



NÁRODNÁ BANKA SLOVENSKA
EUROSYSTEM



ANALYSIS OF THE SLOVAK FINANCIAL SECTOR 2018

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FOREWORD



FOREWORD

Národná banka Slovenska produces the Analysis of the Slovak Financial Sector (ASFS) for the needs of the NBS Bank Board, the professional community and the wider public.

As one of the tools for assessing the stability of the Slovak financial sector, the ASFS should also be seen in the context of other NBS publications in this area, particularly the Financial Stability Report and the Quarterly Commentary on Macroeconomic Policy, which are published on the NBS website.

The aim of the ASFS is to provide an overview of the current situation and developments in the domestic financial sector and to warn of poten-

tial risks. With regard to its systemic focus, the ASFS employs stress testing as a way of assessing the financial sector's sensitivity to various scenarios.

Annex 1 complements the main text by providing charts of selected macroprudential indicators for the principal risk areas in the financial sector.

This edition of the ASFS evaluates the overall condition of the financial sector as at 31 December 2018, on the basis of banking statistics data. In several parts, however, it refers to more recent available data. Activities related to the supervision of individual institutions are not covered.



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OVERVIEW



OVERVIEW

THE GLOBAL ECONOMY CONTINUED EXPANDING IN 2018, ALBEIT SLIGHTLY MORE SLOWLY THAN IN THE PREVIOUS YEAR

Besides slower global growth, there was greater heterogeneity across the economic performance of countries and regions. At the same time, expectations about the future economic situation worsened, and downside risks to the growth outlook became more pronounced. The global economy's weaker growth stemmed mainly from adverse developments in international trade. The implementation of protectionist measures, plus concerns about geopolitical risks, resulted in firms taking a more cautious approach to investment spending. The global economic slowdown was relatively strongly reflected in euro area economic growth, which lost momentum in 2018 and is expected to continue decelerating in 2019.

Compared with previous years, the financial market situation deteriorated, and asset prices experienced several episodes of steeper decline and greater volatility. Almost all asset classes were loss-making during the year under review, regardless of their riskiness. The shifts in the financial market situation were largely a reaction to the turn of the monetary policy cycle, in particular the repeated increases in the target level of the US federal funds rate. Financial markets were further subdued in the second half of 2018 by deteriorating outlooks for the global economy.

IN SLOVAKIA, BOTH THE BUSINESS AND FINANCIAL CYCLES WERE IN AN ADVANCED EXPANSIONARY PHASE IN 2018

Driven mainly by domestic demand, Slovakia's economic growth in 2018 was almost twice as high as the euro area's growth. On the other hand, economic growth is above potential and the degree of economic overheating increased during 2018. Hence the current situation is leading to a build-up of risks and is not expected to be sustainable over the long term. Signs of overheating were particularly evident in the labour market, where significant shortages of skilled labour were observed. The overheating of the economy is expected to continue in 2019, albeit at a more moderate pace. Macroeconomic devel-

opments are therefore accelerating the build-up of risks within the financial cycle.

RETAIL CREDIT GROWTH SLOWED MODERATELY

The continuing growth in total retail loans was supported mainly by further decreases in unemployment and in interest rates, which reached new historical lows. Interest rates on housing loans fell to a level that was the third lowest among euro area countries. As a result, retail credit growth remained higher in Slovakia than in any other EU country.

At the same time, however, credit market developments in 2018 reflected the impact of NBS measures that tightened certain regulatory lending standards. In the second quarter of 2018, credit growth temporarily accelerated prior to these measures taking effect. By the end of the year, however, the new measures were already having a dampening effect on retail credit growth. Since their tightening will be phased in up to July 2019, the measures are expected to continue affecting retail credit growth in 2019. From a longer-term perspective, retail credit trends are being shaped by the gradual saturation of the credit market and adverse demographic changes.

As a result of these trends, annual growth in total housing loans fell from 12.8% at the start of 2018 to 11.4% at the end, and the rate for consumer loans dropped from 11.8% to 6%. In absolute terms, the increase in total retail loans in 2018 was around the same as in 2017.

PROPERTY PRICES CONTINUED RISING

Average prices of existing flats increased in 2018 by 10% year on year. This price growth was broad-based across all Slovak regions and all flat sizes. The supply of flats for sale continued to decline. Due to this trend, the new-build market became dominant in Bratislava. In this market, too, prices increased by almost 10% year on year, which was slightly higher compared with the previous year. Owing to strong demand, however, the new-build market also saw significant depletion of the supply stock, even while the number of flats under construction was twice as high as in 2014.



LOANS TO NFCs RECORDED STABLE GROWTH

The annual growth rate of loans to non-financial corporations (NFCs) ranged between 4% and 6% during 2018. Lending to most economic sectors increased, with investment loans accounting for most of that growth. After slowing slightly in the first half of the year, lending to small and medium-sized enterprises picked up in the second half. Strong demand was the main driver of the high growth in loans to NFCs, with that demand underpinned by a favourable economic situation and generally low interest rates (though rates did begin rising slightly towards the year-end, for the first time since 2014). Corporate sector indebtedness remained largely unchanged in 2018, but the sector's liquid asset-to-total asset ratio declined.

DEMAND IN THE CRE MARKET REMAINED STRONG IN 2018, SO SUPPORTING RELATIVELY ROBUST CONSTRUCTION ON THE SUPPLY SIDE

The commercial real estate (CRE) market was buoyed in 2018 by positive sentiment in the business environment as well as by increasing investor optimism, all of which translated into substantial investment activity in the domestic CRE market. As well as benefiting from the sound macroeconomic climate, investment was supported by the level of prime yields, which remain above those in neighbouring countries. From the perspective of end-user demand, too, 2018 was a strong year, particularly in the office segment of the CRE sector.

Domestic banks' lending to the CRE sector in 2018 was more subdued than their lending to other sectors. Furthermore, the growth rate of total loans to the CRE sector slowed significantly in the last quarter of the year, possibly because several significant property developments are already under construction and the inflow of new projects is more moderate than in the past.

THE DEBT-SERVICING CAPACITY OF HOUSEHOLDS AND FIRMS REMAINED HIGH IN 2018

Amid continuing economic growth, the Slovak banking sector's retail and corporate loan books both improved in terms of their non-performing loan (NPL) ratio. There was, though, a slight rise in the net default rates for consumer loans and NFC loans in the second half of 2018. In the case of housing loans, on the other hand, the net default rate was virtually zero. But although that

is a positive trend in regard to banks' current profitability, it may, from a longer-term perspective, lead to a highly competitive environment in which the risk of a future deterioration in the quality of these loans is underpriced (given that the current low default rate on housing loans is unlikely to be sustainable over the long term).

BANKS PROFITABILITY INCREASED YEAR ON YEAR

The banking sector's aggregate profit for 2018 was around 7% higher than its profit for the previous year. The profit growth was largely attributable to an increase in interest income from corporate financing, resulting mainly from the stabilisation, and eventual slight rise, in interest rates. Another significant factor was the further decrease in the credit risk cost ratio, owing mainly to a lower default rate. The continuing strong growth in retail loans was also a key element of the rising profitability, as it allowed banks to offset interest margin compression on these loans. On the other hand, this trend means banks will be more vulnerable if credit risk costs return to levels more usual in previous years.

THE BANKING SECTOR'S TOTAL CAPITAL RATIO FELL SLIGHTLY, WHILE THE LIQUIDITY COVERAGE RATIO REMAINED LARGELY UNCHANGED

In an environment of ongoing credit growth, the regulatory capital requirement for banks is increasing and the maturity mismatch between their assets and liabilities is widening. The banking sector's aggregate total capital ratio fell slightly in 2018, from 18.6% at the start of the year to 18.2% at the end. On the other hand, the liquidity coverage ratio remained broadly stable, despite a further drop in the liquid asset-to-total asset ratio.

The banking sector's resilience has again been subjected to macro stress testing. Under a scenario mirroring what happened in Slovakia during the global financial crisis, the banking sector's total capital ratio could fall by 5 percentage points. In contrast to the previous crisis, the sector's losses on retail loans could exceed losses on corporate loans. Interest margins remain an important pillar of banks' resilience, but they are now far lower than they were during the previous crisis and are relatively vulnerable to further interest rate movements. Less significant banks, whose interest margins net of credit risk costs are already more compressed compared to larger banks, face heightened risks under the scenario.



THE INSURANCE SECTOR'S NET PROFIT FELL SLIGHTLY, WHILE PREMIUMS INCREASED IN MOST INSURANCE CLASSES

Premiums written increased in almost all classes of non-life insurance and in health insurance. In traditional life insurance, however, there was a drop in premiums written. The sector's aggregate profit fell year on year, owing to a decline in the financial results in both life and non-life insurance, as well as in the technical result in non-life insurance.

Given the headwinds buffeting financial markets in 2018, the situation in unit-linked life insurance deteriorated: there was lower growth in premiums written; asset value declined; and the financial result was significantly negative.

The insurance sector's solvency fell moderately in 2018, after declining in the previous year, too. The solvency capital requirement coverage ratio was 187% as at December. A large part of the sector's aggregate capital consisted of what may be seen as a volatile component: expected profits included in future premiums (EPIFP).

THE PENSION FUND SECTOR MAINTAINED STRONG GROWTH, BUT THE RETURNS ON FUND INVESTMENTS ENDED THE YEAR IN NEGATIVE TERRITORY

Contributions to the second and third pillars of the pension system recorded double-digit growth in 2018. The pension sector benefited mainly from favourable labour market developments coupled with growth in both employment and wages. In the second pillar, the number of savers rose, and the acceleration in inflows from savers was caused in part by a statutory increase in the rate of contributions. In the third pillar, the increase in the number of savers was the highest in more than ten years.

New savers in both pillars gravitated towards funds offering a higher-risk investment policy. Most of those joining the second pillar in 2018 opted to invest in equity or index pension funds, as did existing savers who switched funds in that year.

Given the adverse trends in financial markets, in particular the slump in share prices towards the year-end, all types of second-pillar and third-pillar funds recorded negative annual returns in 2018. With the arrival of 2019, financial markets became less nervous and equity markets

quickly recouped much of their recent losses. The most marked decline in pension-point value was experienced by funds that have a higher equity component in their asset structure, but even funds following a more conservative strategy could not avoid making a negative return. The decline in funds' aggregate net asset value was also reflected in slower growth in the amount of assets under management.

ASSET GROWTH IN THE INVESTMENT FUND SECTOR ENDED ITS UPWARD TREND IN 2018

The growth trend in both domestic investment funds and foreign investment funds marketed in Slovakia came to an end in 2018. This reflected significantly lower demand for investment fund shares/units, as well as funds' poor performance. Compared with 2017, the net sales of investment fund shares/units was less than half; furthermore, the impact of these net sales on funds' aggregate NAV growth was almost entirely cancelled out by the decline in asset value resulting from financial market losses.

In 2018, as in previous years, investor demand for fund shares/units centred on those issued by mixed funds, real estate funds and, to a lesser extent, equity funds. In the case of bond funds, by contrast, redemptions of shares/units remained higher than sales. The investor inflows in 2018 were accounted for mainly by households and to a lesser extent, domestic investment funds.

Owing to the negative financial market developments in 2018, most investment funds recorded an overall loss for the year. The only positive returns, on average, were recorded by money market funds and real estate funds.

THE UPWARD TREND IN THE MARKET RISK EXPOSURE OF PENSION AND INVESTMENT FUNDS SLOWED SIGNIFICANTLY IN 2018

The elevated volatility of financial markets in 2018 was reflected in the investment policies of asset management companies. Looking at the asset structures of pension funds and investment funds, the multi-year growth trend in their equity component decelerated in 2018. At the same time, funds' exposure to interest rate risk decreased. On the other hand, there was a rise in the exposure of pension funds to Italian and other sovereign bonds which carried higher risk during the previous debt crisis.



EXTERNAL AND DOMESTIC DEVELOPMENTS FROM A FINANCIAL STABILITY PERSPECTIVE



1 EXTERNAL AND DOMESTIC DEVELOPMENTS FROM A FINANCIAL STABILITY PERSPECTIVE

THE GLOBAL ECONOMY EXPANDED AT A SLOWER PACE IN 2018 AND THE DOWNSIDE RISKS TO ITS OUTLOOK BECAME MORE PRONOUNCED

The global macroeconomic situation began to take a slightly negative turn in 2018. Although annual global GDP growth was still solid, at 3.7% (just one-tenth of percentage point below the rate for 2017), there was a more substantial trend shift in 2018, including an increase in heterogeneity across the economic performance of regions and countries. Signs of slowdown became more apparent in the second half of the year, and outlooks for global growth, at least for 2019, envisage a further loss of momentum concentrated in advanced economies. At the same time, these outlooks are currently surrounded by heightened uncertainty. The downside risks to growth outlooks became significantly more pronounced in 2018.

The weakening of world economic growth was related mainly to slower growth in global trade and industrial production. The easing of cross-border trade was in no small measure a consequence of the mutual imposition of im-

port tariffs between the United States and China, the world's two largest economies. In addition to the direct impact of such measures on exports and imports, the uncertainty accompanying the escalation of protectionism, coupled with the implications of other political and geopolitical risks, led to a deterioration in business sentiment and a more cautious approach to investment spending among firms.

SLOWER GROWTH IN EXTERNAL DEMAND AND, TO A LESSE EXTENT, DOMESTIC DEMAND WERE THE MAIN DRAG ON EURO AREA ECONOMIC GROWTH

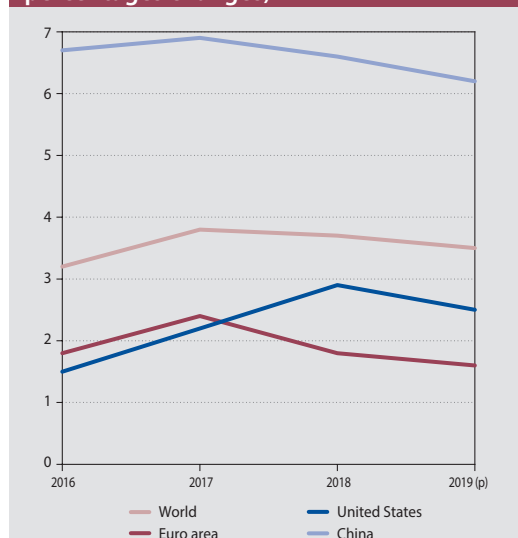
The above-mentioned developments weighed heaviest on the euro area. The bloc of countries that share the single European currency saw its annual GDP growth slip from 2.4% in 2017 to 1.8% in 2018. The slowdown was due largely to the euro area's export orientation, which is heavily focused on the United States and China. The euro area country hardest hit by falling foreign demand was Germany, whose economic growth slowed by one whole percentage point. It should be added, however, that Germany's slowdown also reflected the impact of one-off factors in the automotive industry.

Outlooks for euro area GDP growth in coming years are rather unfavourable, too. In January 2019 the International Monetary revised its projection for the region's economic growth in 2019 down to 1.6%. Then in March the ECB projected that growth would be even lower, at 1.1%, before accelerating to 1.6% in 2020. But while the latest short-term indicator figures show initial signs of stabilisation on the consumer side and in the services sector, the negative trend in manufacturing industry is not diminishing. The manufacturing PMI for the euro area recently fell below its expansion-contraction threshold for the first time since 2013.

THE TURN IN THE REAL ECONOMY CYCLE IN 2018 WAS ACCOMPANIED BY ADVERSE FINANCIAL MARKET DEVELOPMENTS

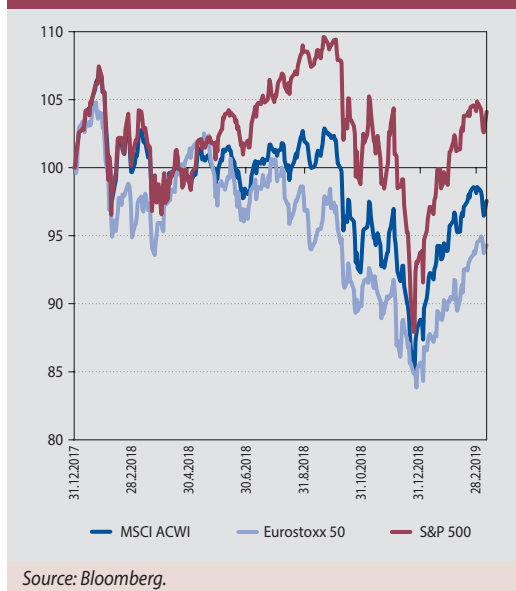
Global financial markets experienced several shocks during the period under review, each followed by significant declines in asset pri-

Chart 1 GDP growth and its outlook for selected regions and countries (annual percentage changes)



Source: IMF World Economic Outlook Update, January 2019.

Chart 2 Major equity indices



ces. A feature of 2018 was that almost all asset classes, whether more or less risky, made an aggregate loss in 2018. Equity investors had a particularly difficult year, owing mainly to heavy stock market slumps in November and December. The MSCI All Country World Index (ACWI) for the whole of 2018 recorded a negative return of 11%. European equities as measured by the Eurostoxx 50 index slumped even further, by 14%. Volatility was far higher compared with previous years and was not just confined to equity markets.

The shift in financial market sentiment and the increasing risk aversion among investors were largely a response to the turn of the monetary policy cycle, in particular the repeated increases in the target level of the US federal funds rate and the unwinding of the Federal Reserve's balance sheet. Following the increase in dollar funding costs in the summer, markets were further moved by concerns about the vulnerability of emerging market economies (EMEs), particularly those where macroeconomic imbalances were coupled with elevated political risk – the most prominent examples being Argentina and Turkey. Towards the end of the year, as the global economic slowdown became more pronounced, this situation exerted increasing downward pressure on the pricing of riskier assets. Markets proved especially sensitive to proliferating re-

ports about the worsening condition of the Chinese economy, which in the post-crisis period has been the main engine of global growth. Europe contributed to the heightened nervousness in the second half of the year through the dispute between Italy and the European Commission over the country's planned budget deficit, which drew attention to the persisting problems of Italy's fiscal stance and led to a widening of spreads on Italian government bonds. Financial markets also remained tense due to the still unresolved search for an agreement between the United Kingdom and the European Union on the form of their post-Brexit relations.

FOLLOWING ITS END-OF-YEAR COLLAPSE, RISK APPETITE SUBSEQUENTLY PICKED UP, ALBEIT AGAINST A BACKDROP OF ONGOING UNCERTAINTY AND RISKS

The concurrence of negative reports and perceived risks in the macroeconomic and financial spheres was most marked at the end of the period under review. With the arrival of 2019, financial markets became less nervous and equity markets quickly recouped much of their recent losses, actually registering one of their best ever January performances.

The upturn in risk appetite was supported by a dramatic reversal of the US central bank's stance on monetary policy tightening, as it adopted a more cautious approach. Even in December the Federal Reserve was signalling further interest rate hikes, yet just a couple of weeks later, under the pressure of circumstances, it decided to take a "patient" approach in determining further adjustments to the benchmark rate.

Nevertheless, the key element of the uncertainty and risks surrounding the global economy – i.e. the tilt to protectionism and the calling into question of globalisation – continues to cast a shadow over growth outlooks. The start of 2019 was accompanied by a slight easing of fears that there would be uncontrolled raising of trade barriers. This shift followed an agreement reached between the United States and China on 1 December 2018 to refrain from increasing tariffs or imposing new tariffs for 90 days. Previously in 2018, the US had imposed tariffs on USD 250 billion worth of Chinese goods, including, respectively, 10% and 25% tariffs on USD 200 billion and USD 50 billion worth

of goods. Before the December agreement, the US was planning to increase the 10% tariff to 25% from 1 January 2019. The US-China meeting on the future of the countries' trade relations generated moderate optimism by sending out several signals that the two sides were drawing closer together. The negotiations remain very complex, however, since they concern not only direct import-export relations, but also other sensitive relationships between the two countries. Whether or not a final deal will be reached is still very much open to question. Any breakdown of the talks would probably bring a new wave of uncertainty for the real economy and turbulence in financial markets.

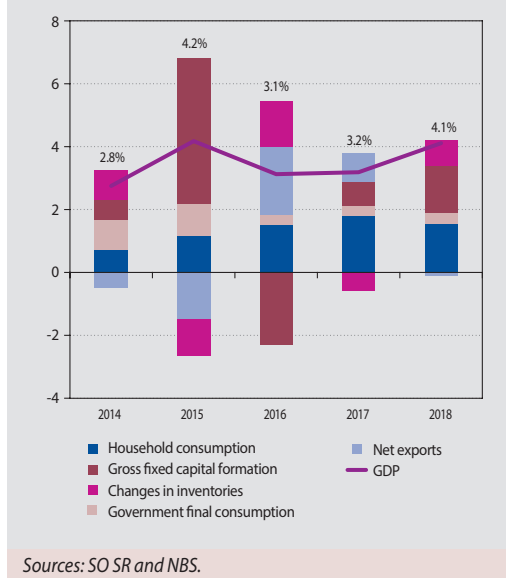
Among the prominent risks to the global economy is that the Chinese economic slowdown will be more severe than expected. China's GDP growth in 2018 was 6.6%, the lowest in thirty years. Annual GDP growth in the fourth quarter was lower still, prompting the Chinese government to revise down the target range for economic growth in 2019, to between 6% and 6.5%. One cause of the ongoing slowdown is the trade dispute with the United States. Other causes include in particular the efforts to deleverage the corporate sector, where debt has increased rapidly in recent years amid heavy investment financing.

In 2018 Europe faced not only these global risks, but also a slight increase in risks related to excessive sovereign indebtedness. Italy was attracting significant attention in the last months of the year, when its sovereign debt came under financial market pressure. Although Italy reached a compromise in its budget dispute with the EC, the required yield on Italian government bonds remains elevated. At the same time, a further escalation of the situation cannot be ruled out, given that the Italian economy is running into difficulties and could even fall into recession.

THE SLOVAK ECONOMY SPENT 2018 IN AN ADVANCED EXPANSIONARY PHASE, WITH SIGNS OF OVERHEATING APPEARING MAINLY IN THE LABOUR MARKET

The financial cycle in Slovakia, as in other EU countries, was undergoing an expansionary phase in 2018. The majority of EU countries were experiencing year-on-year GDP growth for most of the year, and Slovakia was among the

Chart 3 Slovak GDP growth and its components (annual percentages changes)



eight countries with the strongest growth. While the EU and euro area had average growth rates of 1.9% and 1.8% respectively, Slovakia's economy expanded by 4.1%.

Slovakia's economic growth in 2018 was driven mainly by domestic demand, in particular by household consumption and by investment. The improving economic situation supported household consumption expenditure, which for several years now has been reliably making a positive contribution to GDP growth. Investment was another significant factor behind GDP growth in 2018, with year-on-year increases observed in both investment by private firms and public investment. Private investment was significantly boosted by car industry investment related to the launch of a new car plant. In the public sector, local authority investment was stepped up ahead of local elections. The public sector also contributed to GDP growth through its consumption expenditure, and in particular through increases in employee wages and salaries and in health care expenditure. Unlike in previous years, net exports made a slightly negative contribution to economic growth; however, once production at the new car plant is fully on stream, their contribution is expected to be positive this year. After declining year on year in 2017, inventories rebounded in 2018 and contributed positively to GDP growth. The Slovak



economy was operating above potential in 2018, and its overheating gained momentum as the year progressed. Economic confidence gradually deteriorated towards the end of 2018, with the Economic Sentiment Indicator (ESI) for Slovakia ending the year at its lowest level since 2014. This, in the context of the slowdown in economic growth in the fourth quarter, may indicate that the expansionary phase peaked in 2018.

The business cycle's expansionary trends in 2018 were most pronounced in the labour market.

The unemployment rate, for example, was falling to new historical lows from mid-2017, and by the end of 2018 it was down to 6%. The number of people employed in the domestic economy stood at more than 2.4 million at the year-end, representing a year-on-year increase of more than 42,000. At the same time, employers were faced with significant shortages of skilled labour. One of the ways they sought to address this shortage was to hire more foreign workers, whose overall number in the Slovak economy increased by more than one-third in 2018, to around 70,000 by the year-end. Employment increased in all significant economic sectors apart from agriculture, where it has been flat for an extended period. Falling unemployment has had a significant upward impact on wages, which in nominal terms increased by almost 7% in 2018, and in real terms, with inflation remaining stable, increased by more than 4%. The favourable labour market situation in the period under review was a significant source of growth in demand for loans.

The year 2018 was also favourable for non-financial corporations (NFCs), whose aggregate sales increased by almost 8%, year on year, and recorded their highest absolute increase since the previous expansion in 2008. While sales growth was broad-based across sectors, it was most pronounced in industry and services. Unlike in the previous year, the construction sector

also reported strong sales growth. The growth in sales was reflected in corporate profits, with all significant economic sectors reporting an aggregate profit. The performance of the NFC sector was further supported by low corporate loan default rates, although a decline in corporate sector confidence in the second half of 2018 stemmed from firms' demand for new loans.

Prices of goods and services accelerated appreciably in 2018,

as the general price level increased by 2.5% year on year. Inflation had not been at such a level in six years. The main drivers of the acceleration were food prices and energy prices, although services inflation was also elevated. Non-energy industrial goods inflation was lower than the headline rate. The combination of accelerating inflation and the persistent low interest rate environment resulted in a proportion of loans being provided at negative real interest rates.

The overheating of the Slovak economy is expected to continue this year,

though its rate of increase should ease. Although outlooks for the external environment have deteriorated, the impact of that development is expected to be offset by the launch of new production capacities in the domestic car industry. The labour market is expected to remain tight, putting upward pressure on nominal wage growth. Macroeconomic developments are expected to increase the build-up of cyclical risks within the financial cycle in 2019.

The risks to Slovakia's economic outlook are predominantly external.

Given its strong export orientation, the Slovak economy could face significant headwinds from a number of external developments: the current global economic slowdown and deteriorating economic sentiment in several countries; Brexit; and the increasing trend of using trade barriers as an instrument of trade policy.



INTEGRATED OVERVIEW OF THE FINANCIAL SECTOR

2 INTEGRATED OVERVIEW OF THE FINANCIAL SECTOR

THE FINANCIAL SECTOR'S GROWTH TREND CONTINUED IN 2018, ALTHOUGH WITH HETEROGENEITY ACROSS SEGMENTS; COMPARED WITH PREVIOUS YEARS, MOST SEGMENTS DID NOT REPORT STRONG PROFITABILITY GROWTH

The situation in Slovakia's financial market in 2018 reflected the expansionary phase of the financial cycle, which supported balance sheet growth in the financial sector. The financial sector's total assets increased, year on year by 4.3% in 2018, to just under €118 billion. Asset growth was not, however, homogeneous across financial market segments, with some segments reporting no change or a decrease in assets under management. Despite the uneven growth, the private sector showed increasing appetite for borrowing amid rising income and an improving economic situation. Owing to the deteriorating performance of financial markets in 2018, private sector investment demand moderated. At the same time, however, the expansionary trends were causing an increase in cyclical risks related to financial cycle developments. These are risks which arise during good times – as in-

debtedness increases and risk vigilance declines – and which materialise during a recession. This is also evident from data on credit quality in the banking sector's private sector loan book, which show a steady decrease in the non-performing loan (NPL) ratio and default rate for both NFC and retail loans.

The banking sector had the largest impact on asset trends in the Slovak financial sector in 2018, as it accounts for more than 70% of total financial sector assets. The banking sector's assets increased, year on year, by 5.6% in 2018.¹ That growth was largely attributable to lending growth, which accelerated on the back of favourable macroeconomic conditions, a low interest rate environment, and strong competition in the credit market. Compared with previous years, however, asset growth moderated in 2018.

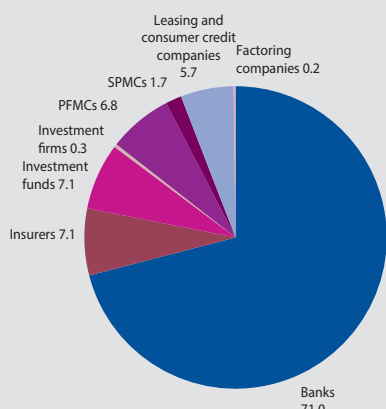
Unlike the banking sector, the insurance sector reported a decline in total assets in 2018, the first annual drop since 2002. This result stemmed mainly from a year-on-year decline of 7% in the value of assets invested under unit-linked insurance. On the other hand, premiums written continued their upward trend in 2018.

The worsening performance of financial markets and the uncertainty surrounding their future performance was also evident in the value of investment fund assets and the value of assets managed by investment firms, both of which remained flat in 2018 after recording double-digit growth in the previous year. This result can be attributed to what, compared with previous years, was the predominantly adverse performance of funds and consequent decline in their net sales. As for both second-pillar and third-pillar pension funds, their year-on-year asset growth slowed in 2018, owing mainly to asset repricing.

Asset growth in second-pillar funds was supported by the upward impact of the favourable labour market situation on wages and employment, a further increase in the number of savers (leaving the total at close to 1.5 million by the year-end), and a statutory increase in the rate of

¹ After adjusting for the impact of a methodological change resulting from the acquisition of the non-bank company Consumer Finance Holding, a.s. (CFH) by Všeobecná úverová banka, a.s. (VÚB), the profit growth in 2018 would be the same as in 2017 (5.1%).

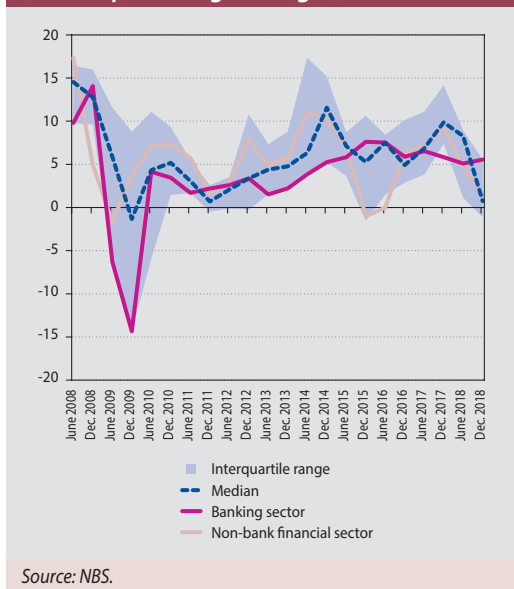
Chart 4 Distribution of assets and managed assets in the Slovak financial market (percentages)



Source: NBS.

Note: Data as at 31 December 2018.

Chart 5 Total assets in the financial sector (annual percentage changes)



contributions to the second pillar (increasing it in 2018 by 25 basis points, to 4.5%). Third-pillar pension funds also benefited from the favourable economic situation and from an increase in the number of savers, which by the year-end had increased to more than 800,000.

In leasing and consumer credit segment, asset growth eased slightly in 2018, on a par with the slowdown in consumer lending in the banking sector.

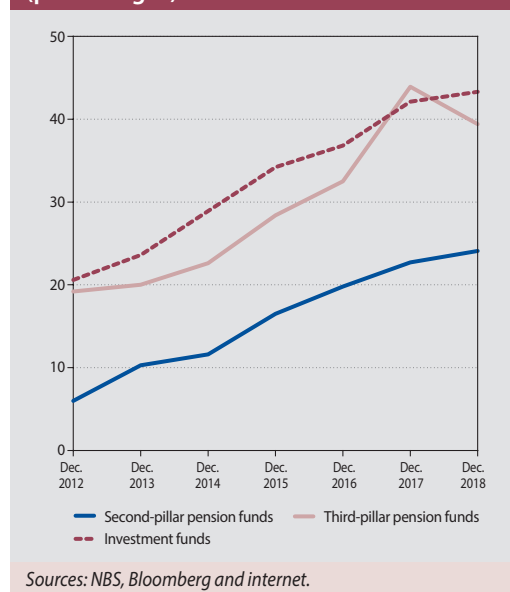
The advanced expansionary phase of the financial cycle and the worsening performance of financial markets were reflected in financial sector profitability in 2018. In some segments of the financial market, profitability in 2018 was similar to that in previous years; in the investment fund sector, however, investment fund management companies managed to increase their profitability. The banking sector's profitability measured by return on equity (ROE) was around the same level in 2018 as in the previous year. Banks have for a long period been compensating for low interest margins by increasing their lending activity, as well as their fee income from NFC loans. Their financial results have also been supported by the low level of credit risk costs, which is largely a corollary of low default

rates. The insurance sector's profitability in 2018 was also similar to its profitability in the previous year, remaining above its historical average. The aggregate profitability of asset management companies was higher in 2018 than in the previous year, although that increase was due largely to the performance of one company. Excluding that result, their profitability in terms of return on equity fell slightly year on year.

THE LONG-STANDING RISING TREND IN EXPOSURE TO DIFFERENT TYPES OF RISK MODERATED IN 2018

The multi-year upward trend in the equity component of pension and investment funds' asset portfolios moderated in 2018; in the case of third-pillar pension funds, the share of assets invested in equities and investment fund shares/units actually declined year on year. This development stemmed mainly from the depreciation of such investments following the general decline in stock markets, but it was also caused partly by investment fund managers tweaking their investment policies in response to financial market headwinds. The equity component fell even though investors continued to prefer investing in funds with higher equity components and in funds with a mixed investment policy. This was true in the investment fund sector as well as both pillars of the pension system.

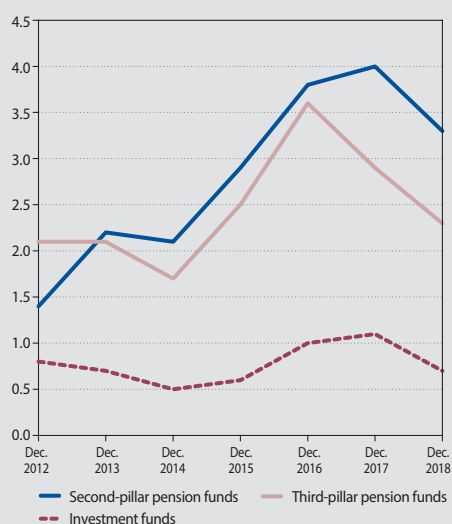
Chart 6 Equity component of total assets (percentages)



Exposure to interest risk was falling across financial market segments in 2018. Although the share of bond holdings in funds' asset portfolios did not change significantly in 2018 (even increasing slightly in the case of second-pillar pension funds, with the equity component declining), the average duration of fund portfolios decreased. On the other hand, there was increasing exposure to credit spread risk in respect of certain countries'

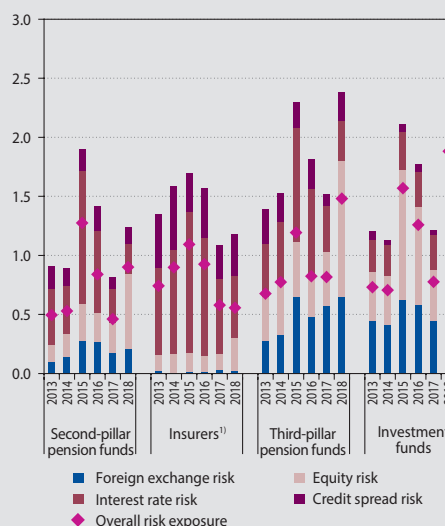
sovereign bonds which had carried higher risk during the euro area debt crisis.

Chart 7 Aggregate portfolio duration (years)



Sources: NBS, Bloomberg and internet.

Chart 8 VaR in financial market segments (percentages)



Sources: NBS, Bloomberg and internet.

Notes: The left-hand scale shows the percentage share of total assets (or NAV). VaR was calculated as the worst expected loss over a period of ten working days at a confidence level of 99%.

1) The figure for insurers does not include assets covering unit-linked insurance policies and risks arising from the revaluation of technical provisions.

Interest rate risk and foreign exchange risk include indirect interest rate and foreign exchange risks, i.e. the risk to which individual institutions or funds are exposed through investments in investment fund shares/units and in exchange-traded funds.

Table 1 Changes in the share of equity, foreign exchange and interest rate positions in individual segments of the financial market

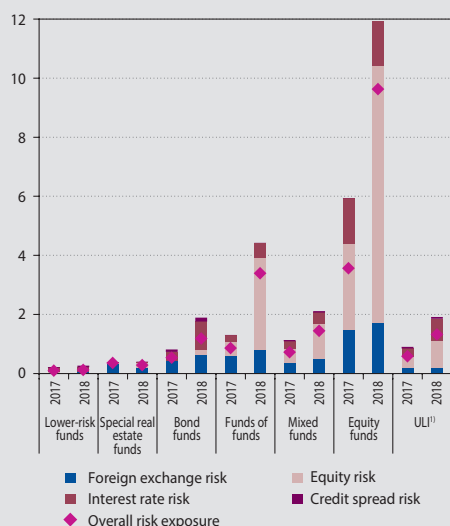
	Equities and investment fund shares/units			Foreign exchange positions			Share of debt securities			Duration of debt securities			Duration of entire portfolio			Residual maturity of debt securities		
	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018
Banks	0.4	0.4	0.3	0.1	0.1	0.1	17.7	14.1	12.9	4.5	4.8	4.6	1.3	1.3	1.3	5.1	5.5	5.2
Insurers	3.8	4.4	6.9	0.7	-0.9	0.9	69.6	69.3	69.9	6.8	6.5	6.3	6.2	6.2	5.8	8.3	8.3	8.4
Second-pillar pension funds	19.8	22.7	24.1	5.8	5.6	5.9	71.3	66.6	66.3	4.5	4.6	4.4	3.8	4.0	3.3	5.3	5.6	5.4
Third-pillar pension funds	32.5	43.9	39.4	10.5	19.5	19.3	51.3	36.8	41.0	5.3	4.4	4.7	3.6	2.9	2.3	6.4	5.5	5.9
Investment funds	36.8	43.0	43.3	12.3	13.7	14.8	22.1	18.1	18.2	2.5	2.6	2.8	1.0	1.1	0.7	3.0	2.8	3.4
ULI ¹⁾	79.9	82.1	83.0	2.7	3.3	3.7	19.6	18.0	16.3	3.8	3.1 ¹⁾	2.7	1.1	1.4	0.6	3.8	3.4	3.1

Sources: NBS and Bloomberg.

Notes: Values are given as a percentage share of total assets (or NAV) and represent the asset-weighted average for the given group of institutions. Foreign exchange positions are given as a percentage share of assets (or NAV); they were calculated as the sum of the absolute values of the positions for each institution. Equity positions are given as a percentage share of assets (or NAV); they do not include participating interests in subsidiaries and affiliates. Durations and residual maturities are given in years.

1) ULI – assets invested by insurers under unit-linked life insurance policies.

Chart 9 VaR in different types of investment fund and in unit-linked life insurance (percentages)



Sources: NBS, Bloomberg and internet.

Notes: The left-hand scale shows the percentage share of total assets (or NAV). VaR was calculated as the worst expected loss over a period of ten working days at a confidence level of 99%.

* ULI – unit-linked life insurance.

Interest rate risk and foreign exchange risk include indirect interest rate and foreign exchange risks, i.e. the risk to which individual institutions or funds are exposed through investments in investment fund shares/units and in exchange-traded funds.

though these assets were being seen as increasingly risky. The sharpest rise in these holdings was recorded in the pension fund sector, where their total amount increased by 83%. Although most of this increase occurred before the riskiness of these bonds started to rise in the second half of the year, second-pillar funds' aggregate holdings continued to increase even during that period.

Funds' holdings of bonds issued in lower-rated sovereigns other than Italy also increased in 2018. These increases involved mainly pension funds' investments in Portuguese and Spanish debt. On the other hand, exposure to Turkish debt, which became far riskier in 2018 as the country's credit rating dropped to speculative grade, remains low and is found only in the investment fund sector.

THE RISK EXPOSURE OF SLOVAK FINANCIAL CORPORATIONS WAS ALSO EVALUATED USING STRESS TESTS

The resilience of individual financial corporations, or the vulnerability of the net asset value under their management, was stress tested using a baseline scenario and two adverse scenarios. The adverse assumption of relatively high uncertainty in financial markets and a de-

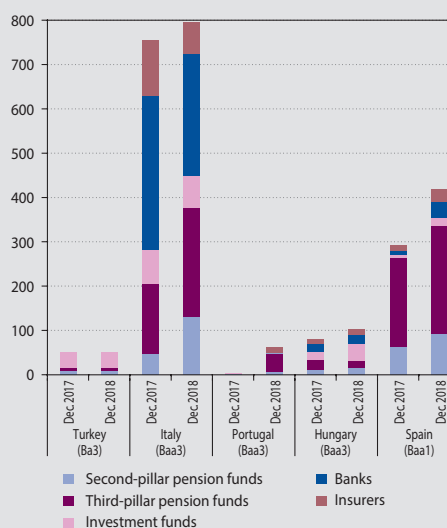
As measured by Value-at-Risk (VaR), the average riskiness of funds in Slovakia's unit-linked life insurance sector, pension fund sector and investment fund sector increased, year on year, in 2018. This trend was caused mainly by the riskiness of equity investments, which rose sharply right at the end of 2018 and ended the period twice as high year on year. Other factors had a lesser impact and included mainly a change in exposures to particular risks and an increase in the riskiness of other types of investment.

Given the rising riskiness of equity portfolios, the increase in VaR centred on funds whose assets included a larger equity component. Hence the principal increases in VaR were observed in investment funds and third-pillar pension funds. In each of these sectors, the aggregate VaR as at the end of 2018 was the highest in six years.

INCREASE IN EXPOSURE TO LOWER-RATED COUNTRIES

The Slovak financial sector's holdings of Italian bonds increased slightly in 2018, even

Chart 10 Amount of holdings of government bonds issued by lower-rated countries (EUR million)



Source: NBS.

Note: Moody's sovereign debt rating (the domestic currency long-term debt rating) is shown in brackets.

cline in the real economy's performance is more severe in the second adverse scenario.

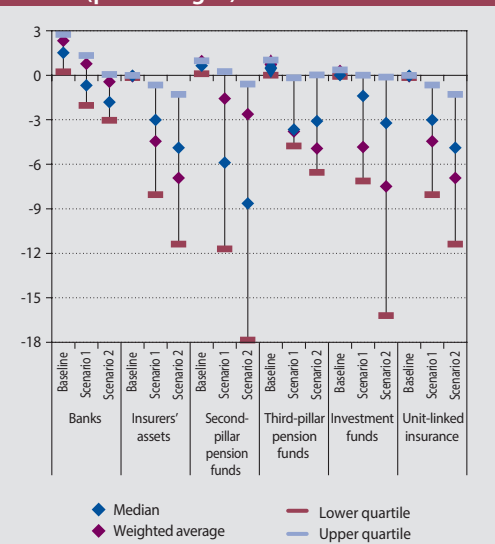
The stress testing of pension funds showed a moderate reduction in the funds' risk exposure. Under the more severe adverse scenario, the decline in the pension-point value in second-pillar pension funds is estimated to be similar to the decline in the fourth quarter of 2018. In third-pillar funds, whose investment policies are riskier than second-pillar policies, aggregate NAV decreases around twofold. In this case, the decline in NAV is slightly greater than that recorded in 2018.

Investment funds show an even more marked decline in performance under the adverse scenarios. In the more severe scenario, the average return on investment funds drops to around 7.5%, close to twice the rate of its decline in 2018.

The insurance sector was exposed to three different types of loss in the stress test exercise, including losses arising from market risks, losses on non-life insurance, and losses on life insurance. The outcomes show that the largest losses are those resulting from the materialisation of market risks. Under the more severe scenario, these negative effects result in the sector making a loss in the first year of the stress test period and in its aggregate equity declining by 23%. In the second year, the sector recoups most of the losses made in the first year, so the aggregate equity rebounds to above its original level (the extent of the rebound at individual insurers depends on their dividend policy). The sector also remains in profit in the third year of the stress test period.

The banking sector remains relatively resilient to potential adverse developments in both the real economy and financial markets. Its resilience continues to be underpinned by banks' assumed ability to generate net interest income even un-

Chart 11 Distribution of the impact of macroeconomic scenarios on the financial sector (percentages)



Sources: NBS, RBLG, ECB and Bloomberg.

Notes: The chart shows quartiles of the estimated profit/loss-to-asset ratio resulting from the application of the respective scenarios as at 31 December 2018.

In the case of banks, the quartiles refer to the ratio of the total estimated net profit for the three-year stress test period to net assets as at 31 December 2018.

The data for insurers include only the change in the fair value of assets. The stress test does not include assets covering technical provisions for unit-linked insurance policies, nor the impact on insurers' liabilities.

Values are given as a percentage share of total assets (or NAV).

A detailed description of these scenarios can be found in Section 6 and in the separately published Annexes to the ASFS.

der adverse scenarios. The exercise shows a decline in the importance of market risks, owing mainly to a decline in the portfolio of securities revalued at fair value. Credit risk losses on loans to households exceed those on loans to NFCs in all three scenarios. This is mainly because a far larger amount of loans are provided to households than to firms, given that the riskiness of corporate loans under the adverse scenarios increases significantly more than does the riskiness of household loans.



THE BANKING SECTOR

3 THE BANKING SECTOR

3.1 TRENDS AND RISKS IN THE BANKING SECTOR'S BALANCE SHEET

3.1.1 LOANS AND CREDIT RISK

THE RETAIL SECTOR²

YEAR-ON-YEAR GROWTH IN TOTAL RETAIL LOANS

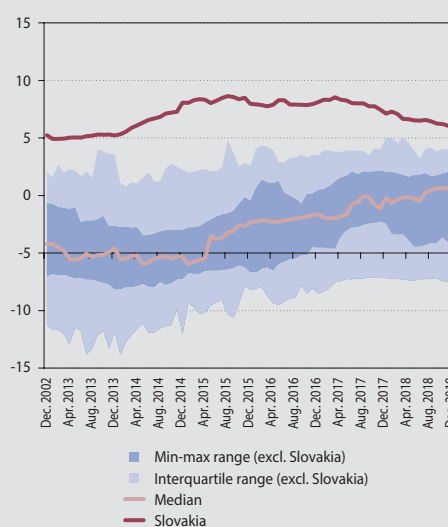
The year-on-year increase in total retail loans stood at 10.3% in December 2018, which was lower than the rate a year earlier (11.7%). The banking sector's retail loan book increased by €3.4 billion in 2018, which was almost the same as the absolute increase in 2017 and therefore close to the historical high. On the one hand, trends conducive to credit growth remained present, including in particular the long-term decline in interest rates, property price growth, and the ongoing improvement in the macro-economic environment (especially in the labour market). On the other hand, NBS measures had a moderating effect on credit growth and there were increasingly frequent signs that deteriorating demographics and credit market saturation were having an impact. Last but not least, credit growth in 2018 was strongly affected by one-off events, in particular by expectations about the impact of NBS Decree amendments that entered into force in July 2018.

Retail credit growth was higher in Slovakia than in any other EU country in 2018, with a gap of almost two percentage points to the second highest (Lithuania). Trends are gradually changing, however, and while median credit growth in the EU is accelerating, credit growth in Slovakia is already moderating.

ABSOLUTE GROWTH IN TOTAL HOUSING LOANS IN 2018 WAS THE SAME AS IN 2017; THE RELATIVE INCREASE MODERATED

The year-on-year increase in total housing loans in 2018 was 11.4%, or €2.9 billion. The absolute increase was the same as that in 2017, but given the expansion of the loan book, the relative growth was lower by 1.4 percentage points.

Chart 12 Annual retail credit growth in EU countries (percentages)



Source: ECB SDW.

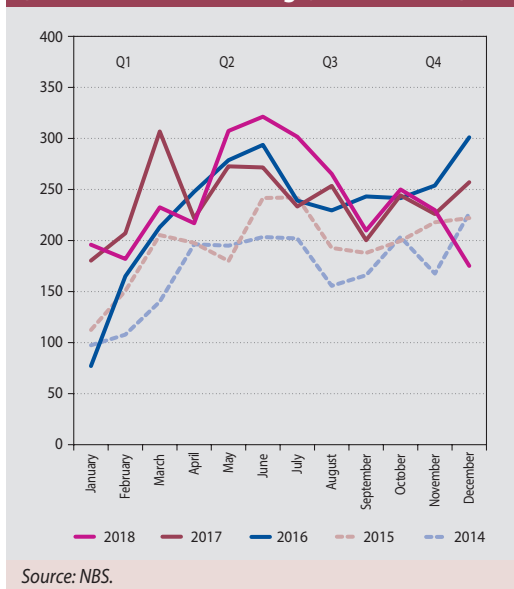
Note: The chart does not include data for Belgium for 2014 and 2015, nor data for Hungary for 2015 and 2016, which were skewed by one-off effects.

At the time of writing this ASFS, December 2018 data for non-euro area EU countries were not available; no median value for this month is given, either.

From the month-on-month perspective, the situation was more complex. In the first quarter of 2018 the monthly increases in total loans were lower in absolute terms than those in first quarter of previous years. In the second quarter of 2018, however, particularly in May and June, expectations about the tightening of regulatory lending standards began having a noticeable effect. Strongly influenced by media reports and financial institutions, borrowers were increasingly seeking to arrange loans before the tighter rules entered into force on 1 July 2018 (i.e. there was frontloading of loans). That date marked the start of a gradual tightening of regulatory lending standards, namely the loan-to-value ratio and the debt-to-income ratio. For comparison, the amount of new loans provided in the second quarter of 2018 was 75% of the amount provided in the second quarter of 2016, when a statutory cap on early repayment fees for housing loans was introduced.

² The stated trends in loans to households include adjustment for a one-off impact: VÚB bank's January 2018 acquisition of the consumer credit company CFH and therefore of CFH's loan book.

**Chart 13 Total housing loans
(month-on-month change; EUR millions)**



In July and August 2018 loans provided under the old conditions were still being taken out, so it was not until around September that housing loan growth began to moderate in earnest. In the fourth quarter of 2018, when the LTV and DTI ratio limits were further tightened, the growth in housing loans was significantly lower compared with the same period of previous years. Indeed, the absolute increase in total housing loans in December 2018 was lower than in any month since the beginning of 2015.³ The main cause of that slow-down was a decline in the amount of new loans taken out, while other factors (such as loan repayments, loan refinancing, loan write-offs/downs and sell-offs) maintained their trends of previous months.

Interest rates on housing loans continued to fall in 2018, at a similar pace to their rate of decline in 2017; these rates averaged 1.5% in December 2018. The annual percentage rate of charge (APRC) for housing loans was 1.8% at the year-end. The gap between the average interest rates on new and existing housing loans remained at 0.5 percentage point during 2018, so there was a slight decline in borrowers' incentive to save on interest costs by refinancing.

Compared with other euro area countries, Slovakia continued to rank in the lower quartile for interest rates on new housing loans.

In the subcategory of loans provided by home savings banks, total loans increased, year on year, by 3.6% in 2018, and showed little sensitivity to overall market developments. The average term of new home-savings loans rose from 19 years in 2017 to 20 years in 2018. The average interest rate on these loans increased from 4.4% in December 2017 to 5.0% in December 2018.

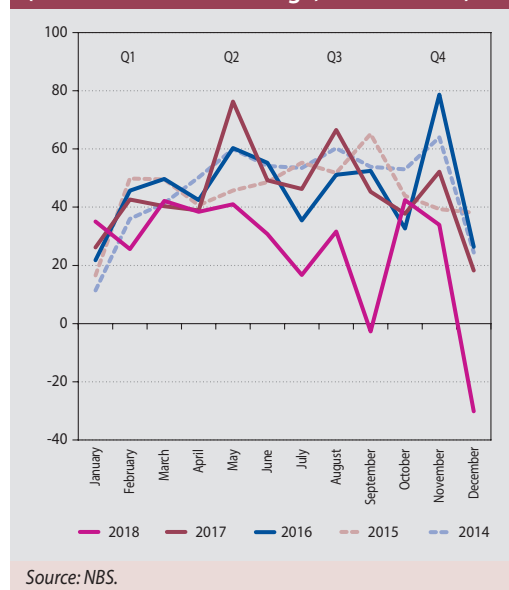
Looking at banks' shares in the aggregate credit portfolio, the share of large banks remained virtually unchanged (74.7% in December 2018), while that of small and medium-sized banks increased by 1 percentage point, to 10.3% in December 2018, at the expense of home savings banks and foreign bank branches.

Loans brokered by external agents as a share of new housing loans increased, year on year, by 2 percentage points in 2018, to 60%. The four largest financial intermediation companies saw their combined share of brokered loans increase, but it still remained below one-third of the total.

GROWTH IN BANK CONSUMER LOANS SLOWED SIGNIFICANTLY

The annual rate of growth in bank consumer loans eased from 11.8% in December 2017 to 6% in December 2018. In absolute terms, their increase dropped to €305 million after maintain-

**Chart 14 Total bank consumer loans
(month-on-month change; EUR millions)**



³ The exceptions being January and February 2016, at the height of expectations of a reduction in the statutory cap on early repayment fees for housing loans.



ing stable growth of around €550 million in the previous years from 2014. From May 2018 the month-on-month increase in these loans began trending below the levels of previous years. Total bank consumer loans approved and taken out in 2018 had been expected to reflect the impact of one bank's acquisition of a non-bank lender (CFH) in January 2018; in fact, however, the growth in new loans was lower in 2018 than in the previous year both in terms of the amount of consumer loans approved and the amount taken out.

The slowdown in consumer loan growth was broad-based across several banks. The month-on-month change in total consumer loans turned negative in December 2018, when it was lower than in almost all months since 2014 (at the same time, housing loan growth was also at its lowest point since 2014). Even after adjusting for loan write-offs/downs and sell-offs, December was one of the ten worst months.

After rising in January 2018, the average interest rate on new consumer loans fell gradually during 2018. By August the average was back to its end-2017 level of 8.4%, and in December it fell to a new all-time low of 8.2%. The average APRC followed a similar trend. The gap between average interest rates on new and existing consumer loans fell from 1.1 percentage point in 2017 to

0.8 percentage point in 2018. Consumer loan interest rates in Slovakia are among the highest in the euro area. The average term of new consumer loans remained close to historical highs in 2018, with 70% of the new loans having a term of more than seven years.

Banks' shares in aggregate bank consumer loans continued in 2018 to shift in favour of large banks; while these banks' combined share increased from 70.5% in December 2017 to 72.6% in December 2018, that of small and medium-sized banks fell from 22.7% to 21.9%.

SLOWER GROWTH IN CONSUMER LOANS WAS NOT OFFSET BY GROWTH IN OTHER RETAIL LOANS

Total credit card and overdraft borrowing remained virtually unchanged during 2018, while 'other loans' increased from low levels. Therefore, the slower growth in total consumer loans was not related to increases in alternative forms of consumer lending. In the subcategory of other loans, including mainly non-housing secured loans, the stock of loans increased by 16% in 2018 owing to developments in a small group of banks. Such loans, however, account for only 4% of total retail loans.

NON-BANK CONSUMER LOANS RECORDED A FURTHER STRUCTURAL DECLINE IN 2018

The total amount of non-bank consumer loans continued falling in 2018, following one bank's acquisition of the non-bank lender CFH. Aggregate non-bank consumer loans amounted to €0.98 billion at the year-end; their share in total consumer loans stood at 15%, or if credit cards and overdrafts are included in that total, just 13%. Car lease financing makes up the great majority of non-bank loans.

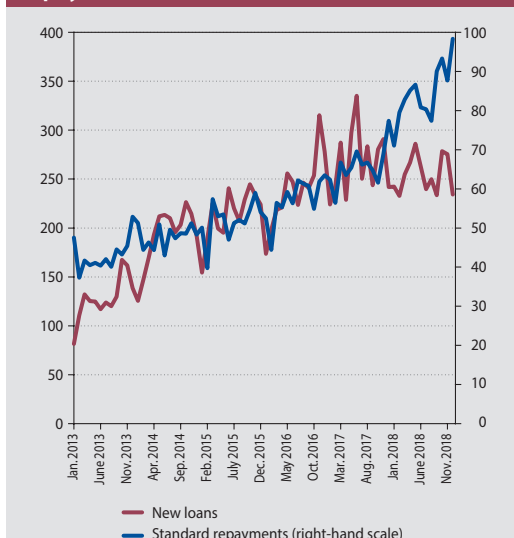
The amount of new loans provided by non-bank lenders in the first three quarters of 2018⁴ stood at €252 million. Loans with a term of one to five years accounted for 58% of that total, and loans with a term of more than five years, 33%. Loans arranged through an external agent accounted for 63% of the total.

CREDIT STANDARDS FOR NEW LOANS WERE IN LINE WITH NBS DECREES

Banks' LTV ratio policies were compliant with regulatory standards in 2018. In the first half of 2018, loans with an LTV ratio of more than 90%

⁴ Since some data were not available as at December 2018, only data for the first three quarters are given.

Chart 15 Consumer loans – new loans and repayments (EUR millions)



Source: NBS.



constituted 8% of new housing loans (against a regulatory limit of 10%), while in the second half of the year, in line with an amendment to the NBS decree governing this area, no new housing loans had such an LTV ratio. The share of new housing loans with an LTV ratio of between 80% and 90% also declined in 2018, from 36% in the first two quarters of the year (against a limit of 40%), to just 30% in the third quarter (when the limit stood at 35%) and 27% in the fourth quarter (30%).

The regulatory limit on the debt service-to-income (DSTI) ratio for household borrowers was tightened twice in 2018. In January 2018 the regulatory financial buffer requirement was increased to 15% of the borrower's disposable income, and in July 2018 it was further increased to 20%. These requirements applied to both consumer loans and housing loans, and banks complied with them throughout 2018.

Via the euro area bank lending survey, banks themselves reported a tightening of their credit standards in 2018, precisely in those areas subject to the new NBS regulatory measures. On the other hand, according to banks' responses, demand remained high for both housing loans and consumer loans. Going forward, the sector expects standards to be further tightened in line with the next phase under the relevant NBS decrees. Changes in demand are not envisaged.

LOAN DEFAULT INDICATORS REMAINED AT HISTORICAL LOWS
The non-performing loan (NPL) ratio for housing loans fell to 1.6% in 2018, while the net default rate for housing loans remained at or below zero. All banks reported low levels of loan default measures. In some banks, the default rate increased into positive territory, but only as an isolated movement in certain months.

The banking sector's average NPL ratio for consumer loans recorded a one-off increase in January 2018 and thereafter declined, down to 8.6% in December. As for the net default rate,⁵ however, it fell in the first half of the year and then increased moderately in the second half, up to 2.9% (its November 2017 level).

RETAIL DEPOSIT TRENDS REMAINED FAVOURABLE IN RESPECT OF OVERNIGHT DEPOSITS

Total retail deposits were 6.9% higher in December 2018 than they were a year earlier.

Their increase stemmed from a combination of, on the one hand, stable growth in sight deposits and deposits redeemable at notice, and, on the other hand, a lower rate of decrease in time deposits.

As in the previous year, deposits held with large banks reported the highest year-on-year growth (8.9% in December 2018). Deposits held with small and medium-sized banks fell by 0.12%, although that decline was notably more moderate than the decline of 2.9% recorded in 2017. Deposits held with foreign bank branches stood significantly higher in December 2018, by 11.8% year on year, whereas in December 2017 they had fallen by 2.1%. Home savings banks reported modest, but positive deposit growth (for more details, see the section on time deposits). In absolute terms, overall retail deposits increased by €2.4 billion.

Annual growth in sight deposits was almost the same in 2018 (12.6%) as in 2017 (12.8%). There was a further increase in large banks' combined share of the aggregate amount of sight deposits held with the banking sector, to 76.5%. At most large banks, the amount of sight deposits held with them increased, year on year, by more than 20% in 2018. Interest rates on such deposits were no longer changing, remaining at a subdued 0.02%.

The year-on-year rate of decrease in aggregate time deposits held with domestic banks eased significantly in 2018, to -4.1% in December (down from -9.2% in December 2017). Large banks recorded the largest drop (-9.41% in December 2018). Virtually the only increase in this area of deposit-taking business was reported by home savings banks (1.8% in December 2018), and that figure was far lower compared with previous years (5.3% in 2016 and 5.8% in 2017). The absolute increase in December – usually the month when home savings banks take the most deposits – was only 68% of that recorded in December 2017; this was probably related to an amendment to the home savings legislation and its partial impact (concerning the government bonus) on home savings contracts concluded before the end of 2018.

Looking at the term structure of the banking sector's aggregate time deposit portfolio, deposits with a term of one year had the largest share

5 The net default rate is adjusted for the impact of a one-off increase in non-performing loans in October 2017 and VÚB bank's acquisition of the non-bank lender CFH in January 2018.

(41%), followed by those with a term of more than five years, i.e. home savings (31%).

The average interest rate on time deposits fell from 0.9% in 2017 to 0.8% in 2018. The average deposit rate offered by large banks was 0.3%, by small and medium-sized banks, 0.8%, by home savings banks, 1.4% (excluding the state bonus), and by foreign bank branches, 0.9%. The average deposit rates corresponded approximately to time deposit terms, with longer terms attracting higher rates.

Total deposits redeemable at notice maintained stable year on year growth in 2018, their increase of 10% being just slightly lower than the 12% growth recorded in 2017. Making up 10% of the banking sector's aggregate deposit portfolio, this smallest category of deposit business is gaining in importance but remains confined to a small group of large banks. The average interest rate on these deposits was 0.2% in December 2018.

RESIDENTIAL PROPERTY MARKET

THE TRENDS OF RISING PRICES AND A DECREASING SUPPLY OF PROPERTIES ON THE MARKET CONTINUED IN 2018
The average year-on-year increase in prices of existing flats was 10% in 2018. This price

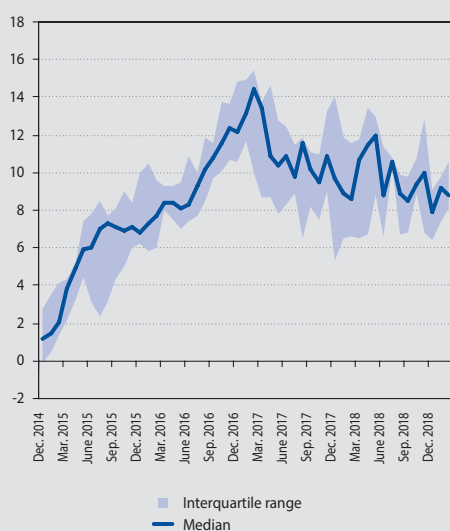
growth was broad-based across Slovak regions and all flat sizes. At the same time, however, the supply of flats on the market continued to decline in 2018, by more than 10% year on year. The market contraction accentuated the volatility of market indicators. This is also complicating the interpretation of developments: the increasing incidence of slowdown or acceleration signals may be seen after a while as standard volatility. Growth in prices of existing flats in 2018 was also homogeneous across flat sizes in the capital city.

DEMAND EXCEEDED SUPPLY IN BRATISLAVA'S RESIDENTIAL NEW-BUILD MARKET IN 2018, RESULTING IN A SHARP DROP IN THE SUPPLY OF AVAILABLE FLATS AND AN ACCELERATION OF NEW PROPERTY PRICES

In regard to both new and existing residential property, similar trends were observed in Bratislava's property market in 2018. Looking at the supply of flats on the market, the split between new flats and existing flats was equal. As for property sales in the Slovak capital, new flats accounted for two-thirds of the total. The decline in the supply of flats, and consequent drop in the number of flats sold, was the same for both new and existing flats.

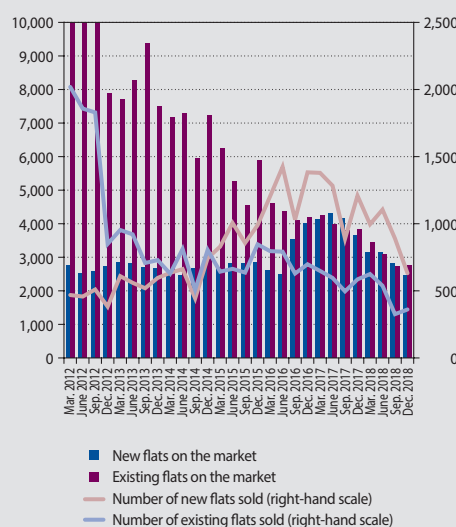
Average prices of new flats increased faster in 2018 than in 2017. The acceleration applied to both offer prices and sale prices, though there were differences between their trends over the

Chart 16 Prices of existing flats in Slovakia's main regional towns and cities (percentages)



Source: CMN.

Chart 17 Composition of the residential property market in Bratislava (number of flats)



Sources: Lexus, CMN.

Notes: The left-hand scale shows the number of flats on the market. The right-hand scale show the number of flats sold.



course of the year. Offer price growth averaged 8.3% for the year and had a gradual downward trend, while sale price growth averaged 9.6%.

Strong demand for new flats and high sales velocity can be identified as the factor behind the acceleration in sale prices of new flats; as a result, the difference between offer prices and sale prices was, compared with previous years, significantly narrower by the end of 2018.

Price growth was further supported by the inflow of new property development projects (or stages of existing projects) offering properties at prices typically above the market average. Given, however, the decline in property developer activity, this factor was less significant than before.

New-build prices in 2018 were also affected by the repricing of flats in several property developments, whether because supply was falling short of strong demand or because prices of construction labour and materials were rising quite sharply. The situation in the new-build market was also having an upward impact on prices of existing flats. Meanwhile, the supply shortage in the capital city's residential market also resulted in rising rental prices.

The situation on the demand-side of the residential property market reflected mainly the impact of supply constraints. The last quarter of 2018 saw a significant decline in the sales of new flats, down to levels not seen since 2014. Compared with 2017, the total number of new flats sold in 2018 was lower by 24%. Relatively severe supply-side constraints appeared to be the main drag on sales, as household demand for buying property remained elevated. Strong demand was further corroborated by the ratio of sales to total supply, which remained similar to its 2017 level.

The average sales velocity for new property developments was higher in 2018 than in any year since 2014.⁶ Demand was supported by the still favourable macroeconomic conditions, as well as by strong growth in housing loans. There may have been a dampening effect from the implementation of regulatory limits on lending to households and from rising property prices.

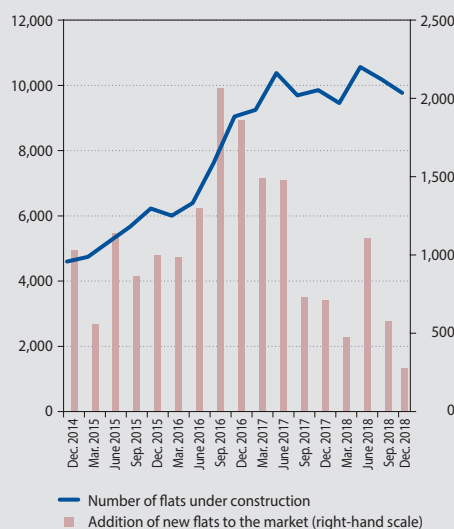
The supply of new properties in the capital city was lagging behind demand in 2018. The number of flats on the market fell sharply despite vigorous construction activity. The number of flats available for sale was 32% lower at the end of 2018 than at the end of 2017, falling to a level not seen since 2014.

Chart 18 Prices of new flats in Bratislava (annual percentage changes)



Sources: Lexus and NBS.

Chart 19 New flats under construction in Bratislava and the addition of new flats to that market



Sources: Lexus and NBS.

Notes: The number of flats under construction is determined on the basis of projected completion dates for property developments. The addition of new flats to the market represents the number of new flats that came on to the market in Bratislava in the given quarter.

6 The first data available were for Q4 2014.



This trend was partly explained by ongoing strong demand, as around one-quarter of the supply of property continued to be sold in each quarter. Another reason, however, was the relatively substantial decline in the number of new flats coming on to the market, in particular during the second half of 2018. The number of new flats added to the market was 45% lower in 2018 than in 2017.

The shortfall between supply and demand in the residential property market, along with the substantial share of off-plan flats, was reflected in a decline in the number of property developments on the market in 2018 and in an increase in the average share of sold flats to total flats for developments (up to 84%). In this context, there was also an increase in the share of developments with limited supply. The average floor area of flats on the market increased in 2018, since one-room and two-room flats recorded the largest declines in numbers.

Underlying the slowdown in the number of new property developments coming on to the market may be uncertainty, or lack of appetite, of developers who have opted for a more cautious approach to rolling out new developments. It should be noted, however, that a substantial number of flats are under construction, more than twice as many compared with end of 2014. Another limiting factor may therefore be a shortage of construction capacities and the related increase in costs of construction labour and materials.

NON-FINANCIAL CORPORATION (NFC) SECTOR

GROWTH IN LOANS TO NFCs WAS STABLE IN 2018 AMID A FAVOURABLE SITUATION ON THE DEMAND SIDE; ON THE SUPPLY SIDE OF THE CORPORATE LOAN MARKET, HOWEVER, THERE WAS SLIGHT TIGHTENING

The flow of loans to NFCs showed a stable trend during 2018. The annual growth rate of loans to NFCs ranged between 4% and 6% and ended the year at 5.14%. Most of the growth was provided by loans with a term of more than one year, most of which were investment related. The monthly year-on-year increase in the stock of these loans was around 7% during the year, but the growth rate showed a slight easing trend and ended the year at 6%.

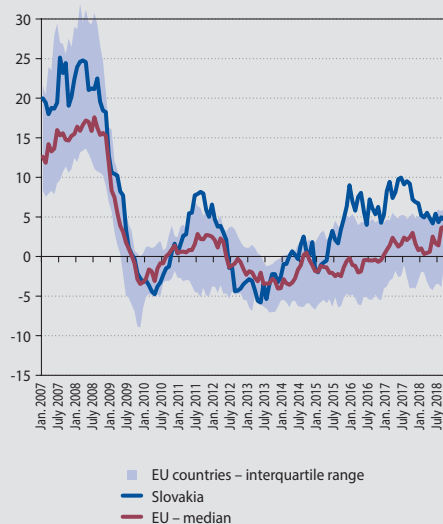
Breaking down total NFC loans by firm size and ownership shows that most of the lending was to private firms and large firms. Lending to small and medium-sized enterprises (SMEs) moderated in the first half of 2018, before picking up again in the second half of the year, when its growth rate more than doubled (ended the period above 4%).

NFC loan growth in Slovakia in 2018 was slightly higher than both the median for central and eastern European countries and the median for the EU, which owing to the pick-up of lending activity in individual countries, increased to 4.5%.

Lending activity is relatively heterogeneous across banks, and almost all the NFC loan growth in 2018 was accounted for by the largest banks.

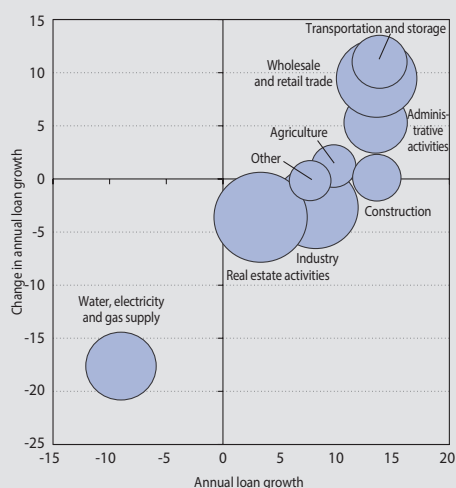
Lending to most economic sectors increased in 2018. The strongest growth was in loans to firms in the trade sector, which averaged 15% over the year. Growth in loans to industrial firms was subdued for most of the year (averaging 1% for the first nine months), before accelerating sharply in the last quarter, to 15% year on year (the absolute growth in these loans exceeded the growth in loans to any other sector). Annual growth in lending to the professional activities sector stood at more than 20% in 2018, although much of that increase was at-

Chart 20 NFC loan growth in Slovakia and the EU (annual percentage changes)



Source: ECB SDW.

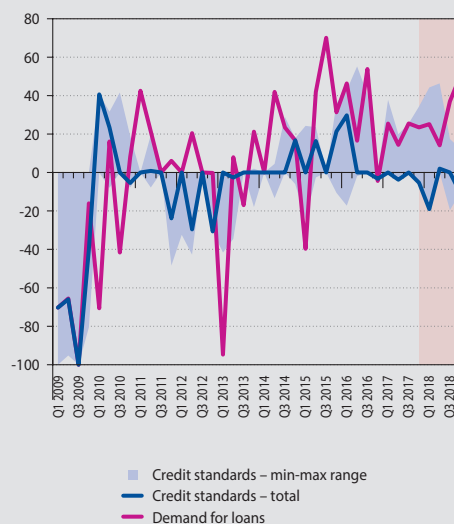
Chart 21 Growth in lending to different economic sectors and sectoral shares in total loans to NFCs (percentages)



Source: NBS.

Notes: The horizontal scale shows average annual loan growth for the second half of 2018. The vertical scale shows the change in average annual loan growth in percentage points (the average for the second half of 2018 compared with the same period of 2017). The bubble size corresponds to the economic sector's share of total loans to NFCs.

Chart 22 Demand and supply changes in the corporate loan market



Source: NBS.

Notes: A positive value denotes an increase in demand or easing of credit standards. A negative value denotes a decrease in demand or tightening of credit standards. The chart shows the min-max range for banks' credit terms and conditions.

tributable to project finance loans. Lending to the CRE sector was below the average growth in total loans to NFCs, and in the fourth quarter it was below 2%. On the other hand, lending to the construction sector remained robust, at 14%. In only three sectors did aggregate loans to NFCs decline in 2018 and the most significant of them was energy supply.

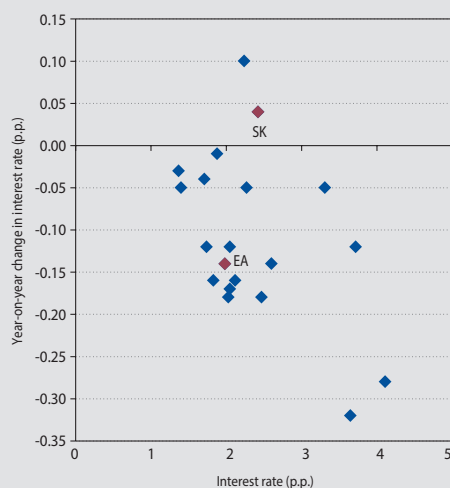
The favourable situation on the demand-side of the corporate credit market continued in 2018.⁷ The economy's sound performance continued to be the main factor behind the relatively strong demand for loans to NFCs in 2018. Another factor was the generally low level of lending rates. This situation supported the continuing strength of loan demand from firms, including demand for both investment-related loans and working capital loans. Firms' borrowing appetite was not yet reflecting the impact of downward revisions to the global economic outlook, or decreases in several leading indicators that implied a decline in optimism from previous periods. Going forward, however, banks do not expect loan demand to grow.

On the supply side of the bank lending market, there was a slight tightening of credit standards in 2018. In 2017 credit standards were already stabilising, with the only easing being a compression of interest margins. This situation changed in 2018, when a moderate tightening of credit standards was observed. Margin compression during the period under review was therefore minimal. Among the factors affecting credit standards, pressure from competition had an easing impact, while perception of risk and banks' risk tolerance had a tightening impact. Banks expect a similar situation in the next period.

Lending rates, which are a key element of the supply side of the credit market, increased in 2018. Interest rates on new loans to NFCs rose by almost 1 percentage point over the year. The rate increases were greater for large enterprises, but were also applied more moderately to SMEs. The movement in interest rates on new loans was behind the reversal of the downward trend in the average interest rate on total loans to NFCs. The rate's increase

⁷ Demand and supply in the corporate loan market is evaluated primarily on the basis of the euro area bank lending survey.

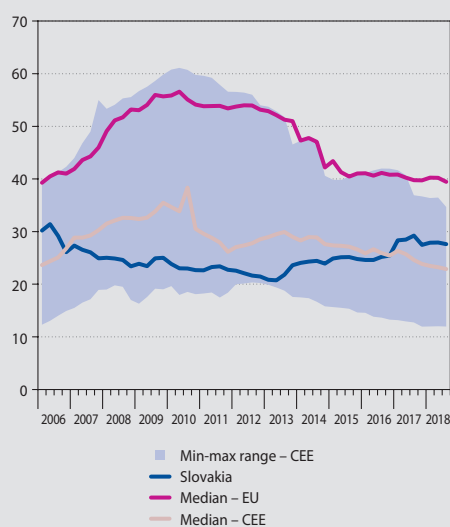
Chart 23 The interest rate on total NFC loans and its year-on-year change in Slovakia and other euro area countries



Source: NBS.

in the last quarter of 2018 was the first since 2014. This is a favourable development from the perspective of the banking sector's profitability. Across the euro area as a whole interest rate increases remain the exception: Slovakia

Chart 24 Slovakia's corporate indebtedness in international comparison



Sources: NBS and ECB SDW.

Notes: CEE – central and eastern Europe. Indebtedness is calculated as the ratio to GDP of domestic banks' loans to NFCs and total securities issued by NFCs.

was one of only two countries to record an increase in the average interest rate on total NFC loans in 2018.

Corporate indebtedness⁸ remained largely unchanged in 2018. The first three quarters of 2018 did not bring a change in corporate debt-to-GDP ratio, as the impact of debt growth was offset by the economy's favourable performance. Growth in loans from domestic banks remained stable in 2018, while there was slower growth in the amount of securities issued by NFCs. Foreign loans were the only significant contributor to corporate debt growth. Corporate indebtedness in Slovakia was among the higher in the CEE region. As for the domestic NFC sector's aggregate debt-to-equity ratio, it was actually the highest in the region. The adverse situation can be put in the context of the corporate sector's liquid asset-to-total debt ratio: the ratio continued on its downward trend to a new historical low (owing mainly to the increase in NFC debt), while the level of liquid assets remained stable.

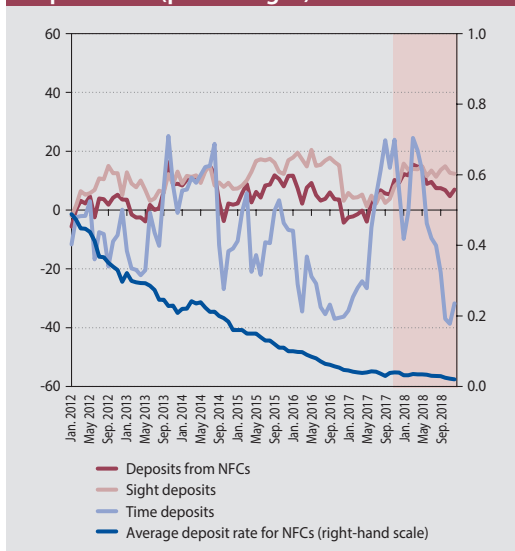
Total NFC deposits maintained their upward trend throughout 2018. The amount of deposits held by NFCs with domestic banks increased in line with the favourable economic situation. Corporate sector sales growth was robust and had a positive impact on firms' deposit holdings with banks. Their average monthly year-on-year increase in 2018 was 10%, encompassing higher rates in the first half of the year and a rate of 7% in December. The growth in deposits was entirely attributable to sight deposits, which increased by more than 10% year on year. The rate of change in NFC time deposits slumped deep into negative territory and ended the year at -32%.

As regards deposit rates for NFCs, no significant movements occurred during the period under review. Rates continued to decline even though they were already close to zero. This downward trend was observed in almost all deposit term categories.

Since the growth in total deposits that firms held with banks outpaced the growth in total loans that banks provided to firms, the loan-to-deposit (LTD) ratio for the NFC sector improved moder-

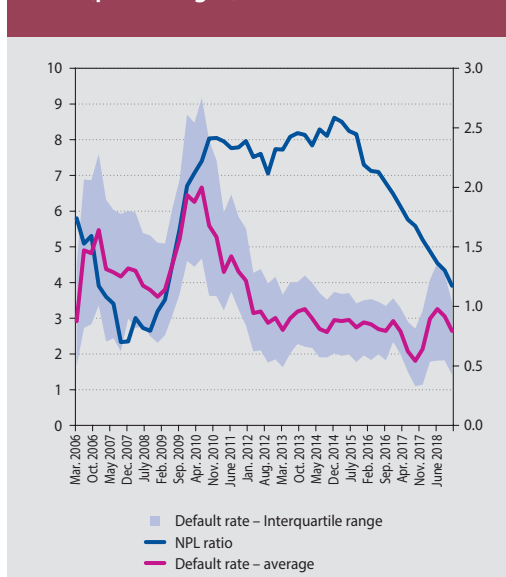
⁸ Corporate indebtedness is measured by the corporate debt-to-GDP ratio. For the sake of data reliability, the corporate indebtedness calculation included only domestic banks' loans to NFCs and total securities issued by NFCs. Foreign loans and intercompany loans were excluded due to the lower reliability of the data. Loans from other financial intermediaries and from the general government sector were excluded in order to allow international comparison.

Chart 25 Total NFC deposits (annual percentage changes) and the average deposit rate (percentages)



Source: NBS.

Chart 26 NPL ratio and default rate for NFC loans (percentages)



Source: NBS.

Notes: The right-hand scale shows the default rate for NFC loans, measured on the basis of the number of loans. The chart shows the average and interquartile range across economic sectors

ately in 2018, ending the year at 141% after ending 2017 at 143 %.

THE DEBT-SERVICING CAPACITY OF FIRMS CONTINUED IN 2018 TO REFLECT THE FAVOURABLE SITUATION IN THE DOMESTIC ECONOMY

The downward trend in the non-performing loan (NPL) ratio for loans to firms continued for a third successive year in 2018. The ongoing favourable performance of the economy and corporate sector, coupled with the low interest rate environment, ensured a further increase in firms' debt-servicing capacity in 2018. This trend has for a long time been reflected in improvements in several credit quality indicators.

The NPL ratio for banks' total loans to NFCs ended 2018 at 3.9%. This represented a year-on-year decrease of 1.4 percentage points, which can be attributed to several factors. The expansion of the aggregate corporate loan book was partly due to the actual decline in the amount of non-performing loans. The NPL trend reflected the continuing low default rate and the increase in the reclassification of non-performing

loans as performing. Furthermore, some banks took advantage of the good economic times to write down/off or sell off NPLs. At the same time, 2018 saw a slight increase in the average default rate, and also an increase in the range of default rates across economic sectors, which implies an increase in the amount of NPLs in certain sectoral loan portfolios. Within the banking sector itself, the decline in the NPL ratio was largely broad-based. Much the same can be said about breakdown of NFC loans by economic classification. For lending to every sector apart from retail trade, the NPL ratio decreased. The riskiness of sectors from the perspective of NPLs is, however, somewhat heterogeneous, with the sectoral NPL ratio ranging from close to zero to 10% (in retail trade).

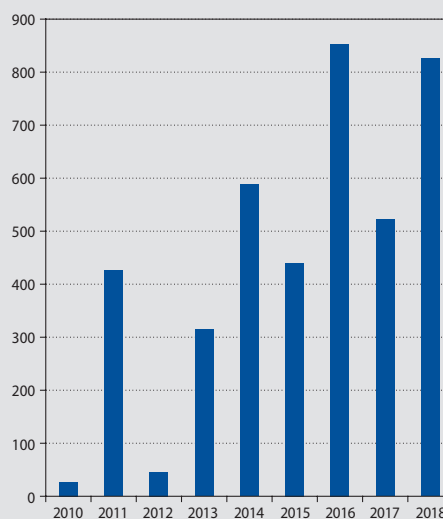
IN THE COMMERCIAL REAL ESTATE (CRE) SECTOR, DEMAND REMAINED ROBUST IN 2018 AND THERE WAS A SUPPLY-SIDE RESPONSE IN FORM OF RELATIVELY STRONG INVESTMENT ACTIVITY. IN CONTRAST TO THAT TREND, BANKS' LENDING TO THE CRE SECTOR DID NOT INCREASE SIGNIFICANTLY. RISKS REMAIN PRESENT IN THIS SECTOR. CRE market trends in 2018 remained those of a market in an expansionary phase.

The favourable performance of the domestic economy as well as the majority of European markets continued to shape developments in the CRE market in 2018. On the one hand, the favourable situation in the CRE market was underpinned by positive sentiment in the business environment. On the other hand, this situation was itself a key factor behind the rising optimism of investors, which translated into substantial investment activity in the domestic CRE market.

The amount of investment in the domestic CRE market in 2018 almost matched the historical high level of 2016. The year-on-year increase in investment activity was a substantial €826 million, only slightly below 2016's all-time record of €853 million. Investor demand remained elevated in all segments of the market. Besides a supportive macroeconomic climate, the factors behind this investment growth included still favourable prime yields as well as high occupancy rates for commercial property. A further decline in prime yields in all the principal CRE segments was evidence of favourable sentiment in the CRE market. At the same time, prime yields remain higher than those in neighbouring countries, meaning that the domestic market continues to offer advantageous conditions for investors.

End-user demand in the CRE market also remained strong in 2018. Office vacancy rates remained extremely low (ending the year at an average level of 6%), despite a higher number of new property developments coming on to the market in the second half of the year. The reason for the low increase in the vacancy rate (from 5.14% in the third quarter of 2018) was the high pre-lease rate for these projects. This development implies continuing strong demand for office space, which remains primarily reliant on a favourable situation in the business sector. In the CRE segment of industrial and logistics premises, demand was also robust in 2018, maintaining its level from the previous period. The vacancy rate increased quite appreciably, however, to 9.5%, due largely to strong construction activity (part of which was of a speculative nature, without pre-sale contracts in place).

Chart 27 Investment in the CRE market (EUR millions)



Source: CBRE.

The residential segment of the CRE market was more subdued in 2018, in particular on the supply side. The combination of a favourable labour market situation and low interest rates on housing loans continued to support household demand for new builds in the capital city in 2018. Even so, the number of flats sold was one-quarter fewer in 2018 than in 2017, owing to a marked slowdown in activity on the supply side, particularly in the second half of the year. Compared with the previous year, the overall supply of new flats coming on to the market was half as much in 2018. This situation was reflected in new-build prices, as both offer and sale prices continued to rise. Annual sale price growth hit double digits several times during the year (for more details, see the section on residential property).

The current optimism in the CRE sector has not removed the risks associated with it. In 2018 there was overriding positive sentiment among both end-users and investors. At the same time, consultancy companies expect the market situation to remain favourable in 2019. Account should be taken, however, of potential risks associated with the CRE market, especially if the market's structural characteristics are joined



by cyclical factors. Among the market's structural risks are its openness to external factors, vulnerability to economic shocks (as witnessed during the global financial crisis), and relatively high concentration. In 2018, moreover, there was a deterioration in the global economic outlook which brought several risks of external nature. Meanwhile, the market was seeing relatively strong construction activity, together with full utilisation of construction capacities, a shortage of labour, and accelerating prices of construction materials and labour.

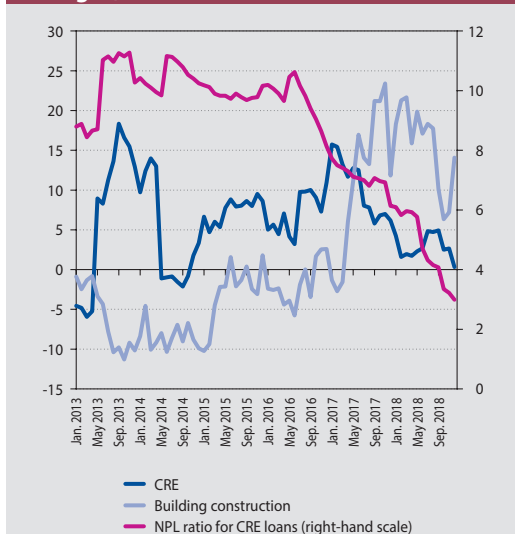
Domestic banks' lending to the CRE sector did not change significantly in 2018. Monthly year-on-year growth in total loans to the CRE sector averaged 3% in 2018, which was far lower than the average for the corporate loan book overall. Furthermore, the CRE loan portfolio expanded at a far slower pace in the fourth quarter of 2018 and did not increase at all in December. The slowdown in lending activity was reported by several market players, including significant ones, and may be attributable to the fact that a number of major property developments were already under construction and the inflow of new ones was more moderate in 2018 than in

the previous year. As a result of this substantial construction activity, the focus of activity in both the residential and office segments of the market shifted to construction companies. The strong activity on the construction side also had an impact on lending to firms in the building construction subsector, with its growth rate exceeding 15% in most months of 2018.

Loans from domestic banks are the primary source of financing in the CRE market. These loans account for three-quarters of the sources of financing from the domestic financial sector. Financial market segments other than the banking sector are also exposed to the domestic CRE market, largely through investments in bonds or in participating interests. After banks, investment funds have the next highest aggregate exposure. Households and NFCs also have relatively substantial exposures to the CRE market.⁹

The quality of the banking sector's CRE loan portfolio continues to benefit from the favourable economic situation. The rate of decrease in the NPL ratio for CRE loans became even greater in 2018 and by the year-end stood at 3%, which was 50% lower than its level a year earlier. Most of the banks active in the CRE market reported a drop in the NPL ratio for this loan book; it is expected, however, that the overall decrease was largely attributable to certain banks reducing their NPLs via loan write-downs/off and sell-offs.

Chart 28 Lending to the CRE sector and to the building construction subsector of the construction sector (annual percentage changes)



Source: NBS.

3.1.2 SECURITIES

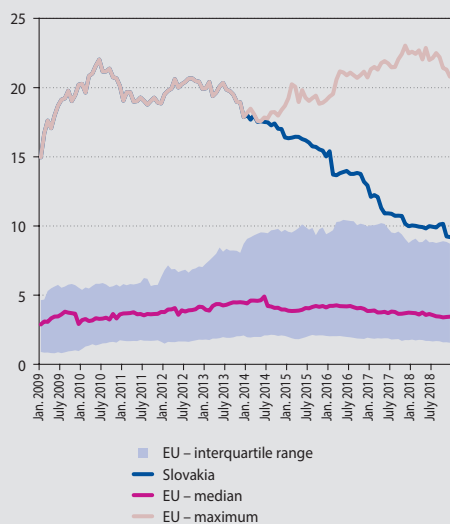
THE BANKING SECTOR'S TOTAL BOND HOLDINGS DID NOT CHANGE SIGNIFICANTLY IN TERMS OF SIZE OR COMPOSITION IN 2018

Domestic banks' investments in debt securities remained largely unchanged in 2018.

Holdings of Slovak government bonds were still the largest component of the aggregate portfolio, with a share of almost three-quarters. As a share of the sector's total assets, domestic government bonds fell from 10% in 2017 to 9% in 2018, since the amount of these holdings remained flat and the total assets increased.

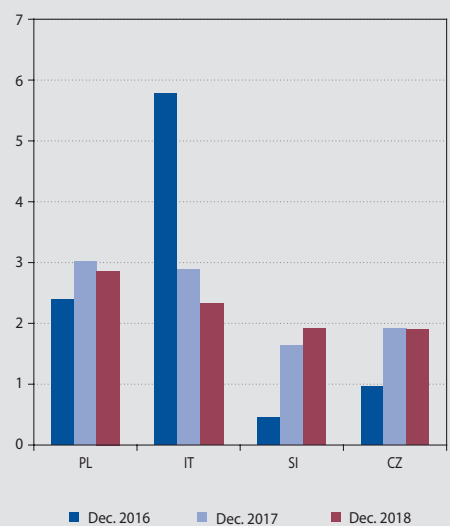
⁹ The NFC sector's exposure to the CRE sector is more difficult to gauge, since a large proportion of the bonds are held by the groups that issued them.

Chart 29 Domestic government bonds as a share of total assets in the banking sectors of EU countries (percentages)



Source: ECB SDW.

Chart 30 Foreign sovereign bonds with the largest shares in the Slovak banking sector's bond portfolio (percentages)



Source: NBS.

Banks' aggregate holdings of foreign government bonds amounted to €1.4 billion at the end of 2018, retaining their position as the second largest component of the portfolio.

The amount of these holdings increased only slightly during 2018. Individual countries' sovereign debt continued to have only minor shares in the overall bond portfolio (the largest such share

at the year-end did not exceed 3%). The concentration of foreign sovereign debt holdings across domestic banks remained low.

BANKS PROBABLY USED THE INTRODUCTION OF NEW ACCOUNTING STANDARDS TO INCREASE THE SHARE OF THEIR BOND HOLDINGS THAT ARE HELD TO MATURITY

In 2018 the banking sector's bond portfolio saw a change in the share of bonds held to maturity. In transitioning to International Financial Reporting Standard 9 (IFRS 9), banks switched part of their bond holdings available for sale to the portfolio of securities held to maturity. Hence, as a share of the aggregate bond portfolio, bonds held to maturity increased from 67% at the end of 2017 to 76% at the end of 2018 – by almost ten percentage points. By contrast, the share of bonds available for sale, which under IFRS 9 are held in the fair value through other comprehensive income (FVOCI) portfolio, fell to 22%. This shift actually means that the bond portfolio has become less sensitive to changes in the market value of bonds, thus implying lower losses for banks in the event of an increase in the yield on their bond holdings.

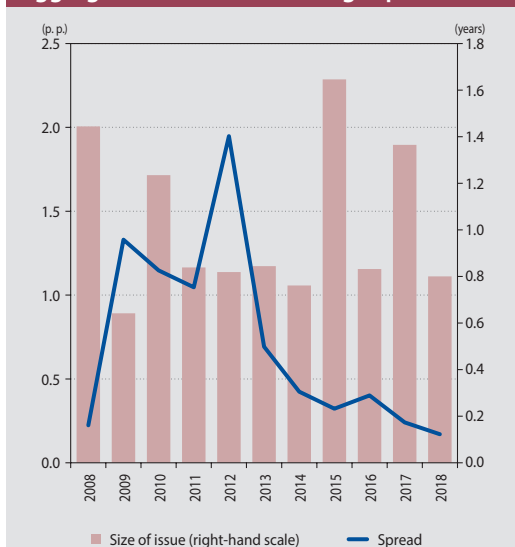
BANKS' ISSUANCE OF COVERED BONDS IN 2018 WAS CONDUCTED UNDER A NEW LEGISLATIVE FRAMEWORK

A new legislative framework for the issuance of bonds has been in force in Slovakia since 1 January 2018. This framework replaced the mortgage banking regime with a covered bond programme. This framework introduced, among other things, two changes that represented a major departure from the system of mortgage bonds.¹⁰ First, under the new framework, banks located in Slovakia may issue covered bonds after obtaining prior approval from NBS. This means that banks can issue covered bonds without necessarily having a mortgage licence and that banks themselves may decide whether and in what amount they will issue such covered bonds. The provision and funding of mortgage loans is not contingent on issuing covered bonds. The second major change concerns the underlying assets with which banks may cover these bonds. The change in the definition of a mortgage loan resulted in an expansion of primary cover assets for virtually all housing loans.

In the first half of the year secondary legislation under the new framework was still being completed and the process of granting prior

¹⁰ More information about the change in the legislative framework can be found in NBS's November 2017 Financial Stability Report.

Chart 31 Bonds issued by domestic banks – aggregate amount and average spreads



Source: NBS.

Notes: The spreads are weighted by the nominal amount of mortgage bonds or covered bonds issued (mortgage bonds until the end of 2017).

The average spreads are calculated for fixed coupon covered bonds issued in euro as the difference between the coupon rate and the euro swap rate with a maturity matching that of the issued bond.

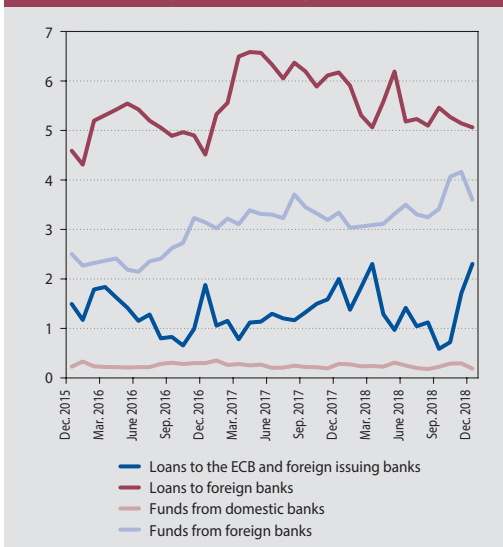
approvals was in progress; hence the first issues of covered bonds under the new framework were not made until June 2018. A total of four such issues, by two banks, were made in 2018, in an aggregate amount of €800 million. While that amount was less than the aggregate amount of mortgage bonds issued in each of the years from 2015 to 2017, it was similar to the amount issued in previous years. All the bonds issued by banks in 2018 had a fixed coupon, whose spread over the swap rate remained relatively low. The bonds issued in 2018 had an average maturity of six years, similar to those issued in previous years.

3.1.3 THE INTERBANK MARKET

IN 2018 THE INTERBANK MARKET SAW A SLIGHT INCREASE IN FUNDING FROM FOREIGN BANKS AND A DECLINE IN LENDING TO FOREIGN BANKS

The fall in lending to foreign banks stemmed mainly from a decline in the funds that had been deposited with Czech banks in response to the Czech central bank's former exchange rate floor policy.¹¹ By the year-end, as a result of

Chart 32 Principal components of the inter-bank market (EUR billions)



Source: NBS.

this decline, practically the only domestic banks that had Czech koruna exposure were those banks with a branch in the Czech Republic.

The overall increase in funding from foreign banks was concentrated across certain banks and consisted largely of intra-group funding.

In some banks the increase in this funding was coupled with an increase in the amount of more volatile assets (interbank loans or funds deposited with the ECB), whereas in other banks this funding was needed to support further lending to the retail and NFC sectors – perhaps because loan growth was outstripping customer deposits, with the result that the average loan-to-deposit ratio in 2018 exceeded 100% for the first time ever.

During 2018 implied interbank interest rates were slightly higher than EURIBOR interbank rates. These higher rates appear to have been caused by longer-term funding, which compared with funds that have a term of up to one year, is moderately more expensive.

3.1.4 LIQUIDITY RISK

THE LEVEL OF THE LIQUIDITY COVERAGE RATIO (LCR) DID NOT CHANGE SIGNIFICANTLY IN 2018

The LCR's level was broadly steady in 2018, although the ratio of liquid assets to total as-

¹¹ For more details, see the Analysis of the Slovak Financial Sector for 2017.

sets continued to fall and there was an increase in total deposits. The LCR levels for retail banks ranged between 1.3 and 2.3 in December 2018, comfortably above the regulatory minimum.

ONGOING LENDING GROWTH WAS INCREASING THE MATURITY MISMATCH BETWEEN ASSETS AND LIABILITIES

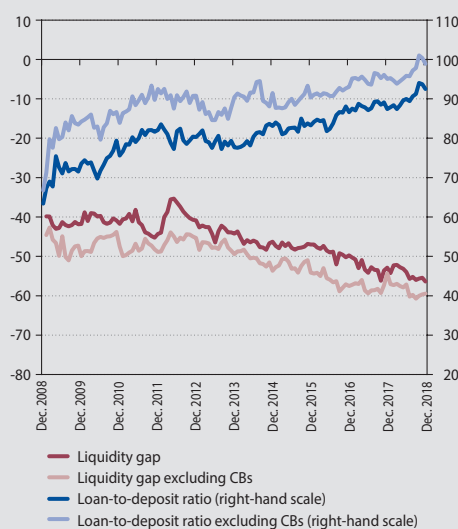
The Slovak banking sector's liquidity position is being adversely affected by strong credit growth supported by the low interest rate environment. The rising share of long-term loans in the sector's total assets further increased the average maturity of assets in 2018; at the same time, however, investments in liquid bonds were less attractive profitability-wise. These trends resulted in an increase in the maturity mismatch between assets and liabilities. The 12-month liquidity gap reached a new historical high in December 2018.

The gradual substitution of liquid securities for illiquid loans implies that the problem of the widening liquidity gap is not simply a matter of changing contractual maturities, but also relates to banks' diminishing capacity to convert long-term claims into liquid assets.

SOME BANKS ARE IMPROVING THEIR LIQUIDITY POSITION BY ISSUING BONDS

Owing to stronger growth in loans than in deposits, the loan-to-deposit (LTD) ratio con-

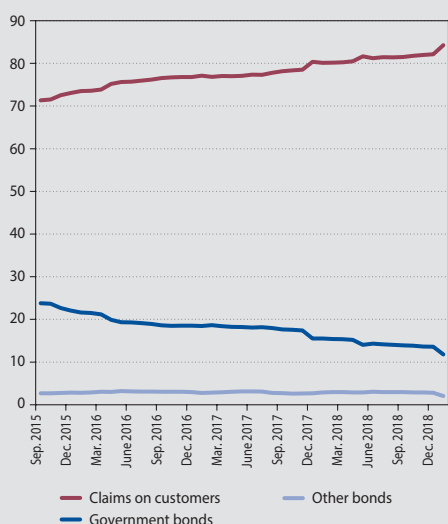
Chart 34 Impact of mortgage bond/covered bond issues on liquidity ratios (percentages)



Source: NBS.
Notes: CBs – covered bonds (including mortgage bonds).
The chart shows data for a sample of universal commercial banks.

tinued increasing in 2018 and exceeded 100% for the first time ever. If covered bonds are included in the calculation, the level falls to 91% at the year-end. Another favourable aspect of covered bonds¹² is that they have for a long time had a moderating effect on the maturity mismatch between assets and liabilities. It should be noted, however, that only a small number of banks sought to raise funds by issuing covered bonds in 2018. On the other hand, certain banks were not replacing maturing bonds with new bond issues in 2018, and therefore the amount of their bond issuance fell to zero. The extent to which a 2018 law amendment¹³ supported stable funding was limited by the fact that only one bank significantly increased the overall amount of its issued bonds.

Chart 33 Composition of assets with a residual maturity of more than one year (percentages)



Source: NBS.

3.2 FINANCIAL POSITION OF THE BANKING SECTOR

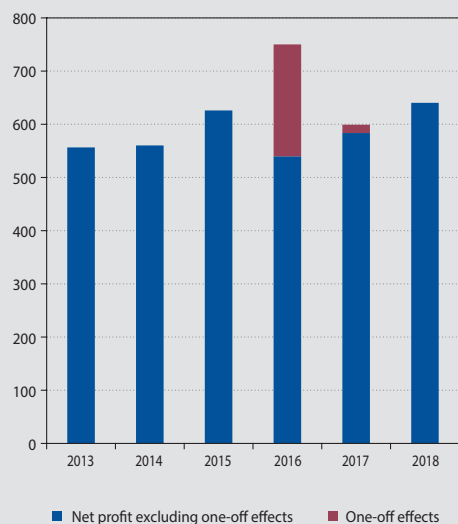
LEAVING ASIDE CERTAIN ONE-OFF EFFECTS, THE BANKING SECTOR MANAGED MODERATE PROFIT GROWTH IN 2018 EVEN IN AN ENVIRONMENT OF INTEREST MARGIN COMPRESSION

The banking sector's net profit for 2018 was 6.9% higher than its profit for the previous year. The profit amounted to €640 million, and almost all banks contributed positively to it.

¹² For the pre-2018 period, this refers to mortgage bonds.

¹³ Act No 279/2017 of 12 October 2017 amending Act No 483/2001 on banks (and amending certain laws), as amended, and amending certain other laws.

Chart 35 Net profit of the banking sector (EUR millions)

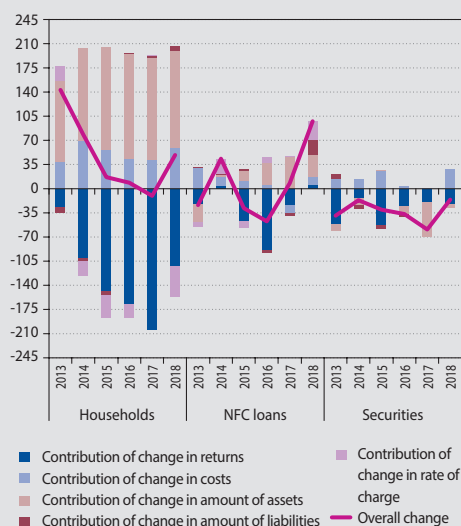


Source: NBS.

Notes: The most notable one-off effects in 2016 were the sale of holdings in VISA company and extraordinary income from dividends. In 2017 the reversal of reserves for litigation costs was deemed to be an extraordinary item.

The sector's net profit for the year also includes the interim financial results of entities which ceased operation in that year or which prepared interim financial statements.

Chart 36 Net interest and fee income and contributions to year-on-year change (EUR millions)



Source: NBS.

The main driver of the profit growth was an increase in interest income from corporate financing, as corporate lending rates stabilised and the amount of loans to NFCs continued in-

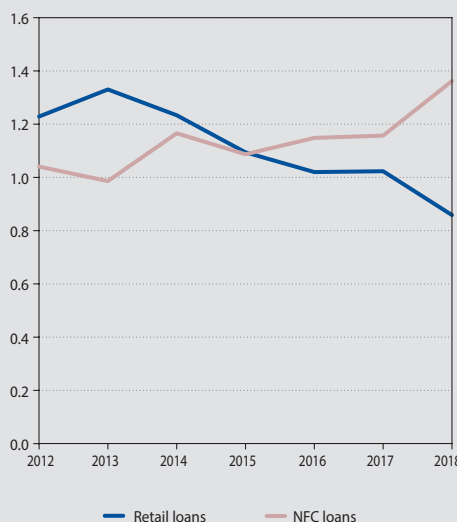
creasing. Interest income on the retail loan book also increased slightly, although that was largely the result of one bank's acquisition of part of the non-bank lender CFH. A key factor behind the sector's rising profitability was the continuation of robust growth in lending, particularly in lending to the retail sector. Thanks to long-term lending growth, the banking sector has been able to compensate for low interest margins. At the same time, however, the sector is increasingly vulnerable to any deterioration in the credit quality of the loan portfolio.

THE POSITIVE TREND IN PROFITABILITY WAS SUPPORTED MAINLY BY THE NFC SECTOR

The banking sector's net interest income increased, year on year, by 2.5% in 2018. This growth was largely attributable to net interest income from loans to NFCs, which increased by 8.1%. The average return on NFC loans increased in 2018 for the first year since 2013. On the other hand, the cost of NFC funds rate fell to a historical low.

Net fee income from lending to the corporate sector also increased in 2018, by a substantial 39% year on year. Besides an increase in total loans to NFCs, that result also reflected an increase in the fee income rate, which over the course of the year rose from 1.16% to 1.36%.

Chart 37 Fee income rate (percentages)



Source: NBS.

Notes: The fee income rate is calculated as the ratio of net fee income to the average outstanding amount of deposits and loans in the given year.

There was also an increase in net interest income from retail loans, stemming largely, though, from one bank's acquisition of part of the non-bank lender CFH. Since this deal involved the acquisition of consumer loans, it had a positive impact on the interest return on the loan book; the return's rate of decrease was more moderate in 2018 than in previous years. By contrast, the long-term downward trend in the fee income rate for retail loans became more pronounced in 2018, falling to 0.86% from 1.02% in 2017 (the largest drop since 2013).

A FALL IN CREDIT RISK COSTS ALSO CONTRIBUTED TO NET PROFIT GROWTH

The credit risk cost ratio¹⁴ has been falling gradually since 2014. Even so, and even after the implementation of IFRS 9 from 1 January 2018, Slovakia has not lost its leading position among EU countries in terms of the provisioning ratio for NPLs. Such a trend supports the banking sector's ability to maintain relatively elevated profitability even amid net interest margin compression.

The all-time low credit risk cost ratio poses two interrelated types of risk to the banking sector. The first risk is the sector's increasing vulnerability to any future increase in the ratio back to its typical levels of previous years. If the

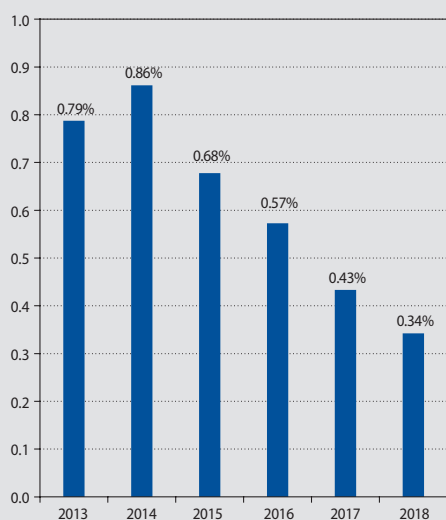
ratio increased to its average level for the period 2013–2016, the banking sector's net profit would fall by 30%. That risk is even greater for small and medium-sized banks, whose net profit in that event would slump by more than 70%. That is because these banks have in recent years recorded the largest decrease in the credit risk cost ratio. The negative impact on the aggregate net profit of significant banks is estimated to be around one-fifth.

The second risk associated with the current low level of credit risk costs is the possibility of banks' underestimating future increases in credit risk. Given the strong competition in the credit market, particularly in lending to the retail sector, banks are under pressure to reduce interest rates, even while these rates may have already ceased to price in the risk that such a low credit risk cost ratio is unlikely to be sustainable over the long term.

BANKING SECTOR SOLVENCY AND LEVERAGE RATIOS¹⁵

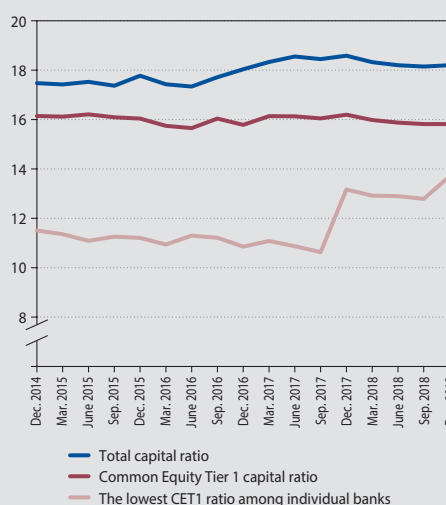
The banking sector's aggregate total capital ratio fell slightly in 2018. From 18.6% at the end of 2017, the total capital ratio decreased to 18.2% a year later. The Common Equity Tier 1 (CET1) capital ratio dropped from 16.2% to

Chart 38 The credit risk cost ratio (percentages)



Source: NBS.
Note: Both the cost ratio and default rate are calculated for the moving period of the previous 12 months.

Chart 39 Capital ratio trends (percentages)



Source: NBS.

¹⁴ The credit risk cost ratio for a given year is calculated as the ratio between, on the one hand, that year's loan loss provisioning costs and costs related to loan write-offs/downs and sell-offs, and, on the other hand, the average stock of loans for that year.

¹⁵ This part of the Analysis is based on preliminary data, since the banks' relevant statement had not been finalised at the time of writing.



15.8% over the same period, with the group of significant banks accounting for most of that drop (their aggregate CET1 ratio fell from 15.6% to 15.1%). Across less significant banks, this ratio increased slightly (from 17.9% to 18.1%).

Besides a moderate decline in its solvency ratios, the domestic banking sector also saw its leverage ratio fall in 2018, from 8.2% to 8.0%.

Solvency ratios declined mainly because the regulatory capital requirement increased (by 5% year on year) amid continuing credit growth. The fall in banks' total capital ratios was to some extent also due to the implementation of the IFRS 9 accounting standard from 1 January 2018.¹⁶

There was also, however, upward pressure on the sector's aggregate ratio, as banks' increased their equity by retaining around one-third of their earnings for 2017. Some less significant banks also increased their equity in the second half of 2018. In these cases, either the parent undertaking increased the share capital directly, or some or all of the bank's profit for 2018 was set off and will not be paid out as dividends. From the perspective of the banking sector's resilience, it is positive that such increases largely occurred at banks reporting the lowest capital ratios. A similar trend was observed in 2017. Thus, the lowest CET1 ratio in the banking sector increased over 2017 and 2018, from 10.9% to 13.7%.

The quality of the banking sector's aggregate capital structure improved moderately in 2018. The share of Tier 1 capital in total own funds increased from 89.5% to 90.8%, mainly through the substitution of Tier 2 capital in the form of subordinated debt for additional Tier 1 capital.

From a longer-term perspective, capital adequacy trends are also being affected by risk weight reductions at banks that use the internal ratings-based (IRB) approach for assessing credit risk. These reductions are a response to the improving economic situation and falling level of risk indicators (in particular the low ratio of non-performing and problem loans). In these banks, the average risk weight for retail exposures fell by almost one-quarter between March 2016 and December 2018, from 27% to 20%. Hence the almost 46% increase in retail exposures resulted in only a 12% increase in the capital charge for retail credit risk. In the absence of the risk weight reductions, the banking sector's total capital ratio as at December 2018 would have been the same as in March 2016 (17.4%), instead of its actual level of 18.2%.

The gradual build-up of risks of a cyclical nature also makes it increasingly important that banks maintain an adequate level of solvency. These risks stem mainly from strong credit growth and the increasing indebtedness of households. In response to mounting cyclical risks, the countercyclical capital buffer (CCyB) rate was increased to 1.25% from August 2018 and will be further raised to 1.50% from August 2019.

Among EU countries, Slovakia is at the lower quartile for the aggregate total capital ratio of its banking sector as at September 2018. Owing to higher cyclical risks, the combined capital buffer requirement for domestic banks is higher in Slovakia than in other countries; nevertheless, the difference between the banking sector's total capital ratio and the sum of the minimum regulatory capital requirement including capital buffer requirements is still lower in Slovakia than in any of the other countries participating in the banking union.¹⁷

¹⁶ The implementation of IFRS 9 had a negative impact of 0.2 percentage point on the banking sector's total capital ratio in 2018. Its further impact will be phased in over the period 2019–2023 and will amount to around 0.3 percentage point.

¹⁷ Data for Germany were not available.



THE INSURANCE SECTOR



4 THE INSURANCE SECTOR

THE INSURANCE SECTOR'S PROFITABILITY DECLINED IN 2018¹⁸

The insurance sector's net profit fell slightly in 2018. The profit for the year was €176 million, 1.6% lower than the profit for 2017. As in previous years, the gross profit differed from the net result by declining year on year, in this case by 4.2%, to €244 million. This divergence resulted from a year-on-year decline in both current and deferred corporate income tax (-€4 million and -€3 million respectively), as well as in proceeds from the special levy payable by firms in regulated industries (-€2 million).

New contracts in non-life insurance concluded in 2018 were still subject to a special levy on insurance premiums, in accordance with Article 68a of the Insurance Act.¹⁹ The levy proceeds for 2018 stood at €33.6 million, according to data from the Slovak Insurance Association.

The insurance sector's aggregate return on assets (ROA) fell to 2.27 in 2018 (from 2.37 in 2017), despite a slight decrease in the denominator. The sector's return on equity (ROE) stood at 14.4% in December 2018; however, as in the previous year, the reading was heavily skewed by a decline in equity in the denominator of the ratio.

The technical result in life insurance (adjusted for investment returns in unit-linked insurance) indicated a year-on-year increase, but only as a result of extraordinary accounting effects. The increase was driven by items included in *other technical income and expenses*, which in a few insurers increased quite sharply. The value of these items is the result of an extraordinary accounting procedure, which was not applied in most of the sector.

Consequently, the technical result in life insurance in 2018 (adjusted for investment returns in unit-linked insurance) was €45 million, fully 50% higher year on year. This figure accounted for 18% of the sector's gross profit. Absent the extraordinary accounting effects, the technical result would have been negative, and more so than it was in the previous year. Another item that had a significant, if negative, impact on the

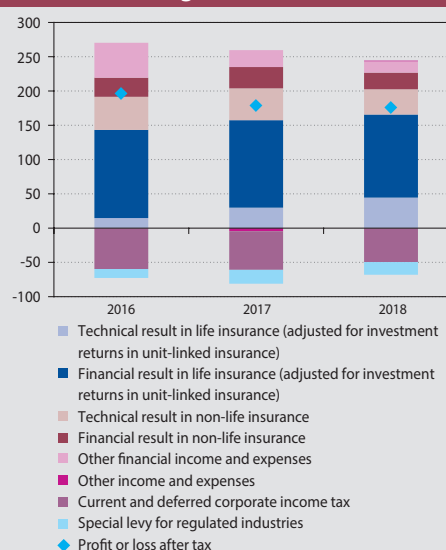
2018 technical result was benefits paid, which increased by €41 million year on year.

As for non-unit-linked life insurance, its technical result for 2018 was 5% lower year on year, at €121 million. In unit-linked insurance, the financial result for 2018 slumped by €155 million, and at minus €72 million it was substantially worse than the previous year's positive result (an increase of 45% or €26 million).

The technical result in non-life insurance for 2018 was 21% lower year on year, at €37 million. This value was a direct corollary of trends in technical income and expenses and was not affected by any unexpected changes. The financial result in non-life insurance for 2018 stood at €24 million, representing a year-on-year decline of 22%.

Average investment returns on non-unit-linked life insurance continued their downward trend in 2018, falling to 3.09%. Data on the average interest rate guaranteed by insurers in 2018 was not available at the time of writing; the figure for 2017 was 3.14%. Assuming that the decrease in the guaranteed rate in 2018 was similar to that

Chart 40 Profit breakdown for insurers and branches of foreign insurers (EUR millions)



Source: NBS.

¹⁸ The profitability analysis is based on the financial statements of insurers and branches of foreign insurers. The data for a few insurers, accounting for 1.6% of gross premiums written, are preliminary. The data for a few branches of foreign insurers, accounting for 0.4% of gross premiums written, were not available at the time of writing this ASFS.

¹⁹ Article 68a of Act No 39/2015 on insurance (and amending certain laws) was repealed as from 1 January 2019, since when a tax on non-life insurance has been in force under Act No 213/2018 on the insurance tax (and amending certain laws).



in previous years, it may be expected that, on average, investment returns in that year remained sufficient to cover interest guaranteed under life insurance contracts.

The book value of technical provisions for non-unit-linked life insurance and non-life insurance increased in 2018 by 1.32% year on year, to €4.42 billion. While the provisions for non-unit-linked life insurance decreased by 0.84% year on year, to €3.31 billion, those for non-life insurance increased by 2.76%, to €1.11 billion. Technical provisions for unit-linked life insurance declined by 7.4% in 2018, to €1.13 billion. This decline was so large that its impact on insurers' aggregate balance sheet exceeded the other impacts on the balance sheet and constituted the main cause of the overall drop in the insurance sector's total assets

THE SECTOR'S SOLVENCY DECLINED FURTHER²⁰

The insurance sector's solvency capital requirement (SCR) coverage ratio was 187% as at December 2018, representing a year-on-year decrease of 14 percentage points. Of the seven insurers whose SCR coverage ratio declined, as many as six had a ratio below the market average. The SCR coverage ratios of individual insurers at the end of 2018 ranged from 122% to 314%.

The minimum capital requirement (MCR) coverage ratio of domestic insurers' also decreased in 2018, although given this ratio's overall higher level, its drop was less pronounced. The aggregate ratio fell from 505% in December 2017 to 487% in December 2018, when the ratios of individual insurers ranged from 115% to 957%.

Despite falling slightly in 2018, expected profits included in future premiums (EPIFP) still constituted most of the insurance sector's total capital. Its share fell over the course of 2018, from 61% to 57%. Several insurers are relying on this volatile capital component to meet regulatory capital requirements.

TRADITIONAL LIFE INSURANCE SAW A DROP IN GROSS PREMIUMS WRITTEN

Gross premiums written in life insurance decreased in 2018 by 9.8% year on year, which was in sharp contrast to their increa-

se of 9.6% in 2017. Around half of the decline, however, was attributable to a proportion of traditional life insurance business being reclassified as income insurance, which falls under non-life insurance. Nevertheless, the decline was broad-based across almost all insurers. Aggregate gross premiums written in life insurance amounted to €706 million at the end of 2018. Benefits paid increased by 11.1% year on year.

In unit-linked life insurance, gross premiums written increased by 5.8% year on year, which, however, was far lower than their increase in the previous year (20%). The amount of benefits paid was almost the same in 2018 as in 2017, just 0.3% lower year on year.

In health insurance, gross premiums written climbed by 32%, which was almost four times higher than their increase in 2017. The share of this insurance class in total life insurance business stood at 6% at the end of 2018. The amount of benefits paid under this insurance class increased by 21.7% year on year.

None of the other life insurance classes accounted for more than 0.5% of gross premiums written. The share of reinsured contracts increased to 4.3%. Net expenses incurred in life insurance as a whole decreased, year on year, by 4.1% in 2018.

Data on life insurance surrenders were not available at the time of writing this ASFS.²¹ In 2016 and 2017 surrenders accounted for, respectively, 67% and 45% of the amount of benefits paid. Their highest shares were recorded in traditional life insurance (74% and 71%), far higher than in unit-linked life insurance (52% and 51%). In health insurance, the share of surrenders was 1% in each year.

IN THE VAST MAJORITY OF NON-LIFE INSURANCE CLASSES AND IN INWARD REINSURANCE,²² GROSS PREMIUMS WRITTEN INCREASED IN 2018

In non-life insurance, the year-on-year increase in gross premiums written in 2018 was broad-based across almost all insurance classes and stood at 6% overall. Around half²³ of that increase resulted from the inclusion in gross premiums written of proceeds from the premium levy for non-life insurance. As from 2019 the levy was replaced with an insurance premium tax.

²⁰ The rest of this sectoral analysis is based on statements reported by insurers and branches of foreign insurers under regulatory requirements.

The data for a few insurers, accounting for 1.6% of gross premiums written, are preliminary. Data for branches were not available.

²¹ In the case of a few insurers, the data were also not available for the previous years.

²² Non-life insurance includes both direct business and proportional inward reinsurance, which accounts for 3% of the gross premiums written.

²³ The amount of the levy proceeds is based on data from the Slovak Insurance Association (SLASPO).



In motor insurance, gross premiums written grew by 9.5% in 2018, just slightly less than in 2017. This result included increases of 9.1% in motor third party liability (MTPL) insurance and 9.9% in comprehensive motor insurance.

Almost all undertakings active in this insurance class reported growth in gross premiums written. The net combined ratio in motor insurance rose, year on year, by more than two percentage points in 2018, to 101.9%. After taking into account additional transfers,²⁴ the net combined ratio in December 2018 stood at 111.5%, its highest ever recorded level.

In property insurance, the year-on-year growth in gross premiums written was 3.3% in December 2018, which again lagged far behind the growth in motor insurance. The net combined ratio for this class was 74.8%, and the combined ratio including premium levy proceeds remained below 100%.

None of the other life insurance classes recorded an increase of more than 10% in gross premiums written. In all these classes, the net combined ratio remained below 100%; the combined ratio including premium levy proceeds exceeded 100% in one class (assistance insurance, accounting for 2% of non-life gross premiums written), and then only marginally.

The reinsurance component of gross premiums written in non-life insurance stood at 23% at end-2018.

THE REGULATORY VALUE OF TECHNICAL PROVISIONS IN 2018 SHOWED A SIMILAR TREND TO THE BOOK VALUE

The total amount of technical provisions in life insurance (excluding unit-linked insurance and health insurance) remained virtually unchanged year-on-year in 2018. After edging down by 0.1% in December 2018, their total amount stood at €3.57 billion. In health insurance, the shortfall in technical provisions increased by 33% year on year, to minus €212 million in December 2018. That shortfall implies high profitability in health insurance business. In unit-linked business, the amount of technical provisions fell by 7.6% year on year, to €1.05 billion. In non-life insurance and inward reinsurance, the amount of technical provisions increased by 3.5% year on year, to €0.89 billion.

In the aggregate assets held to cover technical provisions, government bonds have the largest share: 40% at end-2018, representing a year-on-year increase of two percentage points. Almost all of these securities cover technical provisions for traditional life insurance. The share of corporate bonds fell slightly (from 27% to 26%), and virtually all of these securities were held for the insurer's account. Investment fund shares/units had the next largest share (down from 21% to 20%), and unlike the previous two components, they were held for the policyholder's account. The shares of other types of security in assets covering technical provisions did not change: deposits stayed at 5%, equity and real estate at 3%, structured securities at 2%, and loans at 1%.

Unit-linked insurance investments were even more concentrated in investment fund shares/units and structured investments, which together made up 94% of the total (a year-on-year increase of 6%). In traditional life insurance, the share of bonds in assets covering technical provisions increased from 86% to 88%; in non-life insurance, it rose from 67% to 72%.

Looking at the geographical breakdown of aggregate assets covering technical provisions, Slovak securities have the largest share (38% at end-2018, down by one percentage point year on year), **and Slovak government bonds are the most significant of these securities** (accounting for 27% of the aggregate assets). In the breakdown of the asset counterparties by country, no country other than Slovakia has a share of more than 5%.

As for securities of credit quality step 2 under the Solvency II framework, their share in assets covering technical provisions remained basically unchanged, at 56%. There was, though, a decline in the share of securities of credit quality step 3 (from 21% to 17%), while those of credit quality steps 0 and 1 increased, respectively, from 5% to 6% and from 11% to 13%.

THE INSURANCE SECTOR IS EXPOSED TO LEGAL RISK RELATING TO THE INSURANCE PREMIUM TAX

The question of whether supplementary insurance under life insurance policies is subject to the new insurance premium tax represents a significant legal risk for the insurance sector. Pursuant to the Insurance Premium Tax Act

²⁴ Proceeds from the premium levy for MTPL business, proceeds from the premium levy for other non-life insurance, and the contribution from the Slovak Insurers' Bureau. Information on the most recent of the transfers is not explicitly available; it is estimated on the basis of the amendment of the respective legislation.



(No 213/2018), in force from 1 January 2019, the insurance premium tax is charged on non-life insurance premiums. It is not clear, however, whether the tax applies to supplementary insurance under life insurance policies, since such insurance contains elements of both life and non-life insurance.

Besides its direct impact, the new tax entails further costs for insurers by necessitating a sup-

plementation of technical provisions, since part of the premiums currently allocated to technical provisions will be reallocated to payment of the tax. Unlike standard non-life insurance contracts, supplementary insurance is provided under multi-year contracts, so the shortfall in technical provisions related to the new tax has a cumulative aspect. Hence the overall burden of the tax on the insurance sector's profit could be substantial.



FINANCIAL MARKET SEGMENTS FOCUSED ON ASSET MANAGEMENT



5 FINANCIAL MARKET SEGMENTS FOCUSED ON ASSET MANAGEMENT

5.1 THE OLD-AGE PENSION SCHEME²⁵

THE UPWARD TREND IN THE NUMBER OF SAVERS GATHERED PACE IN 2018; SLOWER GROWTH IN THE AMOUNT OF ASSETS UNDER MANAGEMENT STEMMED FROM NEGATIVE RETURNS ON INVESTMENT

The total number of savers in the second pillar of the pension system increased significantly in 2018, by almost 62,000. This was the highest inflow recorded in one calendar year, except for the year when the scheme was launched. By end-December 2018, a total of 1.488 million people were enrolled in the scheme. The only time the number was higher was eleven years earlier, prior to the scheme's first 're-opening' (a temporary period when existing savers are permitted to leave the scheme).

Most of the people who enrolled in the second pillar in 2018 opted to invest in equity pension funds or index pension funds. These types of fund, in particular index funds, also saw an increase in number of savers as a result of existing savers switching to them from other types of fund. Bond funds lost the most savers, and since this is now a multi-year trend, their dominant share in terms of both assets and enrolment has been gradually declining. The inflow of new savers into individual PFMCs was broadly proportional to the companies' market shares, with the exception of one company in which the number of savers has been falling moderately over an extended period.

Annual growth in the net asset value (NAV) of second-pillar funds slowed in 2018. The funds' aggregate NAV increased by €461 million, which was around €200 million lower than the increase in each of the previous two years. The slowdown stemmed from a deterioration in the performance of second-pillar funds in 2018. Whereas in the previous two years funds' NAV growth had been supported by rising prices of financial assets, in 2018 their aggregate investment return was negative and partly offset the positive impact of new contribution inflows.

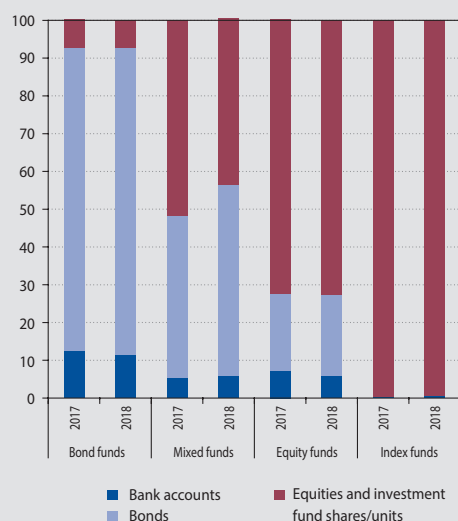
The €628 million of second-pillar contributions paid in 2018 was several times higher than the overall loss from the downward repricing of assets, so ensuring the continuation of the growth trend in assets under management in the second pillar. It is worth noting, however, that this was not the case during the last quarter, when the downturn in financial markets resulted in a moderate drop in the second-pillar's aggregate NAV – a situation rarely seen before. The amount of contributions paid in 2018 was so much higher than in previous years that it caused the long-term upward trend in its annual rate of change to accelerate to 20%. This larger inflow from savers had three principal components. The first, quite naturally, resulted from the law change under which the rate of contributions is being increased between 2011 and 2024 by 25 basis points per year. The second component relates to the favourable labour market situation in Slovakia, including substantial wage growth and decreasing unemployment. The third is the above-mentioned increase in the total number of savers, which is swelling the inflows of contributions. The aggregate NAV of second-pillar funds rose to more than €8 billion in the second half of 2018, and it remained above that level even when falling slightly at the end of the year.

Just under half of the increase in second-pillar assets was accounted for by bond pension funds. Index funds had the second-highest share, not much lower, even though the number of savers in these funds is several times lower than the number in bond funds. This disproportion reflects transfers of savings between these two types of pension fund, resulting from the fund switching mentioned above.

LOOKING AT THE COMPOSITION OF THE AGGREGATE PORTFOLIO IN 2018, THE MAIN POINTS TO NOTE ARE A DECLINE IN THE EQUITY EXPOSURE OF MIXED PENSION FUNDS AND A FIRST FALL FOR EIGHT YEARS IN THE AVERAGE RESIDUAL MATURITY OF THE BOND COMPONENT
Among second-pillar pension funds, mixed funds recorded the largest change in asset

²⁵ The second pillar of the Slovak pension system – the old-age pension scheme – is a largely compulsory defined-contribution scheme operated by pension fund management companies (PFMCs). The third pillar – the supplementary pension scheme – is a voluntary defined-contribution scheme operated by supplementary pension management companies (SPMCs).

Chart 41 Asset structure of different types of second-pillar fund (percentages)



Source: NBS.

structure in 2018. The share of equity investments in these funds' assets declined from 44% at the end of 2017 to 38% a year later. This change took place almost entirely in the final months of 2018 and resulted largely from the slump in share prices at that time. It also, though, stemmed partly from the fact that PFMCs decided to trim their relative exposure to increasingly volatile stock markets. In the first four months of the year, a proportion of the new contributions were used to increase funds' equity holdings; in subsequent months, however, funds' purchases and disposals of equity investments balanced out, and in the last two months there was even a net outflow of these holdings. The impact of these factors on the equity component of the aggregate portfolio caused an increase in the bond component, which by the year-end accounted for more than half of the total NAV.

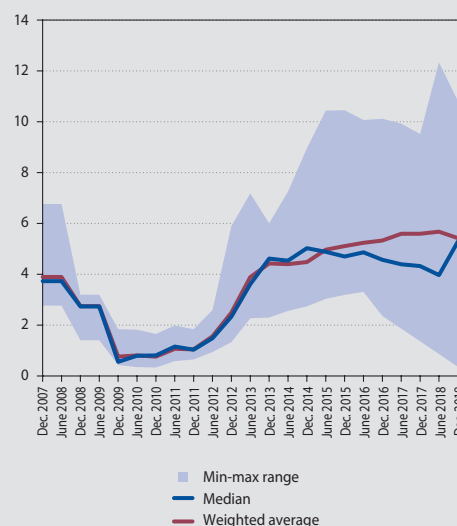
Unlike mixed pension funds, equity pension funds maintained their level of equity exposure in 2018: as the equity component of their aggregate portfolio started and ended the year at 69%. In between, the share increased a little, and it was only the effect of the fourth quarter downturn in equity prices that brought it back down to January's level. Equity pension funds' purchases of equity investments continued exceeding disposals in the second half of 2018, though to a somewhat lesser extent than in the

first six months. The bond component of this portfolio also ended the year where it began, accounting for just under a quarter of the overall NAV.

The asset structure of bond pension funds remained stable throughout 2018. The composition of their aggregate portfolio has been almost unchanged for several years now, with debt securities constituting around 90% and bank deposits the rest.

The weighted average residual maturity of the debt securities holdings of second-pillar funds fell from 5.6 years at the start of 2018 to 5.4 years as at 31 December. The decrease occurred during the second half of the year, and while it may have been relatively insignificant in terms of size, it was the first for eight years. The trend across bond funds, in which second-pillar bond holdings are most heavily concentrated, was similar to the overall average. In mixed and equity funds, the average residual maturity increased slightly. However, across individual pension funds, and even across funds of the same type, the situation was completely heterogeneous. The duration of the aggregate bond portfolio was, as usual, closely mirroring residual maturity trends in 2018. The weighted average maturity of the sector's time deposit holdings increased by around one month. The average interest rate on these deposits nevertheless fell by half, to 0.2%.

Chart 42 Average residual maturity of debt securities held by second-pillar funds (years)



Source: NBS.



In the breakdown of debt securities holdings by sector of issuer, 2018 saw a shift of two percentage points from the share of corporate bonds to the share of government bonds. Aside from minor fluctuations, this breakdown held steady for a fourth consecutive year, with the shares of government bonds (just over 40%) and other debt securities remaining evenly split between those issued by non-financial corporations and those issued by financial corporations.

The second pillar's already quite substantial holdings of derivatives contracts increased further in the first half of 2018 and maintained their new level until the end of the year. These investments comprised mainly swaps and futures purchased as a hedge against any increase in market interest rates.

Pension funds' exposure to government bonds issued by countries most closely associated with the previous debt crisis increased in 2018.

The largest rise was in holdings of Italian sovereign debt, but that occurred in the first half of the year, before concerns about Italy's fiscal stance re-escalated. On the other hand, there were some disposals of Slovak and US corporate debt securities.

The sector's foreign exchange position did not change at all during the period under review, nor were there any significant year-on-year changes in the positions of individual pension funds. As a share of the aggregate NAV of second-pillar funds, non-derivative assets denominated in a currency other than the euro stood at around 6% at the end of 2018.

The current pension-point value showed significant volatility during 2018, particularly in respect of funds that have a higher share of equity investments. It was therefore because the stock market decline culminated in late December that the aggregate performance of second-pillar funds was worse in 2018 than in any year since the global financial crisis ten years ago. The largest negative annual returns were recorded by index pension funds (-6.6%), followed by equity pension funds (-5%) and mixed pension funds (-4%). Nor did 2018 prove favourable for bond investments, given that, beginning in the autumn, the year-on-year return on bond pension funds entered negative territory for the first time in the history of the second pillar. The

average annual return on bond funds as at 31 December 2018 was -0.5%.

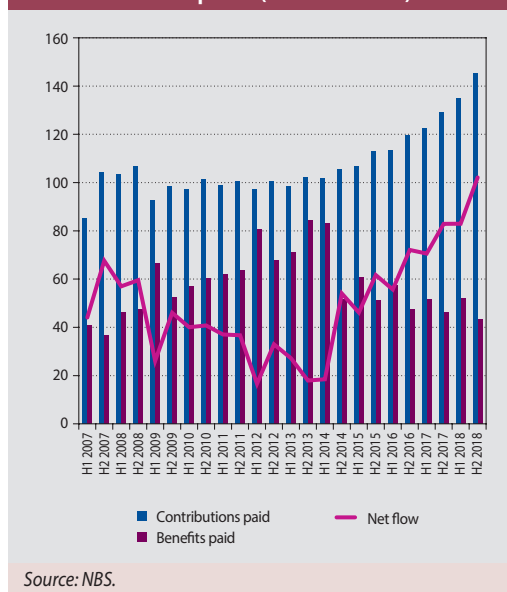
5.2 THE SUPPLEMENTARY PENSION SCHEME

DEMAND FOR ENROLMENT IN THE THIRD PILLAR OF THE PENSION SYSTEM CONTINUED TO STRENGTHEN IN 2018, AND THIS, TOGETHER WITH OTHER FACTORS, RESULTED IN FURTHER ANNUAL GROWTH IN CONTRIBUTIONS TO THE SCHEME

In terms of increasing the number of participants in the supplementary pension scheme, 2018 was an exceptionally successful year.

Their number increased by around 46,000, which was by some margin the largest annual increase in more than ten years. So, the trend in recent years of rebounding demand for enrolment in the third pillar not only continued in 2018, but actually gained momentum. Among the results of this surge was that the total number of participants at the end of the period under review, around 803,000, was higher than the previous highest number recorded around the turn of 2008/09. The new participants gravitated towards the third-pillar funds offering more aggressive growth policies. On the other hand, the number of people receiving benefits from distribution funds of the third pillar decreased

Chart 43 Contributions and benefits paid under the third pillar (EUR millions)



Source: NBS.



in 2018 for a fifth year in a row. A net increase in participants in 2018 was recorded by each of the Supplementary Pension Management Companies (SPMCs).

The increasing number of participants and the good economic times ensured a 12% further year-on-year increase in the amount of contributions paid into the third-pillar scheme. With the amount of benefits paid falling slightly in 2018, the net balance of flows into and out of the scheme stood at €185 million for the year, which was more than one-fifth higher than the figure for 2017 and continued the balance's upward trend of recent years. This growth, however, had only a partial impact on the aggregate NAV of third-pillar funds, given the negative impact of the downward repricing of assets held by these funds, most notably in the case of equity funds. The overall NAV of third-pillar funds increased by €87 million in 2018, which was less than half of each increase in the previous two years. Of the 2018 increase, fully €71 million was generated through the personal accounts of participants in third-pillar funds that follow a growth or conservative investment policy. Less than €15 million was generated by funds following a balanced investment policy, which account for around 70% of the sector's NAV. The overall NAV of distribution funds remained virtually unchanged in 2018, as in previous years.

DEVELOPMENTS IN THE ASSET STRUCTURE OF THIRD-PILLAR FUNDS IN 2018 WERE IN SEVERAL RESPECTS SIMILAR TO THOSE IN SECOND-PILLAR FUNDS

Among the largest group of third-pillar funds – balanced funds – equity exposure continued to increase slowly during the first three quarters, in line with its longer-term trend. From September, however, the declining market value of equity investments of third-pillar funds was accompanied by disposals of these assets. Thus, the share of equities and investment fund shares/units in balanced funds' aggregate NAV was five percentage points lower at the end of 2018 than at the start, at 21%. Meanwhile, shares/units of commodity investment funds, among the riskier assets of balanced funds, doubled their share in the overall NAV, to 4%. The share of bond instruments increased slightly, to 56% as at 31 December 2018.

The decline in the equity component of growth funds in the third pillar was still more pronounced, as its share in their aggregate NAV fell from 47% to 40%. This occurred even though the spate of equity disposals in autumn was relatively lower in these funds than in balanced funds. Given, however, that the equity component is almost twice as high in growth funds as in balanced funds, the end-of-year slump in equity prices had a greater impact on the former than the latter. While equities declined, the share of bank deposits in the assets of growth funds increased by half over the course of the year, to 27%. The bond component's share remained at around 30%, the only change being that direct bond investments increased as a ratio to indirect bond investments.

Precisely the opposite happened in distribution funds of the third pillar, as indirect bond investments via investment funds increased as a ratio to direct bond investments, with the overall bond exposure again remaining flat. This substitution of direct for indirect investments continued a trend going back two years.

The residual maturity of bonds across the assets of third-pillar funds initially increased in 2018, before moving in the opposite direction. The weighted average residual maturity of debt securities in the sector as a whole increased by one year between January and July 2018, reversing the decrease recorded in the previous year and reaching the level of the existing all-time high. In subsequent months, however, the maturity declined by half of the earlier increase, and it ended the period under review at 5.9 years. For some time now, the residual maturity of the bond portfolio, and therefore also its duration and interest rate sensitivity, has not been following a clear path, but rather oscillating around the level of six years.

The sovereign debt component of the third-pillar bond portfolio saw its share increase from 52% at the end of 2017 to 60% a year later. Meanwhile there was slight decrease in the shares of securities issued by NFCs and securities issued by financial corporations.

During 2018 SPMCs were heavily buying Italian government bonds for their funds' asset

portfolios. The share of these assets in the aggregate NAV increased threefold, ending the year at almost 6%. In the breakdown of the third-pillar bond portfolio by country of issuer, the increase in the sum of Italian sovereign and corporate bond holdings ensured that Italy edged Slovakia out of first place. This shift was also supported by the reduction in funds' holdings of domestic bank bonds. There were also increases in third-pillar funds' holdings of Spanish and Portuguese government bonds.

In several third-pillar funds, foreign currency exposure was reduced in 2018. As a share of the funds' aggregate NAV, assets denominated in a non-euro currency fell from 25% at the start of 2018 to 18% at the end. It should be noted, however, that much of that decline was solely due to the depreciation of foreign currency-denominated equity investments. In addition, the nominal amount of foreign currency futures in the assets of third-pillar funds fell by around one-quarter.

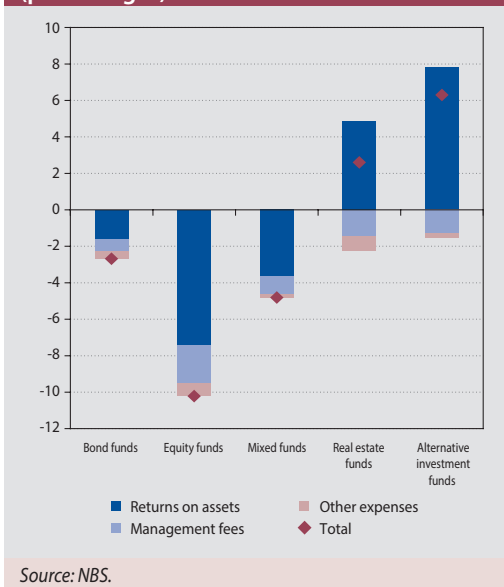
Contributory funds of the third pillar recorded an average annual nominal return of minus 4.7% in 2018. Even the average return on distribution funds, which follow conservative investment policies, was negative (-1.4%). Across individual third-pillar funds, all except one distribution fund posted a negative return in 2018.

5.3 THE INVESTMENT FUND SECTOR

FUNDS' LOWER NET SALES AND NEGATIVE RETURNS SUBSTANTIALLY SLOWED THE EXPANSION OF THE INVESTMENT FUND SECTOR

In the context of its long-term expanding trend, the investment fund sector in Slovakia may be said to have had a less successful year in 2018. Whereas in 2017 the amount of assets under the management of investment funds increased by more than €1 billion, in the period under review it increased by only €61 million. In relative terms, funds' overall year-on-year growth rate slowed from 14% to just under 1%. This was the sector's worst result since 2011.

Chart 44 NAV growth in domestic investment funds broken down by principal components (percentages)



The stalling of the growth trend was attributable both to domestic investment funds and to foreign collective investment undertakings marketed in Slovakia. Since the aggregate NAV of domestic funds stands at more than €6 billion, its year-on-year increase of €6 million in 2018 virtually amounted to stagnation. The NAV of foreign investment funds increased by around twice that amount, but its relative increase of just over two per cent was also significantly lower than the growth of 26% recorded in the previous year.

The virtually zero NAV growth recorded by domestic investment funds in 2018 stemmed from a combination of the funds' lower net sales and unfavourable returns compared with previous years. Their aggregate net sales of €220 million showed, on the one hand, that demand for investment funds had not completely faded, but also, on the other hand, that the net sales of investment fund shares/units was less than half of its level in 2017. This decline in net sales is put in further perspective by the fact that net sales in 2018 were lower than those in all but one of the years from 2012. The impact of net sales on funds' aggregate NAV growth in 2018 was, however, almost entirely cancelled out by

the average negative return on funds' resulting from the broad devaluation of asset prices on financial markets. A further drag on funds' results came from expenses paid out of their assets, in particular management fees.

THE OVERALL GROWTH IN NET SALES WAS DRIVEN MAINLY BY MIXED INVESTMENT FUNDS; THE NET REDEMPTIONS OF BOND FUNDS INCREASED

As in previous years, the bulk of investment funds' aggregate net sales was accounted for by mixed funds, which recorded net sales of €390 million. At the same time, however, these funds recorded the largest year-on-year decline in the amount of net sales and were therefore the major contributor to the overall decline in sales of domestic investment funds. After taking into account their investment returns and expenses, mixed funds ended 2018 with a €233 million year-on-year increase in their aggregate NAV. As usual, real estate funds ranked second for net sales, with a figure of €116 million. Equity funds' net sales were slightly positive, at 27 million, but that was not enough to offset the impact of price depreciation in the equity component of their asset portfolio.

The net redemptions of bond fund shares/units in 2018 were also in line with the lon-

ger-term trend. They amounted to around one-quarter of a billion euro and were spread relatively evenly across the year. The decline in these funds' aggregate NAV, by €291 million, was further amplified by the depreciation of bond investments. As for money market funds and alternative investment funds, each category saw its overall NAV drop by around €30 million in 2018.

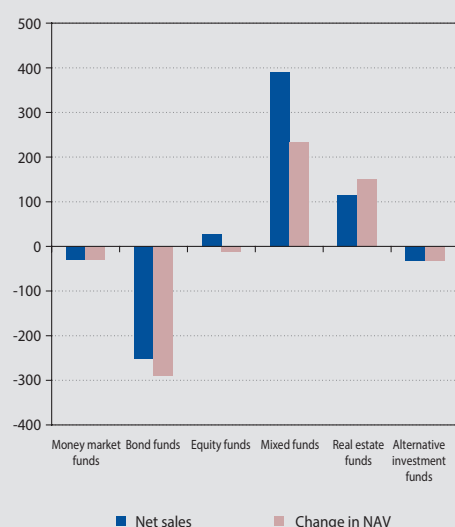
In the sectoral breakdown of domestic investment funds' net sales in 2018, the household sector had, as usual in Slovakia, the largest share. Pension funds contributed a not insignificant amount to the total, while domestic insurers quite substantially reduced their exposure to domestic investment funds.

Among foreign investment funds, equity funds reported the highest net sales and highest NAV growth in 2018. After them came mixed funds and real estate funds. The only foreign investment funds that reported net redemptions in 2018 were bond funds.

Adverse developments in financial markets resulted in negative returns on the assets under management in investments funds. The average nominal return on domestic and foreign investment funds together was -3.5% in 2018, by far the worst result in recent years. The heaviest losses were recorded by equity funds (almost -11%) and mixed funds (-4,8%), and even bond funds were in negative territory (-2.2%). Only money market funds and real estate funds earned positive returns.

The aggregate profit of domestic fund management companies increased, year on year, by 62% in 2018. With such strong growth, the sector's profit stood at a historical high of €26.7 million. Much of that increase, however, stemmed from a large decrease in fee and commission expenses at one management company. Across the rest of the sector, the situation was less clear, with half the companies seeing an increase in profit and the other half a decrease. Fee and commission income, a key element in their aggregate profit and loss account, recorded a relatively broad-based increase of 2%.

Chart 45 Net sales and the year-on-year change in NAV of each type of domestic investment fund (EUR millions)



Source: NBS.



5.4 INVESTMENT FIRMS

The value of transactions conducted through investment firms authorised in Slovakia fell sharply in 2018, by 41% year on year, to €81 billion. Therefore, the downward trend in this figure not only continued for a fifth year, but actually became more pronounced. From a longer-term perspective, this adverse trend has resulted mainly from derivatives transactions, traditionally the largest part of the sector's trading activity. In 2018 the value of these transactions declined by more than one-fifth. An even greater contribution to the overall drop in 2018 trading was made by bond transactions, which in previous years had tended to increase moderately, but in the period under review slumped by more than 90%.

There was little change in the amount of assets under the management of investment firms for the account of clients. The amount of these assets as at 31 December 2018 was €402 million, virtually the same as at the end of

Chart 46 Transactions executed through investment firms (EUR billions)



Source: NBS.

the previous year. The only change was in the share of banks authorised as investment firms, which decreased in favour of other entities.



MACRO STRESS TESTING OF THE SLOVAK FINANCIAL SECTOR



6 MACRO STRESS TESTING OF THE SLOVAK FINANCIAL SECTOR

WHILE THE BASELINE SCENARIO ASSUMES FAVOURABLE TRENDS IN DOMESTIC ECONOMIC OUTPUT AND IN THE LABOUR MARKET, THE ADVERSE SCENARIOS ASSUME RELATIVELY SHARP CONTRACTIONS IN BOTH FOREIGN DEMAND AND THE DOMESTIC ECONOMY AS WELL AS ELEVATED UNCERTAINTY IN FINANCIAL MARKETS

This stress test exercise covers the three-year period from 2019 to 2021 (last year's exercise covered 2018-20).²⁶ The resilience of financial institutions was stress-tested using a baseline scenario and two adverse scenarios.

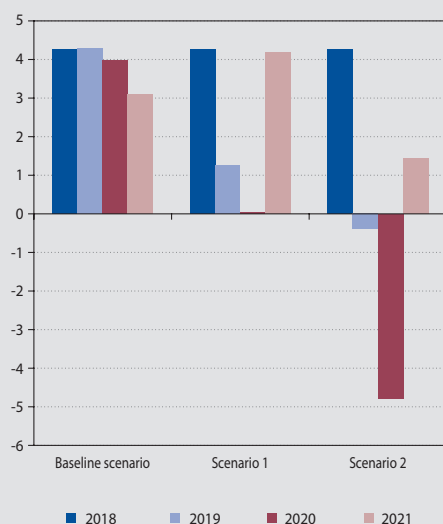
The baseline scenario is based on NBS's December 2018 Medium-Term Forecast (MTF-2018Q4). The assumptions of this scenario include economic growth that is even higher in 2019 than in 2018, owing mainly to a recovery in foreign demand and the gradual coming on stream of new car production. Continuing growth in private consumption is expected. In this context, economic growth maintains a relatively strong pace in 2020, before slowing in 2021 due to the fading of the supply-side shock. Employment growth is assumed to decelerate gradually amid unfavourable demographic

trends and the related shortage of labour. Annual HICP inflation remains relatively elevated and is steady at around 2.5% in 2020 and 2021.

In the first adverse scenario, Scenario 1, geopolitical risks are assumed to materialise and to cause a global economic downturn. There is also an increase in financial market uncertainty. Amid falling foreign demand, domestic GDP declines, with the contraction being most pronounced at the turn of 2019-20. The economy returns to growth in the second half of 2020. Given the weak economic environment, the assumed inflation rate is lower under this scenario than under the baseline. Unemployment increases up to the end of 2020 and then oscillates above 8%.

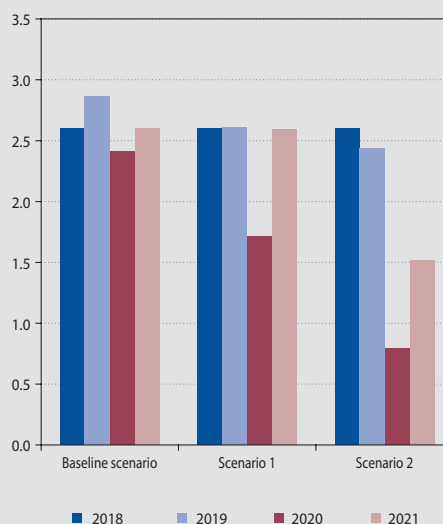
As for the second adverse scenario, Scenario 2, it includes all the negative assumptions of the previous scenario, but they are more prolonged and more pronounced. In addition, Scenario 2 assumes the materialisation of certain risks (Brexit, car industry problems) that will have a more structural nature. As a result, the Slovak economy does not return to growth until

Chart 47 Real GDP growth (annual percentage changes)



Source: NBS.

Chart 48 Inflation (annual percentage changes)



Source: NBS.

²⁶ The macro stress testing of the Slovak financial sector was conducted using data as at 31 December 2018.

the second half of 2021. Under the impact of this recession, inflation is assumed to decrease more markedly in Scenario 2 than Scenario 1 and to be at its lowest level in 2020. The increase in the unemployment rate is also greater in Scenario 2 (rising to above 11% by the end of the stress test period), as is the rise in financial market uncertainty.

THE BANKING SECTOR REMAINS RELATIVELY RESILIENT TO POTENTIAL ADVERSE DEVELOPMENTS IN THE ECONOMY AND FINANCIAL MARKETS

At the beginning of the stress test period, after taking into account the expected retention of earnings from 2018, the banking sector's total capital ratio stood at 18.6%. In the baseline scenario, this ratio is estimated to decrease gradually, to 18.1% at the end of 2021, owing mainly to the assumed growth in loans to NFCs and households. All banks are estimated to meet both the 8% capital requirement and the 10.5% total capital requirement (including a capital conservation buffer).

In Scenario 1, the sector's total capital ratio is estimated to fall to 15.4% by the end of 2021.

This decline of more than three percentage points results from increasing expenses, mainly related to credit risk provisioning, and the assumed increase in risk weights. Banks are estimated to meet the 8% requirement, but against the 10.5% requirement, they have an aggregate capital shortfall of €21 million (equivalent to 0.3% of their own funds as at end-2018).

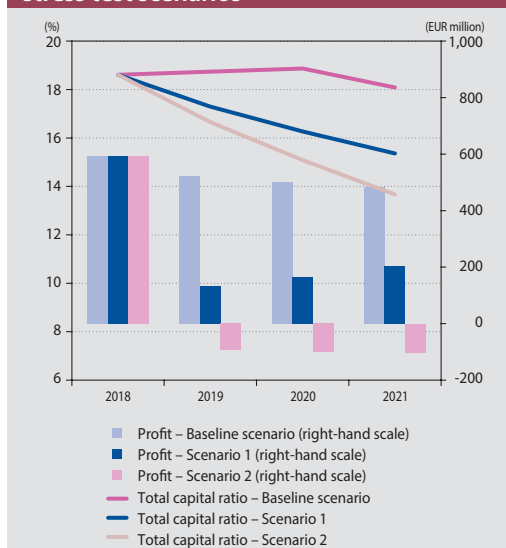
In Scenario 2, the banking sector's total capital ratio falls by almost five percentage points, to 13.7%.

The aggregate capital shortfall against the 8% requirement is €22 million (0.3% of own funds), and against the 10.5% requirement it is €164 million (2.5%).

NET INTEREST INCOME REMAINS CRUCIAL TO THE BANKING SECTOR, BUT IT IS RELATIVELY SENSITIVE TO INTEREST RATE MOVEMENTS

In the baseline scenario, the banking sector's aggregate annual profit declines moderately over the stress test period, from €522 million in 2019 to €484 million in 2021, due largely to the assumption that credit risk costs will rebound from their current historical lows to more normal levels. Banks' annual profits are much lower in Sce-

Chart 49 The banking sector's aggregate profit and total capital ratio under the stress test scenarios



Source: NBS.

Note: Total capital ratios as at the end of 2018 are adjusted to include the assumed impact of capital increases.

nario 1 than in the baseline scenario, ranging between €131 million in 2019 and €203 million in 2021. This is because net interest income is lower under the adverse scenario (due to weaker loan growth and higher credit risk costs). In Scenario 2, the sector records annual losses ranging from €93 million to €103 million, as the factors mentioned above are assumed to have a more severe impact.

The banking sector's profitability continues to be underpinned by banks' assumed ability to generate net interest income.

Even though interest income declines in the adverse scenarios (due to weaker lending and higher NPL ratios), it remains the principal source of income for the banking sector. On the other hand, banks' profitability is relatively vulnerable to any further decline in interest rates. The baseline scenario assumes a gradual normalisation of monetary policy and a related moderate increase in retail interest rates, particularly in 2021. If it is assumed, however, that interest rates on housing loans do not increase gradually from their current average of 1.5%, but rather continue falling amid the still strong pressure of competition, down to 1.2%, the sector's net after-tax profit declines in 2021 by almost 14%.



Table 2 Credit risk costs

	2018	2019	2020	2021
Baseline scenario	0.34%	0.35%	0.39%	0.47%
Scenario 1	0.34%	0.87%	0.89%	0.78%
Scenario 2	0.34%	1.14%	1.31%	1.11%

Source: NBS.

Note: Credit risk costs are expressed as a percentage of total claims on customers.

RELATIVELY LARGE DIFFERENCES ARE EVIDENT BETWEEN SIGNIFICANT AND LESS SIGNIFICANT BANKS

The scenarios show differences between significant and less significant banks in respect of both profitability and total capital ratios.²⁷ Whereas significant banks are able to generate a moderate aggregate profit for the three-year period even under Scenario 2, less significant banks are already making a loss under Scenario 1. A corollary of this is that the total capital ratio of less significant banks declines more significantly under the adverse scenarios.

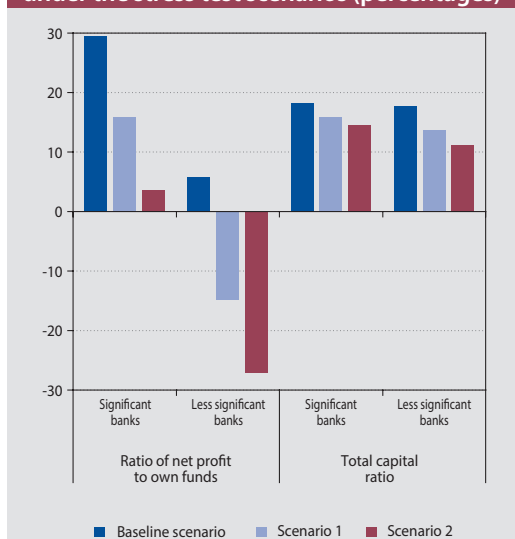
MARKET RISKS HAVE DECLINED IN IMPORTANCE, WHILE CREDIT RISK LOSSES ON HOUSEHOLD LOANS PREDOMINATE

This stress test exercise, like the previous one, shows that losses arising from credit risk ex-

ceed those arising from market risks. One reason for this is that around one-third of banks' bond holdings have been shifted from the portfolio available for sale (FVOCI) to the portfolio held to maturity (loans and receivables), resulting in an increase in the amount of securities not revalued at fair value and therefore a decrease in losses arising from any rises in interest rates or risk premia.

In all three scenarios, credit risk losses on the household loan portfolio exceed those on NFCs loans. This is largely because lending to households is far higher than lending to NFCs, since the riskiness of NFC loans increases under the adverse scenarios to a much greater extent than does the riskiness of household loans.

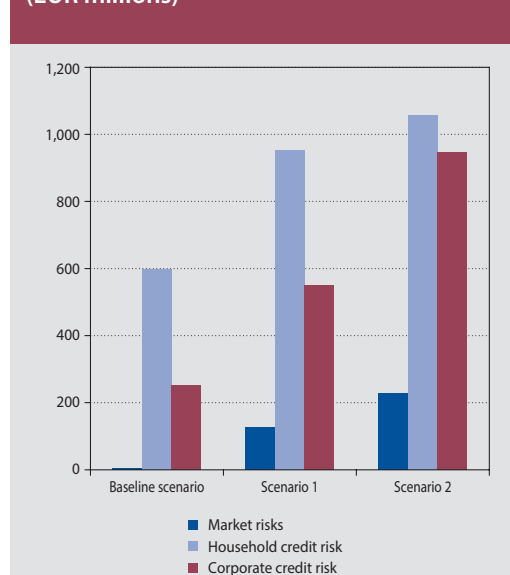
Chart 50 The profitability and total capital ratio of significant and less significant banks under the stress test scenarios (percentages)



Source: NBS.

Notes: The net after-tax profit covers all three years of the stress test period and is expressed as a ratio to own funds as at 31 December 2018. The total capital ratio is weighted by the amount of risk exposures and is expressed as at end-2021.

Chart 51 Risk losses broken down by type (EUR millions)



Source: NBS.

Note: The chart shows the overall loss for the stress test period.

²⁷ Significant banks are banks under the direct supervision of the ECB.



Recently introduced NBS measures are expected to have a positive impact on credit quality in the household loan portfolio, but since they have been

in force for only a short time and therefore do not affect the majority of the loan book, their impact in the current stress test exercise is still only marginal.

Box 1

THE IMPACT OF A POTENTIAL SIGNIFICANT DETERIORATION IN THE QUALITY OF LOANS TO HOUSEHOLDS

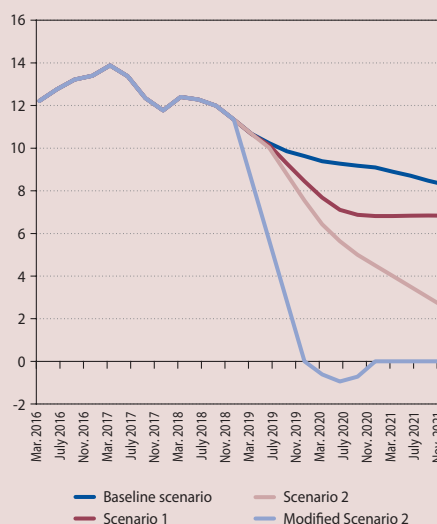
Stress testing makes extensive use of econometric models to estimate the impact on the banking sector of a potential deterioration in the economic situation, but since these models are based to a large extent on historical data, they may not necessarily reflect the actual future path of the variables under review. In the case of the Slovak banking sector, and especially the housing loan market, it is possible to identify a number of factors that at present could alter the impact of any crisis on the credit quality of the housing loan portfolio:

- lower interest rates on housing loans and longer loan terms, which are giving banks less scope to offer loan restructuring to customers who get into repayment difficulties;
- higher household indebtedness, which according to several studies indicates that households will be more vulnerable during a period of stress;²⁸
- lower unemployment, which given the current potential overheating of the economy, could result in rising unemployment if the economic situation worsens.

For these reasons, this Box analyses the impact of a potential significant deterioration in the credit quality of loans to households, in particular housing loans. The analysis is based on adverse assumptions that go beyond those used in Scenario 2; in other words, a modified Scenario 2 is analysed. The assumed significant deterioration is based on what happened in certain euro area countries²⁹ when they were hard hit by the global financial crisis and subsequent recession.

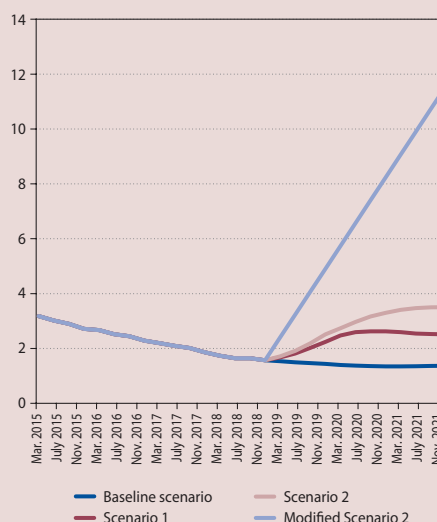
Under the modified Scenario 2, it is assumed that growth in total loans to households will

Chart A Total loans to households (annual percentage changes)



Source: NBS.

Chart B NPL ratio under the stress test scenarios (percentages)



Source: NBS.

²⁸ This issue was also addressed in Box 1 of NBS's November 2017 Financial Stability Report.

²⁹ In particular, Ireland (where the NPL ratio for housing loans increased by more than 13 percentage points from 2009 to 2013), Spain (where it increased by almost 5.5 percentage points from 2006 to 2013), Slovenia, and the Baltic States (in Estonia, it increased by more than 7 percentage points from 2006 to 2010; in Latvia, by more than 17 percentage points from 2006 to 2010; and in Lithuania, by more than 8 percentage points from 2007 to 2012).

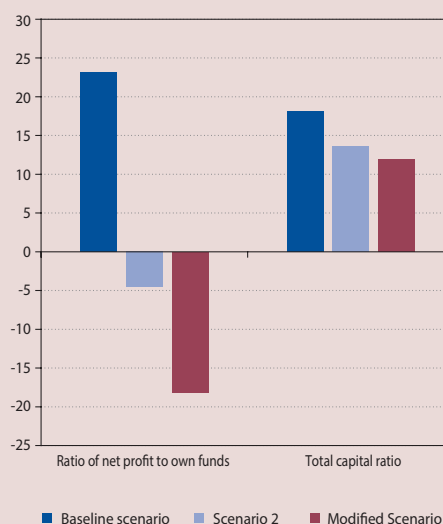
fall gradually to zero during 2019 and then remain flat. It is further assumed that the NPL ratio for housing loans will gradually increase by ten percentage points, up to 11.5% by the end of 2021. Finally, the modified Scenario 2 assumes a provisioning ratio of 40% for non-performing housing loans, while the stress test exercise assumes a ratio of 20%.

Under the modified Scenario 2, the banking sector's total capital ratio falls to 12.0%, i.e. 1.7 percentage points below its level under Scenario 2. Against the 8% capital requirement, banks have an aggregate capital shortfall of €307 million (or 4.7% of own funds as at 31 December 2018), and against the 10.5% requirement, a shortfall of €524 million (8.0%).

The banking sector's annual losses in the three years covered by the modified Scenario 2 range between €260 million and €537 million, which are far, up to fourfold, higher, than the losses in Scenario 2.

This outcome shows that the banking sector is highly vulnerable to any economic headwinds that have a significant impact on the household loan portfolio. In that event, several banks

Chart C The impact of a significant deterioration in the credit quality of loans to households (percentages)



Source: NBS.

The net after-tax profit covers all three years of the stress test period and is expressed as a ratio to own funds as at 31 December 2018. The total capital ratio is expressed as at end-2021.

could face serious difficulty in maintaining profitability and in meeting capital requirements.

THE INSURANCE SECTOR IS SUFFICIENTLY SOLVENT TO COPE WITH THE ADVERSE SCENARIOS

The insurance sector was stress-tested for exposure to three different types of loss: losses arising from market risks, from non-life insurance, and from life insurance. In the module of market risk losses, the assumptions for economic developments were the same as those applied in the stress testing of the banking sector, as described above. In the non-life insurance module, it is assumed that insurers' aggregate claims paid in the first year of the stress test period are 10% higher than their historical average. In the life insurance module, the surrender rate is assumed to increase to 20%³⁰ in the first year. The impact of such increase is estimated to be half of the amount that is included in the solvency capital requirement for the coverage of losses arising

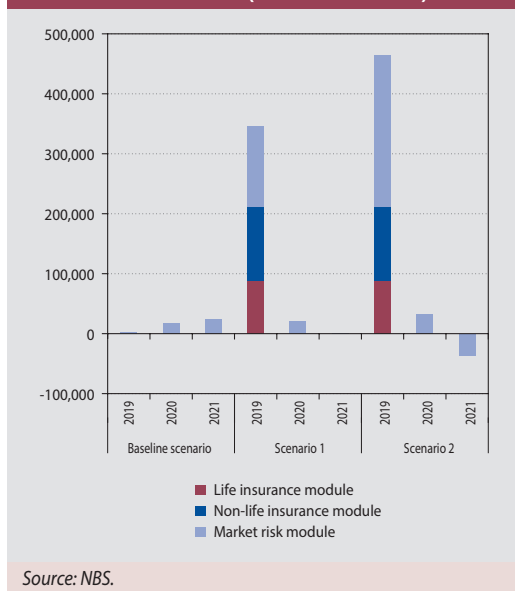
from a run of policy surrenders. The stress test includes the baseline and two adverse scenarios covering a three-year period. The non-life and life modules are the same for both adverse scenarios. Income and expenses in each year of the stress test period are assumed to be the same as those in 2018.

In the baseline scenario, all insurers make a profit in each of the three years. The sector makes modest financial losses, although the only insurers that actually record a financial loss are those that were already loss-making at the start of the exercise.

In the two adverse scenarios, the largest losses are those arising from market risk materialisation, which cumulatively over the three

³⁰ The degree of stress applied is based on the European-wide stress test of the insurance sector carried out by EIOPA in 2018.

Chart 52 Insurance sector losses in the stress test scenarios (EUR thousands)



years amount to €154 million in the Scenario 1 and €250 million in the Scenario 2. Losses arising from non-life insurance amount to €122 million in both scenarios, and losses from an increase in the surrender rate stand at €89 million.

In the first year of the stress test period, the impact of these negative assumptions exceeds the annual profit and results in an equity reduction of 12% under the first scenario and 23% under the second scenario. In the second year, the sector's profit largely makes up the losses of the first year, so equity may (depending on insurers' dividend policies) increase back above its original level. The sector maintains its profit in the third year.

At the end of the first year, when losses are highest, the equity of almost all insurers is reduced under the first scenario, with year-on-year changes ranging from -41% to +4%.

If the SCR coverage ratio is reduced to the same extent as is equity, one insurer ends the period with an SCR coverage ratio below 100, but still in positive territory. At the sectoral level, the SCR coverage ratio falls from 187% to 165%.

In the second scenario, the year-on-year change in equity ranges from -58% to +2%. If the SCR coverage ratio is similarly reduced, two insurers fall below the 100% threshold, but neither of them fall below zero. Each of these insurers has both a relatively low SCR coverage ratio and a subdued profit. The sectoral SCR coverage ratio falls to 144%.

STRESS TEST OUTCOMES FOR OTHER SEGMENTS

Stress testing of the pension fund sector shows a slight drop in pension funds' exposure to risk, in particular interest rate risk. In the more severe of the adverse scenarios, the average pension-point value for second-pillar funds falls by around 2.5%, which is approximately the same magnitude as its decline in the fourth quarter of 2018. Among third-pillar funds whose investment policies are riskier than those of second-pillar funds, the decline in aggregate net asset value is around twofold, slightly greater than that recorded for the whole of 2018. The stress test outcomes for pension funds are shown in more detail in Charts P53 and P54 of the Annex.

The stress testing of investment funds under adverse scenarios produces a decline in performance even greater than that of pension funds. The average impact is shown in Chart P55 in the Annex. Under the more severe adverse scenario, the average return on investment funds falls to around -7.5%, around twice as low as the decline in 2018. Given the diversity of investment policies in this sector, however, the sector shows substantial heterogeneity in terms of returns across funds.



MACROPRUDENTIAL INDICATORS



MACROPRUDENTIAL INDICATORS

GENERAL NOTE:

General note: '31 December 2017 = 1' means that the given index was normalised so that its value on the specified date (31 December 2017) was equal to 1.

MACROECONOMIC RISK INDICATORS

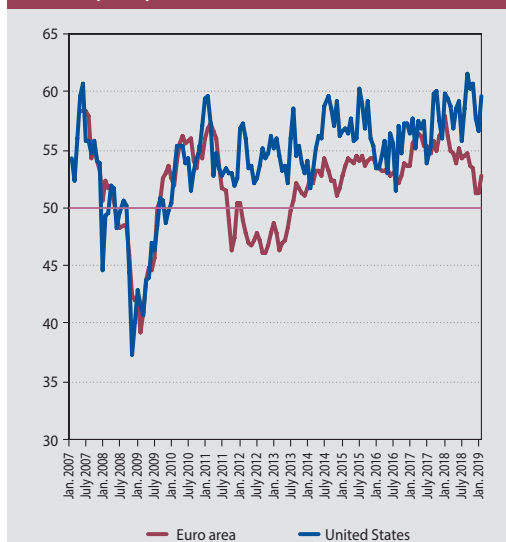
Chart P1 Manufacturing Purchasing Managers' Index (PMI) in selected economies



Source: Bloomberg.

Note: The indicator is defined in the section 'Glossary and abbreviations'.

Chart P2 Services Purchasing Managers' Index (PMI) in selected economies

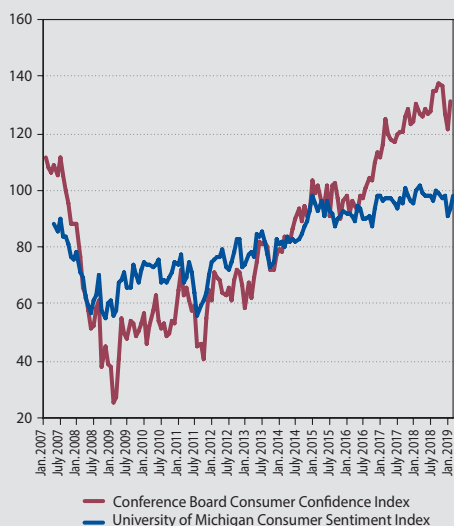


Source: Bloomberg.

Note: The indicator is defined in the section 'Glossary and abbreviations'.

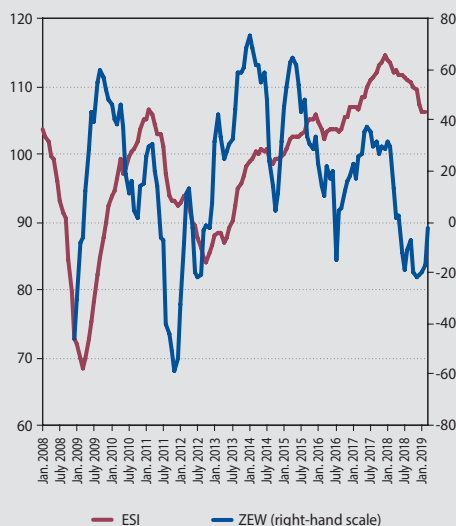


Chart P3 Consumer confidence indicators in the United States



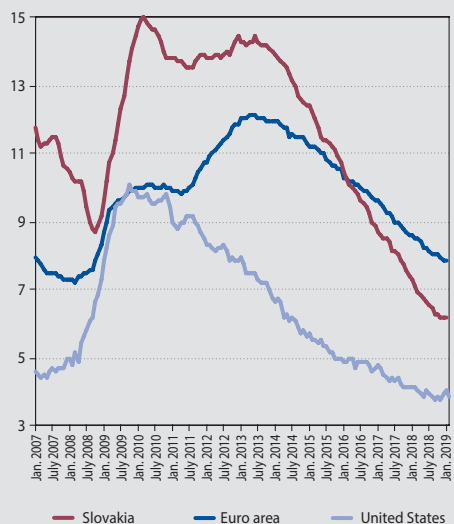
Source: Bloomberg.
Note: The chart refers to US consumer confidence indices produced by two different institutions.

Chart P4 Economic sentiment indicators in the euro area



Source: Bloomberg.
Note: The indicators are defined in the section 'Glossary and abbreviations'.

Chart P5 Unemployment rates in selected economies (percentages)



Sources: Eurostat and Bureau of Labor Statistics.
Note: Seasonally adjusted.

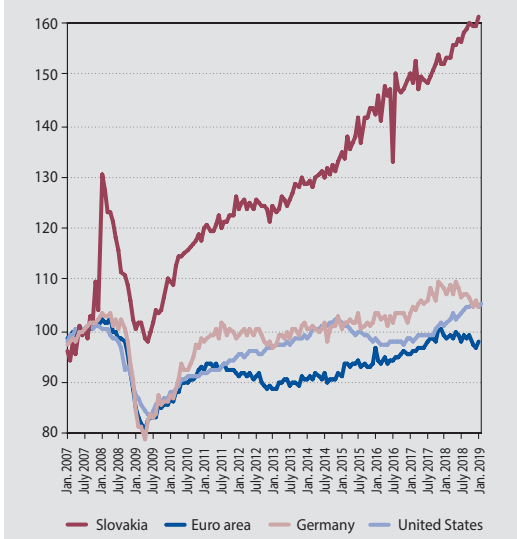
Chart P6 Consumer price inflation in selected economies (annual percentage changes)



Sources: Eurostat and Bureau of Labor Statistics.

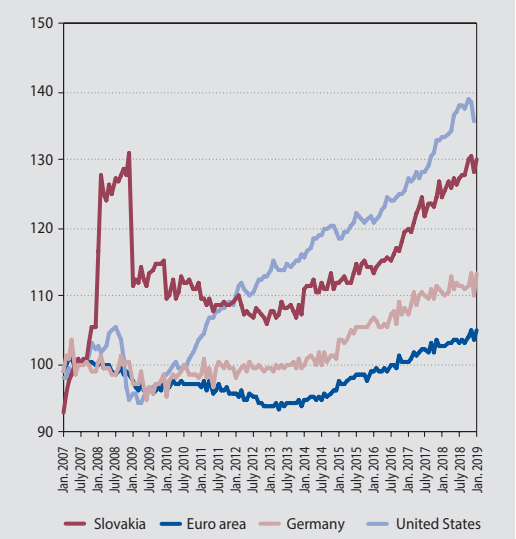


Chart P7 Industrial production indices in selected economies



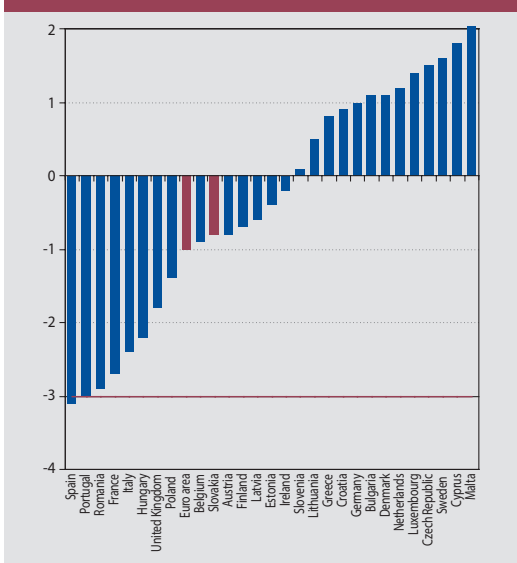
Sources: Eurostat and US Federal Reserve.
Notes: Rebalanced (average: 2007 = 100); seasonally adjusted.

Chart P8 Retail sales indices in selected economies



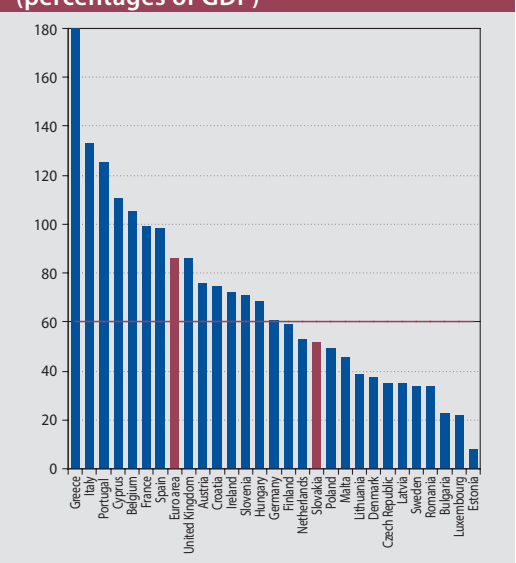
Sources: Eurostat and US Department of Commerce.
Notes: Rebalanced (average: 2007 = 100); seasonally adjusted.

Chart P9 General government balances of EU countries in 2017 (percentages of GDP)



Source: Eurostat.

Chart P10 Gross government debt of EU countries in the third quarter of 2018 (percentages of GDP)



Source: Eurostat.



FINANCIAL MARKET RISK INDICATORS

**Chart P11 Price commodity indices
(31 December 2017 = 1)**



**Chart P12 Exchange rate indices
(31 December 2017 = 1)**



**Chart P13 Equity indices
(31 December 2017 = 1)**



**Chart P14 Share price indices of the parent
institutions of the five largest domestic
banks (31 December 2017 = 1)**

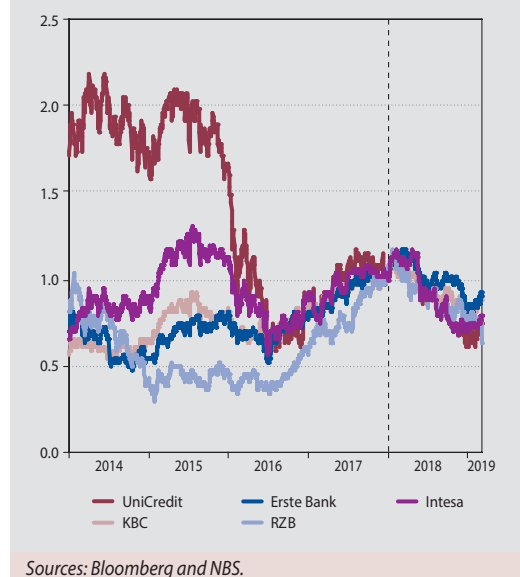
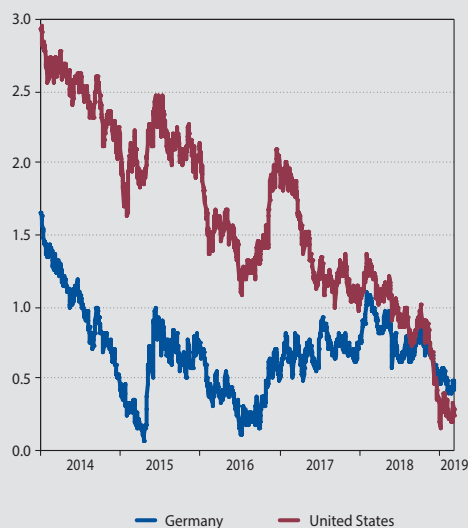




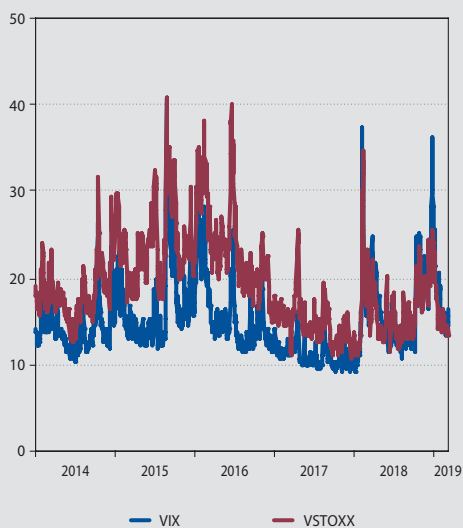
Chart P15 Yield curve slope in selected economies (percentage points)



Sources: Bloomberg and NBS.

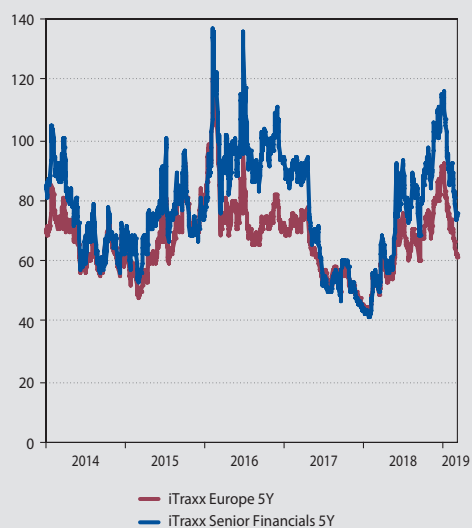
Note: The yield curve slope is expressed as the difference between the yield to maturity on 10-year and 3-month government bonds.

Chart P16 Volatility of equity indices



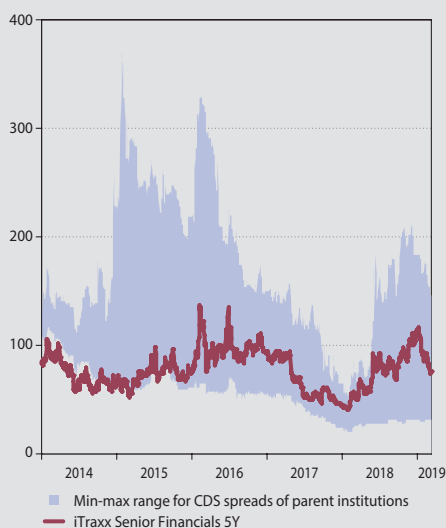
Source: Bloomberg.

Chart P17 CDS spread indices (basis points)



Sources: Bloomberg and NBS.

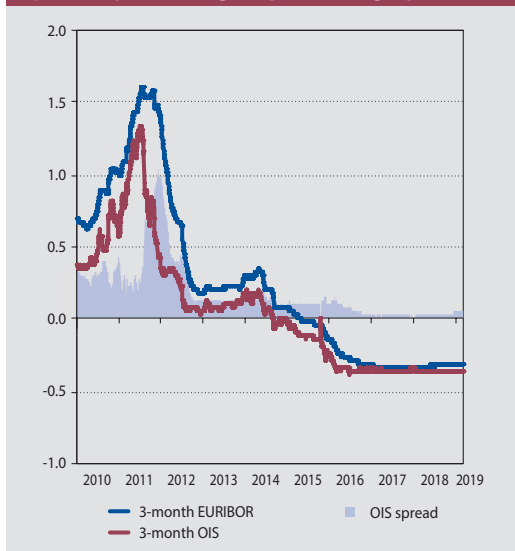
Chart P18 CDSs of the parent institutions of the largest Slovak banks (basis points)



Sources: Bloomberg and NBS.



Chart P19 Three-month rates and the OIS spread (percentages; percentage points)



Sources: Bloomberg and NBS.

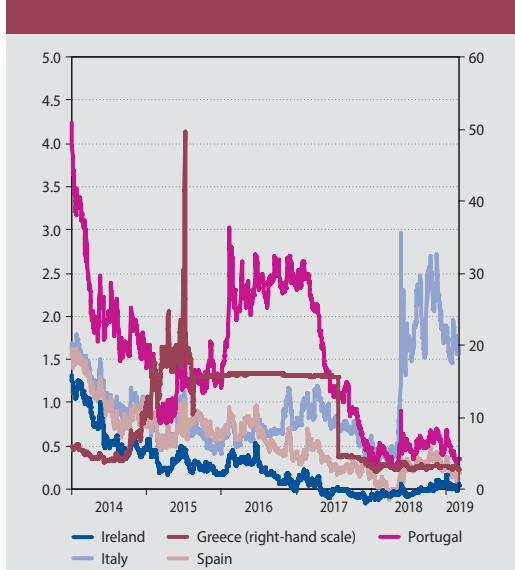
Chart P20 Inflation-linked swap prices (percentages)



Sources: Bloomberg and NBS.

Note: The inflation-linked swap price is defined in the section 'Glossary and abbreviations.'

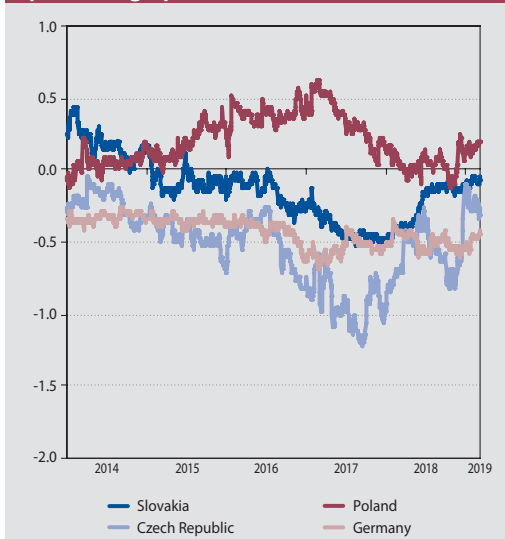
Chart P21 Credit spreads on 5-year government bonds issued by lower-rated countries (percentage points)



Sources: Bloomberg and NBS.

Note: The vertical scales show the difference between the yield on 5-year bonds issued by the given countries and 5-year OIS rates, representing a 5-year interest rate on high-rated bonds.

Chart P22 Credit spreads on 5-year government bonds issued by selected central European countries and Germany (percentage points)



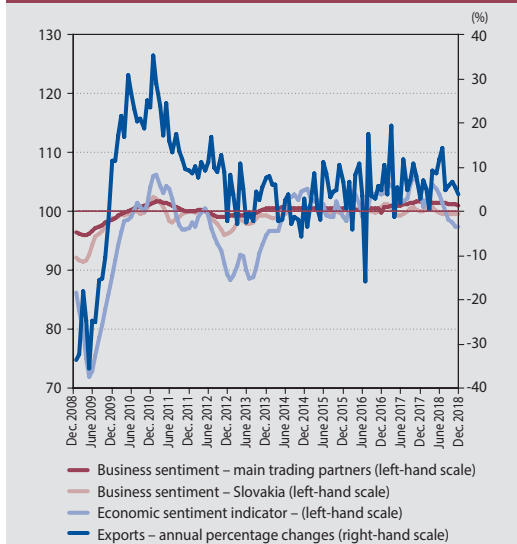
Sources: Bloomberg and NBS.

Note: The chart shows the difference between the percentage yield on 5-year government bonds denominated in the domestic currency of the given country and 5-year swap rates for the respective currency.



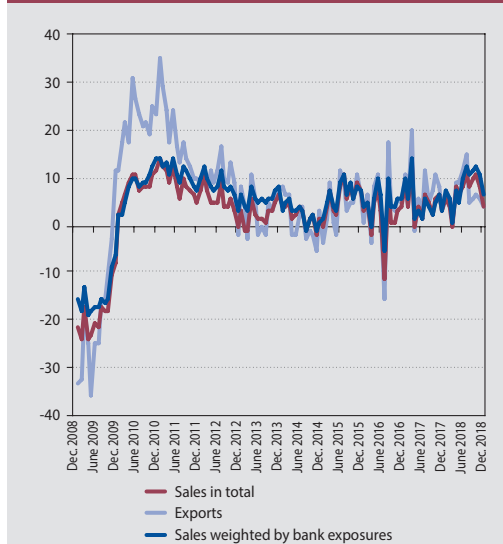
CORPORATE CREDIT RISK INDICATORS

Chart P23 Exports and the business environment



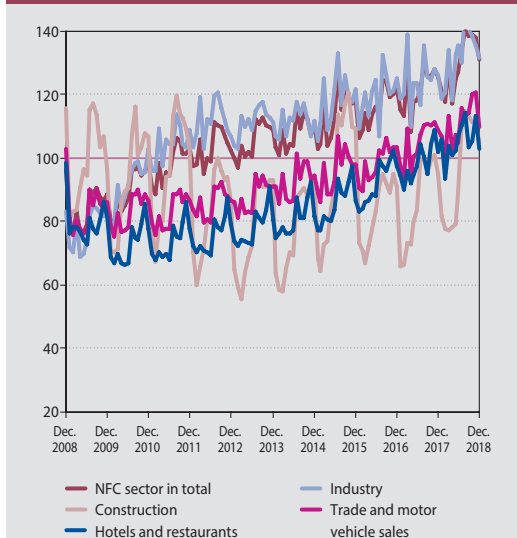
Sources: NBS, OECD and SO SR.

Chart P24 NFC exports and sales (annual percentage changes)



Sources: SO SR, OECD, Slovak Ministry of Economy and NBS.

Chart P25 Sales in selected sectors compared with their level for the period June 2007 to June 2008 (percentages)



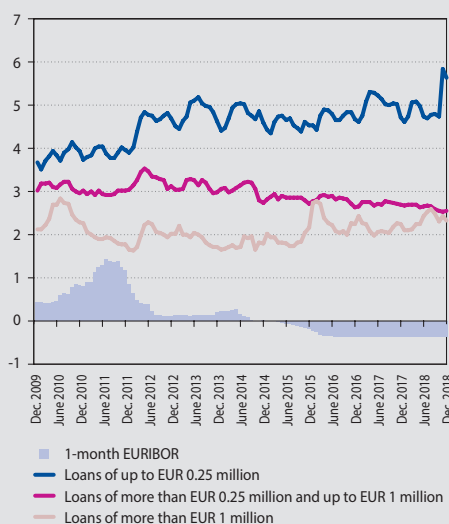
Source: SO SR.

Chart P26 NFC loans and sales (annual percentage changes)



Sources: NBS and SO SR.

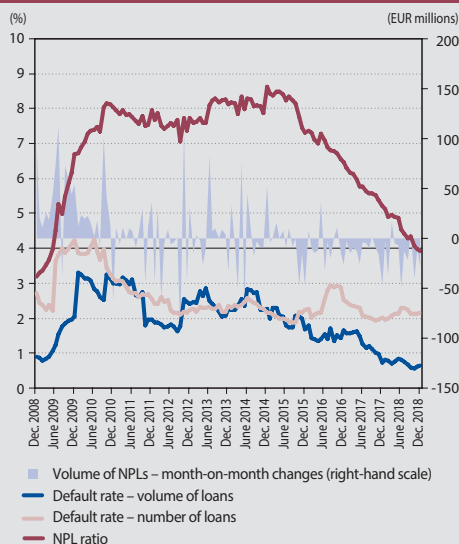
Chart P27 Interest rate spreads on new loans to NFCs (percentages)



Sources: NBS and EBF.

Note: The spread is defined as the difference between the monthly EURIBOR rate and the average rate on new loans in the respective category.

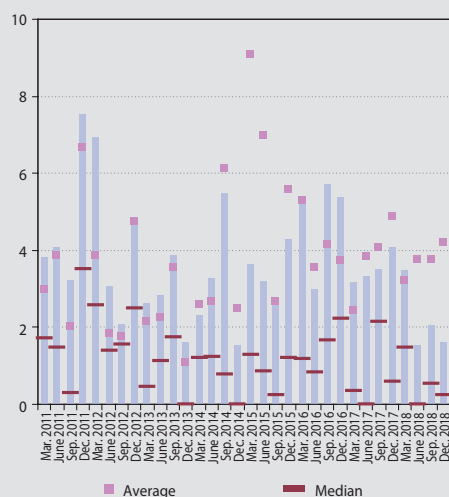
Chart P28 Non-performing loans (NPLs) and default rates



Source: NBS.

Note: The default rate denotes the ratio of the number/volume of loans that defaulted within a period of one year to the number/volume of non-defaulted loans at the beginning of the one-year period.

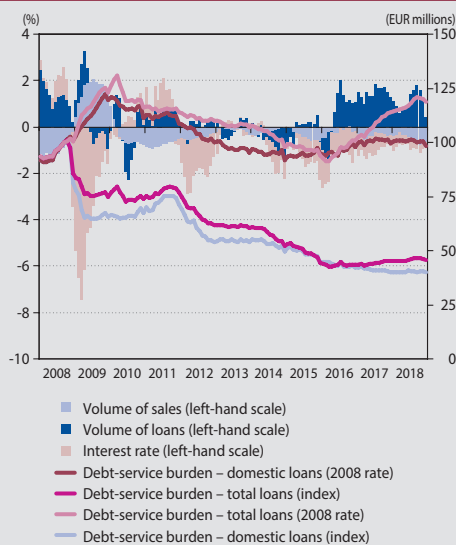
Chart P29 Loans at risk (percentages)



Source: NBS.

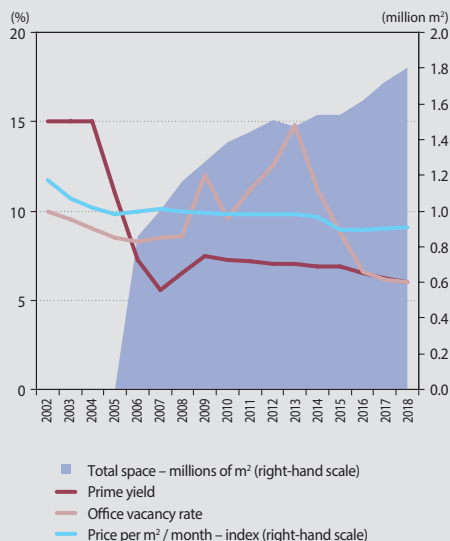
Note: The chart shows interquartile ranges.

Chart P30 The debt-service burden and its components



Sources: NBS and SO SR.

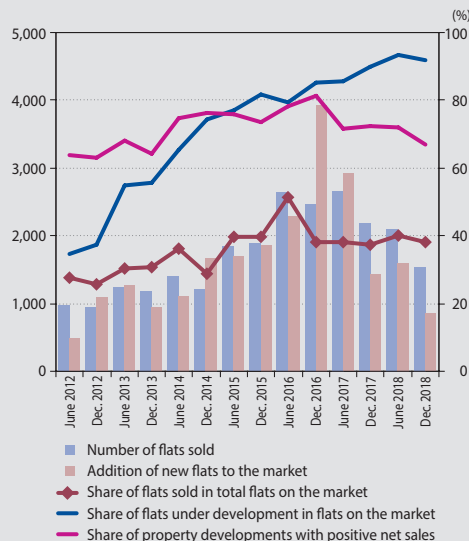
Chart P31 Commercial real estate: developments in the office segment



Source: CBRE, JLL and NBS.

Note: The chart shows prices and occupancy in Bratislava.

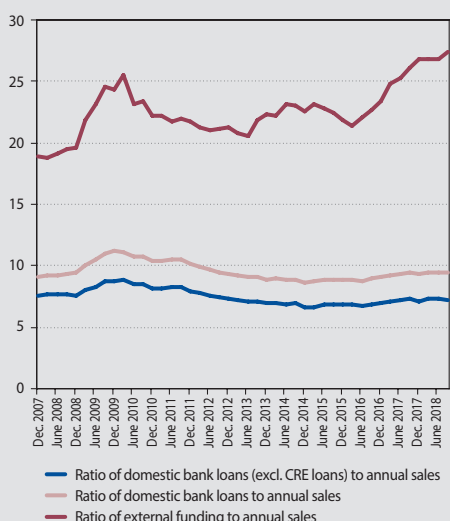
Chart P32 Commercial real estate: sales in the residential segment (new flats)



Sources: Lexus and NBS.

Note: The chart shows developments in Bratislava.

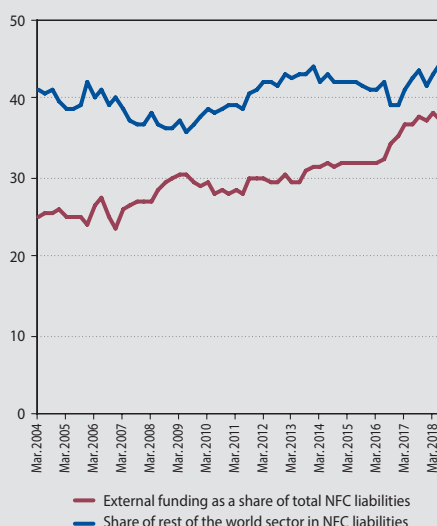
Chart P33 Comparison of the NFC sector's balance sheet and sales (percentages)



Sources: NBS and SO SR.

Note: CRE – Commercial Real Estate.

Chart P34 Structure of NFC liabilities (percentages)



Source: NBS.



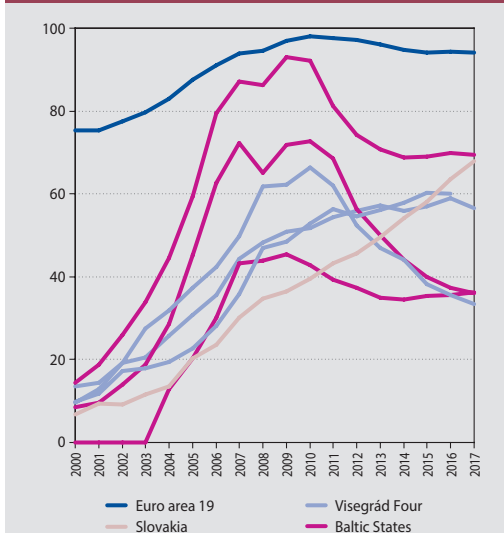
HOUSEHOLD CREDIT RISK INDICATORS

Chart P35 Total retail loans (year-on-year changes)



Source: NBS.

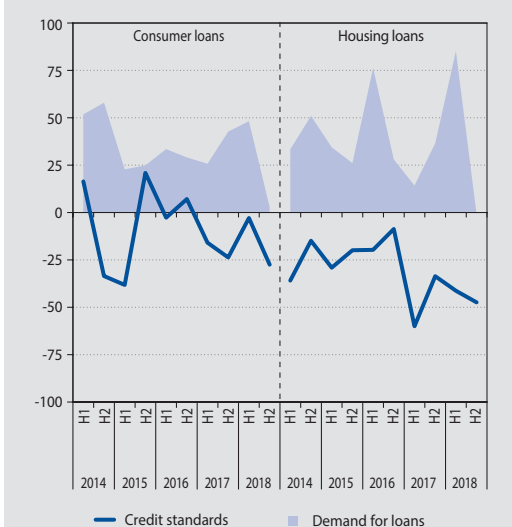
Chart P36 Household indebtedness in Slovakia and in selected countries (percentages)



Source: Eurostat.

Notes: The indicator is calculated as the ratio of households' total debt to their disposable income. Euro area 19 = average for the euro area.

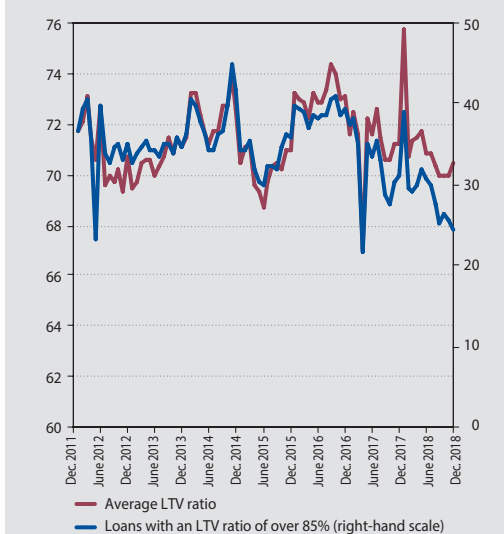
Chart P37 Changes in credit standards and credit demand according to the bank lending survey



Sources: Bank lending survey and NBS.

Note: The data show net percentage shares, with positive values denoting an increase in demand or an easing of standards.

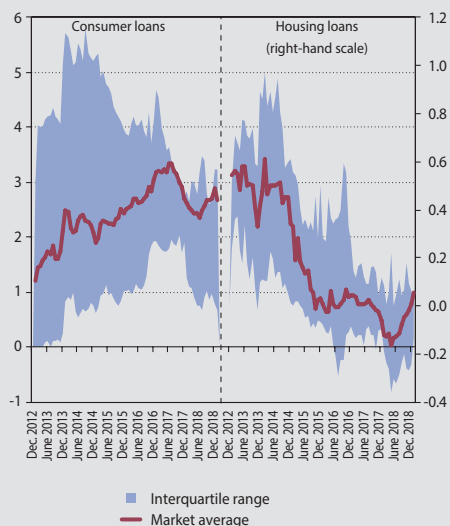
Chart P38 Loan-to-value (LTV) ratio for new loans (percentages)



Source: NBS.

Note: The indicator is defined in the section 'Glossary and abbreviations'.

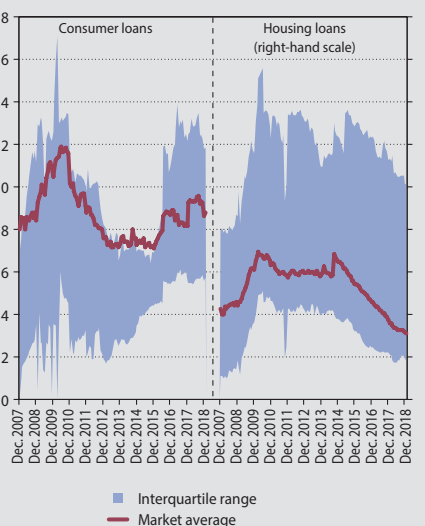
Chart P39 Net default rates for retail loans (percentages)



Source: SO SR.

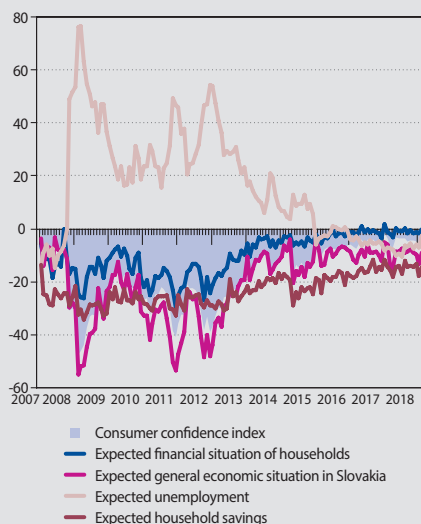
Note: The net default rate denotes the net change in the amount of NPLs over a 12-month period as a share of the outstanding amount of loans at the beginning of the period. The numerator is adjusted for the effect of loan write-offs/downs and sell-offs.

Chart P40 NPL ratios for retail loans (percentages)



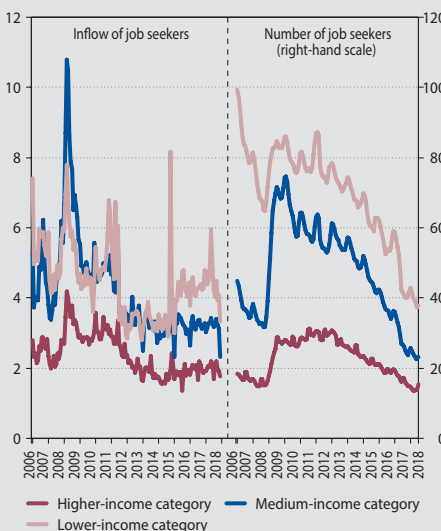
Source: NBS.

Chart P41 The consumer confidence index and its components



Source: SO SR.

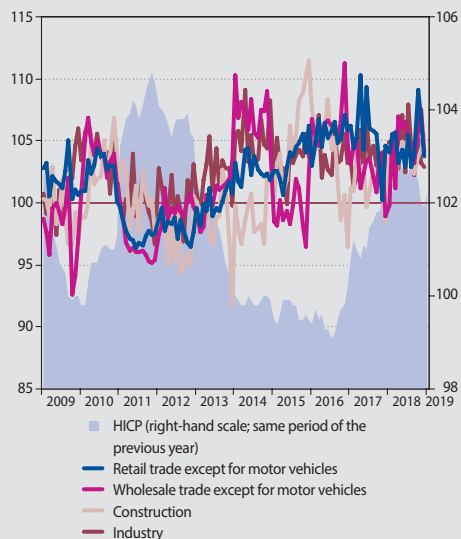
Chart P42 Number and inflow of unemployed by income category



Source: Central Office of Labour, Social Affairs and Family of the Slovak Republic.

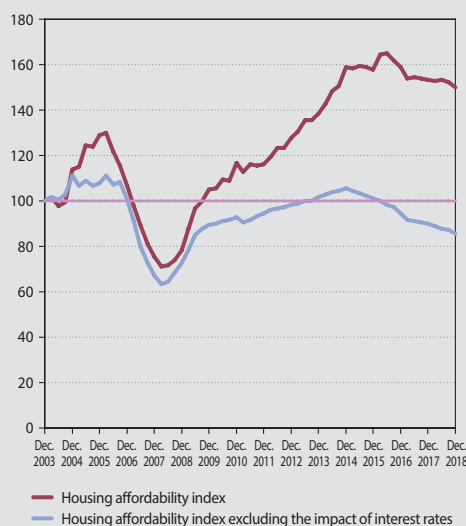
Notes: The left-hand and right-hand scales show numbers of job seekers in thousands. The income categories are defined in the section 'Glossary and abbreviations'.

Chart P43 Real wages in selected sectors – index



Source: SO SR.

Chart P44 Housing affordability index (31 March 2004 = 100)

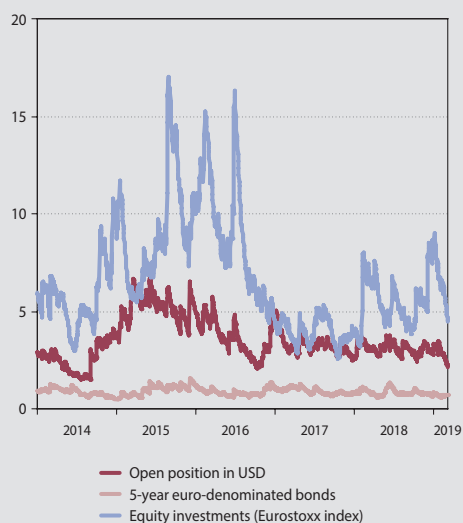


Sources: NBS and SO SR.

Notes: The housing affordability index is defined in the section 'Glossary and abbreviations'.

MARKET RISK AND LIQUIDITY RISK INDICATORS

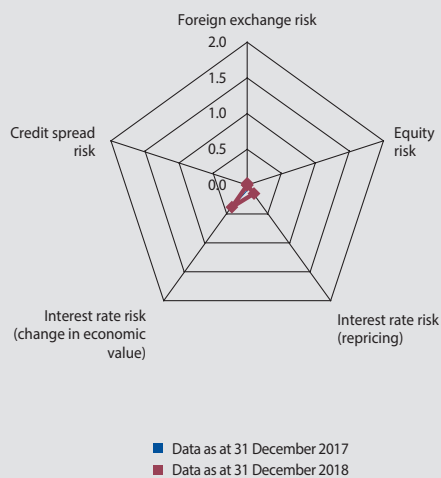
Chart P45 Value at Risk for investments in different types of financial instrument (percentages)



Sources: Bloomberg and NBS.

Notes: The data represent the highest loss (as a percentage of the given investment) that should not be exceeded over a period of 10 days at a confidence level of 99%. This loss was determined on the basis of a risk factor volatility calculation, using exponentially weighted moving averages.

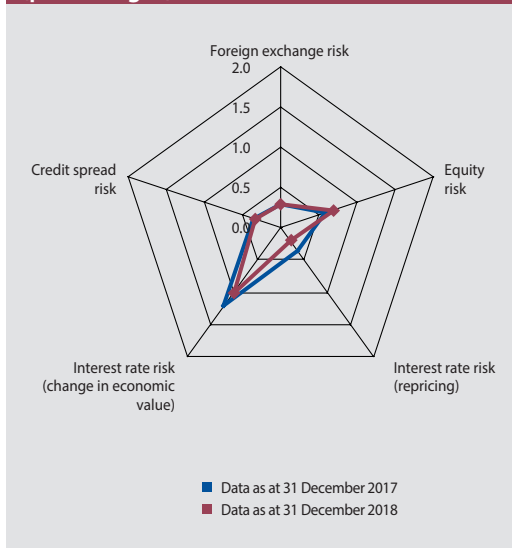
Chart P46 The sensitivity of the banking sector to different risk types (percentages)



Sources: Bloomberg and NBS.

Notes: The data represent the loss (as a percentage of assets) under each scenario of the sensitivity analysis. The sensitivity analysis is described in more detail in the section 'Glossary and abbreviations'.

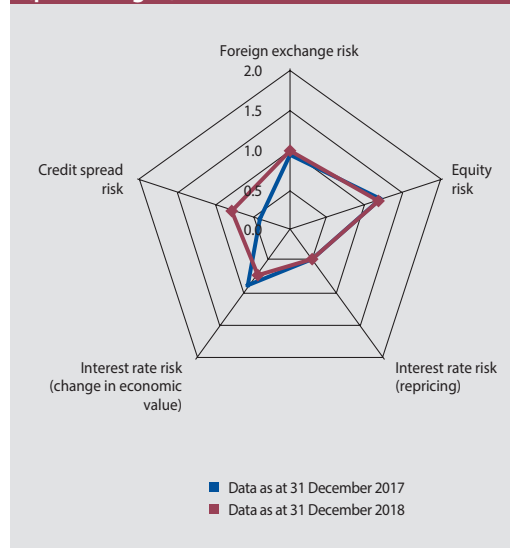
Chart P47 The sensitivity of second-pillar pension funds to different risk types (percentages)



Sources: Bloomberg and NBS.

Notes: The data represent the loss (as a percentage of NAV) under each scenario of the sensitivity analysis. The sensitivity analysis is described in more detail in the section 'Glossary and abbreviations.'

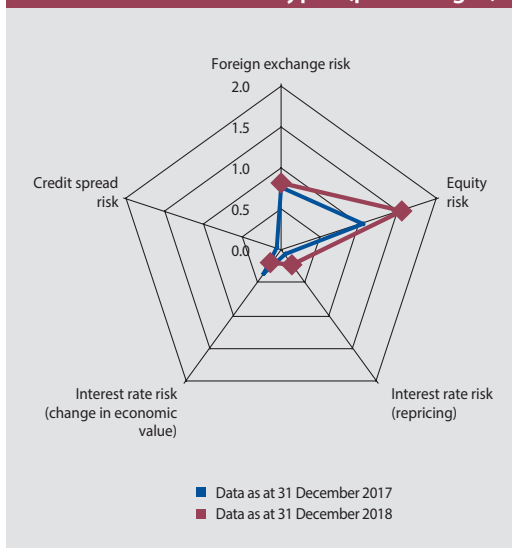
Chart P48 The sensitivity of third-pillar pension funds to different risk types (percentages)



Sources: Bloomberg and NBS.

Notes: The data represent the loss (as a percentage of NAV) under each scenario of the sensitivity analysis. The sensitivity analysis is described in more detail in the section 'Glossary and abbreviations.'

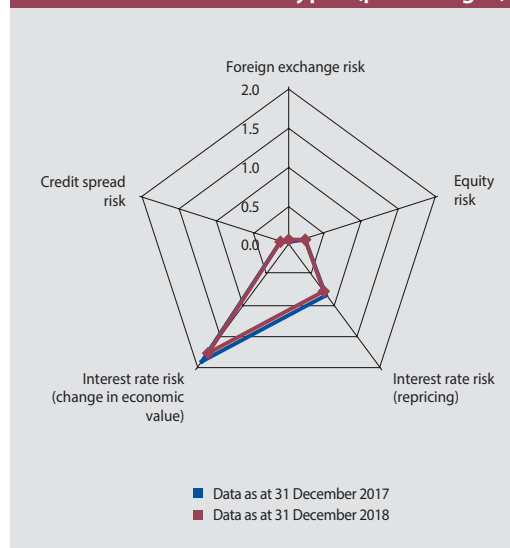
Chart P49 The sensitivity of investment funds to different risk types (percentages)



Sources: Bloomberg and NBS.

Notes: The data represent the loss (as a percentage of NAV) under each scenario of the sensitivity analysis. The sensitivity analysis is described in more detail in the section 'Glossary and abbreviations.'

Chart P50 The sensitivity of insurers' assets to different risk types (percentages)

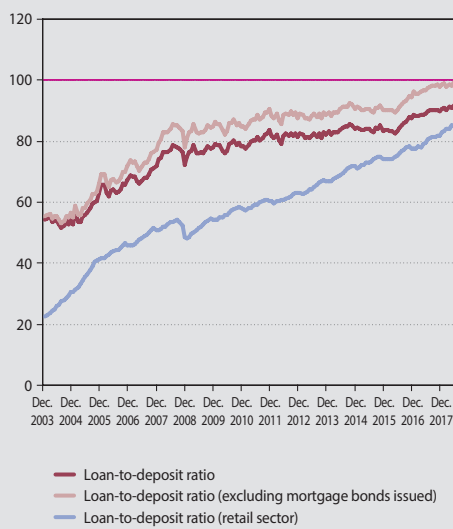


Sources: Bloomberg and NBS.

Notes: The data represent the percentage decline in the value of assets under each scenario of the sensitivity analysis. The sensitivity analysis is described in more detail in the section 'Glossary and abbreviations.'

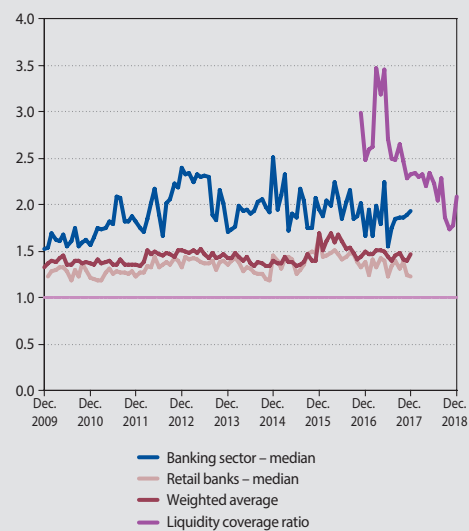


Chart P51 Loan-to-deposit ratio (percentages)



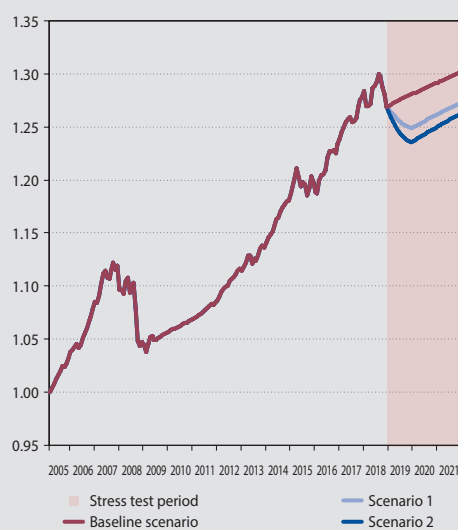
Source: NBS.

Chart P52 Liquid asset ratio and liquidity coverage ratio (percentages)



Source: NBS.

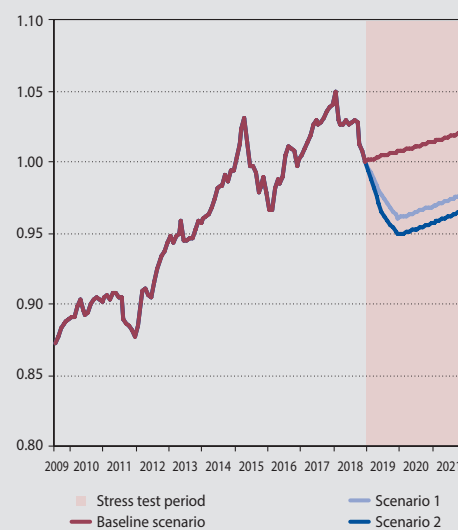
Chart P53 Impact of stress test scenarios on second-pillar pension funds



Sources: NBS, ECB, Bloomberg and internet.

Note: The left-hand scale shows the average of the index of the current pension-point value weighted by the NAV of individual funds.

Chart P54 Impact of stress test scenarios on third-pillar pension funds

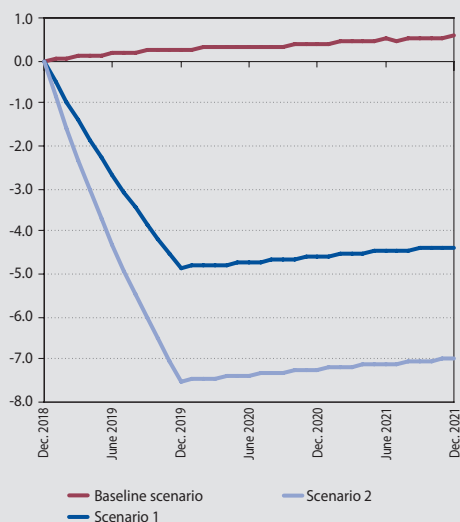


Sources: NBS, ECB, Bloomberg and internet.

Note: The left-hand scale shows the average of the index of the current pension-point value weighted by the NAV of individual funds.

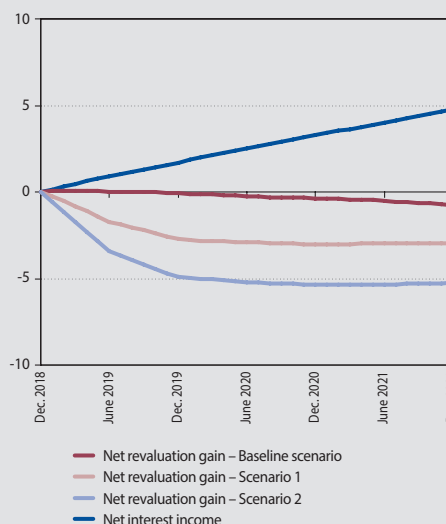


Chart P55 Impact of stress test scenarios on investment funds (percentages)



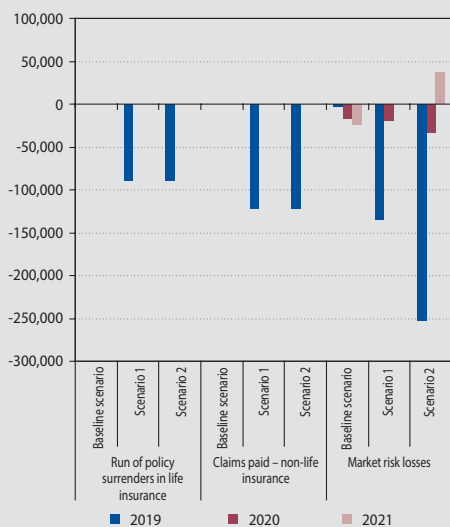
Sources: NBS, ECB, Bloomberg and internet.
Note: The left-hand scale shows the estimated profit or loss as a share of the NAV weighted by the NAV of individual funds.

Chart P56 Impact of stress test scenarios on insurers' assets (percentages)



Sources: NBS, ECB, Bloomberg and internet.
Notes: The left-hand scale shows the estimated profit or loss as a share of assets (except for assets covering technical provisions in unit-linked insurance) weighted by assets of individual insurers. The impact of the stress test scenarios on the value of liabilities was not taken into account.

Chart P57 Additional expenses of the insurance sector arising from negative developments under stress test scenarios (EUR millions)



Source: NBS.

Chart P58 Impact of stress test scenarios on unit-linked insurance assets (percentages)



Source: NBS, ECB, Bloomberg and internet.
Note: The left-hand scale shows the estimated profit or loss as a share of NAV weighted by the net value of assets covering unit-linked insurance in individual insurers.



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GLOSSARY AND ABBREVIATIONS



GLOSSARY

Combined ratio – The value of claims and expenses relative to premiums earned.

Default rate – The percentage of loans defaulting over the period under review.

Household income categories – A categorisation based on the KZAM employment classification and KZAM income data; it consists of three categories: *higher-income category (income of over €800 per month)* – legislators, senior officials and managers, scientists, professionals, technicians, health professionals, and teaching professionals; *middle-income category (income between €600 and €800 per month)* – office workers, craft and skilled workers, processors, and plant and machinery operators; *lower-income category (income of up to €600)* – service and retail workers, agricultural and forestry workers, auxiliary and unskilled workers.

Households – The population, i.e. the accounts of individuals.

Interest rate spreads – The difference between lending rates/deposit rates and the respective inter-bank rates.

Leverage ratio – The ratio of Tier 1 capital to the total value of all on-balance sheet and off-balance sheet exposures (not risk weighted).

Liquid asset ratio – The ratio of liquid assets to volatile liabilities over a horizon of one month. Its level should not fall below 1.

Liquidity gap – The difference between assets and liabilities at a given maturity.

Loan-to-deposit ratio – The ratio of customer loans to the sum of retail deposits, deposits of non-financial corporations, deposits of financial corporations, and issued mortgage bonds. It indicates the extent to which loans are financed with stable funds from customers. The lower the value, the greater the extent to which loans are financed with customer deposits, and therefore the lesser the extent to which they are financed through the more volatile financial markets.

Loan-to-value ratio – The loan value divided by the value of the loan collateral.

Net default rate – The net change in the amount of non-performing loans over a 12-month period as a share of the outstanding amount of loans at the beginning of the period. The numerator is adjusted for the effect of loan write-offs/downs and sell-offs.

Net interest rate spread – The difference between the rate of return on loans (the ratio of interest income from loans to the total amount of loans) and the cost of deposits (the ratio of interest expenses on deposits to the total amount of deposits).

Non-performing loans – Loans identified by a bank as defaulted in accordance with Article 178 of the Capital Requirements Regulation (CRR), i.e. Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012).

PMI (Purchasing Managers' Index) – An indicator of the economic health of the manufacturing or service sector: an index value of more than 50 represents expansion, while a value of below 50 represents contraction.



G L O S A R Y A N D A B B R E V I A T I O N S

Retail sector – Households, sole traders and non-profit institutions serving mostly households.

Retail interest rates – The interest rates applied by banks to households and non-financial corporations.

Sensitivity analysis – An analysis of sensitivity which includes four scenarios as follows: share prices declining by 10%; other currencies weakening against the euro by 5%; interest rates increasing in parallel by 0.3 percentage point; and credit spreads on bonds issued by Greece, Portugal, Ireland, Spain and Italy widening by 2 percentage points. In the case of interest rate risk, the impact on the repricing of instruments valued at fair value is calculated, as is the impact on the economic value that represents the repricing of all financial instruments. Individual risk types include also indirect risks that institutions are exposed to by virtue of their investments in investment fund shares/units. The calculation of these indirect risks was based on the mapping of the different types of fund units/shares into the set of risk factors.

Tier 1/2/3 – categories of capital used in the calculation of capital ratios.

Total capital ratio – ratio of own funds to 12.5 times the minimum capital adequacy ratio requirement



ABBREVIATIONS

APRC	annual percentage rate of charge
b.p.	basis point
CDS	credit default swap
CMN	Property Price Map (Cenová mapa nehnuteľností)
DTI	debt-to-income (ratio)
ETF	exchange-traded fund
EURIBOR	euro interbank offered rate
GDP	gross domestic product
FVOCI	fair value through other comprehensive income
IFRS	International Financial Reporting Standard
JLL	Jones Lang LaSalle
KZAM	Employment Classification (Klasifikácia zamestnaní)
LCR	liquidity coverage ratio
LTV	loan-to-value (ratio)
MCR	minimum capital requirement
MTPL	motor third party liability (insurance)
NAV	net asset value
NFC	non-financial corporation
NPL	non-performing loan
OECD	Organisation for Economic Co-operation and Development
PFMC	pension fund management company
p.p.	percentage point
RBLG	Register of Bank Loans and Guarantees
ROA	return on assets
ROE	return on equity
SCR	solvency capital requirement
SASS	Slovak Association of Asset Management Companies (Slovenská asociácia správcovských spoločností)
SPMC	supplementary pension management company
SO SR	Statistical Office of the Slovak Republic
ULI	unit-linked (life) insurance
ÚPSVaR	Office of Labour, Social Affairs and Family (Ústredie práce, sociálnych vecí a rodiny)
VaR	value at risk



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