Financial Stability Report

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Foreword

It is already more than a year since we first became aware of the pandemic that would have such a great impact on our lives. Its repercussions have, of course, not been confined to the economic and financial world, but have been seen above all in our families, schools and other communities. For our country, the second wave of infections proved an especially painful experience; nevertheless, we have several reasons to be optimistic.

One of the largest problems in the latter part of 2020 was the climate of uncertainty. The domestic economy was being aided by an array of support measures, including statutory loan moratoria taken up by many firms and households. We have all been asking ourselves how we can gradually unwind these extraordinary mechanisms. Today, however, we already know far more than we did half a year ago. For example, the gradual expiry of loan moratoria has shown that only a small proportion of households and firms are having difficulty resuming their repayments. Although a certain amount of uncertainty remains, there are strong grounds for optimism.

The Slovak banking sector has sent a clear positive signal by its handling of last year's developments. It was not an easy time, as reflected in the sharp decline in banks' profits. Nevertheless, the banking sector not only showed itself to be secure and resilient, but it also managed to support the domestic economy by maintaining a smooth flow of credit. This is very good news for the Slovak economy. Banks currently have sufficient capacity to continue their lending to firms and households.

Just as important, however, are the grounds for caution. The pandemic's adverse impact on the global economy is still far from over – several imbalances remain present in the economy, including financial market developments and countries' continuously increasing debt levels. At the same time, historically low interest rates have been contributing to the growing indebtedness of Slovak households. Their risk and investment appetite has not diminished, as can be seen in the uptrend in housing prices.

Národná banka Slovenska is therefore carefully monitoring developments in the economy and financial sector, as well as the financial situation of firms and households. The outputs of this activity are not, however, confined to analyses. The Bank also has the tools at its disposal which can support banks or the credit market if the need arises.

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Overview

Economic and financial developments continue to be affected by the pandemic situation more than anything else; however, the second wave of infections was far more moderate in terms of its economic impact

The first wave of the coronavirus (COVID-19) pandemic dealt the economy a shock that was not only large, but very rapid. On a positive note, however, the economic contraction in 2020 was more moderate than projected at the outset of the crisis. Indeed, several key sectors recovered relatively quickly.

The second wave of infections that struck in the autumn and winter had a far greater impact from an epidemiological point of view, but its impact on economic developments was considerably more moderate. Compared with the first wave, the main difference was in the sectoral impact, as some sectors were less affected than they were during the first wave and others experienced almost the same adverse impact.

In terms of impact on the financial sector, the pandemic's second wave was less marked than its first wave. Banks' credit standards were looser during the second wave than during the first wave. After being tightened immediately after the pandemic broke out, credit standards returned back almost to their pre-crisis level, especially in the retail loan book.

In financial markets, too, investor risk appetite rebounded to pre-crisis levels. This movement also reflected changes in the investment portfolios of domestic pension funds and investment funds, which saw increases in their equity components and in the risk parameters of bond portfolios. Contributions to pension funds also returned to their pre-crisis level.

The financial sector has not only remained stable during the pandemic, but has been one of the pillars of the rapid return of economic recovery

Despite the climate of uncertainty, bank lending has played a major role in helping firms cope with pandemic-related revenue shortfalls. During the first wave of infections, the flow of credit to firms was only temporarily hampered, while during the second wave it was actually slightly higher than its pre-crisis level.

The financing of businesses during the pandemic has also been greatly aided by public loan guarantee schemes. In some periods, government-guaranteed loans have accounted for more than half of the new lending during this period. At the same time, banks have taken a prudent approach to the provision of these loans, even though a large part of the risk associated with the guarantees is borne by the state. Firms that were already in poor financial shape going into the crisis have received government-guaranteed loans to a lesser extent than have other firms. Thanks to available financing and the disbursement of compensation under government support schemes, many firms have actually seen their liquidity increase. Since some of their borrowing may have been precautionary in nature, it may be that credit growth will weaken somewhat in the months ahead.

Housing loan growth has continued at close to its pre-crisis pace. By contrast, the downtrend in consumer credit became more pronounced, mainly owing to a decline in household consumption. Unlike other segments of the financial market, consumer lending was also hard hit during the pandemic's second wave.

The financial sector has not, however, emerged unscathed from the pandemic crisis. The banking sector's aggregate profit fell by one-quarter in 2020. It then recorded a year-on-year increase in the first quarter of 2021, as the intensity of loan loss provisioning eased. Whether or not further provisioning will be necessary will depend on how the situation develops.

Insurers have seen declining demand for life insurance. When the pandemic broke out, savers and investors in pension funds and investment funds were immediately exposed to sizeable losses, but these exposures later moderated.

Stress testing has demonstrated the banking sector's resilience, yet uncertainty remains about non-performing loan developments

The data on borrowers' ability to resume loan repayments after the expiry of loan moratoria have not so far surprised on the downside. According to the latest trends, some 0.7% of the retail loan book and 0.9% of the corporate loan book may have become problematic following the expiry of loan moratoria. These figures, however, may not be final since the crisis has not passed and a high degree of uncertainty remains. According to our estimates, if the economy grows as projected, up to 1.3% of retail loans and 3.3% of corporate loans could become problematic. Under an adverse scenario for the economic outlook, those figures are estimated to be twice as high.

Despite such uncertainty, the banking sector is expected to remain resilient even if the adverse scenario materialises. The banking sector's aggregate total capital ratio increased from 18.2% at the end of 2019 to 19.7% a year later. This result was due largely to banks' responsible dividend policies.

Stress testing results show that although banks' profits may fall markedly under an adverse scenario, their total capital ratios should not drop below pre-crisis levels. The resilience of insurers was also demonstrated in the stress test exercise.

From a long-term perspective, low interest rates and rising public debt levels are the main issues

The prolonged low interest environment was already affecting the financial sector before the pandemic outbreak, and its impact has become even more pronounced during the crisis. Banks have seen the trend decline in their interest margins accelerate amid intensive interbank competition in the housing loan market and a decline in consumer lending. In order to maintain rates of return, risk profiles of pension and investment funds, as well as of insurers' assets, have increased. Insurers, moreover, are compensating for lower investment returns by reducing the guaranteed returns on assets covering technical provisions; they are therefore partly offsetting the decline in their potential investment returns by increasing premiums. Another side effect of low interest rates is households' rising demand for direct investment in corporate bonds. There may, however, be several risks associated with such investment, not least insufficient investment diversification, low secondary market liquidity, and the fact that small investors are in a weaker position to assess potential credit risk.

Another longer-term challenge concerns the transition to a green economy. Loans to non-financial corporations (NFCs) whose compliance with greenhouse gas emission reduction targets may lead to an increase in their operating costs make up around one-tenth of the overall NFC loan book. Banks are, however, gradually starting to factor this risk into their credit standards. At the same time, the transition to a green economy will also offer banks new commercial opportunities. These concern mainly the financing of investments related to environmental policy implementation, ecological product development, and the digitalisation of the economy, as well as cheaper sources of funds such as those obtained through green bonds.

The Bank will be closely monitoring further developments with a view to taking appropriate action if necessary

The Bank takes a proactive approach to its use of the countercyclical capital buffer (CCyB). Its partial release of the CCyB in 2020 was consistent with developments in loan loss provisioning, whose rate of increase is now no longer exceeding pre-crisis levels. The buffer may be further reduced if provisioning starts to pick up significantly again or if the riskiness of banks' loan books decreases.

The Bank is also closely following developments in the credit and property markets. Housing loan growth has remained relatively strong even during the crisis, and in March 2021 its absolute level was almost at an all-time high. If imbalances build up again in these markets, there would be grounds for retaining the CCyB to some extent. The Bank is also analysing risks associated with the rising share of housing loans that are due to mature after the borrower reaches retirement age.

1 Macroeconomic environment and financial markets

The world economy is recovering relatively quickly from a contraction of historic proportions

More than one year on from its outbreak, the coronavirus (COVID-19) pandemic is still setting the pace of economic activity around the world. In the context of stringent containment measures necessary to prevent an explosion of infections, the global economy contracted by 3.3% in 2020, in other words by twice as much as it did during the height of the global financial crisis in 2009. During the pandemic crisis, a large number of firms and households lost some or all of their income and saw their financial situation come under pressure.

The economic fallout from the pandemic crisis would have been far more severe, but for timely and resolute responses from governments, central banks and regulatory authorities. The different types of stimuli, relief and guarantees for firms and households are a major reason why short-term losses of revenue and income had only a limited upward impact on bankruptcies and unemployment, which would otherwise have weakened economic potential for a long time. Therefore, just as importantly, financial stability has remained relatively undisrupted and the problems in the real economy have not spilled over into a full-blow financial crisis that would amplify the crisis dynamics.

After GDP levels plummeted in spring 2020, by record margins in many countries and regions, they recovered relatively quickly in the third quarter. Even though the pandemic situation around the world became significantly worse again in the latter part of the year and necessitated a new round of stringent restrictions on economic life, the economic consequences were far milder compared with the initial phase of the crisis. Since the end of 2020, this more positive trend has also been supported by improved sentiment among economic actors, stemming from favourable news about vaccination progress as well as from the additional fiscal and monetary stimuli response in several major countries. It is generally assumed that as the share of the population vaccinated against COVID-19 gradually increases, particularly in advanced economies, then containment measures will be significantly eased around the end of the second quarter or in the third quarter of 2021. This will give economies a significant boost. Assuming such conditions, the International Monetary Fund (IMF) estimates that global GDP will increase by 6% in 2021. In the United States, which is leading the global economic recovery, GDP is expected to rebound past its pre-crisis level as early as sometime during this year.

After slipping into slightly negative territory in the last quarter of 2020 and apparently remaining there in the first quarter of this year, the euro area's GDP is expected to return to positive growth in the second quarter. Its recovery, however, will be somewhat more gradual, partly because of the slow start to vaccination campaigns in euro area countries. Last year euro area GDP slumped by 6.6%, while this year it is projected to grow by just over 4%, which means it will not return to its pre-crisis level until 2022 at the earliest.

Risks to financial stability are primarily related to the duration and intensity of the pandemic

The principle downside risk to the broadly expected scenario of a robust global economic recovery starting in the second half of 2021 is a potential, unpredictable turnaround in the progress of the pandemic. Favourable projections about a resurgence of economic growth rest on the assumption that the pandemic will gradually be brought under control through vaccination roll-out. The implementation of a successful vaccine-driven strategy for exiting the pandemic crisis faces several challenges. First of all, the vaccines must prove to be effective. Once that is established, the vaccines must be efficiently produced and distributed on a large scale, so that the vaccination of the population progresses as quickly as possible. The slower the vaccination progress, the greater the chance that the virus will mutate into a more virulent or more resistant strain, the spread of which would dash any hopes of an early normalisation of economic conditions. Last but not least, it is necessary that a critical mass of the population be vaccinated in order to achieve herd immunity.

Thanks to government-sponsored support programmes and accommodative financial conditions, a systemic collapse of the corporate sector's financial position has been averted. Despite a recession of historic severity, the corporate sector has so far been shielded from the risk of a surge in bankruptcies. Even so, there remains the risk of a deterioration in firms' sound balance sheets and in their debt servicing capacity. Problems could arise if government support schemes are ended in a hasty and abrupt manner, before the economic recovery is on a sustainable footing. The corporate sector's resilience would naturally come under severe strain if economic performance were weakened over the longer term by recurring pandemic waves. Another risk factor is that many firms have responded to pandemic-related cash-flow losses by borrowing from banks or on financial markets, thereby abruptly increasing the corporate sector's already relatively elevated debt burden. This increased debt burden would exacerbate firms' vulnerability if, in particular, the epidemiological, and hence also economic, situation took a less favourable turn. Even if overall conditions in the corporate sector showed an uptrend, the pandemic has evidently created stark dividing lines between firms according to their vulnerability risks – whether on the basis of the sector in which they operate or their size.

The accommodative financial conditions created by central banks, particularly those in advanced economies, have had a significant global impact in moderating the economic repercussions of the pandemic-induced shock; nevertheless, they also entail the risk of imbalances building up and greater risks being undertaken in the financial market. Prices of assets, especially riskier assets, nosedived after the onset of the pandemic crisis. Once the initial shock had passed, however, prices rebounded relatively quickly to, and in some cases beyond, their early 2020 levels. The most notable example of assets whose prices have in recent months hit new historical highs are US equities. Comparing the price level of equities in the S&P 500 index with general economic fundamentals, as well as with the profitability of the firms in question, indicates that they may be overvalued. If, however, we look at the same matter in terms of premium defined as the difference between equities' earnings yield and the current negative real interest rates, the value of this indicator lies around its long-run average and the valuation of these equities appears to be broadly appropriate.[1]

Increased caution is also in order, given that some of the behaviour seen in the financial market during the last year was indicative of rising risk appetite. One of the warning signals is the extremely high demand for alternative assets, such as cryptocurrencies. Bitcoin prices soared several times higher within a period of a few months. Above-average growth, as well as the increasing volatility in the share prices of a small group of tech giants since the start of this year, is raising questions about whether there will be any significant price correction in this segment. Also worth noting is the dramatic increase in investor inflows into special purpose acquisition companies (SPACs),[2] entities focused on pooling capital with-

1 These statements are based on analyses by the International Monetary Fund (in the IMF Global Financial Stability Report, April 2021) and the Bank for International Settlements (BIS Quarterly Review, March 2021).

2 A special purpose acquisition company (SPAC) is a corporation which is listed on stock exchange and is created specifically to pool funds in order to finance a future merger or acquisition of a target private company not yet listed on a stock exchange. SPACs raised almost USD 100 billion from investors in 2020, and they raised a similar sum the first quarter of 2021.

out having a more specific investment plan in place. The elevated activity of retail investors in equity markets is also a potential sign of increasing risk appetite. Low credit spreads tell a similar story, as does the high issuance of speculative-grade corporate bonds. Demand for these securities is coming from financial institutions such as insurers, pension funds and investment funds, whose portfolios, however, are consequently deteriorating in terms of credit risk, interest rate sensitivity and liquidity. Given their increasing sensitivity resulting from such exposure, these financial entities may, during a future episode of financial market turbulence, prove to be a highly procyclical and destabilising element within the system as a whole.

With the arrival of 2021, the risks of inflation and increasing market interest rates came to the fore. Underlying inflation rates across the world have recently been trending upwards. The driving factor behind this movement has been the rebounding of commodity prices from previous lows. This effect is, however, expected to be only temporary. A more significant development has been the increase in market-based inflation expectations and inflation risk, as reflected in increasing term premia and consequently in a rise in the long end of the yield curve in the United States. This trend has spilled over to other countries to a lesser extent and has also caused equity indices to wobble. This financial market response was triggered mainly by the United States' USD 1.9 trillion fiscal package in 2021, which came shortly after a USD 900 billion stimulus was passed in late 2020. In addition, there are also billions of dollars' worth of other government programmes focused on infrastructure investment. Such expansionary fiscal policy will, of course, be a tonic not only for the United States itself, but also, via the foreign trade channel, for the broader global economy. On the other hand, the unprecedent size of the stimulus is raising concerns about potential overheating of the US economy and about whether the inflation uptrend will be longer-lasting. The rest of the world would be exposed to such a risk if the Federal Reserve responded to inflation developments with a sudden tightening of financial conditions. An increase in interest rates could lead to risk repricing in financial markets and impair the availability of financing in countries whose economies are still not prepared for it.

One key reason why the pandemic crisis has not as yet caused a major disruption to financial stability is that the banking sector, sitting at the centre of the whole financial system, has so far shown strong resilience. The banking sector is in a more robust position now than it was during the global financial crisis, because its capitalisation and liquidity were in better shape going into the pandemic crisis, particularly so in the euro area. Banks have also been protected from higher credit risk losses by programmes initiated to support firms and households, including direct transfers from the government, public loan guarantee schemes, and statutory loan moratoria. Some borrowers, especially those operating and working in the sectors hardest hit by the crisis, will of course not be able to service their debts once public support measures have expired, and banks can therefore expect to see an increase in non-performing loans (NPLs) in their credit books. Banks are, though, prepared for this scenario to some extent, after having stepped up their loan loss provisioning in 2020, particularly in the second quarter. Rising loan delinquencies and their coverage are not expected to become a problem unless the pandemic keeps recurring and stalls the economic recovery. Even in this scenario, however, the results of Europe-wide stress testing show that most banks are sufficiently well capitalised to be able to cope with the situation.

Fiscal support measures have helped the private sector deal with the pandemic-induced shock, though at the cost of increasing the vulnerability of public finances. Public finance positions deteriorated dramatically in 2020, as expenditure climbed and revenues declined. The average budget deficit for advanced economies increased fourfold, to almost 12% of GDP. The average deficit for advanced economies in the euro area was somewhat lower, at 7.6% of GDP. After falling gradually in previous years, the euro area's average public debt burden shot back up in 2020, from 84% of GDP to 97% of GDP. In Italy and Spain, the public debt ratio increased by more than 20 percentage points. The euro area's public indebtedness is projected to rise slightly further in 2021, before following a gradual downward path in subsequent years. Owing to low interest rates and the acquisition of government bonds under the ECB's asset purchase programmes, euro area countries have so far not had any difficulty in financing their increased deficits and debts. Nevertheless, public finance sustainability may come under pressure if the pandemic persists and so has additional adverse effects on government budgets. In such a scenario, public finances could be exposed to the risk of increasing defaults on government-guaranteed loans to the private sector. Public sector indebtedness could face another unfavourable dynamic in the event of market interest rates increasing – whether in the context of inflation risk or of investors becoming increasingly averse to investing in government bonds.

Slovakia's economy was recovering quickly in the second half of 2020 until its progress was stalled by the pandemic's second wave

After contracting sharply in the second quarter of 2020 because of the pandemic crisis, the Slovak economy began to rebound quite rapidly in the second half of the year. The recovery was driven by rising exports, with the automotive industry in particular experiencing a relatively stable period of production. Thus, the pessimistic expectations expressed in the first half of the year about the economy shrinking by close to double digits in 2020 did not come to pass. In the end, thanks to its rally in the second half of the year, the Slovak economy contracted by 4.8% in 2020, which was close to the EU average.[3] The largest negative contribution to GDP growth came from investment, which slumped by more than one-tenth following the onset of the crisis.

The favourable trend in the second half of the year was halted by the pandemic's second wave. The necessary tightening of containment measures at the start of 2021 adversely affected several sectors of the economy. Hardest hit by the crisis were accommodation and food service activities, travel and tourism activities, and sports and leisure activities, while other sectors also experienced a weakening of activity. With the onset of spring and rising vaccination rates, containment measures started to be gradually eased, and this was reflected in rebounding economic activity.[4] After weakening in the early part of the year, economic sentiment began gradually to improve.[5] The recovery has therefore been gaining momentum, and the economy is expected to return to its pre-crisis level in the second half of this year.

Although the impact of the pandemic crisis on the labour market has been gradual, the increase in the number of unemployed was higher in the second wave than in the first wave. Hence the unemployment rate stood at almost 8% in March 2021,[6] 0.33 percentage point higher than in the previous July, its peak level in 2020. From the outbreak of the pandemic crisis until April 2021, the number of registered unemployed has increased by 66 thousand to 235 thousand. In their efforts to stem the effects of the crisis, firms have preferred shortening working hours to laying people off,[7] thereby mitigating the crisis's impact on the labour market. After recording its highest ever decline in the second quarter of 2021, the average wage in Slovakia rebounded, and by the end of the year its annual growth rate stood at 4.7%. Looking ahead, it is expected that labour market developments will reflect the economy's gradual recovery and the unemployment rate will peak in the middle of this year.

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3 The EU economy contracted by 6.1%, the median decline in EU countries' economies was 4.8%.

4 Revenues recorded in the eKasa online cash register system (operated by the Slovak Financial Administration) were 40% higher in April 2021 than in January 2021.

5 The Economic Sentiment Indicator increased by one-quarter between February and April 2021 (source: SO SR).

6 The registered unemployment rate (source: Central Office of Labour, Social Affairs and Family of the Slovak Republic).

7 Although the number of employed (ESA 2010 classification) fell by 1.6% during the pandemic crisis, the number of hours worked slumped by as much as 4.6%.

Box 1

Scenarios of macroeconomic and financial developments for stress testing purposes

For the purposes of assessing financial sector risks and of estimating the impact of economic developments on the financial sector, this Financial Stability Report uses two scenarios of economic developments. The baseline scenario[8] assumes that the economy contracts only in 2020 and then gradually recovers in 2021, whereas the adverse scenario assumes a further economic decline in 2021 followed by a sluggish recovery in subsequent years.

Table 1 Macroeconomic development scenarios

	Actual data	Baseline scenario			Adverse scenario		
	2020	2021	2022	2023	2021	2022	2023
GDP (annual percentage change)	-5.7	4.7	4.6	3.9	-0.9	2.5	3.1
Employment (annual percentage change)	-1.9	-1.0	0.9	1.0	-3.3	-1.1	0.3
Unemployment rate (percentage)	6.8	8.0	7.7	6.9	10.0	11.4	11.3
Inflation (percentage)	2.0	0.6	1.7	1.9	0.5	1.5	1.5
Real household disposable income (annual percentage change)	-0.5	2.0	2.6	2.4	-0.9	0.8	0.9

Source: NBS.

The baseline scenario of economic developments assumes that the economy, after contracting in 2020, returns to significant positive growth in the next three years. The economic recovery is assumed to be driven by both domestic and foreign demand. In this scenario, the spread of COVID-19 infections is successfully stopped and therefore the economy returns to its pre-crisis level as early as the end of 2021. The labour market situation stabilises, but it does so with a certain lag compared with economic developments; hence the unemployment rate continues increasing in 2021 and does not return to 2020 levels until near the end of the scenario period (i.e. the end of 2023). On the other hand, annual wage growth maintains a stable pace. Real household disposable income therefore recovers quite quickly from its 2020 decline, and its growth has a positive impact on household consumption.

The adverse scenario assumes that the ongoing crisis is slow in coming to an end, perhaps because, for example, the vaccination roll-out is slower and less successful, or new mutations emerge, or there are further pandemic waves. In this situation, the smooth easing of containment measures is no longer possible, so the economy declines again in 2021 and its subse-

8 The baseline scenario was set for the stress test and is not identical to the baseline scenario in the Bank's March 2021 Medium-Term Forecast (MTF-2021).

quent recovery is very sluggish. Even by the end of the scenario period, the economy has not returned to its pre-crisis level. In this scenario, the unfavourable situation is also reflected in the labour market, with the unemployment rate rising into double digits and remaining there throughout the scenario period. Not even relatively stable wage growth manages to prevent a decline in household disposable income in 2021. Since that income picks up only gradually towards the end of the scenario period, household consumption makes a limited contribution to economic growth.

Negative developments in financial markets are envisaged in the adverse macroeconomic scenario. Equity indices are assumed to fall by 35% within the first year of the scenario period, and the long end of the yield curve moves up. The zero-coupon yield on ten-year euro area bonds increases by 100 basis points by the end of the scenario period (31 December 2023). This scenario also assumes a widening of credit spreads on government bonds issued by more vulnerable euro area countries and an increase in credit risk premia on private sector bonds (the ITraxx index rises by 350 basis points).

2 Financial sector trends and risks

2.1 Financing of the economy during the pandemic

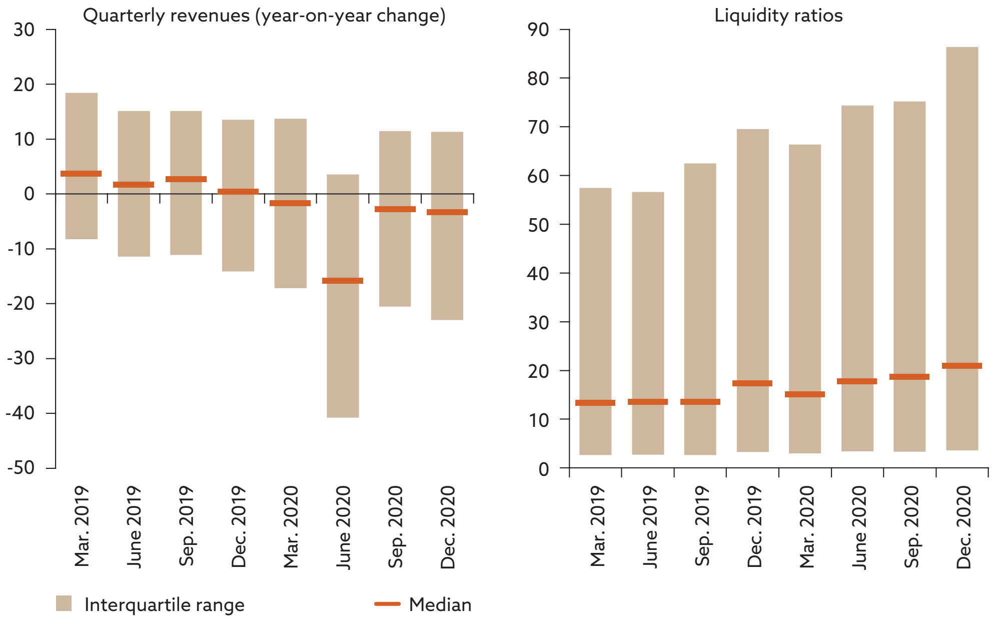
Despite their revenues falling sharply, firms' liquidity positions improved

Many firms have experienced a sharp drop in revenues because of the pandemic crisis. The most difficult period in terms of the severity of the decline and the proportion of firms affected was the second quarter of 2020, i.e. during the first wave of the pandemic crisis. Subsequently, the situation improved in some parts of the business sector but remained depressed in other parts. The revenues of around one-quarter of firms continued to be at least 20% below their pre-crisis level.

Chart 1

Revenues fell in 2020, mainly in the second quarter, while liquidity increased during the year

Distribution of annual rates of change in revenues for quarterly periods and distribution of liquidity ratios (percentages)



Sources: SO SR, and NBS.
Notes: The source of data was a sample of around five thousand firms, mostly medium-sized and large enterprises. The liquidity ratio is defined as the ratio of financial assets (cash and bank deposits) to liabilities.

Contrary to initial expectations, these revenue shortfalls did not cause a deterioration in firms' liquidity.[9] In fact, for a number of reasons, cor-

[9] The sample of firms analysed comprised mainly medium-sized and large firms.

porate liquidity actually improved slightly during 2020. The main reasons were savings on operating and investment expenses, the drawing-down of credit lines immediately after the crisis broke out, and the relatively easy access to new financing supported by government-guaranteed loans. Liquidity was also supported by other public measures aimed at mitigating the effects of the crisis, including statutory loan moratoria and tax deferrals. Some firms have to an extent been frontloading liquidity, especially with the pandemic's second wave having re-escalated uncertainty in the corporate sector. Even among firms blighted by heavy revenue shortfalls,[10] liquidity positions have not deteriorated significantly. These firms were in a better liquidity situation going into the crisis and were also not exposed to any reduction in the availability of financing.

Corporate loan growth maintained a solid pace even in the middle of the pandemic's second wave

Loan growth in the first three months of 2021 maintained the favourable pace observed in the last quarter of 2020. Total loan growth in both periods was driven by an acceleration of lending to non-financial corporations (NFCs) in the private sector. In the first quarter of 2021 the average annual growth in loans to private sector NFCs stood at 4.2%, while during 2020 it did not average more than 3%. Borrowing by micro and small enterprises accounted for the bulk of that loan growth.[11] In the case of loans to micro enterprises, their growth rate remained in double digits,[12] while loans to small enterprises recorded the largest acceleration.[13] Lending to small firms was supported to a large extent by public loan guarantee schemes.[14] Public guarantees were also, however, important for micro and medium-sized enterprises; their absence would have reduced the annual growth in loans to these firms by five percentage points. There was also a moderate improvement in lending to medium-sized enterprises.

In the breakdown of corporate loan growth by loan maturity, loans with a maturity of more than five years were the main component. Their growth was significantly supported by government-guaranteed loans, which were provided largely to firms operating in the sectors worst affected by the pandemic crisis (accommodation and food service activities), as

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[10] Firms whose revenues in 2020 fell by more than 30% year on year.

[11] Of the total growth in corporate loans, lending to micro enterprises and small enterprises accounted for one-half and one-quarter respectively.

[12] The average rate for the first quarter of 2021 was 11.2%.

[13] In the first quarter of 2020 the total amount of these loans fell by 3.5%, while in the first quarter of 2021 it increased by 6.8%.

[14] The growth in loans to small enterprises would have been seven percentage points lower if government-guaranteed loans were not included in the total. In other words, for most of the previous months, growth in total loans to these firms would have been in negative territory or just above zero.

well as to firms in several major sectors: trade, industry, and construction. In the sectoral breakdown of total corporate loan growth, lending to the commercial real estate and construction sectors accounted for the largest shares. Total loans to the trade sector fell year on year.

Demand for working capital financing weakened during the pandemic's second wave. The decline in demand for short-term financing followed a period of relatively robust growth in that financing, when firms took advantage of its ready availability in order to cover losses caused by the pandemic crisis. From a sectoral perspective, there was a significant slowdown in the growth of loans to industry, one of the few sectors whose revenues picked up relatively strongly in the last quarter of 2020.

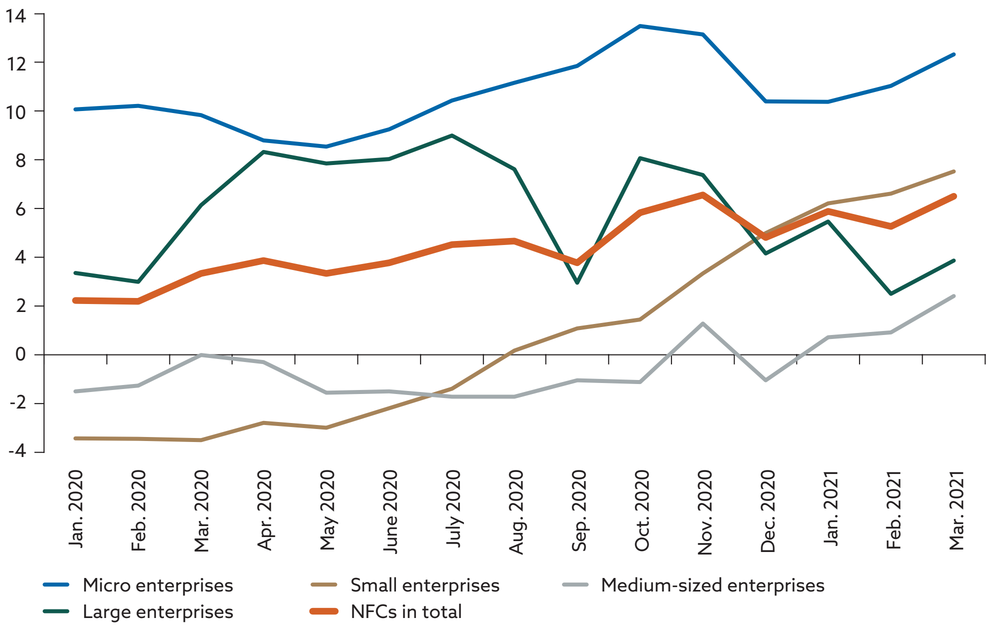
A moderate increase in investment activity had a positive impact on lending activity. However, the only investment loans to record moderate growth were those with a maturity of up to five years; total investment loans continued to decline in year-on-year terms.

The near term is expected to bring a decline in firms' demand for new loans. One reason for that is the fact that firms have been frontloading liquidity, as mentioned above. Rising optimism may result in existing loans being paid off to a greater extent, which may dampen growth in loans (especially to large and medium-sized firms). In many cases, loans taken out in response to increasing uncertainty were in the end not used, and the firms in question have less need to finance new investment than they did before the crisis because the economic situation remains suboptimal.

Chart 2

NFC loan growth accelerated slightly

Annual rate of change in total loans to NFCs broken down by firm size (percentages)



Sources: NBS, and RBUZ.

Public loan guarantee schemes enabled injections of financing to cover business operations

Public guarantees have played an important role in corporate loan growth during the pandemic crisis. By the end of the first quarter of 2021, the total amount of government guarantees provided during the crisis stood at around €800 million. In the breakdown of total lending by firm size, guaranteed loans accounted for a significant share of the loan growth in most size categories. Large enterprises drew the smallest share (5%) of guaranteed loans. Among micro enterprises and small and medium-sized enterprises, guaranteed loans made up a much larger share of new loans, more than half in some months.[15] Government guarantees also supported lending to new borrowers that had never previously had recourse to financing from the domestic banking sector or had been financed primarily by another bank.

Demand for government-guaranteed loans has been falling since the start of 2021, mostly because of developments on the demand side. The largest increases in government-guaranteed loans were recorded in the third quarter and early in the fourth quarter of 2020. The uptake of these loans was already notably lower during the first months of this year, indicating that the decline may have been due largely to falling demand from firms. In the first months following their introduction, the public loan guarantee schemes were an additional source of important assistance for firms trying to get through a period of revenue shortfalls. The uptake of guarantees and deferral of investment plans caused an increase in liquidity held in the corporate sector as a whole. The decline in the uptake of guarantees may therefore be a result of firms having satisfied their need for additional liquidity.

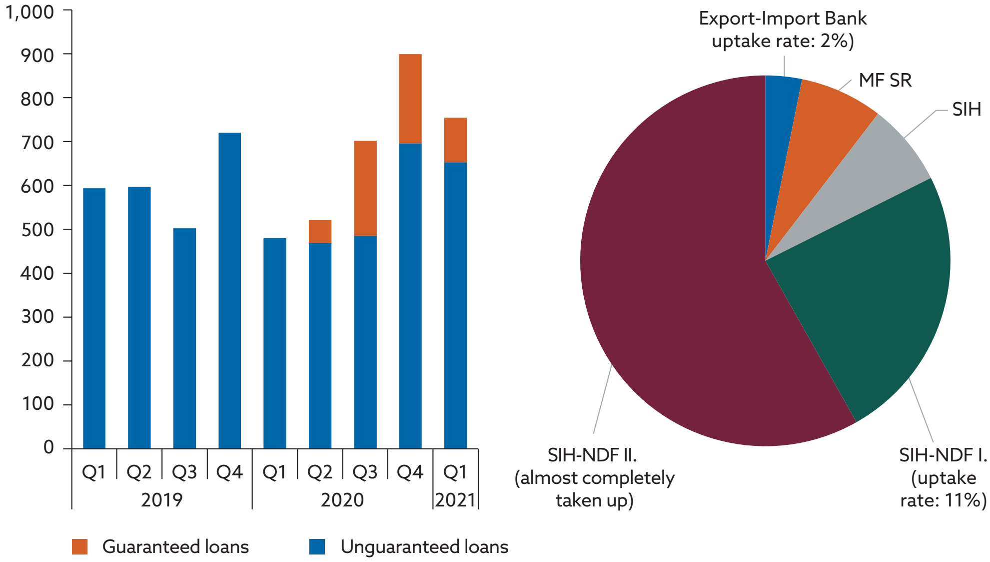
Another factor behind the lower uptake of government-guaranteed loans may be the conditions and red tape attached to the guarantee schemes. This applies mainly to conditions for the granting of a guarantee and the requirements for the waiving of a guarantee fee, as compliance with them may be difficult to prove. Red tape may be diminishing the uptake of some guarantee schemes. While the guarantees available under the SIH-NDF II. scheme have been virtually used up, not even one-tenth of the guarantees available under SIH-NDF I. have been used and hardly any of the guarantees available through the Export-Import Bank of the Slovak Republic have been used.

15 The share of guarantees in new loans peaked in the period from July to November 2020.

Chart 3

The uptake of public guarantees has slowed in 2021, and demand has centred on only some guarantee schemes

Left-hand chart: total amount of new loans (EUR millions)
Right-hand chart: The shares of different guarantee schemes in the total amount of public guarantees provided between the start of the pandemic crisis and the end of March 2021 (percentages)



Sources: NBS, and RBUZ.
Notes: MF SR – Ministry of Finance of the Slovak Republic; SIH – Slovak Investment Holding, a.s.; NDF I. – National Development Fund I., s.r.o., NDF II. – National Development Fund II., a.s. The left-hand chart does not include the later drawing-down of new loans and new loans provided to large enterprises.

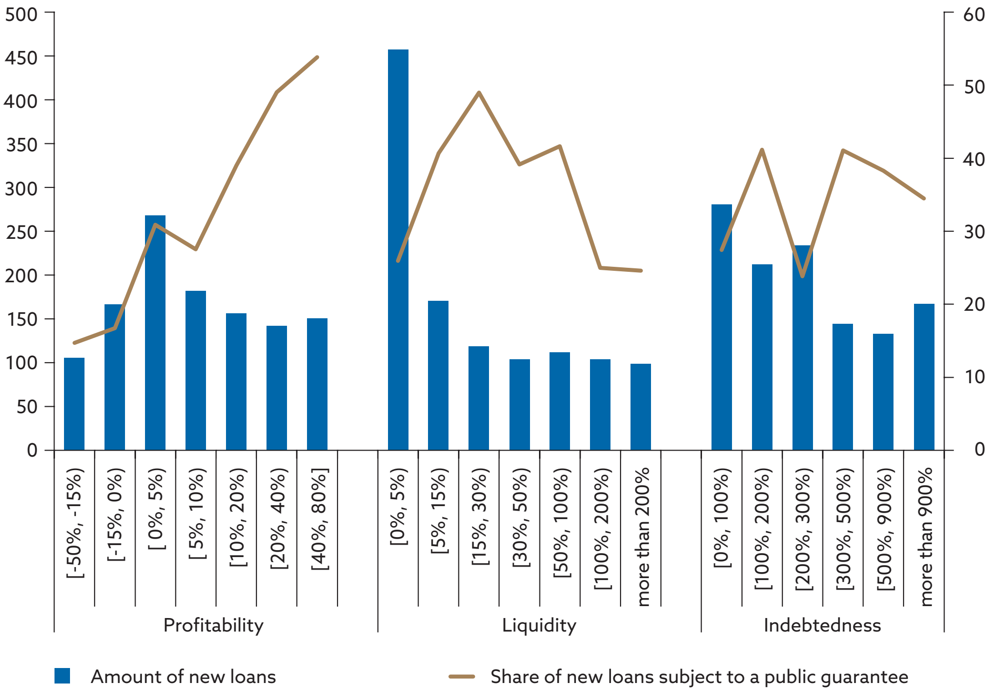
A proportion of higher-risk firms that received government-guaranteed loans did not necessarily receive the full amount possible. Public loan guarantee schemes have done much to support firms' access to financing during the pandemic crisis; nevertheless, banks have been considering firms' credit quality before deciding whether or in what amount to grant these loans, since they are partly exposed to any losses on them. The uptake of guaranteed loans has been highest among firms that went into the pandemic crisis in a position to cope with it, i.e. firms which before the crisis were reporting higher profitability and activity indicators compared with firms drawing unguaranteed loans.[16] A closer look at the distribution of individual financial indicators suggests that firms' access to guaranteed loans was not limited by having higher indebtedness,[17] whereas firms with lower levels of liquidity and profitability accounted for a lower share of government-guaranteed loans in new loans. Differences were also observed between different guarantee schemes. The SIH guaranteed schemes were tapped by firms that had a higher ratio of cash to short-term liabilities, while other schemes were taken up by firms with worse liquidity positions.

[16] Based on data from 2019 financial statements.
[17] Among firms with higher indebtedness, the share of guaranteed loans in new loans was higher (except in the case of high indebtedness at the end of the distribution).

Chart 4

Banks considered firms' creditworthiness before deciding whether and in what amount to grant them guaranteed loans

The share of new loans subject to public guarantees in new loans and the amount of new loans, broken by borrowers' profitability, liquidity and indebtedness (EUR millions; percentages)



Sources: Bisnode, NBS, and RBUZ.
Notes: In order to make as consistent a comparison as possible between the credit quality of loans with a public guarantee and loans without one, a narrow sample of loans from the Register of Bank Loans and Guarantees (RBUZ) was analysed. The new loans in question were provided since June 2020 (when the guarantees were first provided), and their total amount was adjusted to exclude credit card and revolving credit, as well as loans to large enterprises (whose uptake of guaranteed loans was insignificant). The measure of profitability is return on equity (ROE). Liquidity is defined as the ratio of financial assets (cash and bank accounts) to liabilities. Indebtedness refers to the ratio of liabilities other than shareholders' equity to shareholders' equity.

On the whole, except among a certain group of firms, access to ordinary loans (without public guarantees) did not decrease. Even among firms that recorded a sharp drop in revenues, the amount of new lending remained stable. The only firms for whom access to financing was somewhat reduced were micro enterprises that were making a loss before the crisis began.

An important factor affecting the uptake of government-guaranteed loans is the interest rate cap on these loans. From the perspective of micro and small enterprises, which in ordinary circumstances face far more expensive financing costs, the interest rate cap on guaranteed loans is an appealing feature.[18] On the banks' side, however, the rate cap may lead to a reduction in lending to higher risk borrowers as the

[18] For micro enterprises, the interest rate on ordinary loans is almost twice as high as that on guaranteed loans, and for small enterprises it is half as high.

higher risk margin associated with these borrowers may not be covered. This may be one of the reasons why guarantees are, on average, being provided to less risky borrowers. In the case of larger firms, ordinary loans are a reasonable alternative to guaranteed loans given that the interest rates on each are similar and that guaranteed loans come with more burdensome red tape.

Commercial real estate is expected to face gradual longer-term changes resulting from the pandemic crisis

The commercial real estate (CRE) sector will probably face structural changes resulting from the pandemic crisis. Current developments point to the crisis having a differential impact on the sector's individual segments. However, the overall impact will not be assessable until the situation has stabilised after the fading of the crisis. The degree of risks in this sector will be largely determined by the pace of economic growth.

Declining mobility and consequent falling revenues have affected shopping centres in particular. As tenants' turnover has decreased, so have the revenues of shopping centre owners. Hotels have also been hard hit by the restrictions on people's mobility. This situation has, however, benefited the e-commerce segment, whose growing optimism has passed through to the industrial and logistics segment in the form of rising demand for rental premises and new construction. The favourable situation in this segment has been further supported by the sound state of the industry sector. Rents for industrial premises have maintained their level. The vacancy rate, however, has increased,[19] owing both to the crisis and to a legacy of speculative construction projects in previous years.

The pandemic crisis has also weighed on the office segment of the CRE sector. This is mainly because remote working has become far more common and because firms have been shelving expansion plans. Looking ahead, firms can be expected to change their long-term strategy with a view to optimising rented areas. In this regard, the gradual renegotiation of lease contracts is expected to be a moderating factor, so the effects of the strategy shift may only start to be seen one or two years ahead. Another moderating factor may be the fact that some planned commercial development projects can be quite easily turned into residential projects. Like the industrial segment, the office segment has experienced an increase in the vacancy rate[20] amid falling demand and ongoing new con-

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[19] From 6.02% at the end of 2019 to 8.72% at the end of March 2021.

[20] From 8.7% at the end of 2019 to 12.6% at the end of March 2021. The largest increases in vacancy rates were for buildings in peripheral area and for class B buildings.

struction. As competition increases, rental prices will come under downward pressure. The prime yield level has been maintained only in respect of new-build properties in the main business district.[21] Elsewhere, the situation has deteriorated, as reflected in the increase in prime yield expectations.

Developments in particular segments have reflected investor demand. The total amount of transactions in the CRE sector was 27% lower in 2020 than in 2019. Investor demand in the CRE sector was strongest in the industrial segment, which accounted for half of the total investment. The office segment attracted the next highest demand, one-third of the total investment, while the retail segment's share was just 11%.

The CRE sector may represent a significant source of credit risk for the domestic banking sector. This is because a large share of total NFC loans are provided to firms in that sector.[22] There is not only sectoral concentration, but also loan-level concentration. Lending to this sector is characterised by a smaller number of large loans.[23] Another source of its riskiness is the high sensitivity of commercial real estate to adverse economic developments, as observed also during the global financial crisis. At that time, the failure of several real estate projects resulted in significant credit risk losses for the banking sector.

That said, the projected recovery of the domestic economy is expected to mitigate cyclical risks, especially in the retail and office segments. Structural risks nevertheless remain present, particularly in the office segment. These risks may affect not only the CRE sector itself, but also the level and volatility of returns on real estate investment funds with investments focused on that segment of the CRE market.

Housing loan growth has remained at almost pre-crisis levels

Housing loan growth during the pandemic crisis has been at close to its level in preceding years. In 2020, as in each year since 2017, the annual flow of housing loans stood at around €3 billion. As Chart 5 Housing loan growth remained strong but with fluctuations 5 shows, the temporary weakening of their growth rate in the second quarter of 2020 was followed by stronger growth in subsequent months. Indeed, in month-on-month terms, the absolute increase in housing loans recorded an all-

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21 Central Business District

22 Almost 20% of total NFC loans are loans to the CRE sector.

23 The average outstanding amount of CRE loans is more than four times higher than the average outstanding amount of other NFC loans. In the case of loans provided only for real estate development projects, the difference is even more pronounced.

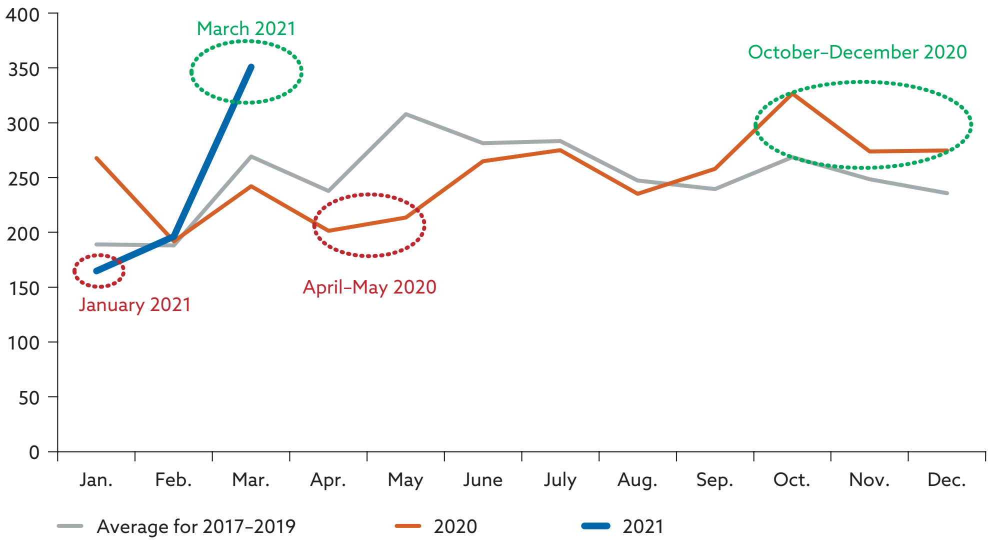
time high in March 2021.[24] Their annual growth rate in that month stood at 9.0%, which was the seventh highest rate in the EU, three places below its ranking in December 2019. This implies that several EU countries have experienced strong housing loan growth during the pandemic crisis.

Housing loan growth involves not only new borrowers but also existing debtors. From mid-2018 to the end of 2020, the share of the working-age population[25] who have a housing loan increased from 20.3% to 22.7%. The outstanding amount of housing loans among people who already had a loan at the beginning of that period had not fallen by the end of it (as may have been expected on the assumption that the loans were gradually being repaid), but actually increased slightly (by 0.9%).

Chart 5

Housing loan growth remained strong but with fluctuations

Month-on-month change in the outstanding amount of housing loans (EUR millions)



Source: NBS.

Housing loan growth has also been accompanied by increasing refinancing of existing loans. The share of new lending that involves loan refinancing increased from 50% for 2019 to 55% for the first quarter of 2021. The total growth in refinancing can be accounted for by loan refinancings with no top-up. In other words, this is about borrowers switching banks in order to get a lower interest rate, not about them taking on more debt. The

24 The flow of housing loans in March 2021 amounted to €351 million. Only in January 2005 and January 2009 were higher flows recorded, but those levels were probably the result of one-time statistical adjustments and not of an actual increase in the amount of loans.

25 People aged from 18 to 64.

surge in refinancings since autumn 2020 was partly related to the increase in lending activity in autumn 2019.[26]

The sustained growth in the housing loan book is due to several factors, in particular still low interest rates, interbank competition, ongoing growth in housing prices, and a recovery of confidence among banks. Interest rates have been on a downtrend since 2010, falling to new historical lows. They have continued to decrease during the pandemic crisis, albeit more moderately than in previous years.[27] On the other hand, differences between the rates charged by different banks have increased. In the past, significant rate decreases were typically matched across the banking sector; in autumn 2020, however, when some banks reduced rates sharply, the rest of the sector did not match those reductions in full.

Thanks to statutory loan moratoria, the acute phase of uncertainty arising during the first wave of the pandemic was overcome. When the pandemic crisis broke out, banks immediately responded by tightening credit standards, but during the second wave there was no similar tightening. On the contrary, several banks indicated that they had already eased credit standards almost back to pre-crisis levels. This is further evidenced by the use of exemptions from regulatory limits on credit standards, according to which these limits were not notably constraining banks' lending activity either at the sectoral level or at the level of individual banks. In the case of housing loans, the exemptions in question were mainly from loan-to-value (LTV) and debt-to-income (DTI) ratio limits. Exemptions from the debt service-to-income DSTI ratio limit were used mainly in respect of consumer credit.

Other important contributors to housing loan growth have been the still relatively favourable labour market situation and the uptrend in housing prices.[28]

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[26] The easing of monetary policy at that time led to a decline in retail interest rates and so had an upward impact on growth in housing loans. After around one year, when the loans taken out at that time had a sufficient payment history, other banks began to show interest in refinancing them.

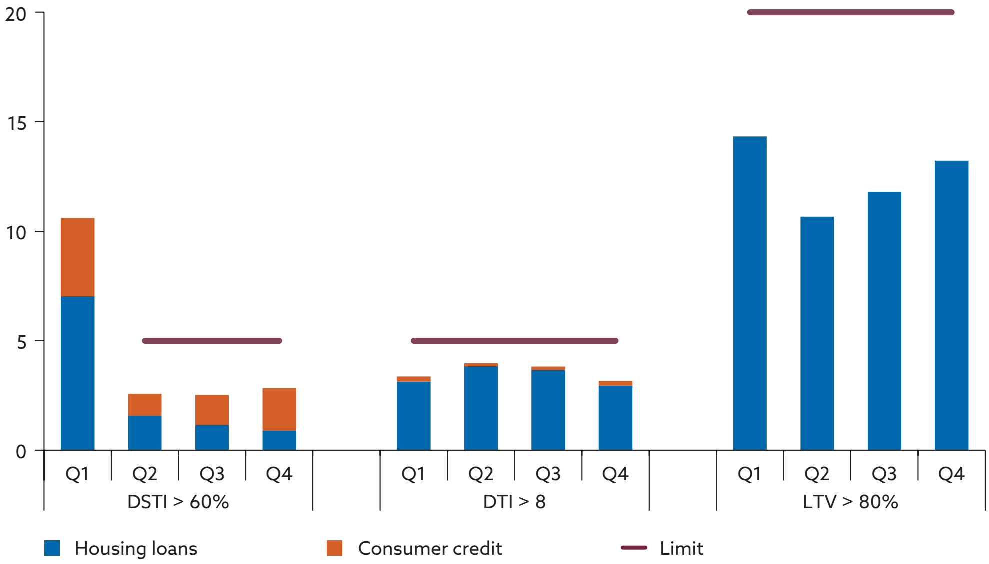
[27] Their average rate fell by 10 basis points between March 2020 and March 2021.

[28] Housing market trends are examined more closely in Box 2.

Chart 6

Banks have slightly eased credit standards in respect of the DSTI ratio and the LTV ratio

The amount of loans provided in each quarter of 2020 which were subject to an exemption from credit standard limits as a share of total new lending in that period (percentages)



Source: NBS.
Notes: Q1, Q2, Q3 and Q4 denote the four quarters of 2020. The DSTI ratio is an expression of a borrower's repayment ability (the amount of monthly repayments, subject to a stressed interest rate of two percentage points, as a ratio to net income reduced by the minimum subsistence amount); the DTI ratio is an indicator of total indebtedness (the ratio of total debt to annual net income); and the LTV ratio is an indicator of loan collateral (ratio of the debt to the value of the collateral).

The pandemic crisis has accelerated the declining trend in consumer credit

The consumer credit portfolio's declining trend has become slightly more pronounced during the pandemic crisis. The first signs of slowdown appeared in 2017, and then in both 2018 and 2019 the growth rate of the banking sector's aggregate consumer credit portfolio fell by six percentage points. Hence, going into the crisis, consumer lending growth was already on a downtrend. This trend became even more pronounced following the outbreak of the crisis; the annual rate of change in consumer credit moved into negative territory and from then until December 2020 fell by nine percentage points. The decline continued in the first months of 2021, with the rate of change of consumer credit reaching a low of -9.6% in February 2021.[29] It probably bottomed out at that point, since in March it moderated to -9.2%.

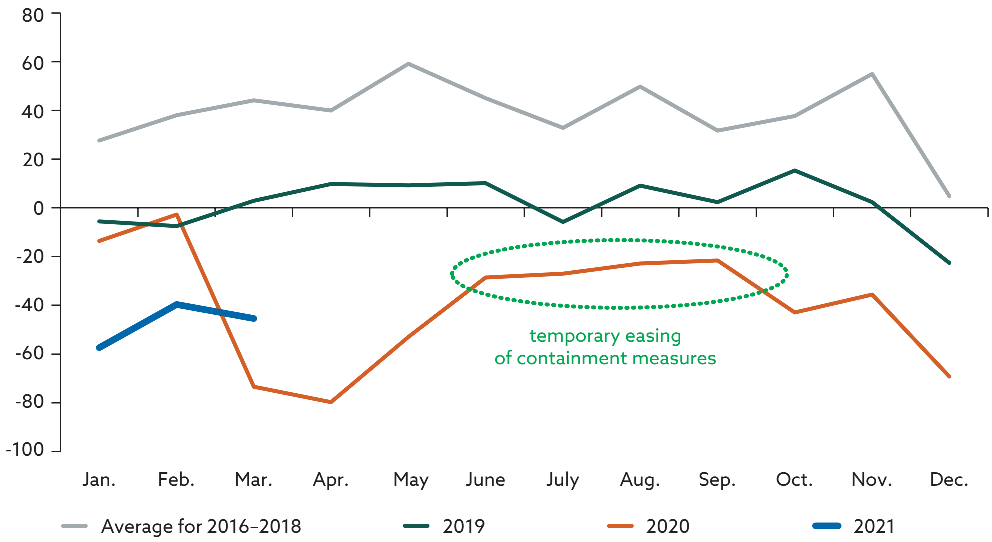
[29] The year-on-year change is the sum of 12 month-on-month changes. At the outset of the pandemic it therefore included a majority of pre-pandemic months in which the change was positive and a minority in which it was negative. As this ratio gradually changed, the year-on-year change recorded a nominal decline. From February 2021 the reference time period already comprised 12 months which all had a negative month-on-month change, so the mathematic effect ceased. If the average monthly decline in the outstanding amount of consumer credit is maintained (at around -€45 million per month), the annual rate of change will now be relatively stable.

Consumer credit was declining faster when pandemic containment measures were more stringent.

Chart 7

The decline in consumer credit was greater during periods of lockdown

Month-on-month change in the outstanding amount of consumer credit (EUR millions)



Source: NBS.

The decline in consumer credit stems mainly from a drop in demand for loans and from other factors that have gradually appeared. Credit standards have, according to banks, already been eased back to pre-pandemic levels, yet loan demand has not responded to this change. Part of the reason for that may be relatively high average interest rates, which are among the highest in the euro area and have increased further during the pandemic crisis. Other factors behind the portfolio's decline may include the consolidation of consumer credit into housing loans (subject to lower interest rates) and the decline in pre-approved loans.[30] From January 2020 the DSTI ratio limit underwent phased-in tightening; however, before this tightening could have its full effect, banks responded to the evolving pandemic crisis by setting credit standards tighter than required by NBS measures. During the pandemic's second wave, credit standards were no longer being tightened; on the contrary, there were increasing signs of them being eased. The principal constraint on lending activity became persisting low demand, which was also related to a general decline in consumption across the economy (it fell in February 2021 by 1.3% year on year).

Non-bank financial institutions have also seen their consumer lending decline, with their aggregate portfolio shrinking by 10% in 2020. Most

[30] Following a tightening of legislation since January 2019, their share of total new consumer credit fell sharply, from 37% to 23%, and it remained roughly stable throughout the period under review.

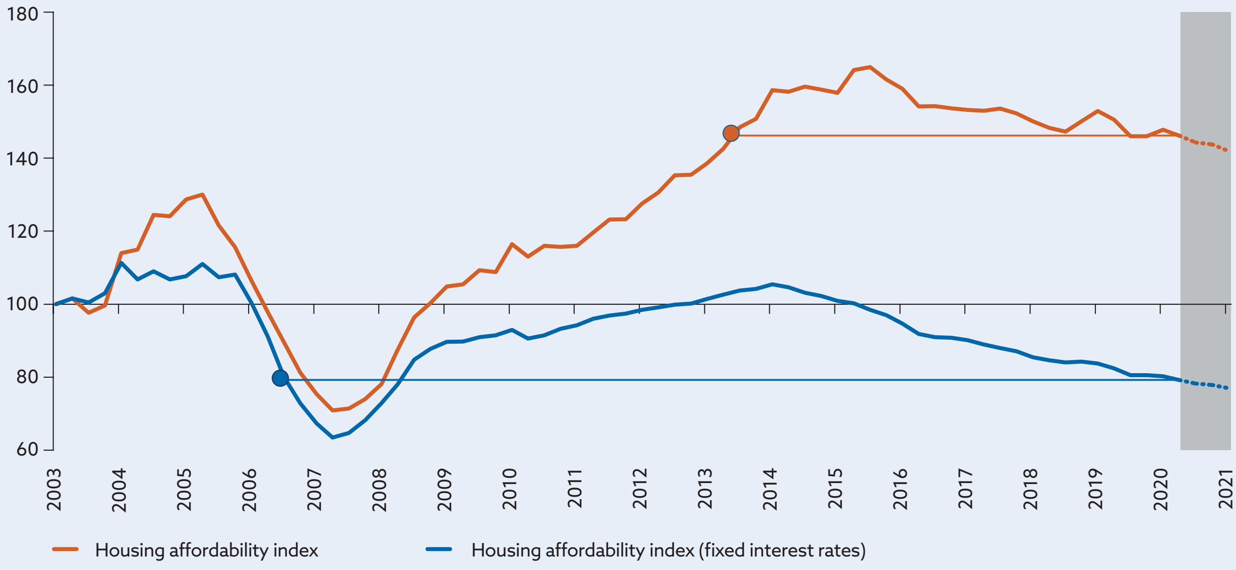
of the more significant non-bank lenders reported a decline in this activity.

Box 2
Housing price growth has continued during the pandemic

The importance of the housing market to financial stability has continued to increase. In Slovakia, housing loans make up more than one-third of the banking sector's total assets, which is the highest share in the euro area.[31] The interlinkage between banks and the housing market has therefore remained very significant during the pandemic crisis. Annual housing price growth for the first quarter of 2021 stood at 15.5%,[32] which, on the one hand, is good news from the perspective of housing loan collateral and, on the other hand, may raise a question about the sustainability of current trends. It should also be stressed that the increase in housing price growth has been driven by the family house segment, while the rate of increase in prices of flats has continued to moderate slightly.

The market for flats in Bratislava has been relatively stable. In the first months of 2021, flat price growth in Bratislava, the capital city, was slightly lower than the average for the whole of Slovakia. The sale prices of new flats in Bratislava also decelerated. Given that domestic banks are so highly invested in this market, it is positive that the market is liquid and not overly volatile.

Chart 8
Interest rates have continued having a large impact on housing affordability
(index)



Sources: CMN, and NBS.
Notes: The housing affordability index is defined as the inverse value of the share of the average monthly wage that would be taken up by the instalment of a loan for the purchase of a median-priced flat. In the calculation using a fixed interest rate, the rate is fixed at its 2003 level.

31 The euro area average is 13.2%.
32 Source: https://www.nbs.sk/_img/Documents/_komentare/2021/1233_rk_cen_20210305.pdf

Despite declining, housing affordability[33] has remained relatively favourable owing to exceptionally low interest rates. The ratio between the monthly instalment of a loan for the purchase of a median-priced flat and the average monthly wage has continued slowly to deteriorate. In other words, prices of flats have been increasing far faster than income, and not even falling interest rates for housing loans have managed to counterbalance that trend. It is also important to note that the average cost of borrowing for the purchase of a flat is still cheaper now than at any time before 2014.[34] This is largely because of low interest rates, which have resulted in the housing market's potentially high sensitivity to a potential change in rates.

According to some calculations, housing prices have been rising faster than certain fundamentals. As for analysing housing prices using potential demand,[35] two observations present themselves. The first is the impact of rising indebtedness and of demographic trends. The number of working people aged between 18 and 34, i.e. the people expected to be the main source of demand for housing, has now been falling for more than ten years. This trend is having a downward impact on the estimation of the fundamental price of housing. At the same time, the number of people aged 35–44 appears to have peaked in 2019, and its subsequent decline will also gradually reduce potential demand. This potential has been further reduced by the increasing saturation of the housing market during the period under review. The second observation is the impact of the pandemic crisis, which, amid still rising housing prices, has naturally weighed on fundamentals affecting potential demand. It cannot be concluded from this calculation that housing prices are overvalued; nevertheless, from a financial stability perspective, it is important that the potential for further growth in demand-side fundamentals of housing prices is limited.

Loans due to mature after the borrower reaches retirement age represent an increasing share of housing loans

A relatively large share of housing loans are due to mature sometime after the borrower reaches retirement age.[36] The long-running uptrend in this share has continued during the pandemic crisis. From mid-2018 until the end of 2020 the share of such loans[37] in new housing loans increased from

[33] Defined as the inverse value of the share of the average monthly wage that would be taken up by the instalment of a loan for the purchase of a median-priced flat.

[34] A weakness of the calculation is still that it does not take account of regional differences, the uneven distribution of income, and the fact that households must meet part of the purchase prices out of their own savings.

[35] Potential demand consists of the income of workers in the main flat-buying age cohorts less their current loan repayments.

[36] For the purposes of this report, the retirement age is deemed to be 64 years.

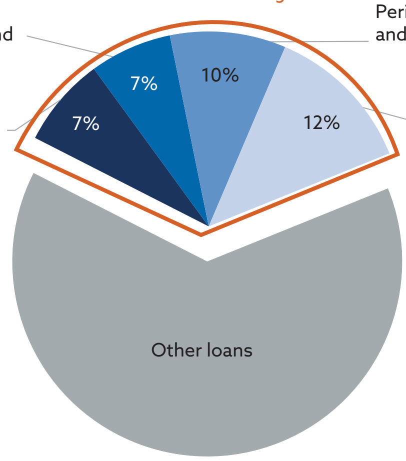
[37] Loans with co-borrowers are included only if the loan is due to mature after all the borrowers reach retirement age. Loans that mature after only one co-borrower reaches retirement age constituted 14% of new housing loans at the end of 2020.

29% to 35%. The average period between the retirement age and the loan maturity also increased (from 3.0 years to 3.3 years). As for consumer credit, the share of loans due to mature after the borrower's retirement is lower (12%).

Chart 9

The riskiness of housing loans that are due to mature after the borrower reaches retirement age

Shares of the specified categories in the total amount of new housing loans provided during 2020 (percentages)



Source: NBS.
Notes: Loans with co-borrowers are included only if the loan is due to mature after all the borrowers reach retirement age. For the purposes of this report, the retirement age is deemed to be 64 years.

The trend is a result of loan refinancings with maturity extensions.[38] **Some of these refinancings include an increase in the outstanding amount, others do not.** Housing loans typically have a 30-year maturity. When borrowers refinance such loans in order to reduce their repayments, they may reset the maturity to its original duration, with the result that the loan will not be due to mature until after they have reached retirement age. There may be a similar outcome when middle-aged borrowers move into a larger or higher quality residence or purchase a property for investment purposes. The average maturity of a refinancing loan increased from 22.8 years in mid-2018 to 24.7 years at the end of 2020.

The increasing share of loans with a post-retirement age maturity reflects to a large extent the strength of interbank competition. When comparing loan products, a significant share of prospective borrowers focus above all on the amount of the monthly instalments. From their perspective, lower instalments are preferable even at the cost of continuing the repayment

[38] Of the loan being repaid by post-retirement age borrowers, 43% are refinanced loans and 57% are new loans.

beyond retirement age. Banks with looser credit standards can therefore gain market share, while in the process putting pressure on other banks.

Extending loan repayments beyond retirement age entails a number of risks. The first risk is that the borrower's income will decline after retirement age. The level of a borrower's pension may be affected, for example, by legislative changes to the pension system, by the borrower taking early retirement,[39] or by any number of individual factors. After reaching retirement age, a borrower's income declines on average to a level that in nominal terms is 10–20% lower than the borrower's income at the time of the loan application.[40]

Another risk is that banks themselves have insufficient experience in dealing with loan repayments by post–retirement age borrowers. At present, only 0.2% of total housing loans are being repaid by borrowers that have reached retirement age. A specific risk with older borrowers is that they develop health problems that temporarily or permanently reduce their income. Nor may domestic banks necessarily learn as much as they would wish from foreign banking sectors' experience in this area, given that the average healthy lifespan in Slovakia (56 years) is the third lowest in the EU and far behind the EU average (65 years). Another consideration with such loans is that there is less leeway to extend their maturity if the borrower's financial situation deteriorates.

Housing loan repayments by post–retirement age borrowers also have a social dimension. Borrowers who reach retirement age may still have as much as one-fifth of their loan to repay.[41] If their income subsequently declined and they had difficulty in repaying their loan, they may have no choice but to move to a cheaper residence. European and domestic legislation requires that borrowers be able to repay housing loans primarily from their own income and not from the sale of property.[42]

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[39] This option is currently taken by 8% to 9% of the future retired population. Taking early retirement may decrease the pension value by up to 12%.

[40] If a person who has an average income and is entitled to an average pension applies for a loan 25 years before reaching retirement age, the nominal value of the pension, assuming index-linking that increases its value by 1–1.5% per year, will be 10–20% lower than that person's income at the time of the loan application.

[41] For a loan with a maturity of 30 years and an interest rate of 1.5%, 20% of the principal would still remain to be repaid after 25 years of repayment.

[42] According to recital 55 of Directive 2014/17/EU on credit agreements for consumers relating to residential immovable property (hereinafter 'Directive 2014/17/EU'), the assessment of creditworthiness should focus on the consumer's ability to meet their obligations under the credit agreement. Under Article 18(3) of Directive 2014/17/EU, the assessment of creditworthiness must not rely predominantly on the value of the residential immovable property exceeding the amount of the credit or the assumption that the residential immovable property will increase in value. In the EBA Guidelines on loan origination and monitoring (EBA/GL/2020/06), paragraph 97 says that collateral, in the case of secured lending, by itself should not be a predominant criterion for approving a loan and cannot by itself justify the approval of any loan

These risks are mitigated by several positive factors. First of all, loans due to mature after the borrower reaches retirement age are similar to the rest of the portfolio in terms of their other risk characteristics. The loans and borrowers are not significantly more risky in this respect, but nor are they less risky. The retirement age itself is a questionable point, since it may be gradually adjusted over time.

Risk may be mitigated in an effective way by early repayment of part of the loan book or at least the reduction of outstanding amounts through overpayments, or by the accumulation of savings to be used for loan repayment in an emergency. By making overpayments in addition to their regular loan instalments, some borrowers may manage to repay their loan even before they reach retirement age. In the environment of low interest rates, however, borrowers are disincentivised from repaying their loans ahead of schedule; on the other hand, they can build up savings. To build up savings or investments may be a sound strategy for borrowers whose loans are due to mature after they reach retirement age. The risks associated with such loans are therefore largely determined by the financial discipline of borrows and by the evolution of their financial situation before they reach retirement age.

Further mitigation of these risks would require regulatory action. Under existing measures governing lending conditions, lenders are required only to take into account that the borrower's income may drop after reaching retirement age.[43] This requirement, however, has only a general nature and its effect may be weakened amid strong interbank competition. One option, for example, is for lenders, in calculating the DSTI ratio, to take account of the post–retirement age drop in income in conjunction with the number of years until the loan matures. The impact on this ratio should be assessed at any refinancing of the loan that involves an extension of the maturity beyond the borrower's retirement age – irrespective of whether the outstanding amount is increased or not.

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agreement. Collateral should be considered the institution's second way out in case of default or material deterioration of the risk profile, and not the primary source of repayment, with the exception of when the loan agreement envisages that the repayment of the loan is based on the sale of the property pledged as collateral or liquid collateral provided.

[43] According to recital 55 of Directive 2014/17/EU, in assessing and verifying the consumer's ability to repay the credit, reasonable allowance should be made for future events during the term of the proposed credit agreement such as a reduction in income where the credit term lasts into retirement. In the EBA Guidelines on loan origination and monitoring (EBA/GL/2020/06), paragraph 104 says that if the loan term extends past the borrower's expected retirement age, institutions and creditors should take appropriate account of the adequacy of the borrower's likely source of repayment capacity and ability to continue to meet obligations under the loan agreement in retirement.

Household deposit growth accelerated during the pandemic's second wave

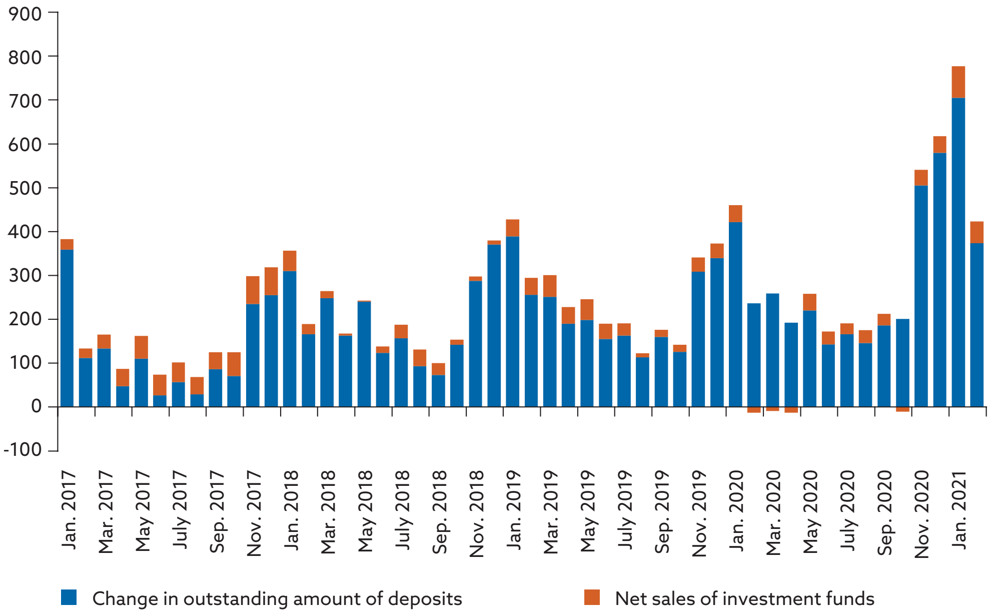
In the early part of the pandemic crisis, household savings increased similarly as in previous years, while during its second wave they accelerated significantly. For around a year before the pandemic broke out, year-on-year growth in total household deposits averaged around 7.2%, and it remained at that level until September 2020. The growth rate began to increase from October 2020, reaching as high as 9.9% in March 2021. The absolute increase in deposits in the first quarter of 2021 was almost twice that in the same period of previous years.

As regards assets under management in investment funds, fluctuations have also been observed but, on average, developments during the pandemic crisis have been similar to the previous period.

Chart 10

Household savings growth accelerated sharply during the pandemic's second wave

Three-month moving average of the month-on-month change in total household deposits and net sales of investment funds (EUR millions)



Source: NBS.

The increase in household deposit growth appears to have been the result of several factors. An important prerequisite for deposit growth is credit growth. Since the flow of new credit into the economy has continued to increase during the crisis, there has been no reason for deposit growth to moderate. Deposit growth has been further supported by the impact of pandemic containment measures, households' precautionary behaviour, and the related decline in consumption. The impact of falling consumption has been particularly evident in the decline in imports from abroad.[44] Another factor has been government measures to support the economy and the financial situation of households. New public debt has been used to fund various support programmes and grants. Although support for households has always been targeted only at selected groups, it has resulted in savings growth across the household sector.

2.2 Debt servicing capacity after moratoria expiry and credit risk

The pandemic crisis has not as yet had a significant upward impact on loan delinquencies, which may be expected to rise with the expiry of statutory loan moratoria

Given that the loan moratoria granted under "Lex Corona" pandemic relief legislation ('statutory moratoria') have only recently expired, the pandemic crisis has not as yet had a significant upward impact on loan delinquencies. The conditions for obtaining a moratorium were somewhat more straightforward in Slovakia than in other EU countries. The moratoria gave households and firms the breathing space needed to bridge temporary shortfalls in income and revenues. The downtrend in the non-performing loan (NPL) ratio for loans to non-financial corporations (NFCs) came to a halt in September 2020, at 3.14%, and by March 2021 it had edged up to 3.47%. The NPL ratio for the retail[45] loan book has continued to decrease.

The share of distressed loans in loans that have emerged from a moratorium is so far slightly better than expected

For some firms and households, however, the crisis has caused problems of a longer-term nature, which, following the expiry of statutory moratoria, will probably be reflected in an increase in non-performing loans. The good news is that the phasing out of statutory moratoria during the first quarter of 2021 has not as yet brought any negative surprises. The share of loans that have become distressed after emerging from a statutory moratorium has not significantly exceeded NBS estimates or expectations based on NBS surveys.

Of the total number of household loans that had emerged from a statutory moratorium by the end of February 2021, 5.4% were distressed by the end of March 2021.[46] This is closely in line with the findings of an NBS survey of indebted households conducted in December 2020, according to which 5.3% of respondents that had received a moratorium on their loan repayments

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[44] In 2020 net exports grew by €424 million year on year.

[45] For the purpose of this report, the retail sector comprises households, sole traders and non-profit institutions serving mostly households.

[46] The moratoria that had expired by the end of February made up 84% of all the moratoria granted to households in 2020.

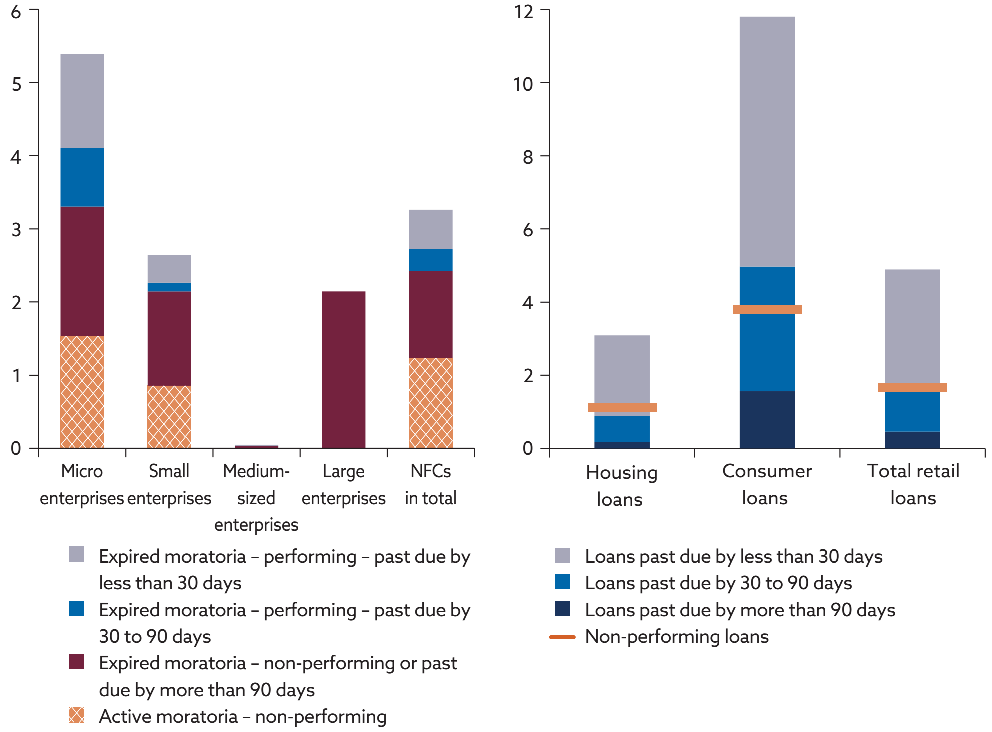
expected to have difficulty in resuming repayments. The percentage of consumer loans that became distressed after emerging from a moratorium is around three times higher than the percentage of housing loans that did so.

In the case of NFC loans, the situation is slightly better. The share of NFC loans that have become distressed after being under a statutory moratorium currently stands at 3.3%.[47] Post-moratorium repayment difficulties have been most pronounced among micro enterprises. In the case of firms, however, a proportion of loans have become non-performing while subject to a moratorium; for example, where the firm goes bankrupt or out of business before the resumption of repayments. The share of non-performing loans in loans that are still under a moratorium is 4.2%. Of the loans that have not been under a statutory moratorium during the pandemic crisis, 0.5% have defaulted in that time.

Chart 11

Impaired loans as a share of loans for which a statutory moratorium has been granted

Left-hand chart: NFC loans (as a percentage share of all loans for which a moratorium has been granted)
Right-hand chart: Retail loans (as a percentage share of loans that were under a moratorium)



Source: NBS.
Notes: The cut-off date for moratoria expiry is the end of February 2021. The chart shows credit quality as at the end of March 2021.

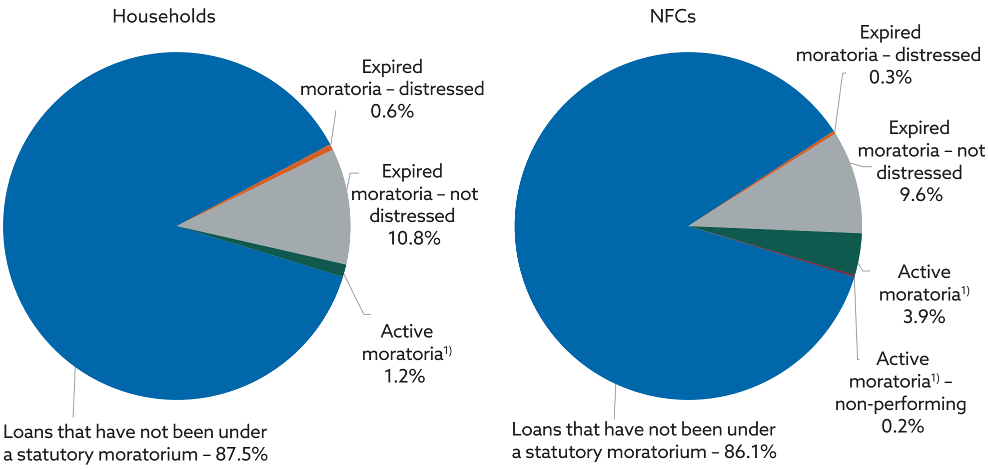
[47] This figure also includes loans that became non-performing while still under a moratorium. The share of loans that have become past due or non-performing after emerging from a moratorium stands at 2.9%. For the purpose of this analysis, the cut-off date for moratoria expiry was the end of February. By then, 71% of the NFC loan moratoria granted in 2020 had expired. The status of the loans covered by the analysis is given as at the end of March 2021.

Some borrowers have solved their post-moratorium repayment difficulties by renegotiating the loan agreement with their bank so as to further defer or temporarily reduce their instalments. Such renegotiations have occurred in respect of 4.0% of the housing loans, 7.2% of the consumer loans and approximately 6% of the NFC loans which were under a statutory moratorium. In these cases, in respect of households, banks as a rule required the borrower to pay at least part (one-quarter, for example) of the original instalment amount. As a result, banks have better information about borrowers' debt servicing capacity, and the borrowers themselves do not get out of the habit of making repayments. On the other hand, demand for new moratoria is far lower than it was during the pandemic's first wave.[48]

From the perspective of the loan book as a whole, distress related mainly to statutory moratoria does not so far represent a serious problem. Assuming no significant trend shift in the period ahead, loans that have become distressed after the expiry of all granted statutory moratoria represent 0.7% of total retail loans and 0.4% of total NFC loans.[49]

Chart 12
Impaired loans

Impaired loans as a share of total loans (percentages)



Source: NBS.
Notes: The chart shows percentage shares of the total loan book. The data for retail loans are based on data for the four largest banks in Slovakia. The cut-off date for moratoria expiry is the end of February 2021.
1) Loans are included under active moratoria if they were under a statutory moratorium and then, after its expiry, became subject to a new moratorium.

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48 In the first quarter of 2021 new moratoria were granted in respect of 0.6% of the housing loan portfolio and 1.4% of the consumer credit portfolio.

49 If we include loans that have become distressed during the same period without having been under a moratorium, the figure for NFC loans increases to 0.9% of the total portfolio.

Simulations indicate that the risk of an increase in loan delinquencies remains present, in particular under an adverse scenario

The above-mentioned levels of non-performing and past due loans may not necessarily provide a reliable view of the actual level of borrowers' debt servicing capacity. We do not yet have a complete picture of all the firms and households which have experienced significant deterioration in their financial situation during the pandemic crisis. Furthermore, the crisis has still not passed, and more firms could find themselves in financial difficulty, especially those that were severely weakened going into the second year of the crisis. Nor can a further increase in the unemployment rate be ruled out. We will therefore not get a fuller picture until early autumn. One of the lessons learnt from the 2008–10 crisis was that the failure of crisis-affected firms may occur in the years following the crisis, during the initial phase of economic recovery. The purpose of this part of the report is to estimate the actual level of credit risk in banks' loan books on the basis of the financial situation of borrowers.[50]

The estimation of the total share of NFC loans that may become distressed as a result of the pandemic crisis is based on the potential decline in revenues. In the baseline scenario, revenue shortfalls compared with the pre-crisis period occurred only in 2020, and revenues are already assumed to be recovering in 2021. The extent of the decline in revenues depends on the economic sector (Chart 13 Simulated decline in revenues by sector 13) and firm size.[51] In the adverse scenario, the revenue shortfalls in 2021 are 45% of their level in 2020, in line with the assumed progress of the economy as a whole under this scenario.[52]

50 The potential increase in NPLs is analysed using simulations based on two scenarios of macroeconomic and financial developments, as described in Box 1.

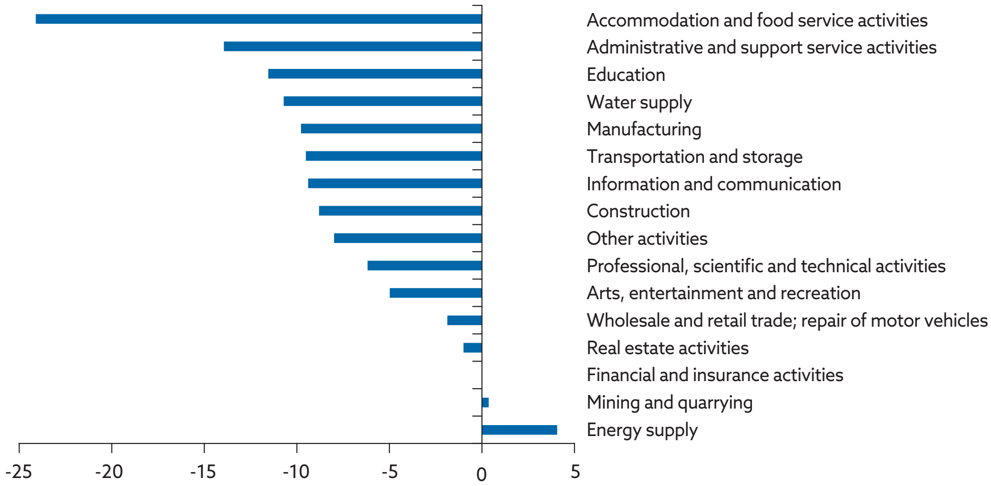
51 In addition to a heterogenous impact across sectors and across firm size categories, we also assume a heterogeneous impact at the firm level within these sectors and categories. The statistical distribution of revenue changes for micro enterprises is based on the distribution of the average change in revenues in the months from March to December 2020 compared with revenues in February 2020, using data from the eKasa online cash register system. The statistical distribution for other firms is based on the condensed financial statements of a sample of firms as at December 2020.

52 Compared with the assumptions used in the November 2020 Financial Stability Report (FSR), these assumptions are slightly more positive, in line with the progression of the pandemic crisis and its impact on economic developments. The methodology for estimating the share of firms at risk and the impact of relief measures is described in Box 4 of the November 2020 FSR.

Chart 13

Simulated decline in revenues by sector

Year-on-year decline in revenues of firms other than micro enterprises in 2020 (percentages)



Sources: SO SR, and NBS.
Notes: The baseline scenario assumes that firms record a revenue shortfall only in 2020. In 2021 there are no further revenue shortfall. The adverse scenario assumes that revenues shortfalls in 2021 are 45% of their level in 2020. The decline in revenues of micro enterprises in individual sectors is assumed to be twice that of other enterprises.

In the household sector, the main risk factor is a further increase in unemployment and the prolongation of the period in which the income of a proportion of households remains below pre-crisis levels. In the baseline scenario, the unemployment rate increases to 8.1% in 2021, and in the adverse scenario, to 11.5%. At the same time, because of the crisis, the income of borrowers who have not lost their job is also assumed to decline, by 10% under the adverse scenario. Another assumption of the adverse scenario is that housing prices fall by 30%.[53]

In the baseline scenario, the share of NFC loans and household loans at risk of delinquency may gradually increase in 2020 and 2021, up to 3.4% and 1.3% in the case of NFC loans and household loans respectively.[54] In the adverse scenario, the corresponding figures are 6.5%[55] and 3.6%. The adverse scenario has a greater impact because many firms were already somewhat weakened going into the second year of the pandemic crisis, and these included some firms which on the eve of the crisis were in rel-

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[53] The calculation methodology is described in Box 2 of the November 2020 Financial Stability Report.

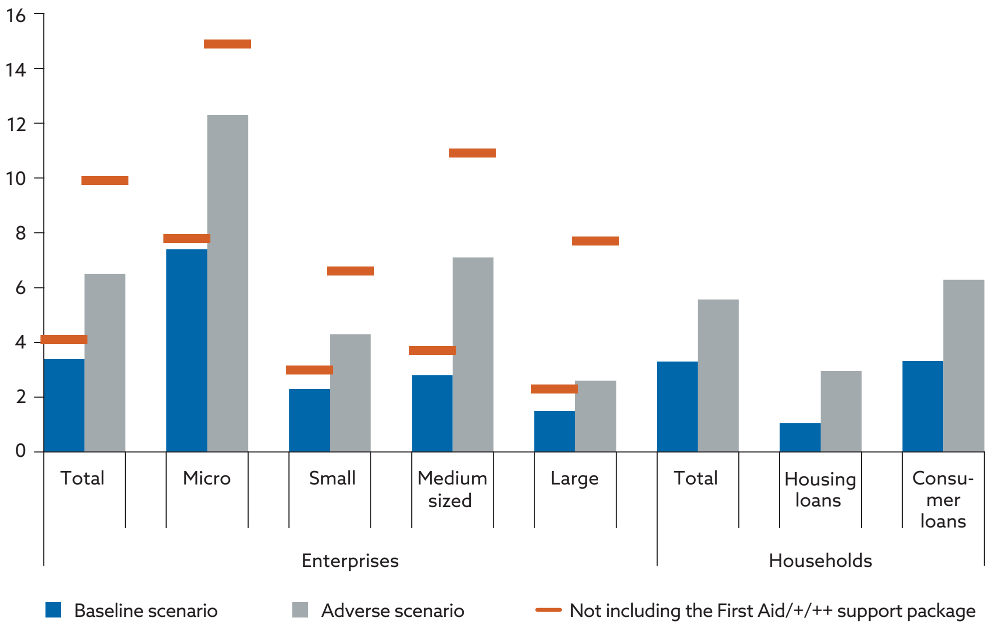
[54] These estimates include loans that have already become non-performing during the pandemic crisis (accounting for 0.8% of the retail loan book and 0.7% of the NFC loan book). By the end of March 2021, the overall NPL ratios for NFC loans and household loans were 3.5% and 2.4% respectively.

[55] From the perspective of the NFC sector as a whole, 8.1% of firms are at risk of delinquency under the baseline scenario, and 11.4% under the baseline scenario. Compared with the share of loans at risk, these shares for the sector as a whole are higher, the reason being that bank lend mainly to firms that have a better financial situation.

atively sound financial shape and had no difficulty obtaining financing from banks. Estimates of the non-performing loan ratio have been positively affected by public support measures provided under the First Aid, First Aid+ and First Aid++ packages, without which the NPL ratio for the NFC loan book would have been far higher, especially under the adverse scenario. In line with previous experience, the loans exposed to the highest risk are loans to micro enterprises and consumer loans to households.

Chart 14
Share of loans at risk of delinquency and the impact of public support measures

Increase in the share of total loans at risk of delinquency as a result of a deteriorating financial situation in 2020 and 2021 (percentages)



Sources: NBS, and Bisnode.
Notes: In the case of the NFC loan book, the share of loans at risk of delinquency is estimated as the percentage share of loans to NFCs which, as a result of declining sales, could become insolvent by the end of 2021. The baseline scenario assumes that firms record a revenue shortfall only in 2020, not in 2021. The adverse scenario assumes that revenues shortfalls in 2021 are 45% of their level in 2020.

Compared with the estimates given in the November 2020 Financial Stability Report, the estimates of loans at risk of delinquency are lower, more so under the adverse scenario.[56] This is largely related to an improvement in the economic outlook, including in the adverse scenario. It must also be noted, however, that the loans in question are at risk of delinquency because of a deterioration in the borrower's financial situation. Whether or not a loan actually becomes non-performing may depend on other factors,

[56] In November 2020 we estimated that, under the baseline scenario, 6.4% of NFC loans and 1.7% of household loans may become non-performing by the end of 2021 and that, under the adverse scenario, those figures may rise to 7.7% and 3.2% respectively.

such as the borrower's saving rate, the borrower's capacity to reduce expenses, etc. It is important that banks have already increased their loan loss provisioning to a significant extent. If all the loans at risk of delinquency were to become non-performing, banks would have to create approximately the same amount of loan provisions in 2021 as they did in 2020.

2.3 Insurance sector trends

Decline in life insurance business[57]

Life insurance premiums declined more markedly in 2020 than in previous years, the main cause being lower new production. The annual rate of decrease in premiums written in traditional life insurance was two times larger in 2020 than in 2019, at -11.6%. The amount of premiums written in this segment decreased by more than one-fifth over the period from 2017 to 2020. As for premiums in unit-linked life insurance, they recorded a first annual drop in 2020 (-8.5%), after a decreasing rate of growth in previous years.

In both cases, the decrease in premiums reflected mainly a decline in new business. The pandemic crisis has made it difficult for insurers to conduct business with customers on a face-to-face basis, and this situation has had a direct impact on policy sales. On the other hand, policy surrenders have not accelerated, possibly thanks in large part to public support measures that have helped ease the strain on family budgets. The way in which these measures continue or are unwound will be important, and not only for insurers.

Results improved in non-life insurance and in accepted reinsurance business

The pandemic's impact on non-life insurance premiums has been moderate; their year-on-year growth rate slowed by half in 2020, to 1.8%. Premium growth even accelerated slightly in some insurance classes, including motor insurance (4.5%) and property insurance (1.7%).

From the perspective of insurers, pandemic containment measures have had a positive impact on motor insurance claim settlements. According to data from the Slovak Interior Ministry, there were 14% fewer road accidents in 2020 than in the previous year. As a result, insurers' payouts on motor insurance claims dropped by 12.4%, and the net combined ratio for this insurance class fell to 94.8%.[58] On the one hand, the combined ratio for motor

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[57] All the data given in the Insurance Sector Trend sections are for insurers established in Slovakia; they do not include data for branches of foreign insurers.

[58] The figure includes additional levies payable in respect of motor third party liability insurance.

insurance remained the worst for any insurance class; on the other hand, motor insurance accounts for 60% of all non-life business, so the drop in the ratio had an appreciable impact on the insurance sector's financial result.

As for other non-life insurance classes, it is worth noting that the pandemic crisis has so far had almost no impact on credit insurance or on travel agency insurance. The number of insurance claims have been low, and the movements of financial indicators have been affected more by individual payouts and base effects. The loss risk in these classes, largely concerning the expiry of public support measures for crisis-affected sectors, has therefore carried over to 2021.

Box 3
Insurers' mergers and transformations into branches

The Slovak insurance market has in recent years seen two significant institutional trends: the merging of insurers and the transformation of insurers' subsidiaries into branches of insurers' from another EU Member State. From the owners' perspective, the same principal motivation lies behind both trends, i.e. to reduce both costs and the regulatory burden.

From the Bank's perspective, certain risks can be seen in both trends. The merging of insurers is reducing competition in the market and may, sooner or later, begin to have a distorting effect on the supply of insurance products. As for the transformation of subsidiaries into branches, it represents a risk to the Bank's conduct of supervision. Under the EU's regulatory framework, the supervision of branches[59] falls under the supervision of their parent institutions; they are not supervised by the Bank, which therefore has a very limited supervisory impact on their business activity.

Since the Bank has little information about the activities of insurers' branches, it cannot inform the public about potential risks associated with their business. Some branches submit a single statement to the Bank per year, others do not report any information at all. Furthermore, there are signs that the non-reporting branches have a material share in the market.

Branches of insurers from another EU Member State have a share of around 22% in the total premiums written in the Slovak insurance market. Referring to reports for all EU countries available from the European Insurance and Occupational Pensions Authority (EIOPA),[60] it can be estimated that these branches account for 26%[61] of the premiums written in non-life business and for 17% in life business.

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[59] For the purposes of this Box, 'branches' means both branches of foreign insurers and insurance business in the form of the free provision of cross-border services.
[60] The most recent available data are for 2019.
[61] A similar share (28%) is indicated by insurance tax collection data.

2.4 Trends in sectors managing customer assets

The outstanding amount of assets of second-pillar pension funds has increased, with the strongest growth in index pension funds

The number of participants in the second pillar of the Slovak pension system[62] maintained a relatively robust uptrend in 2020. The pandemic crisis and deteriorating labour market situation affected that number only to the extent that it stopped accelerating; the increase of 62 thousand was around one-fifth lower compared with the previous year's increase. The combination of a rising number of participants and increases in the rate of mandatory contributions and in wages resulted in the amount of new contributions to the scheme increasing by 8% year on year. The inflow of contributions was clearly below trend in the first half of the year, before returning to trend in the second half of the year.

The net asset value (NAV) of second-pillar pension funds increased by 11% over the course of 2020 and by a further 3.5% in the first quarter of 2021. Approximately three-quarters of that total growth was accounted for by new contributions; the rest by asset price growth. One-half of the absolute increase in the NAV pertained to index pension funds and was partly attributable to the switching of several tens of thousands of participants from other types of funds. The share of participants investing in index pension funds is now approaching one-fifth, as it is rapidly increasing at the expense of the share investing in bond pension funds. Assuming that those investing in index pension funds are younger participants, this trend is going in a positive direction towards higher expected pension asset returns over the long term.

Across equity funds in the second pillar the share of equity positions in the aggregate portfolio increased appreciably after the first wave of the pandemic. At the start of 2020, the share of equities in equity pension funds averaged 70% of the funds' aggregate NAV, and by the end of March 2021 it had already exceeded 78%. This increase was partly the result of rising share prices, particularly in early 2021. A more significant factor, however, was the deliberate decision of pension fund management companies to increase the equity component of these funds against the back-

62 The second pillar of the Slovak pension system – the old-age pension scheme – is a defined contribution scheme operated by pension fund management companies (PFMCs); enrolment is voluntary but savers may not leave the scheme after enrolment. The third pillar – the supplementary pension scheme – is a voluntary defined contribution scheme operated by supplementary pension management companies (SPMCs).

ground of rising equity markets. A relatively large proportion of the new positions were direct purchases of shares of US firms, including a significant number in the technology sector and the health and pharmaceutical sector.

Demand for high-yielding opportunities at a time of low interest rates appears to have been behind further increases in the outstanding maturity and duration of debt security holdings in second-pillar pension funds. By 31 March 2021 the weighted average residual maturity of debt securities across second-pillar funds stood at 7.1 years, almost one year longer than its level at the start of 2020. Most of that increase was accounted for by bond pension funds. A corollary of the longer maturity is that pension funds have become more sensitive to any increase in the interest rate level.

The asset composition of third-pillar pension funds has shifted slightly towards potentially high-yielding assets

The number of accumulation-phase participants in the third pillar of the pension system has followed a similar trend to the number of second-pillar participants. Their number increased by almost 28 thousand between the start and end of 2020, with slower growth in the first half of the year being followed by faster growth in the second half. The uptrend in new contributions continued to increase, albeit slightly more slowly than in the previous two years.

After increasing over recent months, the share of equity investments in growth-focused third-pillar funds stood at almost 60% by the end of March 2021. Thus, the equity component of third-pillar funds surpassed its level of previous years, when it accounted for no more than one-half of the funds' aggregate NAV. This change reflects both the rising value of existing equity investments and increasing purchases of new equity investments, in particular indirect investments such as shares/units issued by exchange-traded funds (EFT) and by other equity-focused investment funds. The more aggressive asset composition of growth-focused third-pillar funds is also evident from a slight increase in the share of shares/units of real estate investment funds.

In accumulation third-pillar funds with a more conservative investment profile and in decumulation third-pillar funds, there has been a common change in the investment mix. The share of bank deposits has declined by more than two-thirds on average, to just under 6%, and the share of debt securities, already the largest in the portfolios, has increased. Within the bond portfolio of third-pillar funds, the proportion of corporate and financial-sector bonds has increased at the expense of government bonds.

It is worth noting that this shift has happened in funds which, according to their profile, should be at the most conservative end of the investment spectrum.

Net sales of domestic investment funds have remained in positive territory, but demand is not as high as it was in some of the stronger previous years

Despite the impact of the pandemic crisis, the net value of assets under management in domestic investment funds increased by €412 million in 2020, which represents a year-on-year growth rate of 6%. Compared with 2019, however, NAV growth was one-half lower, reflecting the impact of a decline in both inflows and rates of return.

The net issuance of investment fund shares/units in 2020 amounted to €270 million. At the onset of the pandemic, investment funds faced redemptions totalling more than €100 million, which, however, represented only 1.5% of their total assets. The sector coped easily with this outflow and its financial stability was not disrupted. After this episode, fund sales returned rapidly to positive territory and, with the exception of a smaller net outflow in November, remained there for the rest of 2020.

The first quarter of 2021 saw the aggregate NAV of domestic investment funds increase by a relatively large €276 million. This growth was driven by net sales of €210 million as well as by asset price growth. Demand for investment funds was subdued in January, before improving slightly in February and then more significantly in March, amid an improvement in economic outlooks and rising optimism in regard to the pandemic situation and economic activity.

Among the different types of investment funds, mixed funds recorded the largest absolute increases in both aggregate NAV and cumulative net sales between the start of 2020 and the end of March 2021. Compared with previous years, mixed funds did not outperform other funds to such a great extent, particularly in respect of net sales. The next highest net sales were recorded by real estate funds, followed by equity funds. Funds focused on equity investments had the highest percentage growth rate (42%) during the period under review, accounted for mainly by demand from the household sector. Total household holdings of these funds' shares/units almost doubled in value. The long-term downtrend in bond funds' aggregate NAV continued during the period under review as a result of gradual net redemptions.

The overall composition of investment fund assets has seen a decline in the share of bank deposits, which can be considered as these funds' liquidity buffer. This decline has been most marked in bond funds, where the share of bank deposits in the aggregate NAV fell by almost half between the start of 2020 and 31 March 2021, to 20%. In mixed funds, their share dropped from around 20% to 13%. In both cases there was a corresponding increase in the share of bond investments. This shift in investment strategy appears to be geared towards increasing the potential return on the fund portfolio.

2.5 Climate-related risks to financial stability

The challenge of climate-related risks

Climate-related risks are gradually gaining in intensity, and the need to address them is becoming more urgent. According to estimates, the doubling of greenhouse gas (GHG) emissions in the earth's atmosphere since the pre–industrial revolution period will result in a global temperature increase of between 1.5°C and 4.5°C. Given its location, Slovakia, will probably experience significant weather fluctuations, whether in the form of temperatures or the amount of rainfall.

The macroeconomic implications of rising atmospheric temperature are the subject of broad discussion. Their common feature, however, is a negative impact on economic output as measured by GDP, which, according to several estimates from the past ten years, could reach up to 10% of annual output for the period until 2100 if the average temperature rises by 6°C (the highest projected increase).[63]

Climate-related risks are subdivided into two basic categories: physical risks, referring to the impact of sudden or extreme weather fluctuations or events; and transitional risks, referring to climate change–related changes in environmental policies, consumer preferences and technological progress. Climate-related risks concern all economic entities, including financial institutions. Banks' exposure to physical risks is largely indirect, through the deterioration of their customers' financial situation (as financial performance is impaired by supply disruptions or reduced demand, or in some cases by a decline in the value of loan collateral). The major part of physical risks in the financial sector is, however, borne by insurers, owing to the claim settlement obligations that arise if the event insured against

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63 Dimitríjevics, A., Döhring, B., Varga, J. and in 't Veld, J., "Economic impacts of climate change and mitigation", *Quarterly Report on the Euro Area*, Vol. 20, No 1, European Commission (2021).

occurs. Transitional risks affect the performance and therefore the creditworthiness of real economy agents; thus, they affect the credit quality of banks' portfolios and, in some cases, the prices of financial institutions' asset holdings.

The direct impact on the banking sector of efforts to reduce GHG emissions is expected to be minimal

Efforts to reduce GHG emissions, particularly through the fulfilment of the EU's GHG emission reduction targets, are expected to have a direct impact on the financial sector, mainly on banks. Compared with 2005, emissions in sectors subject to the EU Emissions Trading System (ETS)[64] should be reduced by 43% by 2030 (by 2018 they had been reduced by 12%), and emissions in sectors not subject to the EU ETS[65] should be cut by 20% (by 2018, 18%). Domestically, in 2018 the energy sector accounted for the largest share of GHG emissions (50%), followed by industry (22%) and transportation (18%).[66] Increased operating expense related to the decarbonisation of production and reduced competitiveness may have a negative impact on the financial strength of individual firms.

The Slovak banking sector's exposure to entities subject to the EU ETS increased by almost €1.4 billion from 2014 to 2020, to €2.4 billion, which as a share of the aggregate NFC loan stock represents an increase from 7% to 12%. The largest part of that credit exposure is to firms that are making maximum use of emission allowance and are the firms most exposed to a gradual reduction in emission limits or an increase in emission allowance prices on the primary and secondary markets.

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64 Operating in all EU countries plus Iceland, Liechtenstein and Norway, the EU ETS is a common scheme for allocating and trading emission allowances and applies to the sectors of electricity generation, industry, and air transport.

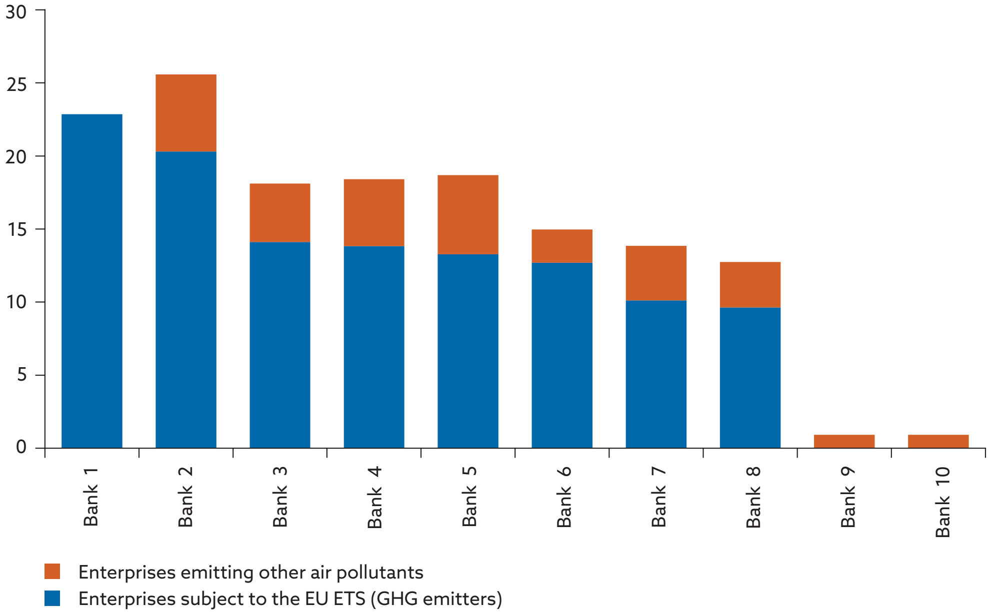
65 Mainly the sectors of surface transport, facility management, waste management, and agriculture.

66 Source: *State of the Environment Report of the Slovak Republic in 2019*, Ministry of Environment of the Slovak Republic and Slovak Environment Agency, 2021.

Chart 15

Loans to air polluting enterprises as a share of selected banks' NFC loan books as at the end of 2020

Enterprises emitting other air pollutants and enterprises subject to the EU ETS (percentages)



Sources: Ministry of Environment of the Slovak Republic, Slovak Hydrometeorological Institute, and NBS.

Notes: The chart covers banks which in 2020 had an NFC loan book amounting to more than €250 million. Where an enterprise emits greenhouse gases and also other pollutants (particulate matter, sulphur and nitrate oxides, carbon monoxide, and other organic materials), it is recorded as an emitter of GHGs. EU ETS: EU Emissions Trading System.

Despite the rising exposure of domestic banks to these entities, the direct impact on the banking sector is expected to be only minimal. The exposure is heavily concentrated, since only a small number of entities account for the major part it. At the same time, there is considerable heterogeneity across individual banks' exposure in this area,[67] and only certain banks report a higher degree of exposure. Exposures to these entities tend to have shorter maturities, thereby giving banks more leeway to respond to an increase in the related risks. In the recent period, moreover, the increase in these risks has had an upward impact on risk margins, which may indicate that banks are gradually starting to price the higher risks into their credit policies.

67 Further information about the Slovak banking sector's exposure to risks related to the fight against climate change may be found in the NBS Analytical Commentary entitled "Ohrozuje boj proti klimatickej zmene finančnú stabilitu?" (Is the fight against climate change a threat to financial stability?) of 14 April 2021.

The gradual implementation of environmental policies will bring new opportunities for the banking sector

Slovakia's environmental policy strategy is setting ambitious targets in regard to the share of renewable energy in the energy mix and to energy efficiency. Meeting these targets may bring substantial changes in the structure of the domestic economy.[68] Structural changes may also be expected in the labour market and in the corporate sector. While some sectors may see their attractiveness and business model improve, others may experience the opposite trend.

These changes may also, however, bring new opportunities for the banking sector. Meeting the mentioned targets will require significant investment, much of which will be covered by EU funds. We assume that the banking sector will have a significant role in the financing of these policies, which could have an upward impact on growth in bank lending to the NFC sector. The phasing-in of environmental policies will also create room for new banking products that respond to the new needs of banks' customers. Demand for green bonds[69] and green mortgages can be expected to increase. The implementation of these policies will have a major impact on sentiment throughout society and will be reflected in the behaviour of financial institutions' customers and of investors. Digitalisation investments, the use of electronic communication channels and online sales channels, the preference for virtual payment cards over plastic ones, and the uptake of company electric vehicles should, in the long run, make institutions' operating expenses more efficient and, just as importantly, reduce their carbon footprint and have a positive impact on public opinion.

A separate issue is the gradual adoption of legislation aimed at increasing the transparency of financial institutions and providing additional information about their portfolios, as well as, in some cases, designing financial products in regard to sustainability and to environmental, social and governance (ESG) parameters (EU Ecolabel). Designing financial products to be ESG compliant will in itself be a major challenge.[70] Another future chal-

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68 *A Low-Carbon Growth Study for Slovakia: Implementing the EU 2030 Climate and Energy Policy Framework*, The World Bank, 2019.

69 According to Bloomberg, the first green bank bond publicly issued in central and eastern Europe was the Green Bond issued by Slovakia's Tatra banka.

70 *Testing the application of the EU Taxonomy to core banking products: High level recommendations*, European Banking Federation and United Nations Environment Programme Finance Initiative (2021). The application of the new EU Taxonomy to core banking products, including retail banking, small and medium-sized enterprises (SME) lending and corporate banking, green bonds, and project financing, was tested in case studies by 26 banks belonging to national banking associations that are members of the European Banking

lenge for banks will undoubtedly be the need to adapt banks' IT systems and to ensure evaluation consistency across EU countries. For financial institutions, the task of becoming compliant with the new legislation will certainly increase their operational burdens and expenses.

2.6 The increasing importance of corporate bonds

The issuance of corporate bonds in Slovakia has for several years now been increasing. It was long the case in the Slovak corporate sector that firms obtained financing either through issuing shares or through borrowing from local banks or from their parent group. In recent years, however, a particular group of firms have increasingly been turning to the bond market to ensure their financing. The corporate sector's debt securities liabilities increased from just over €2 billion five years ago to more than €5 billion by the end 2020.[71]

A substantial part of the demand for Slovak corporate bonds is coming from the household sector. The very fact that firms have become focused on bond financing is essentially positive, since it is contributing to the diversification of their sources of financing and partly also to the development of the domestic capital market. A significant share of the domestic corporate bonds placed on the market in recent years are directly held by Slovak households. The total amount of these household holdings increased from around €0.5 billion at the start of 2016 to €2 billion at the end of 2020, representing an average annual growth rate of 25%. This is a high rate, particularly in the context of other types of households' financial assets, such as bank deposits, pension savings and investments in investment funds, whose average annual growth during same period of time did not exceed 10%. On the other hand, the amount of direct corporate bond holdings as a share of households' total financial assets remains relatively low, at around 2.5%.

The motivation behind households' increasing demand for corporate bonds lies in the environment of low interest rates. Issuing corporate bonds on the financial market is a standard way for firms to obtain financing. When the remuneration on bank deposits is fluctuating around zero,

Federation. In no case was complete alignment observed; however, partial alignment, or alignment after the adoption of certain assumptions, was observed in 15 cases. The biggest problems were data being missing, insufficiently detailed or incomplete and the expertise requirements for the assessment of non-financial parameters in the approval process of individual institutions.

71 These data include book-entry debt securities held in customers' asset accounts at a central securities depository in Slovakia or in the custodianship of a bank or investment firm; they do not include paper securities that investors purchased directly from the issuers.

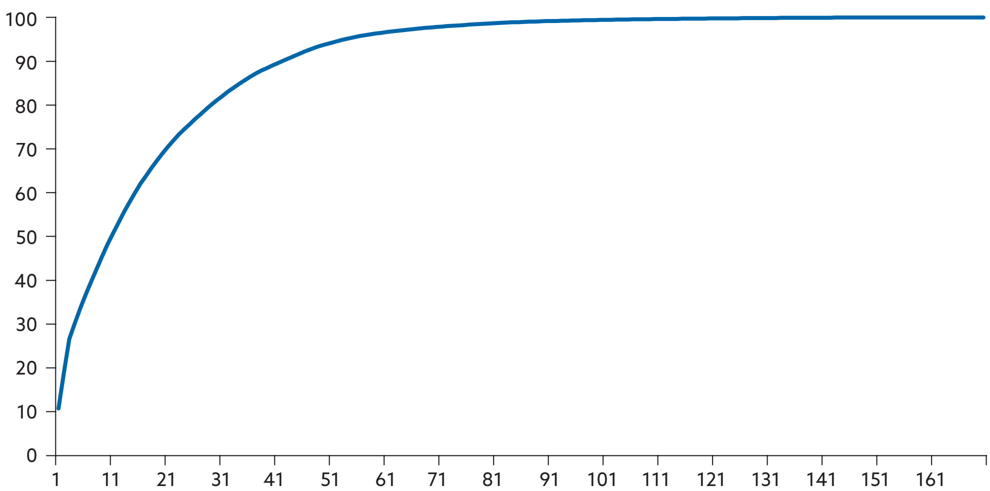
bond yields in the region of 4% to 5% are, at least at first glance, an attractive investment opportunity. The question, however, is whether some of those household investors, mainly non-professional investors, are not underestimating the risks associated with such bond purchases. In their decision-making on investing in this asset class, households appear to be influenced also by the distribution network for these bonds. In April 2021 the Bank issued a supervisory benchmark aimed at harmonising the process for selling corporate bonds and, relatedly, the appropriate level of protection for retail customers. These bonds are marketed predominantly through a small number of banks, investment firms, and their agents, who draw customers' attention to these financial instruments and usually ensure distribution for other groups of issuers.

The first of the risks related to investing in corporate bonds is that it entails greater concentration risk than does investing in a broadly diversified fund. A large share of the total amount of households' corporate bond holdings comprise bonds issued by a small group of issuers numbering several dozen. Even within that limited number there is high concentration: a substantial number of these issuers are linked to each other as members of the same parent financial group or holding company.

Chart 16

Households' holdings of Slovak corporate bonds are concentrated among the several dozen most significant issuers of such bonds

The horizontal axis shows the number of bond issuers ranked by the volume of their issues; the vertical axis shows the cumulative share of the first *n* issuer in the total amount of Slovak corporate bonds held by households (percentages)



Source: NBS.
Note: The chart shows the situation as at 31 December 2020.

Another important aspect is households' credit risk exposure related to their domestic corporate bond holdings. The Slovak corporate bonds that find their way into households' assets do not have any credit rating or preferential security interest. This market practice stems mainly from the fact that Slovak bond issues are relatively small scale, resulting in higher credit rating costs; it does not automatically mean bond issues are higher risk. What this does at least mean, however, is that the creditworthiness of issuers should be evaluated through case-by-case credit analyses based on disclosed information, which in the case of household investors is unlikely to happen. With the aim of giving investors straightforward assistance in deciding whether or not to purchase a corporate bond, the Bank in 2020 issued a Corporate Bond Information Card. One factor that could potentially heighten credit risk is that a majority of issuers are in the form of special purpose vehicles (SPVs); however, the parent institution guarantees differ from case to case.

Another non-negligible risk factor associated with Slovak corporate bonds is their low liquidity. Only around one-half of the amount of households' holdings of these bonds correspond to securities admitted to trading on the Bratislava Stock Exchange. Even among these marketable bonds, the frequency and volume of transactions in them are very low. Low liquidity naturally results also from the small size of many of the issues, which often amount to only tens of millions of euro. If there were a surge in investors wishing to cash in a bond before the maturity date, it could adversely affect the price at which the investors would be able to realise the transaction. In some cases, it may be difficult to find a purchasing counterparty.

3 Financial sector resilience

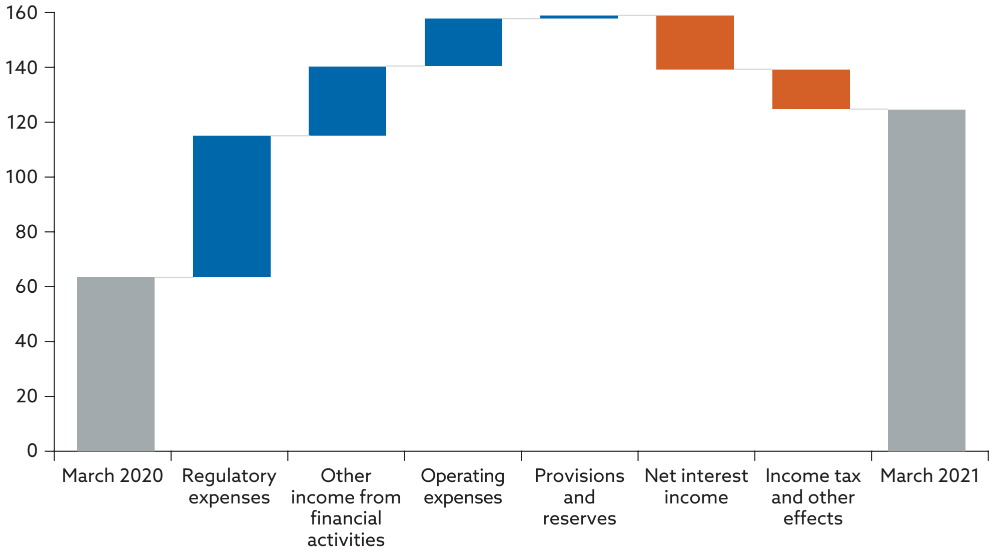
3.1 Solvency and financial position

After falling, year-on-year, by one-quarter in 2020, banks' net profit doubled in the first quarter of 2021

Chart 17

Banks' aggregate profit for the first quarter of 2021 almost doubled year on year

Net profit and the most significant contributors to its year-on-year increase (EUR millions)



Source: NBS.
Notes: Regulatory expenses include the bank levy, contributions to the Resolution Fund and the Deposit Protection Fund, and supervisory fees. Other income from financial activities includes net fee and commission income, dividends received, and the revaluation of financial instruments fair valued through profit or loss.

The banking sector's net profit for the first quarter of 2021 increased by 96%, year on year, to €125 million. In the context of recent history, such a first-quarter result is not exceptional. For the first quarter of each year from 2017 to 2019, i.e. before the pandemic crisis, banks reported an average profit of €166 million. However, the sharp rise in profitability in the first quarter of this year was caused largely by the abolition of the bank levy as from July 2020,[72] though the impact of that change was partly offset by an increase in the contribution to the Deposit Protection Fund (DPF).[73] Banks were also helped by financial market developments that increased the value of their bond and equity portfolios.

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72 The impact of the bank levy's abolition on the banking sector's profit before tax amounted to €76 million.

73 The contribution to the DPF increased by €22 million year on year. The increase was related to an acceleration of the DPF's accumulation of funds, against a target level of 0.8% of covered deposits by 3 July 2024 (as laid down in Act No 118/1996 on the protection of deposits, as amended).

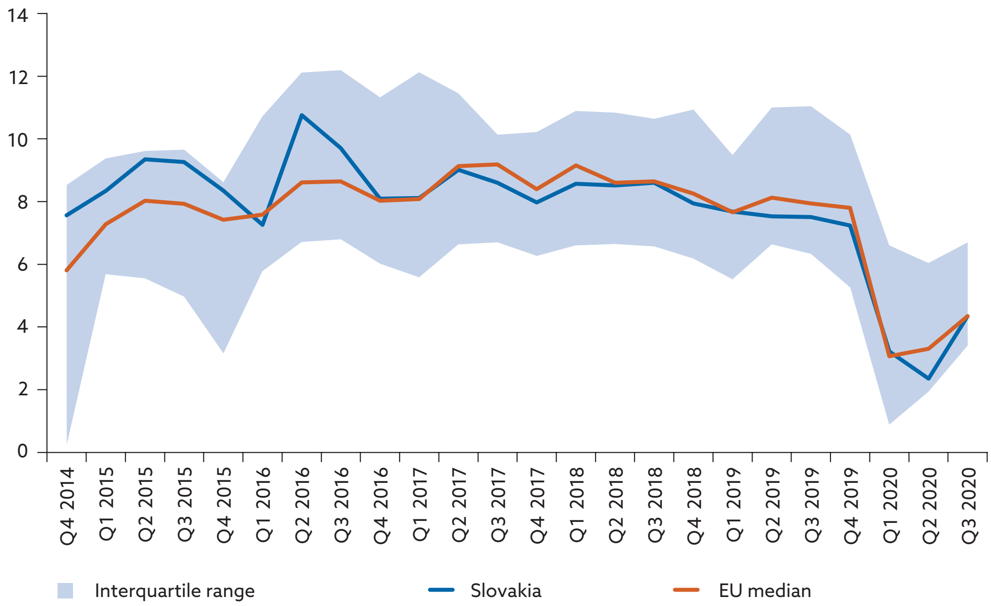
Although banks' loan loss provisioning in the first quarter of 2021 was far below its level in the summer months of 2020, it was still higher compared with the pre-pandemic period. It therefore reflected persisting uncertainty about the future repayment of loans, especially in the corporate sector. Provisioning in the first quarter, as in the previous year, was more precautionary in nature, with risk parameters remaining largely unchanged.

Banks' net interest income – the principal component of their profitability – has remained on a long-term downtrend. In the first quarter of 2021 it fell to its lowest level since the end of 2009. The greatest pressure on net interest income is coming from the decline in returns on loans to households and on the portfolio of securities holdings. Indeed, the annualised net interest margin has fallen to its lowest level since 2004.[74] In the last quarter of 2020 and first quarter of this year, the compression of net interest income was further accentuated by loan growth making a lower than usual contribution to that income. Nor have banks been able to reverse this trend through the other traditional pillar of their profitability: net fee and commission income. This income recorded a modest rise in the first quarter, driven by increases in the amount and number of bank transactions; however, the rate of charge declined.

Chart 18

Banking sector profitability fell in all EU countries

Annualised return on equity in EU countries (percentages)



Sources: NBS, and ECB.

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74 The net interest margin has been gradually falling since the end of 2011. In February 2019 it reached a new all-time low of 2.20%, dropping below its previous lowest level of 2.22%, recorded in May 2006. The downtrend has since accelerated, and in March 2021 the margin stood at 1.69%.

The pandemic crisis has weighed heavily on the profitability of banking sectors across EU countries. The Slovak banking sector's annualised return on equity for the first three quarters of 2020 fell sharply year on year;[75] nevertheless, domestic banks' profitability remained at the level of the EU median.

We assume that banks' profitability will gradually pick up again in the years ahead. In 2021 it is expected to be slightly higher compared with the previous year, while in subsequent years it should already be back to its pre-pandemic level. The main factor having a positive impact in 2021 will be the abolition of the bank levy in 2020, which is expected to push the profitability's annual rate of change into positive territory. On the other hand, the banking sector's profit will remain affected by elevated credit risk costs related to the pandemic crisis. Another factor that could have some positive impact on profitability is certain banks' participation in the Eurosystem's third series of targeted longer-term refinancing operations (TLTRO III). The following years will also see the sector's profitability supported by the ongoing economic recovery, with its downward impact on the creation of provisions and reserves. The most significant contributor to uncertainty in the period ahead will continue to be the pandemic's progress and the related economic recovery.[76]

Improvement in the banking sector's solvency

Although the Slovak economy was confronted with a new situation in 2020, i.e. the pandemic crisis, the banking sector's solvency improved significantly. By the end of 2020 the banking sector's aggregate total capital ratio had risen to 19.7%.[77] There was also in increase in its Common Equity Tier 1 (CET1) capital ratio (CET1 being the highest quality of capital).[78] This improvement in the banking sector's capital adequacy stemmed not only from banks' response to the new economic situation, but also to several measures adopted by regulatory authorities.

Most banks responded cautiously to the new situation, hence the increase in the volume of banks' own funds since the onset of the pandemic crisis. Although most of that increase was due to the retention of earnings for 2019, banks also strengthened other forms of capital. With its overall volume of

[75] From 7.2% to 4.4%.

[76] In the baseline scenario of economic developments, the aggregate profit of banks' in Slovakia, excluding foreign bank branches, is estimated to be €454 million in 2021 (a year-on-year increase of 8.2%). In the adverse scenario, the profit would be more than four times lower compared with the baseline scenario, at €109 million. More detailed information about the stress testing of banks is provided in Section 3.3.

[77] There was a clear increase in 2020, from a level of 18.2% in December 2019.

[78] The CET1 capital ratio rose from 16% in December 2019 to 17% at the end of 2020.

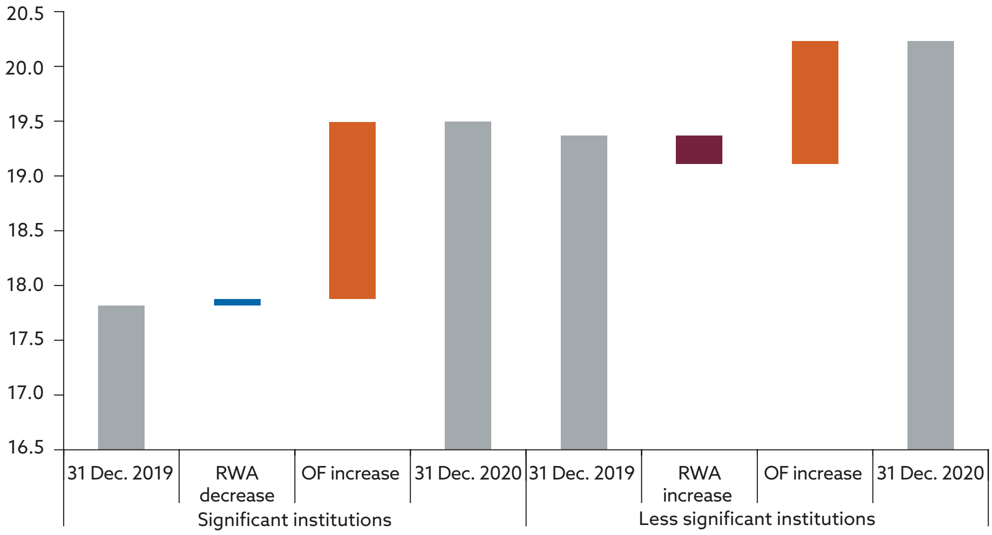
own funds increasing by more than 8%, the banking sector saw its aggregate total capital ratio increase, year on year, by 1.5 percentage points in 2020.

The general improvement in the banking sector's solvency resulted in a slower rate of increase in the amount of banks' risk-weighted assets. The situation in respect of individual banks' risk-weighted asset amounts was affected by the broader economic situation and therefore by banks' precautionary approach to new business, particularly in the early part of the pandemic crisis. Consequently, the sector's year-on-year risk-weighted asset growth was minimal. The banks that had the most significant impact on the aggregate amount of risk-weighted assets were those that use an internal ratings-based (IRB) approach to assess credit risk ('IRB banks'), since the decline in risk weights resulted in an overall decline in their risk-weighted assets. In these banks, unlike other banks, a new supporting factor for loans to small and medium-sized enterprises was applied, and its positive impact on the increase in the sector's total capital ratio amounted to 0.2 percentage point.

Chart 19

Changes in the total capital ratios of banks categorised as significant institutions and less significant institutions

(percentages)



Source: NBS.
Note: RWA – risk-weighted assets; OF – own funds.

Regulatory authorities also responded to the onset of the pandemic crisis, adopting measures to ensure the greatest possible flexibility in lending to the real economy. As early as March 2020, the ECB quite significantly eased credit requirements for banks.[79] NBS, for its part, reduced the coun-

[79] The ECB allowed banks to operate temporarily below the level of capital defined by the Pillar 2 Guidance (P2G) and the capital conservation buffer (CCoB). It also allowed banks to partially use capital instruments that do not qualify as CET1 capital, for example Additional Tier 1 or Tier 2 instruments, to meet the Pillar 2 requirements.

tercyclical capital buffer (CCyB) rate on two occasions in 2020, bringing it down to 1%.

The volume of available capital in the domestic banking sector increased to €1.6 billion in 2020,[80] representing more than 4% of risk-weighted assets. Nor is this available capital limited by the leverage coverage ratio, which by the end of 2020 stood at 8.15%.[81] All domestic banks comfortably met the minimum requirement of 3% for the leverage ratio. This requirement is still lower than the Tier 1 ratio requirement (Tier 1 capital over risk-weighted assets). For the time being, banks have sufficient available capital to continue financing the economy in the post-pandemic period. That capital could in the future be partly reduced by compliance with MREL.[82]

Increase in insurers' resilience

The aggregate profit of insurers in Slovakia continued to increase in 2020, recording its highest growth since 2016. The sector's net profit increased by 9.8%, to €184 million. All insurers posted a profit for the year, and around half of them saw their profit grow.

The profit growth was driven mainly by savings on claim payments and on provisioning. In the non-life segment, the overall technical result increased in 2020 by 54%, year on year, to €86 million, largely because of savings on claim payments in motor insurance. The life segment's technical result stood at €51 million, between the levels recorded in the previous two years.

In non-unit linked life insurance, the financial result for 2020 was 10% lower year on year, at €90 million. Compared with previous years, the decline was more pronounced; nevertheless, it should be seen in the context of the ongoing recovery in financial markets, which continued on after the end of the calendar year. Investment returns decreased similarly as in previous years (by 0.4 percentage point), down to 2.47%.

Compared with traditional life insurance business, unit-linked life insurance has a more volatile financial result, and this trend continued in 2020. But although the result for 2020 fell by 94% year on year, this segment, too,

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80 Including the capital defined by the P2G, the sector's available capital would have stood at €1.9 billion.

81 Excluding exposures to central banks, the leverage ratio would have stood at 8.65%. The second Capital Requirements Regulation (CRR II) amended the European leverage framework by introducing the power, in exceptional circumstances, to exclude certain exposures to central banks from the total exposure measure on a temporary basis.

82 The minimum requirement for own funds and eligible liabilities may be partly met with non-capital instruments. If banks opted to meet MREL entirely with capital instruments, their available capital could be reduced.

was already on a recovery path before the year ended. Its further progress, however, will depend on several macroeconomic and financial factors.

Insurers' aggregate return on equity (ROE) rose in 2020 despite an increase in own funds. Their ROE increased by 0.5 percentage point, to 13.78%. What is positive is that not only the numerator (profit) increased, but so did the denominator (the amount of own funds), whereas in previous years the ROE was rising on the basis of a decrease in own funds.

Solvency indicators confirm the resilience of domestic insurers

During the pandemic crisis, insurers in Slovakia have remained resilient to adverse shocks. The sector's Solvency Capital Requirement (SCR) coverage ratio ended the year at 192%, almost the same as its level in December 2019. On the downside, however, the quality of insurers' capital deteriorated, as the share of *expected profits included in future premiums (EPIFP)*, a volatile component, increased from 49% at the start of 2020 to 58% at the end of the year.

Box 4
The low interest rate environment has affected results in traditional life insurance

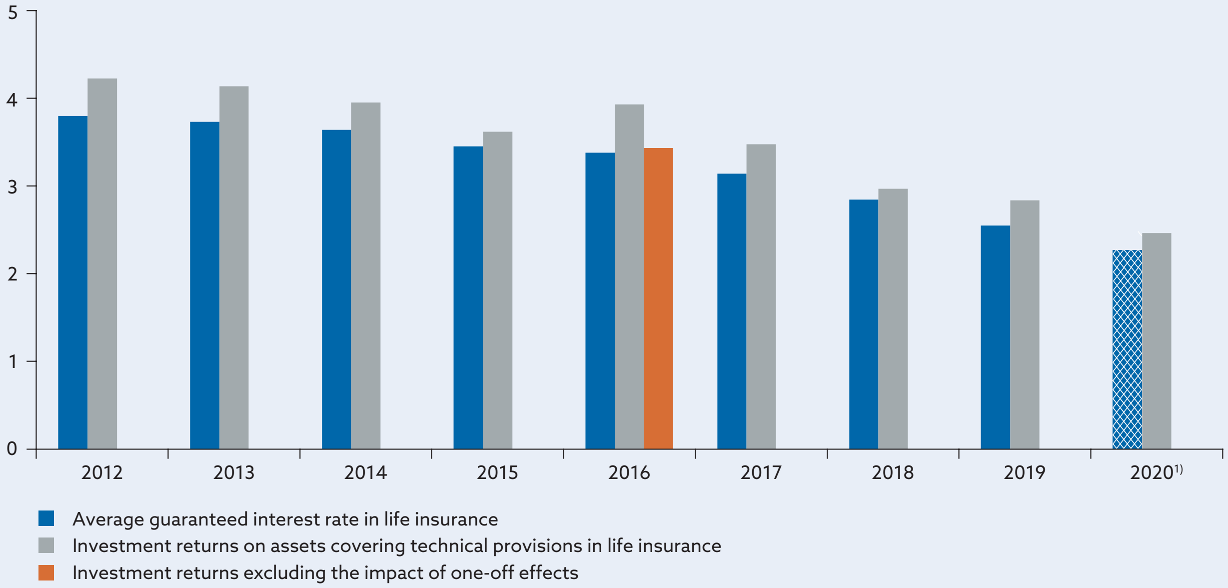
The financial performance of traditional life insurance business has usually relied on investment returns. Insurance theory assumes that insurers invest the premiums they collect and use the returns on those investments to cover the interest guaranteed under life insurance contracts and their own margins. In other words, the life insurance premiums themselves need not be sufficient to cover the insurers' expenses (in which case there is a negative technical result), since the shortfall in funds is made up with investment returns (i.e. the financial result).

Despite the prolonged low interest rate environment, investment returns have so far remained high enough to cover guaranteed interest rates. Since the aggregate portfolio of domestic insurers consists mainly of bonds, the downtrend in market interest rates has been having an impact over an extended period. As the portfolio's older, higher-yielding bonds have matured, they have been replaced with lower-yielding bonds. At the same time, insurers have used this period to reduce the average guaranteed rate in the portfolio of insurance contracts. Concerns that investment returns may fall short of requirements have so far not materialised. The flip side of shoring up returns is an increase in credit risk, as seen by corporate bonds becoming a greater share of the investment portfolio at the expense of government bonds.

Chart 20

Despite declining, investment returns are still sufficient to cover guaranteed interest rates

The level of the average guaranteed interest rate and the investment return on assets (percentages)



Source: NBS.
Note: 1) The guaranteed interest rate figure for 2020 is estimated on the assumption that the rate of decrease continues at the same rate as its average for the years 2016 to 2019.

Another effect of the low interest rate environment is an increase in the technical result in the life insurance segment.[84] For insurers, life insurance policies are relevant only as a profitable commercial product. Hence insurers look to keep a reasonable margin even when their financial result is declining. An increasing share of that result is contributing to insurers' profits, and a diminishing share is allocated to the coverage of guaranteed rates. This means that insurers in the life segment are becoming increasingly reliant on their technical result. The aggregate technical result in life insurance moved into positive territory in 2016. At the start of that year its ratio to the financial result was 1:6; now it is around 1:2.

3.2 Financial sector vulnerability in stress scenarios

The banking sector remains resilient even during the pandemic crisis

Banks are expected to cope with losses resulting from the pandemic crisis. Even if the crisis lasts for a longer time, as assumed in the adverse scenario, most banks should remain in profit.[83] In that scenario, the banking sector's profitability (measured by return on equity) declines in 2021 by one-quarter,[84] year on year, largely as a result of credit risk losses. By the end of the scenario period, its profitability is still not back to the pre-pandemic level.[85] In terms of profit-generating capacity under the adverse scenario, there is a considerable difference between significant banks, which are able to remain in profit, and less significant banks, which are more sensitive to adverse economic and financial market developments.

The main source of losses in both the baseline and adverse scenarios is credit risk losses resulting from the modelled loan delinquencies. Under the adverse economic situation observed in 2020 and under the adverse stress test scenario for 2021, many households and firms were and are unable to repay their loans. Because of the crisis, the amount of extraordinary credit risk losses[86] in the years from 2021 to 2023 exceeds the ordinary level of such losses by around one-half in the baseline scenario. Compared with the baseline, the amount of credit risk losses in the adverse scenario is around three times higher owing to the crisis being more protracted and more severe. In the baseline scenario, just under 60% of the extraordinary credit risk losses are on non-performing loans to households; by contrast, in the adverse scenario, more than half of the extraordinary credit risk losses are on non-performing loans to NFCs.

Although the losses arising in the adverse scenario have a sizeable impact on banks' aggregate profit, the banking sector is at present sufficiently solvent to cope even with those. The banking sector's solvency is expected to remain stable under the baseline scenario. After taking into account assumptions for profit distribution in 2021 and the continuation of a similar dividend policy throughout the scenario period, the sector's aggregate total capital ratio is estimated to remain unchanged at just over 20% of risk-weighted assets. In the adverse scenario, the higher losses result in the total capital ratio falling by 1 percentage point over the period, to 19.2% in 2023. The decline in the sector's capital adequacy stems from both its lower profits during the years modelled and from an increase in

83 Stress testing was carried out on the basis of data as at 31 December 2020. The exercise involved modelling developments over a three-year period (2021–2023) under the two scenarios described in Box 1 ("Scenarios of macroeconomic and financial developments for stress testing purposes"). These scenarios do not, however, represent projections of future developments; they are only modelled scenarios for the macro stress testing of the financial sector.

84 The banking sector's ROE decreases from 5.8% in 2020 to 1.4% in 2021.

85 The ROE increases gradually, up to 7% in 2023, while the ROE for 2019 was 8.6%.

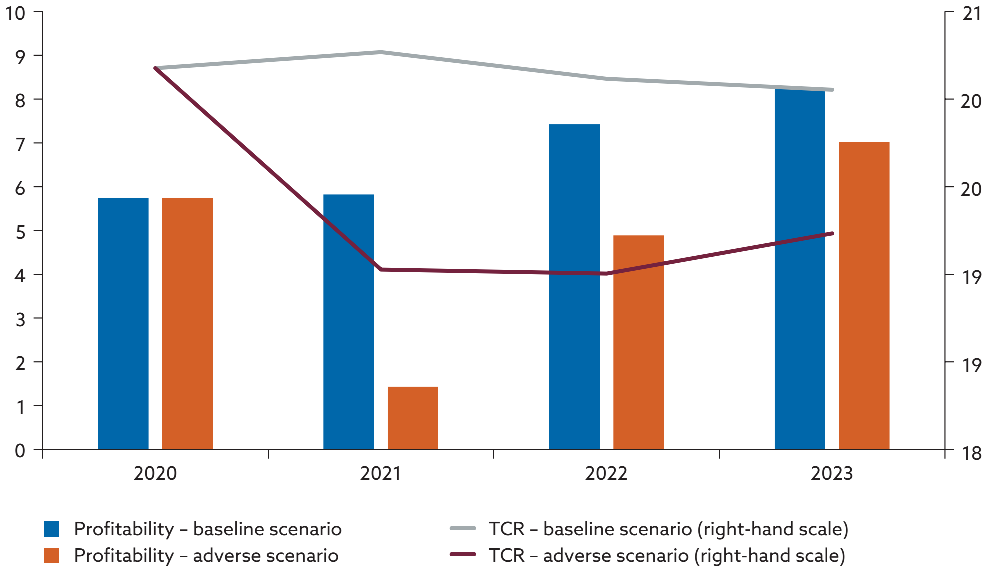
86 The amount of credit risk losses in excess of the average level during the pre-crisis years of 2018 and 2019.

risk-weighted assets. Even in the adverse scenario, however, banks easily meet the basic capital adequacy requirements.[87]

Chart 21

The banking sector's solvency is significantly affected by banks' profit-generating capacity

(percentages of own funds; percentages of risk-weighted assets)



Source: NBS.
Notes: Profitability as measured by return on equity. The total capital ratio (TCR) also covers the profit made in the given year.

Pension and investment funds record temporary losses in the modelled adverse scenario of financial market developments

Stress testing focused on market risk was also applied to other financial market segments. In the adverse scenario, the aggregate NAV of second-pillar pension funds falls by 6.1%, and that of third-pillar funds, by 9.1%. As for investment funds, their NAV decreases by 6.9%. The stress test period was one year, so for pension fund participants, these figures only provide information about the degree of funds' sensitivity to short-term market fluctuations; from the perspective of long-term investment strategy, they may not necessarily be significant.

Insurers' resilience also confirmed by stress testing

Stress testing of the insurance sector showed that even in the case of adverse shocks,[88] insurers had an average Solvency Capital Requirement co-

[87] The capital requirements set at 8% and 10.5% of risk-weighted assets, with the higher requirement also including a capital conservation buffer.

[88] The adverse scenario assumes unfavourable financial market developments (in line with the adverse scenario for the banking sector), a 10% increase in claims paid in all non-life insurance classes, and a 20% surrender rate in life insurance.

verage ratio of 163%. The lowest ratio recorded by any insurer was 112%, comfortably above the 100% compliance threshold.

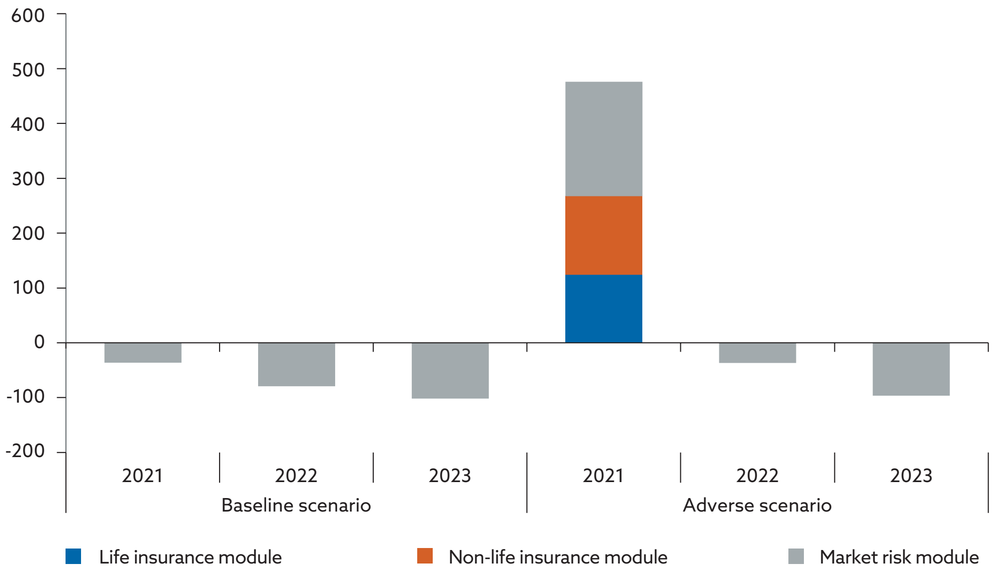
In the adverse scenario, the greatest impact on the sector is from market risks, which cause one-off losses amounting to €209 million.[89] Claims paid in non-life insurance climb to €143 million, while policy surrenders in life insurance cost insurers €124 million.

On the other hand, the sector's profit provides a significant buffer against these costs. The gross profit in 2021 is assumed to be the same as in 2020, i.e. €253 million. The sector's capital declines by 15% in 2021, with the figures for individual insurers ranging from -17% to 0% (i.e. a positive financial result). The next two years of the stress test period are assumed to see a recovery in financial markets that moderates the negative shocks from 2021. The positive revaluation of insurers' assets amounts to €37 million in 2022 and €96 million in 2023.

Chart 22

Asset revaluation would have the largest impact on the sector, before partially correcting in subsequent years

Additional costs under the different stress testing modules for the insurance sector (EUR millions)



Source: NBS.

[89] Market risks refer to the revaluation of financial assets other than those invested under unit-linked policies (whose value does not have a direct impact on the insurer's financial performance).

3.3 NBS macroprudential policy

The Bank stands ready to proactively use the countercyclical capital buffer

The countercyclical capital buffer (CCyB) is turning out to be an effective macroprudential policy instrument. After introducing the CCyB in Slovakia in 2016, the Bank gradually increased its rate, up to 2% in 2019. Subsequently, within a short period between April and July 2020, the CCyB rate was reduced to 1%. In the years before 2020, banks built up their reserves by making effective use of rapid growth in both the economy and their lending activity. Last year, filled as it was with uncertainty, they were already able to tap those reserves. In other words, banks had given themselves sufficient leeway both to increase their loan loss provisioning and to support their lending to firms and households. The current CCyB rate of 1% leaves room to provide further support to the banking sector, should it be necessary.

After reaching exceptional levels that were the main trigger for the CCyB rate reductions in 2020, banks' loan loss provisioning became more moderate in the second half of that year and early 2021.[90] The main reasons for reducing the CCyB rate in 2020 have ceased to exist for the time being. If the provisioning levels seen in 2020 return, or if loan delinquencies increase significantly, the Bank will further reduce the CCyB rate.

The Bank may also lower the CCyB rate if credit risk on loans to firms and households does not rise significantly. Such a situation may arise if the economic recovery becomes clearly robust and the riskiness of banks' loan books consequently decreases. In the period ahead, the Bank will therefore be closely analysing the household and corporate loan books and the financial situation of borrowers, so as to keep track of changes in the riskiness of different types of loans and their borrowers.

It is also the case, however, that excessively fast growth in the economy and lending activity could be a reason for not reducing the CCyB rate. The pandemic crisis has had a major impact on the economic situation, while changes in the financial cycle during the same period have been only moderate. Growth trends in the credit market and property market have continued in 2021. The risk appetite of banks and their borrowers remains whetted by low interest rates. A potential acceleration of these trends

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[90] Further information is provided in the Bank's March 2021 Macroprudential Commentary, published here on the NBS website.

could imply a further build-up of risks, with the CCyB rate having to be calibrated accordingly.

Capital buffers applicable to banks in Slovakia designated as other systemically important institutions (O-SIIs) have been affected by EU legislative amendments[91]

The first change concerns the definition of the systemic risk buffer (SyRB). It will no longer be possible to use this capital buffer as an add-on to the O-SII buffer. Whereas the current capital requirements for domestic O-SIIs comprise two capital buffers (the O-SII buffer and the SyRB), those for 2022 will consist only of the O-SII buffer.

The second change concerns the capping of the O-SII buffer rate. One limit is the O-SII rate applicable to the domestic O-SII's parent group, since the rate applicable to the domestic O-SII cannot be more than one percentage point higher than the parent group's rate. In the case of the domestic O-SII Všeobecná úverová banka, a.s. (VÚB), its group, Gruppo Intesa Sanpaolo, is assigned an O-SII buffer rate of 0.75%, which means that the rate for VÚB cannot exceed 1.75%. Even though the systemic importance of VÚB has increased slightly year on year, its O-SII buffer is to be reduced from 2% to 1.75%.

Table 2 Changes in capital buffers applicable to O-SIIs

Bank	Buffer	Composition of capital buffers from 1 January 2021	Composition of capital buffers from 1 January 2022
Všeobecná úverová banka, a.s.	O-SII buffer	1.00%	1.75%
	SyRB	1.00%	not applied
Slovenská sporiteľňa, a.s.	O-SII buffer	1.00%	2.00%
	SyRB	1.00%	not applied
Tatra banka, a.s.	O-SII buffer	0.50%	1.50%
	SyRB	1.00%	not applied
Československá obchodná banka, a.s.	O-SII buffer	1.00%	1.00%
	SyRB	not applied	not applied
Poštová banka, a.s.	O-SII buffer	0.25%	0.25%
	SyRB	not applied	not applied

Source: NBS.
Note: O-SII – other systemically important institutions; SyRB – systemic risk buffer.

[91] A more detailed explanation of the legislative changes and latest decisions is provided here on the NBS website.

Abbreviations

CCyB	countercyclical capital buffer
CET1	Common Equity Tier 1 (capital)
CMN	Property Price Map / Cenová mapa nehnuteľností
DSTI	debt service-to-income (ratio)
DTI	debt-to-income (ratio)
EBA	European Banking Authority
ECB	European Central Bank
EIOPA	European Insurance and Occupational Pensions Authority
EU	European Union
EU ETS	EU Emissions Trading System
GDP	gross domestic product
IMF	International Monetary Fund
LSI	less significant institution
LTV	loan-to-value (ratio)
NAV	net asset value
NBS	Národná banka Slovenska
NDF I.	National Development Fund I., s.r.o.
NDF II.	National Development Fund II., a.s.
NFC	non-financial corporation
NPL	non-performing loan
O-SII	other systemically important institution
ROE	return on equity
SCR	Solvency Capital Requirement
SI	significant institution
SIH	Slovak Investment Holding
SO SR	Statistical Office of the Slovak Republic
SyRB	systemic risk buffer