

# Nonbank financial intermediation in Austria – an update

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*Nonbank finance, which complements bank finance, increases competition in the supply of financing and supports economic activity. It may, however, also give rise to systemic risk, both directly and indirectly through interconnections with the banking system. The latter may be the case when nonbank finance involves activities that are typically performed by banks, such as maturity or liquidity transformation and the creation of leverage. Worldwide, and also in the EU, the relative importance of nonbank finance has increased noticeably since the great financial crisis. In Austria, the financial system is still dominated by the bank finance model, however. Since 2018, the relative composition of the nonbank finance sector has remained unchanged in Austria. Neither the structure nor the size of nonbank financial intermediation in Austria is currently considered to pose a threat to the stability of the Austrian financial market.*

*JEL classification: G23*

*Keywords: nonbank finance, nonbank financial intermediation, nonbank financial institutions, investment funds, insurance corporations, pension funds, other financial institutions, finance leasing, systemic risk, financial stability*

Today, traditional banks are perceived to be safer and sounder than before the great financial crisis of 2008, which is due to improved regulation and supervision. But since then asset volumes in markets of nonbank financial intermediation have grown markedly in size, both in absolute terms and compared with the assets of the banking sector. Nonbank financial institutions have assumed business activities from banks, including credit intermediation and purchases of debt securities, and nonbank finance has become an increasingly important source of funding for the real economy worldwide. In light of EU policies to further deepen financial integration (European Commission, 2020), the importance of nonbank finance is expected to increase further also in Europe (Schnabel, 2021). While bank loans clearly remain the dominant debt instrument for corporate finance in the euro area, corporate bonds have become more relevant since the global financial crisis, with their volume having more than doubled relative to that of bank loans. This is anticipated to bring benefits – but also new risks – to those parts of the financial market that are regulated differently than banks.

In the past few years, the supervisory focus has increasingly shifted toward financial intermediation outside the traditional banking sector. This study aims at following up on previous analyses carried out by the OeNB (Wagner et al., 2017; Pöchel et al., 2019), which were inspired by benchmark monitoring exercises regarding nonbank financial intermediation by the Financial Stability Board (FSB) and the European Systemic Risk Board (ESRB). To account for specificities of the

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Austrian financial system, we had to slightly adjust the international monitoring methodology.<sup>2</sup>

## 1 Risks and vulnerabilities of nonbank finance

Nonbank finance potentially brings benefits to the financial system, such as a greater diversity of funding sources for the economy and increased risk-sharing across the financial system. Both borrowers and investors may benefit from enhanced competition in financing markets. In addition, capital market finance may function as a buffer by stabilizing financing flows of firms in times of shrinking bank credit. However, these developments may also go hand in hand with increased risk taking in potentially less regulated parts of the financial sector and can involve new forms of risks to financial stability. Systemic vulnerabilities may result directly from credit intermediation activities of particular nonbank financial entities, which may involve maturity and liquidity transformation as well as leverage. Furthermore, issues may arise directly and indirectly through the interconnectedness of the nonbank financial intermediation (NBFi) sector with the regular banking system, or from investors' herding behavior. Other interlinkages such as connections in the repo or securities lending markets might not always be visible from aggregate statistics due to existing data gaps<sup>3</sup>. In addition, the current low interest rate environment may incentivize procyclicality through higher conformity in investment strategies in the search for yield and might render nonbank financial intermediaries and investors vulnerable to a sudden repricing of risk, which in turn creates scope for bubbles and volatility. Finally, vulnerabilities can build up and remain 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 Policy discussion

The COVID-19 pandemic was the first major test for the effectiveness of the regulatory and supervisory reforms put in place after the great financial crisis of 2008. While attesting to the overall resilience of the financial system, the pandemic also highlighted differences in resilience across financial sectors as well as vulnerabilities. Accordingly, it is not only the FSB (2021) that points to the need to step up international cooperation and coordination of policy responses. The ECB (2021a) recently analyzed the implications of shifts in the structure of financial intermediation for monetary policy transmission. While the risk-taking channel operating through nonbanks strengthens the transmission of monetary policy, it may affect nonbanks' capacity to absorb losses and provide credit to the real economy. In addition, interconnections in the financial system can amplify contagion and impair a smooth transmission of monetary policy in periods of market distress, especially since nonbanks do not benefit from explicit official sector-driven backstops while performing liquidity, maturity and credit transformation.

<sup>2</sup> In particular, from the perspective 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.

<sup>3</sup> To learn more about the implementation of detailed reporting, see Regulation (EU) 2015/2365 of the European Parliament and of the Council of 25 November 2015 on transparency of securities financing transactions and of reuse and amending Regulation (EU) No 648/2012.

Hence, the ECB (2021b) proposes to enhance the macroprudential framework for nonbanks to support financial stability and as a result also the smooth transmission of monetary policy. However, pursuing this avenue warrants further comprehensive analysis that takes into account the systemic relevance and interconnectedness of the heterogeneous NBFI market segments, particularly given investors' herding behavior. The ESRB (2016), which published its approach to macroprudential policy beyond banking in 2016 already, closely monitors the development of the NBFI sector in the EU, considering also prudential policies to mitigate risks to financial stability (ESRB, 2021). Nevertheless, in the short run, it seems to be most efficient to step up supervision and close microprudential regulatory gaps with a view to addressing distortions in the various NBFI sectors. In Austria, the Financial Market Stability Board (FMSB), which was established to strengthen cooperation in the field of financial market stability and macroprudential supervision, annually investigates potential systemic risks arising from leverage in alternative investment funds and from liquidity transformation in real estate funds. The FMSB (2021) would recommend appropriate mitigating action should the need arise.

### 3 Nonbank financial intermediation worldwide

At the global level, the Financial Stability Board in 2011 initiated an annual worldwide monitoring exercise to assess global trends and risks from the growing role of NBFI<sup>4</sup>. According to the FSB, the overall worldwide NBFI sector<sup>5</sup>, comprising mainly pension funds, insurance corporations and other financial intermediaries, has grown faster than the banking sector over the past decade, including in 2019.<sup>6</sup>

At year-end 2019, the financial assets of the worldwide NBFI sector, according to the FSB (2020) measurement approach, amounted to USD 200.2 trillion, accounting for 49.5%, and thus nearly half of the total global financial system of approximately USD 404 trillion (figure 1). Ten years earlier, in 2010, the volume of total global financial assets, as measured by the FSB, had stood at about USD 250 trillion, while NBFI assets had amounted to roughly USD 113 trillion, i.e. only 45.2% of the world's total assets.

In 2019, the narrow measure of NBFI grew by 11.1% to USD 57.1 trillion (2010: USD 29 trillion), making up 14.2% of total global financial assets. The 2019 growth rate even outpaced the average annual growth rate of 7.1% registered in the period 2013–18, which had already been brisk.

<sup>4</sup> <https://www.fsb.org/work-of-the-fsb/market-and-institutional-resilience/post-2008-financial-crisis-reforms/enhancing-resilience-of-non-bank-financial-intermediation/>; data for 2020 were not yet available at the time of the finalization of this study.

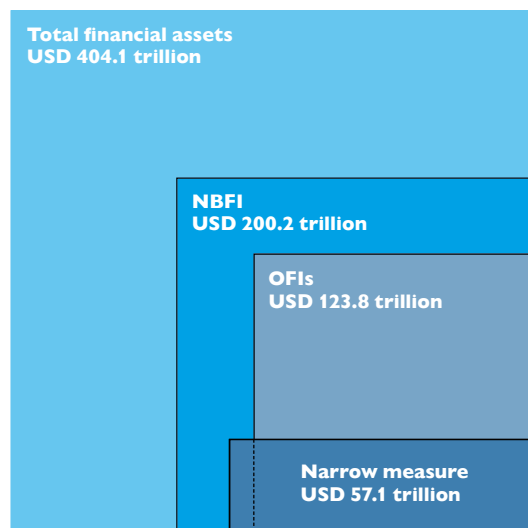
<sup>5</sup> Since 2018, the FSB has replaced the term “shadow banking” with the neutral term “nonbank financial intermediation.”

<sup>6</sup> The FSB NBFI Monitor covers 29 jurisdictions that account for roughly 80% of global GDP. <https://www.fsb.org/2020/12/global-monitoring-report-on-non-bank-financial-intermediation-2020/>

## Global financial assets by FSB monitoring aggregates

### Monitoring aggregates at end-2019

Narrowing down



#### Key terms

- In the FSB methodology, **OFIs** comprise all financial institutions that are not central banks, banks, insurance corporations, pension funds, public financial institutions or financial auxiliaries. The largest OFI subsectors are investment funds, captive financial institutions and money lenders and broker-dealers.
- “**Narrow measure**” of nonbank financial intermediation includes nonbank financial entity types that authorities have assessed as being involved in credit intermediation activities that may pose bank-like financial stability risks, based on the FSB’s methodology and classification guidance.

Source: FSB (2020, p. 3).

## 4 Nonbank finance 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.<sup>7</sup> 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.

The ESRB (2021) measures the size of the NBFIs universe by total assets under management. Its monitoring universe includes all investment funds and OFIs, thus excluding the assets of banks, insurance corporations and pension funds, and central counterparties with a banking license. Because of the withdrawal from the EU of the United Kingdom with its huge financial sector, NBFIs assets in the EU declined by 6% from end-2018 to end-2020, dropping from EUR 41.9 trillion to EUR 39.4 trillion. In the euro area, NBFIs assets stood at EUR 36.7 trillion in the fourth quarter of 2020, having increased by 9.2% against end-2018 (EUR 33.6 trillion). This measure had increased despite the fall of asset values and outflows in some market segments at the beginning of the COVID-19 pandemic in 2020. In 2008, the nonbank sector in the EU amounted to only roughly EUR 23 trillion. After Brexit, five EU member states (Luxembourg, the Netherlands, Ireland, Germany and France) account for 84% of NBFIs in the EU. The NBFIs volume currently amounts to 53% of the assets of the EU’s overall financial sector, including the European System of Central Banks. At EUR 22.3 trillion, the OFI sector

<sup>7</sup> Regulation (EU) No 1092/2010 of the European Parliament and of the Council of 24 November 2010 on European Union macro-prudential oversight of the financial system and establishing a European Systemic Risk Board. OJ L 331, 15.12.2010. 1–11.

remains the largest NBFi sector, followed by investment funds other than money market funds (MMFs) with EUR 14.9 trillion, and MMFs with EUR 1.4 trillion.<sup>8</sup> The ESRB does not include insurance companies and pension funds (ICPFs) in the NBFi definition, but the assets of ICPFs in the EU amounted to EUR 13.2 trillion in aggregate, and thus constitute a large part of the financial system.

In its most recent report, the European Securities and Markets Authority (ESMA, 2021) points to risks and vulnerabilities in the EU's NBFi markets. Amid marked increases in valuations across asset classes, the securities markets regulator flags fragile fundamentals and uncertainty about the sustainability of debt levels as well as rising inflation expectations. It also notes that current market developments need yet to show their sustainability over an extended period.

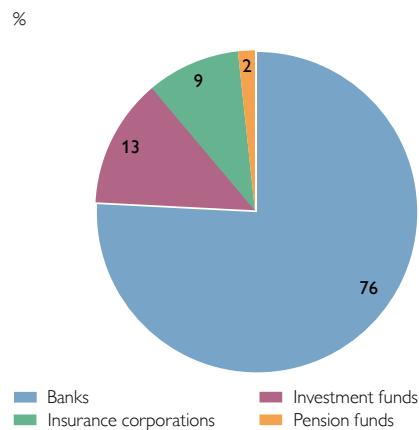
## 5 Nonbank financial intermediation in Austria

In the past decade, the NBFi sector has gained importance relative to the traditional banking system also in Austria. Banking, however, still accounts for 76% of the overall assets of the Austrian financial system (chart 1). Total assets of the consolidated banking sector decreased by 3.4%, from EUR 1,176 billion (year-end 2008) to EUR 1,136 billion (year-end 2020). From year-end 2018, they had increased rather strongly again (+15.2%), starting from EUR 986 billion, thanks to a combination of dynamic lending and a significant increase in cash reserves.

In comparison, the asset volume of the other main financial sectors grew substantially during the same period.<sup>9</sup> Investment funds (IFs) had increased their aggregated assets under management from EUR 127.4 billion to EUR 202.5 billion (+59%) by end-2020. Despite substantial losses in the first quarter of 2020 caused by the market turmoil at the beginning of the COVID-19 pandemic,<sup>10</sup> this strong growth was mainly due to soaring inflows for the rest of 2020, but also due to substantial increases in the valuation of funds' assets. According to the Austrian Financial Market Authority (FMA, 2021), EUR 112.6 billion or 55.6% of the overall assets of IFs were managed by Austrian alternative investment funds (AIFs), while EUR 89.9 billion or 44.4% were invested in Austrian undertakings for collective investment in transferable securities (UCITS).

From end-2008 to end-2020, insurance corporations (ICs) increased their total assets from approximately EUR 107 billion to EUR 141.1 billion

Chart 1  
The Austrian financial sector at a glance



Source: OeNB Financial Stability Report 41, FMA.

Note: Data as at end-2020.

<sup>8</sup> All the information presented in this paragraph is taken from ESRB (2021).

<sup>9</sup> See the statistical annex "Key financial indicators" of OeNB (2021, pp. 90–99).

<sup>10</sup> In response to the pandemic-related turbulences, the ESRB issued in May 2020 a recommendation on containing liquidity risks in investment funds (ESRB/2020/4). [https://www.esrb.europa.eu/pub/pdf/recommendations/esrb\\_recommendation200514\\_ESRB\\_on\\_liquidity\\_risks\\_in\\_investment\\_funds~4a3972a25d.en.pdf](https://www.esrb.europa.eu/pub/pdf/recommendations/esrb_recommendation200514_ESRB_on_liquidity_risks_in_investment_funds~4a3972a25d.en.pdf)

(+31.9%), while the assets of pension funds (PFs) grew from EUR 11.6 billion to EUR 25 billion (+115.5%). The relative sectoral composition of the Austrian financial market has not changed compared to 2018, however (chart 1).

### 5.1 Credit intermediation by nonbank financial entities

This study focuses on financial intermediation in Austria that relates to credit intermediation in a broader sense. In other words, the funding channel outside the banking system involves nonbank entities granting loans and buying debt securities. We give an update – up to the end of the second quarter of 2021 – on the previous analysis of nonbank financial intermediation that covered data up to the end of 2018 (Pöchel et al., 2019).<sup>11</sup> 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, which are structured according to ESA 2010, can be used for an NBFi classification. These data are available for MMFs, IFs, OFIs, financial auxiliaries, captive financial institutions and money lenders as well as ICs and PFs. Nevertheless, MMFs are not taken into account as no MMFs are currently registered in Austria.<sup>12</sup> 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 for broad-based credit intermediation conducted by nonmonetary financial institutions in Austria encompasses mainly IFs, ICs and PFs, but also some OFIs. In the OFI category, for instance, leasing or factoring companies that provide finance and do not report as part of a banking group are relevant in the context of more broadly defined credit intermediation outside the banking system.<sup>13</sup> Chart 2 depicts the stock data of ICs and PFs separately from the aggregate measure calculated according to the ESRB’s “broad approach.” In Austria, ICs and PFs are included in the measurement of nonbank credit intermediation, while they are often excluded in the international context. The transaction-based growth rate shows the development of all these sectors together from the first quarter of 2008 to the end of the second quarter of 2021. The stock of loans (excluding trade loans) and debt securities under management by nonbank financial entities including ICs and PFs increased by roughly 30%, from EUR 139.6 billion (Q1 2008) to EUR 182 billion (Q2 2021). From end-2018, the stock had grown by EUR 14.2 billion. Within the broad measure excluding ICs and PFs (yellow area in chart 2), IFs play a dominant role. Of the stock of approximately EUR 182 billion (end-Q2 2021), roughly EUR 85.6 billion in assets, dominated by debt securities, belong to IFs. About EUR 37.2 billion, basically just loans, are attributable to the OFI category. Compared with monetary financial institutions, nonmonetary financial institutions’ importance regarding credit intermediation in a broad sense thus expanded from around 21% (Q1 2008) to approximately 25%

<sup>11</sup> Note that due to data revisions the figures for 2018 and previous years given in this study may differ from Pöchel et al. (2019). The revisions have not, however, resulted in any changes of the statements presented in Pöchel et al.

<sup>12</sup> There are no MMFs under direct supervision in Austria.

<sup>13</sup> In the following, the term OFI not only includes the described intermediaries but also all other financial institutions according to ESA, namely financial auxiliaries as well as captive financial institutions and money lenders.

in 2018, after which it remained unchanged until the end of the second quarter of 2021. Cumulative net transactions during that period came to EUR 16.2 billion. Changes in stocks were caused not only by transactions but also by price and other changes, such as reclassifications.

Although transaction-based growth was negative in some quarters, the overall importance of loans and debt securities under management by nonbank financial intermediaries increased steadily.<sup>14</sup> In comparison, at EUR 100 billion, banks have since 2008 recorded much higher net transactions of loans granted to nonbanks as well as investments in debt securities issued by nonbanks. Note that no counterparty breakdown is available for issuers of debt securities outside the euro area. Therefore, the above-stated transactions may also include some debt securities issued by banks outside the euro area.

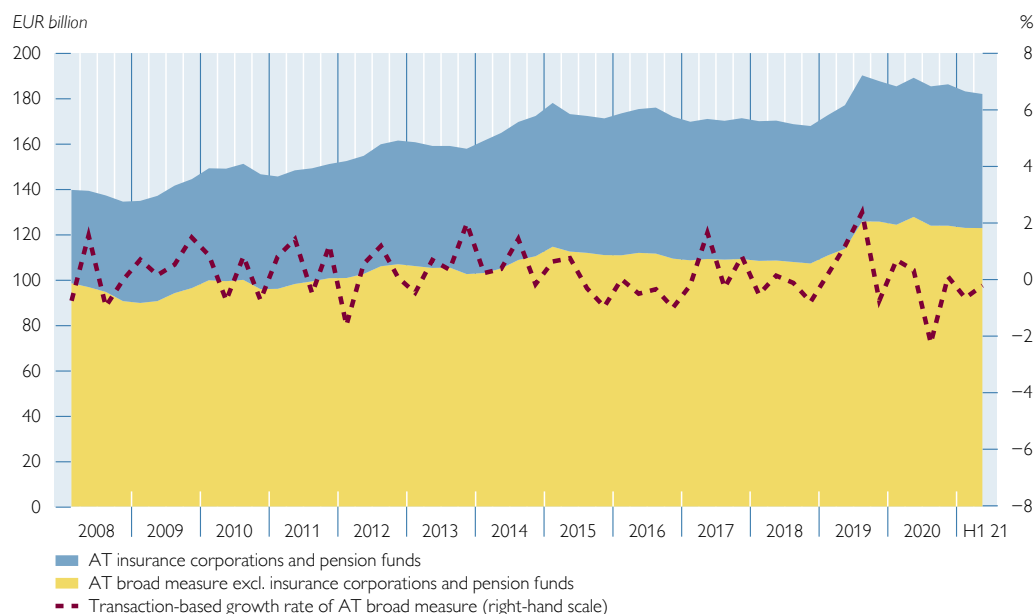
## 5.2 Insurance corporations and pension funds post highest increases

The growth rates of debt securities and loans managed by Austrian nonbank financial intermediaries show higher increases for ICs and PFs than for other nonbank financial entities. Debt securities and loans are, however, first and foremost held by ICs rather than PFs. The asset side of PFs mainly consists of IF shares. By analyzing these IF shares with a look-through approach,<sup>15</sup> we see that parts of PFs' assets are indirectly invested in debt securities. While the loans shown in chart 2 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 by depositing funds. In this respect, developments in wholesale funding provided by nonbank financial entities to the banking sector have since 2008 only led to minor changes in the interconnectedness between the banking sector and the nonbank financial sector in Austria. Overall volumes of debt securities and deposits have hardly changed. Yet, the overall focus on deposits, compared to debt securities, increased, as is evident from chart 3.

<sup>14</sup> The negative outlier of the transaction-based growth rate seen in chart 2 for 2020 was due to a transaction-related decrease of loans granted by captive financial institutions to foreign entities.

<sup>15</sup> Under the look-through approach, the assets of funds are broken down into underlying financing instruments. This way, we gain an overview of fund investors' indirect holdings of financial assets.

Chart 2

**Debt securities and loans under management by nonbank financial intermediaries**

Source: OeNB.

**5.3 Wholesale funding of banks by nonbank financial entities**

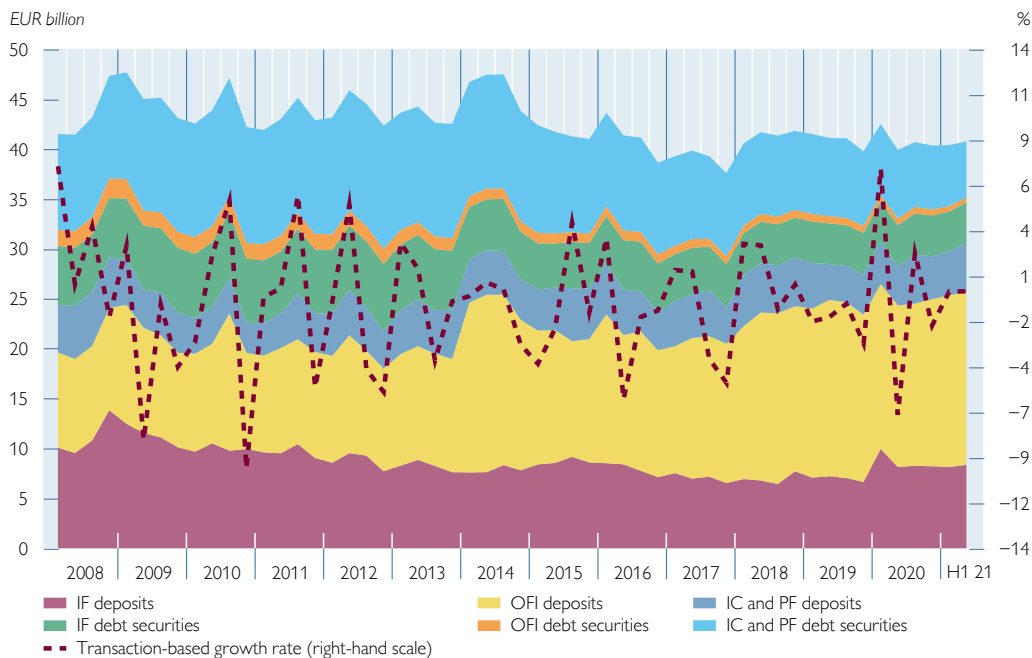
As shown in the previous study (Pöchel et al., 2019), the total volume of wholesale funding of the Austrian banking sector by domestic nonbank financial entities, through both purchases of bank debt and deposits, increased only slightly from EUR 41.5 billion in the first quarter of 2008 to EUR 41.9 billion at the end of 2018. In the meantime, this volume even decreased slightly, namely to EUR 40.8 billion at the end of the second quarter of 2021. The NBFI share amounts to approximately 19% of the total volume of domestic wholesale funding in the form of debt securities and deposits in the Austrian banking sector. The bulk of domestic wholesale funding can be attributed to interbank funding.<sup>16</sup> Due to the accommodative stance of monetary policy in the euro area, the need for banks to issue bonds has been subdued in recent years. Holdings of bank debt are negligible for OFIs in particular. However, increased volumes of bank deposits from entities of the nonbank financial sector have compensated for the overall decline of investment in bank debt. In this regard, OFIs have become more important than traditional financial institutions like IFs, ICs and PFs. OFIs increased their outstanding volume of bank deposits from EUR 9.5 billion to EUR 17.3 billion between the first quarter of 2008 and the second quarter of 2021. 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, which resulted in a higher interconnectedness between banks and OFIs, e.g. in the form of leasing and holding companies.

<sup>16</sup> In this calculation, “wholesale funding” is assumed to consist of all domestic funding in the form of deposits and debt securities except deposits of nonfinancial corporations and deposits and debt securities of households and nonprofit institutions serving households.



Chart 3

### Wholesale funding provided to the banking sector by nonbank financial entities



Source: OeNB.

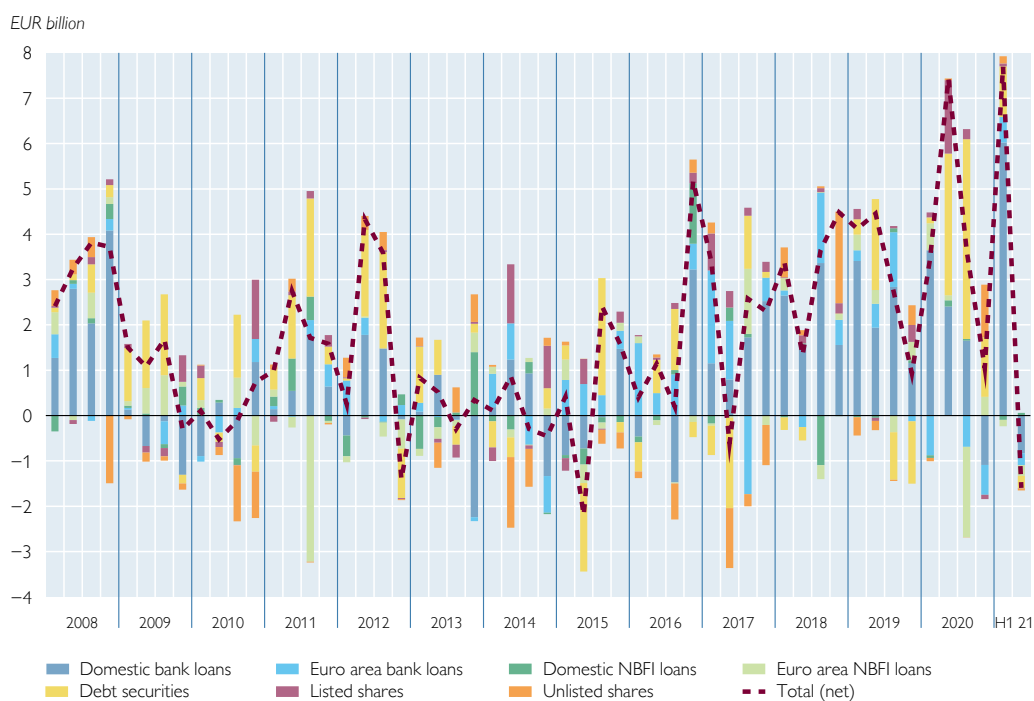
#### 5.4 Financing of the nonfinancial corporate sector

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 had been an important alternative source of financing after the peak of the great financial crisis, a trend that intensified with the beginning of the COVID-19 pandemic. Debt securities issued by nonfinancial corporations are largely held by nonbank sectors, including a large proportion of nondomestic investors, which has led 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. However, especially since 2015, traditional financing in the form of bank loans has again become disproportionately important compared to financing via the capital market. Especially today, the need for loan financing through banks has increased sharply. The monetary policy instruments of the ECB likewise aim at promoting lending to the private sector. Chart 4 depicts the growth and distribution of net finance raised by nonfinancial corporations via various financing instruments, i.e. bank loans, loans from nonbank financial entities, debt securities and shares.

#### 5.5 Interconnectedness through funding via the financial sector

In Austria, bank loans are the dominant form of financing in general and thus not only for nonfinancial corporations. Table 1 shows that Austrian deposit-taking entities, i.e. banks, dominate the funding of domestic creditors via loans.

### Net finance raised by nonfinancial corporations



Source: OeNB.

At the end of the second quarter of 2021, banks accounted for an outstanding amount of EUR 446.1 billion vis-à-vis debtors in the euro area.<sup>17</sup> All other nonbank financial entities together only account for a small fraction of the loan supply side, i.e. an amount of EUR 25.8 billion in total. Although the total volume of loans supplied by nonbank financial institutions rose from EUR 17.3 billion at end-2008 to EUR 25.8 billion at the end of the second quarter of 2021, this type of funding still only accounts for roughly 5% of total loan funding provided by the Austrian financial sector. By contrast, deposit-taking corporations still account for 95%, unchanged from 2018. The main debtors of bank loans are nonfinancial corporations (EUR 208.8 billion) and households (EUR 188.7 billion), while loans to other financial institutions (EUR 29.2 billion), general government (EUR 18.8 billion) and IFs, ICs and PFs (EUR 0.696 billion in total) only account for a much smaller amount. Altogether, loan financing still represents the largest part of funding by Austrian creditors, accounting for an outstanding amount of EUR 471.9 billion vis-à-vis debtors in the euro area at the end of the second quarter of 2021. At the same time, funding through bonds (held by Austrian financial entities) accounts for only EUR 118.6 billion.

With an investment amount of EUR 48.7 billion in debt securities, Austrian deposit-taking entities (excluding the central bank) are also the biggest creditors, providing most of their funding to the general government (EUR 41.4 billion).

<sup>17</sup> The data used comprise only domestic and euro area counterparties. For non-euro area counterparties, only aggregated data are available in financial accounts.

However, overall debt security-based funding through nonbank financial institutions as creditors exceeds bond funding provided by the traditional banking sector: in line with the FSB's definition of the narrow approach to NBFI, the IF figures only include open-end funds because closed-end funds have different risk characteristics. This adjustment, however, concerns only a small fraction of the Austrian IF population.<sup>18</sup> Domestic open-end IFs and ICs provide a substantial amount of financing via investments in debt securities of euro area debtors (EUR 41.6 billion and EUR 26.3 billion, respectively), primarily through holding general government bonds (EUR 23.2 billion and EUR 17.7 billion, respectively). PFs and other financial intermediaries (including financial auxiliaries and captive financial institutions) account for a combined EUR 2.1 billion.

Regarding the debtor side, i.e. bonds issued by nonfinancial corporations, the holdings of both Austrian IFs (EUR 9 billion) and ICs (EUR 4.8 billion) account for the largest part, while the holdings of banks (EUR 4.1 billion) only represent a quarter of the total amount. Like for loans, debt security-based funding by the nonbank financial sector did not increase noticeably from 2008 onward. The total amount of bond funding by entities outside the traditional banking sector increased from EUR 49.6 billion to EUR 69.9 billion between the end of 2008 and the second quarter of 2021.

## 5.6 Funding: the debtor perspective

From a general debtor perspective (table 1), especially the funding of general government heavily depends on the issuance of bonds (at the end of the second quarter of 2021, EUR 82.8 billion of euro area government bonds were held by Austrian financial entities), while loans to the general government sector (of euro area countries including Austria) play a much smaller role (at the end of the second quarter of 2021, EUR 19.7 billion of loans were in the books of domestic financial entities). In contrast, nonfinancial corporations mainly use loans (EUR 228.4 billion) rather than the issuance of debt securities (outstanding amount: EUR 18.4 billion) when they raise debt funding. Households, including nonprofit institutions serving households, receive their funding solely in the form of loans (EUR 188.9 billion; all figures as at the end of the second quarter of 2021). Most debtors of loans are domestic entities (EUR 409.3 billion), and only EUR 62.5 billion are owed by entities located in the rest of the euro area. In contrast, in the case of debt securities, non-Austrians (EUR 80.6 billion) dominated the issuer side, with domestic issuers accounting for only EUR 38 billion. In other words, loan funding largely remains within Austria and is dominated by the traditional banking sector, while debt security financing by Austrian creditors predominantly serves debtor entities from other euro area countries.

<sup>18</sup> In contrast to the rest of the data, the information on open-end funds is based on investment fund statistics and not on financial accounts.

Table 1

**Funding via debt securities and loans**

Creditor	Non-MMF investment funds	Deposit-taking corporations except the central bank	Other financial institutions	Insurance corporations	Pension funds	Total
Debtor <sup>1</sup>						
	<i>EUR million</i>					
Debt securities	41,576	48,684	1,517	26,279	556	118,611
Nonfinancial corporations	9,022	4,125	409	4,796	65	18,416
Non-MMF investment funds	-	116	-	-	-	116
Other financial institutions	8,784	2,766	468	2,885	53	14,957
Insurance corporations	605	319	501	922	0	2,347
Pension funds	-	-	-	-	-	0
General government	23,165	41,358	138	17,676	438	82,775
Households <sup>2</sup>	-	-	-	-	-	0
Loans	119	446,084	19,074	6,579	45	471,901
Nonfinancial corporations	119	208,795	17,299	2,131	39	228,383
Non-MMF investment funds	-	623	-	14	-	638
Other financial institutions	-	29,185	1,473	147	-	30,805
Insurance corporations	-	64	171	3,280	6	3,521
Pension funds	-	8	-	-	-	8
General government	-	18,752	-	899	-	19,651
Households <sup>2</sup>	-	188,657	132	107	-	188,896

Source: Authors' calculations.

<sup>1</sup> Including domestic as well as other euro area debtors.

<sup>2</sup> Including nonprofit institutions serving households according to ESA 2010.

## 6 Summary and conclusions

In Austria, the bulk of nonbank finance is provided by open-end investment funds, followed by insurance corporations. A smaller part of nonbank finance in Austria is provided by other entities that belong to the OFI category, including leasing companies. Very active nonbank financial intermediaries are subject to financial regulation and supervision by the Austrian Financial Market Authority. Furthermore, the Austrian Banking Act establishes a broad definition of core banking activities. This means that both deposit taking and lending are subject to full banking regulation and supervision unless otherwise specified (as is the case, e.g., for insurance corporations). While the relative importance of nonbank finance compared to traditional banking has somewhat increased in the past decade, there has been no structural shift in the Austrian financial system since 2018. The latter is still dominated by the bank finance model with a market share of 76%. By contrast, market-based finance continues to play a smaller role, with investment funds accounting for 13%, insurance corporations for 9% and pension funds for 2% of the overall market. The relatively small growth of nonbank financial assets is not seen as a concern in itself, as the risks from NBFi seem contained. Neither the structure nor the size of NBFi in Austria is currently considered to pose a threat to financial stability. Nevertheless, in view of the impact of COVID-19, general economic development is strongly influenced by these circumstances and corresponding public sector support measures. Based on the moderate developments in recent years, it remains to be seen whether NBFi will gain in importance in Austria over the next few years. However, diversifying their financing sources would help firms become more resilient and could make them less sensitive to adverse shocks.

Supervisors nevertheless need to continue monitoring whether nonbank financial intermediaries are likely to be affected by investors' herding behavior, to what extent they can withstand losses and how the use of leverage is developing. As to the investment fund sector, the largest NBFi segment in Austria, concerns about underpricing risk are on the radar, given that the current environment is characterized by elevated market risk, subdued economic growth prospects and flattening yield curves. In the alternative investment fund sector, open-end real estate funds exhibit a substantial liquidity mismatch (see also FMSB, 2021). Nonetheless, judging from the sectoral holding and borrowing structure of investment funds in Austria, there are no signs of excessive risk taking in NBFi markets at present. In any case, nonbank financial markets are high up on the list of supervisory priorities in the EU. Together with the ESRB and the ECB, the national supervisory authorities will continue to closely monitor the respective systemic risks and to develop appropriate micro- and macroprudential policy responses.

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