NÁRODNÁ BANKA SLOVENSKA
EUROSYSTÉM

Analysis of the Slovak Financial Sector 2017

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Foreword

Národná banka Slovenska (NBS) produces the *Analysis of the Slovak Financial Sector* (ASFS) to meet 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 Macroprudential 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 potential 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 2017, 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.

NÁRODNÁ BANKA SLOVENSKA
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OVERVIEW

Overview

The global economy continued to pick up and gradually gained further momentum

In 2017 the global economy performed better than at any time since the Great Recession, expanding by 3.7% year on year. Its growth was caused by several factors, including fiscal policy expansion at a time of long-standing accommodative monetary policy. The euro area benefited from the favourable economic situation in the rest of the world and also saw an increase in domestic demand. Financial markets, too, generally experienced exceptional buoyancy in 2017 amid low volatility.

The greatest risk to the current economic upswing lies in financial markets' response to a tightening of financial conditions

The financial stability risks stemming from events in financial markets became more pronounced in the year under review. This is because the majority of globally significant asset classes have been more or less rising for the past nine years, and their prices are hundreds of per cent above their Great Recession lows. Moreover, prices of several of these asset classes have already reached or surpassed their pre-crisis level. Price bubble suspicions surround stock markets (especially in the United States) as well as bond markets. Hence there remains an elevated risk of an increase in risk premia and sudden decline in asset prices, similar to that which occurred in stock markets at the end of January 2018. The trigger for that scenario could be a greater than expected rise in inflation and subsequent interest rate hikes in advanced economies. Another significant risk is the impact of any protectionist measures that the United States may take.

The Slovak economy is experiencing good times leading to the risk of overheating in the labour market

GDP growth was driven by increasing household consumption and investment, particularly private sector investment. On the other hand, net trade had a negative impact on overall economic growth in 2017, owing mainly to the retooling of car plants for new production. The number of people in employment in Slovakia was at historical highs. Nevertheless, the labour market was already beginning to show signs of overheating in the form of skilled labour shortages. Furthermore, wage growth was gradually accelerating. The economic upturn was also evident in the improved performance of the non-financial corporations sector. This development was conducive to increasing demand for, and the supply of, loans to the private sector.

Retail credit growth peaked in August 2017, remaining stable or falling slightly in the months that followed

The absolute year-on-year increase in total housing loans peaked in March 2017 and thereafter remained close to historical highs. This was a broad-based market trend that stemmed from previous interest rate reductions and the easing of certain credit standards. Unlike in previous years, interest rates on new housing loans in Slovakia changed only slightly. Compared with other euro area countries, these rates, as well as the annual percentage rate of charge (APRC) for housing loans, were the fourth lowest. Housing loan growth has been higher in Slovakia than in any other EU country for almost six years. As for consumer loans provided by banks, their year-on-year growth rate in 2017 was similar to the rates in previous years. Their annual growth rate peaked in August before returning to its medium-term trend by the end of the year. Looking at consumer loan growth across EU countries, the rate in Slovakia remained in the highest quartile in 2017.

NBS measures led to a tightening of credit standard limits

The average terms of housing loans have been increasing since mid-2016, and the average terms of consumer loans have been close to regulatory limits for a long period of time. In the case of almost one-quarter of housing loans, the provision of the loan leaves the borrower with an excessive debt-to-income ratio. This share is high by international standards as well. As a share of the total volume of new housing loans, loans arranged through brokers continued to increase in 2017, up to 61%. Therefore banks are increasingly conducting their lending activity through brokers, and this may be creating certain risks to financial stability. Pre-approved consumer loans increased as a share of the total volume of new consumer loans in 2017, to around one-third. The provision of such loans is not at present subject to proof-of-income and financial-buffer requirements.

Rapid household debt growth remains one of the most significant risks

Strong growth in retail loans in 2017 resulted in the continuing rapid growth of household debt. Household debt is currently increasing at an excessive pace, even faster than household income. This trend is further increasing the vulnerability of indebted households to potential adverse developments in the domestic economy. The risks arising from this situation have been repeatedly noted by international institutions, including the European Central Bank (ECB) and the International Monetary Fund (IMF). The credit rating agency Standard & Poor's warned that it may consider downgrading Slovakia if retail credit growth remains strong.

Prices for both existing and new build flats increased at a slower pace

The growth in housing loans is closely related to recent property market developments, which suggest a slowdown in the emergence of imbalances. The year-on-year increase in prices of existing flats fell from 12.0% in June 2017 to 8.6% in December 2017. In Bratislava, the new build market has become a significant part of the residential real estate market, with sales of existing flats in 2017 amounting to only half of the number of new build sales. The demand for new builds was slightly less strong in 2017 than in the previous year. The high supply of new builds at the end of 2016 moderated gradually during the second half of 2017. The total number of vacant flats therefore fell gradually.

Lending to non-financial corporations (NFCs) remained relatively robust in 2017, despite easing in the last quarter

At the end of 2017 total loans to NFCs were 7% higher year on year. Compared with the corresponding rates in other EU countries, that was the third highest. NFC credit growth was broad-based across all major economic segments and across most of the banks active in the corporate credit market. As regards loans to small and medium-sized enterprises, however, their growth rate slowed. Favourable economic conditions, together with outlooks that reflected firms' optimistic expectations, had the greatest impact on credit supply and demand. The only change in credit standards in 2017 was a decline in interest margins.

Firms are increasingly vulnerable to adverse economic developments

The annual increase in NFC loans provided by the domestic banking sector was only the third most significant source of growth in corporate debt in Slovakia. Increases in foreign loans and in the issuance of corporate bonds made greater contributions to the aggregate debt. As a result, corporate debt increased at a relatively strong pace – the fastest in the central and eastern European region and the third fastest in the EU – to reach an all-time high. The corporate debt burden remained largely unchanged, but only thanks to the continuing downward trend in interest rates on NFC loans. It may therefore be concluded that the NFC sector became more vulnerable to any adverse economic developments or interest rate increases.

Growth trends in the commercial real estate market continued

In the residential segment of the commercial real estate (CRE) market, sentiment remained optimistic in 2017, even though the market's growth moderated during the year. Developments indicated a continuation of the market's upswing. Investor demand was high and vacancy rates in several segments fell to historical lows. Construction activity in the segment of industrial and logistics centres remained intensive. If sentiment is too optimistic, however, it could result in the underestimation of risks, most notably the sector's high vulnerability to any deterioration in the economic situation.

Short-term credit risk indicators continued to improve

In the overall retail loan book, both the non-performing loan (NPL) ratio and default rate continued to decline. In the case of housing loans, the NPL ratio fell further while the default rate remained at virtually zero. As for consumer loans, however, not only did the NPL ratio decline, but so did the default rate after its previously rising trend. The overall NPL ratio for non-financial corporate loans also fell.

Leaving aside one-off effects, the banking sector maintained relatively stable profitability in 2017 and its total capital ratio also increased

Disregarding several extraordinary effects that had a positive impact on profitability, mainly in 2016, the banking sector's aggregate net profit increased in 2017 by 8% year on year. However, without the deduction of those extraordinary items, the sector's net profit would be lower by 20%. Net interest income continued to fall and had a negative impact on bank profits in 2017, albeit to a lesser extent compared with the previous year. This easing reflected a lower rate of decrease in interest rates on housing loans, stronger growth in NFC loans, and the further fall in retail deposit costs. Net interest income was also dented by the end of the upward trend in interest income from consumer loans and by a decrease in returns on, and total holdings of, bonds. Falling provisioning costs continued to have a positive impact on the banking sector's aggregate profit, and the substantial drop in these costs in 2017 was concentrated in the NFC loan portfolio.

The banking sector's total capital ratio increased from 18.0% as at December 2016 to 18.6% as at December 2017, owing mainly to a fall in the dividend payout ratio. Several banks nevertheless continued – the process of optimising their capital structure. The strengthening of banks' capitalisation was based mainly on increases in the lower quality component of their capital.

The insurance sector's profit increased in 2017, while its solvency fell in March 2017 and remained largely unchanged thereafter

The insurance sector's aggregate net profit for the first nine months of 2017 was 8.4% higher on a year-on-year basis. The sector's gross profit net of one-off effects was fully 30% higher year on year. The large difference between the rate of increase in the gross and net profits may be attributed to the rise in costs related to a special levy imposed on the insurance sector. The annualised return on investments in life insurance (excluding unit-linked insurance) fell gradually over the course of the year, and consequently the sector only just managed to cover the average guaranteed interest rate in life insurance contracts. Insurers saw their overall solvency decline in 2017, although they continued to meet the Minimum Capital Requirement.

The increases in participation in the old-age pension scheme and the supplementary pension scheme in 2017 were the highest for many years

The number of savers in the old-age pension scheme increased by more than 50,000 in 2017, its largest rise in 11 years. The increased inflow of new funds also reflected the raising of the rate of mandatory contributions. The share of index funds in the total assets of old-age pension funds increased due in part to savers switching over to these funds. The overall weighted average nominal return on old-age pension funds for 2017 was slightly lower compared with the previous year.

In the supplementary pension scheme, the number of participants and the amount of assets under management recorded their highest increases in ten years. The average annual nominal return on supplementary pension funds as at 31 December 2017 was 3.7%. However, the nominal returns on individual funds showed considerable heterogeneity across fund types.

In the pension fund sector, the share of equity investments in pension funds' total net asset value continued to increase. This reflected investors' continuing search for yield, which, however, is increasing the riskiness of investments. Given investors' expectations of an increase in interest rates, pension funds became less exposed to the risk of such increase.

The growth of assets under management in the investment fund sector was close to its historical high recorded ten years earlier

The net asset value of foreign and domestic investment funds marketed in Slovakia increased by €1.032 billion in 2017, which compared with its rate of increase in 2016 was three times higher. Most of the higher growth was accounted for by domestic investment funds. Customer demand was focused on mixed funds, while there was a net redemption of shares/units of bond funds. The average annual nominal returns on investment funds, both domestic and foreign, was 2.3% in 2017, slightly lower compared with 2016.

Like pension funds, investments funds recorded an increase in equity investments and a decline in the duration of their asset portfolios – and therefore a decrease to the risk of a rise in interest rates.

Stress test results continue to indicate the resilience of the financial sector as a whole

The baseline scenario founded on NBS projections leads to the banking sector's aggregate profit and total capital ratio falling moderately over coming years. The adverse scenario that has the greatest impact on the banking sector assumes that negative trends in both the economic and financial markets will have a more prolonged impact. This scenario results in the sector making an aggregate loss and having a capital shortfall of €55 million. On the other hand, the sector's total capital ratio remains, at 13.3%, above the minimum requirement. Owing to strong household credit growth in recent years, loan losses under the stress scenarios are notably higher on loans to households than on loans to non-financial corporations.

CHAPTER 1

EXTERNAL AND DOMESTIC DEVELOPMENTS RELEVANT FOR FINANCIAL SECTOR STABILITY

1

1 EXTERNAL AND DOMESTIC DEVELOPMENTS RELEVANT FOR FINANCIAL SECTOR STABILITY

THE GLOBAL ECONOMY CONTINUED ITS CYCLICAL RECOVERY AND GRADUALLY GAINED FURTHER MOMENTUM

The global economy's performance in 2017 was its best since the Great Recession. Annual global economic growth accelerated to 3.7% in 2017, half of a percentage point higher compared with its rate in 2016. The most notably upturns were in investment demand and manufacturing. International trade growth also picked up and exceeded global GDP growth for the first time in several years. This revival was considerably broad-based, with the main upside surprises being developments in Europe and Asia. This strong momentum is expected to have carried over into 2018, and global GDP growth for this year is projected to be even closer to four per cent. According to monthly indicators, growth remained elevated in the first months of 2018.

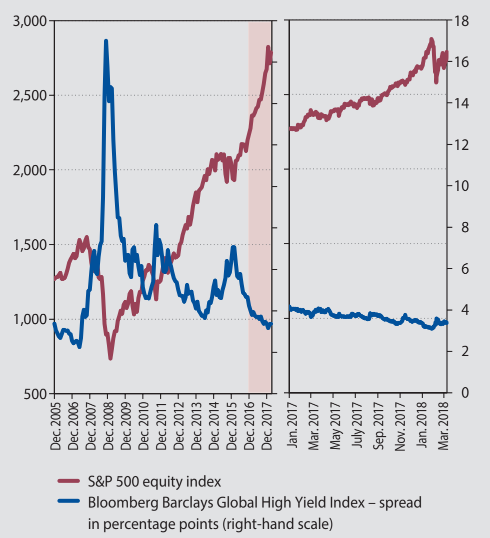
The global economy's improved condition stemmed from the interaction of several factors. The most important seems to have been the favourable setting of macroeconomic policies. Financial conditions had been long relaxed and these were joined by a shift in fiscal policies, including a change from restrictive to neutral fiscal stances in advanced economies and China's mobilisation of public funds to support economic growth. The United States is expected to soon experience an expansionary fiscal stimulus stemming from the recently adopted tax reform and raising of the discretionary spending caps. The growth-supporting policy settings were also reflected in improving sentiment on the supply side of the economy, among consumers, and in financial markets. Some significant emerging market economies (EMEs) oriented on exports of basic raw materials also benefited from an upturn in commodity prices. Another no less important factor behind the healthy macroeconomic situation was stable inflation.

The euro area benefited from the favourable economic situation in the rest of the world and also saw an increase in domestic demand. The euro area economy gained momentum in 2017 and more so in the second half of the year, when the annualised growth rate was around 2.5% (both higher than projected and above the economy's potential). Growth increased in almost all euro area countries. GDP growth dispersion measured by standard deviation recorded its lowest level of recent years. Domestic demand may have been supported by optimistic sentiment in both the NFC and household sectors and by improving labour market conditions. Another stimulant was the increased flow of loans to the private sector. The economy's good cyclical position is expected to be maintained over the next two years, although the forecast consensus is that growth will ease slightly. Some indicators are already suggesting that euro area growth peaked at the end of last year.

FINANCIAL MARKETS WERE MARKED BY GROWTH TRENDS AND LOW VOLATILITY

In general, financial markets experienced exceptional buoyancy in 2017. The healthy trends and improving confidence in the real economy were also reflected in financial market sentiment. A large majority of financial assets recorded notable price growth as accompanied

Chart 1 Selected market indicators



Source: Bloomberg.

by a fall in their risk premia. With investors taking largely the same view about the pricing of these assets, market volatility gradually fell to historical lows. Demand for riskier assets was reflected in increasing portfolio investments in EMEs. Risk appetite in financial markets rose further in January 2018.

The end of January 2018 saw a certain correction in global financial markets. The most substantial decline was in equity indices, which fell by around 10%. More noteworthy even than the magnitude of the fall was its intensity, as it occurred within a few days. The immediate trigger of the turbulence was the publication of the regular monthly report on employment and wages in the United States. This showed a relatively sharp acceleration of wage inflation, raising concerns among many market participants that general inflation in the United States will increase and result in a robust tightening of monetary policy by the Federal Reserve. Market interest rates and yields to maturity were already increasing from the beginning of 2018, but not more so than during similar episodes in the past, the most recent being after the 2016 US presidential election. In the end, however, this bout of market nervousness had no significant impact on the situation in the financial market and no impact at all on the real economy. In hindsight, it is rather seen to have been a larger correction. Stock markets have already begun recouping the losses incurred at that time. What has remained to some extent, however, is heightened volatility.

The greatest risk to financial stability lies in financial markets' response to a tightening of financial conditions

The financial stability risks stemming from events in financial markets became more pronounced in the year under review. The recent turbulences also represent a warning that apparently calm financial market conditions can rapidly deteriorate. This risk lies mainly in the fact that, certain corrections notwithstanding, asset prices are now at levels that raise doubts about their justification. The majority of globally significant asset classes have been on a more or less upward path for the past nine years, and their prices are hundreds of per cent above their Great Recession lows. Many of them have already reached or overcome pre-crisis levels. The main focus of attention is probably the suspected bubble in US stock markets, not least because of its size and potential as a source of contagion. One of the indicators most widely used to measure the degree of consistency between equity prices and economic fundamentals is the CAPE[1] ratio; The CAPE ratio for the S&P 500 increased sharply in 2017 and reached a level not seen since the period before the bursting of the dotcom bubble in 2000.

Risk premia compression was present across a swathe of bond markets in 2017. Credit spreads in Europe and the United States – most notably those on lower-rated corporate bonds – were in the lower quartile of their historical levels in 2017, while spreads on dollar-denominated bond issues in EMEs were at the threshold of the lower quartile. According to the Bank for International Settlements, just such low values of this variable have in the past been a harbinger of stressed conditions.

Given the financial market conditions described above, the potential for a repricing of risk premia and sharp correction of asset prices remains elevated. The most likely trigger for such a development would appear to be a higher than expected increase in inflation and interest rates in advanced economies. The issue most discussed in this regard is the pace of monetary policy tightening in the United States. The recent expansionary fiscal policy measures in that country, coming at a late phase of the economic cycle, could lead to excessive inflation and force the Federal Reserve to take a more robust approach. At the same time, the longer that global risk appetite remains strong and financial conditions accommodative, the greater the risk of further increases in indebtedness and financial vulnerability, which are already elevated in many countries and sectors.

Regarding specifically the sovereign debt risk in the euro area, it appears to have abated for the time being. The moderately falling level of government debt and low cost of servicing it are conducive to public finance sustainability. These trends stem largely from the current good cyclical position of the euro area economy and from the period of low interest rates. In several euro area countries, however, the structural budget balance is likely to begin worsening again in coming years, and any significant increase in

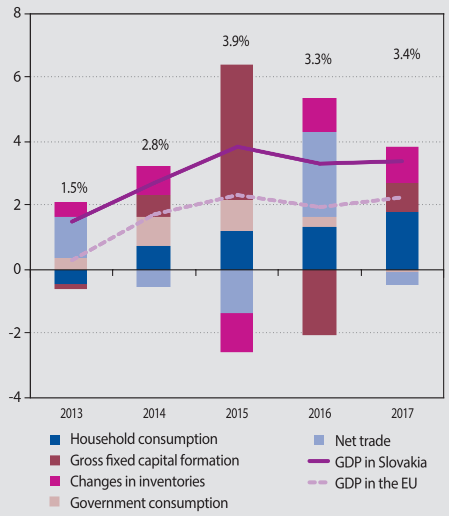
1 *Cyclically adjusted price earnings ratio.*

government bond yields could result in another sovereign debt crisis.

Other long-time major risks to the euro area related to the health of the banking sector have also receded slightly in the recent period. Given the combination of lending activity growth and a moderate rise in interest rates, banks' profits gradually increased in 2017. There was also some progress in reducing the stock of non-performing loans accumulated in the past. Except at the largest banks, however, banks' costs over the past two years have begun to climb again, significantly limiting efforts to strengthen profitability.

Since the current US administration came to power more than a year ago, the risk that a protectionist shift in the United States would pose to the global economy has been a subject of intense discussion. This scenario has recently begun to materialise to some extent, with United States imposing tariffs on steel and aluminium imports. The ultimate impact of such measures will depend on how other countries react to them.

Chart 2 GDP in Slovakia, GDP in the EU, and their components (annual percentage changes)



Sources: SO SR and NBS calculations.

The Slovak economy is experiencing an upswing that is notably reflected in the improving labour market situation; however, skilled labour shortages are beginning to appear

Like the majority of EU countries, Slovakia was experiencing an expansionary phase of the financial cycle in 2017. Although Slovakia's annual GDP growth exceeded the EU's average GDP growth by around 1 percentage point, around a half of all EU countries recorded growth which was similar to, or higher than, Slovakia's 3.4%. This pace was similar to the 2016 rate.

In Slovakia, activity growth in the past two years has been driven by household consumption, which is on a stable upward trend. Slovak households were able to increase their demand for goods and services last year owing to the buoyant labour market and rising nominal wages. Household consumption growth accounted for more than a half of overall GDP growth in 2017. Such consumption has not increased so much since the pre-crisis period in 2008, when it was growing even faster. Another contributor to Slovak GDP growth in 2017 was investment, particularly as a result of the acceleration of private sector investment in the second half of the year. Public investment growth was rather sluggish in 2017, given the slow start to the absorption of EU funds under the new EU programming period. The government sector made a negative contribution to GDP growth, with government consumption expenditure declining in real terms. Net trade had the largest negative contribution to economic growth in 2017, with exports increasing more slowly than foreign demand fundamentals would imply. This reflected mainly a decline in the exports of certain carmakers that shut down their plants in order to retool them for new production. The economy's stable growth was reflected in economic sentiment indicators, which on average reached their highest levels in the post-crisis period. These indicators were also buoyed by expectations that the stable trends would continue in the period ahead.

The impact of economic growth on the labour market situation is particularly favourable. The number of people currently in employment in Slovakia is at an all-time high, close to 2.4 million people as at the end of 2017. More than 53,000 people entered the workforce last year, and around three-quarters of the new jobs were in the sectors of industry, trade and services. The registered unemployment rate fell below 6% at the end of 2017, well below its previous lowest level recorded in summer 2008. The labour market is beginning to show signs of overheating in the form of skilled labour shortages, which firms are attempting to address by, among other things, hiring foreign workers. At the same time, nominal wage growth is gradually accelerating, and last year recorded a year-on-year increase of 4.5%. Real wages are also increasing, last year by more than 3%. The rising purchasing power of households and favourable labour market situation is stoking household demand for both investment (housing) and consumer loans.

Corporate sector sales also had a good year in 2017. The economic upswing was further evident in the corporate sector's improved performance in 2017, with corporate sales rising by more than 6% year on year. Their growth was broad-based across economic sectors, with the highest rates observed in industry and services. Following a period of decline, construction sector sales also increased. The improving financial condition of the corporate sector was reflected in the stability of firms' demand for loans as well as in low default rates.

After falling for three years, goods and services prices began rising again. Slovakia's average annual inflation rate in 2017 stood at 1.4%. Prices of food and services recorded the greatest acceleration. Energy prices were the only inflation component that declined in 2017. Price developments in the context of low interest rates resulted towards the end of the year in part of the aggregate loan book (mainly housing and NFC loans) starting to be charged, on average, at a negative real interest rate.

Going forward, it is expected that current trends will continue and that the economy will gradually overheat. In the period ahead, Slovakia's economic growth is expected to be boosted by the launch of production at a new car factory, the construction of a bypass around the capital city, and increasing foreign demand. At the same time, the labour market is projected to tighten further with a negative impact on the availability of skilled labour. As a result, wage growth should come under upward pressure, supported also by a headline inflation rate that is expected to oscillate above its target level. Macroeconomic developments will therefore contribute to an increase in credit market pressures and to the strengthening of credit demand.

The risks to the economic outlook are mainly external, relating to the possibilities of adverse geopolitical developments and of rising protectionism in international trade, as well as to the presence of political risks in Slovakia and certain other EU countries.

CHAPTER 2

INTEGRATED OVERVIEW OF THE FINANCIAL SECTOR

2

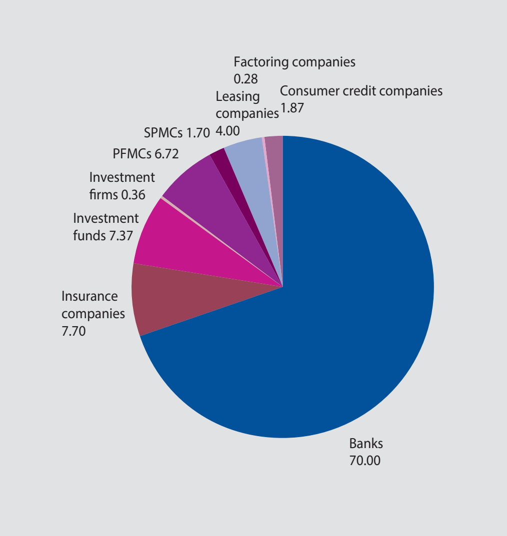
2 Integrated overview of the financial sector

The favourable economic situation was reflected also in the financial market, where all segments experienced an upswing and total assets increased year on year

In the context of the economic upswing, the financial sector performed well in 2017, recording its strongest asset growth since the onset of the financial crisis in 2008. The financial sector's total assets stood at almost €113 billion as at the end of 2017, representing a year-on-year increase of just under 7%. All financial market segments recorded asset growth, and in some cases double-digit growth. The financial market is in the expansionary phase of its cycle, which is typically associated with strong asset growth, favourable trends in most financial market segments, growing investment appetite among economic agents, and increased borrowing. It is also a period when risks in the financial system are increasing.

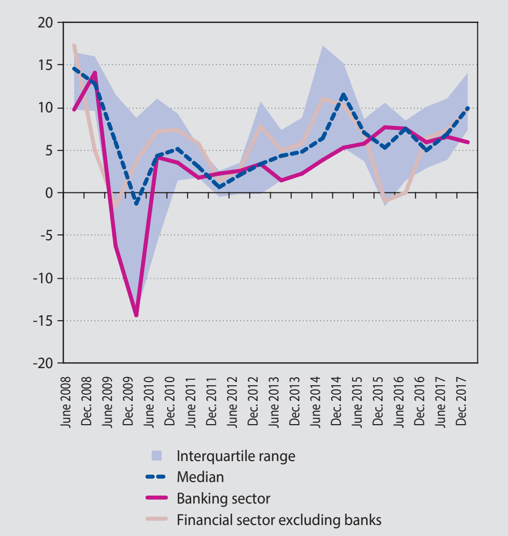
The principal driver of financial sector trends is the banking sector, which accounts for around 70% of the financial sector's total assets. The banking sector's asset growth in 2017 stood at around 6%, approximately double its post-crisis average. In response to currently compressed interest margins, banks are seeking to increase their lending activity. Since loans make up more than two-thirds of banks' total assets, they had the largest impact on the banking sector's asset growth in 2017. The insurance sector's total assets increased in 2017 by 4% year on year, not quite as strongly as the banking sector's assets. Insurers' asset growth stemmed largely from increases in premiums written in all the principal insurance classes. The fastest-growing financial market segments in 2017 were investment firms and investment funds, each of which recorded asset growth of more than 14% year on year. In an environment of low interest rates and low returns on other types of investments, there is increasing demand for investment funds and securities. Last year also saw strong inflows into pension funds of both the second and third pillars of the pension system,[2] with the total net asset value of these funds increasing by around 10% year on year. The increase in assets under the management of pension fund management companies (second pillar) was also supported by a legislated increase in the rate of contributions to the second pillar scheme, which was raised by

Chart 3 Distribution of assets and managed assets in the Slovak financial market (percentages)



Source: NBS.

Chart 4 Total assets in the financial sector (annual percentage changes)



Source: NBS.

2 *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).*

0.25 percentage point to 4.25% in 2017. In the third pillar, the assets under management are growing faster than at any other time in the post-crisis period, implying growth in general public demand for such investment. Amid an upward trend in private sector borrowing for purchases of non-durable goods, both leasing companies and consumer credit companies recorded an increase in total assets in 2017 that exceeded the post-crisis average.

Profits in the greater part of the financial sector, net of one-off effects, remained relatively flat despite the upswing; the banking sector's business model is coming under increasing pressure

The economic upswing had a positive impact on the financial sector's results in 2017, although the low interest rate environment weighed on profitability in several segments. This situation was seen in the largest segment, the banking sector, where although the aggregate return on equity (ROE) fell year on year, its level net of one-off effects[3] remained largely unchanged despite the increase in banks' lending activity. Looking ahead, however, the prolonged compression of interest margins is expected to put increasing pressure on the banking sector's current business model. The insurance sector's profitability also remained steady in 2017. The aggregate profit net of one-off effects[4] actually increased, but part of that increase was trimmed by the levy on non-life insurance premiums, which from January 2017 was imposed on all types of non-life insurance premium after previously being imposed in a limited scope. The growth of investment in investment funds and the positive returns on such funds in 2017 was reflected in the profits of investment fund management companies, as their aggregate ROE remained at more than 25%. In the pension sector, too, companies operating the second and third pillars reported a year-on-year increase in their profits.

Short-term credit risk indicators continued to improve

In the retail and corporate loan books, the non-performing loan (NPL) ratio and default rate continued to fall. In the case of housing loans, the NPL ratio fell further while the default rate remained at virtually zero. As for consumer loans, however, not only did the NPL ratio decline, but so did the default rate after its previously rising trend.

The NPL ratio for non-financial corporate loans also fell, reflecting the uniform impacts of all direct factors: the rate of change in the total amount of NPLs (a more moderate increase); loan write-downs/offs and sell-offs; NPL repayments; and total NFC credit growth. The decline was broad-based across NPLs, whether broken down by volume or by number of days past due.

The equity component of pension and investment funds increased

In both the pension fund and investment fund sectors, funds' holdings of equities and investment fund shares/units continued their extended rising trend in 2017. Among SPMC-managed funds (third pillar of the pension system), the share of these holdings in the funds' total assets increased more than in previous years and exceeded their share in investment funds' assets. This trend resulted from a general appetite among participants in supplementary pension scheme to seek higher yields in the low interest rate environment at the expense of increasing the risk of their investments. Three factors in particular contributed to the rise in the share of equities and investment fund shares/units in the holdings of pension and investment funds:

1. *An increasing number of people were switching their investments to funds with higher risk investment strategies*. Among PFMC-managed funds (second pillar of the pension system) there was an increase in the share of index fund shares/units in funds' holdings. In the investment fund sector, the funds that attracted most investor demand were real estate funds and mixed funds, largely at the expense of bond funds.
2. *Fund management companies themselves increased the equity component of their higher--risk funds.* This trend was observed mainly in SPMC-managed funds and, to a lesser extent, investment funds, including mixed funds (where the highest inflows were recorded).
3. *Equity components also increased as a result of the repricing of existing portfolios, with equity markets having been rising since 2016*. This factor, however, was less significant than the previous two.

Exposure to interest rate risk decreased

While their exposure to equity risk increased, pension and investment funds became less exposed to the impact that a potential hike in interest rates

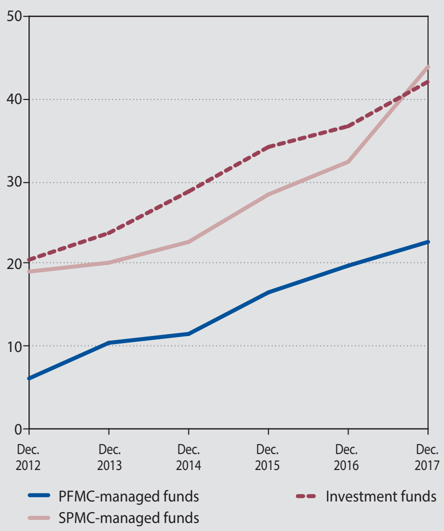
3 *One-off income from the sale of holdings in VISA company in 2016.*
4 *Dividends received from subsidiaries and the reversal of provisions for litigation costs in 2016.*

would have on the repricing of their portfolios. This was a notable shift from the situation seen up to the end of 2016, in which the duration of investment portfolios had been gradually increasing. The turnaround may have been caused by the assumption that interest rates are unlikely to fall further given their current subdued level, while the prospect of them rising again is becoming more likely.

The lessening of exposure to interest rate risk was a natural consequence of the increase in the equity component of funds' assets and the resulting decline in the bond component. This trend was seen across all three types of funds. There was also a directly-related drop in the average duration of the bond holdings of SPMC-managed funds.

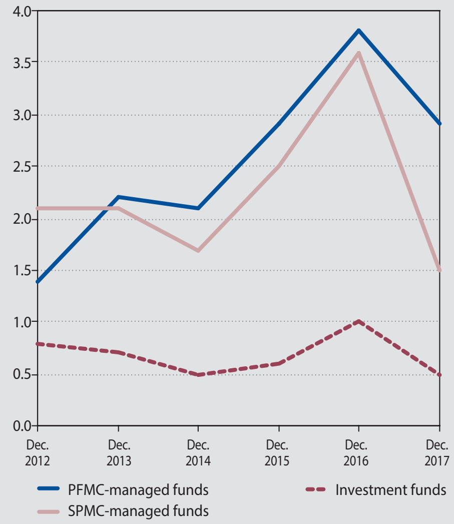
Besides the change in interest risk exposure, another important trend concerning the composition of bond portfolios is the extended gradual increase in the share of Slovak and Czech corporate bonds in the portfolio's net asset value. This trend is most apparent among investment funds, where the share of these assets in aggregate bond holdings stood at more than 5% in 2017. In relation to these developments, the most significant risk is that the low liquidity of the Slovak and Czech corporate bond market could accentuate liquidity risk in the funds that have larger holdings of such assets; another risk the impact that any mispricing of these bonds could have on their fair value. On the other hand, although these components have been rising for a prolonged period, their upward trends either eased significantly or stopped in 2017.

Chart 5 Share of equity components in funds' total assets (percentages)



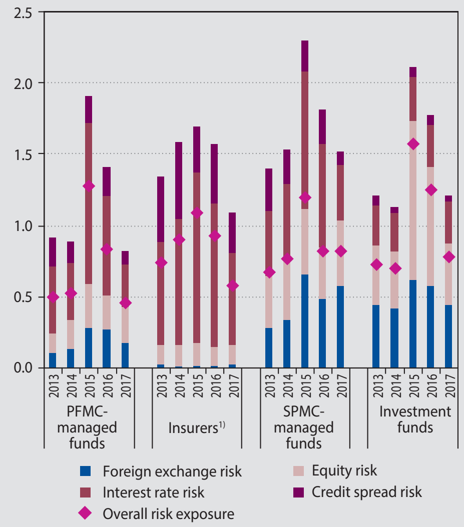
Sources: NBS, Bloomberg and internet.

Chart 6 Duration of the aggregate portfolio (years)



Sources: NBS, Bloomberg and internet.

Chart 7 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 10 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.

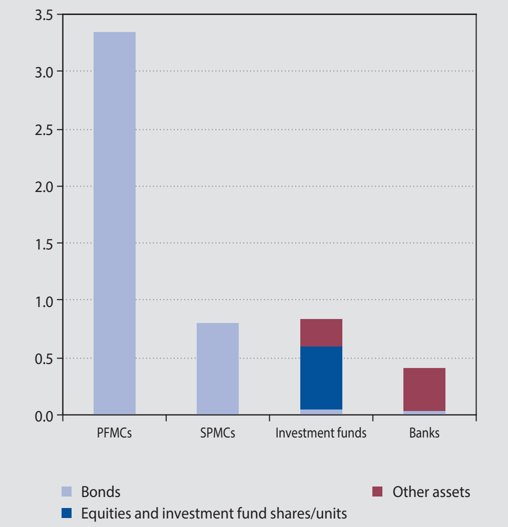
Table 1 Changes in the share of equity, foreign exchange and interest rate positions in individual segments of the financial market

	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		
	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
Banks	0.4	0.4	0.4	0.2	0.1	0.1	19.8	17.7	14.1	4.0	4.5	4.8	1.2	1.3		4.7	5.1	5.5
Insurers	3.7	3.8	4.4[1]	0.4	0.7	-0.9[1]	72.8	69.6	66.5[1]	6.8	6.8	6.0[1]	6.0	6.2	5.0[1]	8.4	8.3	8.3[1]
PFMC-managed funds	16.5	19.8	22.7	5.4	5.8	5.6	69.4	71.3	65.9	4.2	4.5	4.6	2.9	3.8	2.9	5.1	5.3	5.6
SPMC-managed funds	28.4	32.5	43.9	13.9	10.5	19.5	54.2	51.3	36.4	4.6	5.3	4.4	2.5	3.6	1.5	5.6	6.4	5.5
Investment funds	34.2	36.8	42.1	14.5	12.3	13.7	22.9	22.1	17.9	2.0	2.5	2.6	0.6	1.0	0.5	2.6	3.0	2.8
ULI[2]	76.8	79.9	81.4[1]	8.4	2.7	3.3[1]	22.0	19.6	18.5[1]	4.1	3.8	3.1[1]	0.8	1.1	0.5[1]	4.3	3.8	3.5[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) Data for insurers and for insurers' assets invested under unit-linked insurance (ULI) policies are as at September 2017, since the data as at December 2017 were not available when this Analysis was being produced.
2) Assets invested by insurers under unit-linked life insurance policies.

As measured by Value-at-Risk (VaR), the average riskiness of funds in the insurance sector, pension fund sector, and investment fund sector of the Slovak financial market fell in 2017 on a year-on-year basis. Funds managed by insurance undertakings and funds managed by PFMCs (second pillar of the pension system) both had an aggregate overall risk exposure as at 31 December 2017 that was more than one-third lower year on year. The explanation lies in the fall of interest rate risk, both general and specific. This outcome was supported by declines in all three underlying determinants: duration; the share of the bond component; and the volatility of market interest rates. In the case of pension funds, exchange rate risk also diminished as exposures and exchange rate movements remained stable. As for SPMC-managed funds (third pillar), their overall risk exposure was largely the same as in 2016. On the one hand, to interest rate risk fell, for the same reasons that it did among the PFMC-managed funds; on the other hand, however, equity risk and foreign exchange risk increased after significant bolstering of the corresponding positions. In the investment fund sector, too, the overall risk receded in 2017, owing to declines in foreign exchange risk and, most of all, in equity risk.

Chart 8 Exposures of financial market segments to the United Kingdom (percentages)



Sources: NBS.
Note: Data for the insurance sector as at 31 December 2017 were not available.

The risk exposure related to the United Kingdom's withdrawal from the European Union is low

The UK's withdrawal from the European Union may entail certain risks for financial institutions that have exposures to the country. In the case of Slovak financial institutions and funds, however, this exposure is low. PFMC-managed funds have the largest such exposures, in the form of debt securities that make up 3.4% of their total assets. In other financial market segments, this exposure does not exceed 1% of total assets.

The risk exposure of Slovak financial institutions was also evaluated using stress tests

The resilience of individual financial institutions, or the vulnerability of the net asset value under their management, was stress tested using a baseline scenario and two adverse scenarios. The second adverse scenario assumes to a greater extent relatively high uncertainty in financial markets as well as a decline in the real economy's performance. A detailed description of the stress test scenarios are provided in Chapter 6.

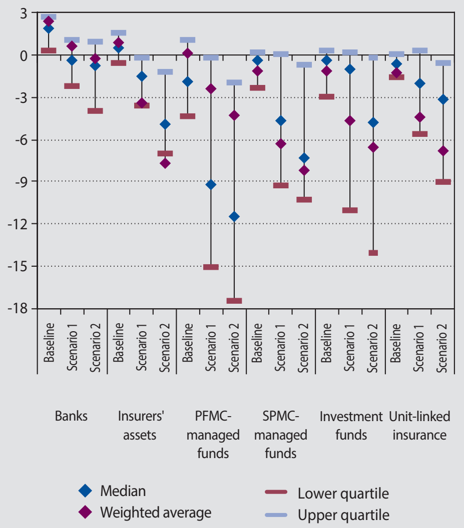
The results show particular types of financial institution incurring greater losses under the second adverse scenario. In both pillars of the pension system, institutions' vulnerability to the adverse scenarios is lower in this exercise than in the one conducted last year, even though they make heavy losses under the latest scenarios. The main reason for that is they are less exposed to the risk of an interest rates increase.

Investment funds also record a marked drop in performance under the adverse scenario, although naturally the results include considerable heterogeneity across funds.

As for the Slovak insurance sector, the exercise showed again that its main vulnerability is to financial market losses. Increasing insurance risks result in additional losses, but, under assumptions given, these losses are generally lower than financial risk losses.

The banking sector is seen to be relatively resilient to adverse developments in both the real economy and financial markets. Banks' principal losses over the stress test period are credit risk losses. According to the results under all three scenarios, banks' losses are greater on loans to households than on loans to NFCs, even though credit risk costs in the NFC loan book are envisaged to be significantly higher under the adverse scenarios than under the baseline scenario. This was the first such stress test exercise in which losses on household loans exceeded losses on NFCs loans even under an adverse scenario, the likely explanation being the strong household credit growth of recent years.

Chart 9 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 2017.
The data for insurers include only the change in the fair value of assets and impact of insurance risks on their profitability. 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).

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 sector

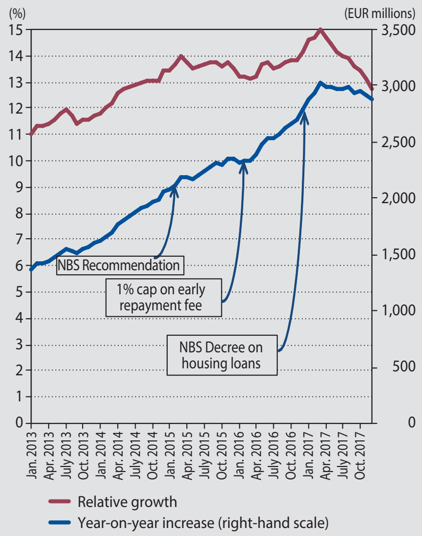
Annual growth in the stock of retail loans stabilised in the latter part of 2017 after five years of acceleration

Year-on-year growth in the stock of retail loans in Slovakia maintained its upward trend in the first eight months of 2017, and the volume of those loans reached an all-time high in August; it then remained flat or declined slightly in the final four months. In August the year-on-year increase stood at €3.55 billion, while in December it was €3.45 billion. The pace of retail credit growth was mirrored in almost all retail banks. In relative terms, the annual growth rate of retail loans moderated from a peak of 13.1% in March (the highest level since 2009) to the still high rate of 11.7% in December. For a sixth successive year, retail credit growth was higher in Slovakia than in any other EU country (excluding short-term spikes in certain countries).

Conditions for lending to the real economy continued to improve. The registered unemployment rate reached an all-time low in 2017 and was below 6% from November. The rate in half of all Slovak regions was down to 4% or lower. Wages continued to grow, and the consumer confidence indicator, together with households' expectations for the economy, registered its most favourable and stable results since 2007. A new element in 2017 was the upturn in the annual inflation rate, to more than 2% from November; this supported an increase in households' propensity to borrow at the expense of their propensity to save.

The absolute year-on-year increase in the stock of housing loans reached a historical high in March 2017 and thereafter remained close to that level. The year-on-year increase had been accelerating since April 2016, i.e. immediately after the introduction of a statutory cap on the early repayment fee for housing loans. In March 2017 the year-on-year increase stood at €3.02 billion (12.8%), and although the increases were slightly lower in subsequent months, the stock of housing loans in December 2017 still recorded an annual growth of €2.87 billion (12.8%), which was more than the 2016 year-end value. This was a broad-based market trend that stemmed from continuing, albeit moderating, declines in interest rates and from the prolongation of loan terms.

Chart 10 Stock of housing loans (year-on-year change in EUR millions)



Source: NBS.

Housing loan growth in Slovakia maintained its position as the highest in the EU.

Among the different types of housing loans, mortgage loans recorded the strongest growth in 2017, particularly in March and towards the end of the year. The growth rate for loans provided by home savings banks accelerated, but remained below the market average. The situation in mortgage loans was apparently affected by expectations about the impact of law changes. While the March increase was related to the introduction of a debt service-to-income (DSTI) ratio limit, the later increase can be attributed to a change in the system of state subsidies for mortgage loans.

Loans provided by home savings banks maintained their regular two-year cycle of alternating slow and fast growth, recording accelerating growth in 2017 which peaked in the autumn months at almost 6% year on year.

Of the total volume of secured loans provided in 2017, refinancing and renegotiated[5] loans with a significant top-up accounted for around one-third.

Five banks, mostly large ones, increased or at least maintained their share in the aggregate stock of housing loans. The overall share of the four largest banks reached almost 75%. Medium-sized and smaller banks had a share of just over 9%, while foreign bank branches held slightly more than 6% of the market.

In contrast to previous years there was little change in interest rates on new housing loans. The average interest rate fell by 0.2 percentage point over the first 11 months, before increasing slightly in December, to 1.8%. The rise at the end of the year reflected mainly interest rate increases at large banks, and in particular mortgage rate increases. The nominal interest rate, together with the inflation rate, implies that housing loans were being provided at the end of 2017 at a negative real interest rate.

Compared with other euro area countries, the average interest rate on housing loans in Slovakia and the annual percentage rate of change (APRC) for such loans were the fourth lowest.

As for consumer loans provided by banks, their year-on-year growth rate in 2017 was similar to the rates in previous years. In absolute terms, the growth in the stock of these loans accelerated slightly after mid-2017 (peaking at €576 million in August), and then towards the end of the year it returned to its medium-term trend of €540 million. The stable annual increases, together with the growing loan book, was reflected in a fall in the relative rate of increase, from 13.8% in December 2016 to 11.8% in December 2017. In the great majority of banks that provide consumer loans, the average annual growth rate of such loans was more than 18%.

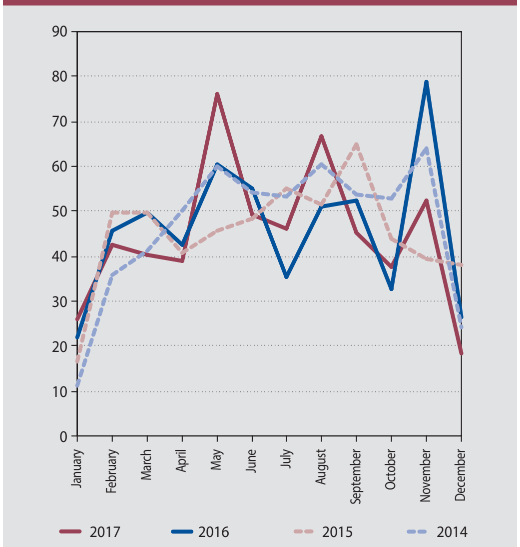
Looking at consumer loan growth across EU countries, the rate in Slovakia remained in the highest quartile in 2017. Market shares in consumer loans shifted slightly in favour of large banks. In this market segment, only four banks have a share of more than 5%. Of the total volume of unsecured loans provided in 2017, refinancing and renegotiated loans accounted for almost one half.

As for consumer loans provided by non-bank entities, their outstanding amount remained

Chart 11 Stock of consumer loans (year-on-year change in EUR millions)

Source: NBS.

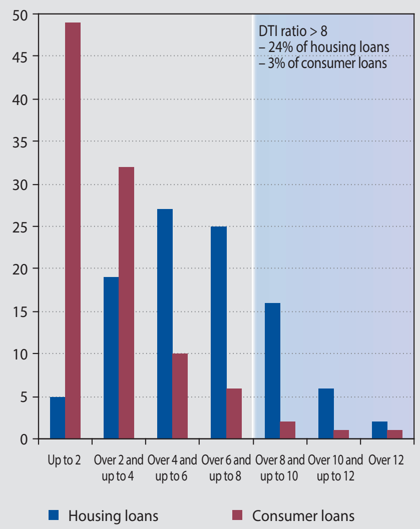
Chart 12 Stock of consumer loans (month-on-month changes in EUR millions)



Source: NBS.

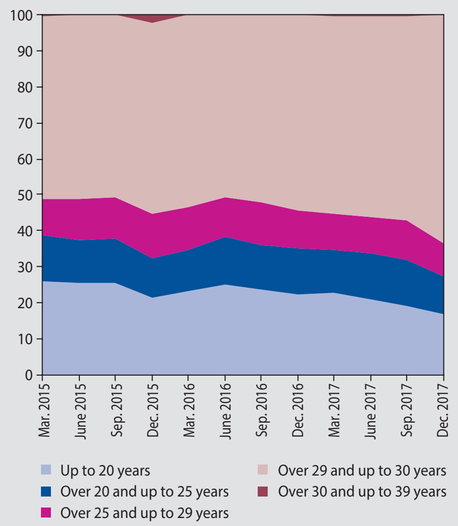
5 *Given reporting changes, time series on loan refinancings and renegotiations have only been available on a consistent basis since the second half of 2017.*

Chart 13 Loans provided in the second half of 2017 broken down by borrower debt-to-income (DTI) ratios (percentages)



Source: NBS.

Chart 14 New housing loans broken down by term (percentages)



Source: NBS.
Note: From the second quarter of 2017 the data do not include unsecured loans provided by home savings banks.

steady in 2017, but owing to the rapid growth in bank loans, their share of the consumer financing market fell to 20%.

The average interest rate on new consumer loans provided by banks in 2017 fell by more than 0.5 percentage point, and the APRC for these loans fell by a similar margin. The average interest rate as at December 2017 was 8.4%. Although it has a strong downward trend, the rate was the fifth highest among euro area countries.

THE BANKING SECTOR WAS COMPLIANT WITH NBS DECREES ON CONSUMER LOANS AND HOUSING LOANS; SELECTED CREDIT PARAMETERS WERE EASED

The continuing credit growth was further supported by the provision of loans to borrowers with high debt-to-income ratios. In the second half of 2017 fully 24% of housing loans were provided to borrowers with a DTI ratio[6] of more than 8. In general, DTI ratios are far lower for consumer loans than for housing loans. Of the consumer loans provided in the second half of 2017, only 3% had a DTI ratio above 8.

A gradual increase in the average term of new housing loans has been observed since mid-2016. The average term increased from 25.5 years in December 2016 to 26.4 in December 2017. Among new loans other than refinancing loans, the average term rose to 27.1 years, and the share of these loans with a term of 30 years rose to 63% (from 54% at the end of 2016). Among top-up housing loans, the share of loans with a term of 30 years increased during the period under review from 36% to 45 percent.

There was, by contrast, a drop in the average term of unsecured loans provided by home savings banks (such loans make up three-quarters of their new loan book). These loans have a shorter time series running from the second to fourth quarters of 2017, during which period the share of these loans with a term of more than 20 years fell from 35% to 28%. The cause was a decline in the outstanding amount of loans with longer terms, rather than people "switching" to shorter terms.

The average term of consumer loans has long been close to regulatory limits, and in 2017 it was 7.1 years.

As regards collateralisation, trends were consistent with regulatory measures. In 2017 limits were introduced on the share of housing loans with loan-to-value (LTV) ratios of more than 80%, which in 2016 were being provided in increasing

6 *The ratio of the borrower's total debt (including the loan provided) to the borrower's annual net income.*

numbers. The result was a decline in the share of new loans with high LTV ratios. Loans with an LTV ratio of more than 90% made up 7% of new loans, and were more concentrated among non-refinancing loans. The share of loans with an LTV ratio of more than 80% fell during 2017 from 46% to 33%. The fall to below the 40% regulatory limit on the share of new loans whose LTV ratio may exceed 80% coincided with the full phase-in of that limit in the third quarter of 2017 under NBS's Housing Loan Decree. In this case, too, new loans with LTV ratios exceeding 80% were mostly non-refinancing loans.

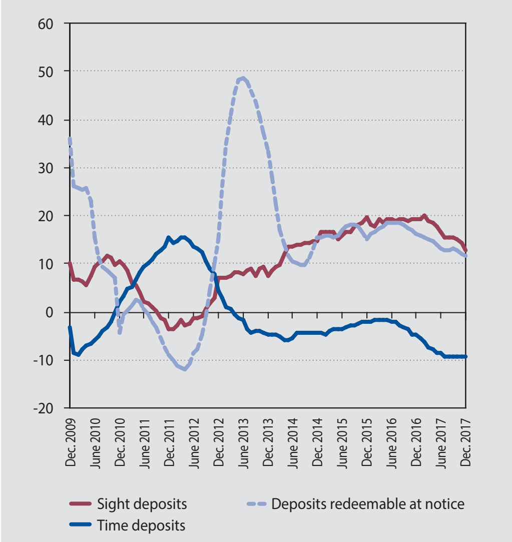
The share of new housing loans arranged through brokers increased in 2017, to 61%, continuing the volatile, but upward trend observed in 2016. On the other hand, market concentration among the largest financial agents declined, with the quartet of largest companies seeing their share fall from 28% in June 2016 to just under 14% in December 2017.

The share of pre-approved consumer loans increased slightly, still accounting for around one-third of new loans. The share increased in several banks, and overall rose from 29% in 2016 to 31% in 2017. Loans provided online increased their share of new loans to 7% on average.

In the regular bank lending survey, banks reported a tightening of credit standards during 2017, mainly in regard to standards for housing loans. This was apparently a natural consequence of the phasing-in of NBS's Housing Loan Decree. Average margins on housing loans and, to a lesser extent, consumer loans underwent compression, owing mainly to the pressure of competition. At the same time, banks noted rising demand for both housing loans and consumer loans, in each case driven mainly by the low interest rate environment. In the months ahead, banks said they expected credit standards on both the principal types of loan to be further tightened, but also expected rising credit demand.

Non-performing loan trends continued to improve in 2017. The non-performing loan (NPL) ratio for the banking sector's housing loan book fell from 2.3% in December 2016 to 1.9% in December 2017, and the NPL ratio for consumer loans decreased from 8.7% to 8.1%. The net default rate for housing loans remained around zero in 2017, and the rate for consumer loans came to the end of its multi-year upward trend: after rising from 3.1% in December 2016 to 3.3% in June 2017, it fell to 2.7% in December 2017. This trend shift was seen in several banks, and given the strong concentration in the consumer loan market, it may be described as sectoral.

Chart 15 Stock of retail deposits (annual percentage changes)



Source: NBS.

Household deposit developments reflected responses to the low interest rate environment

Retail deposit growth slowed during 2017. The annual growth rate of bank deposits fell from 8.7% in December 2016 to 4.4% in December 2017. These figures corresponded to absolute increases of €2.6 billion and €1.5 billion in the stock of deposits. The slowdown in deposit growth stemmed mainly from a more pronounced annual rate of decline in the stock of time deposits (from -4.7% in December 2016 to -9.2% in December 2017), as well as from falling growth rates of sight deposits (from 19.2% to 12.8%) and deposits redeemable at notice (from 16.3% to 11.7%).

In 2017 holdings of retail deposits became further concentrated among four large banks. These institutions ended the year with 65% of the market, while home savings banks maintained their share at just under 10%. The deposit market shares of small and medium-sized banks and foreign bank branches were further squeezed.

Average deposit rates remained at all-time lows. The average interest rate on sight deposits, which had been below 0.05% since December 2016, continued to fall moderately in 2017.

The average interest rate on new time deposits ended its downward trend in January 2017, when it stood at 0.3%. It remained at that level until the last quarter of the year, when it even edged up to 0.4%, owing mainly to rate increases among a few banks.

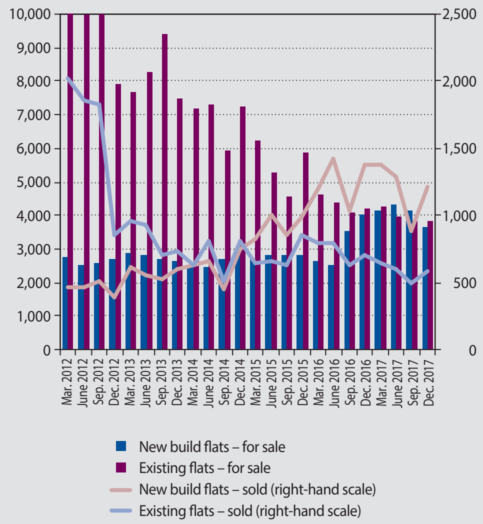
Interest rates on deposits redeemable at notice (savings books) fell during 2017, from 0.4% to 0.2%.

Market for residential new build flats in Bratislava recorded strong year-on-year growth in 2017, which was nevertheless lower than in 2016 and was concentrated in the second half of the year; prices of new builds continued to increase, but at a slower pace

The new build flat market in Bratislava is becoming a significant part of the Slovak capital city's residential real estate (RRE) market. Looking at the overall supply of flats in Bratislava in 2017, both new builds and existing flats had the same share, but new builds recorded by far the larger increase in supply. The sales numbers for new build flats and existing flats were in line with supply trends. The number of sales of existing flats in 2017 was only half that of new builds. Therefore the major share of overall demand for flats is focused on new builds.

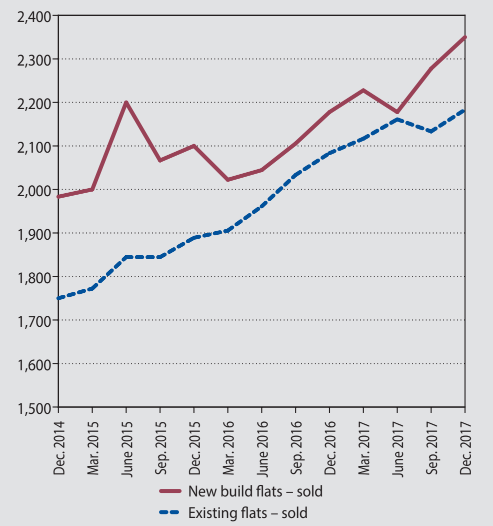
Prices of new builds, both sold and for sale, remained largely unchanged in 2017. Prices of flats free for sale maintained their upward trend in 2017, but the average year-on-year increase of 5.6% was lower compared with the previous year's rate (7.4%). Prices of sold new builds increased by 8% year on year, a similar rate to that

Chart 16 Composition of the residential real estate market in Bratislava (number of flats)



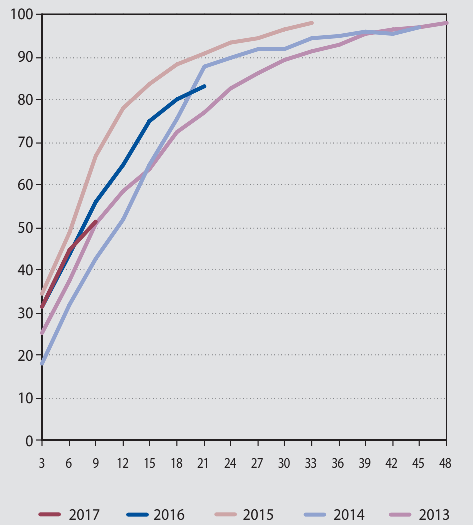
Sources: Lexxus and CMN.

Chart 17 Residential real estate prices



Sources: Lexxus and CMN.

Chart 18 Sales rate of property developments broken down by the date in which the development was first marketed (percentages)



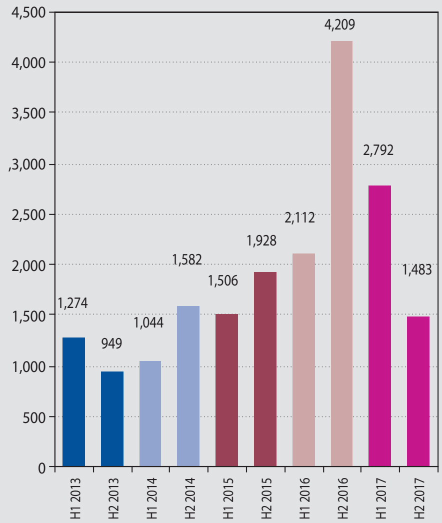
Source: Lexxus.
Note: Data on the horizontal scale are in months.

recorded in 2016. The lower rate of increase in market supply and slight drop in demand were therefore not yet reflected in the prices of new build flats. Prices of existing flats have been catching up with prices of new flats (prices of new flats were higher than of existing flats but the difference has been narrowing). By around mid-year, new build prices had caught up with prices of existing flats. So while new build prices continued to increase amid favourable macroeconomic conditions, prices of existing flats remained flat.

Although demand for new builds was slightly less strong in 2017 than in 2016, new build sales remained elevated. Demand for new build flats in the capital city continued to be supported by the favourable labour market situation and bright outlooks for the property market. Although the number of flats sold fell year on year, it was far higher than the number sold in other post-crisis years. On the other hand, the slight downward trend in the number of flats sold in 2017 may be indicative of a certain shift in demand at a time of credit tightening and rising property prices, amid no change in the macroeconomic conditions for demand growth. The speed of property development sales also slowed in 2017, mainly in the second half of the year. Furthermore, this happened despite a markedly lower increase in the number of new build flats that came on the market in that year. Demand for flats under development did not diminish, as their share of new build sales reached an all-time high of more than 90%. Given the strength of sales growth, anyone wishing to buy a new build had little option but to pre-purchase of a new flat under development. Along with the increasing share of flats under development, the average time until sold new builds were certified for occupancy was longer compared with 2016, at more than six months.

The growth rate in the supply of new build flats was high from the end of 2016 but gradually moderated during the second half of 2017. The total number of flats for sale therefore fell gradually. More new builds came on the market in 2016 than in any previous year of the post-crisis period, as several major development projects started to be sold. The result was a marked rise in the supply of new build flats. In the second half of 2017, however, the supply of flats steadily declined amid strong demand and a gradual dampening of developers' activity. During the first half of the year, the number of new builds on the market was still recording year-on-year growth, but their number in the second half of the year was similar only to that in the second half of 2014. Another change was in the structure of additions of new developments, since the 2016 surge in large projects was gradually replaced by the introduction of smaller projects or the phased expansion of projects. Similarly in 2018, the market expects new projects to be mostly on the smaller side, perhaps indicating certain cautiousness among developers.

Chart 19 Additions to the supply of new build flats



Source: Lexxus.

Prices of existing flats recorded slower growth

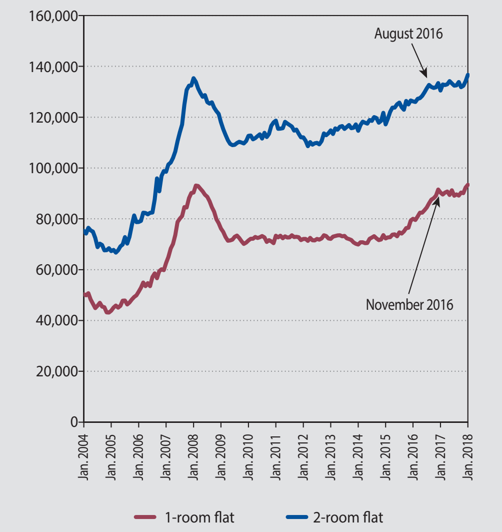
The year-on-year increase[7] in prices of existing flats fell from 12.0% in June 2017 to 8.6% in December 2017. Signs that their annual price growth was cooling were present in early 2017, but included considerable volatility. The slowdown stemmed from price developments in Bratislava and Žilina regions and, to a lesser extent, in Prešov and Trnava regions.

In the breakdown of flats by number of rooms, no clear nationwide trends were seen. For one- to three-room flats, average price growth slowed, while for four-room flats it remained largely unchanged. Prices of five-room flats fell. These data, however, mask considerable volatility.

The number of flats for sale continued to decline, by around 25% year on year.

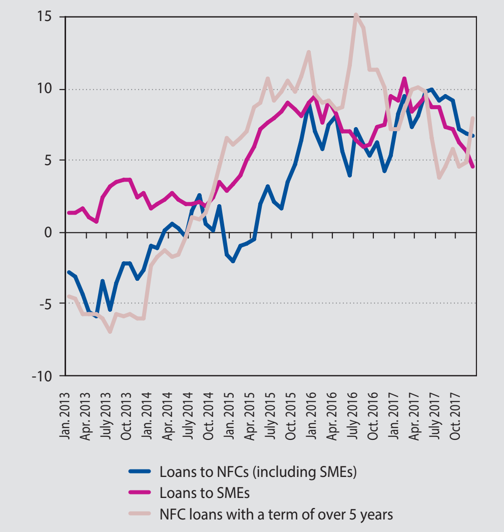
7 *Prices of existing flats for a given month represent the prices' three-month moving average centred on that month.*

Chart 20 Average prices of one-room and two-room flats for sale in Bratislava (EUR/flat)



Source: CMN.

Chart 21 NFC credit growth and its breakdown by loan term category (annual percentage changes)



Source: NBS.

THE NON-FINANCIAL CORPORATIONS (NFC) SECTOR[8]

Developments in the corporate credit market were shaped by the favourable economic situation; NFC credit growth remained strong in 2017, despite easing towards the end of the year

Although year-on-year growth in the stock of NFC loans moderated in the last quarter of 2017, the rate for the year as a whole was relatively strong. In the first three quarters of 2017, the growth in loans to NFCs was robust, close to 10%. In the final quarter of the year, their growth rate fell to below 7% year on year, which nevertheless was higher than the corresponding figure for the same period of 2016 (5.2%). Annual corporate credit growth thus remained relatively high, and in comparison with the rates in other EU countries, it ranked fifth (behind Luxembourg, Poland, Hungary and the Czech Republic).

Lending activity maintained broad-based trends, although there were changes to certain long-term trends, most notably a fall in the growth of loans to small and medium-sized enterprises. Trends in the corporate credit market in 2017 were determined by loans to private sector firms, which also saw their rate of growth slowing in the last quarter of the year (to 6.2%). The annual growth rate of loans to state-owned firms remained steady over 2017, and at the end of the year it stood at a relatively high 14.4%.

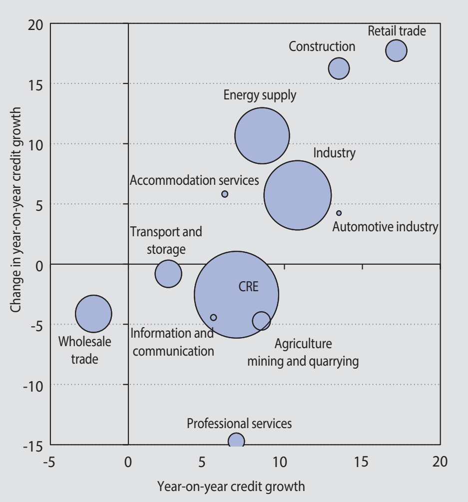
The easing of credit growth was seen across a broad range of loan terms, but with varying rates of slowdown, the highest being in loans with terms of up to one year and more than five years. Investment loans, however, continued to account for an important part of overall NFC credit growth, with an annual growth rate of 8% at the end of 2017.

A notable change was the lower rate of growth in loans to small and medium-sized enterprises, which fell from 10% in the first half of the year to 4.5% in the second half. Large firms were the main driver of credit growth, with the outstanding amount of their loans in the second half of 2017 being 10% higher year on year. The stronger growth in loans to large firms was partly a result of the stable growth in loans to state-owned firms.

Lending to all significant economic sectors continued to increase in 2017. The largest growth was in lending to the sectors of industry, energy supply, and commercial real estate. It was these sectors that accounted for the bulk of NFC credit growth. Other notable contributors were

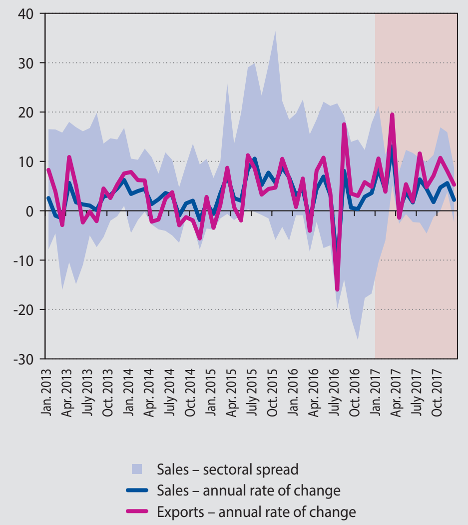
8 *Loans to the NFC sector are understood as loans to NFCs residents in Slovakia.*

Chart 22 Credit growth broken down by economic sector and changes in sectoral shares (percentages)



Source: NBS.
Notes: The horizontal scale shows average annual credit growth for the second half of 2017. The vertical scale shows the changes in annual credit growth of NFCs in percentage points (average for 2017H2, compared with the same period of 2016). The bubble size corresponds to the share of economic sectors in total loans provided to NFCs. CRE – real estate activities; Professional services – professional, scientific and technical activities. The chart does not cover 'Administrative and support services activities', which had a growth rate of 11% and a share of 4% in total loans (representing a change of -40%).

Chart 23 Exports and sales (annual percentage changes)



Source: NBS.

from agriculture and from administrative and support services. The stock of loans to the construction sector also recorded strong growth in 2017; it increased by 10% year on year, after falling in the previous years. Lending to the retail trade sector in 2017 was also marked by large year-on-year increase. All the sectors mentioned above, apart from administrative and support services, contributed to the overall slowdown in NFC credit growth in the last quarter, albeit to differing degrees.

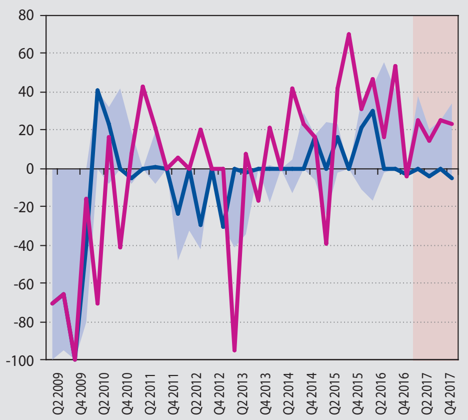
The majority of banks providing NFC loans reported an increase in their corporate loan books, although the rate of growth across banks was relatively heterogeneous. The degree of that divergence, however, as measured by credit growth concentration, remained within normal values.

Strong demand in the credit market was underpinned by the favourable economic situation and low interest rate environment. The only change in credit standards in 2017 was a decline in interest margins. Favourable economic conditions were the main determinant of corporate demand for credit in 2017. The global improvement in macroeconomic trends translated into stable export growth, which was particularly robust in the second half of the year. Another significant factor behind the improving situation in the corporate sector was the strong increase in household consumption, stemming mainly from an especially buoyant labour market. The growth in domestic demand, as well as foreign demand, was reflected in stable corporate sales growth in almost all economic sectors in 2017. Furthermore, the bright economic outlook gave rise to growing optimism, as seen in the upward path of several forward-looking indicators.

Strong corporate demand for loans was reported by a number of banks in the regular bank lending survey. The combination of an economic upswing and relatively low debt servicing costs was reflected in growth across all loan categories, including investment financing, inventory financing, operating capital financing, and debt restructuring financing.

Favourable economic outlooks, together with the corporate sector's optimistic prospects, had the

Chart 24 Changes in NFC credit demand and supply



Source: NBS.
Notes: A positive value denotes an increase in demand / easing of credit standards. A negative value denotes a decrease in demand / tightening of credit standards. The chart shows the min-max spread of banks' credit standards.

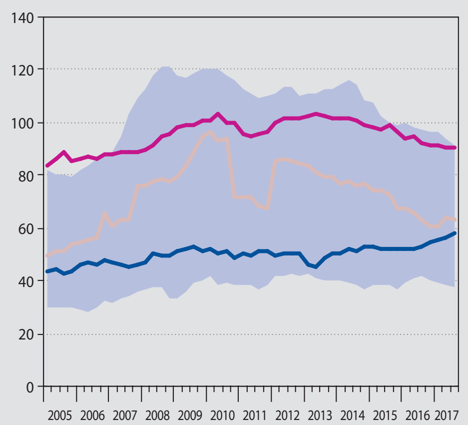
greatest impact on credit supply in 2017. There was no broad-based easing of credit standards, whether in the form of banks' internal criteria or in the loan parameters themselves. One exception, however, was the gradual narrowing of interest margins on loans of average quality.[9]

Interest rates on new loans showed a mixed trend in 2017, as they continued to fall during the first three quarters and then rose in the last quarter. The trend shift in the average interest rate on new NFC loans was, however, within the normal range of volatility. Overall, therefore, as at the end of 2017, the average interest rate on new loans did not show a significant year-on-year change, standing at just over 2%. The rate increase stemmed from rising lending rates for large firms, and consequently there was a narrowing of the gap between rates for SMEs and rates for large firms. The interest rate on the stock of loans continued to decline, albeit more moderately compared with the previous period. It remained the case, however, that the average interest rate on domestic NFC loans (2.4%) was one of the highest in the EU.[10]

Corporate sector debt continued to rise in 2017. Thus the vulnerability of NFCs to adverse economic developments also continued to increase. The year-on-year increase in the stock of NFC loans provided by the domestic banking sector was only the third most significant contributor to the growth in corporate debt. The increases in foreign loans and in the issuance of corporate bonds were more substantial. The result was a relatively large increase in corporate sector debt. The debt-to-equity ratio reached a historical high, as did the debt-to-GDP ratio and the debt-to-annual sales ratio (Chart P33). In the latter two cases, the increases were far more moderate, but steady. It may still be noted, however, that the corporate sector debt was increasing faster than economic activity growth.

Compared with levels in other EU countries, NFC debt in Slovakia is one of the lowest, and compared with levels in other central and eastern European countries, it stands just below the median. More importantly, however, Slovakia recorded higher NFC debt growth in 2017 than did any other EU country, the majority of which saw a reduction in corporate sector debt.

Chart 25 Growth of NFC's indebtedness by country (percentages)



Source: NBS.
Note: Indebtedness is measured by the debt-to-GDP ratio. NFC's total debt is measured by total debt to GDP and refers to the loans and securities on the liability side of the NFC sector. The loans include intra-company loans with resident counterparties and loans from abroad; the most of them can be intra-company loans as well.
CEE – central and eastern European region. The volatility of the CEE median is caused by a change in reporting in the case of one country and by a shorter time series in the case of another country.

9 The bank lending survey distinguishes only two categories of loan – average and riskier.
10 The only countries that reported highest rates were Latvia and those countries that recorded significant credit losses during the crisis years, including Ireland, Portugal, Malta, Cyprus and Greece.

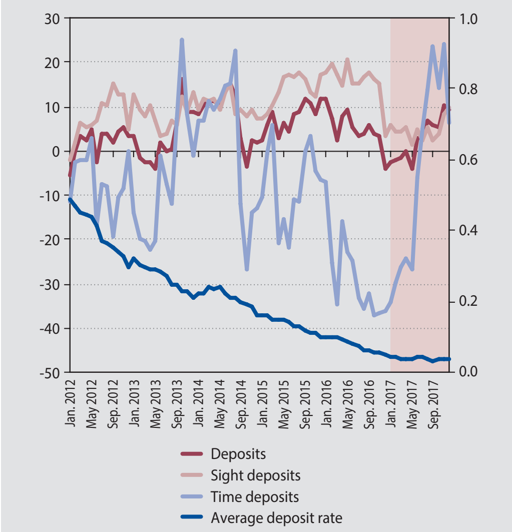
The corporate debt burden remained largely unchanged, but only thanks to the continuing downward trend in interest rates on NFC loans. Falling interest rates managed (along with rising sales) to offset the increase in the corporate debt burden resulting from the rise in NFC debt. If interest rates were set at their 2008 level, the credit burden would be 10% higher than its pre-crisis high. The rise in NFCs' total debt in 2017 was further accompanied by a worsening of their liquidity position. Since the total amount of their liquid assets remained largely unchanged in 2017, it declined as a ratio to their total debt. In that context, the corporate sector's vulnerability to any adverse trends may be said to have increased.

NFC deposits recorded a relatively robust increase towards the end of 2017, including an increase in the stock of time deposits. The amount of funds that firms had on deposit with domestic banks showed a mixed trend during 2017. The first half of the year saw the continuation of the slight downward trend observed at the end of 2016, while the second half of the year was marked by a gradually accelerating annual rate of increase in deposits. The stock of NFC deposits in December was 9% higher year on year. As in 2016, deposit trends reflected favourable developments in corporate sales. The annual rate of change in sight deposits was positive throughout the year, while the rate for time deposits turned positive in the second half of the year, ending three years of almost continuous decline.

Interest rates on corporate deposits remained at almost zero levels in 2017. But while interest rates continued to fall in year-on-year terms, the rate of their decrease gradually moderated. Looking at absolute interest rates, however, they stabilised in the second half of 2017. It is therefore likely that interest rates have bottomed out. In the case of time deposits of certain maturities, a trend shift can even be observed, since their level as at December 2017 was slightly higher than their low of the third quarter.

As a result of the mixed trend in NFC deposits and the stable growth in lending to firms, the loan-to-deposit (LTD) ratio was at higher levels in 2017 than in the previous year. Its average for 2017 was 151%, while its average for 2016 was 143%. In the EU context, the LTD ratio for Slovakia was below the average for all EU countries, which in the second half of 2017 stood at 182%.

Chart 26 Stock of NFC deposits (annual percentage changes) and the average deposit rate (percentages)



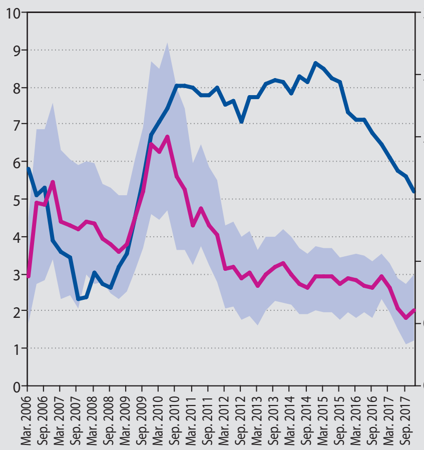
Source: NBS.

The marked upswing in the domestic economy accounted for a significant improvement in non-performing loan trends; nevertheless, optimism could give rise to a build-up of several imbalances that will heighten the risk of future credit risk losses

NFCs' debt servicing capacity increased in 2017, given the sector's continuing strong performance and the fact that debt servicing costs remained subdued. A number of credit quality indicators have long been reflecting this situation. It should also be noted the improvement in credit quality has been broad-based.

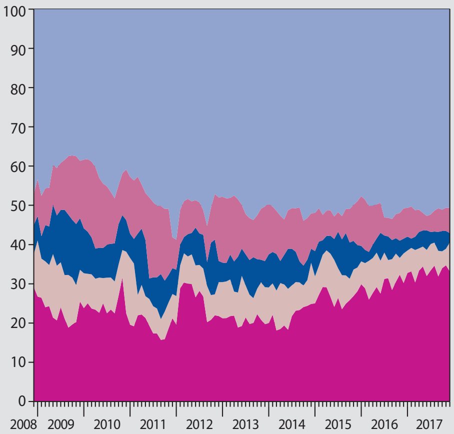
The NPL ratio for total loans to non-financial corporations ended 2017 at 5.2%, which was its lowest level in the post-crisis period and 1.3 percentage points lower than the corresponding figure for the previous year. Several trends lay behind this decrease, a key one being the falling stock of NPLs, which at the end of the year was 14% lower year on year. The NPL stock had been falling con-

Chart 27 The NPL ratio and default rate for loans to NFCs (percentages)



Source: NBS.
Note: The right-hand scale shows the three-month moving average of 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.

Chart 28 NPLs broken down by number of days past due (percentages)



Source: NBS.

tinuously for three years and declined by more than one-quarter over that period. This trend was supported to a significant extent by a decline in the volume of newly defaulted loans and consequent drop in the inflow to the NPL book. At the same time, existing NPLs continued to be settled, written down/off, and sold off. Another cause of the improving NPL ratio was the growth in total loans.

Looking at the breakdown of loans by size, the NPL ratios for all size categories fell sharply. In terms of their actual quality, however, the loans are relatively diverse. Loans of more than €10 million had the lowest NPL ratio (below 2%), behind loans of up to €0.25 million (with an NPL ratio of 7.5%) and other loans (around 9%). It is important to note that with the exception of the NPL ratio for the largest loans (more than €10 million), the ratios for all other size categories – basically all NPLs, since they make up 99.5% of total NFC loans – were above the sectoral average.

As for the breakdown of NPLs by the number of days past due, there was also a broad downward trend, with declines recorded in all categories other than loans non-performing for reasons other than being past due. The strong economic performance of the corporate sector had a notable impact on past due categories covering periods within the range of one day to one year. Loans past due by more than one year made up the largest component of non-performing NFC loans, followed by non-performing loans not past due, whose share has been increasing over time owing only to the slight decline in the volume of these loans.

The same homogeneity is observed in the breakdown of NPLs by economic sector. The NPL ratios for all sectors fell in 2017, with the largest contributions to the overall decline coming from commercial real estate, construction, industry, wholesale trade and retail trade. As for NPL ratios within sectors, however, there is considerable heterogeneity, ranging between 1% and 13%. The sectors with the worst NPL ratios are other activities (13%), accommodation services (10%), food service activities (8%) and wholesale trade (8%). At the other end of the scale are transportation and storage (1.3%), energy supply (2%), and administrative services (2%).

The commercial real estate (CRE) sector remains in an expansionary phase in which strong demand is followed by relatively intensive new construction. Towards the end of 2017 this trend was reflected in lending to the sector. The risk of imbalances emerging is still an issue

The CRE market is a significant source of credit risk. Taken together, loans to the CRE sector and loans for building construction (a sub-sector of the construction sector) make up the largest share of NFC loans for both total and non-performing loans. At the same time, the CRE sector is highly vulnerable to any adverse economic developments. Several trends show that this sector is in an expansionary phase. The risk of imbalances emerging is therefore a real one, and it may be further accentuated by the cross-border dimension of the CRE market.

In the residential segment of the CRE market, sentiment remained optimistic in 2017, even though the market's growth moderated during the year. Favourable labour market trends along with low interest rates on housing loans were reflected in demand for new build flats in Slovakia's capital city. Sales of flats remained strong, albeit slightly lower in year-on-year terms. The slowdown in activity was seen on the supply side, in a lower number of new flats being advertised for sale. It therefore appeared that property developers were becoming more cautious. Prices of unsold and sold new builds continued to rise (more so in the part of the market focused on residential real estate).

The economy's strong growth and favourable outlook underpinned the maintenance of trends in other segments of the CRE sector. Developments indicated a continuation of the market's expansionary phase. Optimism in the corporate sector supported the continuing strong demand for office space. Demand-side activity in the form of maintaining elevated net absorption of office space was reflected in a further decline in the vacancy rate for office space, which reached new historical lows. This triggered a supply-side response in the form of new property developments, two-thirds of which are expected to be finished in 2018. This new construction activity is relatively substantial, considering that the total area of premises to be finished in 2018 is on a par with that in 2007. Nevertheless, the impact on the vacancy rate should be only moderate, since 60% of the space in question has already been pre-sold.

In both the retail segment and industrial and logistics centres segment, the favourable trends stemmed from rising household consumption, as well as from the continuing levels of foreign demand and arrival of large investors. The industrial and logistics centres segment is experiencing a particularly favourable period, with the respective vacancy rate, like the rate for offices space, at historically low levels leading to a high intensity of construction activity.

Investment activity fell short of its all-time high of 2016, with the total volume of transactions for 2017 standing at €522 million (compared with 853 million in 2016). The largest part of that investment was accounted for by industrial and logistics centres. The high demand, however, had a negative impact on expected prime yields in all segments of the market. Compared with the yields offered in neighbouring countries, those in Slovakia remained attractive.

The end of 2017 saw lending to the CRE market pick up again after its subdued trend in the second half of 2017. The annual growth in the stock of loans to the CRE sector fell in the second half of 2017 from almost 13% (the average for the first half) to 6%. The likely cause of this decline was the fact that several major property developments were announced in 2016, but no similar level of activity was seen in 2017. The situation changed towards the end of the year, however, when the banking sector provided financing for a number of property developments. As a result, the month-on-month and quarter-on-quarter rates of change in CRE lending were approaching 2016 levels, while the annual growth rate stood at 6% (down from 10% in 2016).

Construction activity was strong in both the commercial segment and residential segment (flats and houses). The rising trend in new construction was also reflected in the stock of loans for building construction – a sub-sector of the construction industry – which in the second half of 2017 recorded average year-on-year growth of 17.5%. Increasing demand pressures therefore pushed up prices of construction work and materials.

In the context of the economy's upturn, the quality of the CRE loan book continued to improve in 2017. At the year-end the NPL ratio for total loans to the CRE sector stood a 6.1%, which was 20% lower year on year.

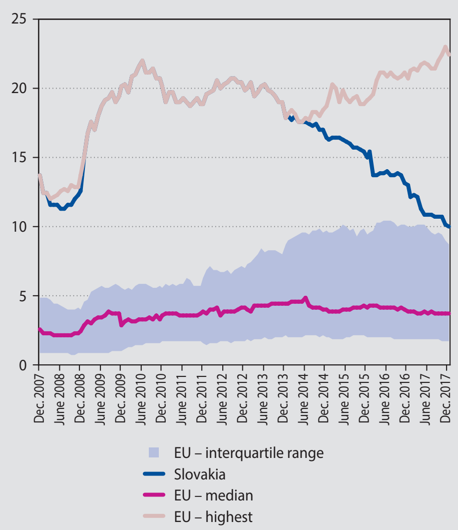
3.1.2 SECURITIES

The volume of investment in Slovak government bonds continued its downward trend

The Slovak banking sector's holdings of Slovak government bonds fell in 2017, by 18%, year on year, thus maintaining a downward trend that has been almost continuous since 2012. These securities thus made up almost 73% of banks' total bond holdings as at December 2017 and 10% of their total assets, an all-time low share that is similar to the pre-crisis level of 2008. Within the EU, the banking sectors in Hungary, Romania and Poland have far higher shares of domestic sovereign debt.

The Slovak banking sector's holdings of foreign government bonds also declined, due largely to significant disposals of Italian government bonds in March and December 2017. On the other hand, holdings of Polish and Czech government bonds increased slightly. Among foreign government bonds, Polish bonds ended the year with largest share of Slovak banks' total bond holdings (3.6%), followed by Italian bonds (3.4%) and Czech bonds (2.3%) From the perspective of the banking sector, holdings of foreign government bonds remain of minor significance. Although the ratio between these securities and own funds at certain smaller and medium-sized banks might be quite high, the portfolios are diversified in all cases.

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



Source: ECB SDW.

Banks' bond issues in the first half of the year continued to comprise mainly mortgage bond issues

Banks in Slovakia continued to issue mortgage bonds in 2017, since they are required to maintain the ratio of at least 70% between total mortgage bonds issued and the outstanding amount of mortgage loans. All the mortgage bonds they issued during the year had a fixed or zero coupon and relatively long maturities, particularly among those issued in the first half of the year (when some of the maturities were between 8 and 10 years). This activity probably reflected banks efforts to secure long-term funding at what remain relatively low charges.

In the second half of the year, however, there were only four mortgage bond issues. This drop may have been a response to a change in the legislative framework: as from 1 January 2018 the minimum requirement for the coverage of mortgage loans with mortgage bonds was scrapped, with mortgage bonds to be phased out and replaced with standard covered bonds.[11] This transition is likely to have an impact on several aspects of the bonds issued as well as on the present mortgage bond market (with regard to the volume and frequency of bonds issued, the number of issuing banks, etc.).

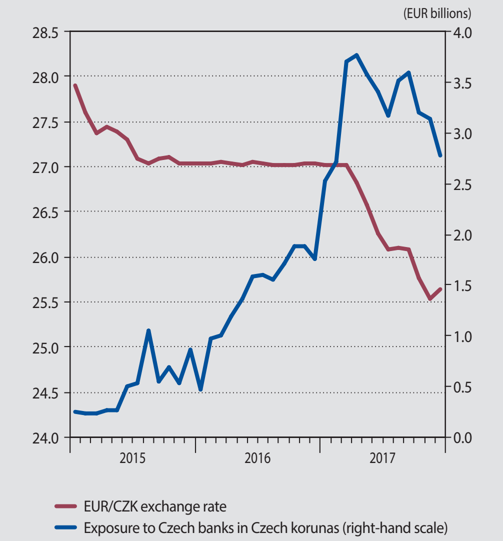
3.1.3 THE INTERBANK MARKET

The interbank market remained relatively volatile; some banks probably took advantage of the Czech central bank's monetary policy operations in order to increase their income

The interbank market remained relatively volatile in 2017, and banks continued to use wholesale operations mainly for the management of short-term liquidity.

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

Chart 30 Exposures to Czech banks and the EUR/CZK exchange rate



Source: NBS.

From the end of 2016 there was a quite notable rise in the volume of loans provided to non-resident banks, as certain resident banks transferred surplus funds to Czech banks (mostly in intragroup transactions) over a period that extended approximately from December 2016 to March 2017. From November 2013 the Czech central bank, Česká národná banka (ČNB), was using foreign exchange interventions as an instrument for easing monetary policy, by preventing the Czech koruna's exchange rate from appreciating below 27 CZK to the euro. From December of 2016, banks were probably already expecting this monetary policy instrument to be discontinued, and in anticipation of consequent koruna strengthening, they deposited more than €2 billion with ČNB. ČNB ended the exchange rate floor on 6 April 2017, after which the Czech koruna followed a continuous appreciation trend.

3.1.4 CONCENTRATION RISK AND LIQUIDITY RISK

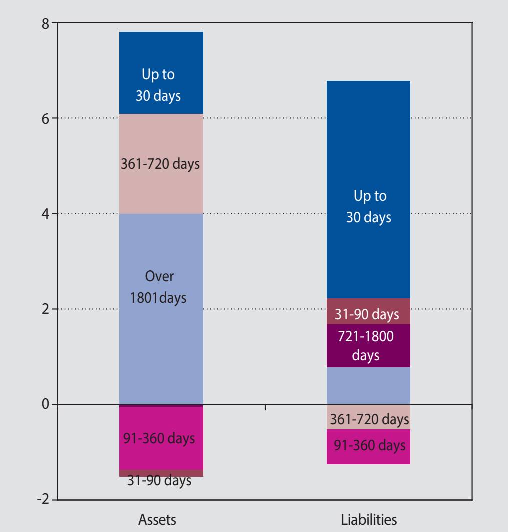
The level of concentration risk remained largely unchanged during 2017

Concentration is a significant structural risk to the domestic banking sector. Sectoral concentration in 2017 was similar to its level in the previous year. This is because lending growth was relatively broad-based across economic sectors. Therefore the sectors accounting for the largest shares of the banking sector's NFC loan book continued to be commercial real estate, industry and energy supply. However, sectoral concentration is related to the presence of significant customers, or groups of closely-linked customer, to whom the banking sector has significant exposure.

The slow deterioration of banks' liquidity positon continued its long-running trend in 2017

The maturity mismatch between assets and liabilities in the banking sector continued to increase gradually in 2017. What had the largest impact on the maturity structure of banks' balance sheets were growth in long-term loans to households and the upward trend in current account balances. On the asset side the largest increases in 2017 were in items with a residual maturity of more than five years, or one to two years, but on the liability side it was liabilities repayable within seven days which increased the most. The continuation of this trend, irrespective of the stable nature of current accounts, is exacerbating systemic liquidity risk fundamentals in the Slovak banking sector. Given the gradual increase in the maturity mismatch between assets and liabilities and the relative decline in investment in liquid assets, it is crucial that the banking sector's short-term

Chart 31 Changes in the volume of assets and liabilities in 2017 broken down by maturity (percentages)



Source: NBS.

liabilities are sufficiently stable. It is therefore positive that the sector's loan-to-deposit ratio (including mortgage bonds) is still averaging less than 1.

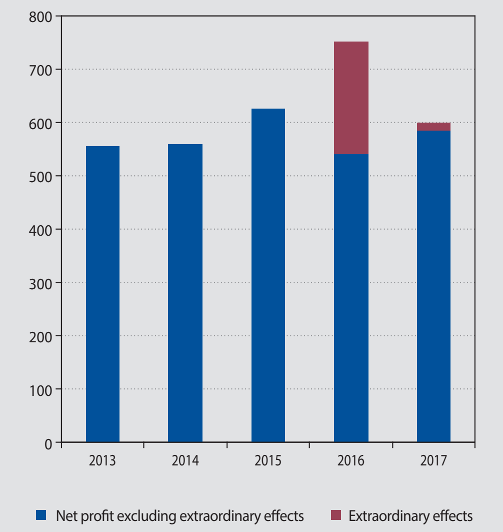
3.2 FINANCIAL POSITION OF THE BANKING SECTOR

Leaving aside certain one-off effects, the banking sector managed to increase its profit moderately even while interest margins were falling

Disregarding several extraordinary effects[12] that had a positive impact on banks' profitability, mainly in 2016, the sector's aggregate net profit increased in 2017 by 8.1%[13] year on year. Without the deduction of those extraordinary items, the net profit would be lower by 20%. Almost all banks reported a profit for 2017.

From a longer-term perspective, the banking sector has in recent years maintained relatively stable profitability. Its profit for 2017 only slightly (by 2%) exceeded the average for the years from 2013 to 2016. Essential to maintaining this trend at a time of interest margin compression has been robust lending activity and the downward impact of the economic upturn on the credit risk cost ratio.

Chart 32 Net profit of the banking sector (EUR millions)



Source: NBS.
Notes: The most notable one-off effects reported by the banking sector 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.

The sector is recording this net profit trend while rapid growth is largely responsible for the increase in its balance sheet total, and the sector's annual return on assets did not change in 2017 (remaining at 0.79%) and even declined in comparison with the average for the period 2014-2016 (0.95%).

Net interest income continued to fall and had a negative impact on bank profits in 2017, albeit to a lesser extent compared with the previous year

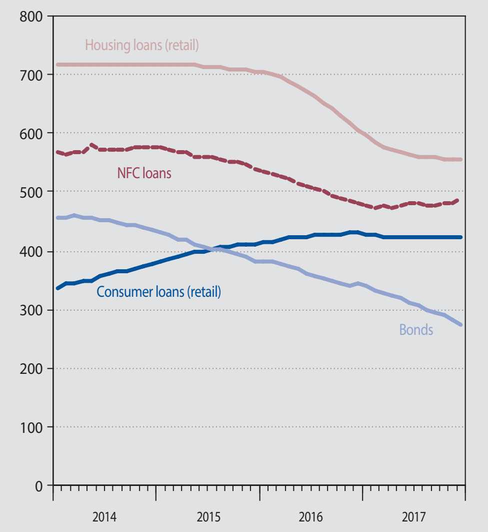
The factor that had the largest negative impact on the banking sector's profit in 2017 was interest margin compression. Despite robust growth in retail loans, as well as the gradual acceleration of NFC credit growth, banks' net interest income continued to decline. But compared with 2016, when this income fell by 5.3% year on year, its decline moderated in 2017, to 2.8%. In regard to these figures there are several factors to note:

1. The rate of decrease in interest income from housing loans eased significantly, from 14.1% in 2016 to 8.4% in 2017. Moreover, developments in the second half of 2017 imply that the decline in this income will continue to moderate. This trend has been underpinned by the gradual fading of the impact of the sharp fall in interest rates on new housing loans which occurred between February and May 2016 (from 2.5% to 1.9%). That reduction was subsequently passed on to a large part of the banking sector's housing loan book via a marked increase in refinancing activity. Since then, however, interest rates on new housing loans have remained largely unchanged (in December 2017 they stood at 1.8%), and so interest income is expected to stabilise after its recent slump.
2. The increase in interest income on NFC loans represented a notable turnaround. In both 2015 and 2016 interest income from NFC loans was on a downward trend (in 2016 it fell by as much as 11.4% year on year), but in 2017 it recorded a moderate increase of 1.8%, owing mainly to the pick-up in NFC credit growth in the first three quarters of 2017. In addition,

12 A detailed analysis of the exceptional effects that affected the banking sector's 2016 profit is provided in the Analysis of the Slovak Financial Sector for 2016. They consist mainly of the sale of holdings in VISA Europe company and extraordinary income from dividends.

13 The sector's net profit for the year also includes the financial results of entities that ceased operation in 2017.

Chart 33 Interest income broken down by segments (EUR millions)



Source: NBS.
Notes: The chart shows the cumulative interest income in each segment for the past 12 months. The data are for the banking sector as a whole, but in order to ensure consistency in the time series, they do not include foreign bank branche which began operation in 2016.

the rate of decline in returns on the NFC loan book became less pronounced.

3. A third factor that supported the improving trend in net interest income was the continuing fall in the cost rate of retail funds, at a similar pace to that seen in previous years. This rate, in contrast to the cost of NFC funds rate, had still not bottomed out, falling from 0.76% in 2016 to 0.61% in 2017.
4. On the other hand, interest income from consumer loans, the main driver of net interest income growth until 2016, stopped rising in 2017, and in December of that year it even fell, by 1.1% year on year. Although these loans continued to record strong growth in 2017, the continuing decline in consumer loan interest rates is beginning to outweigh the impact of that growth.
5. Falling interest income from their bond portfolios also had a negative impact on banks' net interest income. The long-running downward trend in returns on these assets was compounded in 2017 by a significant decline in banks' holdings of bonds, with part of the portfolio being gradually replaced with customer loans.

Profitability was boosted by a significant fall in provisioning costs for NFC loans

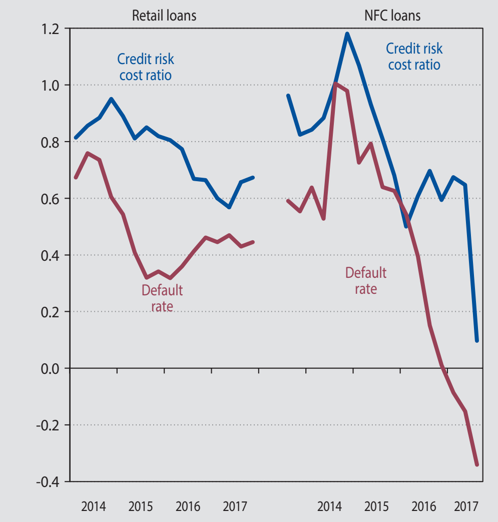
In 2017, as in the previous year, credit risk costs maintained a downward trend that mitigated the adverse impact of interest margin compression. Their decline was largely accounted for by falling costs of NFC credit; the net default rate for NFC loans continued to fall in 2017, moving further into negative territory (i.e. disposals of non-performing loans exceeded the additions to them). The fall in the credit risk cost ratio in the fourth quarter of 2017 was the largest of the year, and it was observed in several banks. Bank's not only recorded a decline in provisioning costs,

Table 2 The most significant factors behind the change in net interest income

		2016	2017	
Overall change		**-5.3%**	**-2.8%**	
Main factors behind change	Fall in returns on retail loans	-10.0%	-11.1%	▼
	Fall in returns on NFC loans	-4.8%	-1.4%	▲
	Rise in retail loan stock	7.8%	8.1%	▬
	Rise in NFC loan stock	1.7%	2.6%	▬
	Fall in cost of retail funds rate	2.3%	2.3%	▬
	Fall in bond holdings	-0.6%	-2.8%	▼
	Fall in bond returns	-1.4%	-1.2%	▬
	Other factors	-0.3%	0.6%	▬

Sources: NBS.
Notes: The data are for the banking sector as a whole, but in order to ensure consistency in the time series, they do not include foreign bank branche which began operation in 2016.

Chart 34 The credit risk cost ratio and net default rate (percentages)



Source: NBS.
Note: The credit risk cost ratio is calculated as the ratio between net provisioning for loan losses and net costs of write-offs and sales of loans for the previous 12 months and the average volume of loans for that period. The default rate is calculated as the change in the amount of default loans net of write-offs and sales of loans and the average volume of loans for the previous 12 months.

but also income from the reversal of reserves for litigation costs, although that may be treated only as extraordinary income.

In contrast to NFC credit risk costs, retail credit risk costs increased slightly. This was caused mainly by an increase in the consumer loan default rate, a trend that began back in 2016 and came to an end in 2017.

The way provisions are calculated underwent a change from January 2018, due to the start of the transition to IFRS 9, a new accounting standard. This change was analysed in more detail in NBS's November 2017 *Financial Stability Report*. For Slovak banks, the transition to the new standard is expected to increase their aggregate provisioning by around 14%. This change, however, will not affect the sector's profitability in 2018 and its impact on banks' own funds is expected to be gradual.

The banking sector's solvency and leverage[14]

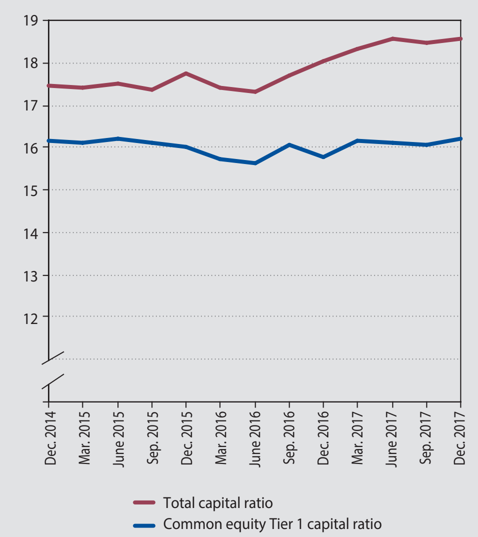
The Slovak banking sector's total capital ratio maintained its moderate upward trend in 2017, increasing from 18.0% as at December 2016 to 18.6% as at December 2017. This resulted mainly from an increase in the sector's retained earnings ratio. With its total capital ratio having also increased in 2016, the sector's capital adequacy increased by more than 1 percentage point between the end of 2015 and end of 2017, after an extended period of little change.

As well as increasing their total capital ratio, several banks continued the process of optimising their capital structures. Since these included historically high shares of the highest quality capital, common equity Tier (CET) 1 capital, banks were able to replace part of that component with lower-quality capital. As a result, the CET1 ratio increased only slightly in 2017, from 15.8% to 16.2%. Since it was first introduced in 2014, this ratio has remained relatively stable. It is therefore clear that the increase in banks' capital adequacy in 2017 stemmed largely from an increase in their lower-quality capital.

On the positive side, however, the last quarter of 2017 saw an increase in the volume of CET1 capital of those banks which reported the lowest CET1 ratios as at the year-end (above 13%).

Besides its higher solvency ratios, the banking sector also reported an increase in its leverage ratio, which rose from 8.1% at the end of 2016 to 8.3% at the end of 2017. This ratio expresses the

Chart 35 Capital ratio trends (percentages)



Source: NBS.

14 *This part of the Analysis is based on preliminary data, since the relevant statements from banks had not been finalised when the Analysis was being produced.*

ratio of Tier 1 capital to total (non-risk weighted) exposures. There is not as yet a mandatory minimum level for this ratio, but one is expected to be set at 3%.

The rise in the banking sector's total capital ratio, including the contribution from banks with the lowest total capital ratios, is a welcome development given that capital requirements are gradually increasing. In response to elevated cyclical risks, the countercyclical capital buffer (CCyB) rate was increased to 0.5% from August 2017 and is due to be raised to 1.25% with effect from August 2018.

CHAPTER 4

THE INSURANCE SECTOR

4

4 The insurance sector

Leaving aside one-off effects in 2016, the insurance sector increased its aggregate profit in 2017 despite an increase in special levy costs. The sector's solvency fell in March and remained largely unchanged for the rest of the year. Gross premiums written increased in both life and non-life insurance

The insurance sector's aggregate net profit for the first nine months of 2018,[15] adjusted for one-off effects, was higher year on year by 8.4%, at €135 million. A number of factors lay behind that increase, the main one being the above-mentioned one-off effects from mid-2016 (dividend payments from subsidiaries and the reversal of reserves for litigation). If these effects were not taken into account, the net after-tax profit would be lower by 12.4% year on year.

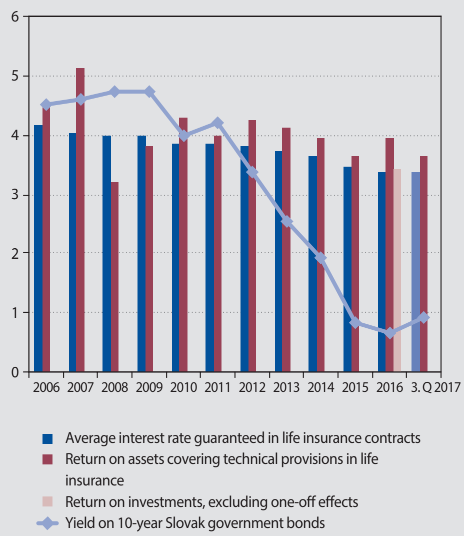
The sector's net and gross profits recorded different growth rates, owing mainly to a marked variation in current and deferred tax and an increase in special levy costs. The sector's gross profit net of one-off effects was fully 30% higher year on year. This result was supported by improvements in both the technical result and financial result. The sector's profit was dented by the expansion of the special levy on insurers, which as from 1 January 2017, under an amendment to the Insurance Act (No 39/2015 Coll.), was imposed on all categories of non-life insurance (whereas previously it had applied only to motor third party liability insurance). The difference between the net and gross profit was, however, due in large part to substantial variation in current and deferred tax. The sector's annualised return on assets (ROA)[16] compared with September 2016 increased to 2.64% (the figure for September 2016 was unchanged at 2.5% after adjustment for one-off effects, 2.88% without adjustment).

In life insurance, the aggregate technical result maintained the upward trend seen in 2016, while in non-life insurance it remained flat. The financial result increased in both life and non-life insurance but at different rates. The technical result in life insurance (adjusted for investment returns in unit-linked life insurance) rose by €22 million year on year. Its growth was attributable to a decline in benefits paid, as well as to a fall in provisions for life insurance as result of one-off effects. Thus the technical result maintained its upward trend or, in other words, maintained its previous trend of decreasing negative values. The financial result in life insurance (excluding unit-linked insurance) increased by 2.4% to €79 million. For unit-linked insurance (ULI), the financial result for the first nine months of 2017 rose by 72.6 % year on year (from almost €27 million to €46 million).

The technical result in non-life insurance remained largely unchanged in 2017, which may be seen as a natural correction after its strong growth in 2016. The financial result in non-life insurance ended the third quarter 12.9% higher year on year, at €24 million.

Annualised investment returns in life insurance other than ULI fell gradually over the course of the year, to stand at 3.64% at the end of

Chart 36 Comparison of guaranteed returns and actual returns (percentages)



Source: NBS.
Note: The data for the average guaranteed rate in 2017 were not yet available and were therefore imputed with the corresponding data for 2016.

15 The data as at end-2017 were not available at the cut-off date for this Analysis.
16 Only the ROA ratio is stated here, not the return on equity ratio. This is because the ROE was skewed in the first quarter by a decrease in the sector's equity.

the third quarter. The insurance sector is only just managing to cover the returns guaranteed under life insurance contracts, estimated to be 3.38%.[17]

Insurers saw their overall solvency decline in 2017, although they continued to meet the minimum capital requirement. The insurance sector's solvency capital requirement (SCR) coverage ratio fell from 230% at the end of September 2016 to 211% at the end of September 2017, but remained largely unchanged from the end of March 2017, when it stood at 208%. In March, the SCR coverage fell quite sharply, mainly because certain insurers with high SCR coverage ratios made sizeable returns of capital to shareholders. Likewise, the sector's minimum capital requirement (MCR) coverage ratio fell from 578% at the end of September 2016 to 540% a year later. The situation across individual insurers can be described as heterogeneous, with SCR coverage ratios ranging from 119% to 338% and MCR coverage ratios ranging from 138% to 947%.

Gross premiums written increased in all the main life insurance classes

Gross premiums written in traditional life insurance[18] increased year on year, while benefits paid fell. Aggregate gross premiums written amounted to €561 million as at September 2017, more than 6% higher year on year. The growth was driven by insurance with profit participation and, to a lesser extent, by other life insurance products.

In unit-linked insurance, gross premiums written increased by a substantial 21%, to €176 million at the end of September 2017. Benefits paid increased more moderately than gross premiums written, by 13%.

Relatively strong growth in gross premiums written was also observed in other classes of life insurance.[19] The increases in benefits paid were, however, heterogeneous across classes.

Net expenses incurred in life insurance rose moderately in 2017, by 1%. This increase was broad-based across all life insurance classes apart from unit-linked insurance. Reinsurers' share of life insurance was low, at less than 3%.

The insurance sector also saw activity pick up in non-life insurance and in inwards proportional reinsurance.[20] The combined ratio in motor insurance improved slightly in 2017, but owing to the special levy on premiums, it was significantly higher than 100%

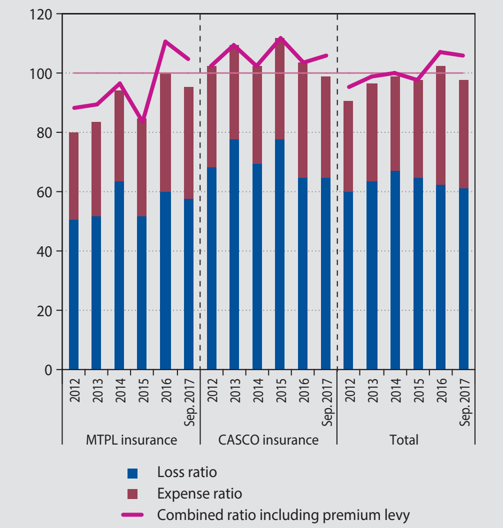
Gross premiums written in non-life insurance increased by 6.7% year on year, to €809 million. The growth rate was almost the same as that in 2016 and was based largely on increases in the three major classes of non-life insurance: motor third party liability insurance (9.6%), comprehensive motor vehicle insurance/CASCO (10%), and property insurance (a far more modest 2.7%). Across the other classes of non-life insurance, the year-on-year increase in gross premiums written stood at 2%. The share of reinsurers in gross premiums written in non-life insurance fell to 27%.

The combined ratio in motor insurance[21] improved in 2017, but after taking into account the impact of the special levy on premiums, it ended the period significantly above the 100% threshold. For most of 2016, both the MTLP and CASCO classes of motor insurance had a combined ratio higher than 100% (a figure above 100% indicates an underwriting loss). In 2017 the situation improved, and the combined ratio for motor insurance as a whole stood at 97.4% as at September 2017. After taking into account, however, the special levy on non-life insurance premiums (extended in 2017 to all classes of non-life insurance) and contributions to the Slovak Insurers' Bureau, the combined ratio for motor insurance stood at 105.4% (the combined ratio excluding the impact of the special levy's expansion was 101.8%).

The combined ratio in property insurance increased year on year, but only due to the imposition of the special levy on premiums. The combined ratio excluding the premium levy remained unchanged at 75%, while the ratio including the levy rose to 81%. In all other non-life insurance classes, the combined ratio was well below the 100% threshold even after taking the levy into account.

17 The data for the average guaranteed rate in 2017 were not yet available and were therefore imputed with the corresponding data for 2016.
18 Under Solvency II, this category includes "insurance with profit participation" and "other life insurance".
19 Under Solvency II, this class includes health insurance, health reinsurance, and annuities arising under insurance contracts.
20 Under Solvency II inwards proportional reinsurance is part of each class of non-life insurance.
21 The most recent gross combined ratio data are as at the end of 2016.

Chart 37 The loss ratio, expense ratio and combined ratio (including special levy on premiums) in motor insurance (percentages)



Source: NBS.
Notes: The combined ratio including premium levy is calculated similarly as the combined ratio in that the amount of technical claims paid is increased by contributions to the Slovak Insurers' Bureau (SIB) and by changes in provisions for liabilities to the SIB, while the amount of premiums earned is reduced by transfers to the Slovak Interior Ministry (paid until 31 December 2016) and the special levy on premiums (from 1 January 2017).
The data for MTPL insurance until 2015 are adjusted to include carrier's liability insurance, which under Solvency II (post-2015) is included in MTPL insurance.

The rate of increase in technical provisions was higher in 2017 than in 2016. As for the investment profile of technical provisions, the share of bonds investments declined

The increase in technical provisions was greater in 2017 than in the previous year and it was spread between life and non-life insurance. The year-on-year increase in the book value of technical provisions in the insurance sector as at September 2017 was 3.5%, which was 0.5 percentage point more than the corresponding figure for the previous year. In life insurance excluding unit-linked insurance, technical provisions increased by 1.4%, and in unit-linked insurance they rose by 8%. In non-life insurance, technical provisions rose by 5.7% after recording a year-on-year decline in September 2016.

In life insurance (excluding ULI), the regulatory value of technical provisions fell by 5.2% year on year, while in non-life insurance it increased by the same margin. Technical provisions in health insurance remain negative, implying that this insurance class is highly profitable.

Of the assets invested by insurers, 77% cover liabilities under life insurance and 19% cover liabilities under non-life insurance. In life insurance, assets covering technical provisions for traditional life insurance contracts amount to 74% of the total assets invested.

The share of technical provisions invested in bonds fell year on year, while the shares invested in other areas rose. Bond investments fell from 42% to 36% as a share of technical provision investments, with most of that decline occurring in traditional life insurance and non-life insurance. Corporate bonds accounted for 27% of the total investments as at September 2017, down by 1 percentage point year on year. By contrast, investments in investment funds saw their share increase (from 19% to 20%), as did investments in money market funds and deposits (from 4% to 5%), in real estate (from 3% to 4%), and in mortgages and loans (from 0% to 3%). Investments of technical provisions in real estate and in mortgages/loans are concentrated among a small group of insurers.

Looking at the geographic breakdown of technical provision investments, the majority were domestic. Of the technical provisions invested in government bonds, 69% were invested in Slovak government bonds (down by 4 percentage points year on year), while 39% of corporate bond investments were domestic (down by 3 percentage points year on year). As for investments in equities, 79% were in domestic issues (down by 1 percentage point). Accounting for ten times smaller shares were Dutch, French, Austrian, US, Czech, Luxembourgian, Polish, Italian and German investments. The shares of other investments according to nationality are not appreciable.

The investment portfolio's quality changed only slightly in 2017. Government bonds assigned to credit quality step 2 made up 80% of the total sovereign debt portfolio, while in the corporate bond portfolio, bonds assigned to step 1 and step 2 each accounted for a fifth of the total and bonds assigned to step 3 had a share of 45%. In both categories there was a shift towards investing in higher-quality bonds.

CHAPTER 5

FINANCIAL MARKET SEGMENTS FOCUSED ON ASSET MANAGEMENT

5

5 Financial market segments focused on asset management

5.1 The old-age pension scheme

Record increase in number of savers in recent years; NAV growth driven by higher inflow of contributions

In 2017 more than 50,000 people joined the old-age pension scheme, a largely compulsory defined contribution scheme that constitutes the second pillar of the Slovak pension system and is operated by pension fund management companies (PFMCs). This annual increase was by far the highest for eleven years, and it marked a further strengthening of an upward trend which began in mid-2015. The number of people who have joined the scheme since its most recent 're-opening' in the first half of 2015 is already around two-thirds of the number who left the scheme at that time. The number of savers enrolled in the second pillar as at 31 December 2017 was 1,425,843.

The net inflow of new savers in 2017 was somewhat unevenly spread across the PFMCs. In one PFMC, the number of savers increased by almost 10%, while in another four it rose by between 2% and 4% and in one more it declined slightly. As regards the types of pension funds savers are enrolling in, the longer-term trends of strong demand for growth-focused funds and, even more so, for index funds continued in 2017, as did the gradual and moderate shift away from guaranteed bond funds. The share of mixed pension funds stopped falling, but remained marginal.

The net asset value (NAV) of old-age pension funds as at 31 December 2017 was €7.6 billion. That represented a year-on-year increase of €657 million, which in both absolute and relative terms was similar to the increase in 2016. It was slightly higher only because of the increase in the volume of contributions credited to the old-age pension scheme in 2017, which amounted to €525 million. The increase in new inflows may be explained by several factors. First, the rate for mandatory contributions to the second pillar was raised from 4.0% to 4.25% of the assessment base, as part of a phased-in increase that is due to be completed in 2024 with the rate set at 6%. Second, the amount of credited contributions was also boosted by increases in the number of savers in the scheme and in the nominal income of Slovak households. Returns on old-age pension funds accounted for almost one-quarter of the increase in their NAV.

Among these funds, index pension funds recorded by far the largest relative annual increase in NAV, at almost fifty per cent. This largely reflected the fact that many savers switched their personal pension accounts from other types of pension fund (mainly bond funds) to index pension funds. As a result of this trend, the share of bond pension funds in the total NAV of pension funds fell by three percentage points in 2017, to just below 80%, while the share of index funds increased to 8% and it is rapidly catching up with the share of equity funds (12%).

The basic composition of pension fund assets saw relatively few significant changes in 2017, but a number of long-running trends came to an end

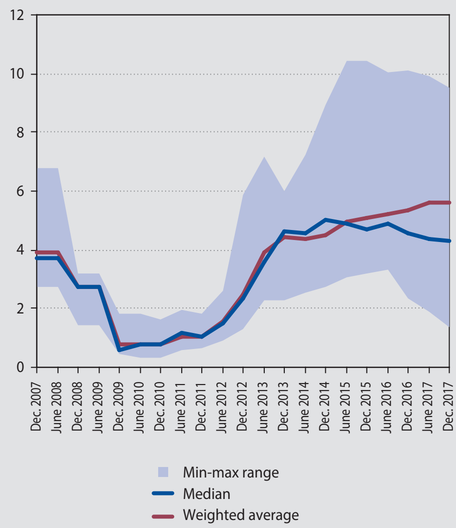
But for developments at the end of the year, the aggregate asset structure of bond pension funds remained almost unchanged in 2017 with respect to the principal asset classes. Some smaller disposals of bond instruments from these funds took place in the final months, and therefore the share of these instruments in the funds' assets ended the year at 80%, 2 percentage points lower year on year. The proceeds from these transactions were deposited with banks. The bond holdings of bond pension funds had been rising for several years, and these disposals marked the end of that trend.

A fall in bond investments and increase in bank deposit investments was also observed in equity pension funds. In this case, however, the shift between investment types was more pronounced and occurred over the whole course of the year. There was also a halt to the prolonged rising trend in these funds' equity exposure, as the share of equity holdings in their NAV remained unchanged during the period under review, at just below 70 %. On the other hand, the decrease in the bond holdings of equity pension funds was part of a long-running trend.

In mixed pension funds, the aggregate equity holdings increased over the course of 2017, from 35% to 44%. Besides reflecting the targeted purchasing of greater equity volumes (mainly shares/units of equity-focused investment funds), this increase also stemmed from repricing effects, reflecting notable rises in equity indices during the period under review. The increase in the equity component was accompanied by a commensurate fall in the bond component. The assets of index pension funds continued to consist almost entirely of indirect investments in equity instruments.

Some pension funds saw further expansion of the already substantial use of interest rate derivatives. These derivatives comprised swaps and futures purchased as a hedge against interest rate increases. Currency derivatives were included in the holdings of certain pension funds, but to a lesser extent than interest rate derivatives.

Chart 38 Distribution of the average residual maturity of bonds across pension funds (in years)



Source: NBS.

In the first half of 2017 the weighted average residual maturity of debt securities maintained its previous slow growth trend, increasing by a moderate 0.3 year. In subsequent months, that average remained at a constant level of 5.6 years. The increase in the first six months was driven by only three bond pension funds. But among the other pensions funds, constituting the majority, the average residual maturity of each fund's bond component fell by between one month and one year. Thus the gap between the weighted average and median of the residual maturity indicator widened still further, after the median had already been in moderate decline for some time. After taking into account that some of the bond holdings of bond pension funds are measured not at fair value, but at amortised cost, it may be noted that the aggregate duration, i.e. interest rate sensitivity, of these holdings did not change during 2017 even in weighted average terms. The stability or, in many individual cases, decline in the maturity and duration parameters seems to have reflected to some extent gradually shifting expectations regarding the future path of interest rates.

The interest income potential of pension funds also fell slightly in 2017. Although interest rates were no longer on the downward trend seen in previous years, the replacement of older maturing bonds with new bonds meant that the average coupon rate on pension funds' bond holdings declined. The average interest rate on pension funds' investments in time deposits at banks also fell year on year, from 0.65% to 0.4%.

In the breakdown of debt securities by the issuer's economic sector, the share of bonds issued by non-financial corporations reached a historical high. By the end of 2017 these bonds amounted to 30% of the total volume of pension funds' holdings of bond instruments. Government bonds, which have long constituted the largest share, continued to account for more than 40% of the total, and bonds issued by financial corporations made up the rest.

In previous years, the share of Slovak assets in pension funds' total NAV, or in the subset of pension funds' interest rate instruments, had been falling, but in 2017 it rose slightly owing mainly to an increase in investments in deposits at Slovak banks. Holdings of bonds issued by issuers from non-OECD countries have stabilised.

The sector's foreign exchange position arising from non-derivative instruments increased only marginally in 2017, to stand at 6% of the NAV at the end of the year. Nor did any pension fund see a significant change in the share of foreign currency denominated assets in its NAV.

The overall weighted average nominal return on old-age pension funds for 2017 was slightly lower compared with the previous year. Given the increase in inflation, the year-on-year difference in real terms was even more pronounced. The average annual nominal return on bond pension funds (the major type of pension fund) was 1.1% as at 31 December 2017. The average return on each of the three other types of pension ranged between 5.5% and 6.7%.

The aggregate annual profit of PFMCs increased in 2017 by 14% year on year, to €16.4 million. The profit growth was driven mainly by a 6% increase in fee and commission income, along with a fall in fee and commission expenses. Income from account management and administration fees increased, while income from fees linked to fund performance declined slightly. In 2017, as in previous years, all PFMCs made a profit.

5.2 THE SUPPLEMENTARY PENSION SCHEME

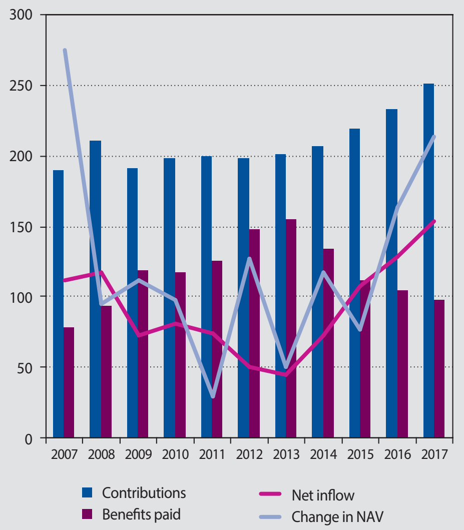
The annual increases in the number of participants in the scheme and in the volume of assets under management were the highest for ten years

In the supplementary pension scheme – a voluntary defined contribution scheme that constitutes the third pillar of the Slovak pension system and is operated by supplementary pension management companies (SPMCs) – the number of participants increased in 2017 by more than 32,000, to 757,000. That increase was the highest for at least ten years and marked a continuation of the upward trend in demand for enrolment in the third pillar, a trend that began in mid-2014 and has gradually been gaining momentum. The number of beneficiaries under the third pillar scheme has also been moving in one direction over the past four years, only in this case downwards. In 2017 their number fell by more than four thousand. An increase in scheme participants and decline in beneficiaries was recorded by each SPMC.

The aggregate NAV of third pillar pension funds increased in 2017 by 12.5%, or €213 million, with the absolute increase being more than one-third higher than the previous year's rise and the highest since 2007. Three-quarters of the NAV growth was accounted for by the net inflow to the funds, meaning the difference between contributions received, which increased as in previous years, and benefits paid, which has for some time been falling moderately. Returns on third pillar funds accounted for one-quarter of their NAV growth in 2017 and were relatively high in historical terms.

The aggregate NAV of supplementary pension funds amounted to €1.92 billion as at 31 December 2017. More than 70% of that total was accounted for by the four largest contributory funds, which each have a balanced investment

Chart 39 Pension contributions and benefits and the change in overall NAV in the sector of SPMC-managed funds (EUR millions)



Sources: NBS and Slovak Ministry of Labour, Social Affairs and Family.

policy. On the other hand, the gradual decline in the market dominance of these funds continued in 2017. Their contribution to the aggregate NAV growth in 2017 was around one-half. Among the remaining smaller supplementary pension funds, NAV growth was 26%, which was three times higher than the rate for the group of largest funds. As for distribution supplementary pension funds, their share of the aggregate NAV and contribution to the overall increase in NAV in the sector were both less than 5%. The number of supplementary pension funds fell in 2017 for the first time in a while. Two contributory funds managed by one SPMC were wound up at the beginning of September and their assets were transferred to another contributory fund managed by the same company.

The equity exposure of all balanced supplementary pension funds increased, while the interest rate sensitivity of bond holdings fell across the sector

Looking at the asset composition of supplementary pension funds that have a balanced investment policy, the trends observed in previous years continued in 2017. Most notably, the share of equity instruments in the funds' NAV increased from 20% to 26%. Although this increase was supported by rising equity prices, it was largely driven by purchases of new equities, mainly via investments in shares/units of exchange-traded funds (ETFs). As for the bond holdings of balanced supplementary pension funds, their share of the funds' NAV continued its long-running downward trend, falling from two-thirds to less than one-half. The decline in directly held debt securities was even more pronounced, and it was only partly offset by an increase in purchases of shares/units of investment funds following a bond-focused investment policy. Bank deposits are the third largest item in the assets of balanced supplementary pension funds and their share increased in 2017.

Among supplementary pension funds with a growth-focused investment policy, the aggregate composition of their assets did not change significantly and showed volatility comparable to that in previous years. The share of their core asset, equity instruments, increased briefly in the second quarter, but at the end of 2017 it was unchanged year on year, at around 47% of NAV. The share of bond holdings in the NAV of growth supplementary funds increased moderately, to end the year at 30%. As happened in growth funds, there was a rise in indirect bond exposure. At the start of the year these funds' had a two-to-one ratio of direct bond investments to indirect bond investments, but by the year-end the ratio stood at one-to-one. The share of investments in bank deposits continued to fall in the first months of 2017, to below 20%, and subsequently remained unchanged for the rest of the year.

Like balanced and growth contributory funds, distribution supplementary funds saw a trend away from direct to indirect bond holdings. As a result, the share of bond exposure in their aggregate NAV fell by 2 percentage points year on year, to 66%. Commensurate with that decline was the increase in the share of bank deposits.

Several supplementary pension funds were also using derivative instruments in portfolio management: some in order to hedge currency and interest rate risk, but others, in certain funds, to acquire positions in different underlying assets.

Developments in the weighted average residual maturity of debt securities in 2017 indicated that the period of its almost unabated rise had come to an end. The residual maturity indicator began falling in the second quarter of 2017 and by the end of the year it stood at 5.5 years, down by 0.8 year compared with the end of 2016. A large majority of supplementary pension funds contributed to the decline in the average residual maturity of the sector's aggregate bond holdings. The same trends were observed in regard to the duration indicator.

As for supplementary pension funds' holdings of bonds issued in Slovakia, the downward trend of their share in the sector's NAV was further extended in 2017. The share fell from more than 12% of the NAV at the start of the year to less than 8% at the end. The total share of Slovak assets fell more moderately however, owing to an increase in the allocation of investments in domestic bank deposits. Looking at the geographic breakdown of asset exposures, it is worth noting that in one distribution supplementary pension fund, bonds issued in emerging market economies increased as a share of the total NAV from zero to 22%.

As for the aggregate bond holdings of supplementary pension funds, the share issued by non-financial corporations increased from 21% to 30% in 2017, and the share of government bonds fell by approximately the same margin, to end the year at just over half of the total.

The share of the sector's aggregate assets denominated in foreign currency was around one-quarter at the end of 2017, the same as at the start of the year. In some months, however, that share rose slightly. Foreign exchange assets were concentrated in balanced and growth supplementary pension funds, reaching as high as one-half of the NAV in some funds.

The average annual nominal return for all supplementary pension funds as at 31 December 2017 was 3.7%. However, the nominal returns on individual funds showed considerable heterogeneity across fund types. The average return on growth funds, was 8.2%, while the average returns on balanced and conservative funds were, respectively, 3.3% and 0.2%.

5.3 THE INVESTMENT FUND SECTOR

THE DYNAMIC GROWTH IN THE VALUE OF ASSETS UNDER MANAGEMENT IN THE INVESTMENT FUND SECTOR WAS CLOSE TO ITS HISTORICAL HIGH RECORDED TEN YEARS EARLIER

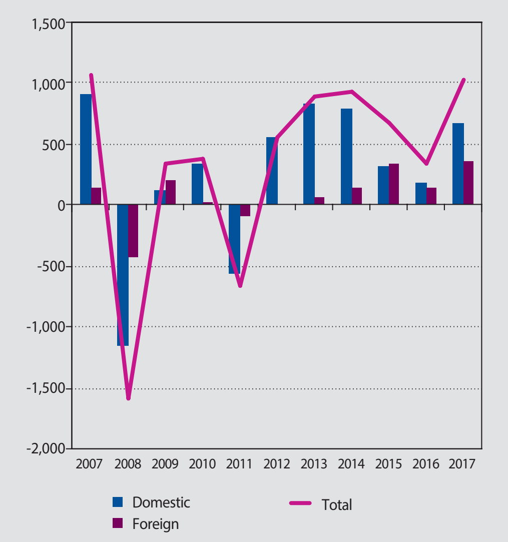
Demand for investment funds in Slovakia rose markedly in 2017. The NAV of domestic and foreign investment funds marketed in Slovakia increased by €1.032 billion, which surpassed even the increases recorded in the highly successful years of 2013 and 2014 and was close to the all-time high from 2007. Compared with 2016, the NAV growth of investment funds was three times higher. Around two-thirds of the total NAV growth was accounted for by domestic investment funds. Foreign funds also saw a pick-up in asset growth, which, although less pronounced than that of domestic funds, did suffice to set a new all-time high for the absolute annual increase in the aggregate assets of this group of funds.

All domestic fund management companies reported an increase in the assets under their management, although the range of these increases across companies was relatively broad, from 5% to 56%. On the whole, smaller fund management companies in terms of their funds' NAV did better than larger ones, and therefore the market shares in this sector became a little more balanced.

Net sales of investment funds amounted to €529 million in 2017 and were the major factor behind the overall increase in funds' NAV. The volume of sales was more than five times higher in 2017 than in 2016. At the aggregate level, inflows peaked in the last two months of the year, amounting to around €80 in each month.

The total number of domestic investment funds being marketed in Slovakia at the end of 2017 was unchanged from a year earlier, at 87. During the year, however, seven funds were wound up and another seven were established.

Chart 40 Changes in the NAV of domestic and foreign investment funds (EUR millions)



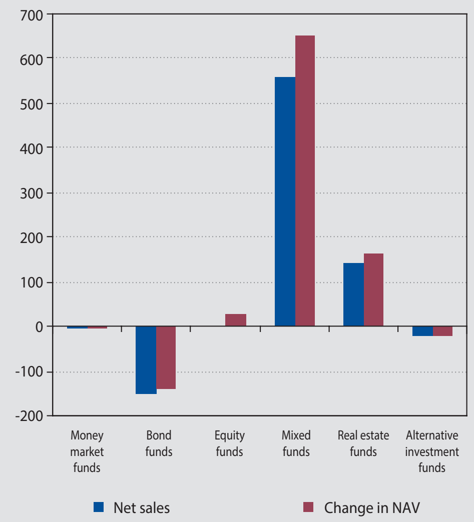
Sources: NBS and SASS.

Households, as usual, accounted for by far the largest share of new inflows to domestic investment funds. Insurers also had a sizeable share in 2017. Among other financial intermediaries, however, there were relatively high net redemptions of investment fund shares/units.

Customer demand was focused on mixed funds, while there was a net redemption of bond fund shares/units

Among the different types of investment fund, mixed funds recorded the highest growth in both NAV (€651 million) and net sales (€559 million). It was demand for these funds that drove the aggregate increase in NAV and net sales during the period under review. Some way behind mixed funds, real estate funds were the next best performing type of fund: their overall NAV increased by €162 million and net sales by only a slightly lower amount. These figures were also an improvement on those for the previous year, by around one-half.

Chart 41 Net sales of domestic investment funds in 2017 and the year-on-year change in the funds' NAV (EUR millions)



Source: NBS.

Bond funds experienced a relatively large volume of redemptions (€151 million), slightly greater than the net redemptions of bond fund shares/units in 2016. Redemptions by households were even higher than that year on year, but they were mitigated by sales of bond fund shares/units to financial sector participants. Alternative investment funds also recorded a net outflow in 2017, amounting to around €20 million. Net sales of both money market funds and equity funds were marginal in 2017, but the aggregate NAV of equity funds increased by €28 million thanks to significant returns on the funds.

Because of the opposite trends mentioned above, a gap opened in 2017 between the aggregate NAVs of mixed funds and bond funds, which had ended 2016 at virtually the same level. Thus mixed funds took over from bond funds as the fund category that has the largest volume of assets under management.

As for different types of foreign investment funds and their NAV growth based on sales in Slovakia, equity funds recorded the largest increase, followed by mixed funds and bond funds. In other categories of foreign investment fund, NAV increased only slightly or, in the case of structured funds, even declined.

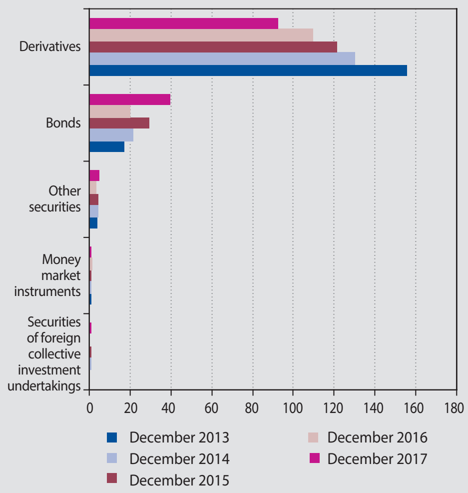
In several categories of domestic investment funds the aggregate composition of assets underwent a change in 2017. In both equity funds and mixed funds, the largest component of their assets – equities and investment fund shares/units – increased its share in 2017 after doing the same in 2016. In real estate funds there was a reverse of the previous trend, as direct and indirect investment in real estate decreased as a share of the funds' NAV.

More than 80% of the asset growth in the domestic segment of the investment fund sector was attributable to investment funds covered by the EU's UCITS Directive. The rest of the growth, just under one-fifth of the total, was generated by investment funds governed by the EU's Alternative Investment Fund Managers (AIFM) Directive. Among foreign funds, more than 90% of their year-on-year NAV growth occurred in UCITS funds.

The average annual nominal return for all investment funds, both domestic and foreign, was 2.3% in 2017, only slightly lower compared with 2016. Equity funds earned the highest average return, 7.3%, while mixed funds and real estate funds both recorded an average return of 2.4%. The worst-performing funds were those focused on interest rate instruments. Bond funds had an average return of 0.5% and money market funds fared even less well, producing a negative return of -1.5%.

Domestic fund management companies made an aggregate profit of €16.5 million in 2017, which was 14% lower year on year. Net income from fees and commission increased by almost one-tenth. The overall drop in profit from one year to the next was the result of lower income from certain one-off items in the profit and loss account, specifically dividends received and income from the reversal of provisions. All of the fund management companies operating in Slovakia made a profit. In year-on-years terms, however, performance was more mixed, with three companies reporting a decline in profit and the rest an increase.

Chart 42 Investment firms' overall transactions broken down by financial instrument (EUR billions)



Source: NBS.

5.4 INVESTMENT FIRMS

THE VOLUME OF ASSETS UNDER THE MANAGEMENT OF INVESTMENT FIRMS INCREASED IN 2017, AND SO TOO, MODERATELY, DID THE VALUE OF TRANSACTIONS CONDUCTED BY THESE FIRMS

After remaining flat in 2016, the volume of assets under the management of investment firms authorised in Slovakia increased in 2017 by 16% (or €56 million) year on year, to €403 million.

The value of transactions conducted through these firms in 2017 increased slightly year on year, by just under four billion euro, to €138 billion. In derivatives trading, which is by far the largest part of the sector's trading activity, the value of transactions fell in 2017 for a fourth successive year, by 16% in this case. As a result of this downward trend, the dominant position of derivatives trading is gradually weakening. In 2017, however, the decline in derivatives trading was more than offset by an increase in bond trading. The value of bond transactions conducted in 2017 increased almost twofold year on year, to €39.5 billion.

CHAPTER 6

MACRO STRESS TESTING OF THE SLOVAK FINANCIAL SECTOR

6

6 Macro stress testing of the Slovak financial sector

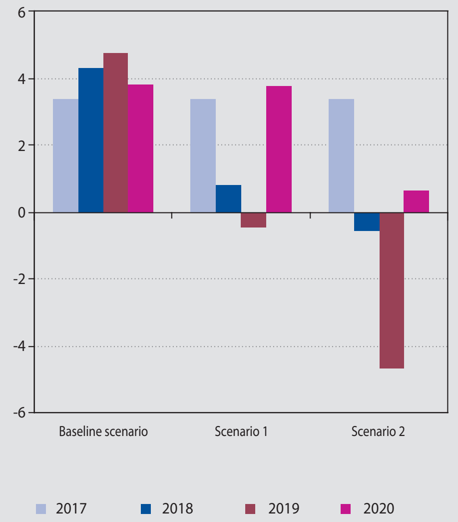
While the baseline scenario assumes favourable trends in domestic economic output and in the labour market, the adverse scenarios assume relatively sharp contractions in both foreign demand and the domestic economy as well as quite elevated uncertainty in financial markets

The resilience of financial institutions was stress-tested using a baseline scenario and two adverse scenarios. Whereas the stress test period in previous such year-end exercises was two years, in this case it was extended to three years.

The baseline scenario is based on the update of NBS's December 2017 Medium-Term Forecast. Under this scenario, economic growth is assumed to accelerate in 2018 and 2019, before slowing slightly in 2020 amid the fading of growth stimuli from the domestic car industry. GDP growth during the three-year period is supported by both private and government investment. Amid positive economic developments, the unemployment rate is expected to fall throughout the period. The inflation rate is expected to accelerate to 2.4% in 2018, supported by all the main components of the inflation basket. Over the next two years, the previously strong impact of processed food inflation fades and the headline inflation rate moderates as a result.

In the first adverse scenario, *Scenario 1*, geopolitical risks are assumed to materialise and result in a global economic downturn. There is also an increase in financial market uncertainty. Domestic GDP declines in response to falling foreign demand, recording its largest drop at turn of 2018-19; it returns to growth in the second half of 2019. Given the weak economic environment, inflation is lower compared with its level under the baseline scenario, and gradually increases from the end of 2019. Unemploy-

Chart 43 Real GDP growth (percentages)



Source: NBS.

Table 3 Inflation (percentages)

		Annual real GDP growth	Average annual inflation	Unemployment
Baseline scenario	2018	**4.31%**	**2.35%**	7.10%
	2019	4.73%	2.10%	6.50%
	2020	3.79%	2.27%	6.00%
Scenario 1	2018	0.78%	2.08%	8.40%
	2019	-0.45%	1.20%	9.80%
	2020	3.73%	2.08%	9.70%
Scenario 2	2018	-0.59%	1.82%	8.90%
	2019	-4.70%	0.29%	11.90%
	2020	0.60%	1.23%	13.10%

Source: NBS.

ment rises until the end of 2019 and then levels off.

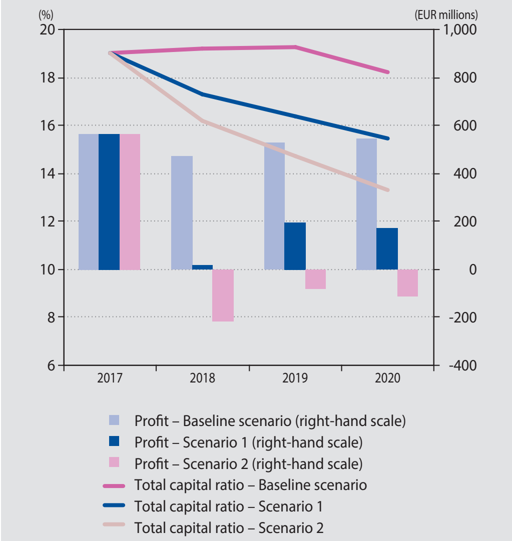
As for the second adverse scenario, *Scenario 2*, it includes all the negative assumptions of the previous scenario, but they are more prolonged and more pronounced. As a result, the Slovak economy does not return to growth until the second half of 2020. Under the impact of this recession, the inflation rate is lower than that envisaged in the first adverse scenario; it remains low until the end of 2019 and does not begin to rise until 2020. The rise in the unemployment rate is also greater in this scenario than in Scenario 1, as is the degree of financial market uncertainty.

In the adverse scenarios, the banking sector as a whole is estimated to experience a slump in profit and a decline in its total capital ratio; nevertheless, most banks maintain capital adequacy at a sufficient level

At the beginning of the stress test period, after taking into account the expected retention of earnings from 2017, the banking sector's total capital ratio stood at 19%. In the baseline scenario, this ratio is estimated to fall gradually until the end 2020, to a level just over 18%. This decline stems mainly from an expected rise in risk exposures, owing to a projected increase in lending and consequently also in the banking sector's balance sheet, as well as from an estimated moderate fall in the sector's profit. In Scenario 1, the sector's total capital ratio falls gradually, down to 15.5%. In this case, the decline is caused by an increase in credit risk losses and market risk losses, as well as by an increase in risk exposures due to the heightened riskiness of loan books. In Scenario 2, the impact of market and credit risks is estimated to be even greater, with the total capital ratio dropping to 13.3% by the end of 2020. This decline reflects a fall in own funds due to the sector making a loss (the impact being around 1.8 percentage points) and to an increase in risk-weighted assets (3.9 percentage points).

In the baseline scenario, the sector's profits for each year of the stress test period are estimated to be slightly lower than its profit for 2017. A number of factors explain this decline, including, for example, no expected increase in net interest income, a slight rise in credit risk costs

Chart 44 Profit and total capital ratio estimates under the stress test scenarios

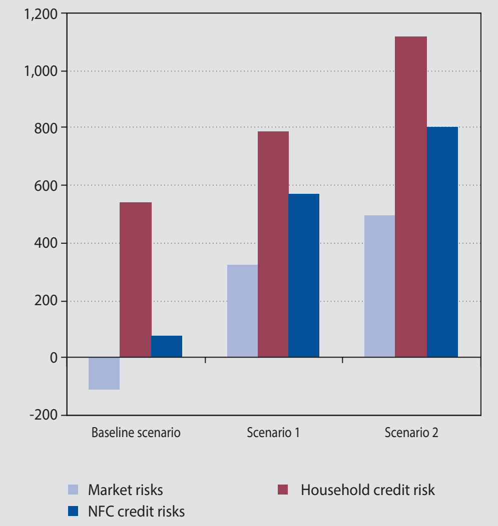


Sources: NBS.
Note: Total capital ratios as at the end of 2017 are adjusted to include the assumed impact of capital increases.

(mainly in the NFC loan book), and an increase in various levy payments as result of balance sheet growth. In Scenario 1 and Scenario 2, the sector's profit is further dented by credit losses and, more so in Scenario 2, by market risk losses as well as weaker balance sheet growth. Therefore, in Scenario 1 the sector is estimated to make a much reduced profit, while in Scenario 2 it is estimated to make a total loss over the three-year stress test period. The sector's profitability in each scenario is further impaired by the impact of the new International Financial Reporting Standard (IFRS) 9, since in respect of what are known as Stage 2 loans, banks will already be provisioning for the expected credit loss over the lifetime of the loan. For the purposes of the stress test, these loans were approximated by loans past due by between 30 and 90 days. The total additional loss resulting from the impact of IFRS 9 on the loan book is between €26 million and €34 million depending on the scenario.

In the baseline scenario, all banks are estimated to meet both the 8% minimum capital requirement and the capital requirement of 10.5%. In Scenario 1, the sector has a capital shortfall of €12 million (0.2% of own funds as at 31 December 2017) against the 10.5% requirement, while in Scenario 2 it has a capital shortfall of €55 mil-

Chart 45 Risk losses broken down by type (EUR millions)



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

lion (0.9%) against the 8% requirement and a shortfall of €256 million (4%) against the 10.5% requirement.

During the stress test period, the losses resulting to banks from credit risk are more significant than other losses. In all three scenarios, credit risks losses in the household loan book exceed those in the NFC loan books, notwithstanding that in each of the adverse scenarios, compared with the baseline scenario, the increase in credit risk costs is notably greater for NFC loans than for household loans. Never before in this series of stress test exercises had credit risk losses on household loans exceeded those on NFC loans, and the fact they did so in this exercise was probably due to the strong increase in household credit in recent years. At the end of 2008 retail loans accounted for 19% of the banking sector's total balance sheet and NFC loans for 23%, whereas at the end of 2017 retail loans accounted for 41% of the total balance sheet and NFC loans for 22%.

Stress test results for other segments

The stress test exercise again showed that the Slovak insurance sector is vulnerable mainly to financial market developments, which are estimated to cause the sector an additional loss of between €300 million and €600 million depending on the scenario. If claims paid in non-life insurance record a one-off 10% increase vis-à-vis their long-run average, the sector is estimated to make an additional loss of €100 million. A 10% increase in the average mortality rate in each of the three years of the stress test period results only in a minimal increase in the sector's loss. In the first year of the stress test period, the insurance sector's equity declines in the adverse scenarios, by 14% in Scenario 1 and 36% in Scenario 2 (under Scenario 2 the rates of change in the equity of individual insurers range between 11% and -61%). In some insurers, the solvency capital ratio falls to around the level of the regulatory minimum. In the subsequent two years, equity is estimated to increase virtually throughout the sector; in Scenario 1 the sector's equity is estimated to return to its end-2017 level as early as 2019, while in Scenario 2 the sector's equity in the third year of the stress test period is only 75% of its 2017 level.

In the sectors of PFMC-managed old-age pension funds (second pillar of the pension system) and SPMC-managed supplementary pension funds (third pillar), funds' vulnerability in the adverse scenarios are slightly lower in this exercise than they were in the previous year's exercise. This is caused largely by a decline in funds' exposure to interest rate risk, as may be observed by the decrease in the average duration of funds' portfolios. In Scenario 2, the average pension-point value in PFMC-managed funds is estimated to fall by 4%, meaning the evaporation of around one-year's worth of gains. In SPMC-managed funds, where investment policies are considerably riskier owing mainly to the greater equity component in funds' assets, the average pension-point value is estimated to decline by around twofold, approximately to the level it was at in early 2016. The stress test results for pension funds are show in Charts P53 and P54 of the annex.

As for the investment fund sector, its performance also deteriorates significantly in the adverse scenarios. The average impact is shown in Chart P55 of the annex. Naturally, the results show considerable heterogeneity across funds. Those with higher-risk investment policies, which in 2017 were attracting greater demand, are exposed to relatively significant losses in the event of financial market headwinds.

NÁRODNÁ BANKA SLOVENSKA
EUROSYSTÉM

ANNEX 1

MACROPRUDENTIAL INDICATORS

P1

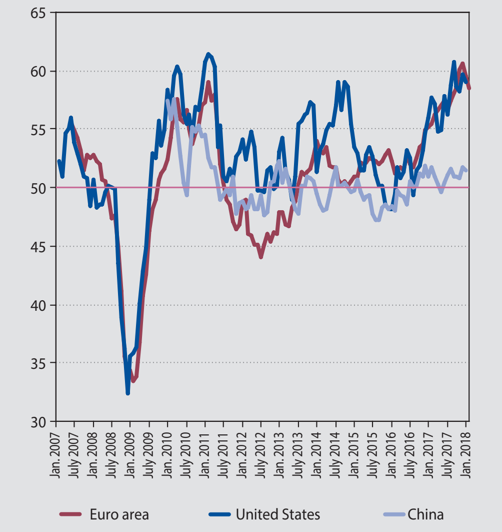
Macroprudential indicators

GENERAL NOTE:

General note: '31 December 2016 = 1' means that the given index was normalised so that its value on the specified date (31 December 2016) was equal to 1.

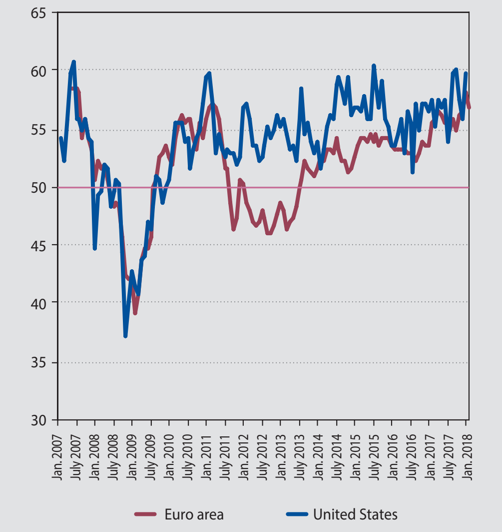
MACROECONOMIC RISK INDICATORS

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



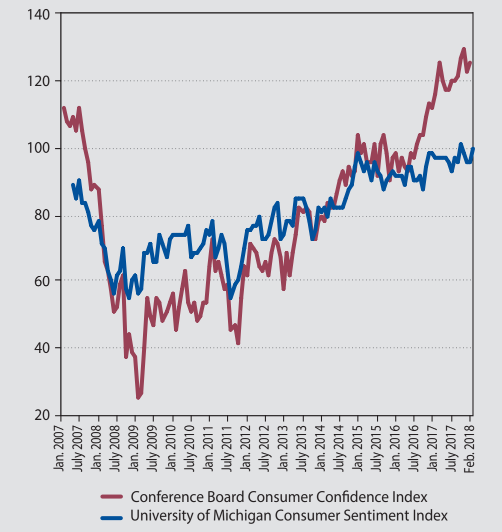
Source: Bloomberg.
Note: The indicator is defined in the section 'Glossary and abbreviations'.

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



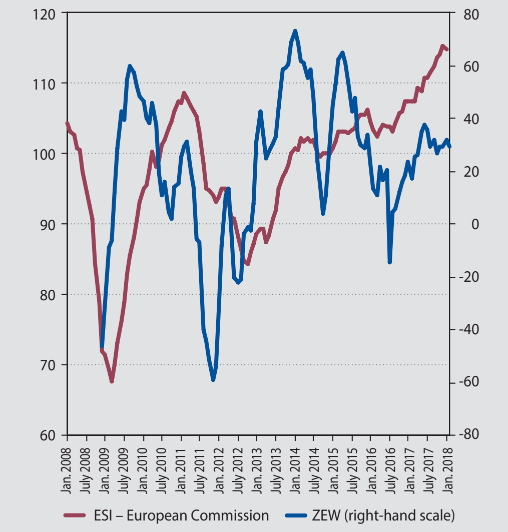
Source: Bloomberg.
Note: The indicator is defined in the section 'Glossary and abbreviations'.

Chart P3 Consumer confidence indicators in the United States



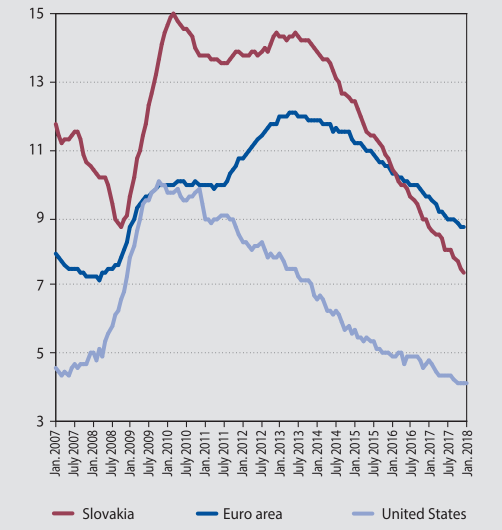
Source: Bloomberg.
Note: The chart refers to US consumer confidence indices produced by two different institutions.

Chart P4 Economic sentiment indicators in the euro area



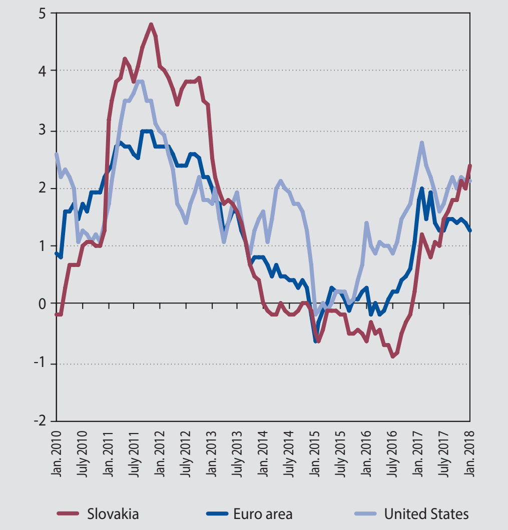
Source: Bloomberg.
Note: The indicators are defined in the section 'Glossary and abbreviations'.

Chart P5 Unemployment rates in selected economies (percentages)



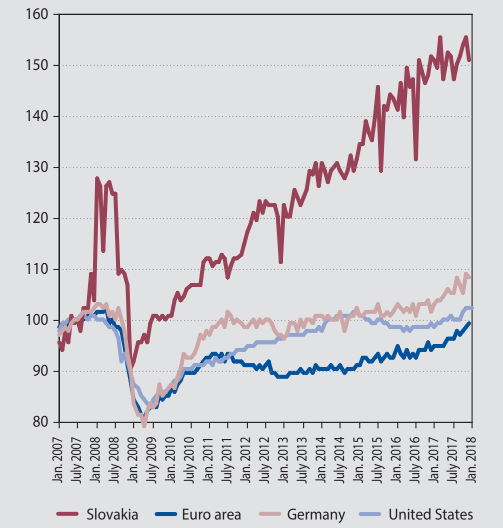
Sources: Eurostat and Bureau of Labor Statistics.
Note: Seasonally adjusted.

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



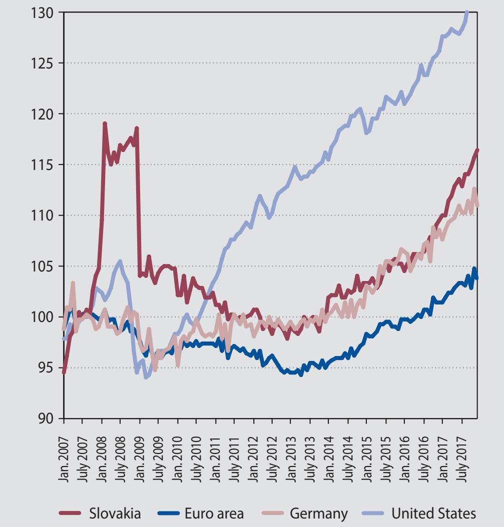
Sources: Eurostat and Bureau of Labor Statistics.

Chart P7 Industrial production indices in selected economies



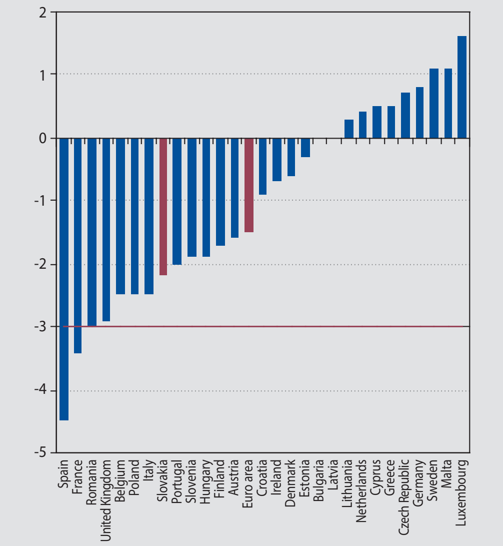
Sources: Eurostat and US Federal Reserve.
Notes: Rebalanced (average: 2007 = 100); seasonally adjusted.

Chart P8 Retail sales indices in selected economies



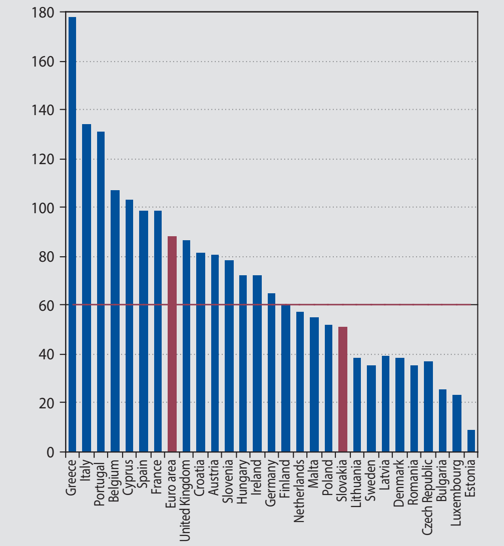
Sources: Eurostat and US Department of Commerce.
Notes: Rebalanced (average 2007 = 100); seasonally adjusted.

Chart P9 General government balances of EU countries in 2016 (percentages of GDP)



Source: Eurostat.

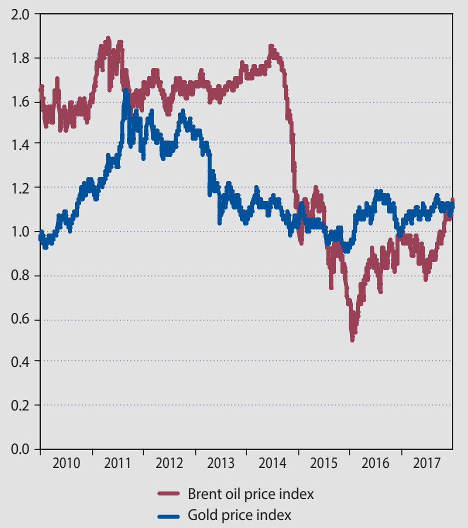
Chart P10 Gross government debt of EU countries in the third quarter of 2017 (percentages of GDP)



Source: Eurostat.

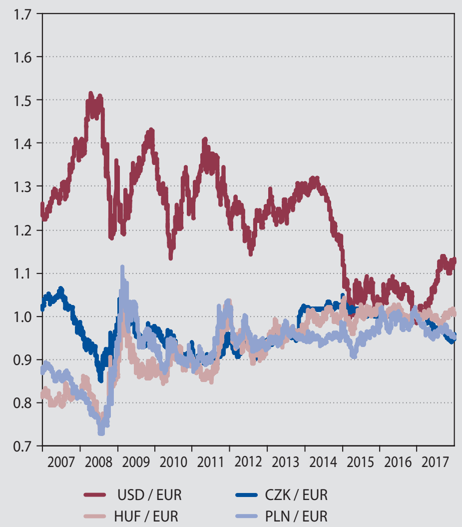
FINANCIAL MARKET RISK INDICATORS

Chart P11 Price commodity indices (31 December 2016 = 1)



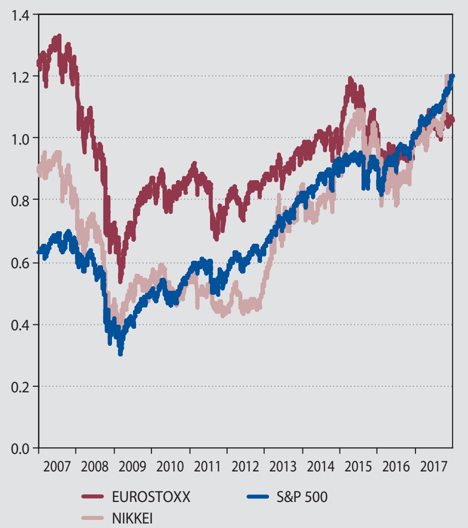
Sources: Bloomberg and NBS.

Chart P12 Exchange rate indices (31 December 2016 = 1)



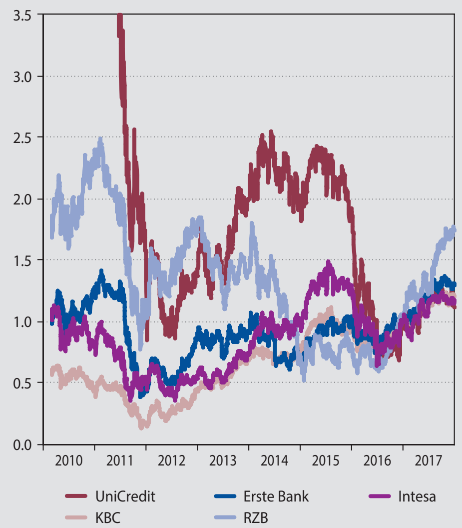
Sources: Bloomberg and NBS.

Chart P13 Equity indices (31 December 2016 = 1)



Sources: Bloomberg and NBS.

Chart P14 Share price indices of the parent institutions of the five largest domestic banks (31 December 2016 = 1)

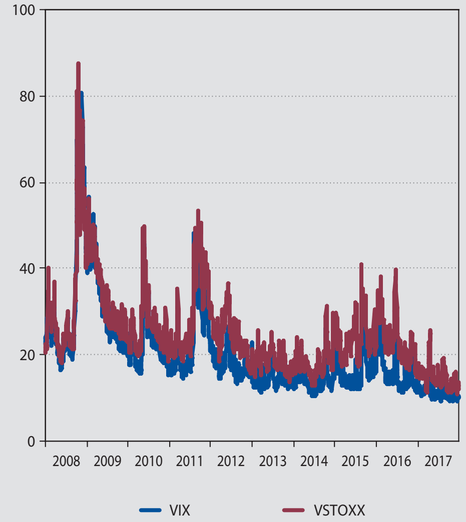


Sources: Bloomberg and NBS.

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

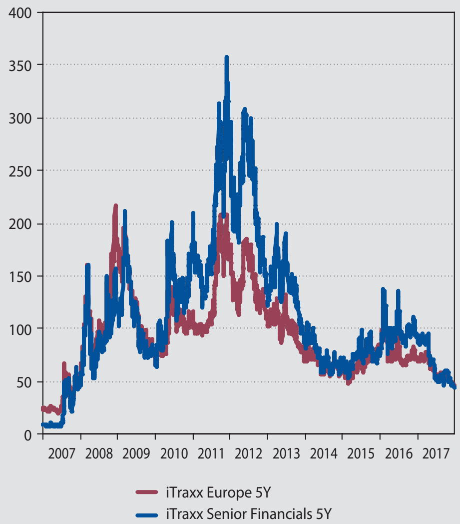
Sources: Bloomberg and NBS.
Note: The yield curve slope is expressed as the difference between the yield to maturity on 10-year and 3-month government bonds.

Chart P16 Volatility of equity indices



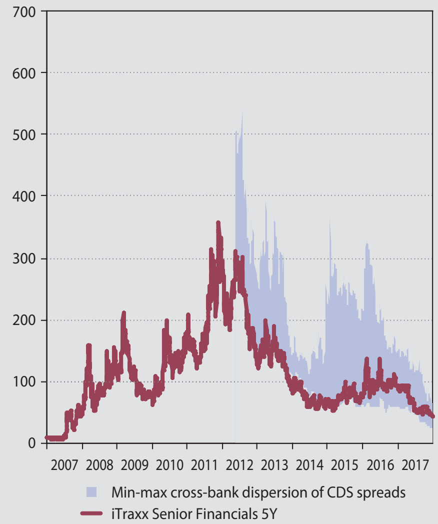
Source: Bloomberg.

Chart P17 CDS spread indices (basis points)



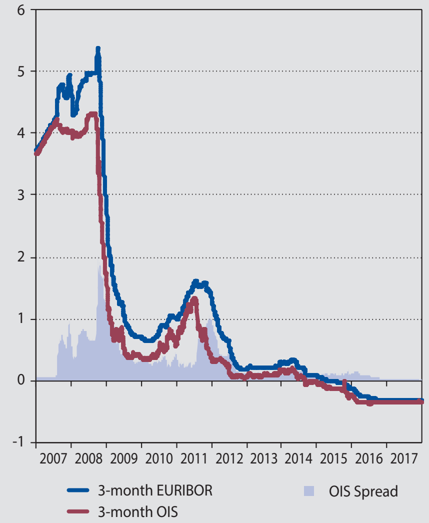
Sources: Bloomberg and NBS.

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



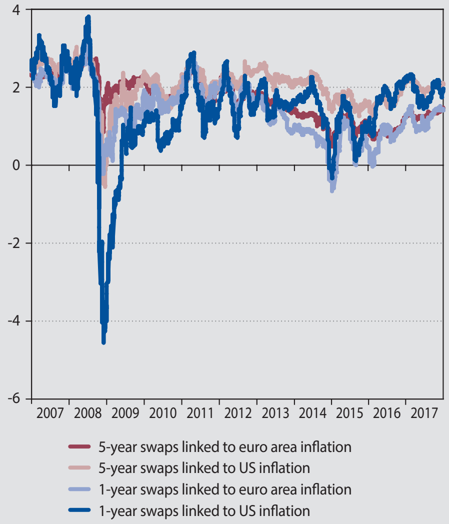
Sources: Bloomberg and NBS.

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



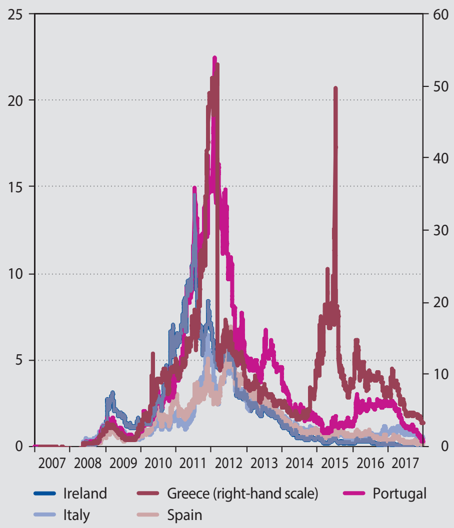
Sources: Bloomberg and NBS.

Chart P20 Inflation-linked swap prices (percentages)



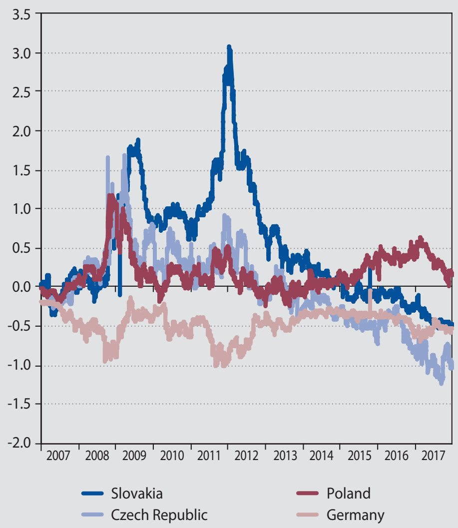
Sources: Bloomberg and NBS.
Note: The inflation-linked swap price is defined in the section 'Glossary and abbreviations'.

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



Sources: Bloomberg and NBS.
Note: The vertical scale shows 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.

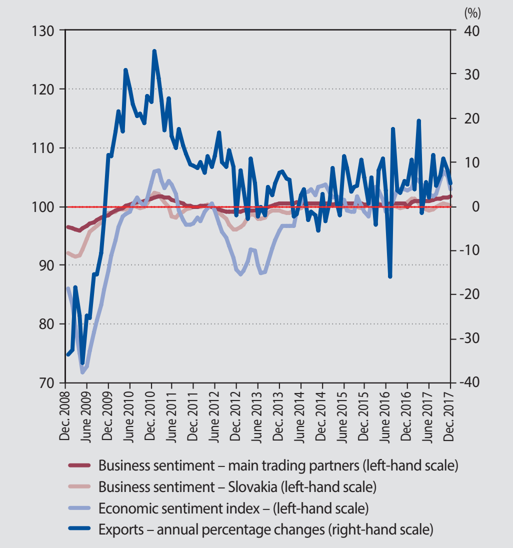
Chart P22 Credit spreads on 5-year government bonds issued by selected central European countries and Germany (percentage points)



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

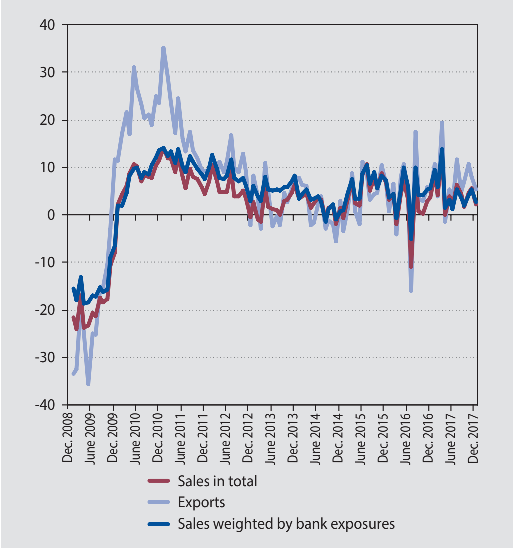
CORPORATE CREDIT RISK INDICATORS

Chart P23 Exports and the business environment



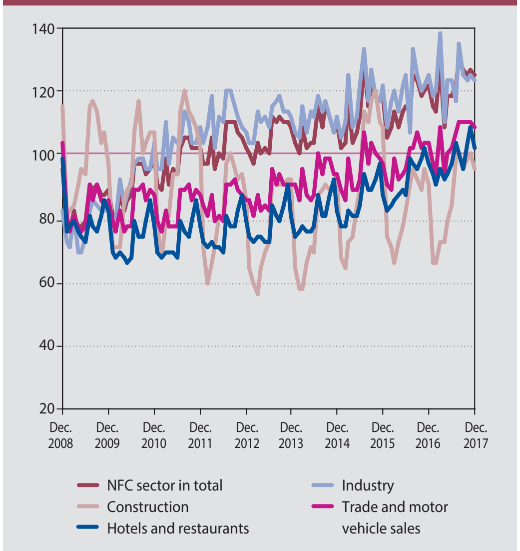
Sources: NBS, OECD and SO SR.

Chart P24 NFC exports and sales (annual percentage changes)



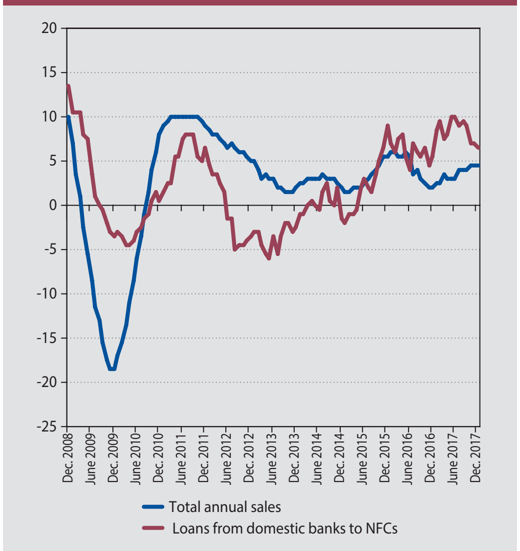
Sources: SO SR, OECD, Slovak Ministry of Economy and NBS.

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



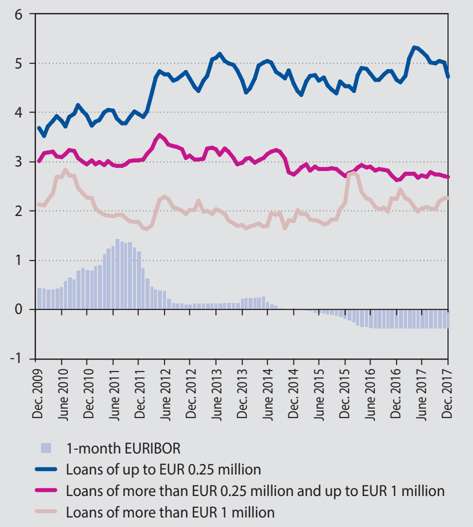
Source: SO SR.

Chart P26 NFC loans and sales (annual percentage changes)



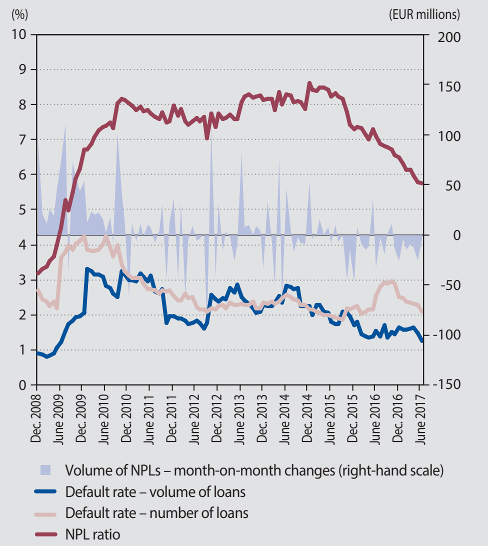
Sources: NBS and SO SR.

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



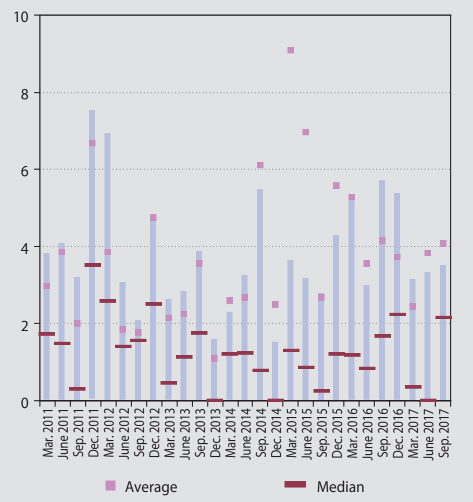
Sources: NBS and EBF.
Note: The spread is defined as the difference between the monthly EURIBOR rate and the average rate on new loans in the respective category.

Chart P28 NPLs and default rates



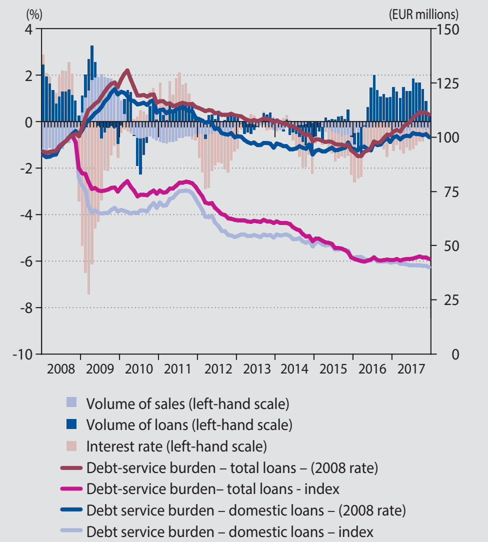
Source: NBS.
Note: The default rate denotes the ratio of the number/volume of loans that defaulted within a period of one year to the number/volume of non-defaulted loans at the beginning of the one-year period.

Chart P29 Loans at risk (percentages)



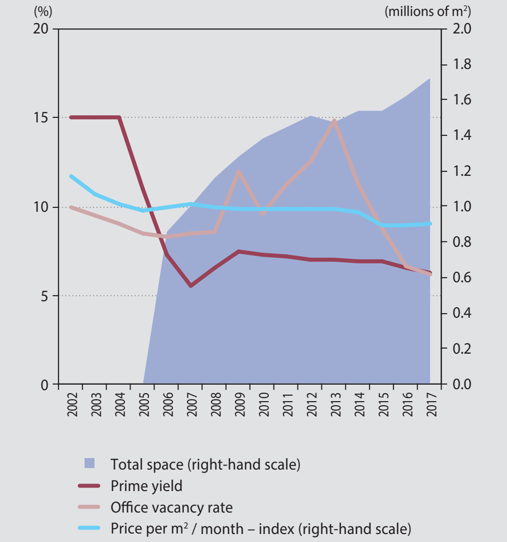
Source: NBS.
Note: The chart shows interquartile ranges.

Chart P30 The debt-service burden and its components



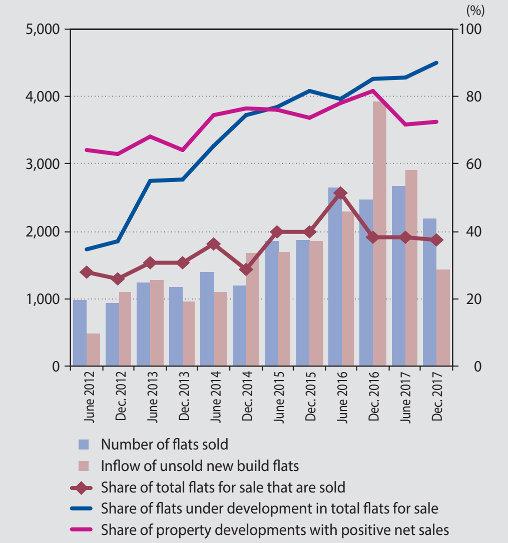
Sources: NBS and SO SR.

Chart P31 Commercial real estate: developments in the office segment



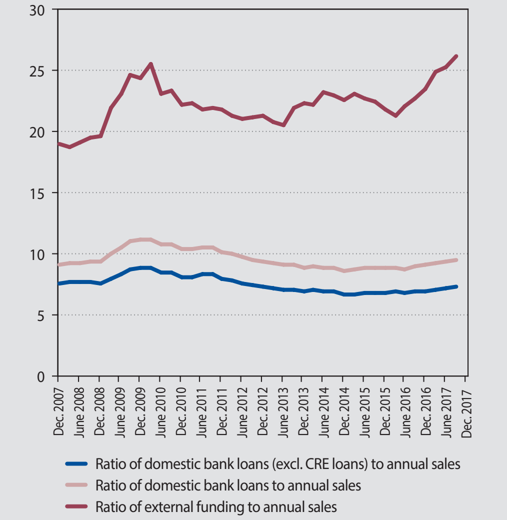
Source: CBRE, JLL and NBS.
Note: The chart shows prices and occupancy in Bratislava.

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



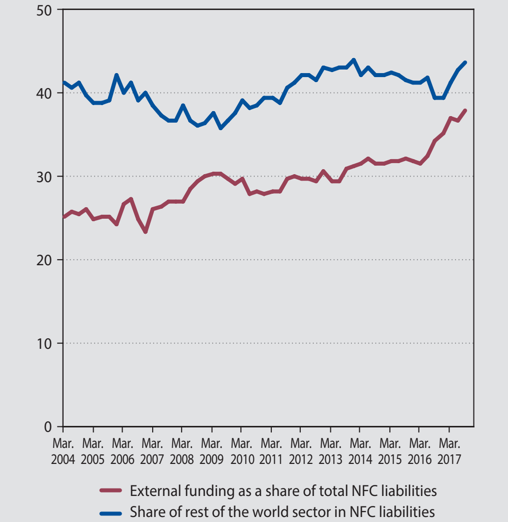
Sources: Lexxus and NBS.
Note: The chart shows developments in Bratislava.

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



Sources: NBS and SO SR.

Chart P34 Structure of NFC liabilities (percentages)



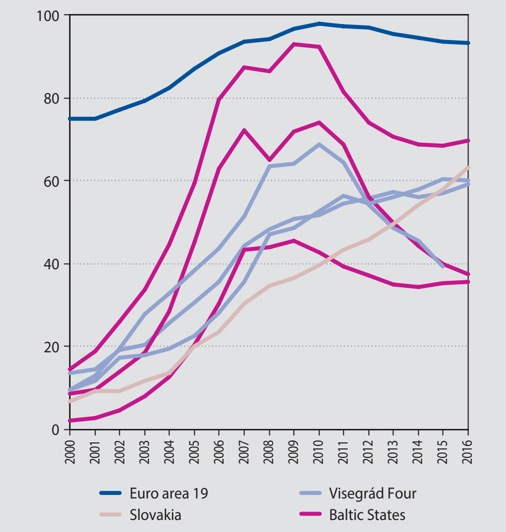
Source: NBS.

HOUSEHOLD CREDIT RISK INDICATORS

Chart P35 Stock of retail loans (year-on-year changes)

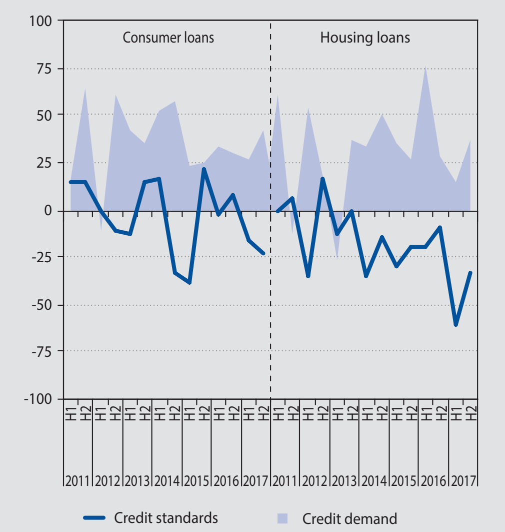
Source: NBS.

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



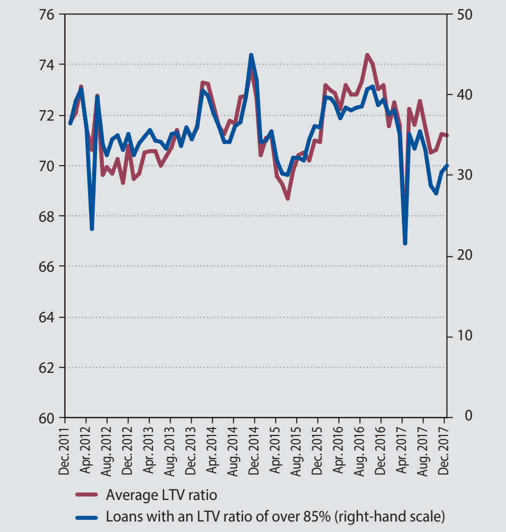
Source: Eurostat.
Notes: The indicator is calculated as the ratio of households' total debt to their disposable income. Euro area 19 = average for the euro area.

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)

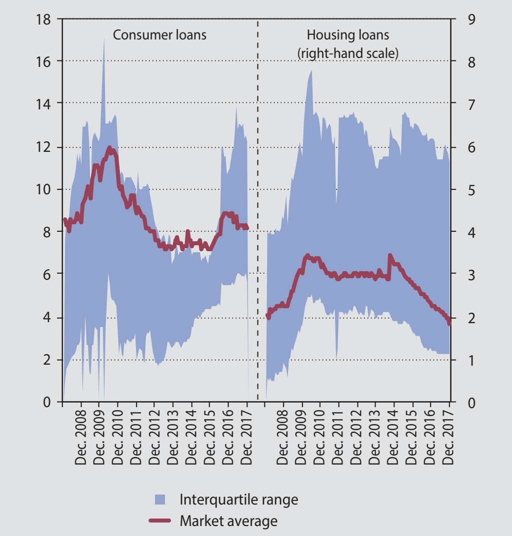


Source: NBS.
Note: The indicator is defined in the section 'Glossary and abbreviations'.

Chart P39 Net default rates for retail loans (percentages)

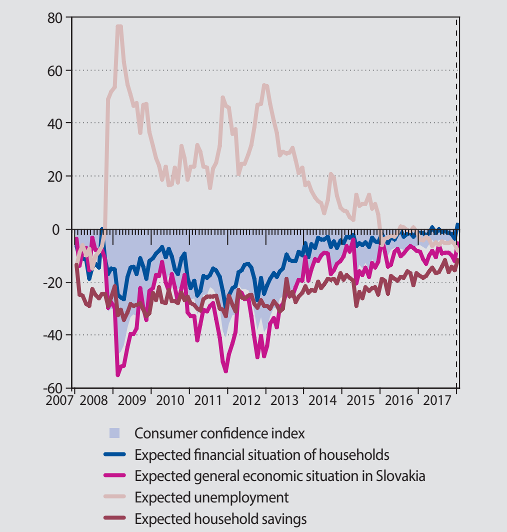
Source: SO SR.
Note: The net default rate denotes the net change in the amount of NPLs over a 12-month period as a share of the outstanding amount of loans at the beginning of the period. The numerator is adjusted for the effect of loan write-offs/downs and sell-offs.

Chart P40 NPL ratios for retail loans (percentages)



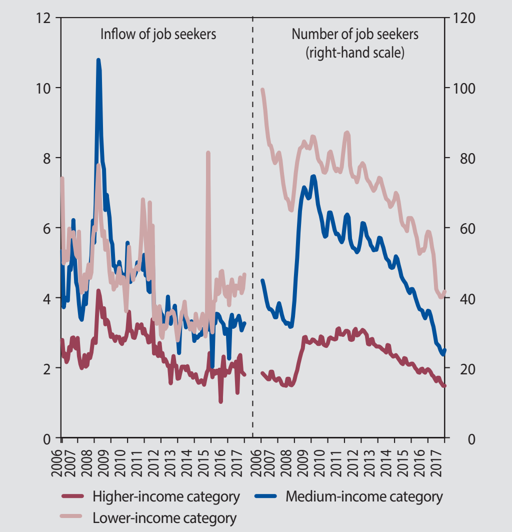
Source: NBS.

Chart P41 The consumer confidence index and its components



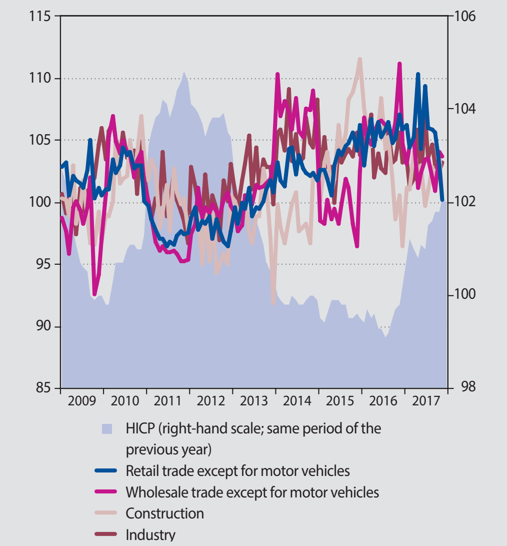
Source: SO SR.

Chart P42 Number and inflow of unemployed by income category



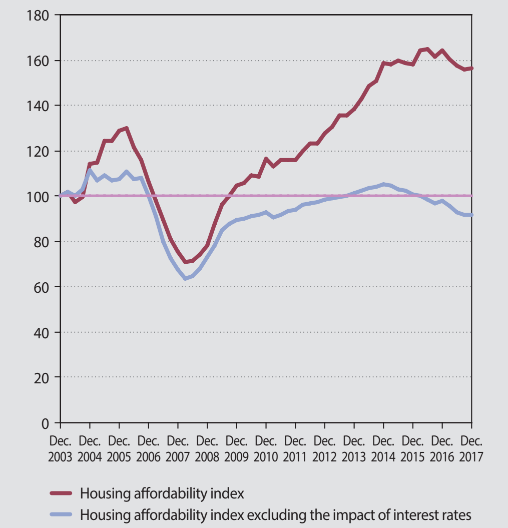
Source: Central Office of Labour, Social Affairs and Family of the Slovak Republic.
Notes: The left-hand and right-hand scales show numbers of job seekers in thousands. The income categories are defined in the section 'Glossary and abbreviations'.

Chart P43 Real wages in selected sectors – index



Source: SO SR.

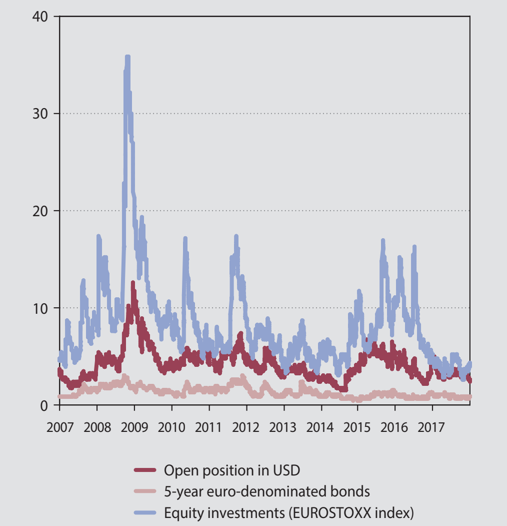
Chart P44 Housing affordability index (31 March 2004 = 100)



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

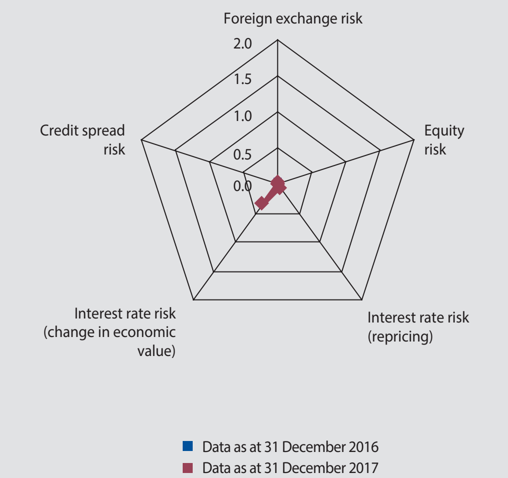
MARKET RISK AND LIQUIDITY RISK INDICATORS

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



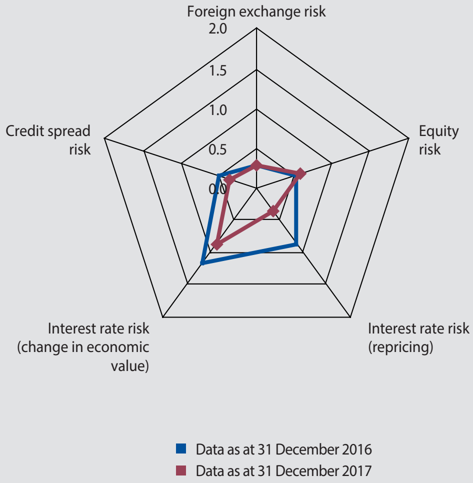
Sources: Bloomberg and NBS.
Notes: The data represent the highest loss (as a percentage of the given investment) that would be expected over a period of 10 days at a confidence level of 99%. This loss was determined on the basis of a risk factor volatility calculation, using exponentially weighted moving averages.

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



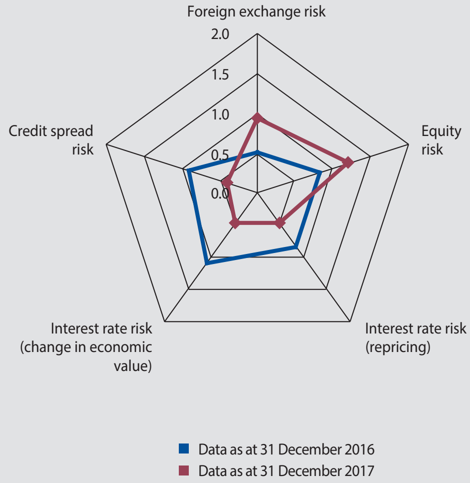
Sources: Bloomberg and NBS.
Notes: The data represent the loss (as a percentage of assets) under each scenario of the sensitivity analysis. The sensitivity analysis is described in more detail in the section 'Glossary and abbreviations'.

Chart P47 The sensitivity of PFMC-managed old-age pension funds to different risk types (percentages)



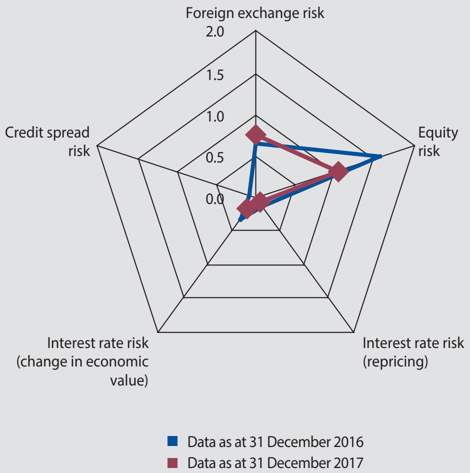
Sources: Bloomberg and NBS.
Notes: The data represent the loss (as a percentage of NAV) under each scenario of the sensitivity analysis. The sensitivity analysis is described in more detail in the section 'Glossary and abbreviations'.

Chart P48 The sensitivity of SPMC-managed supplementary pension funds to different risk types (percentages)



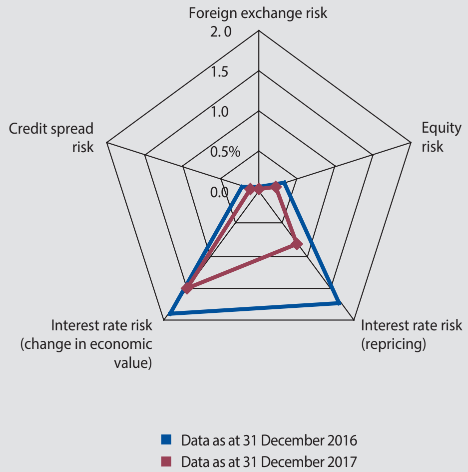
Sources: Bloomberg and NBS.
Notes: The data represent the loss (as a percentage of NAV) under each scenario of the sensitivity analysis. The sensitivity analysis is described in more detail in the section 'Glossary and abbreviations'.

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



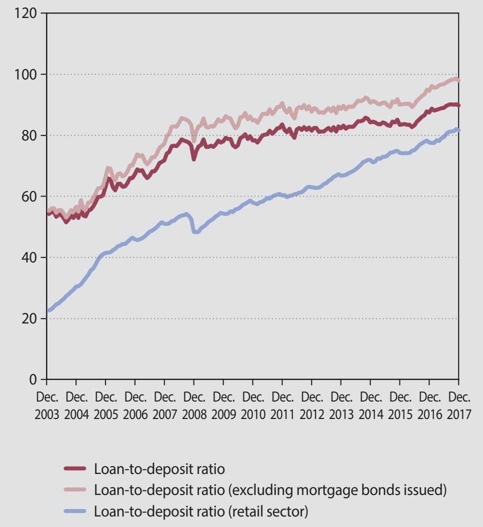
Sources: Bloomberg and NBS.
Notes: The data represent the loss (as a percentage of NAV) under each scenario of the sensitivity analysis. The sensitivity analysis is described in more detail in the section 'Glossary and abbreviations'.

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



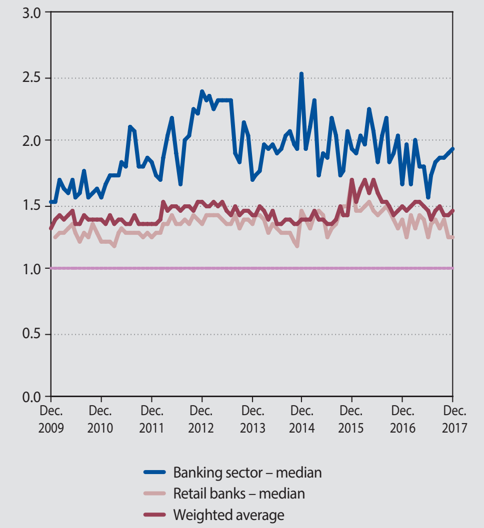
Sources: Bloomberg and NBS.
Notes: The data represent the percentage decline in the value of assets under each scenario of the sensitivity analysis. The sensitivity analysis is described in more detail in the section 'Glossary and abbreviations'.

Chart P51 Loan-to-deposit ratio (percentages)



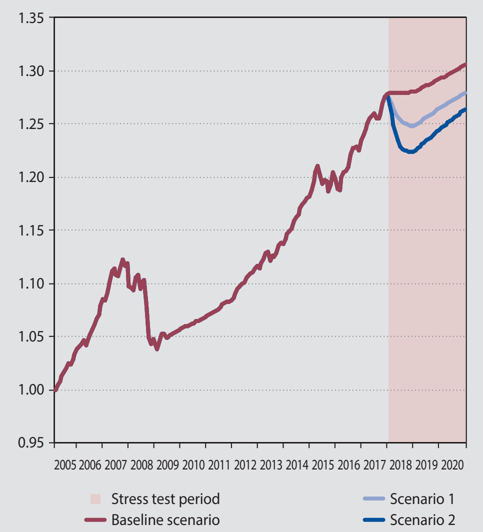
Source: NBS.

Chart P52 Liquid asset ratio (percentages)



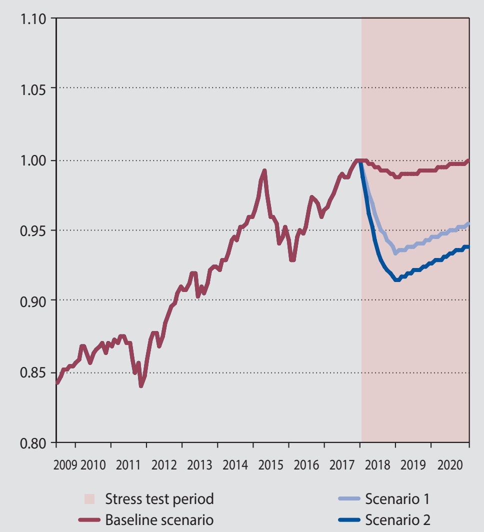
Source: NBS.

Chart P53 Impact of Baseline scenario and stress test scenarios on PFMC-managed old-age pension funds



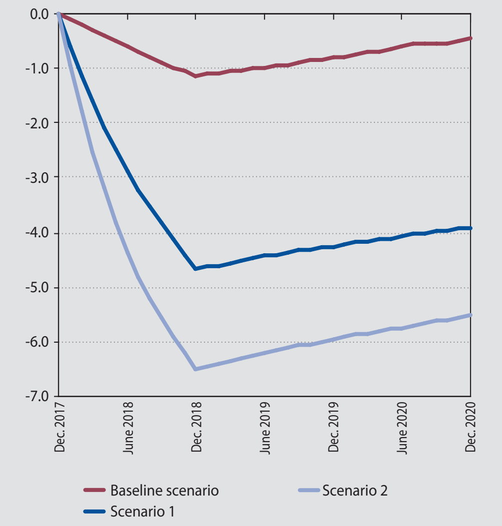
Sources: NBS, ECB, Bloomberg and internet.
Note: The left-hand scale shows the average of the index of the current pension-point value weighted by the net asset value of individual funds.

Chart P54 Impact of Baseline scenario and stress test scenarios on SPMC-managed distribution pension funds



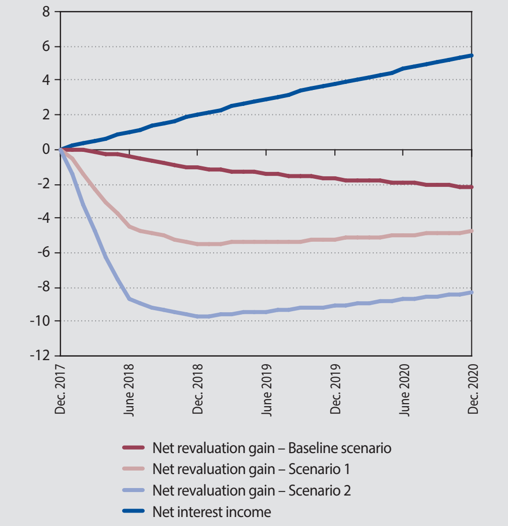
Sources: NBS, ECB, Bloomberg and internet.
Note: The left-hand scale shows the average of the index of the current pension-point value weighted by the NAV of individual funds.

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



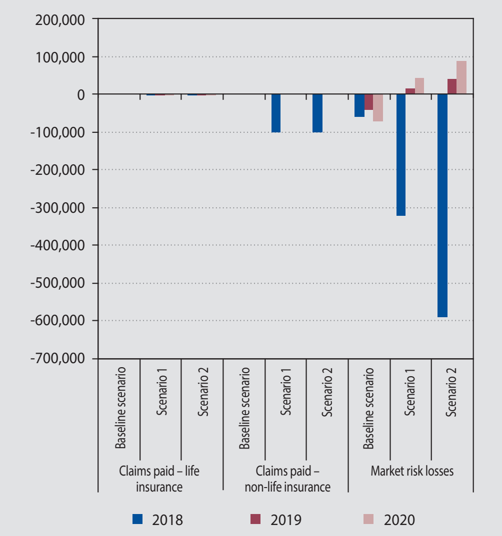
Sources: NBS, ECB, Bloomberg and internet.
Note: The left-hand scale shows the estimated profit or loss as a share of the net asset value weighted by the NAV of individual funds.

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



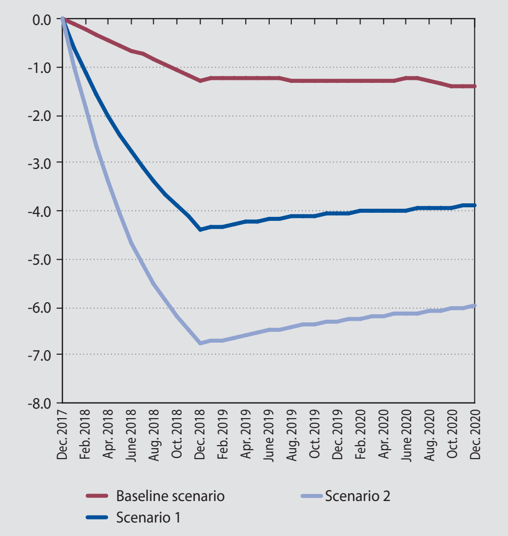
Sources: NBS, ECB, Bloomberg and internet.
Notes: The left-hand scale shows the estimated profit or loss as a share of assets (except for assets covering technical provisions in unit-linked insurance) weighted by assets of individual insurers. The impact of the stress test scenarios on the value of liabilities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

Chart P57 Additional expenses incurred by the insurance sector under negative impact in the stress test scenarios (EUR millions)



Source: NBS.

Chart P58 Impact of Baseline scenario and 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.

GLOSSARY AND ABREVIATIONS

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 interbank 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.

NBS Recommendation – Macroprudential Policy Recommendation No 1/2014 of Národná banka Slovenska of 7 October 2014 on risks related to market developments in retail lending.

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.

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

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
DTI	debt-to-income (ratio)
ETF	exchange-traded fund
EURIBOR	euro interbank offered rate
GDP	gross domestic product
IFRS	International Financial Reporting Standard
JLL	Jones Lang LaSalle
KZAM	Employment Classification (Klasifikácia zamestnaní)
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
PPM	property price map
RBLG	Register of Bank Loans and Guarantees
ROA	return on assets
ROE	return on equity
SCR	solvency capital requirement
SASS	Slovak Association of Fund Management Companies (Slovenská asociácia správcovských spoločností)
SPMC	supplementary pension management company
SO SR	Statistical Office of the Slovak Republic
ULI	unit-linked (life) insurance
ÚPSVa R	Office of Labour, Social Affairs and Family (Ústredie práce, sociálnych vecí a rodiny)
VaR	value at risk

NÁRODNÁ BANKA SLOVENSKA
EUROSYSTÉM

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