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Security through stability.

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The OeNB's semiannual Financial Stability Report provides regular analyses of Austrian and international developments with an impact on financial stability. In addition, it includes studies offering in-depth insights into specific topics related to financial stability.

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Call for applications: Klaus Liebscher Economic Research Scholarship

Please e-mail applications to *scholarship@oenb.at* by the end of October 2021. Applicants will be notified of the jury's decision by end-November 2021.

The Oesterreichische Nationalbank (OeNB) invites applications for the "Klaus Liebscher Economic Research Scholarship." This scholarship program gives outstanding researchers the opportunity to contribute their expertise to the research activities of the OeNB's Economic Analysis and Research Department. This contribution will take the form of remunerated consultancy services.

The scholarship program targets Austrian and international experts with a proven research record in economics and finance, and postdoctoral research experience. Applicants need to be in active employment and should be interested in broadening their research experience and expanding their personal research networks. Given the OeNB's strategic research focus on Central, Eastern and Southeastern Europe, the analysis of economic developments in this region will be a key field of research in this context.

The OeNB offers a stimulating and professional research environment in close proximity to the policymaking process. The selected scholarship recipients will be expected to collaborate with the OeNB's research staff on a prespecified topic and are invited to participate actively in the department's internal seminars and other research activities. Their research output may be published in one of the department's publication outlets or as an OeNB Working Paper. As a rule, the consultancy services under the scholarship will be provided over a period of two to three months. As far as possible, an adequate accommodation for the stay in Vienna will be provided.[1]

Applicants must provide the following documents and information:

- a letter of motivation, including an indication of the time period envisaged for the consultancy
- a detailed consultancy proposal
- a description of current research topics and activities
- an academic curriculum vitae
- an up-to-date list of publications (or an extract therefrom)
- the names of two references that the OeNB may contact to obtain further information about the applicant
- evidence of basic income during the term of the scholarship (employment contract with the applicant's home institution)
- written confirmation by the home institution that the provision of consultancy services by the applicant is not in violation of the applicant's employment contract with the home institution

[1] *We assume that the coronavirus crisis will abate in the course of 2021. We are also exploring alternative formats to continue research cooperation under the scholarship program for as long as we cannot resume visits due to the pandemic situation.*

Financial stability means that the financial system – financial intermediaries, financial markets and financial infrastructures – is capable of ensuring the efficient allocation of financial resources and fulfilling its key macroeconomic functions even if financial imbalances and shocks occur. Under conditions of financial stability, economic agents have confidence in the banking system and have ready access to financial services, such as payments, lending, deposits and hedging.

Reports

The reports were prepared jointly by the Foreign Research Division, the Economic Analysis Division, the Financial Stability and Macroprudential Supervision Division, the On-Site Supervision Division – Significant Institutions, the Off-Site Supervision Division – Significant Institutions, the Off-Site Supervision Division – Less Significant Institutions and the Supervision Policy, Regulation and Strategy Division, with contributions from Stephan Barisitz, Andreas Breitenfellner, Philippe Deswel, Gernot Ebner, Judith Eidenberger, Andreas Greiner, Manuel Gruber, Stefan Michael Kavan, Robert Liptak, Benjamin Neudorfer, Michaela Posch, Elisa Reinhold, Benedict Schimka, Josef Schreiner, Reinhard Seliger, Peter Strobl and Walter Waschiczek.

Management summary

Rebound in global economic activity in late 2020

Despite the resurgence of the COVID-19 pandemic, the worldwide economic recovery was rapid in the second half of 2020, but uneven across demand components. On a global scale, economic activity returned to pre-pandemic levels in the final quarter of 2020 and has continued to grow in early 2021. The recovery builds on more favorable economic and financial conditions as governments and central banks have been providing generous support. In the euro area, however, the recovery has been delayed to the second quarter against the background of an initially slow vaccination campaign. Inflation has increased recently and, according to ECB projections, will stay volatile but moderate until the end of the year.

The spread of coronavirus in spring 2020 brought economic activity in Central, Eastern and Southeastern Europe (CESEE) to a sudden halt. Yet, the recession was less severe than in the euro area, as CESEE benefited from a rebound of world trade in the second half of 2020 that allowed industrial dynamics to break away from trends in most other sectors. The COVID-19-related slump in economic activity was met with a strong policy reaction, and monetary policy and financial conditions remained highly accommodative throughout 2020. Some countries, however, have had to raise interest rates in response to rising inflation in recent months. Despite the economic turbulences, banking sectors in CESEE performed reasonably well in 2020. Profitability declined notably but remained positive throughout the region. Regulatory action, monetary policy measures and public guarantee schemes have supported lending activity and prevented a stronger increase in nonperforming loans (NPLs).

Corporate and household sectors in Austria strongly affected by the pandemic

Economic activity in Austria has been strongly hampered by the COVID-19 pandemic. Yet, due to large-scale government support measures, nonfinancial corporations' profitability, as measured by gross operating surplus, deteriorated only slightly in 2020. While internal financing increased, external financing volumes decreased in 2020, reflecting negative equity financing and reduced debt financing. Bank loans remained a central tool for maintaining companies' liquidity during the pandemic, facilitated by the Eurosystem's comprehensive monetary policy instruments, payment moratoria and government guarantees for loans. Yet, after a spike in the first two months of the pandemic, the annual growth rate of loans to nonfinancial corporations moderated slightly. This reflected the declining use of COVID-19-related moratoria, the sizable liquidity buffers that had been built up in the first phase of the pandemic and muted corporate investments. In contrast, corporate bond issuance increased substantially in 2020. As a result of the rise in debt, the aggregate corporate sector's consolidated debt-to-income ratio increased. However, this rise was accompanied by a strong buildup of liquid assets (cash and deposits). Moreover, insolvency numbers have fallen significantly since the start of the pandemic due to government support measures, but lagged effects are likely to materialize when these measures are eventually phased out.

The pandemic and the related containment measures also significantly dampened household income. In parallel, the growth of bank lending to households subsided slightly. While consumer loans were down considerably in line with the lower consumption of durables, growth in housing loans remained buoyant amid favorable financing conditions and continuing demand for housing. Both the increase

in outstanding debt and the reduction of disposable income contributed to a rise in the aggregate household debt-to-income ratio. However, a significant share of household debt is held by households with higher incomes, which are more likely to have sufficient funds to service their loans. Residential property prices in Austria continued to rise in 2020 and early 2021, further deviating from their fundamentally justified values as implied by the OeNB fundamentals indicator for residential property prices.

Austrian financial intermediaries continue to support the economy; precautionary provisioning affected banks' profits in 2020

Fortified by improved liquidity and a doubling of capital ratios since the global financial crisis, banks entered the pandemic in a state of greater resilience. Austrian banks' macroprudential capital buffers have increased the stability of the financial system and improved market confidence, a fact which was also confirmed by the rating agency Moody's in April 2021. Greater resilience and public support measures enabled banks to continuously perform their economic function and support the economy during the pandemic, allowing them to alleviate many negative effects. Nevertheless, banks were not able to shield themselves from the effects of the broad-based downturn that took a heavy toll on their annual profit.

Fiscal support and regulatory policy measures have helped to avoid any severe feedback loops between the real economy and the financial system. However, the prospect of deteriorating credit quality has led banks to step up precautionary measures by significantly increasing credit risk provisioning (albeit from very low levels). At the same time, the low interest rate environment has put further pressure on banks' interest margins and fueled a global rebound in financial asset prices.

Recommendations by the OeNB

In an environment of persistent uncertainty, both about the further course of the pandemic and its implications for the economy, the OeNB recommends that banks take the following measures:

- Focus on a solid capital base, i.e. avoid share buybacks and carefully consider profit distributions (dividends, management bonuses) in accordance with European recommendations.
- Continuously analyze borrowers' solvency, especially after the expiration of COVID-19-related support measures, to ensure the validity of credit risk indicators and an adequate level of loan loss provisioning.
- Apply sustainable lending standards, particularly in real estate lending, both in Austria and in CESEE, and comply with the quantitative guidance issued by the Financial Market Stability Board.
- Continue efforts to improve cost efficiency and operational profitability, even under the currently difficult circumstances.
- Further develop and implement strategies to deal with the challenges of digitalization and climate change.

International macroeconomic environment: global outlook improved despite divergent recoveries and high uncertainty

Global activity remains resilient to resurgent pandemic

The economic impact of the resurgent pandemic has been more muted than in early 2020 as firms and households have learned to cope with lockdowns. It is increasingly visible that most advanced economies will soon have overcome the worst of the health and economic crisis. Recently, significant vaccination progress has suggested a faster loosening of containment measures. Also, large fiscal support and accommodative financial conditions underpin optimism across global financial markets. Trade in goods has fared better than expected, while trade in services remains subdued due to travel restrictions and other containment measures that particularly affect tourism-based economies. Supply bottlenecks pose a short-term risk to the recovery. Temporarily rising commodity and input prices are putting upward pressure on headline inflation, which however, is being dampened by low capacity utilization. Current data indicate a sustained recovery in global economic activity and world trade. In the first quarter of 2021, China recorded a huge real GDP expansion of 18.3% (year on year), which, however, mainly reflected a base effect due to a severe contraction in the first quarter of 2020. The corresponding figures are 0.4% for the USA and −1.8% for the euro area (both year on year).[1]

Based on a substantially improved outlook, the IMF expects global real GDP to rise by 6.0% in 2021. This reflects an increase of more than 9 percentage points against the recession year 2020 and a substantial upward revision against the forecast of last autumn.[2] The reasons for the improved outlook are the better than expected developments in the second half of 2020, the large US fiscal package and the expectation of a strong recovery in the second half of 2021 enabled by accelerated vaccinations. The IMF stresses that uncertainty is high and that downside risks prevail, not only in connection with the further course of the pandemic and possible delays in vaccinations but also in connection with deteriorating financing conditions, more frequent natural disasters as well as geopolitical and

Table 1.1

Projections of real GDP growth

	IMF WEO projections of April 2021 in %			Revisions to October 2020 WEO in percentage points	
	2020	2021	2022	2021	2022
Euro area	–6.6	4.4	3.8	–0.8	0.2
Austria	–6.6	3.5	4.0	–1.1	..
UK	–9.9	5.3	5.1	–0.6	1.9
Japan	–4.8	3.3	2.5	1.0	0.8
China	2.3	8.4	5.6	0.2	–0.2
USA	–3.5	6.4	3.5	3.3	0.6
World	–3.3	6.0	4.4	0.8	0.2

Source: IMF World Economic Outlook (WEO).

[1] *OECD. 2021. Quarterly GDP.*

[2] *IMF. 2021. World Economic Outlook – April 2021.*

trade policy risks. A rapid return of real GDP to pre-crisis levels will be made more difficult by so-called scarring effects on productivity and human capital in economic sectors that have suffered lasting damage. Moreover, the consequences of rising inequality are increasing the risk of social unrest.

While unprecedented macroeconomic policy measures have contained financial stability risks, they may have promoted excessive risk taking in markets. Equity markets have rallied on rising earnings expectations since mid-2020; however, equity prices have exceeded levels suggested by fundamental-based models run by the IMF.[3] Similarly, low risk-free rates have narrowed corporate bond spreads considerably. Emerging economies with large external financing needs may be confronted with a repricing of risk and tighter financial conditions as soon as advanced economies normalize their policies. Recently rising long-term US yields may have contributed to declining capital inflows into emerging economies, particularly those with high US dollar-denominated debt. Yet markets remain generally confident, as inflation has broadly been under control in most large emerging economies apart from Turkey. The pandemic has left the corporate sector overindebted in many countries, which has raised concerns about loan quality and reduced banks' risk appetite. These issues may become exacerbated by a wave of bankruptcies, even in advanced economies, as soon as debtor protection measures and tax deferrals are repealed. So far however, banks have been resilient in the pandemic thanks to capital and liquidity buffers amplified in response to the global financial crisis.

The economic effects and response measures in the wake of the pandemic also pose a challenge to fiscal sustainability. In 2020, average overall deficits reached 11.7% of GDP in 2020 in advanced economies and 9.8% in emerging economies. Revenues fell everywhere, whereas pandemic-related spending was higher, mostly in advanced economies (6% of GDP in 2021). Spending will decline only gradually, given recovery plans including 18% climate-related investment.[4] While fiscal support and automatic stabilizers have prevented deeper recessions, average public debt has risen to unprecedented levels and is expected to stabilize at 99% of GDP worldwide in 2021.[5] In the advanced economies, the average debt ratio will have risen by 18.7 percentage points to 122.5% from 2019 to 2021 – almost twice the change and level expected for emerging economies. This leaves governments with the difficult task of avoiding a premature withdrawal of fiscal support while preparing for medium-term fiscal consolidation. Still, public households are being supported by a trend decline in market interest rates and accommodative policies of central banks. Given limited market access, however, the situation is more difficult for low-income countries.

In the USA, economic recovery is gaining momentum amid rapid vaccination progress and extensive fiscal incentives. The IMF has raised its growth forecasts for the USA by more than 3 percentage points and expects that real GDP will grow by 6.4% in 2021 as a result of fiscal incentives – even if a considerable part of the spending package (USD 1.9 trillion in total) is temporarily being set aside as savings by private households. In addition, President Biden has

[3] *IMF. 2021. Global Financial Stability Report. Preempting a Legacy of Vulnerabilities. April 2021.*

[4] *UNDP. 2021. How are Countries Investing in Recovery? Report.*

[5] *IMF. 2021. Fiscal Monitor. April 2021.*

announced two plans that are supposed to be partly financed by tax increases: a USD 2.3 trillion plan for infrastructure and low-carbon transition and a USD 1.8 trillion plan for families and education. These measures are expected to shift the output gap into positive territory for two years from 2021. The US Federal Reserve (Fed) therefore assumes that core PCE inflation (part of its monetary policy target) will rise above 2% in the course of 2021 and reach 2.2% in December 2021. Public debates about a possible overheating of the economy have been fueled by the fact that longer-term US yields have temporarily increased due to higher inflation expectations and risk premiums. Nevertheless, the Fed has maintained its accommodative policy stance, keeping the federal funds rate in a target range of 0% to 0.25% and continuing monthly purchases of at least USD 120 billion in Treasuries and asset-backed securities.

China already returned to pre-pandemic GDP levels in 2020, supported by effective containment measures, strong public investment and ample central bank liquidity. The rapid rebound of the Chinese economy has, however, led to a further buildup in financial vulnerabilities. Corporate debt has risen sharply, particularly driven by riskier borrowers, and public debt has increased by 10 percentage points to 66.4% in 2020. The IMF has revised its autumn forecast upward, expecting real economic growth of 8.4% for 2021 and a return to long-term trend growth at 5.6% for 2022. In line with a rebalancing needed to return to a sustainable growth path, the Chinese authorities plan to gradually reduce their fiscal support, increasingly shifting it toward private households, and to reduce the deficit through higher revenues. Inflation turned positive in the first quarter of 2021 but is still very muted despite high producer price inflation. The People's Bank of China has announced that it will maintain its flexible and targeted monetary policy and pay more attention to the containment of financial risks. Since May 2020, the renminbi has appreciated against the US dollar.

Japan is expected to return to end-2019 activity levels in the second half of 2021. The outlook for the Japanese economy has improved, thanks to unprecedented domestic policy support and favorable external conditions, with growth projected at 3.3% in 2021 and 2.5% in 2022. The government announced sizable fiscal support for 2021 after public debt had risen by more than 20 percentage points to 256.2% of GDP in 2020. The Bank of Japan continues its monetary easing by flexibly cutting interest rates, controlling the yield curve via fixed-rate purchase operations as well as by purchasing exchange-traded funds and real estate investment trusts.

The United Kingdom suffered one of the strongest economic contractions in Europe, with GDP dropping by almost 10% in 2020. The IMF expects the UK's real GDP to grow by 5.3% in 2021 and at a similar rate in 2022. The reopening of retail and catering businesses and the steep decline in COVID-19 cases thanks to swift vaccine uptakes should allow the recovery to build momentum. UK exports to the EU fell sharply in early 2021, reflecting the resumption of EU custom controls in the wake of Brexit. Very moderate consumer price inflation (0.7% in March) is likely to rise soon. The Bank of England maintains its accommodative monetary policy stance with a base rate of 0.1% and a total target stock of asset purchases of almost GBP 900 billion.

In Switzerland, the decline in economic growth was comparatively modest. After a drop by 3% in 2020, the IMF expects Switzerland's GDP growth

to pick up to 3.5% in 2021 and a slightly lower rate thereafter. Inflation is forecast to remain barely positive. The exchange rate of the Swiss franc has declined to around CHF 1.1 against the euro since early 2021. The Swiss National Bank has maintained its expansionary monetary policy with negative key interest rates (−0.75%) and generous liquidity supply, while standing ready to intervene in foreign exchange markets to counter overvaluation.

In the euro area, a third wave of the COVID-19 pandemic has delayed the projected return to growth. After the euro area economy experienced another mild contraction in the first quarter of 2021, a rebound is expected to start from the second quarter of 2021, driven by global and domestic demand, positive profit growth, favorable financing conditions as well as coordinated crisis response and solidarity instruments. After a decline by 6.6% in 2020, the IMF expects growth to return to positive levels of 4.4% for 2021 and 3.8% for 2022. The IMF's forecast for 2021 is more optimistic than a previous forecast by the ECB, not least because it is based on upwardly revised GDP figures for 2020. Inflation was close to zero in 2020 but is forecast to rise to 1.5% in 2021, before weakening somewhat in the following years.

Divergent growth within the euro area is increasing financial stability risks, often concentrated in countries and sectors with pre-existing vulnerabilities. The euro area countries most negatively affected in 2020 were Spain (−11%) and Italy (−8.9%), while Germany performed better than average (−4.9%), and Ireland was an outlier recording positive growth (2.5%). Now, in the recovery phase, the picture is changing, and the IMF expects Spain to become the fastest-growing economy in the euro area (6.4%) in 2021, followed by France (5.8%), while Germany and Italy are expected to remain below the euro area average (3.6% and 4.2%, respectively). These differences are accounted for by various factors such as the relative importance of tourism. The crisis also entailed diverging debt ratios of up to 205.6% of GDP in Greece and 155.8% in Italy, while Germany's debt ratio of 69.8% stayed below the euro area average of 98%.[6] Financial stability concerns also stem from potential corrections in stretched asset valuations, higher corporate debt across all economic sectors, low bank profitability and concentrated exposures to low-carbon transition risks.[7]

Fiscal policy in the euro area has provided critical support for incomes, employment, businesses and financial stability. According to the ECB, discretionary fiscal policy measures related to the COVID-19 crisis, including the recovery fund branded "Next Generation EU" (NGEU), amount to 4¼% of GDP for 2020, 3.3% for 2021 and about 1.5% for 2022 and 2023 each. Their growth impact is estimated at 1.7 percentage points in 2020 and 0.5 percentage points in 2021.[8] Additionally, automatic stabilizers (amounting to about 5% of GDP) are estimated to have contributed about 0.8 percentage points in 2020. Furthermore, government loan guarantees totaling 17% of GDP and capital injections have alleviated liquidity constraints. The high level of savings is likely to support household investment, while digital and environmental projects funded by the NGEU will mobilize private investments beyond the forecast horizon.

[6] *Eurostat. 2021. Government debt up to 98.0% of GDP in euro area. euroindicators of April 23, 2021.*

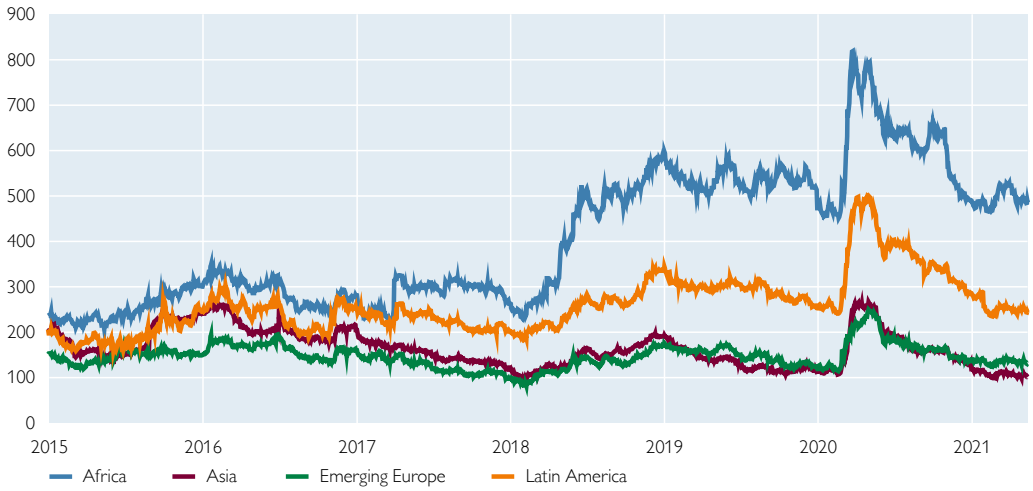
[7] *ECB. 2021. Financial Stability Review. May 19, 2021.*

[8] *ECB. 2021. Economic Bulletin. Issue 2.*

Chart 1.1

Spreads of euro-denominated sovereign bonds issued in selected emerging market regions

Euro EMBIG spread in basis points



Source: Macrobond.

Note: EMBIG = Emerging Markets Bond Index Global.

The ECB has reacted to the crisis with wide-ranging measures to mitigate the economic and financial consequences of the pandemic. The ECB's Governing Council has announced that it will continue the ECB's pandemic emergency purchase programme (PEPP) until at least March 2022 with a total envelope of potentially used EUR 1,850 billion. Net purchases under the expanded asset purchase programme (APP) are scheduled to continue at a monthly pace of EUR 20 billion. Moreover, the Eurosystem will continue to provide the banking sector with ample liquidity through its refinancing operations, mainly through its targeted longer-term refinancing operations (TLTRO III) supporting bank lending to firms and households. Since the start of the pandemic, the Eurosystem's asset purchases and refinancing operations have provided roughly EUR 2,800 billion in liquidity. In addition, supervisory and macroprudential policies have freed up bank capital for absorbing losses and supporting credit flows to the real economy. These policies included the release of capital buffers, guidance to reduce procyclical provisioning and measures to preserve banks' loss-absorbing capacity. It is assumed that, taken together, fiscal, monetary and prudential policy will help avoid severe real-financial feedback loops.

Financial markets data reflect optimism. Since the beginning of 2021, the exchange rate of the euro in nominal terms has depreciated by 0.8% to roughly USD/EUR 1.22 and appreciated by 4.6% against the Japanese yen. Since the beginning of 2021, the yields of German 10-year government bonds have increased by more than 30 basis points but remain negative at −0.3%. Spreads between German benchmark yields and Portuguese, Spanish, French Italian and Greek bond yields have remained stable, with only the latter two exceeding 100 basis points. The spreads between 10-year US Treasuries and German bund yields have risen by 68 to 181 basis points. International stock indices increased in the first quarter of 2021. Since January 2021, the representative stock index DJ EURO STOXX has

gained around 13%. The Dow Jones Industrial Index and the FTSE 100 have shown similar increases although their rally was steeper last year. Brent crude oil prices rose by about 33% in the first months of 2021, to almost 69 per barrel.

Coronavirus sent CESEE into a deep recession, but banking sectors have been performing reasonably well so far

The spread of coronavirus across the world in spring 2020 brought economic activity in CESEE[9] to a sudden halt. Output in the region shrank by 2.2% on average in 2020, with several countries reporting notably sharper setbacks. Thus, 2020 will go down in history as a year with some of the sharpest economic downturns in the region since the transformation years of the early 1990s.

And yet, the recession was less severe than in the euro area. A large part of the positive growth differential was due to the resilience of the CESEE region's two largest economies – Russia and Turkey. Turkey stands out in particular, as it was one of only two countries in Europe that reported an economic expansion in 2020 on the back of a notable credit impulse from state-owned banks. However, also the CESEE EU member states and Ukraine recorded a somewhat milder recession than the average euro area country.

CESEE was more resilient because of two factors: In the first half of 2020, a more gradual spread of the pandemic eastward and a quick reaction by local authorities prevented the type of public health crises that were observed in e.g. Italy or Spain and enabled CESEE to start lifting restrictions on public life and the economy at a comparatively early stage. Later in 2020, CESEE benefited from a rebound in world trade that allowed industrial dynamics to break away from trends seen in most other sectors, especially services. Unlike in spring, lockdown measures mainly targeted contact-intensive sectors like services and retail trade, while industrial production remained largely unrestricted. Structural features of CESEE economies (especially a comparatively high share of industry and a comparatively low share of services in gross value added) acted as further stabilizing factors.

Industrial strength was mirrored in a clear revival of exports in late 2020. Export performance improved throughout the second half of 2020 and export volumes again embarked on an upward trend in the final quarter of 2020 in half of the CESEE countries. As weak domestic demand put a brake on imports, this often translated into a positive growth contribution of net exports to GDP growth. However, it needs to be noted that, in some parts of CESEE, the external sector also substantially reduced growth. This is particularly true for the countries that are most reliant on tourism, i.e. Bulgaria, Croatia and Turkey, where a strong reduction of tourist visits due to COVID-19-related travel restrictions weighed on services exports.

[9] *Central, Eastern and Southeastern Europe. This report covers Slovakia, Slovenia, Bulgaria, Croatia, Czechia, Hungary, Poland, Romania, Turkey, Russia and Ukraine.*

While public consumption bolstered economic activity – in part thanks to large-scale fiscal crisis mitigation packages – the remaining components of domestic demand stayed weak throughout CESEE. COVID-19-related shutdowns in services and retail, sour sentiment, decelerating credit momentum and weaker labor markets weighed on consumer spending, and uncertainty about the further course of the pandemic kept capital spending low. Investment dynamics, however, picked up somewhat toward the end of 2020, reflecting rising capacity utilization rates amid the recovery of external demand and industrial production.

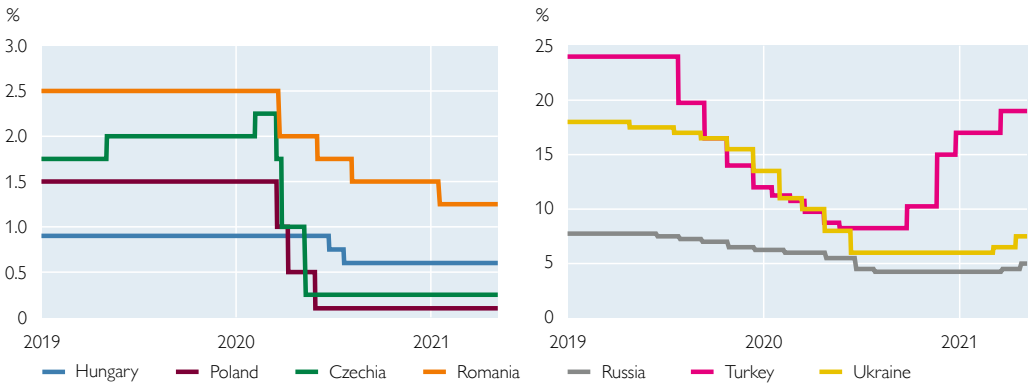
Despite weak economic activity, inflation declined only very moderately following the onset of the coronavirus pandemic. In the CESEE EU member states, average inflation fell from 3.2% in March 2020 to 2.4% in December 2020. The decline, however, was not evenly spread across the region, and inflation fell more in euro area countries and countries that have pegged their currency to the euro (i.e. Slovakia, Slovenia, Bulgaria and Croatia). This suggests that the exchange rate pass-through prevented prices from falling more strongly in the countries with a freely floating exchange rate. In the first quarter of 2021, the Czech koruna, the Hungarian forint and the Polish złoty traded 1.7%, 6.1% and 4.9%, respectively, below their corresponding euro values in the same period of the previous year. On the level of individual HICP components, lower price growth in the CESEE EU member states was mainly related to lower price pressure from non-core items (i.e. energy and unprocessed food) and processed food. Consequently, core inflation remained constant in the second half of 2020 and stood at an average of 3.3% in December 2020 (3.3% in March 2020). The first two months of 2021 brought about some reacceleration of regional headline inflation (to 3.1% in March 2021) on the back of higher energy prices, while core inflation remained broadly unchanged (3.1% in March 2021).

In non-EU CESEE countries, inflation was not only higher, it also accelerated notably in recent months. In March 2021, headline inflation came in at 5.8% in Russia, 8.5% in Ukraine and 16.2% in Turkey. In addition to some temporary factors (e.g. a low yield of agricultural crops in Ukraine in 2020), all three countries struggled with higher exchange rate volatility that passed through to price growth in the past quarters, fueled by political uncertainty and – in the case of Russia – oil price developments. In the first quarter of 2021, the Russian ruble, the Ukrainian hryvnia and the Turkish lira traded 17.9%, 18.2% and 24.3%, respectively, below their corresponding euro values in the same period of 2020.

Monetary policy and financial conditions remain highly accommodative in the CESEE EU member states. Monetary policymakers took swift and comprehensive action in response to the COVID-19-related recessions. While the Eurosystem's monetary policy decisions enhanced monetary accommodation in those CESEE economies that are part of the euro area, most non-euro area countries in the region lowered their national policy rates. For instance, the Czech central bank cut its key policy rate in three steps, from 2.25% to 0.25%, the Polish central bank, also in three steps, from 1.5% to 0.1%, the Hungarian central bank in two steps, from 0.9% to 0.6%, and the Romanian central bank in four steps, from 2.5% to 1.25% (see chart 1.2).

Chart 1.2

Policy rates in CESEE



Source: Macrobond.

Furthermore, several central banks (including those of Croatia, Hungary, Poland, Romania and Turkey) started to buy sovereign bonds issued by their respective countries. To provide the banking sector with sufficient liquidity, some national central banks in the region also adjusted minimum reserve requirements for banks and conducted longer-term refinancing operations. The adequate provision of liquidity was further supported through the establishment of liquidity lines with the ECB. Such lines include repo facilities with the central banks of Hungary and Romania (EUR 4 billion and EUR 4.5 billion, respectively, until March 2022) and swap facilities with the central bank of Croatia (EUR 2 billion, until March 2022) and the central bank of Bulgaria (EUR 2 billion, expired at end-2020). A number of countries also implemented loan repayment moratoria and eased macroprudential regulations for the banking sector, for instance with regard to the size of anticyclical capital buffers (e.g. in Bulgaria, Czechia and Slovakia) or with regard to the collateral framework and debt-servicing capacity rules for borrowers (e.g. in Slovenia).

Russia, Ukraine and Turkey have tightened their monetary policy in recent months. In March and April 2021, Russia increased its policy rate by a total of 75 basis points to 4.5%. In the same months, Ukraine raised its policy rate in two steps by a total of 150 basis points to 7.5%. In both countries, inflation ran above target in early 2021.

In Turkey, rates were raised in four steps from September 2020, by a total of 1,075 basis points to 19%, after a loose policy stance and repeated rate cuts in the first half of 2020 had helped economic activity recover but had contributed to high annual consumer price inflation, a persistent current account deficit, a rapid loss of foreign exchange reserves and a sell-off in the lira. As noted above, the Turkish lira depreciated substantially in the course of 2020 and reached a historical low in early November 2020 against the euro and the US dollar. After rallying markedly between November 2020 and February 2021, it started to weaken again from mid-February onward. Although the lira's latest weaknesses were partly related to global trends – emerging-market currencies have been hit by expectations of higher US interest rates – they may also have reflected renewed concern about the Turkish authorities' commitment to policy tightening.

Financial market turbulences were largely contained throughout most of CESEE in the wake of the pandemic. Uncertainty at the start of the first COVID-19 wave led to currency depreciation, an increase in sovereign spreads and capital outflows from the region but monetary and financial easing in advanced economies contained financial stress and stabilized international markets. High-frequency fund flow data show that outflows from CESEE were mainly concentrated to the second half of March 2020. After this short episode, net fund flows hovered around zero before global investment funds started to flock back to CESEE bond markets in autumn 2020. This trend was interrupted in February 2021, when bond flows suddenly declined and eventually dried up. The last two weeks of March 2021 brought about a certain reversal of this trend, and especially the CESEE EU member states' bond markets again attracted international capital. The situation remained more tense in Russia and Turkey, however.

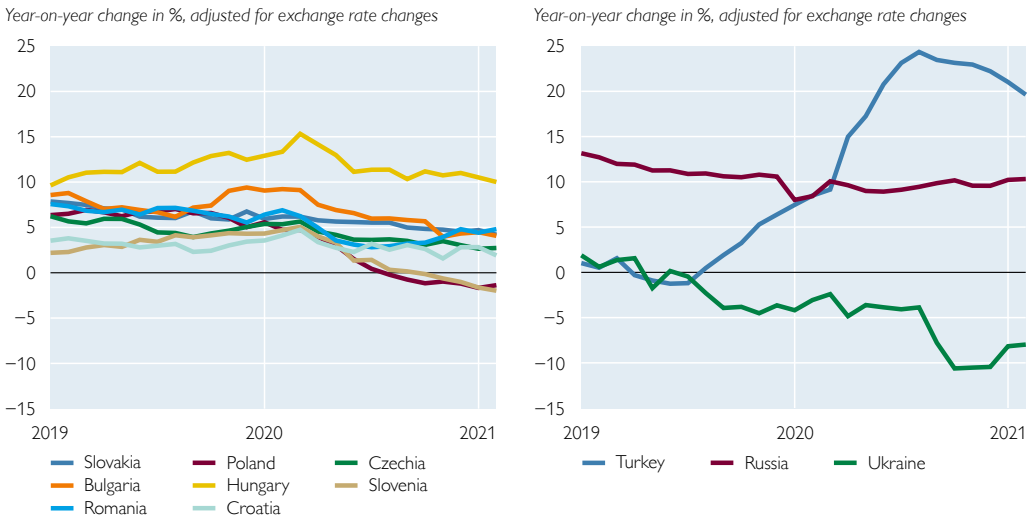
Expectations of higher US interest rates following the announcement of the US fiscal stimulus in late 2020 have had limited spillovers on European yields so far. In the CESEE EU member states, 10-year government bond yields have increased between 12 basis points in Romania and 59 basis points in Czechia since the beginning of 2021 (with some moderate decline in Croatia). The increase in US bond yields was more pronounced (+66 basis points). In several CESEE EU member states, yields in mid-April 2021 were lower than in early March 2020. Central banks' large-scale purchases of government securities in the framework of their quantitative easing programs were probably instrumental in keeping yields low despite increased financing requirements for government budgets. In addition, stepped-up liquidity provision to banks and decreased credit demand by the private sector also likely helped absorb increased government bond supply. Stronger increases in 10-year government bond yields, however, were reported for Russia and Turkey (+117 basis points and +556 basis points, respectively, until mid-April 2021), where domestic (political) factors amplified global trends.

In the banking sector, the coronavirus pandemic brought about a reversal of previous years' trends. Its impact on banking sector indicators, however, was much weaker than in the global financial crisis of 2008. On the one hand, this was related to the very nature of the shock that sent the region into recession. On the other hand, CESEE banks entered the downturn on a much stronger footing than in 2008 (i.e. with stronger capital buffers, less excessive loan growth, a much lower foreign currency-denominated exposure and/or a strengthened regulatory environment).

Weaker demand and worsening credit supply conditions dampened loan growth in nearly all CESEE countries (see chart 1.3). Demand suffered from faltering domestic demand and souring sentiment. Supply was negatively affected by tightened collateral requirements and groups' limited funding, a weakening local and international environment and nonperforming exposures. The decline in credit expansion, however, was rather moderate in many countries, as the recession turned out weaker than initially expected. Furthermore, surveys suggest that regulatory action (e.g. more flexible treatment of NPLs, relaxation of liquidity ratios, various forms of capital relief measures and adjustments of risk weights), monetary policy measures (e.g. long-term liquidity provision) and public guarantee schemes have supported lending activity.

Chart 1.3

CESEE: growth of credit to the private sector



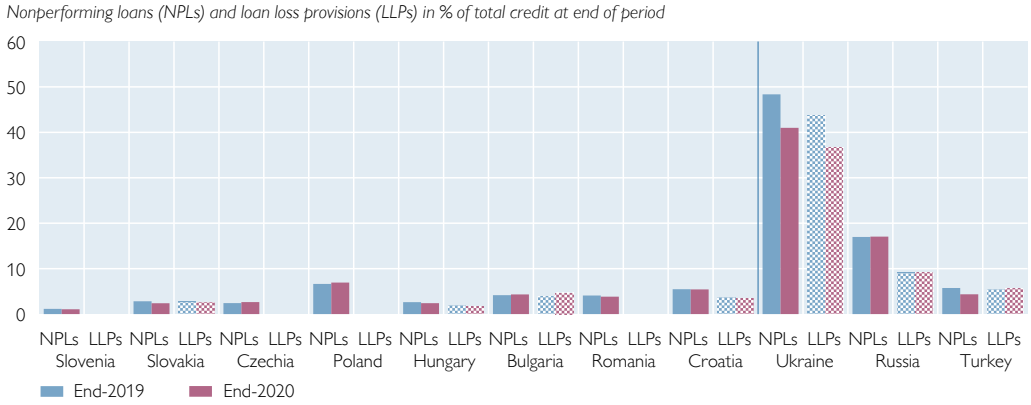
Source: ECB, national central banks.

All countries introduced moratoria on the repayment of loans to alleviate financial strains for borrowers. Surveys indicate that no more than 20% of borrowers renegotiated loan repayments in most CESEE countries. Even in countries where blanket moratoria were imposed by law (e.g. Hungary), penetration did not reach higher levels than some 50% of private sector loans. This is a sign that the remaining borrowers were able to service their debt amid falling interest rates and borrowing costs and despite the economic downturn.

Against this backdrop, NPLs have not yet embarked on a clear upward trend. In fact, NPL ratios declined somewhat throughout 2020 in more than half of the countries under observation (see chart 1.4). The most notable decline was reported for Ukraine, where state-owned banks stepped up the resolution of (fully

Chart 1.4

CESEE banking sector: credit quality



Source: IMF, national central banks, OeNB.

Note: Data are not comparable across countries. NPLs generally refer to loans that are in arreas for more than 90 days except for Czechia, Poland, Russia, Slovakia and Turkey, where NPLs refer to substandard, doubtful and loss loans.

provisioned) nonperforming exposures. Banks, however, expect that the quality of loan applications in the region will deteriorate across the client spectrum and that NPLs will increase notably in the future.

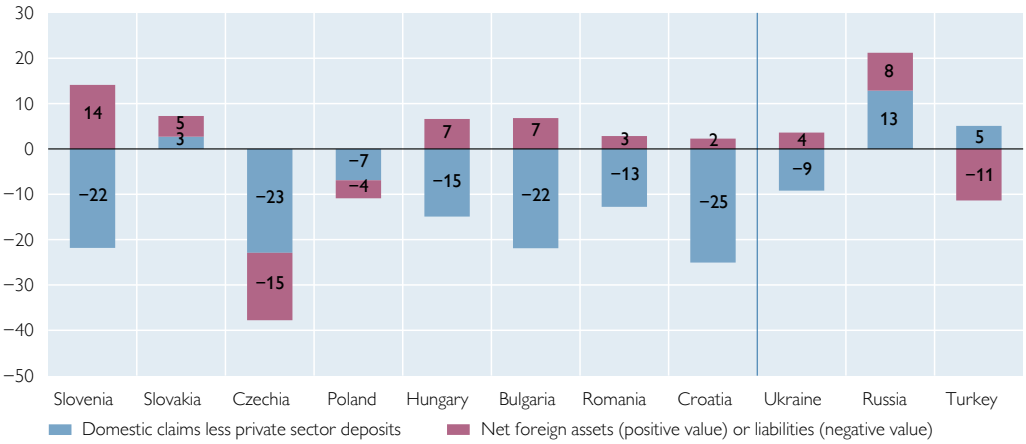
The COVID-19 pandemic further supported a shift in the refinancing structure of CESEE banking sectors toward domestic deposits. A moderate decline in domestic claims was accompanied by a notable increase of private sector deposits in the year 2020 (see chart 1.5). Apparently, corporations and households increased savings as consumption and investment decisions were postponed in an uncertain environment. This resulted in the largest overhang of deposits over claims in the past 20 years throughout most of CESEE, with gaps reaching more than −20% of GDP in Czechia, Bulgaria, Croatia and Slovenia. A substantially positive funding gap was only reported for Russia and Turkey, where loan growth was particularly strong.

The crisis, finally, had a notable impact on the profitability of banking sectors in CESEE. The return on assets (ROA) in 2020 was notably lower than in 2019 and declined by close to 40% on average. Especially strong reductions were reported for several CESEE EU member states, including Hungary, Bulgaria and Croatia. The ROA nevertheless remained positive and ranged between 0.3% in Poland and 2% in Ukraine at the end of 2020 (see chart 1.6). Rising loan loss provisions in response to the recession were a main driver of lower bank profits. Central bank rate cuts put additional pressure on net interest margins, and lower loan growth weighed on operating income. Profitability will likely remain under stress, as eased regulatory requirements and loan moratoria only temporarily sheltered banks from some of the COVID-19-related impact. Deteriorating profitability coupled with rising NPLs will likely weigh on banks' capital ratios. At the end of 2020, however, most CESEE banking sectors continued to report substantial capital buffers. The capital adequacy ratio (tier 1) hovered between 14.1% in Turkey and 24.3% in Croatia. Substantially lower figures were only reported for Russia (9.7%).

Chart 1.5

CESEE banking sector: gap between claims and deposits, and net external position

% of GDP at end-2020

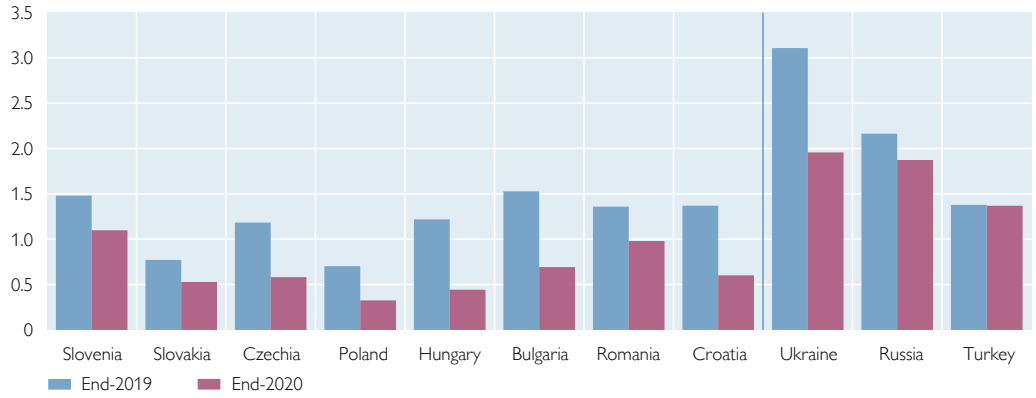


Source: ECB, Eurostat, national central banks, national statistical offices, OeNB.

Chart 1.6

CESEE banking sector: profitability

Return on assets (ROA) in %



Source: IMF, national central banks, OeNB.

Note: Data are not comparable across countries. They are based on annual after-tax profits, except for Russia's data, which are based on pre-tax profits.

Box 1

European banks in Russia from 2017 through the COVID-19 pandemic – recent developments and perspectives[10]

Europe's significant banks have remained committed to the Russian banking sector despite challenges linked to the COVID-19 pandemic. *Though European banks qualifying as significant institutions for banking supervision purposes have pursued different strategies in the Russian banking sector, they remain committed to this market, with a resilient performance.[11] Nonetheless, they face several challenges linked with the wide-ranging impacts of the COVID-19 pandemic on the Russian and global economy. In the years prior to the pandemic (2017 to 2019), European banks slightly increased their market presence in Russia, with different underlying trajectories. They experienced dynamic revenue growth, even if profitability ratios faced some pressure. Their credit quality tended to improve, and compliance with capital requirements was ensured. Besides, while Russia's pre-pandemic GDP growth had suffered from a weak investment climate, oil price volatility and sanctions, the country and its banking system had built up sizable financial buffers. In 2020, the COVID-19 pandemic stopped European banks' lending expansion and provisioning drove a moderate crisis-related profitability contraction. At the same time, the banking sector entered a regime of regulatory forbearance. Measures decided by the Bank of Russia in response to the crisis, as well as key rate reductions and targeted government subsidies, have supported banks' and businesses' activity. Overall, the economic recession was rather mild on the back of limited restrictive measures and fiscal stimulus. In March and April 2021, the key rate was raised against the backdrop of inflationary pressures and incipient economic recovery tendencies.*

Looking ahead, credit risk remains a central risk driver for European banks, as crisis-related measures are slated to expire in mid-2021, and the second half of the year may well be a test for the market. *The banking sector would in general appear sufficiently capitalized to cover a potential swelling of loan losses and provisioning needs. This goes especially for European banks that tend to have better than average asset quality and a sound capital basis. But European banks also keep facing exogenous risks, such as ruble volatility or sanctions, which are still among the major risks when operating in Russia. Climate risk is*

[10] *This box includes highlights of a study to be published in: Focus on European Economic Integration Q3/21. OeNB.*

[11] *The analysis covers the Russian subsidiaries of Raiffeisen Bank International, Société Générale and UniCredit.*

also an upcoming challenge. Likewise, dynamic digitalization trends bring both risks and opportunities in this competitive market, and the pandemic served as a real test to European banks' digitalization capacities.

Russia's banking sector and economy will be strongly influenced by the further course of the COVID-19 pandemic and the effectiveness of vaccines. *That said, the still weak overall investment climate may slow down the recovery. While their combined profitability in Russia has so far been quite resilient despite different underlying trajectories, European banks qualifying as significant institutions will have to continue to maneuver through prospects of oil price and ruble volatility, persisting sanction risks and moderate growth trends. This will continue to provide a challenging environment, even if generous reserves remain at the disposal of the authorities should financial problems emerge for the banking sector, a scenario whose implications remain untested in the case of European banks.*

Nonfinancial corporations and households in Austria strongly affected by the pandemic

Vulnerabilities in the Austrian nonfinancial corporate sector mitigated by public support measures in the short term

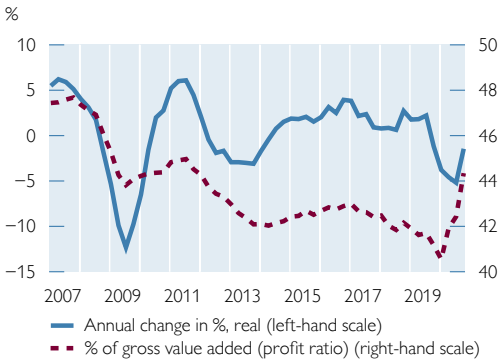
Economic activity in Austria strongly hit by COVID-19

The coronavirus pandemic seriously impacted economic developments in 2020 and continues to do so in 2021. After contracting sharply during the first lockdown in spring 2020, the Austrian economy recovered over the summer months. The GDP losses during the second and third lockdowns in fall and winter 2020 were not as pronounced as those incurred during the first lockdown. Overall, Austrian GDP declined by 6.6% in real terms in 2020. The exceptionally high level of uncertainty caused by the pandemic prompted many businesses to halt or postpone investment projects. In some cases, interruptions or shortfalls in delivery or production made it impossible to fully complete ongoing investment projects. Construction investment was more stable on the back of ongoing high demand owing to rising property prices and favorable funding conditions.

Due to large-scale government support measures, profitability deteriorated only slightly despite the sharp contraction in economic activity. The gross operating surplus[1] of Austrian nonfinancial corporations was down 1.4% year on year in real terms in 2020 (see chart 2.1). Gross value added of nonfinancial corporations fell faster than the compensation of employees, but this decline was offset in part by an increase in production subsidies ("other subsidies on production") resulting from the various support measures (such as short-time work schemes, fixed cost grants and compensation for sales losses). As a result, the reduction in profits since the onset of the pandemic has not only been less severe than during the global financial crisis of 2008–09 (GFC), it has also been less pronounced than the current fall in economic activity. Therefore, the profit ratio – as measured by gross operating surplus divided by gross value added – even increased in 2020, by 3 percentage points to 44.3%. Moreover, nonfinancial corporations' balance of property income received minus property income paid – which is usually negative – improved (by almost 40%), mainly because of a diminished distribution of corporate profits to firms' owners or shareholders[2]. This was primarily attributable to the fact that the distribution of profits and dividends was prohibited for businesses that received fixed cost grants. As a result, (gross)

Chart 2.1

Gross operating surplus of Austrian nonfinancial corporations[1]



Source: Statistics Austria.

[1] Four-quarter moving sums.

[1] *Including mixed income (income of the self-employed and other unincorporated businesses).*

[2] *It has to be taken into account that in the national accounts this item is derived as a residual and thus surrounded by a certain degree of uncertainty. Moreover, profits reinvested by foreign multinational corporations in their Austrian subsidiaries also declined, as did profits reinvested by Austrian corporations in their foreign subsidiaries.*

internal financing, the most important source of funds for Austrian nonfinancial corporations, even improved by almost one-quarter in 2020. Yet, it has to be borne in mind that the current figures are distorted by the comprehensive government support measures. Therefore, they do not reflect the actual performance of the corporate sector during the pandemic and are not indicative of problems that may still lie ahead.

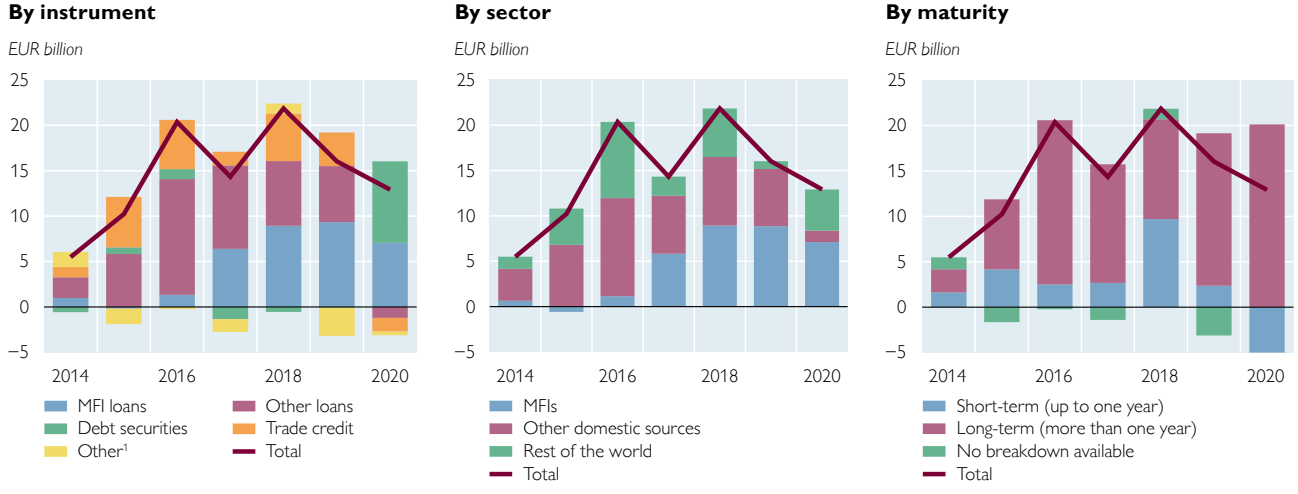
Financing needs of Austrian nonfinancial corporations subdued

Nonfinancial corporations' external financing volumes plummeted in 2020, reflecting negative equity financing and reduced debt financing. According to preliminary financial accounts data, external financing amounted to EUR 5.8 billion, a level two-thirds below the 2019 value. On the one hand, this reflected reduced financing needs as investment projects were postponed amidst the worsening of the short-term growth outlook. Also, the sizable liquidity buffers that had been built up in the first phase of the pandemic reduced financing needs. Moreover, ample internal financing might also have played a role. On the other hand, external financing continued to benefit from favorable financing conditions. Equity financing, which had already been rather subdued in the two preceding years, was negative in net terms at –EUR 7.1 billion in 2020, as foreign investors reduced their investments in resident corporations.

Thus, external financing took exclusively the form of debt in 2020. Reflecting lower financing needs, net debt flows to nonfinancial corporations fell by 19.4% to EUR 12.9 billion (see chart 2.2). Debt financing was entirely long-term (with maturities over one year), while short-term funding decreased, and came to a large extent from domestic sources, primarily monetary financial institutions (MFIs). Trade credit, which typically moves in tandem with overall economic activity, was negative in 2020. In contrast, loans from other enterprises, which largely reflect transactions within corporate groups, increased slightly.

Chart 2.2

Debt financing of Austrian nonfinancial corporations



Source: Statistics Austria.

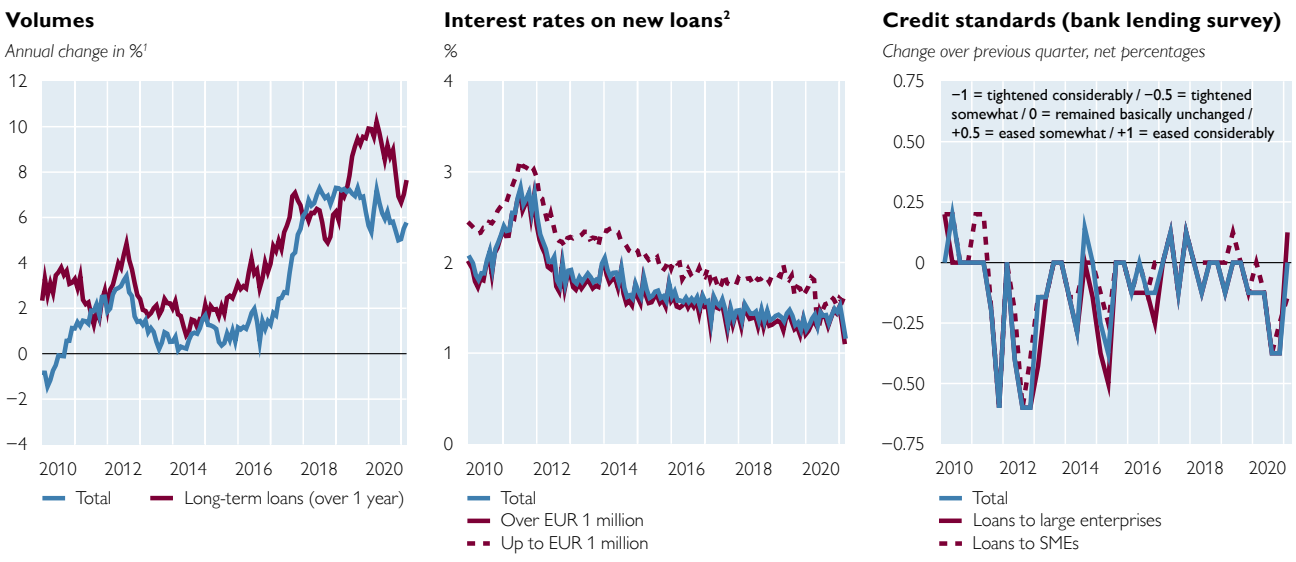
Note: 2020 data are preliminary.

[1] Pension entitlements and other accounts payable.

Bank loans remained a central tool for maintaining companies' liquidity during the COVID-19 pandemic. The Eurosystem eased banks' refinancing conditions through multiple monetary policy instruments, including direct asset purchases (under the pandemic emergency purchase programme – PEPP) as well as lending operations, in particular targeted longer-term refinancing operations (TLTRO III) aimed at encouraging banks to extend loans to the private sector. In addition, the government provided unprecedented fiscal stimulus to nonfinancial corporations. At the same time, moratoria on repayments and public guarantees for bank loans alleviated stress on borrowers and allowed banks to provide new lending, thereby offering short-term relief to firms in an environment of compressed cash flows and ensuing needs for working capital. Accordingly, loans by domestic banks, whose share in debt financing had already been comparatively high in recent years, accounted for more than half of debt financing in 2020. Their role was particularly important in the first two months of the pandemic, when firms took recourse to short-term loans to secure liquidity. After this spike, the annual growth rate of MFI loans to nonfinancial corporations moderated, reaching 5.8% in March 2021 (according to BSI data, adjusted for securitization as well as for reclassifications, valuation changes and exchange rate effects). While this value was down 1.4 percentage points from the level recorded in April 2020, it was still rather high by historical standards (see chart 2.3). One factor behind this decrease could have been the drop in the use of COVID-19-related moratoria, which had impacted loan growth rates by reducing repayments. From their peak recorded in mid-2020, the amount of loans under moratoria declined by almost two-thirds, as a significant share of deferrals expired.[3] In contrast, loans with

Chart 2.3

MFI loans to Austrian nonfinancial corporations



Source: OeNB.

[1] *Adjusted for reclassifications, valuation changes and exchange rate effects.*
[2] *Euro-denominated loans.*

[3] *See Fidesser, S., A. Greiner, I. Ladurner, Z. Mrazova, C. Schweiger, R. Spitzer and E. Woschnagg. 2021. COVID-19-related payment moratoria and public guarantees for loans – stocktaking and outlook. In: Financial Stability Report 41. OeNB.*

COVID-19-related public guarantees increased until early 2021, although their growth had leveled off markedly toward the end of 2020. Another factor was that enterprises could draw on the liquidity buffers accumulated in the first months of the pandemic, and liquidity needs arising during the second wave of the pandemic were lower than those during the first wave. Short-term loans (with a maturity of up to one year), which had made a large contribution to loan growth at the beginning of the COVID-19 pandemic, were redeemed in net terms in the second half of 2020. In contrast, the outstanding amount of medium- and long-term loans increased, to a large extent because government guarantees were typically given for loans with medium-term maturities.

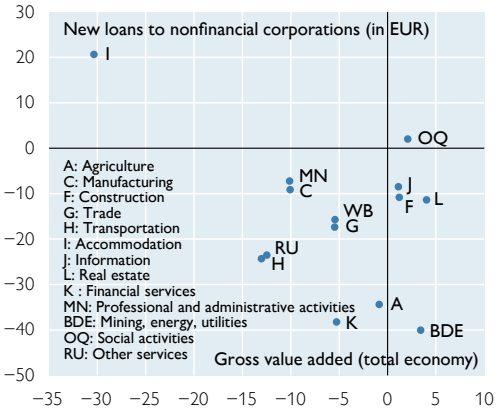
Gross new loans to nonfinancial corporations were down 16.5% in 2020 against the year before. In general, new loans reflected firms' financing needs during the pandemic. On the one hand, there were differences by loan size: While new loans of more than EUR 1 million were down 20%, new loans of up to EUR 1 million rose by 6%. The latter include the loan category that is eligible for public loan guarantees, i.e. loans with a volume of up to EUR 500,000 and a maximum term of five years. Here, new lending even doubled in 2020 compared to the year before. On the other hand, loan growth differed across industries in 2020 (see chart 2.4[4]). One factor behind these differences in the uptake of new loans was the drop in the gross value added registered in 2020, and the industry most affected by the pandemic – accommodation and food service activities – even increased its volume of new loans by 20%. This indicates that loans were taken out not for investment but to bridge liquidity shortages or build up liquidity buffers.

Credit standards for loans to enterprises were tightened throughout 2020, but remained stable in the first quarter of 2021, according to the Austrian results of the euro area bank lending survey (BLS). The main factors contributing to this tightening were a deterioration in the assessment of risks stemming from the general economic and the firm-specific situation as well as banks' reduced risk tolerance. Notably, banks reported a significant easing of credit standards for loans with COVID-19-related government guarantees in 2020, while standards for loans without government guarantees were already tightened in the first half of the year. Likewise, demand for government-guaranteed loans – which had been particularly strong in the first half of 2020 – weakened in the second half of the year.

Chart 2.4

New loans to nonfinancial corporations and gross value added 2020

Annual change in %

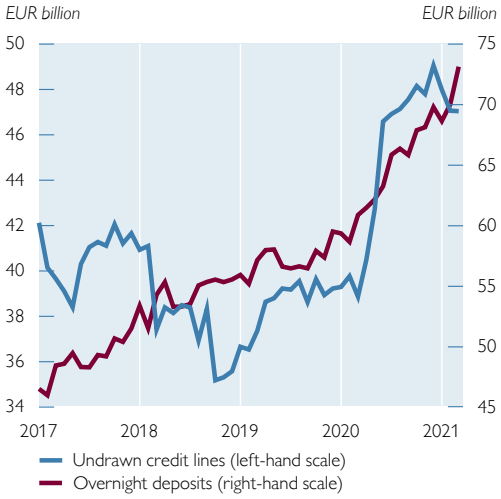


Source: OeNB, Statistics Austria.

[4] *Gross value added refers to the gross value added of the total economy.*

Chart 2.5

Indicators of Austrian nonfinancial corporations' liquidity



Source: OeNB.

Since the onset of the pandemic, nonfinancial corporations have built up substantial liquidity reserves. On top of the loans already disbursed to firms, banks provided additional liquidity in the form of new credit lines. As firms have so far only made partial use of the credit lines granted to them, undrawn credit lines increased briskly, rising by 18.5% year on year in March 2021, a reduction in the first months of this year notwithstanding (see chart 2.5). Additionally, firms' transferable deposits continued to rise (by 20% in March 2021), even though the interest rates on nonfinancial corporations' short-term deposits were negative throughout 2020 and early 2021. A large part of these funds were bank funds and funds raised on the bond market which have not yet been spent. While this increase may reflect precautionary motives, the very low interest rate level has also reduced the opportunity cost of holding liquidity.

Credit conditions have tightened somewhat since the outbreak of the pandemic. Between March 2020 and March 2021, interest rates on new loans to nonfinancial corporations decreased on average by 19 basis points, higher risk premia due to the economic impact of the pandemic on firms' revenues notwithstanding. This likely reflected the easing monetary policy stance. In particular in the first months of the pandemic, interest rates varied widely across different loan segments. While interest rates on larger loans (with a volume of more than EUR 1 million) rose, rates on smaller loans decreased in the first months following the onset of the pandemic. This was especially true for interest rates on loans with an interest fixation period of 1 to 5 years, which fell by 144 basis points in the second quarter of 2020. This is typically the size and maturity bracket of guaranteed loans, for which risk considerations are less of a concern. With the role of guarantees in the development of loans diminishing, the interest rate on loans of this size and maturity bracket rebounded by 77 basis points by March 2021. As in previous years, banks participating in the BLS stated that over the course of 2020 and in early 2021, interest margins on riskier loans to firms were widened to a larger extent than margins on loans with average risk (which were even eased slightly in the first quarter of 2021). Other terms and conditions, such as collateral requirements and loan covenants, were also tightened, according to the BLS.

Corporate bond issuance has increased substantially since the beginning of the pandemic. Securities statistics show that after three years of negative net issuance, Austrian nonfinancial corporations raised close to EUR 9 billion in net terms via debt securities in 2020. This was the highest value on record, and like in the years following the GFC, debt securities issuance surpassed the net amount obtained via MFI loans. Bond financing accounted for more than half of total external

financing in 2020, according to financial accounts data. On the one hand, this surge undoubtedly reflected growing financing needs, but on the other hand, corporate bond issuance also benefited from the narrowing of corporate bond spreads facilitated by the enhancement of the ECB's securities purchase programs, which include corporate bonds. That said, this form of finance was used by a comparatively small number of large firms.

Debt servicing capacity of the corporate sector affected by the pandemic

COVID-19 has seriously affected the debt sustainability of Austrian companies. In 2020, the aggregate corporate sector's consolidated debt-to-income ratio surged by 14 percentage points to 325%.[5] Chart 2.6 shows that this increase was almost entirely driven by higher debt while lower gross operating surplus only played a minor role. However, as pointed out above, the gross operating surplus of nonfinancial corporations was largely underpinned by government support measures in 2020. Their eventual discontinuation could affect gross operating surplus and subsequently the debt-to-income ratio. Conversely, a rebound in economic activity could at least partially reverse the rise in the debt-to-income ratio. Moreover, the increase in corporate debt was accompanied by a significant increase in liquid assets (cash and bank deposits) held by the corporate sector so that in the aggregate, the balance of corporate debt and liquid assets even decreased slightly in 2020. Furthermore, the Austrian value was below the euro area average. However, this aggregate figure masks the substantial heterogeneity across industries as regards the impact of the pandemic. At least for firms hit most by the pandemic, the higher debt levels resulting from additional loans taken out to make up for lost revenues will persistently affect corporate indebtedness. This is all the more a concern as the conditions to generate equity have deteriorated in the current situation too, as raising external equity – which had been already muted in the years before the pandemic – has been seriously hampered by the uncertain economic outlook. Thus, further policy measures related to the pandemic should take into account possible effects on Austrian enterprises' equity.

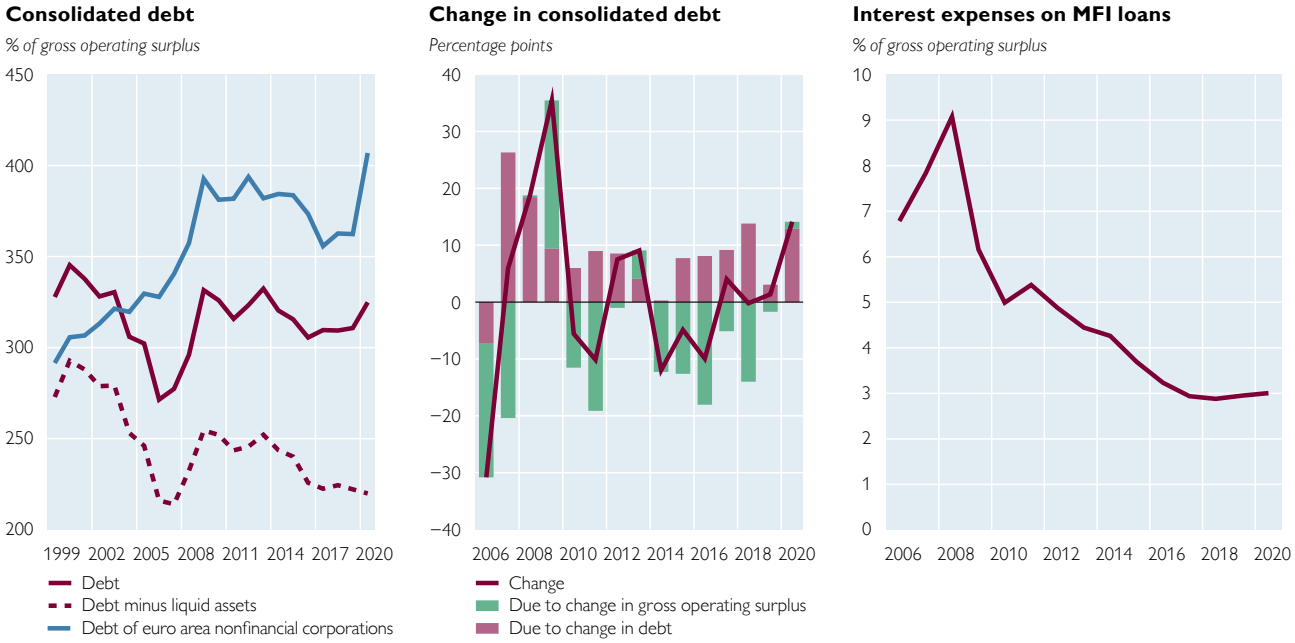
Nonfinancial corporations' interest burden remained low in 2020. The ratio of interest payment obligations for (domestic) bank loans to gross operating surplus remained stable at 3% in 2020 (compared to 9% in 2008), despite the sizable increase in loan volumes since then. As the majority of guaranteed loans have medium-term interest rate fixation periods, the share of variable rate loans declined by 1.6 percentage points year on year to 79.7% in the first quarter of 2021.

Due to government support measures, insolvency numbers have fallen significantly since the start of the pandemic, but lagged effects are likely to materialize when support measures are eventually phased out. The number of insolvencies dropped by 40% in 2020 compared to the previous year, according to the creditor protection association KSV 1870. However, this reduction did not reflect economic developments but was solely attributable to the large-scale government aid and protection measures. On the one hand, the impact

[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, such as 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 firm incurs through its primary activities. Data are presented in consolidated terms, i.e. transactions within the corporate sector are not taken into account.*

Chart 2.6

Consolidated debt and interest expenses of Austrian nonfinancial corporations



Source: OeNB, Statistics Austria.

Note: Consolidated gross debt is the sum of total loans granted to and debt securities issued by nonfinancial corporations net of intra-sectoral lending. Data for 2020 are preliminary.

of the economic slump on companies was cushioned by a series of liquidity-supporting measures. On the other hand, companies benefited from deferrals of taxes and social security contributions. In addition, the obligation to file for bankruptcy due to overindebtedness was temporarily suspended. Other policy measures, such as loan guarantees and moratoria, which temporarily shielded firms from the economic effects of the pandemic, also contributed to this decline.[6] Yet, while these relief measures have so far helped avoid widespread bankruptcies, they have shifted insolvency risks into the future. Not only is there a danger of lagged effects when bankruptcy relief measures are phased out, but these measures may also touch off additional insolvencies. Moreover, the increased borrowing that went along with a number of those policy measures may impair the future repayment capacity of enterprises, a situation which may be further aggravated by the fact that loans to the industries hit hardest by the crisis expanded most.

Households' debt sustainability weakened by the pandemic despite government support measures and increased savings

Households' financial investments increased strongly amid surging saving ratio

The COVID-19 pandemic and the related containment measures have significantly dampened household income. Yet, given the severity of the recession, households' real disposable income fell comparatively moderately – by

[6] *See Elsinger, H., P. Fessler, S. Kerbl, A. Schneider, M. Schürz, S. Wiesinger. 2021. The calm before the storm? Insolvencies during the COVID-19 pandemic. In: Financial Stability Report 41. OeNB.*

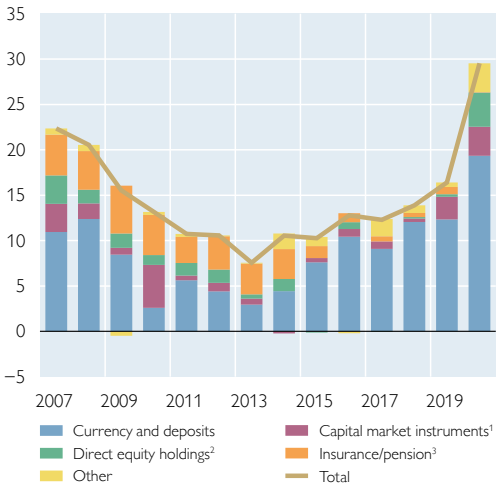
1.9% – in 2020 as income was supported by massive government transfers (unemployment benefits, short-time work subsidies, higher pension benefits, one-off payments, etc.). Apart from a drop in the compensation of employees, the main reason for the decline in disposable income was a 43% fall in property income, primarily due to a massive reduction in corporate income distribution (which had supported the internal financing capacity of the nonfinancial corporation sector, see above). As the COVID-19-related restrictions had limited consumption possibilities, private consumption declined much more strongly than income (by 9.4%), resulting in the saving ratio surging from 8.2% in 2019 to 14.4% in 2020. In addition to this forced saving, precautionary saving increased as people felt increasingly insecure about their income situation.

Financial investment flows of households surged in 2020. Mirroring the jump in the saving ratio, households' financial investment flows rose by 80% year on year to EUR 29.5 billion (see chart 2.7). Reflecting high uncertainty, liquid assets contributed more than three-quarters as households increased their cash holdings by EUR 2.4 billion and their overnight deposits by EUR 20.4 billion. Other bank deposits were reduced by EUR 3.5 billion as the shift from time and saving deposits to overnight deposits continued.

By the end of 2020, households' capital market investment holdings recovered the sizable valuation losses suffered in the early stages of the pandemic. In 2020, net financial investments in capital market instruments amounted to EUR 3.2 billion, the highest value in a decade. Investment in listed shares had been especially buoyant, reaching EUR 2.4 billion, the highest value since the start of the compilation of financial accounts data in 1996. Households also continued to invest in mutual fund shares, while further reducing their direct holdings of debt securities. Given the massive price declines in national and international capital markets following the COVID-19 shock in spring 2020, households encountered massive (unrealized) valuation losses in the first quarter of 2020. However, as capital markets had recouped a significant share of these losses by the end of the year, households registered (again: unrealized) valuation gains of about EUR 1 billion in 2020 as a whole, equivalent to 0.8% of the outstanding amount at end-2019. In contrast, the GFC had caused cumulative valuation losses of EUR 19 billion in 2008. Apart from that, investments in capital market instruments are very much concentrated in the portfolios of higher-income households, who are in a better position to bear such valuation losses, as the results of the Household Finance and Consumption Survey

Chart 2.7

Households' net financial investments



Source: OeNB.

Note: Data for 2020 are preliminary.

[1] *Debt securities, mutual fund shares and listed shares.*
[2] *Unlisted shares and other equity.*
[3] *Insurance, pension entitlements and severance funds.*

(HFCS) for Austria show.[7] Moreover, households invested EUR 3.8 billion in other equity, around EUR 3 billion of which were in fact capital injections by households into firms in economic distress because of the COVID-19 pandemic.

Housing loans remain buoyant amid favorable financing conditions and strong demand for real estate

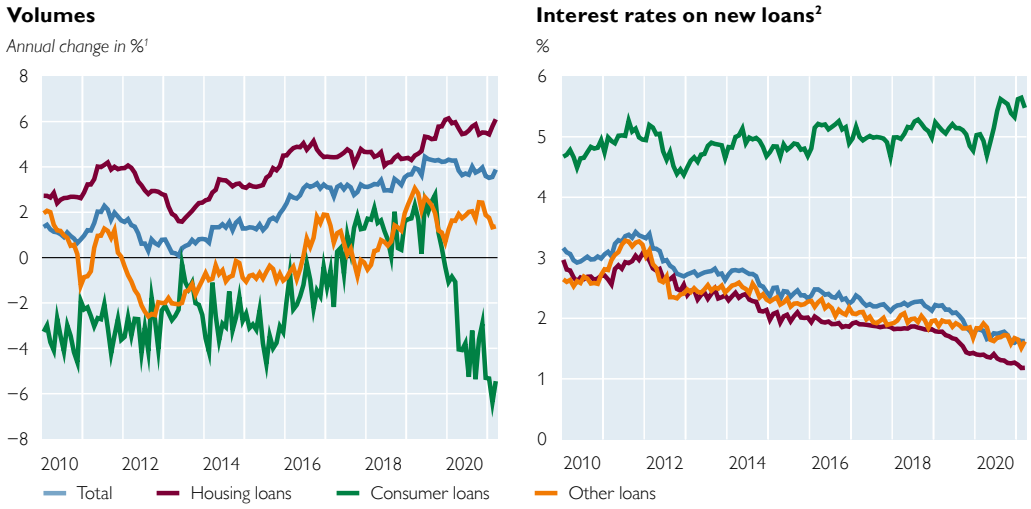
After the onset of the pandemic, the growth of bank lending to households has subsided slightly. In the twelve months to March 2021, the annual growth rate of bank loans to households slowed from 4.3% to 3.9% year on year (adjusted for reclassifications, valuation changes and exchange rate effects; see chart 2.8). This moderation reflected uncertainties among households about the impact of the pandemic on their disposable income and employment prospects. Moreover, as in the corporate loan segment, reduced repayments due to moratoria for persons who suffered substantial cuts in incomes as a result of the health crisis supported outstanding loans to households and thus growth rates. In line with the decrease in consumption of durables and the extraordinary fall in consumer confidence in 2020, consumer loans were down 5.4% year on year in March 2021. Other loans, which include loans to sole proprietors and unincorporated enterprises (which were eligible for loan guarantees), rose by 1.4%. As in past years, the main contribution to loan growth came from housing loans, not only because the latter 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 of all loan purposes, reaching 6.1% year on year in March 2021. At the same time, households faced tighter lending standards for housing loans from banks, which – according to the BLS – had been tightened between the second and the fourth quarters of 2020 (as they had already been throughout 2019) mainly because of the deteriorating general economic situation and a lower risk tolerance. Demand for housing loans, which had risen in the two years up to the third quarter of 2020, stabilized since then.

The conditions for housing loans remained favorable overall. Interest rates on new bank loans to households fell by 17 basis points to 1.62% in the period from March 2020 to March 2021, while interest rates on housing loans fell by 22 basis points to 1.18%, which may have buoyed demand. In contrast, rates on consumer loans rose by 55 basis points to 5.48%. However, conditions for taking out housing loans became tighter in 2020, especially for riskier borrowers. BLS results show that banks' margins for riskier housing loans were tightened to a larger extent than margins for loans to borrowers with an average risk profile. Other terms and conditions remained stable in the first quarter of 2021, after collateral requirements and loan size limits had been tightened in 2020.

[7] *For instance, 2.6% of households in the lowest income quintile but 18.4% in the highest income quintile own mutual fund shares. For stocks, the percentages are 1.6% and 11.3%, respectively.*

Chart 2.8

Loans to Austrian households



Source: OeNB.

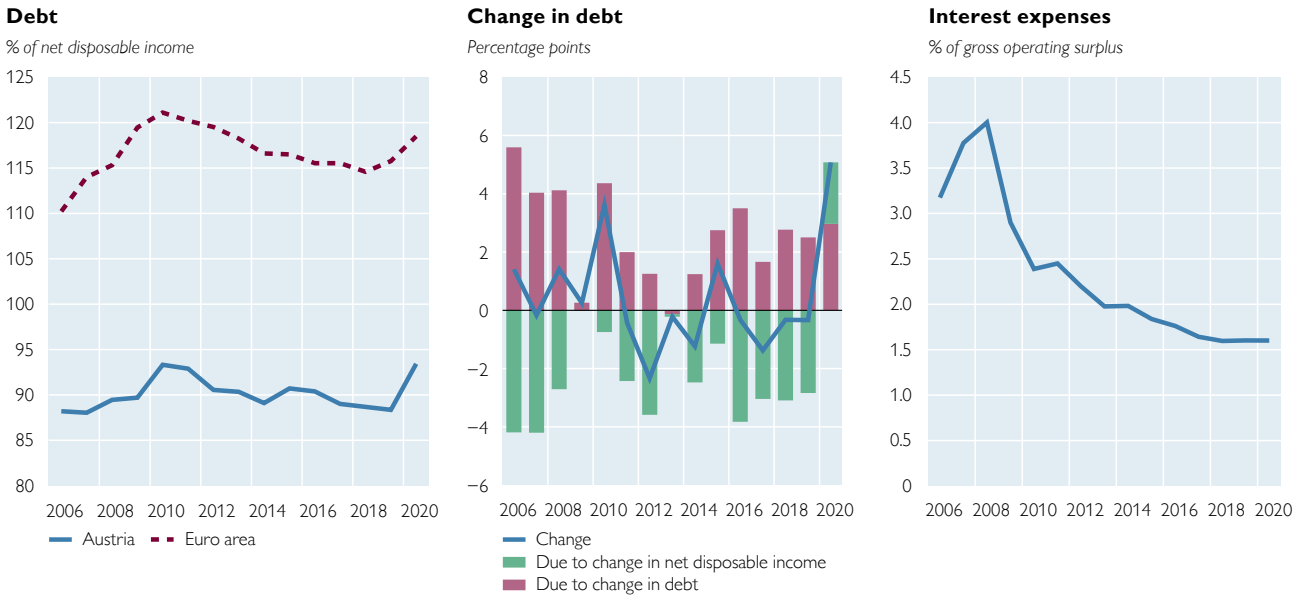
[1] *Adjusted for reclassifications, valuation changes and exchange rate effects.*
[2] *Euro-denominated loans.*

The sustainability of household debt has deteriorated somewhat since the onset of COVID-19. Compared to 2019, households' debt-to-income ratio rose by 5.1 percentage points to 93.4% in 2020, which marked the highest growth rate in 15 years. Both the increase in outstanding debt and the reduction in disposable income contributed to this rise in roughly equal measure (see chart 2.9). Loan moratoria have eased the financial pressure on households that have made use of this measure for the time being but may increase the burden of debt servicing once moratoria expire. However, as is the case with financial assets, a significant share of household debt is held by households with higher incomes, who are more likely to have sufficient funds to service their loans.[8] Moreover, both a moderate increase in debt and the low interest rate level have kept households' interest expenses at a low 1.6% of aggregate disposable income in 2020. This was more than 2 percentage points below the rate recorded at the onset of the GFC in 2008, i.e. the year before interest rates had started to fall. Other risk factors of household loans likewise indicated a better situation than during the GFC: The share of variable rate loans (floating rate and up to one year initial rate fixation) in new housing loans decreased further in 2020 and the first months of 2021 – to roughly 39% – while the share of new housing loans with a very long interest fixation period (more than ten years) continued to rise, reaching 46% in the first quarter of 2021 and thus surpassing the variable rate share. Foreign currency loans also decreased further, to less than 6% of all outstanding loans (and to 8% of housing loans). Moreover, taking both financial investments and financing into account, the net lending position of the household sector rose sharply in 2020.

[8] *According to the most recent HFCS data, about 21% of households in the lowest income quintile, but 46% in the highest income quintile had taken out a loan in 2017.*

Chart 2.9

Debt and interest expenses of Austrian households



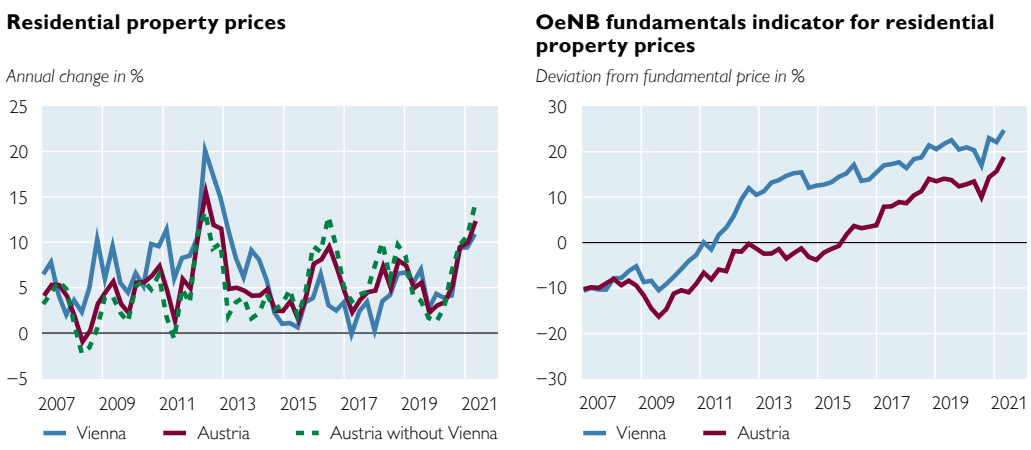
Source: OeNB, Statistics Austria.

Note: Data for 2020 are prliminary.

Residential property prices in Austria show increasing signs of overheating. In the first quarter of 2021, nominal prices increased by 12.3% year on year, with prices continuing to trend upward both in Vienna and in the rest of Austria. The overall pickup in prices was above all due to the pronounced increase in single-family house prices since the onset of COVID-19, which might be related to increased working from home and the lockdowns in general. The OeNB fundamentals indicator for residential property prices reached 18.8% in the first quarter of 2021, signaling an increasing overheating of the residential real estate market in Austria.[9]

Chart 2.10

Austrian residential property market



Source: TU Wien, OeNB.

[9] *For more information on the property market in Austria, see the latest edition of our quarterly publication "Immobilien aktuell" (available in German only) at https://www.oenb.at/Publikationen/Volkswirtschaft/immobilien-aktuell.html.*

Austrian financial intermediaries continue to support the economy; precautionary provisioning affected banks' profits in 2020

Austrian banks have weathered the COVID-19 pandemic well so far

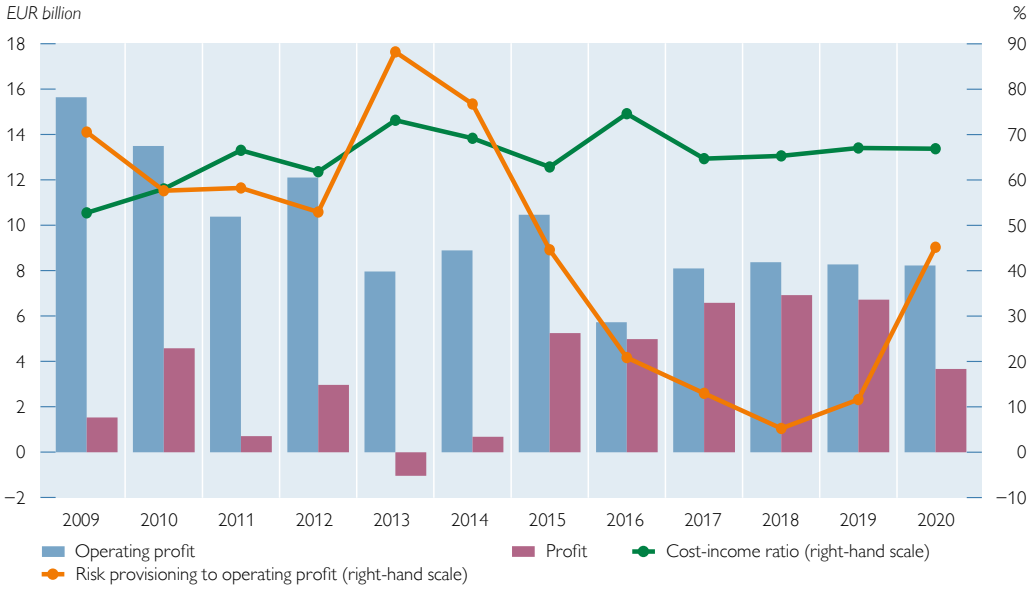
Austrian banks have weathered the COVID-19 pandemic well so far. Supporting measures have alleviated the pressure on borrowers' solvency, but risks to financial stability have increased. More than a year after the COVID-19 pandemic spread to Austria, its effects on the banking sector are still not fully assessable: credit risks are likely to rise once the cushioning impact of the supporting measures starts to fade. Until now, Austrian banks have proved to be resilient to operational challenges during several lockdowns, performed their business without major disruptions and fulfilled their economic functions vis-à-vis the real economy at all times. But the pandemic has also taken a heavy toll on banks, with their profitability burdened by precautionary provisioning in an environment of persisting uncertainty, which has also increased risks to financial stability. Nevertheless, unchanged from last year, the rating agency Moody's in April 2021 confirmed its stable outlook for the Austrian banking system. According to the outlook, banks' credit fundamentals are expected to remain broadly stable over the next 12 to 18 months.

Austrian banking sector's profit dropped by nearly half as the cost of risk soared

In a demanding operating environment, Austrian banks managed to keep their operating profits stable. With the COVID-19 pandemic raging in 2020, the main sources of Austrian banks' consolidated income remained flat. Both net interest income and fees and commissions, which together make up more than 90% of banks' income, did not budge year on year. While trading income

Chart 3.1

Profitability indicators of the Austrian banking system



Source: OeNB.

turned positive, other income declined. All in all, operating income was down by just 1%. In terms of costs, staff expenses declined by 3%, while other administrative expenses rose by 3%, so that operating costs also hardly changed year on year. Consequently, the cost-income ratio stood at an unchanged 67%, which points to a continuation of cost efficiency issues in the sector. To put it in a nutshell, the tumultuous year of 2020 barely left its mark on the overall operating profit of the Austrian banking sector.

Risk provisioning quadrupled in 2020 and led to a significant fall in profits. Although traditional credit risk indicators, such as the ratio of nonperforming loans (NPLs), continued to be favorable, Austrian banks made substantial efforts to increase their risk provisioning. This way, banks brace themselves for a potential pandemic-induced increase in credit losses over the years to come. In the consolidated profit and loss statement of the sector, this stepped-up risk provisioning caused the cost of risk to rise significantly, namely from slightly less than EUR 1 billion in 2019 to EUR 3.7 billion in 2020. This increase absorbed nearly half of the sector's operating profits (see chart 3.1). The cost of risk was the main negative driver of profit in 2020. In fact, profit contracted by EUR 3.0 billion year on year and came to just EUR 3.7 billion.[1] While such a low level had not been seen in several years, the COVID-19 impact was less severe than that of the 2007–2008 global financial crisis. The strong decline in profit also had an impact on the sector's return on assets (2020: 0.4% versus 2019: 0.7%).

With the unprecedented period of extremely low cost of risk having ended abruptly, structural issues are coming to the fore. In 2020, the onset of the COVID-19 pandemic ended the benign macroeconomic conditions, which had supported banks' profits over the past few years. Austrian banks' cost efficiency has remained low, while their cost of risk has soared, which is putting pressure on banks' medium-term profitability. Much now depends on their ability to lend at risk-adequate margins, keep costs under control and, at the same time, compete with agile market participants, such as fintechs, neobanks, but also bond markets. Masked by cyclically low cost of risk in the last years, these structural issues need to be addressed to ensure sustainable levels of profitability, which are the backbone of banks' resilience. This is crucial for banks' continued ability to provide services to the real economy, and ultimately also for financial stability both in Austria and in Austrian banks' host markets.

Credit risk indicators remain favorable, but their informative value is currently weakened

After a pandemic-driven spike in lending growth in Austria in the second quarter of 2020, momentum was fading and the overall growth rate for 2020 came in at pre-pandemic levels. In the first months of 2020, propelled by the first lockdown, Austrian banks recorded a significant increase in corporate loan demand that was driven by bridging loans and refinancing. After this spike, however, demand diminished over the course of 2020, due to declining financing needs for fixed investments and increased internal financing. At the same time, lending to households in Austria remained fairly stable because of ongoing mortgage

[1] *Another noteworthy negative driver was the profit from neither fully nor partially consolidated subsidiaries (equity method of accounting) that declined by EUR 0.5 billion.*

lending that was supported by low interest rates and increased demand for home ownership. As a result, at around 4%, overall growth of loans to nonbank customers in Austria was more or less unchanged in 2020 year on year.

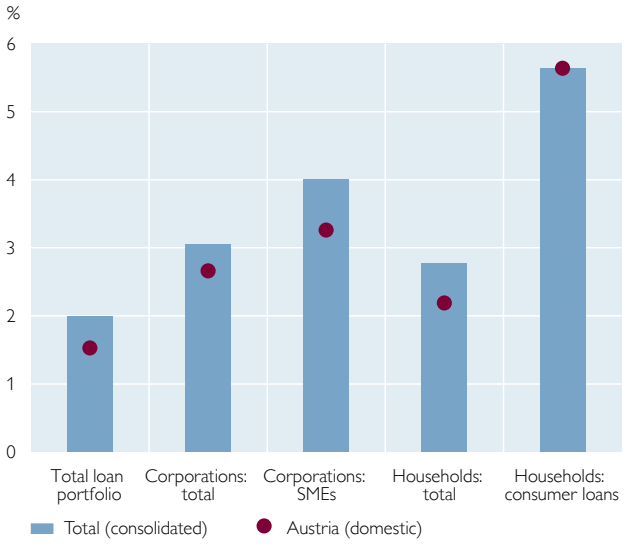
Continued dynamic credit growth and various support measures kept credit risk indicators at favorable levels, but the informative value of the indicators has weakened. Fiscal support and regulatory policy measures have so far helped avoid severe feedback loops between the real economy and the financial system. Such measures have included the temporary suspension of the obligation to file for insolvency, credit and other payment moratoria as well as public guarantees. The support measures also had the effect that asset quality indicators have become partly disconnected from economic realities. Under these circumstances, it becomes more challenging to gauge potential credit losses for financial institutions. Here, the international financial reporting standards (IFRS) comprise a possible forward-looking indicator which reflects the migration of loans between the three different IFRS loan stages. In 2020, Austrian banks actively started to transfer a considerable volume of loans from Stage 1 to Stage 2. In other words, they saw significantly increased credit risk for these loans since initial recognition. Banks reclassified loans either because they had analyzed individual customers' probability of default or because they sought to take precautions for loans to economic sectors that had been particularly affected by the pandemic impact.

Austrian banks increased credit risk mitigating measures in 2020 as a precaution. Stepped-up provisioning did not, however, result in significantly higher loan loss provisioning ratios. Austrian banks' profitability in 2020 was burdened by a significant year-on-year increase in provisioning. The consolidated coverage ratio for all loans nevertheless remained at 49% throughout 2020. Also, the overall loan loss provisioning ratio remained stable at around 1.5% for the consolidated, and at 1.0% for the domestic, loan portfolio. The latter can

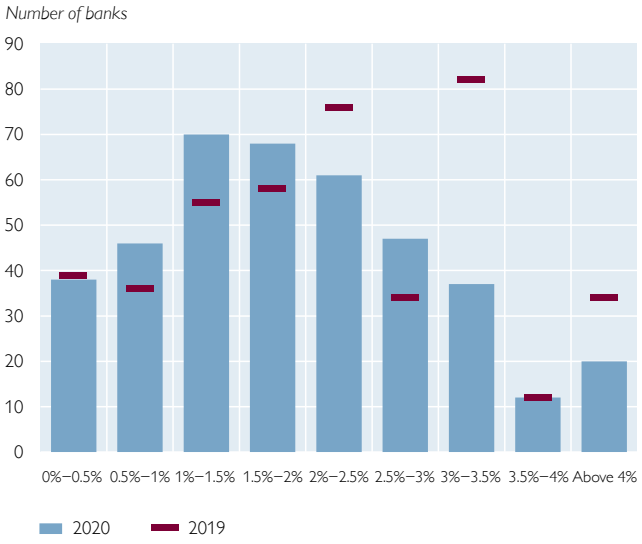
Chart 3.2

Nonperforming loans of the Austrian banking sector

Austrian banks' NPL ratios by customer group



Distribution of NPL ratios (total loan portfolio, consolidated)



Source: OeNB.

basically be attributed to two reasons. First, loan growth continued to be dynamic and, second, banks used existing provisions to write off nonperforming loans. Another risk mitigation measure was that banks strongly increased the value of collateral for corporate loans, especially for loans extended to the accommodation and food services as well as trade sectors, either by calling for additional, or by reappraising, existing collateral.

Although the average NPL ratio of Austrian banks appears low, the distribution shows that individual ratios differ considerably. The consolidated NPL ratio of Austrian banks was 2.0% at the end of 2020 (EU average: 2.6%[2]), and for domestic business it stood at 1.5%. This was a slight improvement compared to the previous year. The NPL ratios of some borrower groups had started to worsen already in the second half of 2020, however. SME loans and consumer loans – which had already had somewhat elevated NPL ratios (see the left panel of chart 3.2) – were hit in particular. The distribution of NPL ratios across Austrian banks is quite wide around the average, with some fat tails below 0.5% and above 4% (see the right panel of chart 3.2). Compared to 2019, the distribution has shifted slightly to the left.

This issue of the Financial Stability Report features studies on COVID-19-related credit risk developments in Austria. To give an in-depth view of the impact of the pandemic on the Austrian economy and its banks, two studies in this report analyze (1) the use of support measures (see page 77) and (2) the development of corporate insolvencies in Austria (see page 57). Both factors are set to drive the development of banks' NPL ratios in the course of 2021 and the years to come.

Austrian banks' capitalization increased in 2020

Austrian banks' efforts to increase their CET1 ratios were supported by restrained dividend payments and supervisory relief measures, but the sector's leverage ratio went down. After a short-lived slump at the beginning of the year 2020, the Austrian banking sector managed to increase its capitalization in the subsequent quarters. This was also supported by temporary supervisory relief measures, such as reduced loan provisioning requirements due to postponed NPL recognition or the prolongation of transition periods for certain Basel III rules. Together with the retention of profits, this helped increase Austrian banks' CET1 ratio to 16.1% (as at end-2020, nearly +50 basis points year on year).[3] The ratio thus stood somewhat above the euro area average. However, as total assets expanded despite slightly shrinking risk-weighted assets, the leverage ratio declined from 8.3% to 7.7%.

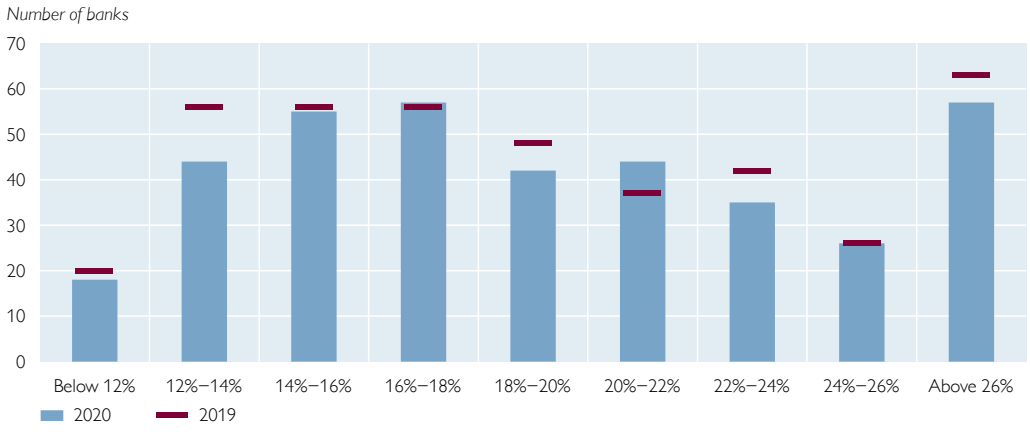
Capital ratios of Austrian banks vary markedly across the sector and their development in 2020 was heterogeneous. Chart 3.3 shows that the distribution of Austrian banks' CET1 ratios is skewed to the right, i.e. many banks' capitalization exceeds the weighted average of 16.1%. The average, which is depressed by several larger banks, does not reflect the good capitalization of most – small – institutions.

[2] *According to the EBA Risk Dashboard as at end-2020.*

[3] *Despite the increase in the Austrian banking sector's CET1 ratio in 2020, nearly half the banks experienced a decline in their respective ratio.*

Chart 3.3

Distribution of Austrian banks' CET1 ratios



Source: OeNB.

Equity capital is the most important stabilizing factor in times of crisis. The importance of internal financing should not be underestimated. After a bank's profits, equity is the second line of defense in terms of loss absorption. With a view to safeguarding financial stability in difficult times, macroprudential supervisors aim at high levels of capitalization. In 2020, Austrian banks markedly reduced their profit distributions to shareholders, which significantly helped increase their overall capital. But as uncertainty persists, careful handling of profit distributions is also warranted for 2021. The ECB recommends that, until September 30, 2021, credit institutions exercise extreme prudence when deciding on, or paying out, dividends or performing share buybacks to remunerate shareholders.[4]

The ECB's targeted review of internal models (TRIM) has been finalized: Austrian banks' internal models perform well by comparison in the Single Supervisory Mechanism (SSM). The publication of the TRIM results[5] marked the end of a comprehensive five-year project. At its core, TRIM was made up of 200 on-site model investigations across 65 significant institutions (SIs). The OeNB conducted 13 of these investigations. The project covered all market and counterparty credit risk models and more than 65% of credit risk exposures within the SSM. Austrian banks accounted for less than EUR 1.3 billion of the overall impact on risk-weighted assets, which increased by more than EUR 275 billion on account of deficiencies identified in the course of the TRIM project. Consequently, Austrian SIs that apply internal models were less affected by supervisory measures and have clearly profited from the OeNB's guidance and findings over the last 15 years. However, while the TRIM project did not have a major impact on Austrian SIs' capital requirements, it highlighted the need for banks to continue investing in internal models and the related data architecture. This is especially important as they are about to start implementing the requirements that resulted from the EBA's regulatory review of the internal ratings-based

[4] *See ECB. 2020. Recommendation on dividend distribution during the COVID-19 pandemic.*

[5] *See ECB. 2021. ECB's large-scale review boosts reliability and comparability of banks' internal models.*

(IRB) approach.[6] On top of the ongoing model maintenance, banks will moreover have to address the medium- to long-term model-related challenges of the COVID-19 pandemic.

Austrian banks are well funded

The Austrian banking system shows high levels of liquidity. LCR buffers are mostly made up of the top category of eligible high-quality liquid assets. All Austrian banks report liquidity coverage ratios (LCRs) well above the regulatory minimum. In March 2021, the system-wide LCR stood at 168% at the consolidated level, which corresponds to an increase of 26 percentage points over the last 12 months. The share of Level 1 assets, excluding high-quality covered bonds, came to 98% at end-March 2021, and the share of Level 1 central bank reserves rose to as much as 61%. While largely unchanged in absolute terms, Level 2a and Level 2b assets account for 1.1% and 0.4%. Within the classification of Level 1 assets, the most important categories are cash, central bank reserves and government bonds. The net stable funding ratio (NSFR) will be introduced for all Austrian credit institutions on June 28, 2021. The Austrian banking system seems to be adequately prepared for this new regulatory minimum requirement.

The funding mix of Austrian banks continued to be concentrated on retail and corporate deposits. Mostly larger institutions tap the capital market by issuing own debt securities. Overall, retail and corporate deposits remain the primary funding source of the Austrian banking sector. The first 12 months of the COVID-19 pandemic did not trigger sudden changes in the funding structure.

Box 2

Impact of the pandemic on government bond yields in Austria

The UDRB[7] index tracks the average yield of outstanding euro-denominated Austrian government bonds, issued under Austrian law, with a fixed coupon and a residual maturity of more than one year. While it still serves as an underlying index for a small share of Austrian loan contracts, its importance has decreased over time.

The UDRB index clearly responded to the different phases of the pandemic, which was in line with comparable international indices. *Much like comparable international yields, Austrian government bond yields, represented by the UDRB, saw a strong increase, after the initial shock caused by the outbreak of COVID-19 in March 2020. However, in August, yields had returned to pre-crisis levels amid strong support from the ECB's asset purchase program. The UDRB then decreased further, to reach an all-time low of –0.47% in November. Yields remained mostly unchanged until the start of 2021, but then rose again – in light of the strong recovery in the USA, the worldwide vaccination rollout and potential reflation. Such a rise was also reflected across the board in European government bond yields. In this environment, the UDRB reached –0.22% at the end of April 2021.*

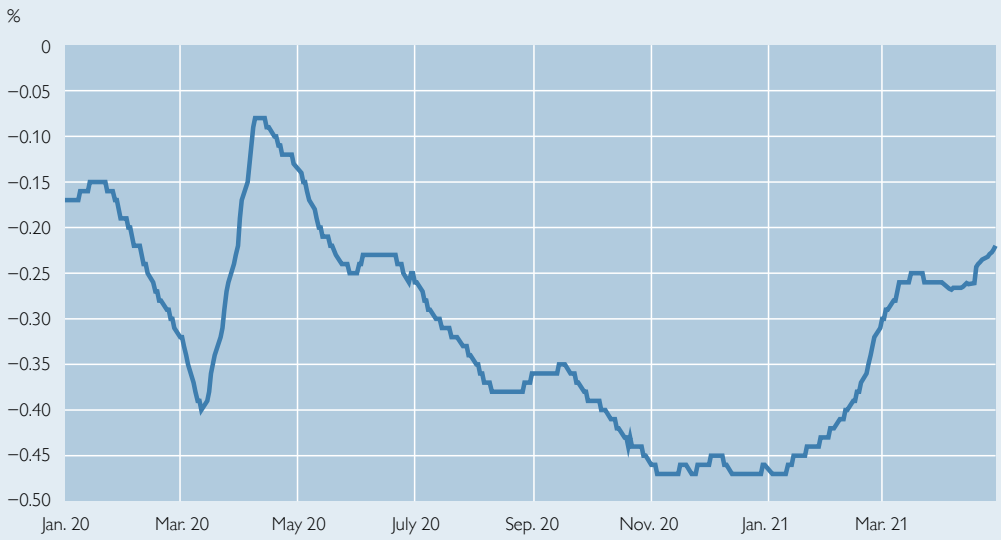
[6] *See EBA. 2019. EBA publishes report on progress made on its roadmap to repair IRB models.*

[7] *The German abbreviation stands for "umlaufgewichtete Durchschnittsrendite für Bundesanleihen," i.e. the average yield on government bonds weighted by outstanding amounts.*

The change in government bond yields had only a limited impact on Austrian banks. *Compared to other countries like Italy, Slovenia or Spain, Austrian banks' exposure to sovereign bonds issued by the national government is limited. In addition, only around 6% of all government bonds held by Austrian banks belong to the mark-to-market segment. Therefore, increasing yields (i.e. decreasing prices) have a very limited effect on banks' profit and loss accounts in the short term.*

Chart 3.4

Average government bond yields in Austria



Source: OeNB.

New oversight standards for payment instruments

In October 2020, the ECB published a draft oversight framework for electronic payment instruments, schemes and arrangements (PISA). Where this is appropriate and possible, this new framework is aligned with the principles for financial market infrastructures (PFMIs). The purpose of the PISA framework is twofold: (1) to consolidate existing oversight standards for card payment schemes, credit transfer schemes, such as SEPA, the Single Euro Payments Area, and the like into a single framework; and (2) to integrate new standards for payment innovations, e.g. instant payments, digital payment tokens, payment initiation or facilitation. In this context, PISA is intended to complement the oversight of individual payment systems and/or the microprudential supervision of payment service providers, according to the Payment Services Directive, with aspects that are relevant from a payment scheme/arrangement perspective. A public consultation on the draft PISA framework was conducted during the second half of 2020. The framework is scheduled to apply from mid-2021, with a transition period of one year.

At the national level, COVID-19 did not negatively affect the operational stability of the Austrian financial market infrastructures. ATM and POS transactions declined, however, in 2020. The OeNB's oversight function remained fully effective as it shifted from conducting on-site inspections to performing online assessments.

Foreign exposure increased despite the pandemic, but subsidiaries' profitability in CESEE deteriorated markedly

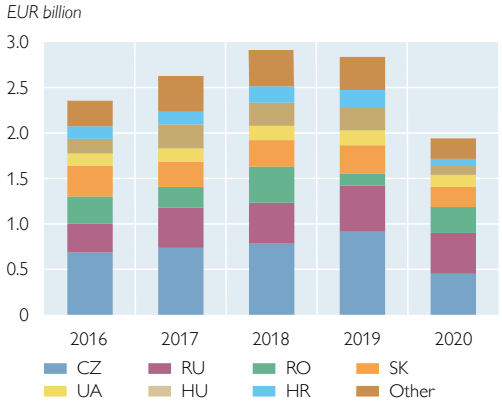
Austrian banks' total assets increased despite the pandemic, as structural transformation processes continued. The consolidated balance sheet of the Austrian banking sector increased by 10% to more than EUR 1.1 trillion in 2020. Most notably, the cash reserve on the asset side doubled and central bank liabilities increased even more strongly. Austrian banks also pressed ahead with transformation processes: the number of banks continued to go down, with the number of domestic branches declining at an even faster pace,[8] especially among joint stock and private banks. At the same time, the business volume of foreign branches remained stable, but overall foreign exposures increased slightly to EUR 412.5 billion in 2020, especially in CESEE.

The profitability of Austrian banks' subsidiaries in CESEE deteriorated markedly in 2020 on account of COVID-19-related effects taking their toll. Compared to 2019, profit after tax was down by one-third, dropping from EUR 2.8 billion to EUR 1.9 billion. Given that average assets rose by 6% year on year, the return on average assets came down from 1.3% to 0.8%. Regarding the most important host markets, it is remarkable that the fall in profits was highly heterogeneous in 2020 (see chart 3.5). Profits dropped by more than half in Croatia, Hungary and Czechia, whereas the decline amounted to only 11% in Russia.[9]

The lower profits of Austrian banking subsidiaries in CESEE were mainly due to a quintupling of credit risk provisioning. A 3% decrease in net interest income as well as in fees and commissions in 2020, which account for the lion's share of the CESEE subsidiaries' income, caused last year's operating income to shrink by 2%. Staff costs declined but other operating expenses rose by a similar amount, so operating costs remained broadly flat. Consequently, operating profit contracted by 5%. Most significantly, banks increased credit risk provisioning fivefold, to more than EUR 1.2 billion (see chart 3.6), as they were adjusting to an operating environment severely affected by the COVID-19 pandemic and its repercussions in the real economy. Altogether, subsidiaries' profit decreased by nearly EUR 900 million to EUR 1.9 billion.

Chart 3.5

Profits of Austrian banks' subsidiaries in CESEE by country



Source: OeNB.

Credit risk provisioning at Austrian banks' subsidiaries in CESEE was of a precautionary nature in 2020, as traditional risk indicators have yet to deteriorate. While the real economy was weighed down by the COVID-19 pandemic, households and

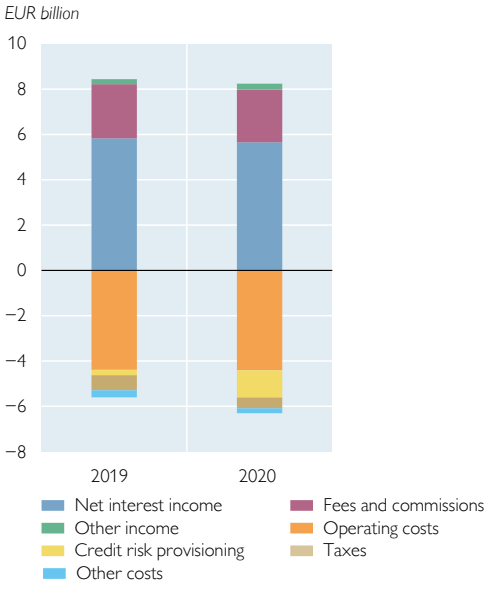
[8] *The number of banks declined by 5% year on year and the number of domestic branches even shrank by as much as 11%.*

[9] *The development in Romania, where profits more than doubled in 2020, was due to the reversal of a one-off effect; for further details, see the Financial Stability Report 39.*

nonfinancial corporations, at the same time, profited from several support measures, including debt moratoria and short-time work schemes. Indirectly, this helped keep traditional risk indicators, such as the NPL ratio, at low levels, while the coverage ratio continued to be adequate. As highlighted by chart 3.7, NPL ratios had fallen substantially over the last years and barely changed in 2020, with the ratio for all loans remaining flat, at 2.4% year on year. At a more granular level, however, corporate loans worsened slightly, household loan quality was unchanged, and the important subcategory of residential real estate loans improved further. Throughout 2020, the coverage ratio for all loans came in at a satisfactory level of above 66%. There is, however, one important caveat regarding these encouraging credit risk indicators: the share of IFRS Stage 2 loans – i.e. loans whose credit risk had increased significantly since initial recognition – was close to one-fifth at the end of 2020 (for corporate loans alone: one-quarter).[10] This points to a nonnegligible potential for future loan losses in the region, especially once current COVID-19-related support measures expire, and is the reason for banks' provisioning. In this challenging environment, it is still paramount that Austrian banks and their subsidiaries in CESEE prepare for the expiry of support measures, such as debt moratoria, and maintain a high level of transparency regarding the quality of their loan books.

Chart 3.6

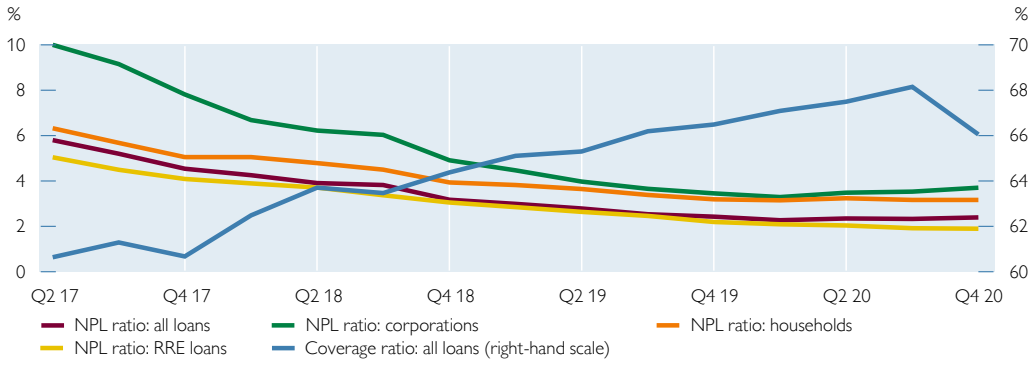
The profit and loss statement of Austrian banking subsidiaries in CESEE



Source: OeNB.

Chart 3.7

Austrian banking subsidiaries in CESEE: NPL ratios (by counterparty) and coverage ratio



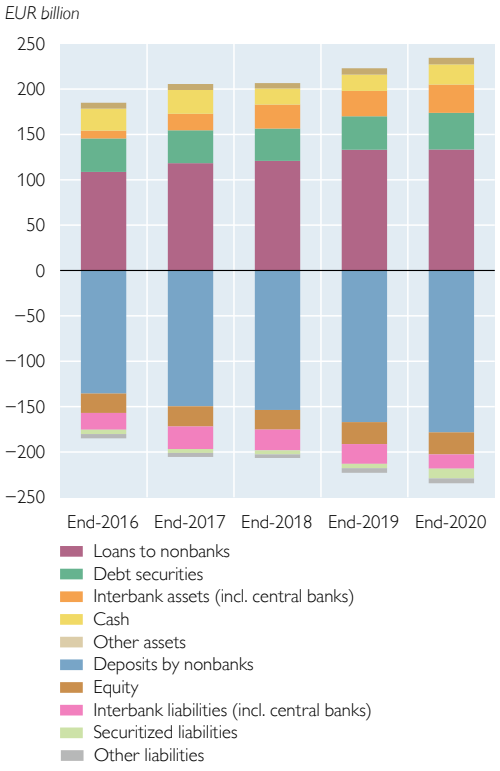
Source: OeNB.

Note: RRE stands for residential real estate.

[10] *Unfortunately, the time series for IFRS loan stages at Austrian banks' foreign subsidiaries is only available from mid-2020.*

Chart 3.8

Balance sheet of Austrian banks' subsidiaries in CESEE



Source: OeNB.

The capitalization of Austrian banking subsidiaries in CESEE remained solid and their funding situation well balanced. At the end of 2020, the aggregate CET1 ratio stood above 17% and the loan-to-deposit ratio at 75%. These solid levels bear testimony to past efforts of banks and their host and home supervisors to improve banking systems' resilience and foster financial stability. Among other initiatives, the OeNB monitors the loan-to-local stable funding ratios of the largest Austrian banks' foreign subsidiaries.[11] At the end of 2020, all 23 subsidiaries of Erste Group Bank as well as Raiffeisen Bank International had a sustainable local refinancing structure. Compared with the global financial crisis, Austrian banking subsidiaries in CESEE are therefore better prepared to cope with the impact of the COVID-19 pandemic.

Strong deposit growth and flat loan volumes depressed the net interest margin at Austrian banking subsidiaries in CESEE. Over the course of 2020, deposits by nonbanks rose by 7%, partly due to the lack of consumption and investment opportunities as well as increased uncertainty related to the pandemic. At the same time, loans to nonbanks remained unchanged and the subsidiaries increased their investments in cash and lower-yielding assets, such as debt securities and interbank assets (including vis-à-vis central banks; see chart 3.8). Consequently, subsidiaries' net interest margin continued its long-term decline and stood at 2.5% in 2020, compared to 2.8% in 2016. With Austrian banks' consolidated profit depending to a significant extent on their subsidiaries in CESEE, Austrian supervisory authorities continue to closely monitor profitability trends in CESEE and to foster financial stability in the region.

Macroprudential supervisory activities in Austria

At the beginning of the COVID-19 pandemic, the OeNB advised the Austrian Financial Stability Board (FMSB) to decide against buffer releases to ensure that investors continue to have confidence in the Austrian banking sector and that funding costs for the Austrian banks and the real economy remain favorable. Austrian authorities repeatedly communicated to banks that buffers can and should be used to absorb losses and maintain lending during the pandemic. Retrospectively, the FMSB's expectations

[11] *For further details, see OeNB. Sustainability of large Austrian banks' business models.*

were fulfilled given that solvency remained solid, funding costs did not go up and lending to nonfinancial corporates and for mortgages stayed dynamic. Banks did not cut back lending and continued to have a strong capital position. Capital conservation also benefited from the FMA and OeNB recommendations on dividend distributions. In line with supervisory guidance, banks suspended dividend payouts throughout 2020.

Policy proposals geared toward more releasable buffers or macroprudential space can increase systemic risk, in particular in times of financial stress. First, the economic benefits of releasing buffers are very small and, thus, substantially lower than the risks associated with a less resilient banking system, especially under stress. Second, loan growth in the euro area has been strong so far. Third, reducing capital buffers might only bring small gains for monetary transmission but result in large losses in terms of financial stability for individual countries due to heterogeneous financial cycles across member states.

Potential changes to the macroprudential framework in the EU should not dilute internationally agreed minimum standards. While the EU macroprudential framework laid down in the CRD/CRR has not been fully tested yet, empirical evidence suggests that macroprudential policies have been working as intended and the current regime is effective. Any regulatory changes should be assessed within the European Commission's macroprudential policy review in 2022. The following high-level principles should be guiding this review: (1) reducing the complexity of regulation, (2) increasing the resilience of the EU financial system, and (3) preserving the objectives enshrined in regulation so as not to dilute existing buffer and other minimum requirements. Ultimately, any changes to the macroprudential framework in the EU need to be aligned with the framework defined by the Basel Committee on Banking Supervision (BCBS).

In light of the COVID-19 pandemic's impact on the Austrian commercial real estate sector, the OeNB and the FMSB have stepped up their monitoring activities. The drivers of this intensification are first and foremost tourism- and retail-related real estate, as these segments have been hit particularly hard. Loans granted by Austrian banks to domestic nonfinancial corporates which are collateralized by commercial real estate (CRE) structurally exhibit higher NPL ratios. At the same time, real estate companies (i.e. of the NACE sectors "construction" and "real estate activities") generally have lower ratings than the overall corporate sector. An EU-wide comparison shows that CRE-backed corporate loans account for an above-average share in Austrian banks' total assets. Efforts are underway to obtain data for calculating CRE price, rental and yield indices. CRE-related risk assessments will improve significantly once these indices are available.

Increasing signs of systemic risks arising from residential real estate loans warrant heightened supervisory attention. In 2018, the FMSB followed a recommendation by the OeNB and issued public guidance on sustainable real estate financing. At that time, continued strong lending growth, rising real estate prices and record-low interest rates caused the OeNB to conclude that there were signs of rising systemic risks in real estate financing and that compliance with supervisory expectations will be crucial for safeguarding financial stability in Austria. Since then, key indicators on lending standards have revealed that the risk profile of banks' lending has not improved (see box 3), which, in combination with

a very dynamic real estate market, points toward increasing risks to financial stability. Even though the share of newly granted variable rate housing loans has decreased considerably, to below 40% in the first quarter of 2021, it is still high compared to other countries. Last year's IMF mission suggested that authorities consider further regulatory requirements. Drawing on a new reporting framework (see box 3), the OeNB will regularly provide the FMSB with its findings on systemic risks from real estate financing and on banks' compliance with sustainable lending standards.

The Austrian deposit guarantee schemes (DGSs) have proved resilient in the pandemic and enjoy high credibility despite two DGS payout cases in the first half of 2020. Both DGS payouts only affected Einlagensicherung Austria (ESA) as its ex ante fund was sufficient. To counterbalance the substantially lowered volume in the ex ante fund, ESA member banks started to pay increased contributions in 2020. Moreover, the Raiffeisen sector has submitted an application for the recognition of a new institutional protection scheme (IPS) structure, which covers the entire sector and constitutes the basis for the recognition of a separate Raiffeisen DGS. With a third DGS in place, the structural and legal complexity is set to increase, as larger payouts involve more than one DGS. Working arrangements between the different DGSs will need to reflect, and alleviate, the increased complexity.

Box 3

First insights gained from Austria's new regulatory reporting framework on banks' lending standards for residential real estate financing

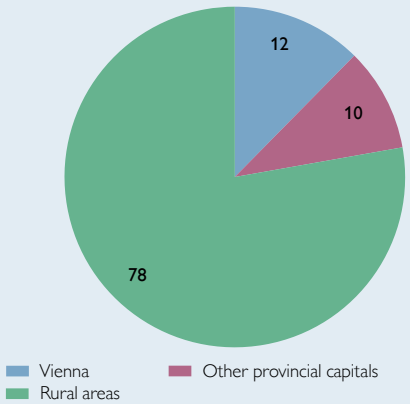
In the second half of 2020, Austrian banks issued almost EUR 15 billion worth of new residential real estate (RRE) loans, which compares with a five-year average of EUR 10 billion[12]. *The new database covers all new RRE lending by banks collateralized by immovable property as well as uncollateralized[13] RRE lending. Austrian households borrow almost exclusively to establish their households' main residence; only a minor share (7%) of new loans was granted for buy-to-let purposes[14]. This is also reflected in borrowers' age structure: almost half the new loans were granted to borrowers aged 35 years or younger. While Austria's capital Vienna is important, the bulk of new lending took place in Austria's rural areas (78%; see chart 3.9).*

Not all new lending can be considered sustainable according to the FMSB's

Chart 3.9

Residential real estate lending in the second half of 2020

Geographical breakdown in %



Source: OeNB.

[12] *Source: ECB. 2016–2020. MFI Interest Rate Statistics.*

[13] *For the purpose of this data collection, a loan is classified as "uncollateralized" in case there is no mortgage registered with the Austrian land register ("Grundbuch") securing the loan and no other funded credit protection as defined in Article 4(1)(58) CRR. These loans can, however, be secured by other forms of collateral, such as shares or registrable mortgage certificates ("eintragungsfähige Pfandurkunden – EPUs").*

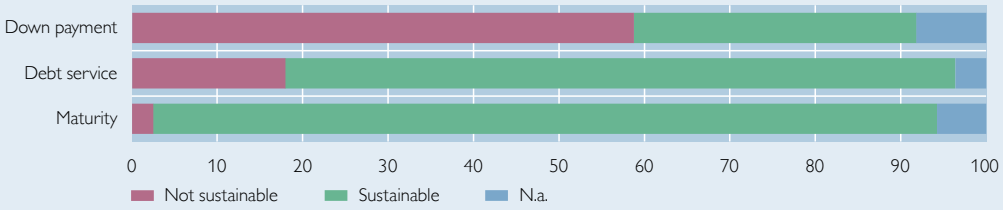
[14] *Buy-to-let lending does not include renting out or selling properties for commercial use.*

guidelines. *In 2018, the FMSB recommended[15] that (1) borrowers contribute own financial means of no less than 20% of total financing needs ("down payment"), (2) loan maturities exceed 35 years only in exceptional cases and (3) debt service expenses do not exceed 30% to 40% of a household's net income.*

Chart 3.10

Sustainability of residential real estate lending in the second half of 2020

Share of new lending in %



Source: OeNB.

The new data show a continuation of recent trends in key lending indicators that point toward increasing systemic risk. *One half of all borrowers' projects was financed almost entirely through credit, i.e. the down payment was less than the benchmark of 20% communicated by the FMSB (see chart 3.10). This is also reflected in high leverage ratios (loan-to-market value of property). With one-fifth of loans, debt service is not sustainable according to the FMSB's guidelines given that it exceeds 40% of borrowers' net income. Compared to five-year averages, the share of lending that is unsustainable according to both indicators has increased by approximately 5 percentage points.[16] Most housing loans were granted with maturities of 20 to 35 years, and ultralong maturities remain the exception, with their share decreasing further compared to the five-year average. In addition, the share of variable interest rate loans – although decreasing – is still high in Austria compared to other EU countries and bears interest rate risks for borrowers.*

The OeNB stays vigilant about rising systemic risks, and compliance with sustainable lending standards remains key. *RRE lending to households has been growing at annual rates of above 5% for the past two years. The continued strong dynamics imply that unsustainable lending practices quickly feed into the stock of housing loans and impair the risk profile of banks' balance sheets across the Austrian banking system. Therefore, the OeNB urges banks to comply with sustainable lending standards in real estate financing.*

Austrian banks reduced foreign currency loans further

Foreign currency (FX) loans continue to be on the decrease in Austria. Due to supervisory measures, FX loans have declined further and do not represent a systemic risk to the Austrian banking sector. By January 2021, the volume of outstanding FX loans extended to domestic households had fallen to EUR 11.4 billion, down by 13.7% year on year and exchange rate adjusted. The lion's share (96%) of these loans is denominated in Swiss francs. The share of FX loans in total loans to households shrank by 1.5 percentage points year on year to 6.6%. Despite the significant decline over the past years, residual risks from FX loans remain, as

[15] *See FMSB. 2018. 17th meeting of the Financial Market Stability Board.*

[16] *Source: OeNB Mortgage Lending Survey, 2016–2019; OeNB VERA H reporting 2020. Only collateralized loans were included in the calculation. There are differences in coverage between sources.*

about three-quarters are bullet loans linked to repayment vehicles. Such loans may face a funding shortfall at loan maturity in case of unfavorable exchange rate movements and/or underperforming repayment vehicles. In the past few years, the shortfall between the outstanding loan amount in euro and the forecast value of the repayment vehicle upon maturity had equaled around 30% of outstanding repayment vehicle loans. To monitor these loans, the OeNB – in cooperation with the FMA – conducts an annual survey among a representative sample of Austrian banks. The results of this year's survey are expected to be available in summer 2021.

The strong Swiss franc continues to put pressure on foreign currency borrowers. Even though the Swiss franc has depreciated somewhat against the euro since the beginning of the year and is now trading at around 1.10 per EUR (its lowest level since November 2019), its cumulative appreciation since September 2008 still amounted to around 45% in early May 2021. In other words, a borrower who took out a Swiss franc bullet loan of EUR 150,000 in September 2008 would currently have to repay EUR 217,000, in addition to the interest that also becomes due. The OeNB therefore still recommends that banks and borrowers intensify bilateral negotiations to find tailor-made solutions to mitigate risks arising from these loans.

Austrian banking subsidiaries in CESEE also continued to reduce their retail foreign currency loan portfolio. In 2020, the volume of FX loans to households dropped by 4.7% (exchange rate adjusted) to EUR 9.5 billion. This translates into a 12.7% share of FX loans in total retail loans. Around three-quarters of these loans are denominated in euro. In the nonfinancial corporation segment, the outstanding amount of FX loans increased by a slight 1.3% to EUR 19.9 billion, which was mostly driven by the increase in euro-denominated loans (+2.5% year on year, to EUR 17.7 billion). At year-end 2020, the FX share in the corporate loan segment stood at 38.1%. The significantly higher share of FX loans in the corporate loan segment can be partially explained by foreign currency income of many corporations (natural hedge) and less political attention. FX loans continued to show weaker credit quality than loans in local currency. In 2020, the NPL ratio for the two loan portfolios remained broadly stable and stood at 4.7% and 3.1%, respectively. The associated risks have been partly mitigated by satisfactory risk provisioning, with the NPL coverage ratio equaling 67% for both loan portfolios.

Austrian nonbank financial intermediaries benefited from rising market valuation

Austrian insurers have proven resilient to the COVID-19-related financial and economic shocks so far. In the near term, the ongoing economic weakness will challenge insurers' underwriting profitability, driven by weak premium growth, and contribute to rising credit risk on the asset side. Moreover, insurance companies will continue to be affected by the persistently low interest rate environment (e.g. through reinvestments at low or even negative yields, rising liabilities), which is still the fundamental longer-term concern for the sector. Hence, life insurance companies in Austria have already started moving from guaranteed-return to unit-linked business models or to lower guaranteed returns in new policies. Rising yields as seen in the first quarter of 2021, if sustainable, may help insurers only over the longer term to rebuild their deteriorated interest income.

The Austrian insurance sector's total premium volume of EUR 19.1 billion in 2020 consists of EUR 11.3 billion revenues from property and casualty insurance policies, EUR 5.4 billion from life insurance policies and EUR 2.4 billion from health insurance policies. The underwriting result declined by 10% in 2020 compared with 2019, and the financial result decreased by 43%. Overall, the result from ordinary business activities dropped to EUR 0.7 billion, down from EUR 1.55 billion in 2019. At the end of 2020, Austrian insurance companies were well capitalized, despite a year-over-year 18-percentage-point lower median solvency capital requirement ratio of 220%.

The extensive support measures taken to mitigate the impact of the COVID-19 pandemic have improved financial market conditions. Thus, they have also benefited the Austrian insurance sector by increasing the market value of its holdings of financial assets. The composition of the securities holdings of Austrian insurance companies changed only slightly in 2020. Debt securities accounted for 39% of the sector's total assets of EUR 141 billion, investment fund shares totaled another 27% (mixed and bond funds played a dominant role), and shares and other equity amounted to 15%. Over the last three years, the importance of debt securities declined by 2 percentage points, while the share of investment funds increased by more than 1 percentage point. In 2020 only, share and other equity investments increased by 9%, mainly driven by nonlisted shares.

Insurance companies' exposure to the banking sector and to sovereigns might become a channel of risk transmission and contagion to the insurance industry. The sector's average exposure (investments and sales agreements) vis-à-vis the banking sector in Austria is above the EU average, but has remained almost unchanged since 2016. Bail-inable securities issued by banks and held as assets by insurance companies continued to decline by 10% to EUR 15.4 billion[17]. The insurance sector's exposure to the domestic sovereign (debt securities and loans) amounted to less than 5% of insurers' total assets, having declined over the last three years. In this period, however, investments in debt securities issued by other euro area governments increased by 2 percentage points to 11% of total assets.

Austrian pension funds enjoyed solid returns in a rather difficult environment. Assets under management by Austrian pension funds increased by 2.8% (year on year) to EUR 25.0 billion in 2020, and the number of beneficiaries (prospective and current recipients) increased by 1.5% to 995,000. Currently, 119,000 beneficiaries receive a pension under an occupational pension scheme. The largest exposure of the sector are bonds (37% of the portfolio), followed by stocks (36%), and almost all assets are invested via investment funds. In 2020, the overall return on investment of Austrian pension funds was 2.5%, compared to an average 3.9% per year over the past ten years.

Austrian investment funds realized capital gains in 2020. The net asset value of Austrian investment funds was EUR 202.5 billion at the end of 2020. Driven by capital gains and net inflows after the COVID-19-related plunge in the first quarter, the funds' assets increased by 3.8% or EUR 7.5 billion year on year. Net inflows accounted for EUR 6.1 billion.

[17] *See FMA. 2020. Report on the State of the Insurance Industry 2020.*

Special topics

Nontechnical summaries in English

The calm before the storm? Insolvencies during the COVID-19 pandemic

Helmut Elsinger, Pirmin Fessler, Stefan Kerbl, Anita Schneider, Martin Schürz, Stefan Wiesinger

In the course of the COVID-19 pandemic, the Austrian government has adopted comprehensive support measures aimed at cushioning the shock on the real economy. Moreover, parts of insolvency legislation have been suspended. For these reasons, the number of corporate insolvencies in Austria declined by 31% in 2020 compared to 2019. The resulting backlog in insolvencies may also have implications for financial stability.

We use firm-level data on insolvencies from the Austrian insolvency register to provide a timely picture of how insolvency numbers evolved in Austria before and during the COVID-19 pandemic from January 2019 to March 2021. Merging several sources of firm-level data allows us to gain some insight into insolvency developments and their potential impact on financial stability.

We show that only 40% of insolvent firms had loans above EUR 25,000 with Austrian banks when they turned insolvent. Moreover, 30% of insolvent firms had already been rated as "defaulted" by banks twelve months before they filed for insolvency. The decline in insolvencies in 2020 compared to 2019 was seen across all nine Austrian provinces and turned out to be particularly pronounced in sectors that had been hit hard by the crisis and had also received the largest amounts of government aid. Linking insolvency and balance sheet data, we find that the majority of firms that turned insolvent had had negative or very low equity capital long before the crisis. When we also consider banks' internal ratings of corporate borrowers, we see that government support apparently tended to protect firms with higher equity ratios from insolvency rather than firms that had high risk ratings and low equity ratios already before the crisis.

Our study also provides a statistical basis for further work in this field. Firm-level information on government support is not available at the moment; however, combining such data with our data would allow us to analyze a number of relevant questions on the effectiveness of government support in cushioning the impact of the crisis.

COVID-19-related payment moratoria and public guarantees for loans – stocktaking and outlook

Stephan Fidesser, Andreas Greiner, Ines Ladurner, Zofia Mrazova, Christof Schweiger, Ralph Spitzer, Elisabeth Woschnagg

In light of the economic impact of the COVID-19 pandemic, measures were taken in Austria to provide loan repayment relief to companies and households. These measures included payment moratoria, which make it possible to delay the payment of debt for specific periods of time, and public guarantees for loans. In this study, we examine how Austrian banks have been addressing potential loan defaults, i.e. the possibility of losses resulting from borrowers' failure to repay their loans. We also investigate how the support measures have impacted on the credit quality of banks' outstanding loans and advances to companies and households. To this end, we analyze the use of moratoria and guarantees from the second quarter to year-end 2020, drawing on data that banks reported to the Oesterreichische Nationalbank. We find that moratoria were used to a much larger extent than guarantees, with most moratoria agreed in 2020 scheduled to expire at the end of March 2021 at the latest. Banks started to set aside risk provisions for potential loan defaults early on while nonperforming loans increased only slightly in the last quarter of 2020. Loans are classified as nonperforming if they are unlikely to ever be repaid or loan payments are past due by 90 days or more. Thanks to the risk provisions set aside in 2020, Austrian banks are well prepared for potential COVID-19-related deteriorations in credit quality in 2021, not least due to the lessons learned from the 2007–2008 financial crisis. Our analysis of a severe hypothetical scenario shows that, owing to the built-up capital buffers and risk provisions, banks would even be able to manage relatively high credit defaults. Still, it is important for banks to take precautions now to be ready for delayed effects that might manifest themselves once the public support measures expire.

Nontechnical summaries in German

Die Ruhe vor dem Sturm? Entwicklung der Insolvenzen während der COVID-19-Pandemie

Helmut Elsinger, Pirmin Fessler, Stefan Kerbl, Anita Schneider, Martin Schürz, Stefan Wiesinger

Im Zuge der COVID-19-Pandemie wurden in Österreich umfangreiche staatliche Hilfsmaßnahmen ergriffen, um den realwirtschaftlichen Schock abzufedern. Darüber hinaus wurde der insolvenzrechtliche Rahmen zum Teil ausgesetzt. Aus diesen Gründen ist zu beobachten, dass die Zahl der Unternehmensinsolvenzen 2020 in Österreich im Vergleich zu 2019 um 31 % gesunken ist. Der dadurch entstandene Rückstau an nicht eingereichten Insolvenzen wirft unter anderem Fragen betreffend die Finanzmarktstabilität auf.

Wir verwenden Daten auf Firmenebene zu Insolvenzbeschlüssen aus der österreichischen Ediktsdatei, um die Entwicklung der Insolvenzen vor und während der COVID-19-Pandemie in Österreich (Jänner 2019 bis März 2021) zeitnah zu dokumentieren. Durch das Zusammenführen von mehreren Datenquellen auf Firmenebene erlangen wir erste Einsichten in das Insolvenzgeschehen und dessen Bedeutung für die Finanzmarktstabilität.

Wir zeigen, dass nur knapp 40 % der insolventen Unternehmen Kredite über 25.000 EUR bei österreichischen Banken hatten und dass 30 % der insolventen Unternehmen bereits zwölf Monate vor der Insolvenz im Risikomanagement der Banken als „ausgefallen" eingestuft worden waren. Der Rückgang der Insolvenzen 2020 im Vergleich zu 2019 war in allen neun Bundesländern zu beobachten und besonders markant in den von der Krise stark betroffenen Branchen, denen auch die höchsten staatlichen Unterstützungen zugutekamen. Eine Verknüpfung von Insolvenz- und Bilanzdaten ergab ferner, dass die Mehrheit der in der Krise insolventen Unternehmen bereits lange vor der Krise negatives oder sehr niedriges Eigenkapital aufgewiesen hatte. In Kombination mit den Analysen der Ratings der Banken ist das ein Hinweis darauf, dass die staatlichen Hilfsmaßnahmen bis zu einem gewissen Grad eher Unternehmen mit höheren Eigenkapitalquoten vor der Insolvenz bewahrten als jene, die schon zuvor niedrige Eigenkapitalquoten und ein Rating, das mit hohem Risiko verbunden ist, aufgewiesen hatten.

Die vorliegende Studie bietet auch die statistische Grundlage für weiterführende Arbeiten. Eine Kombination mit Daten zu den staatlichen Hilfsprogrammen auf Firmenebene – die derzeit allerdings nicht zugänglich sind – würde es erlauben, eine Vielzahl an relevanten Fragestellungen im Zusammenhang mit der Wirkung der staatlichen Maßnahmen zur Abfederung der Krise zu analysieren.

Kreditmoratorien und staatliche Kreditgarantien im Zusammenhang mit der COVID-19-Pandemie – Bestandsaufnahme und Ausblick

Stephan Fidesser, Andreas Greiner, Ines Ladurner, Zofia Mrazova, Christof Schweiger, Ralph Spitzer, Elisabeth Woschnagg

Angesichts der wirtschaftlichen Auswirkungen der COVID-19-Pandemie wurden in Österreich Maßnahmen zur Unterstützung von Unternehmen und privaten Haushalten ergriffen. Dazu zählen Kredithilfen wie Moratorien, d. h. Stundungen von Kreditrückzahlungen, und staatliche Kreditgarantien. In der vorliegenden Studie beleuchten wir, wie österreichische Banken mit dem Risiko potenzieller Kreditausfälle umgehen und wie sich die Unterstützungsmaßnahmen auf die Qualität ihrer ausständigen Forderungen auswirken. Zu diesem Zweck untersuchen wir auf Basis von Daten, die von den Banken an die Oesterreichische Nationalbank gemeldet werden, wie sich die Inanspruchnahme der Moratorien und Garantien im zeitlichen Verlauf entwickelt hat, und zwar vom zweiten Quartal bis zum Jahresende 2020. Eine Erkenntnis ist, dass Moratorien zu einem weit größeren Ausmaß genutzt wurden als Garantien, wobei für die meisten 2020 vereinbarten Moratorien eine Laufzeit bis Ende März 2021 galt. Ende 2020 war zwar erst ein geringfügiger Anstieg bei den notleidenden Unternehmenskrediten erkennbar, die Banken haben aber dennoch frühzeitig bilanzielle Vorsorgen für Kreditausfälle gebildet. Kredite werden als notleidend eingestuft, wenn ihre Rückzahlung unwahrscheinlich ist

bzw. wenn der Schuldner mindestens 90 Tage mit der Rückzahlung im Verzug ist. Dank der bereits 2020 gebildeten Risikovorsorgen haben sich die Banken für eine mögliche Verschlechterung der Qualität ihres Kreditbestands im Lauf des Jahres 2021 gewappnet. Die österreichischen Banken sind nicht zuletzt auch aufgrund der Lehren aus der Krise 2007/08 gut auf mögliche Auswirkungen der COVID-19-Pandemie auf die Kreditportfolios vorbereitet. Dies wird auch durch unsere Analyse eines hypothetischen Negativszenarios untermauert: es zeigt sich, dass die Banken selbst relativ hohe Kreditausfälle dank ihrer aufgebauten Kapitalpuffer und Risikovorsorgen bewältigen könnten. Dennoch ist es für die Banken essenziell, sich in vorausschauender Weise auf mögliche verzögerte Effekte nach dem Auslaufen der staatlichen Unterstützungsmaßnahmen vorzubereiten.

The calm before the storm? Insolvencies during the COVID-19 pandemic

Helmut Elsinger, Pirmin Fessler, Stefan Kerbl, Anita Schneider, Martin Schürz, Stefan Wiesinger[1]
Refereed by: Dennis Dlugosch, OECD

We employ firm-level data on insolvencies from the Austrian insolvency register to document the incidence of insolvencies before and during the COVID-19 pandemic in Austria (January 2019 to March 2021). From the onset of the first national lockdown in March 2020, we observe 31% fewer insolvencies in 2020 than in 2019 and a marked deviation from previous levels, which is likely due to the multitude of government measures taken to contain the economic impact of the pandemic. We merge insolvency data with data from several other sources at the firm level to (1) deepen our descriptive analysis along several dimensions, such as region, sector classification, number of employees and equity capital, and to (2) analyze the loans of insolvent firms linked to Austrian banks. We find insolvencies to be below pre-crisis levels especially among smaller firms in sectors most hit by the crisis, and we also expect to see most future insolvencies in this group, although the further development of insolvencies will depend on possible changes to insolvency law, potential further government support measures and the size and speed of the economic recovery. With regard to financial stability, our results caution against directly associating firm insolvencies with bank losses; there are three reasons for this: (1) Less than 40% of firms turning insolvent have a loan above EUR 25,000 at Austrian banks, (2) a significant share of these loans is fully or at least partially secured and (3) nearly 30% of firms that turned insolvent were already marked as "defaulted" in banks' risk management twelve months before filing for insolvency. The crisis increased differences between particularly weak borrowers and those in better financial shape: While the former were more likely to file for insolvency, the latter were partly saved by government programs. More detailed firm-level data on policy measures are necessary to evaluate the effectiveness of the measures used and deliver guidance for future policies.

JEL classification: G33, G21
Keywords: COVID-19, insolvencies, nonfinancial companies, banking sector, Austria

The COVID-19 pandemic has had a significant impact on the financial situation of firms. However, these effects differ a lot among countries and economic sectors (ESRB, 2021b). Firms in the leisure industry, tourism and close-contact services have seen the largest losses, while others, such as local food suppliers, drugstores, online shops or suppliers of protective clothing gained economically. A recent IMF analysis suggests that without policy support, the share of illiquid firms would have more than doubled and that of insolvent firms would have almost doubled by end-2020 (IMF, 2021).

The COVID-19 crisis has affected businesses through various channels. The first channel is a direct one: workers and consumers get sick, become contagious, stay absent from work and refrain from consumption. The second channel is a

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result of government measures against the spread of coronavirus. Governments have imposed massive restrictions on citizens' private and economic lives. Many businesses have been forced to close for long periods of time. Even without these measures, people would have sought to avoid exposure to the virus, thereby reducing their demand for particular services. These changes in behavior raise uncertainty about firms' future cash flows and investment needs (see also Albacete et al., 2021, for effects on households).

Altogether these effects triggered by the pandemic amount to a huge negative shock and had a strong impact on companies' cash flows. Economic theory would suggest a strong increase in insolvencies, but as a matter of fact, during the COVID-19 pandemic fewer insolvencies occurred than before due to far-reaching government rescue programs. This does not mean that these insolvencies will not happen, however, and it remains unknown how insolvency statistics would have looked in a counterfactual situation without the multitude of government interventions.

Our contribution is a microdata-driven description of the insolvency dynamics of the last two years. By merging firm-level data with insolvencies, balance sheets and the AnaCredit credit register, we obtain deeper insights into structural changes from 2019 to 2020 and the differences between firms turning insolvent and those that do not. Our selection of firms (see section 1) and a unique combination of data sources form the basis for an effective and timely monitoring of insolvency events.

Firms may address their solvency problems by using cash buffers, adjusting working capital, new loans or new equity and/or by government support. Our data allow us to follow corporate debt dynamics. However, we would need granular data on the financial support from COFAG (COVID-19 Finanzierungsagentur des Bundes), the state-owned limited liability company through which support measures are organized and operationalized in Austria, in order to understand the effectiveness of policy measures and related risks to financial stability (see Brandner and Traumüller, 2020; see also section 1.1).

The remainder of the paper is structured as follows. Section 1 introduces the basic data we use, the data we combine them with, our definition of insolvency and the target population of firms (subsection 1.1). It also discusses data gaps which currently prevent serious policy evaluation and counterfactual estimation (subsection 1.2). Section 2 delivers the main stocktaking exercise of the paper, documents the insolvencies that occurred during the pandemic and compares them to the pre-crisis year 2019. Section 3 presents results for financial stability we obtain through linking insolvent firms to firm-level loan data and the Austrian banking system. Section 4 delivers a summary and conclusions.

1 Data

1.1 Data sources and definitions

We use the event-level data on insolvencies from the Austrian insolvency register[2]. The concept "insolvency" refers to a rather complex process, and there is no clear-cut definition of when a firm is considered insolvent. In Austria, there are several private associations engaged in creditor protection that gather and process data on

[2] *The Austrian insolvency register is published via the Ediktsdatei (legal notices database) website.*

Table 1

Data sources merged at individual firm level

Data source	Units	Reference time/period	Frequency
Insolvency data from the Austrian insolvency register	Events	2019–2021	Daily
OeNB Master Data (OBServ)	Firms	End-2018; 2019; 2020	3 points in time
Structural business statistics	Firms	End-2018	1 point in time
SABINA	Firms	End-2018	1 point in time
AnaCredit	Loans	2019–2020	Monthly

Source: OeNB.

insolvencies, such as Kreditschutzverband von 1870 (KSV 1870), Österreichischer Verband Creditreform (Creditreform), Alpenländischer Kreditorenverband (AKV) or Insolvenzschutzverband für Arbeitnehmerinnen/Arbeitnehmer (ISA). They all use data from the insolvency register, but also enrich these data with information on court cases and the use of other firm-level databases. Further, Statistics Austria has recently started to provide figures tracking insolvencies in Austria[3]. We combine several data sources which are briefly described in table 1.

In a first step, we merge the data from the insolvency register with an internal OeNB database on economically active units (OeNB Master Data – OBServ). Insolvencies of sole proprietorships sometimes show up as personal bankruptcies and are therefore difficult to unambiguously identify. Therefore we take a sectoral approach to be able to work with a well-defined set of firms, namely all entities registered in the Austrian business register without registered sole proprietorships. Note that in the other sectors there are also nonregistered entities, such as NGOs and public companies, which are excluded from our analysis.

We exclude the household sector from our analysis for several reasons: First, we are mainly interested in risks to financial stability channeled through non-performing loan risks for Austrian banks. The bulk of loan volumes are held by firms in the nonfinancial corporate sector and not sole proprietorships. Second, only for these registered entities can we identify a meaningful population of firms, which in turn allows us to define meaningful insolvency ratios, as with sole proprietorships and self-employed persons, it is practically and legally difficult to distinguish between business and private. Third, while sole proprietorships and the self-employed might be hit hardest by the crisis and are therefore likely the ones showing the largest increase in insolvencies once the impact of policy support measures fades out, they are typically those with the lowest loan volumes, which are additionally secured by private assets. Finally, we consider the nonfinancial corporate sector as the key driver of innovation and future growth. For these reasons, we define an insolvency according to the procedure laid out in box 1.

[3] *See http://www.statistik.at/web_de/statistiken/wirtschaft/unternehmen_arbeitsstaetten/unternehmensdemografie_ab_2015/index.html#index4.*

Box 1

How do we define insolvencies in this study?

In the data provided by the Austrian insolvency register, we find different events ("Verfahren") which each relate to a certain step toward an or within an insolvency proceeding.

In this study we take all events from the beginning of 2019 until March 2021 which refer to registered entities. We exclude all events related to the household sector (ESA 1400), sole proprietorships (including registered ones) and firms with a head office outside Austria (i.e. branches). Note that in the other sectors there are also nonregistered entities (such as NGOs and public companies) which are excluded from our analysis. An insolvency case in this study is defined by the occurrence of at least one of three events, namely

(1) bankruptcy proceedings have been initiated and/or
(2) reorganization proceedings have been initiated and/or
(3) insolvency proceedings have not been initiated due to a lack of sufficient assets to cover the costs.

The table below shows the detailed mapping from the data provided by the Austrian insolvency register to these three events matched to the OeNB Master Data (OBServ).

Table

Mapping insolvency data to OeNB Master Data

Insolvency data from the Austrian insolvency register				→	OeNB Master Data
Abbreviation	Full text	Category	Category content		Event
KV	Opening of bankruptcy	Opening		→	Bankruptcy initiated
SVME	Reorganization proceedings with self-administration	Opening		→	Reorganization initiated
SVOE	Reorganization proceedings without self-administration	Opening		→	Reorganization initiated
KV	Bankruptcy proceedings	Legal force	"Failure to open proceedings due to lack of cost-covering assets"	→	Not initiated due to lack of assets
KEV	Bankruptcy opening proceedings	Legal force	"Failure to open proceedings due to lack of cost-covering assets"	→	Not initiated due to lack of assets

Source: OeNB, OeNB Master Data (OBServ), Austrian insolvency register.

While the events "bankruptcy initiated" as well as "reorganization initiated" are unambiguously defined by a combination of two variables in the insolvency data from the Austrian insolvency register[4], the third one requires text mining of a third variable (category content). Events which refer to insolvency proceedings not initiated due to a lack of sufficient assets to cover the costs are identified by an additional text mining algorithm searching for specific related strings pointing toward such an event. An example is the string "Failure to open proceedings due to lack of cost-covering assets" ("Nichteröffnung mangels Kostendeckung").

During the insolvency process, the status of a firm may change between bankruptcy, reorganization and not initiated. Only the first event for each firm remains in our dataset and is counted as an insolvency case with the date when it occurred.

Note that we end up with a firm-level dataset in which all firms are included once if at least one of the three events occurred during the period we analyze (January 2019 to March 2021). This ensures that we do not double count firms. At the same time, some firms may have exited the insolvency process and still exist (e.g. because of successful reorganization) during the observation period but turn insolvent (i.e. show up as being affected by one of the three events) once more. We also count these firms only once on the basis of the first event.

[4] *Namely "Verfahrenskurztext" (abbreviation) and "Baustein-Name" (category).*

Table 2 shows the number of relevant events as well as the number of firms to which our definition applies as shown in the insolvency data of the Austrian insolvency register combined with the OeNB Master Data (OBServ). As expected, our numbers are markedly lower than those provided by other institutions. AKV reports 5,191 insolvencies of firms in 2019 and 3,175 in 2020, Creditreform reports 5,235 in 2019 and 3,063 in 2020, and KSV 1870 reports 5,018 in 2019 and 3,034 in 2020.[5] This difference is mostly due to our exclusion of firms belonging to the household sector, but also due to our restrictive approach based on head office location and, importantly, by preventing double counting by only allowing one event – also across the three different events we use – per firm for the whole time period. According to our definition, about 31.5% fewer firm-level insolvencies were recorded in 2020 compared to 2019. We see that the number of events is twice as high as the number of firms these events are related to. In 2019 and 2020, about two-thirds of the first firm-level events/events were initiated bankruptcies, less than 10% were initiated reorganizations and about a quarter were not initiated due to a lack of assets. For the remainder of this study, we do not distinguish between these three different events but consider the first firm-level event to be an insolvency case.

In the next step, we match our data at the firm level to three further data sources. The SABINA database comprises balance sheets reported under the national generally accepted accounting principles (GAAP) framework of a subset of our insolvency cases. Here, the latest available information is balance sheet data from 2018. We use these data for the equity capital ratios of firms which later (2019 to 2021) turned insolvent. Note that equity capital ratios compiled under national GAAP rules may differ from those observed in other economies with different reporting standards.

We also merge our data with data from the structural business statistics compiled by Statistics Austria to be able to include information on the number of employees of insolvent firms. These data refer to 2018 as well, and therefore the information is missing for a few firms we observe in 2020 and 2021.

Table 2

Events we relate to insolvencies and related firms

Year	Events/firms	Bankruptcy initiated		Reorganization initiated		Lack of assets		Total
		Number	% of yearly total	Number	% of yearly total	Number	% of yearly total	
2019	Events	3,034	68.1	305	6.8	1,117	25.1	4,456
2019	Firms (first event)	1,509	70.1	107	5.0	536	24.9	2,152
2020	Events	2,171	65.9	279	8.5	846	25.7	3,296
2020	Firms (first event)	976	66.4	129	8.8	364	24.8	1,469
2021	Events	401	68.1	43	7.3	145	24.6	589
2021	Firms (first event)	180	67.7	20	7.5	66	24.8	266

Source: OeNB, OeNB Master Data (OBServ), Austrian insolvency register.

[5] *AKV: https://www.akv.at/wp-content/uploads/AKV-Insolvenzstatistik-Gesamt-2020.pdf; Creditreform: https://www.creditreform.at/fileadmin/user_upload/Oesterreich/Downloads/Presse/Insolvenzstatistik_Oesterreich/2020/Insolvenztrends_2020.pdf; KSV 1870: https://www.ksv.at/KSV1870_Insolvenzstatistik_Unternehmen_2020_final.*

Finally, we merge our data with AnaCredit's granular credit data available to the OeNB. This is the key comparative advantage of our approach: we are able to directly link the loans of firms turning insolvent to Austrian banks and therefore are able to analyze the direct effects of these potential losses on banks (see section 3).

1.2 Caveats

There are three main caveats which should be considered when interpreting our analyses.

The first one results from our data selection procedure discussed in section 1.1. We exclude the household sector as well as all sole proprietorships and all non-registered entities from our analysis of insolvencies for the reasons discussed in section 1.1. However, this comes with a trade-off in that our figures do not represent all insolvency cases that refer to firms usually counted in other statistics presented by Statistics Austria and other insolvency statistics providers. While there exist other differences in definitions, this restriction is the one explaining most of the difference between our data and the statistics presented by other providers.

Secondly, to be able to get an idea of insolvency patterns regarding other firm-level variables, we have to merge the insolvency data as explained in section 1.1. For some of the data, such as number of employees, total assets or equity capital, the information we can merge is not contemporaneous with the time of the insolvency but can be rather outdated as it refers to the end of 2018. In some cases, other mergeable datasets are in principle available (such as social security data for the number of employees) but we have no access. In other cases, such as equity capital ratios, more recent data do not exist. On top of that, for some firms the data for employees or NACE sectors are missing, while equity capital data are missing for many firms because there is no obligation to report that information up to a certain firm size and due to other inclusion restrictions.

Thirdly and most importantly, we do not have access to firm-level data on the current government support measures. It would be crucial to know which insolvent (and solvent) firm got which form of government support, at what time and in what amount. These data would not only be needed for analyzing the implications for firms, banks and financial stability as a whole, but also for engaging in a serious estimation of the (relative) effects of policies and their (relative) effectiveness. They are also important for gauging potential market distortions and identifying those benefiting or losing out. Valid predictions of future insolvencies depend on this information, which, unfortunately, is not available.[6]

[6] *In OECD (2020) the authors perform an accounting exercise to simulate the consequences of the pandemic for leverage ratios and investment activity. Firm-level data on government support measures would facilitate more precise simulations.*

2 Insolvencies before and during the pandemic (2019 to 2021)

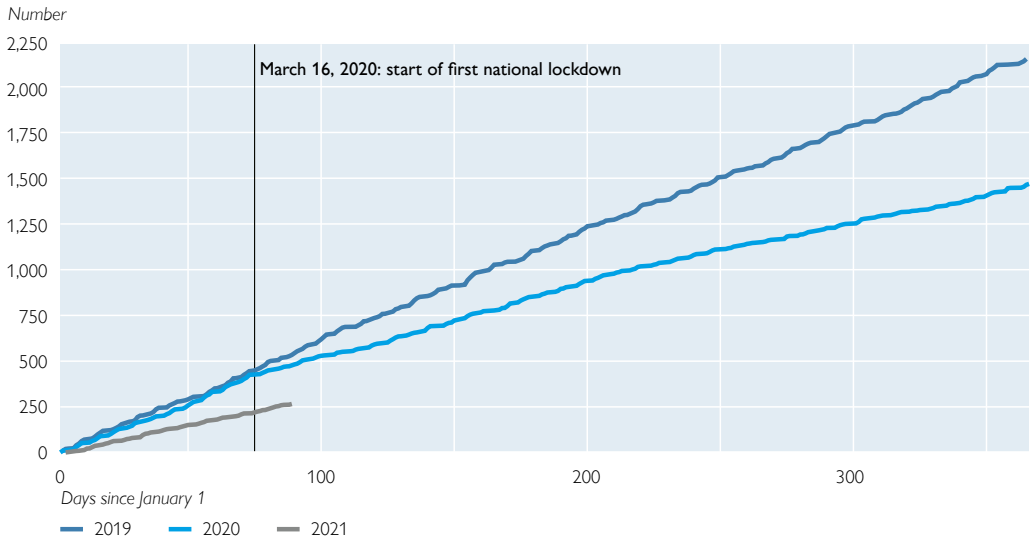
Chart 1 shows the yearly cumulated incidence of firm-level insolvencies as recorded on a day-by-day basis for the full time period. We can clearly see that since the first national lockdown starting in mid-March 2020, the insolvency numbers have been markedly lower than in the comparable pre-crisis period 2019, and the latest available data suggest that this trend continued in the first few months of 2021 (up to March 2021).

Note that the insolvency ratios implied – given our subset of firms – are about 0.83% for 2019 and 0.56% for 2020[7]. These numbers tie in with the somewhat higher insolvency ratios calculated by the private creditor protection firm Creditreform, which also include all sole proprietorships. Combining insolvency statistics from KSV and Statistics Austria with the total number of active firms provided by Statistics Austria's business demography statistics (roughly 550,000) also results in insolvency ratios of about 0.9% for 2019 and 0.5% for 2020[8]. Note however, that these are rather ad hoc figures as it is difficult to define and observe a correct target population of firms once sole proprietorships are included. As smaller firms seem to have slightly higher rates of insolvencies, it is expected that the figures are slightly lower for our subsample, which excludes sole proprietorships. Recent attempts to forecast insolvencies based on microdata of Creditreform (see Schwaiger, 2021) point toward potentially large numbers of insolvencies but still relatively low risks to financial stability.

Chart 1

Cumulated insolvencies in Austria

Sharp drop since first national lockdown



Source: Austrian insolvency register.

[7] *These figures exclude firms for which the economic sector is missing in the database. The figures including those firms are somewhat lower at about 0.6% for 2019 and 0.4% for 2020. As a large part of those might be economically inactive, the figures mentioned in the text are likely more economically interesting and reliable.*

[8] *See https://www.creditreform.at/presse/insolvenzstatistik-oesterreich.html for Creditreform figures; see https://www.ksv.at/insolvenzstatistik/insolvenzstatistik-2020-final for KSV figures; see http://www.statistik.at/web_de/statistiken/wirtschaft/unternehmen_arbeitsstaetten/unternehmensdemografie_ab_2015/index.html#index4 for Statics Austria figures.*

Table 3

Insolvencies by NACE sectors

NACE sector	2019		2020		2021		Change from 2019 to 2020	
	Number of insolvencies	Number of firms	Number of insolvencies	Number of firms	Number of insolvencies	Number of firms	Number of firms	2020 in % of 2019
		Thousand		*Thousand*		*Thousand*		
Wholesale and retail trade; repair of motor vehicles and motorcycles	433	46.4	255	45.7	42	44.4	–178	58.9
Construction	430	25.4	337	25.8	94	25.1	–93	78.4
Accommodation and food service activities	311	22.1	191	21.7	24	20.8	–120	61.4
Transportation and storage	205	10.1	114	9.9	14	9.3	–91	55.6
Professional, scientific and technical activities	186	42.6	132	43.9	25	44.0	–54	71
Administrative and support service activities	135	10.9	107	11.0	27	10.6	–28	79.3
Real estate activities	123	32.4	71	34.3	15	35.6	–52	57.7
Manufacturing	123	15.2	107	15.2	8	14.8	–16	87
Information and communication	88	12.3	60	12.6	6	12.6	–28	68.2
Arts, entertainment and recreation	38	5.4	26	5.5	2	5.6	–12	68.4
Other service activities	29	13.1	16	13.4	5	13.9	–13	55.2
Financial and insurance activities	20	10.6	25	10.5	0	0.0	5	125
Human health and social work activities	7	3.6	3	3.7	1	3.7	–4	42.9
Electricity, gas, steam and air conditioning supply	6	2.4	2	2.4	1	2.4	–4	33.3
Water supply, sewerage, waste management and remediation activities	6	2.8	2	2.9	1	2.9	–4	33.3
Education	5	3.8	10	3.9	1	3.9	5	200
No information available	7	–	11	–		–	–	–
Total	2,152		1,469		266			

Source: OeNB, OeNB Master Data (OBServ), Austrian insolvency register.

Table 3 shows insolvency statistics by NACE sectors. While our data allow an analysis down to the most detailed NACE 5 level, we only show NACE 1 levels here. Table 3 illustrates that in all sectors of a relevant size the trend of fewer insolvencies in 2020 compared to pre-crisis levels is evident. Especially in those sectors heavily hit by the crisis – and therefore heavily supported by the government – the drop in the number of insolvencies was particularly pronounced.

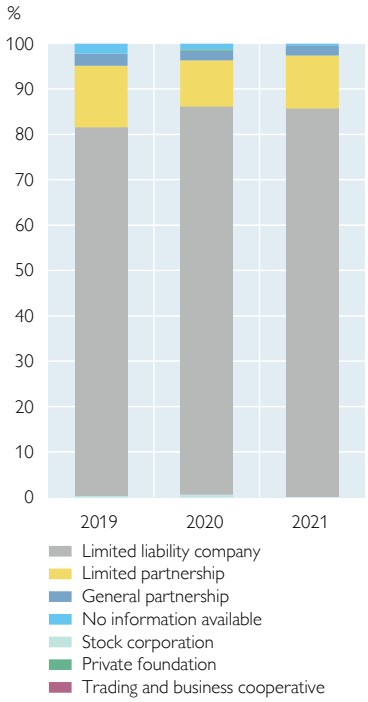
Almost all insolvencies in our data (which exclude the household sector) took place in the nonfinancial companies sector, and only in few cases are we not able to determine the economic sector of the insolvent entities.

Chart 2 shows insolvencies by firm type. More than 80% of insolvencies affected limited liability companies, followed by limited partnerships (10% to 14%). Again, for less than 2.5% of insolvencies (depending on the year) we are not able to determine the type of the insolvent entity.

Chart 3 shows insolvencies by number of employees. While the share of entities for which no information on the number of employees is available increases over time (as the data merged are from the end of 2018), it seems that the share of firms with fewer employees has decreased since the beginning of the pandemic (see left-hand panel). Note also that generally, the share of firms with fewer employees is somewhat lower among insolvent firms than among solvent ones.

Chart 2

Insolvency cases by firm type



Source: OeNB, OeNB Master Data (OBServ), Austrian insolvency register.

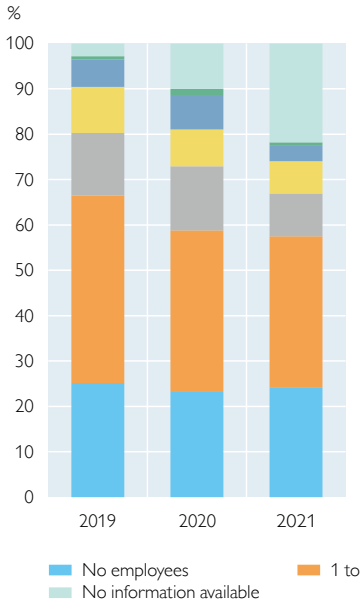
Figure 1 shows insolvencies in 2020 as a percentage of 2019 insolvencies across Austrian provinces. In all provinces, there were fewer insolvencies in 2020 than in 2019, with particularly low numbers – about 62% to 63% – in Lower Austria and Salzburg and the largest number – about 83% – in Carinthia. Lower insolvency ratios are therefore not a regional phenomenon but observed in all nine Austrian provinces.

Chart 4 shows insolvencies by equity ratio as measured in the SABINA database at the end of 2018 for those firms for which such information is available. While for 2019, we do not have this information for 77% of the firms, this share of firms is only about 40% for 2020 and 38% for 2021. Note that missingness is partly due to the fact that not all companies have to report the specific information needed. In general, only corporations and limited liability companies or limited partnerships

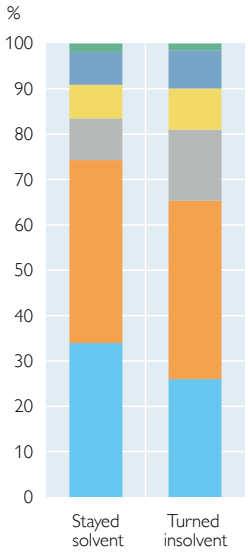
Chart 3

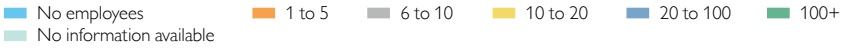
Insolvencies by number of employees

Insolvency cases by number of employees



Solvent vs. insolvent firms by number of employees in 2020

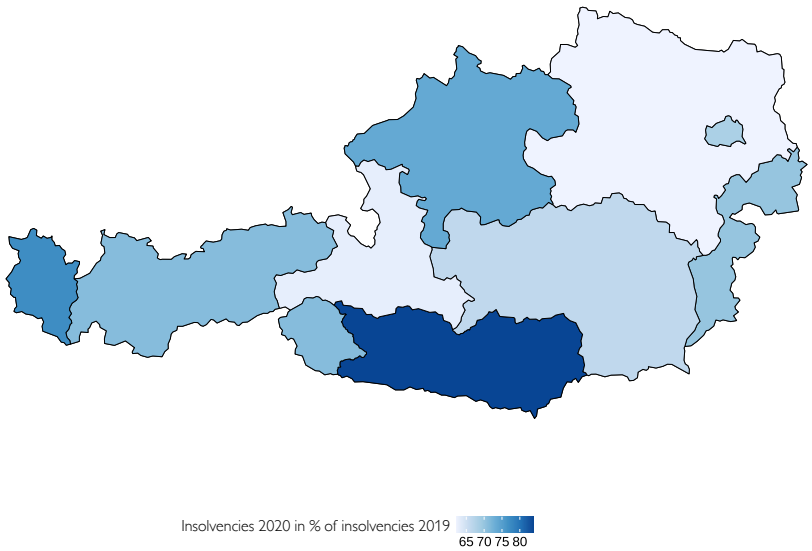




Source: OeNB, OeNB Master Data (OBServ), Austrian insolvency register, SABINA 2018.

Figure 1

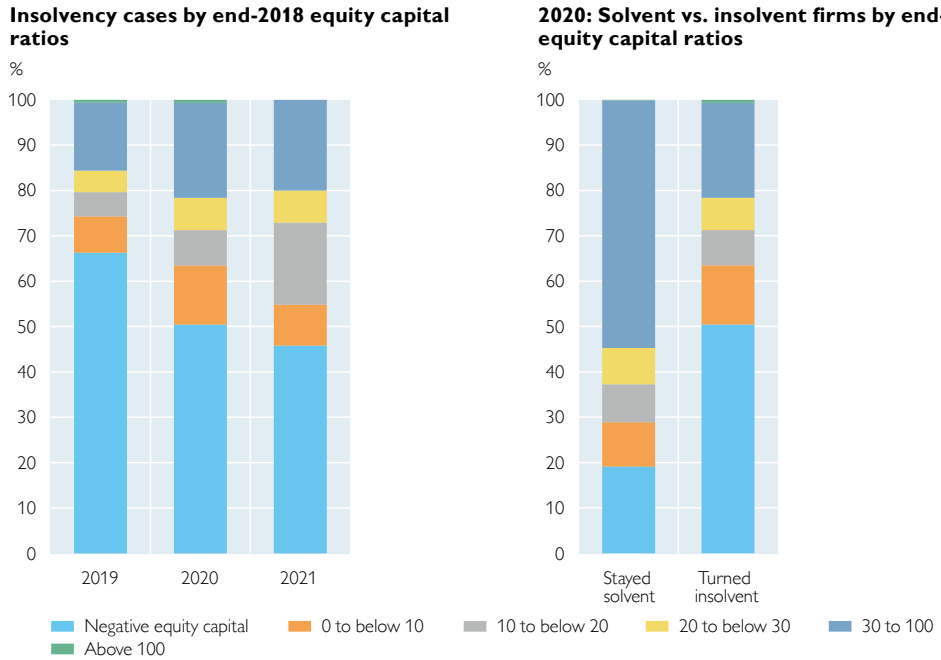
Change in insolvencies between 2019 and 2020 by provinces



Source: Austrian insolvency register.

Chart 4

Insolvencies by equity capital ratios



Source: OeNB, OeNB Master Data (OBServ), Austrian insolvency register, SABINA 2018.

(GmbH and KG) are obliged to submit their annual financial statements to the commercial register. Furthermore, the scope of disclosure depends on firm size and legal form.[9] However, it can be clearly seen that more than half of the insolvent

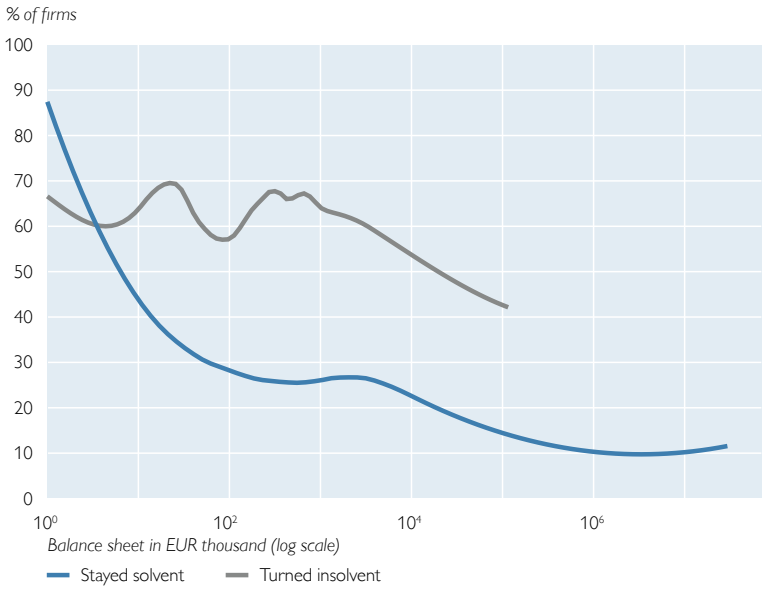
[9] *According to Articles 277 and 221 Austrian Commercial Code.*

firms already showed negative equity capital[10] for the year 2018 and more than 70% had negative equity capital or equity capital ratios below 20%. In short, most insolvent firms already showed low equity capital long before the pandemic and were already particularly vulnerable to shocks (see left-hand panel of chart 4). Again, the right-hand panel compares insolvent firms in 2020 to solvent firms. Those firms which turned insolvent in 2020 (right bar in right-hand panel, middle bar in left-hand panel) showed far lower values in equity capital already at the end of 2018 compared to the set of solvent firms.

This finding is also confirmed across balance sheet size. Chart 5 shows the share of solvent and insolvent firms along the balance sheet distribution in 2020 that had an equity capital ratio below 8% at the end of 2018. Among firms with a balance sheet total of more than EUR 50,000, a markedly larger share of firms with an equity capital ratio below 8% turned insolvent.

Chart 5

Share of firms with an equity capital ratio below 8%



Source: Austrian insolvency register, SABINA.

3 Implications for financial stability

Merging these data on insolvencies with our firm-level loan data (AnaCredit) provides us with the unique opportunity to explore the potential consequences of current and future insolvency developments for financial stability. For this purpose, we restrict the dataset to nonfinancial corporations[11] and merge the data with the AnaCredit loan dataset that contains reports of all loans issued by Austrian banks above EUR 25,000. As AnaCredit has only been available since March 2019, we set our comparison period to the year 2020 from March 2019 to March 2020. We thereby ensure that the comparison covers a pre-lockdown period, but at the disadvantage of a slight overlap of samples (an insolvency in the first quarter of 2020 enters both datasets).

First, we find that the share of firms turning insolvent while having a loan above the materiality threshold of EUR 25,000 with an Austrian bank is surprisingly small. Only 39.9% of firms turning insolvent in the course of 2020 had a loan above the materiality threshold at the beginning of the year. During our comparison period (March 2019 to March 2020), this share is not substantially different at 36.8%. These figures suggest that most firms turning insolvent only have liabilities vis-à-vis tax authorities, social security institutions, suppliers and other creditors

[10] *Based on a positive business continuity forecast ("Fortbestehensprognose"), a firm may continue operations despite negative equity.*

[11] *We exclude firms from the NACE sectors financial and insurance activities (64–66), public administration and defense; compulsory social security (84) and extra-territorial organizations and bodies (99). Note that households are already excluded from the set in the whole paper.*

and none to banks (above the materiality threshold of EUR 25,000). This is one reason why we caution against associating insolvency events directly with bank losses. Banks' total exposure affected by insolvencies dropped from EUR 530 million in our comparison period to EUR 499 million in 2020, i.e. less than the decline in the number of insolvencies of firms with a loan at an Austrian bank (750 to 569).[12] Against these EUR 499 million of exposure toward firms filing for insolvency, banks had booked EUR 90 million in loan loss provisions and held EUR 116 million of collateral (banks' internal estimates).

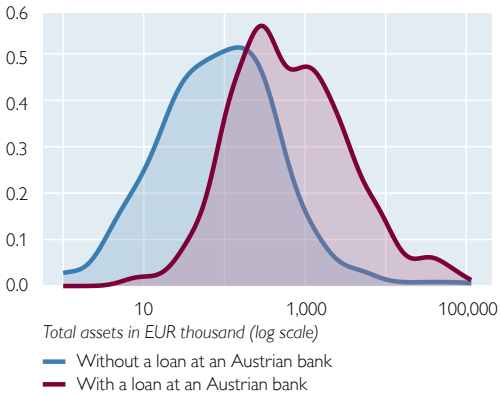
Which firms in our sample have a loan at an Austrian bank? We suspect that larger firms – measured by total assets – also tend to rely on financing through bank loans. Indeed, as chart 6 shows, those firms that file for insolvency but do not show up in our credit data are on average much smaller firms.

Chart 7 contrasts those firms that had loans and turned insolvent in 2020 with those that did not. In the left-hand panel, we see a substantial difference in the sum of exposures[13]. Firms turning insolvent are strongly overrepresented in smaller loans (up to EUR 50,000), and less so in loans up to EUR 130,000; in loans larger than that, these firms are underrepresented. Again, we see the credit selection mechanism of banks at work. In the right-hand panel of chart 7, we see the distribution over collateral levels. If the banks' internal value of collateral associated with the exposure is >90% of the outstanding amount, we classify the loan as "secured;" the rest of the classification looks like this: internal collateral values >50% – "mostly secured," >10% – "partly secured," and ≤10% – "unsecured." Compared to customers that stayed solvent, we see that insolvent firms tend to have less exposure that is either secured or unsecured, i.e. at the far ends. Naturally, banks are unwilling to lend to risky customers without security, and, on the other hand, firms in financial trouble struggle to provide collateral on par with their obligations, resulting in the distribution we see above.

Chart 6

Density of total assets

Of firms filing for insolvency in 2020



Source: OeNB, AnaCredit.

On both accounts, i.e. the distribution over the size of the loans and their collateral values, we see no noteworthy shift between firms turning insolvent until March 2020 and in the course of 2020.

Another interesting observation we can make from our merged data is the distribution of ratings prior to a firm turning insolvent. For financial stability,

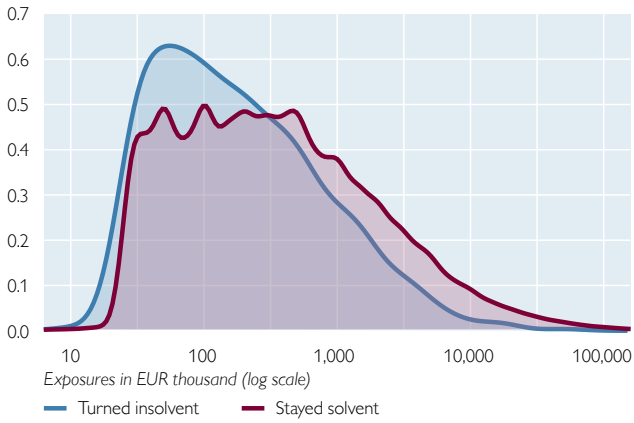
[12] *For reference, EUR 499 million is about 0.05% of the Austrian consolidated total assets of the Austrian banking system (i.e. including foreign subsidiaries) or 0.6% of the consolidated CET1 capital. If the whole amount were performing at end-2019 and nonperforming at end-2020, the NPL ratio in Austria would increase from 1.73% (Q4 2019) to 1.86% in total and from 2.5% to 2.85% if we consider only lending to nonfinancial corporations. Tables A1 and A2 in the annex provide more detailed statistics about the size of loans and ratings of firms that turned insolvent in 2020 and 2019.*

[13] *We aggregate all liabilities of a firm toward one bank and refer henceforth to this sum of exposures of one firm to one bank as its "loan", although it can be composed of several contracts.*

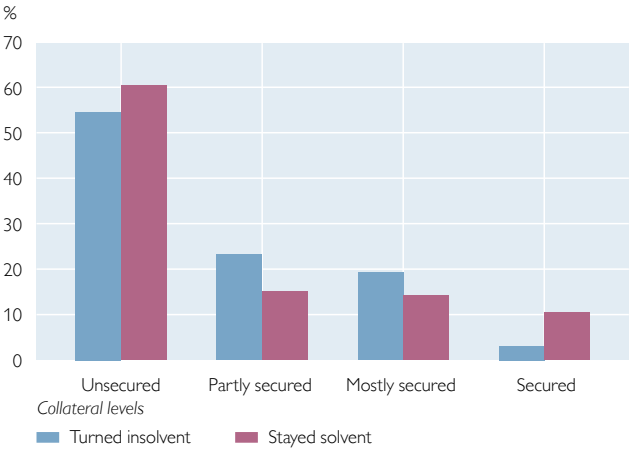
Chart 7

Comparison of exposures and levels of collateral

Density of exposures – exposures to firms that turn insolvent are often lower



Distribution over collateral levels – exposures are often "partly" or "mostly secured"



Source: OeNB, AnaCredit.

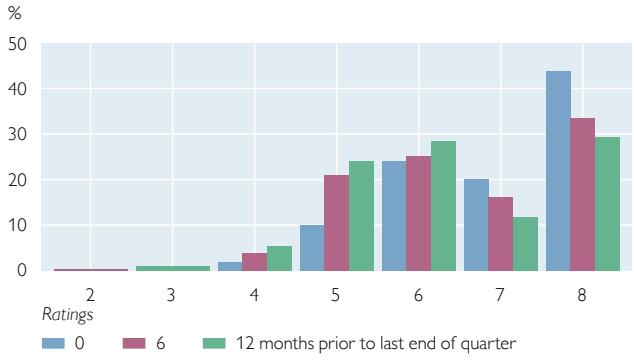
the early identification of problematic bank customers and bad loans is important: it helps avoid losses and spreads those losses that occur over longer periods, thus smoothening their impact. Our data allow to assess whether the crisis of 2020 has decreased or increased the ability of banks to anticipate insolvencies. Some early considerations suggest the hypothesis that this ability may have declined: (1) a large economic shock such as the pandemic may have driven otherwise financially sound customers into insolvency and (2) debt moratoria may have clouded banks' ability to anticipate losses as they render one of their predictors – the days-past-due counter – inoperative.

To collect ratings up to a year before insolvency, and for the purpose of comparison also for those filing for insolvency in 2019, we draw on another micro loan dataset, the central credit register, which predated AnaCredit. As the central credit register has a different reporting threshold, we need to filter AnaCredit data for the common reporting threshold of EUR 350,000.

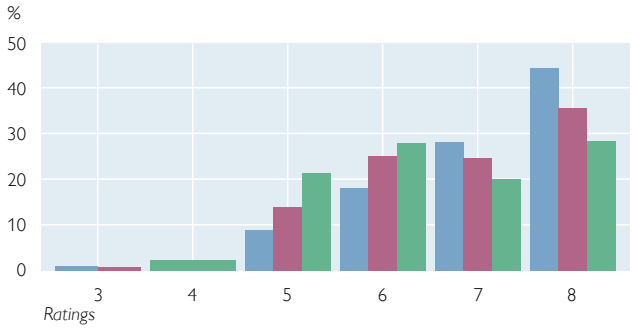
Chart 8

Distributions of ratings of firms that filed for insolvency in 2019 and 2020

2019



2020



Source: OeNB, AnaCredit.

Chart 8 displays the distribution of ratings of those firms that turned insolvent in 2019 (left-hand panel) and 2020 (right-hand panel) at three different points in time: "0" means at the last end of quarter before entering insolvency, "6" and "12" mean six and twelve months, respectively, prior to the last end of quarter before entering insolvency. The x-axis displays a time-invariant rating scale that maps banks' internal probabilities of default (PDs)[14].

Interestingly, between 28% and 30% of firms are already in default status (equal to rating 8) twelve months before turning insolvent. Note that default is either "unlikely to pay" or "90 days past due" (according to Article 178 Capital Requirements Regulation). Insolvency is a trigger for "unlikely to pay" but banks are required to use earlier indicators to anticipate insolvencies among their borrowers, and, in fact, do so (as shown in chart 8).

As firms are given two months to file for insolvency after turning illiquid or overindebted[15], it is not surprising that close to 50% are already in default at the last end of quarter before filing for insolvency. The phenomenon that insolvencies are a lagging rather than a leading indicator of defaults is even stronger when one considers exposure-weighted figures instead of numbers of firms as in chart 8. Over 50% of the exposure to firms which turned insolvent within the next quarter are already booked at default status at Austrian banks. One year ahead of the insolvency event, almost 40% of the exposure is in default. Yet not all cases of insolvencies are detected before their filing. Surprisingly, around 25% of firms even have ratings as low as 5, associated with a PD of 0.95%, one year prior to filing for insolvency. This share drops to 8% to 10% one quarter before insolvency.

Both in 2019 and 2020 we observe the expected shift toward worse ratings at time points closer to insolvency, but comparing the two panels, we see that the anticipation of insolvencies was better for the 2020 insolvencies, as the rating distribution shifted to the right. To quantify the different levels of anticipation, we compute the receiver operating characteristic (ROC), a measure of the predictive power of a binary classifier system. The ROC curve is created by plotting the true positive rate (correctly identified insolvencies) against the false positive rate (incorrectly identified insolvencies) at various thresholds corresponding to ratings in our case[16]. First developed and applied by electrical engineers, the ROC is now widely applied in the field of medicine (e.g. to describe the accuracy of a diagnosis) but also in the field of rating model validation and development to describe their predictive power.[17]

By computing the ROC of two years with regard to insolvencies, we measure if the insolvencies of 2020 were indeed better predicted than those of 2019.

[14] *For the purpose of this article we map each customer to a suitable rating scale consisting of seven nondefaulted and one defaulted rating classes. The central PDs for each class are (1) 0.004% (2) 0.016% (3) 0.063% (4) 0.251% (5) 0.951% (6) 3.284% (7) 9.750% and (8) 100%.*

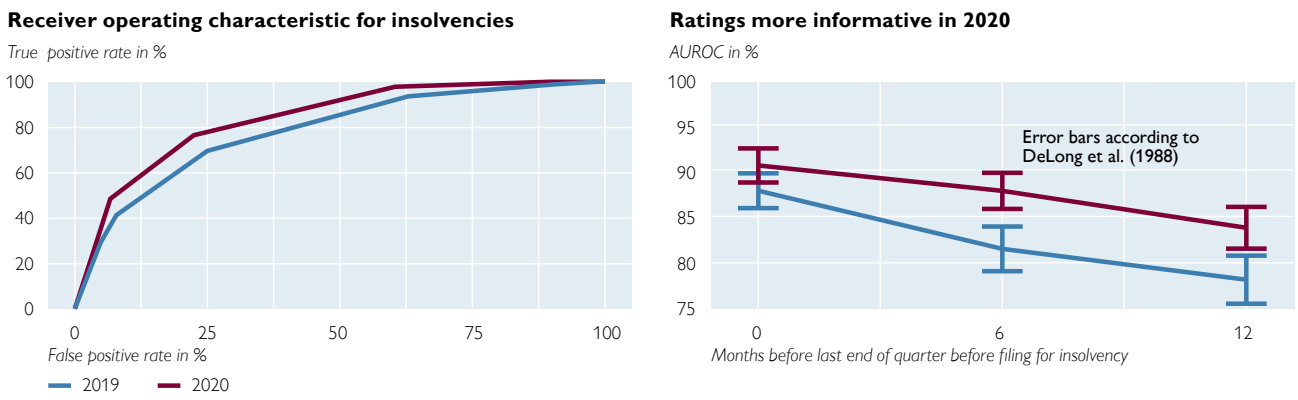
[15] *See the Austrian Insolvency Act (Bundesgesetz über das Insolvenzverfahren), Article 69 (2), and Article 66 on illiquidity and Article 67 on overindebtedness.*

[16] *After a year of pandemic reporting one may also know the true positive rate to be "sensitivity" and the false positive rate to be "1-specificity".*

[17] *Note that rating models are built to predict the status of "default," which also covers (but is not limited to) insolvencies. As described in the next paragraph, we do not want to judge the predictive power of banks' models but gauge how foreseeable insolvencies were in 2019 and 2020.*

Chart 9

Accuracy in prediction twelve months ahead (left) and over various time horizons (right)



Source: Authors' calculations, AnaCredit.

Note: AUROC 2020: 84%; AUROC 2019: 78%; AUROC Comparision Test according to Venkatraman (2000); p-value (H0: equal AUC): 0.138%.

The left-hand panel of chart 9 plots the ROCs for the two years where we use ratings twelve months prior to the last end of quarter before the firm filed for insolvency. The measure of the predictive power of banks' ratings are the areas under the curves. A value of 84% in 2020 and of only 78% in 2019 suggests that the insolvencies of 2020 were indeed better predicted. We employ the test of Venkatraman (2000), testing the null hypothesis of equal predictive power of two ROC. We obtain a p-value of 0.138%, thus reject the null and conclude that this difference is statistically significant. Also, a comparison at different prediction horizons (0 and 6 months prior to the last end of quarter) as depicted in the right-hand panel of chart 9 confirms this conclusion.

There is no reason to believe that there have been substantial improvements in the predictive power of banks' models from one year to the next and therefore we attribute this shift to the markedly different insolvency developments of 2020 compared to previous years. We interpret the finding as follows: In 2020, government measures (or other effects) helped medium-rated firms survive which otherwise – without the crisis and policy measures – would have filed for insolvency. At the same time, the crisis led to increased insolvency events among firms with the riskiest ratings (rating 7), probably as those companies were deemed noneligible for government rescue programs and too risky (especially in a crisis environment) for further bank funding. The crisis thus increased differences between particularly weak firms, which had to file for insolvency, and those in better financial condition, which were partly saved by government programs. This means, in turn, that there will be a backlog of insolvencies, especially in the medium to risky portfolio, and that defaults will increase in 2021 among firms in these rating classes (5 to 6) once rescue measures are lifted. As some insolvencies are likely to be prevented beyond 2021 and these rating classes generally do not show a high default ratio, it is unlikely that the dissolution of the backlog, and the increase in defaults resulting thereof, will be of systemic size.

4 Summary and conclusions

We employ data from the Austrian insolvency register to analyze how the number of insolvencies evolved before and after the onset of the COVID-19 pandemic. We exclude sole proprietorships, which are part of the household sector. The remaining insolvencies mainly affected limited liability companies and limited partnerships in the nonfinancial corporate sector, which is particularly important to financial stability. This confinement allows us to meaningfully combine insolvency data with data from other sources to enrich our data with further firm-level information.

We find that since the start of the first national lockdown in mid-March 2020, the number of insolvencies has decreased markedly, which is likely due to government measures taken to cushion the economic impact of the pandemic. This decrease can be found across almost all NACE sectors but is especially pronounced in sectors hit strongly by the crisis, which also received the most government support, such as retail trade and accommodation and food services. We find some evidence that the share of insolvent firms with fewer employees has decreased since the beginning of the pandemic, which points to a stronger insolvency-dampening effect for smaller firms. Regional variation at the province level is limited – in all provinces, the insolvencies recorded in 2020 were between 62% and 84% of those seen in 2019. Available equity ratios show that most firms that turned insolvent between March 2020 and March 2021 had operated under low equity capital long before the pandemic and had thus already been vulnerable to shocks. More than half of the insolvent firms already showed negative equity capital in 2018, and more than 70% had negative equity capital or equity capital ratios below 20%. This finding is also confirmed across balance sheet size. Among firms with a balance sheet total of more than EUR 50,000, a markedly larger share of firms with an equity capital ratio below 8% (already in 2018) turned insolvent.

Combining the data with loan-level information, we document that caution is warranted when directly associating insolvency events with bank losses for the following three reasons: (1) less than 40% of firms turning insolvent have loans above EUR 25,000 at Austrian banks, (2) a significant share of these loans is fully or at least partially secured and (3) nearly 30% of firms turning insolvent were already marked as "defaulted" in banks' risk management twelve months before filing for insolvency. However, for quite a substantial fraction of firms, filing for insolvency is the default trigger at banks and probably also reduces recoveries and collateral realizations.

Analyzing changes in the predictive power of ratings, we find that the crisis increased predictive power as it increased the difference between particularly weak borrowers, who filed for insolvency more frequently, and those in better financial condition, who were partly saved by government programs. Finding out whether these firms will default at a later stage would be of utmost importance, but given the available data, this issue is beyond the scope of this paper. However, some of our findings suggest that the threat to financial stability arising from insolvencies is limited at least for the second half of 2021. Insolvency numbers have remained low up to now, and further support measures are being discussed or already in place. We also found evidence that the potential lag in insolvencies seems to be most prevalent among smaller firms. Finally, the finding that only a relatively low share (less than 40%) of firms have loans (above EUR 25,000) at Austrian banks points toward the fact that there is no one-to-one direct link between insolvencies and bank losses. Recent research by the Bank for International Settle-

ments also suggests that the additional availability of loans to firms may have led to a potentially longer delay of insolvencies but at the same time to markedly lower earnings-to-debt ratios (Banerjee et al., 2021). Firm-level data on the government support measures, which are available but not accessible at this point, are a necessary precondition for gaining an – urgently needed – deeper understanding of the future risks to financial stability through the impact of the crisis on firm insolvencies and related bank loans.

References

Albacete, N., P. Fessler, F. Kalleitner and P. Lindner. 2021. How has COVID-19 affected the financial situation of households in Austria? In: Monetary Policy & the Economy Q4/20 – Q1/21. OeNB. 111–130.

Banerjee, R. N., J. Noss and J. M. Vidal Pastor. 2021. Liquidity to solvency: transition cancelled or postponed? BIS Bulletin No 40.

Brandner, P. and H. Traumüller. 2020. Anmerkungen zur COVID-19 Finanzierungsagentur des Bundes. In: Steuer und WirtschaftsKartei 95. Jahrgang Nr. 19. 980–993.

Bruegel. 2021. Corporate insolvencies during COVID-19: keeping calm before the storm. Blog post. https://www.bruegel.org/2021/01/corporate-insolvencies-during-covid-19-keeping-calm-before-the-storm/

DeLong, E. R., D. M. DeLong and D. L. Clarke-Pearson. 1988. Comparing the areas under two or more correlated receiver operating characteristic curves: a nonparametric approach. In: Biometrics 44. 837–845.

ESRB. 2021a. The General Board of the European Systemic Risk Board held its 40th regular meeting on 15 December 2020. Press release. https://www.esrb.europa.eu/news/pr/date/2020/html/esrb.pr201218~341881f7b9.en.html

ESRB. 2021b. Preparing for the post-pandemic rise in corporate insolvencies. ASC Insight No 2. January. https://www.esrb.europa.eu/pub/asc/insights/shared/pdf/esrb.ascinsight212101_2~534e2c6120.en.pdf

European Commission. 2016. Directive of the European Parliament and of the Council on preventive restructuring frameworks, second chance and measures to increase the efficiency of restructuring, insolvency and discharge procedures and amending Directive 2012/30/EU. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016PC0723&from=EN

IMF. 2021. Staying Afloat: New Measures to Support European Businesses. IMF Blog. March. https://blogs.imf.org/2021/03/02/staying-afloat-new-measures-to-support-european-businesses/

OECD. 2020. Insolvency and debt overhang following the COVID-19 outbreak: Assessment of risks and policy responses. OECD Policy Responses to Coronavirus (COVID-19). November. https://www.oecd-ilibrary.org/economics/insolvency-and-debt-overhang-following-the-covid-19-outbreak-assessment-of-risks-and-policy-responses_747a8226-en

Osterkamp, R. 2006. Insolvency in selected OECD countries extent, trends, laws. ifo Institute. Ifo Schnelldienst 59. Nr. 09. 22–29. https://www.ifo.de/en/publikationen/2006/article-journal/insolvency-selected-oecd-countries-extent-trends-laws

Schwaiger, W. 2021. Corona-Pleitewelle: Wie viele Ausfälle sind tatsächlich zu erwarten? Predictive Default Study. Marktanalyse. Creditreform in Kooperation mit TU Wien und imw. April.

Venkatraman, E. S. 2000. A Permutation Test to Compare Receiver Operating Characteristic Curves. In: Biometrics 56. 1134–1138.

World Bank. 2020. COVID-19 Outbreak: Implications on Corporate and Individual Insolvency. COVID-19 Notes. April 13. https://pubdocs.worldbank.org/en/912121588018942884/COVID-19-Outbreak-Implications-on-Corporate-and-Individual-Insolvency.pdf

Annex

Table A1

Firm types across economic sectors

Name	German (original or translation)	Non-financial corporations	Financial corporations	General government	Households	Nonprofit institutions serving households
Limited liability company	Gesellschaft mit beschränkter Haftung	Yes	Yes	Yes		Yes
Limited partnership	Kommanditgesellschaft	Yes	Yes	Yes		Yes
Sole proprietorship	Einzelunternehmer				Yes	
General partnership	Offene Gesellschaft	Yes	Yes	Yes		Yes
Private foundation	Privatstiftung		Yes	Yes		Yes
Trading and business cooperative	Erwerbs- und Wirtschaftsgenossenschaft	Yes	Yes		Excluded	Yes
Stock corporation	Aktiengesellschaft	Yes	Yes	Yes	area	
Savings bank	Sparkasse		Yes			
Other legal entity	Sonstiger Rechtsträger	Yes	Yes	Yes		
Mutual insurance company	Versicherungsverein auf Gegenseitigkeit		Yes			
European Economic Interest Grouping	Europäische wirtschaftliche Interessen-vereinigung	Yes				
European Cooperative Society	Europäische Genossenschaft	Yes				
Societas Europaea	Societas Europaea	Yes	Yes			

Source: OeNB.

Note: The highlighted area, namely sole proprietorships as well as the household sector, is excluded from our analysis. Note that while in principle all other firms are theoretically included almost all insolvencies recorded affect limited liability companies or limited partnerships in the nonfinancial corporations sector.

Table A2

Descriptive statistics by firm characteristics – firms filing for insolvency from March 2019 to March 2020

Indicator	Category	Share of firms with bank[2] liabilities > EUR 25,000	Mean number of bank connections[1]	Median loan size[1,3]	Mean loan size[1,3]	Share of firms with a default rating at end-March 2019[1]
		% of all firms entering insolvency in 2019	*Number*	*EUR thousand*	*EUR thousand*	*% of all firms with a bank liability > EUR 25,000*
Number of employees	0	23	1.20	120.95	496.17	38
	1 to 5	34	1.23	88.42	335.32	35
	6 to 10	47	1.29	87.39	223.82	19
	10 to 20	55	1.40	153.64	447.65	29
	20 to 100	66	1.72	321.67	1,167.45	23
	100+	50	4.25	832.87	1,714.05	34
	No information	5	1.00	47.52	47.52	0
NACE sectors	Construction	35	1.36	110.31	397.08	20
	Administrative and support service activities	34	1.32	103.89	469.08	20
	Real estate, renting and business activities	41	1.20	475.74	841.06	47
	Information and communication	32	1.16	161.90	346.39	22
	Transportation and storage	37	1.39	79.38	169.43	22
	Wholesale and retail trade; repair of vehicles	40	1.36	126.20	477.42	38
	Manufacturing	58	1.75	334.17	1,334.20	39
	Professional, scientific and technical activities	32	1.35	116.45	539.45	26
	Hotels and restaurants	31	1.16	76.32	163.49	28
	Other service activities	42	1.18	70.00	100.80	38
	Education	43	1.33	156.47	492.71	25
	Arts, entertainment and recreation	24	1.00	105.08	502.75	30
	Water supply	17	2.00	342.37	342.37	100
	Health and social work	60	1.33	334.45	322.57	0
	Electricity, gas, etc.	50	1.00	156.46	156.46	100
Equity ratios	Negative equity	52	1.32	171.33	396.91	30
	0 to below 10	68	1.42	300.00	996.52	10
	10 to below 20	55	1.63	483.89	832.47	8
	20 to below 30	46	1.35	62.26	317.44	0
	30 to and including 100	20	1.33	80.44	711.57	17
	Over 100	0	-	-	-	-
Regions	No information	31	1.34	93.36	504.43	36
	Lower Austria	43	1.41	119.06	424.72	32
	Styria	46	1.60	185.00	893.00	40
	Vienna	26	1.23	82.73	466.56	24
	Salzburg	44	1.43	100.32	590.37	36
	Tyrol	37	1.37	131.55	375.57	15
	Upper Austria	51	1.35	161.41	398.16	31
	Carinthia	53	1.18	139.55	389.61	36
	Burgenland	35	1.25	155.00	268.09	9
	Vorarlberg	30	1.38	227.18	1,172.58	12

Source: OeNB, OeNB Master Data (OBServ), AnaCredit.

[1] *Conditional on having bank liabilities above EUR 25,000.*
[2] *Bank liabilities with at least one Austrian bank.*
[3] *Loans are defined here as the sum over all bank liabilities one firm has with one bank.*

Table A3

Descriptive statistics by firm characteristics 2020

Indicator	Category	Share of firms with bank[2] liabilities > EUR 25,000	Mean number of bank connections[1]	Median loan size[1,3]	Mean loan size[1,3]	Share of firms with a default rating at end-2019[1]
		% of all firms entering insolvency in 2020	*Number*	*EUR thousand*	*EUR thousand*	*% of all firms with a bank liability > EUR 25,000*
Number of employees	0	23	1.16	147.52	936.39	60
	1 to 5	38	1.18	90.96	316.91	34
	6 to 10	57	1.35	141.18	412.73	26
	10 to 20	63	1.35	180.00	470.33	21
	20 to 100	72	1.49	336.91	830.41	12
	100+	70	2.00	1,375.12	4,661.33	36
	No information	15	1.05	78.80	352.92	0
NACE sectors	Administrative and support service activities	35	1.19	125.14	460.53	12
	Construction	39	1.36	102.51	454.63	18
	Real estate, renting and business activities	39	1.21	595.79	1,873.72	61
	Wholesale and retail trade; repair of vehicles	46	1.32	150.00	578.58	33
	Manufacturing	63	1.51	383.06	1,660.62	38
	Transportation and storage	35	1.38	56.59	221.42	20
	Information and communication	36	1.19	208.54	265.19	32
	Professional, scientific and technical activities	33	1.16	218.24	514.63	42
	Hotels and restaurants	33	1.06	72.20	238.70	28
	Other service activities	31	1.40	95.82	200.07	14
	Education	50	1.20	113.55	358.27	33
	Arts, entertainment and recreation	35	1.00	100.81	411.95	14
	Health and social work	67	1.00	1,484.52	1,484.52	50
	Electricity, gas, etc.	50	1.00	411.42	411.42	100
	Negative equity	48	1.25	166.35	630.53	37
Equity ratios	0 to below 10	65	1.41	313.30	1,139.39	17
	10 to below 20	71	1.39	128.52	588.60	16
	20 to below 30	54	1.45	204.35	400.92	10
	30 to and including 100	32	1.29	129.88	444.27	20
	Over 100	0	–	–	–	–
	No information	26	1.23	98.62	695.37	38
Regions	Vienna	24	1.26	86.98	401.51	20
	Burgenland	45	1.12	484.70	1,619.19	29
	Styria	57	1.42	154.91	503.22	30
	Lower Austria	50	1.23	107.55	411.89	26
	Vorarlberg	44	2.06	394.54	1,873.43	28
	Tyrol	48	1.37	200.79	542.38	27
	Salzburg	51	1.18	153.39	869.32	34
	Upper Austria	53	1.27	235.74	1,183.66	43
	Carinthia	54	1.18	208.64	370.22	36
	No information	33	1.00	208.02	439.35	67

Source: OeNB, OeNB Master Data (OBServ), AnaCredit.

[1] *Conditional on having bank liabilities above EUR 25,000.*
[2] *Bank liabilities with at least one Austrian bank.*
[3] *Loans are defined here as the sum over all bank liabilities one firm has with one bank.*

COVID-19-related payment moratoria and public guarantees for loans – stocktaking and outlook

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Refereed by: Thomas Url, WIFO

From March 2020 onward, measures aimed at mitigating the impact of the COVID-19 pandemic on banks and their customers were adopted in Austria, which included payment moratoria and public guarantees for loans. Data reported by banks to the Oesterreichische Nationalbank allow for an analysis of the utilization, expiry and residual maturities of these measures on the basis of consolidated quarterly data covering the period from June 2020 to December 2020 and provide input for a first assessment of financial stability implications.

The bulk of payment deferrals has expired by the end of the first quarter of 2021. Starting from a level of nonperforming loans (NPLs) well below the European average, Austrian banks are well prepared for potential deteriorations in credit quality, having increased their capital buffers in the aftermath of the 2007–2008 financial crisis, and having implemented measures to address future increases in NPLs. In 2020, Austrian banks proactively started to reclassify loans according to IFRS 9, which resulted in an increase of risk provisioning to address potential defaults. This frontloading should help reduce the burden on banks' 2021 balance sheets. We observe a first slight uptick in NPL ratios at the end of 2020 in the nonfinancial corporate loan segment, which at the same time still showed dynamic credit growth.

To assess the impact of potential defaults and their implications for financial stability, we analyze the impact of a severe hypothetical scenario. If half of the loans subject to COVID-19-related support measures (i.e. loans to households and nonfinancial corporations) were to default, the overall NPL ratio would increase to 5.8%, up from 2% as at December 2020. While severe, such a hypothetical scenario would still be manageable for the Austrian banking sector. We do not take into account structural changes in the economy, however, that might be triggered by the pandemic.

Given the payment deferrals, the impacts of the COVID-19 pandemic on credit quality will be reflected in banks' balance sheets with a time lag. While having already established risk provisions in 2020, banks will need to be prepared to handle a potential deterioration in credit quality in 2021 and later on. It therefore remains paramount for banks to monitor the credit quality of their portfolios in order to avoid any cliff effects once all support measures expire. To maintain financial stability in the banking sector in an environment of ongoing uncertainty, two things continue to be very important: proper risk provisioning at an early stage as well as acting in a forward-looking manner regarding the allocation of profits.

JEL classification: G21, G32
Keywords: COVID-19-related measures, payment moratoria, public guarantees, public guarantee schemes, provisioning, nonperforming loans, IFRS 9, payment deferral, credit risk, forbearance

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In the context of COVID-19-induced restrictions on economic activity, banks play a crucial role in shock absorption. They support the real economy by providing much needed liquidity and absorbing deferred payments. Apart from unprecedented monetary and fiscal stimulus packages, European institutions and national governments also put in place support measures, such as payment moratoria and state-guaranteed loans, to help borrowers cope with the situation. These measures were designed carefully so as not to dilute the high standards previously developed for treating nonperforming loans (NPLs)[2]. Consequently, a new reporting scheme was implemented to monitor asset quality in conjunction with the use of these instruments. In a recent study, Puhr and Schneider (2021) simulate the mitigating impact of COVID-19-related support measures on insolvencies in Austria. They find that, while loan guarantees and payment moratoria support borrowers by boosting their liquidity when most needed, some of these benefits might be reversed once the measures expire. Analyzing supervisory reporting data at the group level, we give an outlook for possible asset quality developments and their implications for financial stability in the banking sector.

The paper is structured as follows: section 1 describes the available data and their limitations as well as the set of applicable regulations. Section 2 provides data evidence for the utilization, expiry and residual maturities of support measures. Section 3 presents first indications of the future evolution of asset quality. Section 4 benchmarks Austrian banks against European peers. Section 5 assesses the impact of a severe scenario. Finally, section 6 highlights the impact on financial stability and section 7 concludes.

1 Data and regulatory setting

This analysis is based on data from regular supervisory reporting (FINREP) as well as on the new reporting scheme on payment moratoria, forbearance and public guarantees for loans defined in Guideline 07/2020 of the European Banking Authority (EBA)[3]. This reporting scheme focuses on households (HHs) and nonfinancial corporations (NFCs) because public support measures have been targeting these groups in particular. We use bank data at the highest level of consolidation, including foreign subsidiaries. As a consequence, we cover support measures implemented both in Austria and in countries in which Austrian banks operate. While broadening the perspective, this also comes with some limitations: it is not possible to make separate diagnoses for Austrian support measures. Moreover, the reporting requirements are designed in a proportionate manner – smaller banks need to report less data points less frequently. The established timelines for the reporting processes result in a time lag before data are available for analysis. Our observations are thus based on quarterly data from June 2020 to December 2020.

Public guarantees for loans apply to newly originated loans. The Austrian government provided such guarantees mainly for loans to NFCs, which transferred some credit risk to the government. Guarantees for loans are typically issued for much longer time horizons than payment deferrals. EBA-compliant payment moratoria

[2] *The definition of the NPL ratio used in this paper matches that used in the EBA Risk Dashboard. It thus comprises loans and advances (but not debt securities), captures all types of customers (if not stated otherwise) and is given in gross terms, i.e. before any deductions of collateral or provisioning.*

[3] *Guidelines on reporting and disclosure of exposures subject to measures applied in response to the COVID-19 crisis.*

and other COVID-19-related forbearance measures, on the other hand, apply to existing loans and required new legislation.

In April 2020, the EBA published "Guidelines on legislative and non-legislative payment moratoria on loan repayments applied in the light of the COVID-19 crisis" (EBA/GL/2020/02), clarifying that broadly applied payment deferral schemes do not necessarily trigger the default of a borrower, provided the payment moratoria follow general principles. Such EBA-compliant payment moratoria, established either by law (i.e. legislative payment moratoria) or by the banking sector (i.e. non-legislative payment moratoria), interrupt day counting for the 90 days past due criterion after which a loan is considered to be in default. However, institutions are still obliged to assess the obligor's unlikeliness to pay on a case-by-case basis during the moratorium, which can also result in a loan's default status. Further, the EBA clarified that loans under such payment moratoria do not constitute distressed restructuring and do not automatically have to be classified as forborne.

In contrast, deferral agreements not in line with the principles laid down in the EBA Guidelines (i.e. other COVID-19-related forbearance measures) do not benefit from these exemptions and will imply a forbearance qualification.[4] These loans are reported under the category "other COVID-19-related forbearance."[5]

In Austria, one legislative EBA-compliant moratorium was put in place (and extended), which addressed retail and microenterprise customers. From April 1, 2020, to January 31, 2021, it allowed banks and customers to agree on deferring debt or interest payments for up to ten months.

In addition, one nonlegislative EBA-compliant moratorium focusing on enterprises and leasing activities was put in place. It allowed payment extensions to be agreed between March 15, 2020, and August 31, 2020, for a duration of up to nine months but not beyond March 31, 2021.

Thus, depending on when the agreement was made, deferrals of loan repayments on the basis of the payment moratoria are set to expire in the course of 2021. It is possible at any time to agree on earlier repayment terms.

While it may take some time until first defaults materialize based on the 90 days past due criterion, banks have to continuously monitor customers' unlikeliness to pay, which should help reduce the likelihood of an accumulating backlog of defaults. Later in this paper, we analyze whether the data indicate clusters of new defaults (cliff effects) when payments will have to be resumed.

2 Utilization, expiry and residual maturities of payment moratoria and public guarantees for loans

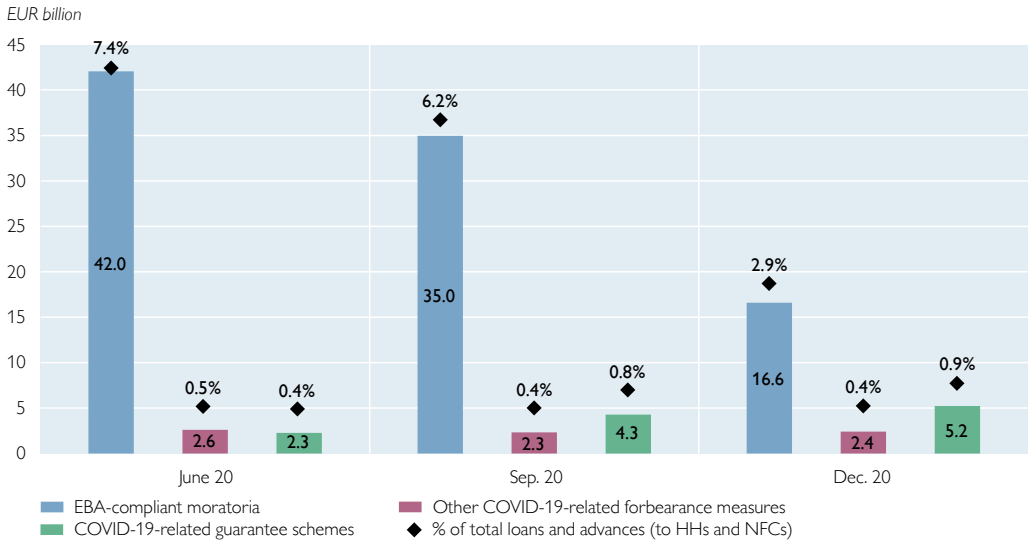
Support measures – such as payment moratoria and public guarantees for loans – were accessible for HHs and NFCs. At the end of 2020, these two groups of customers accounted for about EUR 573 billion or two-thirds of total loans and

[4] *The qualification of loans as forborne results in a more conservative handling, for example regarding the faster redefault of cured loans or the indication of re-forbearance as a default. A loan can be either performing forborne or nonperforming forborne. The assessment of performance has to be done independently of whether a loan is classified as forborne.*

[5] *Exposures subject to EBA-compliant payment moratoria that are also subject to other COVID-19-related forbearance measures are reported as EBA-compliant payment moratoria.*

Chart 1

Development of active support measures (HHs and NFCs)



Source: OeNB.

Note: Data refer to all Austrian SIs and LSIs.

advances[6] of all Austrian banks on a consolidated basis. Given an uptake of EUR 55 billion for (expired and active) payment deferrals and EUR 5.2 billion for public guarantees, some 10.5% of the HH and NFC loan volume were at some point subject to at least one measure. Households account for half of the payment deferrals, and the NFC segment for the other half. As both measures were still open for application in December 2020, the figures were likely to increase further in early 2021.

Chart 1[7] shows the level of active (i.e. net of expired) payment moratoria, other forbearance measures and COVID-19-related guarantees as recorded in June, September and December 2020. We see two trends: first, a decrease in the level of active EBA-compliant payment moratoria, which happen to be the predominant measure. In other words, more existing payment moratoria expired than new ones were granted. Second, starting from a much lower level, COVID-19-related public guarantees for loans were on the rise.

Now we take a closer look at loans with COVID-19-related public guarantees, which on average cover 70% of the loan volume. Compared to loans with payment moratoria, their volume is much less relevant, but their residual maturities are longer. Defaults of loans with public guarantees will also have a much smaller impact on banks' balance sheets, as banks only have to absorb the residual part not covered by the guarantee or any other collateral.

Chart 2 gives an overview of the total volume of these loans (i.e. including the guaranteed part), which amounted to EUR 5.23 billion at end-December 2020. The guarantee was called for about EUR 100 million of this amount. Roughly 90% of these loans were extended to NFCs, the remainder to borrowers classified as HHs.[8] Chart 3

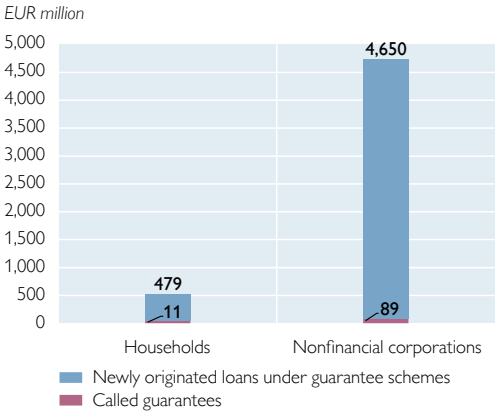
[6] *The remaining borrowers are banks, central banks, governments and nonbank financial intermediaries.*

[7] *SIs refer to significant institutions, i.e. banks directly supervised by the ECB. LSIs refer to less significant institutions, which are banks directly supervised by the Austrian Financial Market Authority (FMA) and the OeNB.*

[8] *Although the Austrian public guarantee scheme was designed to address the corporate sector, some household loans, extended e.g. to freelance professionals, are also included.*

Chart 2

Utilization of COVID-19-related guarantee schemes

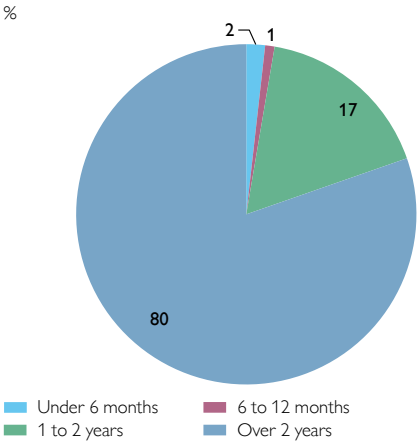


Source: OeNB.

Note: Data refer to all Austrian SIs and LSIs.

Chart 3

Residual maturity of guarantees



Source: OeNB.

Note: Data refer to all Austrian SIs and LSIs.

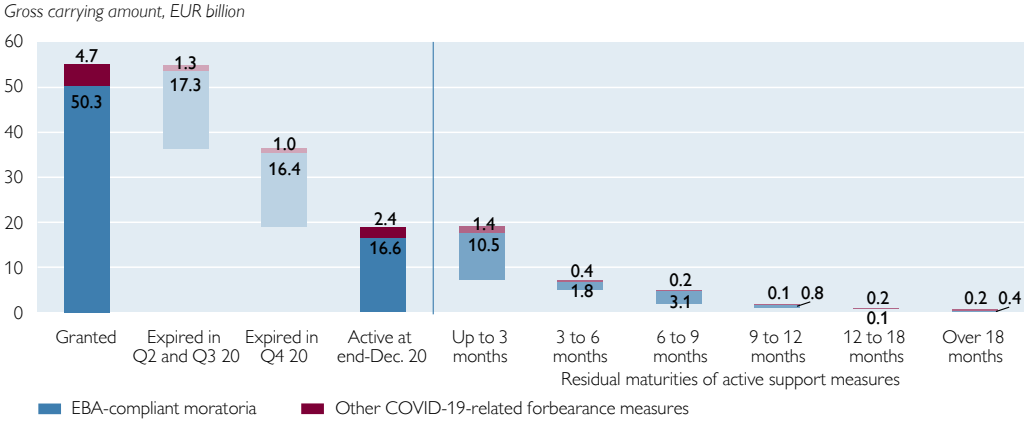
shows that around 80% of the guaranteed loans have a residual maturity of more than two years.

In the following, we will analyze the characteristics of loans with payment deferrals in more depth, given their volume and more immediate impact on banks' balance sheets.

Chart 4 depicts the total volume of all payment deferrals granted since the onset of the pandemic until end-December 2020 that had been reported in the dedicated EBA reporting template on payment moratoria for HHs and NFCs. The first column includes all active and expired payment deferrals, the second column captures all deferrals that expired in the second and third quarter of 2020, and the third column shows all deferrals that expired in the fourth quarter. The fourth column shows the payment moratoria that were active at end-December 2020. The remaining five columns look beyond December 2020, showing the volumes of active payment moratoria based on their remaining maturities.

Chart 4

Total volume of loans and advances with support measures and residual maturities as at end-December 2020 (HHs and NFCs)



Source: OeNB.

Note: Data refer to all Austrian SIs and LSIs.

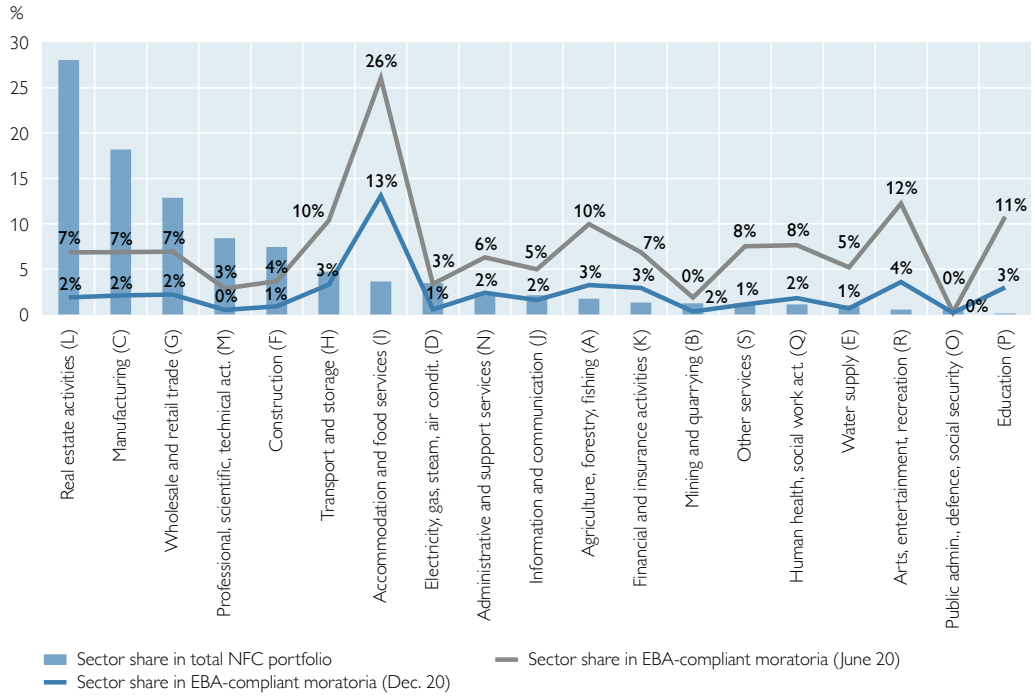
The main information we gain from chart 4 is that 87% of all deferral measures expired before the first quarter of 2021, and only EUR 1 billion reach into 2022. Even more interestingly, a significant share of deferrals already expired by the end of the third quarter of 2020, which – due to the 90 days past due default criterion – might give rise to potential cliffs of NPLs to be observed in the reporting data as of the final quarter of 2020. And, indeed, for the NFC portfolios, we observe a slight first uptick in NPL ratios in the quarterly data as of the fourth quarter of 2020. At the same time, we have to bear in mind that more agreements might still be agreed until January 31, 2021, i.e. one month after the cutoff date for this analysis.

In light of the large number of expiries before December 2020, we conclude that many borrowers did not take full advantage of the maximum deferral period that was legally possible in Austria. This could mean that deferrals that had been agreed at an early stage were not prolonged and that reporting data also reflect payment moratoria in other countries.

Significant institutions (SIs), which account for about two-thirds of Austrian banks' total assets, report more detailed information on the use of payment deferrals for NFCs across industry sectors (NACE classification) than less significant institutions (LSIs) do. Chart 5 shows the relative importance of the different industry sectors and the respective prevalence of EBA-compliant payment moratoria for two reference dates, namely end-June and end-December 2020. As mentioned earlier, the use of payment moratoria generally decreased from June to December 2020, which is also evident at the sector level. Across all NACE sectors, more payment moratoria expired during the second half of last year than were prolonged or newly agreed. Not surprisingly, sectors more heavily affected by lockdown measures also

Chart 5

NACE sector shares in EBA-compliant moratoria vs. total portfolio



Source: OeNB.

Note: Data refer to Austrian banks classified as SIs (as in June 2020).

made heavier use of payment moratoria. The average share of loans under payment moratoria was 6.8% by the end of June and 2.2% by the end of December 2020. By contrast, in accommodation and food services, which is a comparably small sector that accounts for about 4% of the NFC portfolios of Austrian SIs, more than one-quarter of loans was subject to EBA-compliant payment moratoria in June. This figure dropped to 13% in December 2020. The arts, entertainment and recreation sector (12% down to 4%) and the agriculture sector (10% down to 3%) also made heavy use of this instrument. In each of the three largest sectors, i.e. real estate activities, manufacturing and wholesale/retail trade, about 7% of loans were subject to payment moratoria at end-June, with this percentage declining to about 2% until year-end 2020.

3 First indications of asset quality evolution

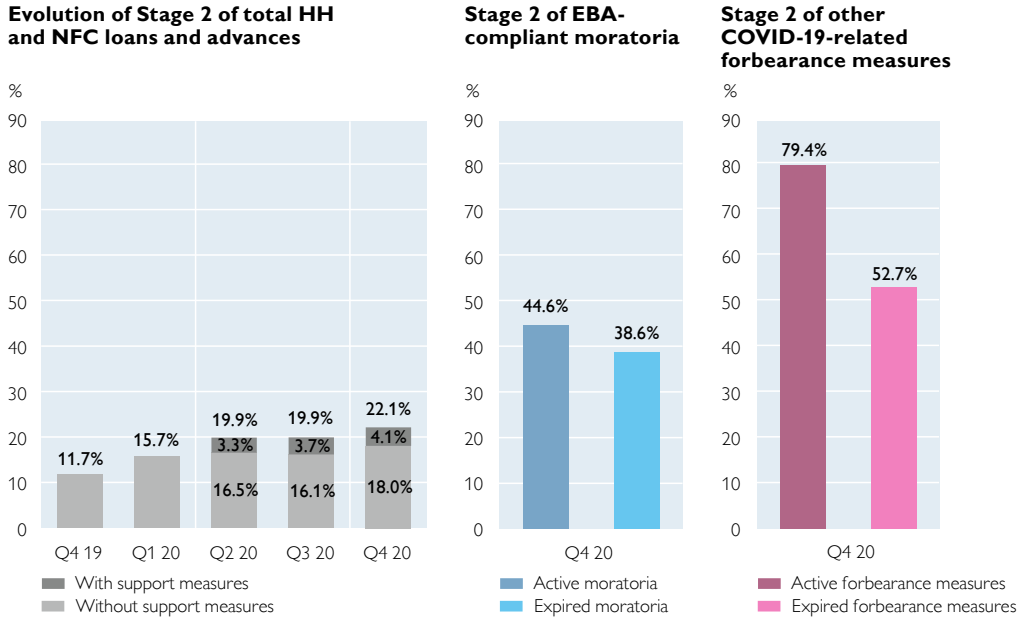
While the previous section shed light on the status quo of the consolidated Austrian banking sector, we now provide a forward-looking snapshot for a subset of reporting banks. To this end, we examine two leading indicators for potential credit risk, namely IFRS[9] 9 Stage 2 classifications and the prevalence of early arrears.

At first, we take a look at the sample of IFRS reporters among Austrian banks: 18 institutions covering around 80% of total HH and NFC loans. IFRS 9 requires banks to reclassify assets from the initial Stage 1 to Stage 2 once credit risk increases significantly. Such a reclassification is particularly relevant because the bank has to recognize substantial additional risk provisions on its balance sheet, thus anticipating losses before loans turn nonperforming, i.e. enter Stage 3.

Chart 6 shows that, once Austria felt the COVID-19 impact in the first quarter of 2020, banks' share of Stage 2 loans in their HH and NFC portfolios started to

Chart 6

Credit quality: IFRS 9 stages for households and nonfinancial corporations



Source: OeNB, IFRS reporter sample.

[9] *International Financial Reporting Standards.*

go up steadily (left panel). By end-2020, about 22% of all HH and NFC loans were classified as Stage 2. The share classified as Stage 2 amounted to 44.6% for loans with active EBA-compliant payment moratoria, and to 38.6% for loans with expired EBA-compliant payment moratoria (middle panel). Further, 79.4% of active, and 52.7% of expired, other COVID-19-related forbearance measures were classified as Stage 2 (right panel).[10] In these areas, specifically, high levels of Stage 2 classifications point to targeted and proactive risk identification and management practices. The observed frontloading of provisions that comes with Stage 2 classifications – which was also called for by supervisors – suggests that Austrian banks took a conservative approach. This assumption is supported when we benchmark Austrian banks against European peers (see section 4). The fact that banks already frontloaded a significant part of provisions in 2020 will relieve some of the burden on their 2021 balance sheets.

As to the forbearance status of HH and NFC loans reported for December 2020, we see that, for loans with payment moratoria, the share of forborne loans is significantly higher at 7.3% (active moratoria) and 6.4% (expired moratoria) than in the overall HH and NFC portfolio (2%). These forbearance flags result in particular from the performing forborne category (as opposed to the nonperforming forborne category). Thus, although no forbearance flag is required for loans subject to EBA-compliant payment moratoria, some of the banks in the sample nevertheless classified loans as forborne, based on their risk management policies or national specificities in host-country regulations.

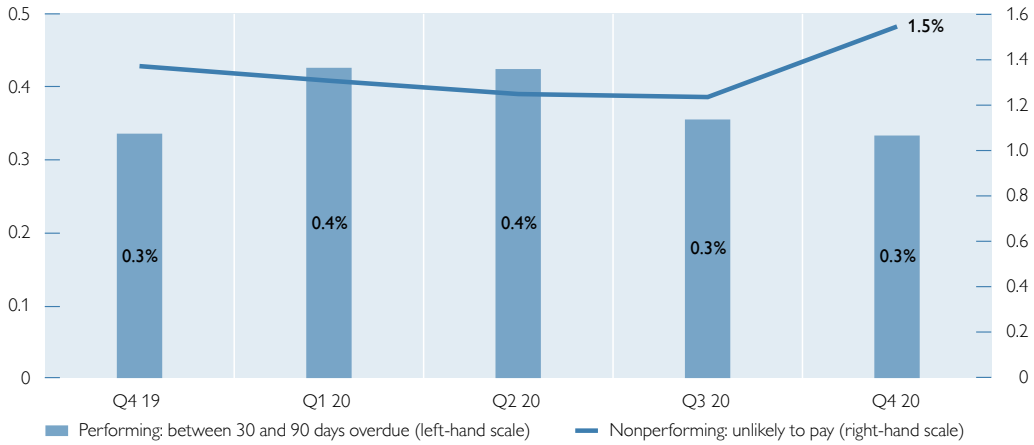
Next, we look at early arrears, i.e. payments that are overdue by more than 30 and up to 90 days, and thus can be taken as an early indicator for upcoming defaults.

Chart 7 shows how both the volume of early arrears and defaults triggered only by the unlikely to pay criterion evolved from end-2019 to end-2020. We observe a

Chart 7

Early arrears of the HH and NFC portfolio

% of total HH and NFC loans and advances



Source: OeNB, IFRS reporter sample.

[10] *Here, one would expect that the whole portfolio is at least subject to Stage 2 or to Stage 3. A forbearance flag would normally at least trigger a Stage 2 classification, and a Stage 3 classification should be in line with a default. The lower Stage 2 share results from one outlier bank and is additionally traceable to a time lag between forbearance and Stage 2 classification or to banks' policies not requiring a strict mechanical conditionality between Stage 2 and forbearance status during the forbearance probation period.*

decrease in early arrears in the third and fourth quarters of 2020, which may be due to some loans turning nonperforming on account of the unlikely to pay criterion. But the decline may also have resulted from the suspension of the days past due counting due to payment moratoria.

4 Benchmarking Austrian banks against European peers

To provide some insight into Austrian banks' provisioning for potential risks in a European comparison, we look at the data in the EBA Risk Dashboard[11] for the fourth quarter of 2020. It analyzes more than 160 large European financial institutions, including seven banks that are domiciled in Austria (consolidated figures).

In Austria, COVID-19-related public guarantee schemes were applied to a much smaller extent of loans than in the European average, but, at more than two years, their maturities were much longer. The portion of a loan covered by guarantees lies at around 70% both in Austria and in Europe overall.

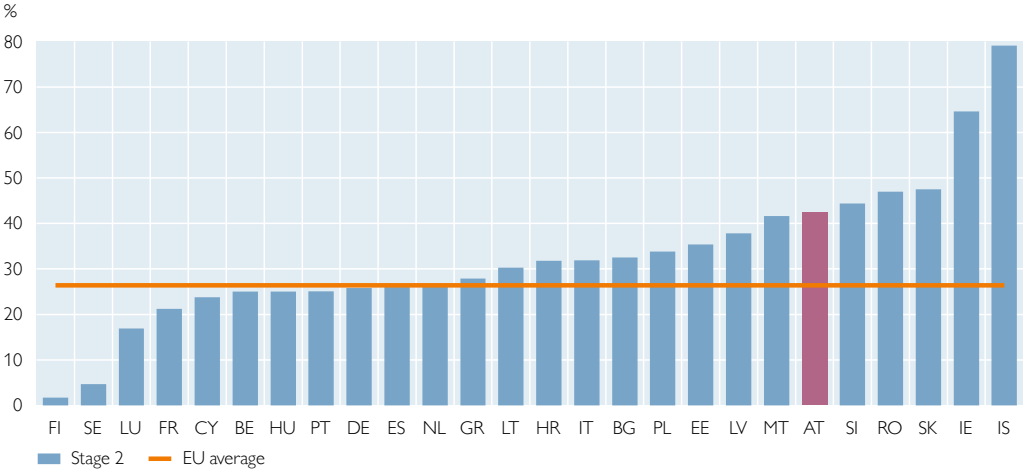
Given the design of the Austrian legislative moratorium, which addressed households and microenterprises, payment moratoria in Austria apply to HHs and NFCs in approximately equal shares, while the European average shows a slightly higher prevalence of NFCs.

On average, European banks built Stage 2 provisions for 9.1% of their total loans, compared to 18.1% for Austrian banks. Of loans with active payment moratoria, 26.4% were classified as Stage 2 for European banks overall, compared with 42.4% for Austrian banks (see chart 8). The Stage 2 shares of loans with expired payment moratoria came to 20.1% and 37.9%, respectively. At the same time, NPL ratios for Austrian total loans and advances (2.1%) have continuously been below the European average of 2.6%, while coverage ratios are well above the European average. This is also true for loans with active and expired payment moratoria, where coverage ratios are higher.

The comparison supports our conclusion that Austrian banks' Stage 2 provisions are an indication of conservative policies rather than a sign of low asset quality.

Chart 8

Loans and advances with active EBA-compliant moratoria classified as Stage 2 (EU-26, year-end 2020)



Source: EBA.

[11] *EBA Risk Dashboard (https://www.eba.europa.eu/risk-analysis-and-data/risk-dashboard).*

5 Assessing a hypothetical severe scenario

Comparisons with international peers suggest that Austrian banks seem well prepared for potential deteriorations in credit quality. Banks built up capital buffers over the past years and NPL ratios declined continuously, standing at 2.0% for the total portfolio at end-2020, or at 2.8% (HHs) and 3.1% (NFCs). In the HH and NFC segments, coverage ratios[12] equal around 50%.

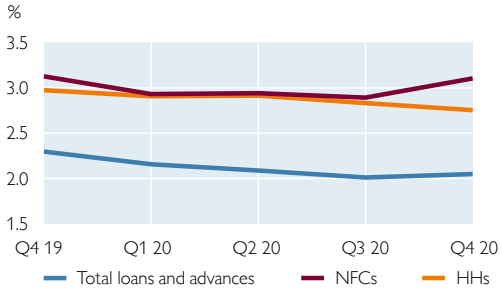
Chart 9 shows, however, that the downward trend in the overall NPL ratio reversed into a small uptick between the third and fourth quarter of 2020, driven by the NFC portfolio. This uptick underestimates the trend reversal given that credit growth, i.e. the inflow of new loans, was still dynamic. In general, slightly higher NPL ratios (+20 basis points) are also reported for HH and NFC loans with (active and expired) payment moratoria than for such loans without payment moratoria.

The increase in NPL ratios in the NFC segment also reflects the rise in defaults due to the unlikely to pay criterion, as shown in chart 7 above. As insolvency filings had been suspended, we conclude that the classification of "unlikely to pay" was assessed separately from the insolvency status.

In a next step, we assess how banks would be affected by a strong increase in NPLs. Please note the hypothetical character of such a severe scenario: it only serves to assess the potential magnitude of possible impacts and should not be misinterpreted as an expected or a likely scenario. Chart 10 illustrates how the NPL ratio for the total loans and advances portfolio would increase if 50% of all currently performing loans (PLs) covered by (active or expired) support measures were to default.[13] This covers all loans reported in the EBA reporting templates for COVID-19-related support measures (EBA/GL/07/2020), which are mostly NFC and HH loans. According to our approximation for this hypothetical scenario, the volume of NPLs would increase to EUR 49.7 billion (compared to actual NPLs at year-end 2020: EUR 17.6 billion[14]) and the NPL ratio would rise to 5.8% (actual NPL ratio at year-end 2020: 2.0%).

Chart 9

Evolution of NPL ratios in 2020



Source: OeNB.

Apart from their hypothetical character, these figures must be interpreted with caution for other reasons as well. First, they represent a severe scenario that assumes that half of all borrowers using COVID-19-related support measures default (defaults in other segments are disregarded, however). Second, an increase in the NPL stock does not translate into provisions of an equal size, as parts of this portfolio are collateralized or have

[12] *We use a coverage ratio that considers only provisioning coverage and not the value of collateral.*

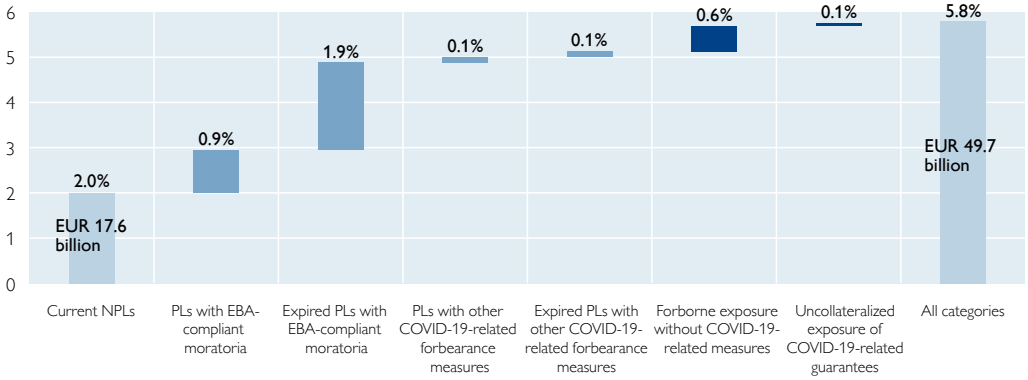
[13] *Besides nonperforming and forborne exposures, this includes performing exposures subject to active and expired EBA-compliant payment moratoria and other COVID-19-related forbearance measures. Furthermore, newly originated loans and advances subject to public guarantee schemes were factored into our calculations with their uncollateralized part.*

[14] *Loans that were subject to support measures accounted for EUR 2.3 billion of this figure.*

Chart 10

Asset quality: severe scenario – impact on NPL ratio based on data at year-end 2020

Share of total loans and advances in %



Source: OeNB.

already been provisioned for. In addition, it can be assumed that an increase in the NPL stock may not manifest itself immediately but over a certain period of time instead, not least because the maturities of the measures differ.

Compared with the consolidated NPL levels after the financial crisis, which stood at 7% in 2009, and peaked at 9% in 2012[15], the scenario outcome seems manageable for Austrian banks, given that capitalization has improved considerably since then. This assessment is consistent with the OeNB's stress test for the Austrian banking sector published in December 2020. Based on a consistent macroeconomic scenario and additional assumptions for other risks, the stress test projected an aggregate NPL ratio of slightly above 7% and a depletion of the aggregate common equity tier 1 (CET1) ratio of about 4.4 percentage points. According to the stress test, banks can even withstand a considerable worsening of the economic environment on account of the ongoing COVID-19 pandemic.

So far, Austrian banks have taken various approaches to dealing with COVID-19-related credit risks. Some have already frontloaded risk provisions in 2020 to cover an expected increase in defaults as both unemployment and corporate bankruptcies are likely to go up in 2021. Importantly, Austrian banks should thus be able to cope with a corresponding increase in credit risks.

6 Financial stability implications

Fiscal support and financial sector policy measures – such as temporary suspensions of the obligation to file for insolvency, payment moratoria or public guarantees – have so far helped limit negative feedback loops between the real economy and the financial system. At the same time, as a result of the support measures, asset quality indicators have become increasingly disconnected from economic realities. With credit growth still strong, it is therefore difficult to gauge potential effects on financial institutions' credit risk and, ultimately, on financial stability.

Policymakers have, however, proactively started to adapt the NPL resolution frameworks with a view to mitigating credit risk. In 2020, the European Commission

[15] *The definition of the consolidated NPL measure has changed in the meantime. So, while this measure is therefore no longer fully comparable, it still gives a good indication.*

revised its NPL action plan of 2017 to address a possible accumulation of NPLs over the medium term and support banks in working out problematic loans.

To complement these activities, banks themselves need to get operationally ready for handling rising volumes of bad loans. This requires fully functional workout units that are endowed with the necessary resources. Banks will also need to adapt their internal policies for managing and resolving NPLs as well as their methodologies for dealing with recoveries and for assessing distressed borrowers' viability. Inevitable credit losses should be identified and worked out in order to release financial resources for financing recovered or emerging segments.

Banks have so far made a substantial contribution to overcoming the pandemic, providing their services without fail despite several lockdowns. Compared with the 2007–2008 financial crisis, banks entered the pandemic with much better capitalization. For this reason, financial stability risks have remained limited, as confirmed by the results of the OeNB stress test in late 2020 (Guth et al., 2020).

7 Conclusions

From our stocktaking, we conclude that the temporary support measures provided in 2020 to borrowers affected by the pandemic have proven effective. Although the pandemic was still ongoing at the cutoff date for this analysis, the lion's share of payment moratoria was scheduled to expire by the end of the first quarter of 2021, and several Austrian banks had already been increasing their risk provisions throughout 2020. This frontloading of provisioning should help reduce the burden on banks' 2021 balance sheets. In a hypothetical scenario, in which half of all loans covered by support measures were to default, Austrian banks' NPL ratio would almost triple to 5.8%. Compared to levels seen after the 2007–2008 financial crisis, this would seem manageable, especially as Austrian banks entered the COVID-19 pandemic with strong micro- and macroprudential capital buffers and a low level of NPLs compared to other European banks. In addition, taking a careful approach to profit distribution can further contribute to banks' financial strength.

The COVID-19 pandemic continues to be a threat to public health and uncertainty remains high. As banks are more resilient today than ten years ago, we find no indication of materializing financial stability risks. To date, banks have played an important role in supporting the economy during the pandemic, and they are also able to support the subsequent recovery.

References

European Banking Authority. 2018. Guidelines on management of non-performing and forborne exposures. GL 06/2018. October.

European Banking Authority. 2020a. Guidelines on legislative and non-legislative payment moratoria on loan repayments applied in the light of the COVID-19 crisis. GL 02/2020. March.

European Banking Authority. 2020b. Guidelines on reporting and disclosure of exposures subject to measures applied in response to the COVID-19 crisis. GL 07/2020. June.

European Banking Authority. 2020c. Guidelines amending the "Guidelines on legislative and non-legislative payment moratoria on loan repayments applied in the light of the COVID-19 crisis (EBA/GL/2020/02)." GL 08/2020. June.

Guth, M., C. Lipp, C. Puhr and M. Schneider. 2020. Modeling the COVID-19 effects on the Austrian economy and banking system. In: Financial Stability Report 40. OeNB. 63–86.

Puhr, C. and M. Schneider. 2021. Have mitigating measures helped prevent insolvencies in Austria amid the COVID-19 pandemic? In: Monetary Policy & the Economy Q4/20-Q1/21. OeNB. 77–110.

Annex: Key financial indicators

Annex: Key financial indicators

Cutoff date for data: May 20, 2021

Conventions used:
x = no data can be indicated for technical reasons.
.. = data not available at the reporting date.

Revisions of data published in earlier volumes are not indicated.
Discrepancies may arise from rounding.

International financial markets

Table A1

Short-term interest rates[1]

	2013	2014	2015	2016	2017	2018	2019	2020
	Three-month rate, period average, %							
Euro area	0.22	0.21	–0.02	–0.26	–0.33	–0.32	–0.36	–0.43
USA	0.27	0.23	0.32	0.74	1.26	2.31	2.33	0.65
Japan	0.24	0.21	0.17	0.08	0.06	0.07	0.07	0.07
United Kingdom	0.51	0.54	0.57	0.50	0.36	0.72	0.81	0.29
Switzerland	0.02	0.01	–0.75	–0.75	–0.73	–0.73	–0.74	–0.71
Czechia	0.46	0.36	0.31	0.29	0.41	1.27	2.12	0.86
Hungary	4.31	2.41	1.61	0.99	0.14	0.12	0.19	0.70
Poland	3.02	2.52	1.75	1.70	1.73	1.71	1.72	0.67

Source: Bloomberg, Eurostat, Macrobond.

[1] *Average rate at which prime banks are willing to lend funds to other prime banks for three months.*

Table A2

Long-term interest rates[1]

	2013	2014	2015	2016	2017	2018	2019	2020
	Ten-year rates, period average, %							
Euro area	3.01	2.28	1.27	0.93	1.17	1.27	0.58	0.21
USA	2.16	2.63	2.14	1.83	2.32	2.81	2.33	0.89
Japan	0.72	0.58	0.37	–0.01	0.04	0.06	–0.08	0.00
United Kingdom	2.03	2.14	1.79	1.22	1.18	1.41	0.88	0.32
Switzerland	0.84	0.85	0.05	–0.36	–0.09	0.03	–0.43	–0.50
Austria	2.01	1.49	0.75	0.38	0.58	0.69	0.06	–0.23
Czechia	2.11	1.58	0.58	0.43	0.98	1.98	1.55	1.13
Hungary	5.92	4.81	3.43	3.14	2.96	3.06	2.47	2.22
Poland	4.03	3.52	2.70	3.04	3.42	3.20	2.35	1.50

Source: ECB, Eurostat, Macrobond.

[1] *Yields of long-term government bonds.*

Table A3

Stock indices

	2013	2014	2015	2016	2017	2018	2019	2020
	Annual change in %, period average							
Euro area: EURO STOXX	17.53	13.07	11.76	–9.67	17.16	–0.48	–0.37	–3.69
USA: S&P 500	19.17	17.49	6.71	1.63	16.92	12.13	6.09	10.45
Japan: Nikkei 225	49.20	13.84	24.21	–11.90	19.41	10.44	–2.77	4.60
United Kingdom: FTSE100	12.69	3.23	–1.38	–1.74	13.96	–0.21	–1.17	–13.75
Switzerland: SMI	24.14	9.28	4.23	–10.12	10.91	–0.16	9.56	4.01
Austria: ATX	16.94	–2.36	1.28	–5.42	34.83	7.56	–8.95	–20.45
Czechia: PX 50	2.53	1.62	0.81	–11.49	14.29	7.88	–2.91	–11.78
Hungary: BUX	3.26	–3.89	17.28	28.94	31.55	5.55	10.10	–10.34
Poland: WIG	16.05	8.07	–0.31	–9.83	30.01	–2.67	–1.25	–13.84

Source: Macrobond.

Table A4

Corporate bond spreads[1]

	2013	2014	2015	2016	2017	2018	2019	2020
	Percentage points, period average							
	Euro area							
AA	0.89	0.63	0.73	0.80	0.73	0.70	0.79	0.86
BBB	2.25	1.75	1.91	2.11	1.70	1.78	1.85	1.83
	USA							
AA	1.12	0.88	1.04	0.93	0.74	0.76	0.72	0.96
BBB	2.17	1.76	2.13	2.21	1.54	1.59	1.73	2.05

Source: Macrobond.

[1] *Spreads of seven- to ten-year corporate bonds against ten-year government bonds (euro area: German government bonds).*

Austrian corporate and household sectors

Table A5

Financial investment of households[1]

	2013	2014	2015	2016	2017	2018	2019	2020
	EUR billion, four-quarter moving sum							
Currency	1.2	0.9	0.9	0.6	0.6	0.8	0.9	2.4
Deposits	1.9	3.2	6.5	10.3	8.8	11.6	11.8	17.6
Debt securities[2]	–1.8	–4.2	–3.5	–2.7	–2.7	–1.8	–1.1	–3.3
Shares and other equity[3]	–0.1	1.9	–0.3	1.1	–0.4	0.2	1.1	6.2
Mutual fund shares	2.7	3.5	4.1	3.1	3.8	2.2	2.6	4.1
Insurance technical reserves	3.4	3.3	1.3	1.0	0.6	0.4	0.8	0.1
Other accounts receivable	0.0	1.7	1.1	–0.2	1.9	0.8	0.6	3.3
Total financial investment	7.3	10.3	10.1	13.2	12.6	14.2	16.7	30.4

Source: OeNB (financial accounts).

[1] *Including nonprofit institutions serving households.*
[2] *Including financial derivatives.*
[3] *Other than mutual fund shares.*

Table A6

Household[1] income and savings

	2013	2014	2015	2016	2017	2018	2019	2020
	EUR billion, four-quarter moving sum							
Net disposable income	185.6	190.7	193.1	201.3	208.2	215.4	222.3	218.2
Savings	13.3	14.0	13.1	15.9	15.6	17.0	18.4	31.9
Saving ratio in %[2]	7.1	7.3	6.7	7.8	7.5	7.8	8.2	14.5

Source: Statistics Austria (national accounts broken down by sectors).

[1] *Including nonprofit institutions serving households.*
[2] *Saving ratio = savings / (disposable income + increase in accrued occupational pension benefits).*

Table A7

Financing of nonfinancial corporations

	2013	2014	2015	2016	2017	2018	2019	2020
	EUR billion, four-quarter moving sum							
Debt securities[1]	1.7	–0.7	0.0	0.7	–1.9	–1.5	–1.2	8.0
Loans	7.0	3.3	5.7	14.1	15.6	16.1	15.5	5.8
Shares and other equity	4.4	4.1	2.5	2.8	12.5	–0.7	2.0	–7.1
Other accounts payable	3.1	2.9	4.5	5.6	0.7	7.3	1.7	–0.9
Total external financing	16.2	9.6	12.7	23.2	26.9	21.2	18.0	5.8

Source: OeNB (financial accounts).

[1] *Including financial derivatives.*

Table A8

Insolvency indicators

	2013	2014	2015	2016	2017	2018	2019	2020
Estimated default liabilities (opened insolvency proceedings, EUR million)	6,255	2,899	2,430	2,867	1,863	2,071	1,697	2,974
Opened insolvency proceedings (number)	3,266	3,275	3,115	3,163	3,025	2,985	3,044	1,789
Dismissed applications for insolvency proceedings (number)	2,193	2,148	2,035	2,063	2,054	1,995	1,974	1,228
Total insolvencies (number)	5,459	5,423	5,150	5,226	5,079	4,980	5,018	3,017

Source: Kreditschutzverband von 1870.

Note: Estimated default liabilities for 2013 include one large insolvency.

Table A9

Housing market indicators

	2013	2014	2015	2016	2017	2018	2019	2020
Residential property price index	*(2000=100)*							
Vienna	196.3	204.6	209.2	217.2	220.4	232.0	243.2	259.6
Austria	156.0	161.4	168.1	180.4	187.2	200.1	208.0	222.6
Austria excluding Vienna	141.1	145.4	152.9	166.7	174.9	189.8	194.8	209.4
Rent prices[1]	*(2015=100)*							
Rents of apartments, excluding utilities (as measured in the CPI)	92.2	95.8	8.4	103.1	107.4	111.4	114.7	119.4
OeNB fundamentals indicator for residential property prices[2]								
Vienna	13.2	13.8	13.9	15.0	17.1	19.8	21.4	20.6
Austria	–2.5	–2.7	–0.7	3.5	8.4	12.3	13.3	13.4

Source: OeNB, Vienna University of Technology (TU Wien).

[1] *Free and regulated rents.*

[2] *Deviation from fundamental price in %.*

Austrian financial intermediaries[1]

Table A10

Structual indicators

	2013	2014	2015	2016	2017	2018	2019	2020
	End of period							
Number of banks in Austria	790	764	738	672	628	597	573	543
Number of bank branches	4,359	4,255	4,096	3,926	3,775	3,639	3,521	3,134
Number of foreign subsidiaries	93	85	83	60	58	55	53	53
Number of branches abroad	151	200	207	209	215	219	229	231
Number of employees[1]	77,712	75,714	75,034	74,543	73,706	73,508	73,203	72,996

Source: OeNB.

[1] *Number of persons, including part-time employees, employees on leave or military service, excluding blue-collar workers.*

Table A11

Total assets

	2013	2014	2015	2016	2017	2018	2019	2020
	End of period, EUR million							
Total assets on an unconsolidated basis	927,155	896,424	859,165	832,267	815,275	854,582	884,964	974,817
Total assets on a consolidated basis	1,089,713	1,078,155	1,056,705	946,342	948,861	985,981	1,032,285	1,136,427
Total assets of CESEE subsidiaries[1]	264,998	285,675	295,557	184,966	205,532	206,582	222,947	234,468

Source: OeNB.

[1] *The transfer in ownership of the UniCredit Bank Austria AG's CESEE subsidiaries to the Italian UniCredit Group limits the comparability of figures as from end-2016.*

Table A12

Sectoral distribution of domestic loans to nonbanks

	2013	2014	2015	2016	2017	2018	2019	2020
All currencies combined	*End of period, EUR million*							
Nonbanks	326,820	328,230	333,743	335,644	341,149	355,869	371,790	385,384
of which: nonfinancial corporations	*140,329*	*136,600*	*137,151*	*135,569*	*143,758*	*153,028*	*162,905*	*169,795*
households[1]	*139,052*	*140,944*	*146,444*	*152,516*	*156,386*	*161,947*	*168,824*	*174,494*
general government	*25,970*	*28,108*	*28,034*	*27,681*	*24,443*	*24,562*	*23,576*	*24,718*
other financial intermediaries	*21,244*	*22,578*	*22,114*	*19,878*	*16,562*	*16,332*	*16,485*	*16,330*
Foreign currency								
Nonbanks	40,108	36,289	33,948	30,088	22,182	20,564	19,618	16,527
of which: nonfinancial corporations	*6,985*	*6,379*	*5,291*	*4,296*	*3,397*	*3,538*	*3,321*	*2,628*
households[1]	*28,385*	*25,374*	*24,423*	*21,224*	*16,486*	*14,993*	*13,590*	*11,582*
general government	*2,478*	*2,777*	*2,861*	*2,623*	*943*	*517*	*471*	*425*
other financial intermediaries	*2,257*	*1,759*	*1,373*	*1,945*	*1,356*	*1,516*	*2,236*	*1,891*

Source: OeNB.

[1] *Including nonprofit institutions serving households.*

Note: Figures are based on monetary statistics.

[1] *The OeNB's financial indicators relate to all banks operating in Austria. For this reason, some of the figures presented here may deviate from the Financial Soundness Indicators published by the IMF.*

Table A13

Loan quality[1]

	2013	2014	2015	2016	2017	2018	2019	2020
	End of period, %							
Nonperforming loans in % of total loans (Austria[2])	4.1	4.4	4.0	3.2	2.5	2.0	1.7	1.5
Nonperforming loans in % of total loans (consolidated)	8.6	7.0	6.5	5.2	3.4	2.6	2.2	2.0
Nonperforming loans in % of total loans (Austrian banks' CESEE subsidiaries)	14.0	11.8	11.5	8.6	4.5	3.2	2.4	2.4
Coverage ratio[3] (Austria[2])	×	×	47	59	60	62	61	68
Coverage ratio[4] (consolidated)	×	×	54	53	52	51	49	49
Coverage ratio[4] (Austrian banks' CESEE subsidiaries)	53	57	59	67	61	64	67	67

Source: OeNB.

[1] *As from 2017, data are based on Financial Reporting (FINREP) including total loans and advances. Data before 2017 only include loans to households and corporations.*
[2] *Austrian banks' domestic business.*
[3] *Total loan loss provisions in % of nonperforming loans.*
[4] *Loan loss provisions on nonperforming loans in % of nonperforming loans.*

Table A14

Exposure to CESEE

	2013	2014	2015	2016	2017	2018	2019	2020
	End of period, EUR million							
Total exposure according to the BIS[1]	201,768	184,768	186,397	193,273	210,616	217,078	233,275	244,480
Total indirect lending to nonbanks[2,3]	161,439	177,389	176,728	108,738	118,268	120,816	133,169	133,437
Total direct lending[4]	52,926	43,144	40,866	32,976	28,507	27,526	23,992	25,656
Foreign currency loans of Austrian banks' CESEE subsidiaries[3]	79,047	76,736	69,317	32,576	31,027	29,836	29,766	30,457

Source: OeNB.

[1] *As from mid-2017, comparability of data with earlier figures is limited due to several methodological adjustments in data collection.*
[2] *Lending (net lending after risk provisions) to nonbanks by all fully consolidated bank subsidiaries in CESEE.*
[3] *The transfer in ownership of the UniCredit Bank Austria AG's CESEE subsidiaries to the Italian UniCredit Group limits the comparability of figures as from end-2016.*
[4] *Cross-border lending to nonbanks and nonfinancial institutions in CESEE according to monetary statistics.*

Table A15

Profitability on a consolidated basis[1]

	2013	2014	2015	2016	2017	2018	2019	2020
	End of period, EUR million							
Operating income	35,271	28,717	28,064	22,408	22,837	24,023	24,997	24,750
of which: net interest income	*18,598*	*19,345*	*18,336*	*14,604*	*14,536*	*15,210*	*15,589*	*15,458*
fee and commission income	*7,590*	*7,741*	*7,730*	*6,562*	*6,885*	*7,097*	*7,226*	*7,314*
Operating expenses	27,318	19,833	17,612	16,687	14,752	15,661	16,733	16,530
of which: staff costs	*10,378*	*9,543*	*8,959*	*8,774*	*8,415*	*8,602*	*8,740*	*8,461*
other administrative expenses	*6,628*	*6,569*	*6,830*	*5,820*	*5,571*	*5,630*	*5,673*	*5,835*
Operating profit/loss	7,953	8,884	10,452	5,723	8,087	8,361	8,264	8,220
Risk provisioning	7,004	6,807	4,655	1,192	1,049	438	960	3,708
Net profit after taxes	–1,035	685	5,244	4,979	6,577	6,916	6,713	3,668
	%							
Return on average (total) assets[2]	0.0	0.0	0.5	0.6	0.8	0.8	0.7	0.4
Cost-to-income ratio	73	69	63	74	65	65	67	67
Risk provisioning to operating profit	88	77	45	21	13	5	12	45

Source: OeNB.

[1] *The transfer in ownership of the UniCredit Bank Austria AG's CESEE subsidiaries to the Italian UniCredit Group limits the comparability of figures as from 2016.*
[2] *Based on profits after tax, but before minority interests.*

Table A16

Profitability of Austrian banks' CESEE subsidiaries[1]

	2013	2014	2015	2016	2017	2018	2019	2020
	End of period, EUR million							
Operating income	12,544	12,159	12,261	7,753	7,914	7,926	8,442	8,243
of which: net interest income	*8,414*	*9,068*	*8,431*	*5,135*	*5,304*	*5,467*	*5,827*	*5,651*
fee and commission income	*3,164*	*3,477*	*3,358*	*2,184*	*2,315*	*2,241*	*2,393*	*2,327*
Operating expenses	6,253	6,413	6,264	4,084	4,216	4,081	4,390	4,412
of which: staff costs	*2,922*	*2,978*	*2,896*	*1,956*	*2,052*	*2,004*	*2,126*	*2,059*
other administrative expenses	*2,599*	*2,762*	*2,752*	*1,726*	*1,753*	*1,672*	*1,652*	*1,746*
Operating profit/loss	6,291	5,746	5,998	3,668	3,698	3,845	4,053	3,831
Risk provisioning	3,348	4,037	3,025	720	340	221	472	1,326
Net profit after taxes	2,201	672	2,050	2,354	2,627	2,913	2,837	1,941
	%							
Return on average (total) assets	0.8	0.2	0.7	1.3	1.3	1.4	1.3	0.8
Cost-to-income ratio	50	53	51	53	53	51	52	54
Risk provisioning to operating profit	53	70	50	20	9	6	12	35

Source: OeNB.

[1] *The transfer in ownership of the UniCredit Bank Austria AG's CESEE subsidiaries to the Italian UniCredit Group limits the comparability of figures as from 2016.*

Table A17

Solvency on a consolidated basis[1]

	2013	2014	2015	2016	2017	2018	2019	2020
	End of period, EUR million							
Own funds	88,994	87,584	87,793	80,699	84,983	86,529	90,928	94,257
Total risk exposure (i.e. risk-weighted assets)	578,429	562,790	537,447	442,870	449,451	465,623	486,507	482,394
	%							
Total capital adequacy ratio	15.4	15.6	16.3	18.2	18.9	18.6	18.7	19.5
Tier 1 capital ratio	11.9	11.8	12.9	14.9	15.9	16.0	16.3	17.2
Core tier 1 capital ratio (common equity tier 1 (CET1) ratio as from 2014)	11.6	11.7	12.8	14.9	15.6	15.4	15.6	16.1
Leverage ratio[2]	6.5	6.1	6.3	7.9	8.2	8.4	8.3	7.7

Source: OeNB.

[1] The transfer in ownership of the UniCredit Bank Austria AG's CESEE subsidiaries to the Italian UniCredit Group limits the comparability of figures as from end-2016.
[2] Definition in 2013: tier 1 capital after deductions in % of total assets. Definitions according to Basel III: 2014–15 (fully phased in) and since 2016 (transitional).

Note: Since 2014, figures have been calculated according to CRD IV requirements; therefore, comparability with previous figures is limited.

Table A18

Market indicators of selected Austrian financial institutions

	2013	2014	2015	2016	2017	2018	2019	2020
Share prices	*% of end-2013 prices, end of period*							
Erste Group Bank	100	76	114	110	143	115	133	99
Raiffeisen Bank International	100	51	56	71	123	91	91	68
EURO STOXX Banks	100	95	90	83	92	62	68	52
Uniqa	100	84	81	78	95	85	98	69
Vienna Insurance Group	100	102	70	59	71	56	70	57
EURO STOXX Insurance	100	104	120	113	124	113	139	120
Relative valuation: share price-to-book value ratio	*%, end of period*							
Erste Group Bank	93	80	108	95	115	89	97	69
Raiffeisen Bank International	51	48	50	59	100	69	62	46
EURO STOXX Banks	81	77	74	72	83	56	61	49
Uniqa	103	78	74	69	86	81	83	57
Vienna Insurance Group	102	98	79	62	71	57	64	52
EURO STOXX Insurance	107	93	102	89	105	92	101	82

Source: Bloomberg.

Table A19

Key indicators of Austrian insurance companies

	2013	2014	2015	2016	2017	2018	2019	2020
	End of period, EUR million							
Business and profitability								
Premiums	16,608	17,077	17,342	16,920	16,975	17,178	17,555	19,082
Expenses for claims and insurance benefits	13,150	14,157	15,514	14,751	14,727	14,088	15,016	15,764
Underwriting results	592	477	475	560	581	507	618	554
Profit from investments	3,354	3,211	3,216	3,051	2,815	2,528	3,118	1,771
Profit from ordinary activities	1,524	1,421	1,354	1,414	1,244	1,168	1,693	744
Total assets	110,391	113,662	114,495	114,707	137,280	133,082	138,411	141,080
Investments								
Currency and deposits	×	×	×	3,247	2,749	3,402	2,732	2,681
Debt securities	*x*	*x*	*x*	*55,006*	*55,616*	*53,830*	*54,679*	*54,331*
of which: issued by domestic residents	*x*	*x*	*x*	*16,760*	*16,157*	*15,342*	*14,832*	*13,942*
issued by euro area residents (other than domestic)	*x*	*x*	*x*	*27,101*	*27,442*	*27,001*	*28,269*	*29,461*
issued by non-euro area residents	*x*	*x*	*x*	*11,145*	*12,017*	*11,487*	*11,577*	*10,928*
Shares and other equity	×	×	×	22,474	21,258	19,677	19,413	21,178
Investment fund shares (incl. money market funds)	×	×	×	33,981	34,877	33,414	37,498	37,702
Insurance techincal reserves and related claims	×	×	×	3,568	3,128	2,683	2713	2,994
Risk capacity[2] (median solvency capital requirement), %	368	380	375	×	276	255	238	220

Source: FMA, OeNB.

[1] *Contains shares, share certificates (listed and not listed) and all equity instruments held by mutual funds.*

[2] *A new reporting system based on Solvency II was introduced in 2017; therefore, some indicators cannot be compared with historical values.*

Table A20

Assets held by Austrian mutual funds

	2013	2014	2015	2016	2017	2018	2019	2020
	End of period, EUR million							
Domestic securities	49,757	52,116	52,970	54,382	54,824	52,480	54,114	56,278
of which: debt securities	*16,203*	*15,467*	*13,609*	*13,278*	*11,879*	*11,313*	*10,759*	*10,563*
stocks and other equity securities	*3,610*	*3,345*	*3,530*	*4,283*	*4,678*	*3,607*	*4,108*	*3,673*
Foreign securities	99,647	110,397	114,833	120,330	128,836	121,038	140,616	146,180
of which: debt securities	*62,972*	*69,642*	*70,326*	*69,911*	*70,353*	*67,956*	*72,949*	*74,332*
stocks and other equity securities	*16,278*	*17,910*	*18,521*	*20,145*	*22,924*	*20,747*	*27,983*	*31,535*
Net asset value	149,404	162,513	167,802	174,712	183,661	173,518	194,730	202,458
of which: retail funds	*83,238*	*89,163*	*91,626*	*94,113*	*97,095*	*89,923*	*101,536*	*105,467*
institutional funds	*66,167*	*73,350*	*76,177*	*80,599*	*86,572*	*83,600*	*93,194*	*96,938*
Consolidated net asset value	128,444	138,642	143,249	148,682	156,173	154,235	168,013	175,248

Source: OeNB.

Table A21

Structure and profitability of Austrian fund management companies

	2013	2014	2015	2016	2017	2018	2019	2020
	End of period, EUR million							
Total assets	670	725	745	691	674	655	716	706
Operating profit	131	158	184	157	177	177	192	209
Net commissions and fees earned	310	368	411	402	407	407	433	453
Administrative expenses[1]	219	246	266	284	267	251	260	255
Number of fund management companies	29	29	29	29	30	24	21	21
Number of reported funds	2,161	2,118	2,077	2,029	2,020	2,017	1,935	1,953

Source: OeNB.

[1] Administrative expenses are calculated as the sum of staff and material expenses.

Table A22

Assets held by Austrian pension funds

	2013	2014	2015	2016	2017	2018	2019	2020
	End of period, EUR million							
Total assets	17,385	19,011	19,646	20,839	22,323	21,494	24,341	24,976
of which: direct investment	*1,640*	*1,065*	*990*	*835*	*848*	*863*	*769*	*789*
mutual funds	*15,745*	*17,946*	*18,656*	*20,004*	*21,475*	*20,631*	*23,572*	*24,187*
stocks	*5,472*	*6,250*	*6,200*	*6,972*	*7,867*	*7,034*	*8,317*	*9,079*
debt	*7,650*	*9,163*	*9,552*	*9,521*	*9,054*	*9,724*	*10,540*	*9,294*
real estate	*583*	*576*	*690*	*754*	*1,165*	*978*	*1,142*	*1,369*
cash and deposits	*2,033*	*1,598*	*1,850*	*1,863*	*2,192*	*1,632*	*1,711*	*1,973*

Source: OeNB, FMA.

Table A23

Assets held by Austrian severance funds

	2013	2014	2015	2016	2017	2018	2019	2020
	End of period, EUR million							
Total direct investment	1,528	1,415	1,565	1,682	1,893	2,416	2,621	2,916
of which: euro-denominated	*1,507*	*1,299*	*1,502*	*1,647*	*1,847*	*2,348*	*2,549*	*2,780*
foreign currency-denominated	*21*	*x*	*63*	*35*	*46*	*68*	*72*	*136*
accrued income claims from direct investment	*21*	*15*	*14*	*15*	*13*	*12*	*9*	*9*
Total indirect investment	4,701	5,912	6,741	7,745	8,720	9,674	10,686	11,733
of which: total of euro-denominated investment in mutual fund shares	*4,220*	*5,190*	*5,790*	*6,743*	*7,429*	*7,989*	*8,724*	*9,803*
total of foreign currency-denominated investment in mutual fund shares	*481*	*722*	*951*	*1,002*	*1,291*	*1,685*	*1,962*	*1,930*
Total assets assigned to investment groups	6,218	7,306	8,294	9,412	10,597	12,052	13,288	14,563

Source: OeNB.

Note: Due to special balance sheet operations, total assets assigned to investment groups deviate from the sum of total indirect investments.

Table A24

Transactions and system disturbances in payment and securities settlement systems

	2013	2014	2015	2016	2017	2018	2019	2020
Large-value payment system (domestic, operated by the OeNB)	*Number of transactions in million, value of transactions in EUR billion*							
Number	1	1	1	1	1	1	1	1
Value	5,906	7,438	6,381	4,316	3,690	1,536[1]	1,412	1,651
System disturbances	3	0	1	4	0	3	0	0
Securities settlement systems								
Number	2	2	2	2	2	2	2	2
Value	369	377	315	335	701[2]	658	639	700
System disturbances	5	2	3	3	0	3	1	0
Card payment systems								
Number	673	856[3]	901	963	1,061	1,178	1,299	1,350
Value	72	91[3]	97	101	108	116	125	115
System disturbances	2	0	2	4	1	2	1	3
Participation in international payment systems								
Number	53	113	144	166	191	217	242	290
Value	1,634	2,463	2,420	3,029	3,242	3,831	3,304	2,252
System disturbances	0	0	0	0	0	0	0	0

Source: OeNB.

[1] *Liquidity transfers from participants' domestic accounts to their own TARGET2 accounts are no longer included under domestic transactions.*
[2] *Free-of-payment (FOP) transactions were first included in the value in 2017.*
[3] *On-us ATM transactions were first included in 2014.*