financial auxiliaries, captive financial institutions and money lenders; IC=insurance corporations; PF=pension funds; GG=general government; HH=households incl. nonprofit institutions serving households.

financial entities). In contrast, nonfinancial corporations mainly use loans (EUR 193.8 billion) rather than the issuance of debt securities (EUR 16.9 billion of outstanding amount) when they raise debt funding. The same applies to households (including nonprofit institutions serving households), which receive their funding solely in the form of loans (EUR 166.7 billion; all figures for end-2018).

Most of the debtors of loans are domestic entities (EUR 368.6 billion), only EUR 50.2 billion are owed by entities located abroad. In contrast, in the case of debt securities, non-Austrians (EUR 72 billion) dominated the issuer side, while domestic issuers account for only EUR 45.3 billion. Thus, in general, loan funding largely remains within Austria, while debt security financing by Austrian creditors predominantly serves debtor entities from abroad.

5 Summary and conclusions

In Austria, the bulk of nonbank finance is provided primarily by open-end investment funds, followed by insurance corporations and pension funds. Only approximately one-tenth of nonbank finance in Austria is provided by other entities that are attributable to the OFI category, including leasing companies. All actors in the markets for nonbank financial intermediation that pursue substantial activities are subject to financial regulation and supervision by the Austrian Financial Market Authority (FMA). Furthermore, the Austrian Banking Act establishes a broad definition of core banking activities so that either taking deposits or granting loans is subject to full banking regulation and supervision unless specific financial regulations provide otherwise (as is the case, e.g., for insurance corporations). The FMA estimates that a mere 3% of nonbank financial assets originate from unregulated service providers.¹⁹

While the relative importance of nonbank finance compared to traditional banking has somewhat increased in the past decade, the Austrian financial system is still dominated by the bank finance model, and market-based finance continues to play a smaller role. Overall, the fractional growth of nonbank finance assets is not seen as a concern in itself, as the risks from nonbank financial intermediation seem contained. Neither the structure nor the size of nonbank financial intermediation in Austria are currently considered to pose a threat to financial stability. On the other hand, this also means that the Austrian financial system remains largely dependent on traditional banks and, hence, does not reap the potential benefits of diversification in funding sources for the economy.

Nevertheless, the prolonged low level of interest rates continues to pose significant challenges for many financial sectors, not only for banks but also for life insurers and pension funds, making it increasingly difficult to generate sufficient investment returns to meet long-term financial obligations. Hence, the concern of possible mispricing of funding provided arises in the context of the search for yield. In addition, supervisors need to keep their focus on the questions whether nonbank financial intermediaries are prone to runs, how levered they are and to what extent they can withstand losses. As regards the investment fund sector, concerns of underpricing risk are in the forefront, given the current environment of elevated market risk, subdued economic growth prospects and flattening yield curves. In the sector of alternative investment funds (AIFs), open-end real estate funds exhibit a

¹⁹ FMA (2019).

substantial liquidity mismatch. Nonetheless, in light of the sectoral holding and borrowing structure of investment funds in Austria, there are no signs of abundant risk-taking at present.

The increasing importance of nonbank financial activities is high up on the list of supervisory priorities in the EU. The national supervisory authorities together with the ESRB and ECB will continue their close monitoring and scrutiny of the respective systemic risks and develop appropriate micro- and macroprudential policies to address them, should the need arise.

References

- Carmassi, J., R. Corrias and L. Parisi. 2019.** Is taxpayers' money better protected now? An assessment of banking regulatory reforms ten years after the global financial crisis. In: Macroprudential Bulletin No. 7. ECB. https://www.ecb.europa.eu/pub/financial-stability/macroprudential-bulletin/html/ecb.mpbu201903_01~c307e09dd7.en.html.
- EIOPA. 2019.** Financial Stability Report June 2019.
- ESRB. 2016.** Macroprudential policy beyond banking: an ESRB strategy paper.
- ESRB. 2019.** EU Non-bank Financial Intermediation Risk Monitor. No. 4. https://www.esrb.europa.eu/pub/pdf/reports/nbfi_monitor/esrb.report190717_NBFImonitor2019~ba7c155135.en.pdf?aad-1f4a011a6d589537645242475aa89.
- FMA. 2019.** Facts and Figures, Trends and Strategies 2019. <https://www.fma.gv.at/en/publications/%20facts-and-figures-trends-and-strategies/>.
- FSB. 2018.** Enhancing Resilience of Non-Bank Financial Intermediation. <https://www.fsb.org/work-of-the-fsb/policy-development/enhancing-resilience-of-non-bank-financial-intermediation/>.
- FSB. 2019.** Global Monitoring Report on Non-Bank Financial Intermediation 2018. <https://www.fsb.org/2019/02/global-monitoring-report-on-non-bank-financial-intermediation-2018/>.
- OeNB. 2019.** Financial Stability Report 37.
- Pires, F. 2019.** Non-banks in the EU: ensuring a smooth transition to a Capital Markets Union. SUERF Policy Note Issue No 103. www.suerf.org/policynotes.
- Wagner, J., M. Wicho and J. C. Zhan. 2017.** Kreditintermediation des Nichtbanken-Finanzsektors. In: Statistiken – Daten und Analysen Q3/2017. Vienna: OeNB. 46–57.