

Corporate and household sectors in Austria: income growth supports debt service capacity

Nonfinancial corporations' financing needs ebbed in 2018

Economic growth supports profits of Austrian nonfinancial corporations

The Austrian economy was thriving for the second year in a row in 2018, driven by both domestic and foreign demand. With real GDP growing by 2.7%, the economic momentum was stronger in Austria than in Germany and the euro area. However, GDP growth weakened during 2018 and early 2019, reflecting a deterioration in external conditions as Austria's economy was increasingly confronted with a foreign economic slowdown. In 2018, the growth momentum of almost all investment components slowed, with the slowdown in equipment investment being most pronounced. Yet, from 2015 onward, the investment cycle has been unusually long by historical standards. This resulted in an increase in the investment ratio to 23.9% of nominal GDP, the highest value recorded since 2003.

Corporate profitability increased in 2018. Despite slowing down in the second half of 2018, economic growth still supported the earnings-generating capacity of Austrian nonfinancial corporations. According to the sectoral accounts, the gross operating surplus¹ of Austrian nonfinancial corporations continued to expand in 2018, posting a year-on-year increase of 3.0% in real terms in the fourth quarter of 2018 (based on four-quarter moving sums; see chart 2.1). In nominal terms, gross operating surplus rose by 4.7%. Although corporate profitability – as measured by gross operating surplus divided by gross value added – increased somewhat in the past two years, it remained subdued by historical standards. In the fourth quarter of 2018, the gross profit ratio amounted to 42.7%, up 0.6 percentage points from the post-crisis low registered in the second quarter of 2014.

Austrian nonfinancial corporations' need for financing decreased

Chart 2.1

Gross operating surplus of Austrian nonfinancial corporations¹



Source: Statistics Austria.

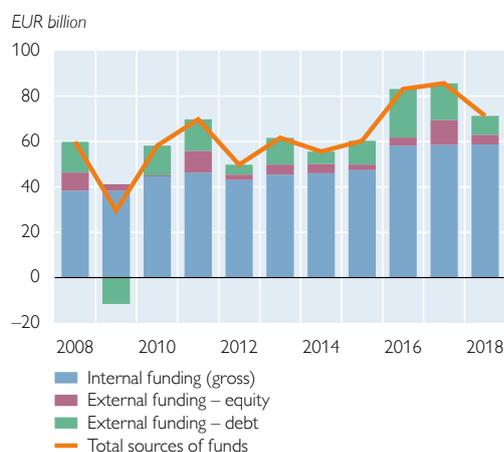
¹ Four-quarter moving sums.

The slowdown in corporate investment dampened the financing needs of Austrian nonfinancial corporations. Consequently, total financing (consisting of both internal and external financing) was down by 16.7% against 2017, after having increased over the previous three years (see chart 2.2). Internal financing (measured as the sum of changes in net worth and depreciation) remained the most important source of funds for nonfinancial corporations in Austria. At EUR 58.7 billion, it remained virtually unchanged in 2018 against the high levels registered in the previous two years as the rise in gross operating surplus was

¹ Gross operating surplus and mixed income (self-employed and other unincorporated business income).

Chart 2.2

Sources of funds for Austrian nonfinancial corporations



Source: OeNB, Statistics Austria.

compensated by a decrease in nonfinancial corporations' net property income. The latter resulted from an increase in the distributed income of corporations consisting of dividends and withdrawals from income by owners for their own use.² Profits reinvested by foreign multinational corporations in their Austrian subsidiaries also declined (as did profits reinvested by Austrian corporations in their foreign subsidiaries). In contrast, the low interest rate environment continued to reduce the net interest burden of corporations. Overall, the earnings situation not only supported the corporate sector's internal financing potential but also alleviated its debt-servicing capacity.

Austrian nonfinancial corporations' recourse to external financing plummeted in 2018. At EUR 12.6 billion, external financing more than halved in 2018 compared to the previous year's figure. Roughly one-third (34%) of external financing came in the form of equity financing, which is a somewhat smaller share than in 2017. In absolute terms, equity financing fell by 61% year on year to EUR 4.3 billion. Equity financing took place exclusively in the form of unquoted equity, with listed shares falling by EUR 3.1 billion mainly due to a large delisting. In 2018, there had been one new listing of Austrian nonfinancial corporations on the Vienna stock exchange and one in early 2019. At 82%, the share of internal financing in total financing was higher in 2018 than in the previous four years, corroborating its significant role in corporate financing. Adding internal financing and equity-based external financing, the overall structure of corporate financing was again marked by a significant weight of own funds, which accounted for 88% of financing in 2018.

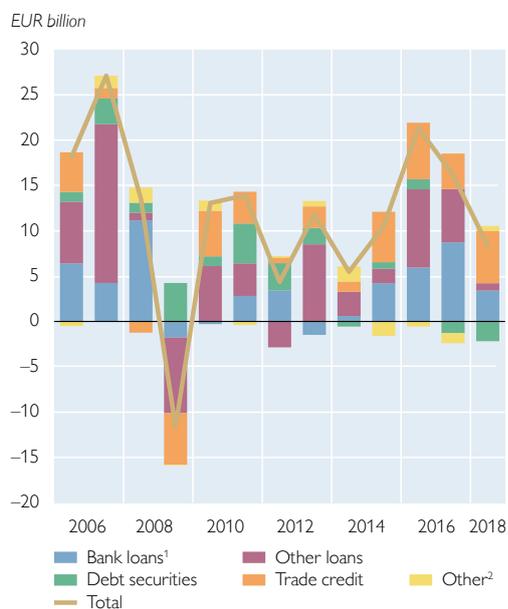
Debt financing goes down considerably

Debt instruments again provided the bulk of nonfinancial corporations' external financing in 2018. Although the volume of debt financing almost halved to EUR 8.4 billion (see chart 2.3), it accounted for about two-thirds of nonfinancial corporations' external financing. In the light of low interest rates, debt financing continued to be attractive. Net debt financing from abroad was negative at –EUR 7.4 billion in 2018. In contrast, financing from domestic sources was one-third higher in 2018 than in the year before, amounting to EUR 15.8 billion or almost twice the total volume of debt financing. Net debt flows from the domestic financial sector reached EUR 8.6 billion, almost all of which came from monetary financial institutions (MFIs). A substantial part of debt financing stemmed from other nonfinancial corporations. This financing mostly took the form of trade credit, which – including cross-border trade credit – increased by almost one-half compared to

² It has to be taken into account that this item is derived as a residual in the national accounts and is thus surrounded by a certain degree of uncertainty.

Chart 2.3

Debt financing of Austrian nonfinancial corporations



Source: OeNB.

¹ Loans by domestic and foreign banks.

² Pension entitlements and other accounts payable.

Note: 2018 data are preliminary.

Chart 2.4

MFI loans to Austrian nonfinancial corporations



Source: OeNB.

than one-third of total credit expansion (i.e. change in stocks). Looking at maturities, the strongest contribution to this upturn came from loans with longer maturities (more than five years), which are most relevant for business fixed investment and account for the largest share in outstanding loan volumes. The highest growth rate, however, was recorded for short-term loans (with maturities up to one year).

2017 and thus continued to play a prominent role in debt financing. As trade credit typically develops in tandem with overall economic activity, it might be expected that with economic growth slowing, trade credit decelerated, too. Thus, the increase in trade credit might reflect supply rather than demand factors, such as better financial conditions of suppliers granting trade credit (e.g. higher profits or bank loans) or more positive assessments of buyers' creditworthiness. Loans from other enterprises, which largely reflect transactions within corporate groups, fell by roughly one-third. Looking at maturities, debt financing tended to take the form of short-term funding (with maturities up to one year), while the share of long-term funding decreased.

Loans by (domestic and foreign) banks accounted for 41% of debt financing in 2018. Whereas loans from foreign banks, which had exhibited buoyant growth in 2017 and 2016, decreased substantially in 2018, lending by Austrian banks to domestic nonfinancial corporations gained further momentum in 2018 and the first months of 2019.³ In March 2019, its annual growth rate (adjusted for securitization as well as for reclassifications, valuation changes and exchange rate effects) reached 7.0% in nominal terms (see chart 2.4). Broken down by industries (see chart 2.5), the increase in corporate loans in the twelve months to March 2019 was strongly driven by real estate activities, which accounted for more

³ At the cutoff date, financial accounts data were available up to the fourth quarter of 2018. More recent developments of financing flows are discussed based on data from the MFI balance sheet statistics.

Austrian nonfinancial corporations continued to have abundant liquidity buffers at their disposal, even if they decreased in 2018.

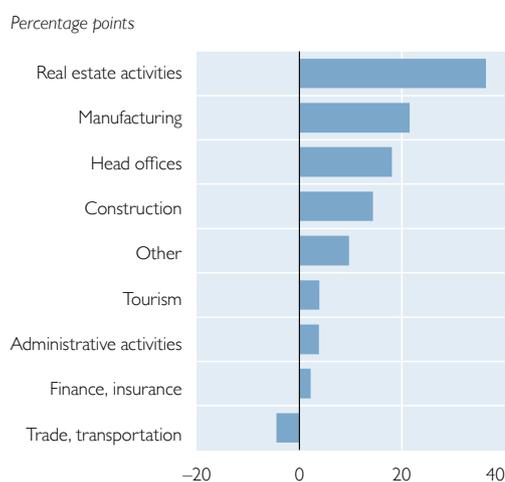
One factor behind the strong increase in short-term loans was the marked drawdown of credit lines. The total amount of undrawn credit lines⁴ available to enterprises, which had increased steadily from 2013 to 2017, fell by 16.4% from end-2017 to March 2019 (see chart 2.6). Yet, nonfinancial corporations continued to have substantial liquidity at their disposal. On the one hand, the levels of unutilized credit lines remained high by historical standards; on the other hand, nonfinancial corporations' transferable deposits continued to rise, albeit at a lower rate than in previous years (+5.3% year on year in March 2019). Apart from the low opportunity cost of holding liquid assets and the small yield difference relative to longer-term deposits, the continuing buildup of transferable deposits is also likely to mirror nonfinancial corporations' improved earnings.

In recent years, loan growth has been driven primarily by demand factors. Demand remained high, even if – after more than three years of continuously increasing loan demand – the banks surveyed in the euro area bank lending survey (BLS) reported a decrease in corporate loan demand in the first quarter of 2019 (see chart 2.7). This reduction was brought about mainly by funding requirements for fixed investment, which had been a major driver of loan demand in the previous years. Inventories and working capital, merger and acquisition activities as well as debt restructuring and renegotiations continued to support loan demand.

At the same time, Austrian banks' lending policies remained cautious. In the BLS, banks said that they continued their cautious lending policies in 2018 and the first quarter of 2019 (see chart 2.7). Among the factors affecting banks' stance toward lending to the corporate sector, reduced risk tolerance and banks'

Chart 2.5

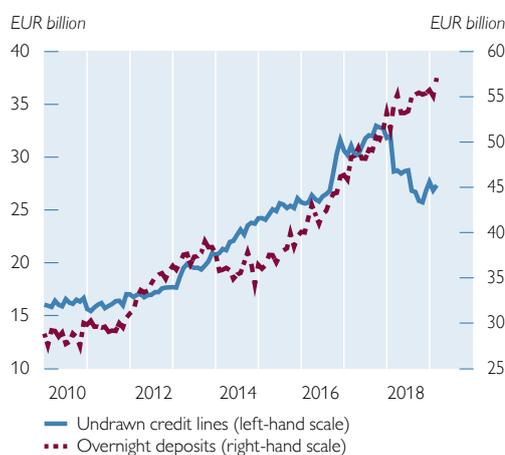
Contribution to loan growth in March 2019



Source: OeNB.

Chart 2.6

Indicators of Austrian nonfinancial corporations' liquidity



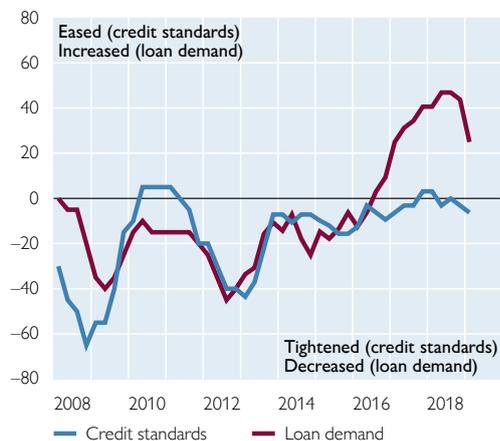
Source: OeNB.

⁴ According to the OeNB's statistics on new lending business.

Chart 2.7

Credit standards and demand for loans to nonfinancial corporations

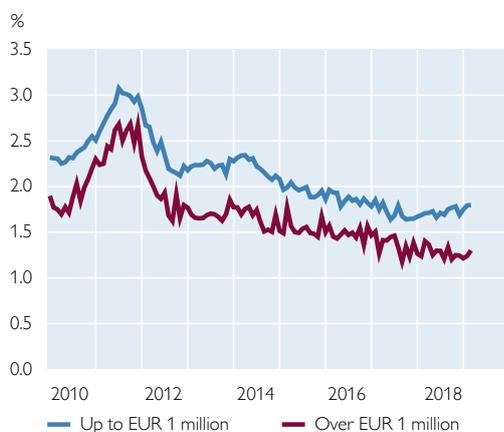
Net percentages, four-quarter moving averages



Source: OeNB (Bank lending survey).

Chart 2.8

Interest rates for variable rate MFI loans¹ to nonfinancial corporations



Source: OeNB.

¹ Loans with an interest rate fixation period of up to one year.

perception of risk factors, such as their assessment of borrowers' creditworthiness and collateral, were most often cited as having contributed to a more cautious stance. Pressure from competition, especially from other banks, which had caused banks to ease their credit standards in the first half of 2018, no longer did so in the second half of 2018 and early 2019.

Low bank lending rates continued to support lending to the corporate sector. Interest rates on new loans to nonfinancial corporations decreased by a further 12 basis points in the twelve months to March 2019 (see chart 2.8). During this period, the spread between interest rates on loans of smaller amounts and those on larger loans, which – given the lack of other data – often serves as an indicator of the relative cost of financing for SMEs, averaged 48 basis points and thus was 13 basis points higher than in the preceding twelve months. The results of the BLS show how banks differentiated interest margins by credit risk. According to the survey, the margins for average loans were eased (i.e. lowered) in most of 2018 and early 2019, mainly because of the competitive situation in the Austrian banking market. In contrast, respondent banks said that they increased the margins on riskier loans during the last few quarters, pointing to a differentiated risk assessment by the banks. Collateral requirements and other terms and conditions (such as noninterest

charges, loan covenants, loan maturity and loan size) remained broadly unchanged during the same period.

Debt securities' net contribution to corporate financing was negative in 2018. According to financial accounts data, corporate bond issuance was negative, amounting to –EUR 1.7 billion, low corporate bond yields notwithstanding. Yet, despite this decline, bonds have played a relatively important role in Austrian corporate finance, even if this form of funding is available only to a limited number of mainly larger nonfinancial corporations. By the end of 2018, the outstanding amount of long-term bonds issued by the corporate sector amounted to 9.5% of GDP.

Corporate sector debt-servicing capacity improved

The debt sustainability of Austrian nonfinancial corporations improved in 2018 due to enhanced profitability. In the course of the year, the corporate sector's debt-to-income ratio decreased considerably by 13 percentage points to reach 376% at the latest reading (see upper left-hand panel of chart 2.9). At 1.3%, the growth of corporate sector financial debt (measured in terms of total loans raised and bonds issued)⁵ remained well below the expansion rate of the gross operating surplus. The debt-to-equity ratio also fell by 0.6 percentage points to 86.8% in 2018 but remained higher in Austria than in the euro area.⁶

Together with the economic recovery, the low interest rate environment continued to support nonfinancial corporations' current debt-servicing capacity. Falling interest rates continued to alleviate the interest service burden on both variable rate loans and new debt. In 2018, the ratio of interest payments for (domestic) bank loans to gross operating surplus remained stable, reaching 2.9% in the fourth quarter of last year. This reflected the still high share of variable rate loans (with a rate fixation period of up to one year) in new loans, despite a reduction by 12 percentage points to 85% between mid-2014 and the first quarter of 2019 (despite a rebound of this share in the previous two quarters). While Austrian nonfinancial corporations therefore recorded lower interest expenses than their euro area peers – which alleviated current debt sustainability concerns – they still face a high exposure to interest rate risk. A rebound of interest rates could become a burden, in particular for highly indebted nonfinancial corporations. The Austrian corporate sector's exposure to foreign exchange risk remained low in 2018 and the first quarter of 2019, after having decreased continuously in the preceding years.

The declining trend in insolvencies observed in the past few years continued until early 2019. Since the fourth quarter of 2018, the insolvency ratio (i.e. the number of corporate insolvencies in relation to the number of existing companies) has fallen below 1%. This low level may be attributed to both the moderate increase in debt financing in the past few years and the low interest rate level, which makes debt servicing easier even for highly indebted companies.

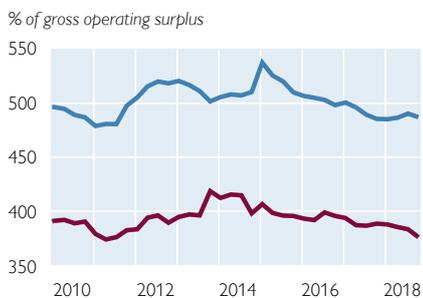
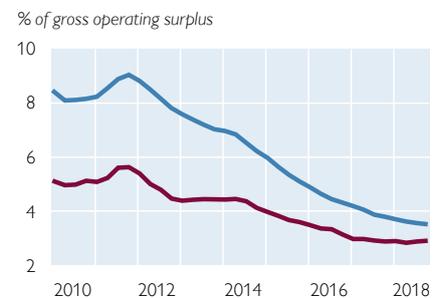
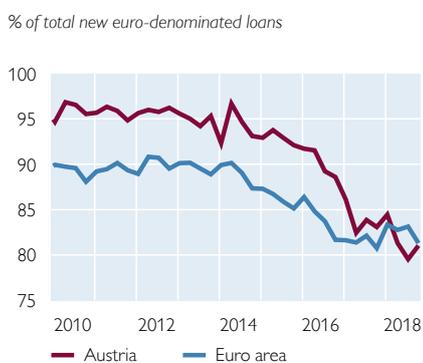
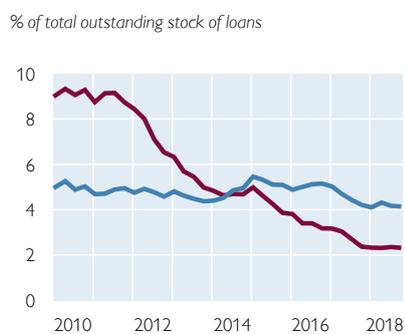
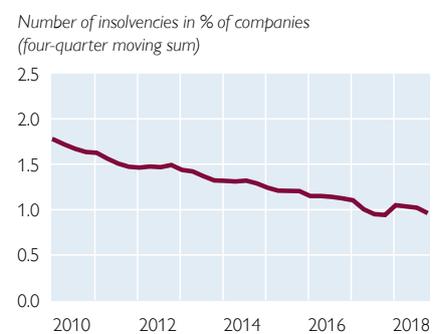
Household loans maintain their momentum

Buoyant household income growth

Austrian households saved more in 2018 than in 2017. The still favorable cyclical position of the Austrian economy was reflected in labor market developments, with the number of employees growing by 2.2% in 2018. This resulted in a decrease in the unemployment rate (Eurostat) from its peak of 6.0% in 2016 to 4.8% in 2018. In this environment, compensation of employees gained additional momentum and grew by 4.7% in nominal terms. This marked increase was driven

⁵ This measure follows Eurostat's and the European Commission's debt measures for the macroeconomic imbalance procedure (MIP) surveillance mechanism. It excludes pension scheme liabilities, which are not very significant in Austria, and other accounts payable, including trade credit and other items due to be paid, mostly on a short-term basis. These items essentially constitute operational debt, i.e. liabilities that a nonfinancial corporation incurs through its primary activities.

⁶ According to international conventions, financial accounts use market prices to value equity on the liabilities side of nonfinancial corporations' balance sheets.

Risk indicators for Austrian nonfinancial corporations**Debt****Debt-to-equity ratio****Interest expenses¹****Variable rate loans****Foreign currency loans****Insolvencies**

Source: OeNB, ECB, Eurostat, KSV 1870.

¹ Figures for the euro area represent only interest expenses on euro-denominated loans.

by the growth in employment numbers and a strong rise in bargained wages. Net mixed income, operating surplus and property income also experienced high growth. Altogether, households' disposable income expanded by 4.5%, which is well above the historical average. Coupled with broadly unchanged HICP inflation (2.1% in 2018), real disposable household income also increased at an above-average growth rate of 2.4%. As households aimed to smooth their spending levels over time, private consumption grew less, causing the saving ratio to rise to 7.4% in 2018. The increase in households' saving ratio was reflected in a rise in households' financial investments by 18.4% to EUR 13.0 billion in 2018. Yet, despite this increase, financial investments remained well below the values seen before the onset of the crisis (see chart 2.10).

Households' financial investments reflect a strong preference for liquid assets

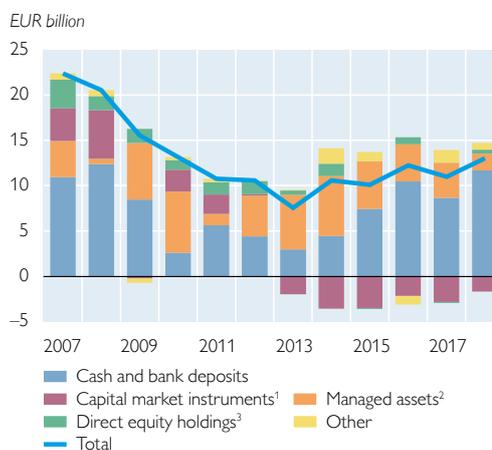
In the low nominal interest rate environment, households continued to display a strong preference for highly liquid short-term assets. In 2018, they shifted EUR 17.9 billion into overnight deposits with domestic banks (and another EUR 0.8 billion into cash holdings). For the fourth year straight, the buildup of overnight deposits surpassed total financial investments, implying a con-

tinuing considerable substitution of other financial assets.⁷ Bank deposits with an agreed maturity continued to decline, dropping by EUR 6.9 billion in 2018 (see chart 2.11). Taking a longer-term perspective, almost all of the financial investments made by households in the past decade took the form of cash and overnight deposits in net terms, while deposits with an agreed maturity were reduced by EUR 46 billion. As a result, the share of overnight deposits in total financial assets has more than doubled to 23% since end-2008, while the share of deposits with an agreed maturity has halved to 15%.

Financial investments in asset management instruments decreased strongly. Mirroring the development of deposits with an agreed maturity, investments in mutual funds, insurance policies and retirement products halved in 2018 against the previous year. Even investments in mutual funds, which had been buoyant in recent years, fell by 43.5% in 2018, reflecting the poor performance of equity markets in the final quarter of 2018. Net investments in insurance (both life and non-life) remained negative in 2018, amounting to –EUR 1.4 billion. For life insurance policies, disbursements outstripped contributions for the fourth year in a row. In the current environment of low interest rates, life insurance policies were not very attractive. A large proportion of gross inflows into life insurance policies did not result from current investment decisions, but rather reflected decisions made in the past – partly even before the onset of the crisis – given the long maturities and commitment periods involved. Life insurance policies often serve as repayment vehicles for foreign currency bullet loans (even if these have been converted into euro-denominated loans). Investments in pension vehicles were rather muted, too. Despite recovering somewhat from last year’s slump, net investments in pension

Chart 2.10

Households’ net financial investments



Source: OeNB.

¹ Debt securities and listed shares.² Mutual funds, insurance, pension entitlements and severance funds.³ Unlisted shares and other equity.

Chart 2.11

Households’ net investments in deposits



Source: OeNB.

⁷ For an analysis of the effect of model assumptions on interest rate risk as reported by banks, see the contribution by Kerbl et al. in this volume.

entitlements (including both claims on pension funds and direct pension benefits granted by private employers) stayed low, amounting to EUR 0.1 billion. Investments in severance funds remained broadly stable.

Households' net financial investments in direct capital market instruments declined further, remaining in negative territory in 2018 for the sixth consecutive year. As regards debt securities, this concerned in particular bonds issued by banks, reflecting continued redemptions over the past few years. In the period 2013–2018, households' securities portfolio shrank by EUR 15.7 billion. Over the same period, investments in listed shares increased slightly by EUR 0.3 billion, with issues of Austrian nonfinancial corporations being reduced by EUR 2 billion and replaced by stocks of foreign issuers of virtually the same amount.

The Austrian household sector recorded large unrealized valuation losses in its securities portfolios in 2018, mainly reflecting falling stock prices in the fourth quarter of last year. For listed shares, the valuation losses amounted to EUR 2.7 billion or 11% of the holdings of listed shares at end-2017 (after valuation gains of 19% in the previous year). Securities also recorded valuation losses, as did mutual funds, whose losses amounted to EUR 4.3 billion or 7% of the volumes outstanding at the end of 2017. In total, these valuation losses amounted to almost half of the – equally unrealized – valuation gains of roughly EUR 15 billion recorded by the Austrian household sector between 2012 and 2017. While these developments point to revaluation risks in household portfolios, the low investments in capital market instruments suggest that there are few indications that households made up for low interest rates by investing in riskier assets in a search for yield in the past few years. What is more, capital market investments in general and investments in stocks in particular are very much concentrated in the portfolios of higher-income households, which have a higher risk-bearing capacity, as the results of the Household Finance and Consumption Survey (HFCS) for Austria show.⁸

Loans to households continue to grow

The growth rate of bank lending to households increased noticeably in recent months. In March 2019, bank loans to households (adjusted for reclassifications, valuation changes and exchange rate effects) rose by 4.2% year on year in nominal terms. Euro-denominated loans continued to grow briskly (by 6.1%), while foreign currency loans continued to contract at double-digit rates. By March 2019, they had fallen by 12.5% year on year. The dynamics of loan growth is expressed by the fact that loans for all purposes showed positive nominal year-on-year growth rates (see chart 2.12). Consumer loans grew by 1.9% year on year, and other loans by 2.7%. The main contribution to loan growth came from housing loans, not only because they are the most important loan category for households – accounting for more than two-thirds of the outstanding volume of loans to households – but also because they registered the highest growth rate among all loan categories, reaching 5.0% year on year in March 2019. The increase in loans

⁸ See, for example, Bekhtiar, K., P. Fessler and P. Lindner. 2019. *Risky assets in Europe and the US: risk vulnerability, risk aversion and economic environment*. ECB Working Paper Series No 2270. April. See also Lindner, P. and V. Redak. *The resilience of households in bank bail-ins*. In: *Financial Stability Report 33*. OeNB. 88–101.

Chart 2.12

Loans to households

for house purchases reflects the rise in the number and volume of real estate market transactions, which gained momentum in 2018 following a stagnation in 2017. In 2018, the transaction volume increased by 13.3% to EUR 31.9 billion.

Credit terms continued to be favorable. Interest rates for new bank loans decreased slightly below the already very low levels recorded in the preceding years. At 1.77%, average interest rates on euro-denominated housing loans to households were 5 basis points lower in March 2019 than one year earlier. The interest rate on variable rate housing loans decreased by 4 basis points to 1.49%. In contrast,

non-interest price elements are likely to have increased slightly. The effective annual rate of interest on housing loans, which reflects total borrowing costs (interest rate and other price elements), decreased by 2 basis points year on year to reach 2.23% in March 2019. The conditions for taking out housing loans became tighter over the past two years, too. According to the results of the BLS, banks slightly tightened their credit standards for housing loans to households in 2018 and the first quarter of 2019. Since the second half of last year, banks have no longer recorded an increase in households' demand for housing loans.

Households' currency and interest rate risks

Households' debt-to-income ratio remained broadly stable at 90%. By the end of 2018, the household sector's total gross liabilities amounted to EUR 191.7 billion according to financial accounts data, up 3.2% in nominal terms against one year earlier. Accordingly, the debt ratio of Austrian households remained lower than that of households in the euro area (see upper left-hand panel of chart 2.13).

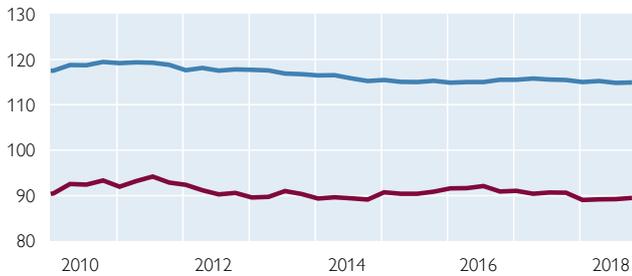
The share of variable rate loans continued to decrease in 2018 and early 2019. In the first quarter of 2019, loans with an initial rate fixation period of up to one year accounted for 54% of new lending (in euro) to households compared to 86% in the same quarter four years earlier. Over the same period, their share in housing loans narrowed from 83% to 44%.⁹ But despite this recent decline, the share of variable rate loans is still quite high when compared to the euro area average. At the same time, this implies lower current interest expenses resulting from a positive slope of the yield curve, which favorably affects current debt servicing. In the fourth quarter of 2018, households' interest expenses equaled 1.6% of their aggregate disposable income, more than 2 percentage points less than in 2008, i.e. the year before interest rates had started to fall. However, the high

⁹ In return, new housing loans with a very long interest fixation period (more than ten years) increased from less than 2% in 2014 to one-third in the first quarter of 2019.

Indicators of household indebtedness

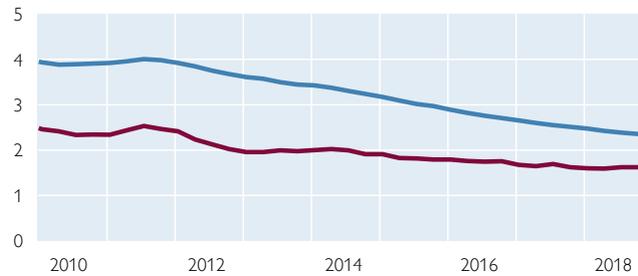
Liabilities

% of disposable income



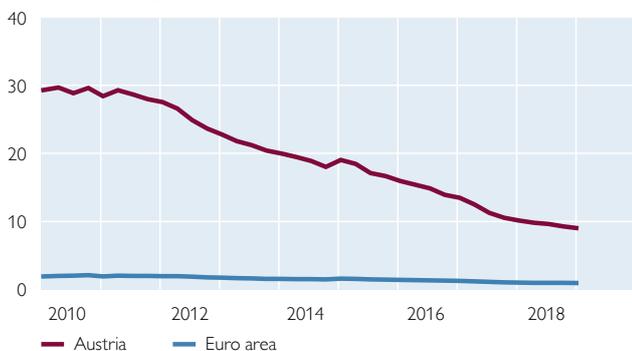
Interest expenses¹

% of disposable income



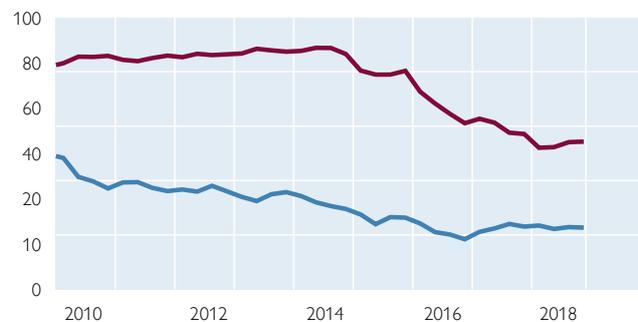
Foreign currency loans

% of total outstanding stock of loans



Variable rate loans

% of total new euro-denominated loans



Source: OeNB, Statistics Austria, ECB, Eurostat.

¹ Figures for the euro area represent only interest expenses on euro-denominated loans.

share of variable rate loans in total lending implies a considerable exposure of the household sector to interest rate risks over the medium term.

The share of foreign currency loans had fallen to 9.0% by the first quarter of 2019, less than one-third of the peak value reached ten years ago. The foreign currency share varies considerably depending on a loan's purpose. For housing loans, it was 11.4%, for consumer loans 2.5% and for other loans 4.6%. Almost all outstanding foreign currency-denominated loans are denominated in Swiss franc (close to 97%). Despite their ongoing reduction, outstanding foreign currency loans remain a risk factor.

Austrian households' debt service over the past ten years

Servicing outstanding debt constitutes a relevant expenditure item for households. Based on reporting data to the OeNB, this box presents an estimation of the debt service – defined as the sum of interest expenses and repayments – of Austrian households (including non-profit institutions serving households) for the period from 2009 to 2018. While interest expenses, which have been regularly presented in the OeNB's Financial Stability Report, can be calculated relatively easily using these data, estimating repayments is prone to greater uncertainty as data have not been available for some loan categories. In principle, repayments are computed as the difference between newly granted loans in a given period (gross lending) and the change in outstanding loan volumes over this period (net lending), adjusted for reclassifications, valuation changes and exchange rate effects.¹⁰ Given that repayments are calculated as a residual, they are surrounded by a certain degree of uncertainty.

The left-hand panel of chart 2.14 displays the development of Austrian households' debt service between 2009 and 2018. Over this period, households' annual interest expenses declined by EUR 1.6 billion or around one-third to EUR 3.4 billion. More than two-thirds of this decline were attributable to euro-denominated loans, and close to one-third to foreign currency loans. By contrast, in the same period, repayments increased by EUR 6.6 billion or 41% to EUR 22.6 billion. Repayments of euro-denominated housing loans doubled between 2009 and 2018 (+100%), while repayments of euro-denominated consumer and other loans increased only slightly (+14%). Repayments of foreign currency loans, whose portfolio has been steadily reduced in recent years, declined (–13%).

Adding interest expenses and repayments, households' debt service amounted to EUR 26.0 billion in 2018, EUR 5.0 billion or 23.7% more than in 2009. In 2018, euro-denominated housing loans accounted for more than half (52%) of Austrian households' debt service, euro-denominated consumer and other loans for 41%, and foreign currency loans for 7%. Assuming that most of the foreign currency loans are used for residential purposes, housing loans accounted for roughly two-thirds of total debt servicing in 2018. Over the whole period under review, debt servicing hovered around 12% of the household sector's disposable income. However, relating debt service expenses to the income of indebted households – which is more relevant from a macroprudential point of view – the debt service ratio came to 24%, using data on the share of indebted households obtained from the 2014 HFCS survey.

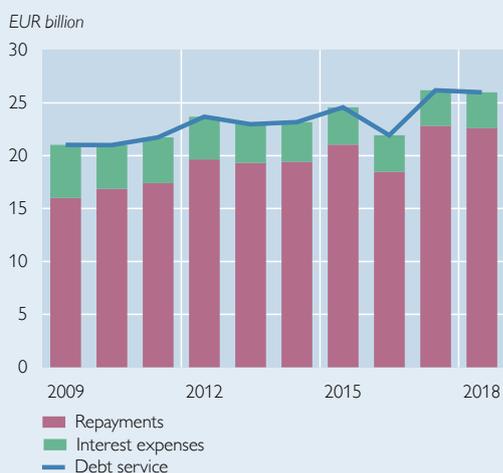
The right-hand panel of chart 2.14 breaks down the growth of households' debt service between 2009 and 2018 into the factors driving this growth. From 2009 to 2018, the largest contribution (EUR 7.2 billion) came from the rise in outstanding loans. At the same time, declining interest rates had two divergent effects on households' debt service: On the one hand, they reduced interest expenses; on the other hand, they increased repayments in loan schemes with constant annuities as interest rate fluctuations affect the amount of both interest expenses and repayments of the annuities. A falling interest rate means that a smaller part of the annuity goes toward interest expenses and a larger part toward the repayment of the outstanding loan. In addition, given falling interest rates in recent years, borrowers increasingly resorted to repaying higher-yielding loans ahead of schedule. This is reflected in the increase of "other repayments" (see chart 2.14), which also includes repayments of bullet loans. Another factor driving the growth of households' debt service arises from the assumptions underlying the annuity formula, which is used to estimate the drivers of repayments. According to this factor, falling interest rates let repayments rise. However, since in practice, interest rates are fixed for a large part of loans, the increase in repayments of the annuity formula is underestimated, which results in an increase in the residual "other repayments." Overall, lower interest

¹⁰ See Schneider, M. and W. Waschiczek. 2018. *Schuldendienst der privaten Haushalte in Österreich 2009 bis 2017*. In: *Statistiken, Daten & Analysen Q3/18*. OeNB. 57–75 (available in German only).

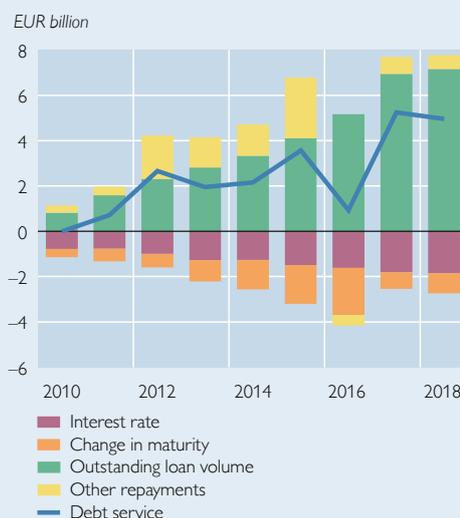
Chart 2.14

Debt service of Austrian households

Debt service by components



Cumulated change since 2009 by driving factors



Source: OeNB.

rates reduced households' debt service by EUR 1.8 billion, according to these calculations. The increase in the maturity of outstanding loans that took place between 2009 and 2018 had a dampening effect (–EUR 0.9 billion) on households' debt service. This results from the fact that for loans with fixed regular annuities, the share of repayments in the installment varies over time, being very small initially and increasing over the life of the loan. As the maturity of a loan portfolio increases, the share of repayments decreases (and that of interest expenses increases).

In addition to these direct effects, lower interest rates also had indirect effects on debt servicing. To the extent that the decline in interest rates increased the affordability of loans, enhanced credit demand, and thus contributed to the rise in real estate prices, it increased, at the same time, households' financing requirements for real estate acquisition and, subsequently, loan volumes and debt service expenses. While this effect is implicitly included in the increase in outstanding loan volumes, it should be, economically, attributed to the interest rate. Higher funding requirements as a result of higher real estate prices (and thus, indirectly, lower interest rates) may also have contributed to the extension of residual maturity observed during the period under review.

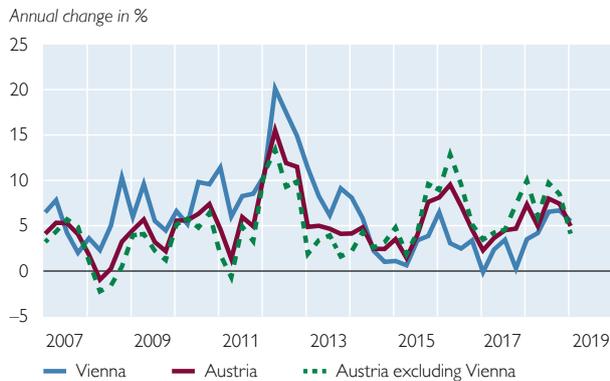
From a macroeconomic perspective, funds used for debt servicing expenditures are not available for consumer spending. Yet, paying off loans faster may bolster private consumption in the future. At the same time, faster debt reduction has helped households to secure or strengthen their repayment capacity.

Residential property prices in Austria have continued to increase

The upward trend in residential property prices in Austria continued in 2018 and early 2019. In the first quarter of 2019, overall price increases reached 5.0% year on year. After more than four years, prices rose faster in Vienna (+5.5%) than in the “Austria excluding Vienna” aggregate, which posted a growth rate of 4.1% in the first quarter of 2019. In recent years, housing supply has started

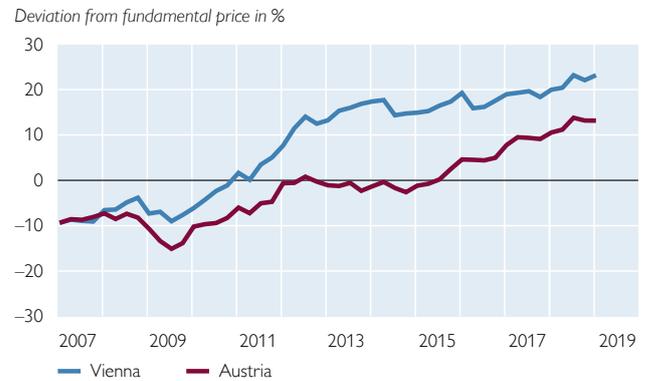
Austrian residential property market

Residential property prices



Source: Vienna University of Technology, OeNB.

OeNB fundamentals indicator for residential property prices



to catch up with housing demand. With the construction industry responding to the rising demand, production in building construction expanded by 7.0% in 2018.¹¹ Reflecting these price dynamics, the OeNB fundamentals indicator for residential property prices in Vienna increased slightly to 23.2% in the first quarter of 2019. For Austria as a whole, the indicator reached 13.2%, implying that prices do not reflect fundamentals and that the increasing overvaluation observed in recent years has continued.¹²

¹¹ See Schneider, M. 2019. Exploring supply-demand imbalances in Austria's housing market. In: Monetary Policy and the Economy Q3/19. OeNB. Forthcoming.

¹² For an analysis of the recent developments in the Austrian real estate market, see <https://www.oenb.at/Publikationen/Volkswirtschaft/immobilien-aktuell.html> (available in German only). Further analyses and data on the Austrian real estate market can be found at <https://www.oenb.at/en/Monetary-Policy/focus-on-real-estate-market-analysis.html>.