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EUROSYSTEM

A large, semi-transparent background image showing a 2015 100 Euro coin on the left and a bridge with people walking on it on the right.

ANALYSIS OF THE SLOVAK FINANCIAL SECTOR 2015

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FOREWORD



FOREWORD

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

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

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

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

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

This edition of the ASFS evaluates the overall condition of the financial sector as at 31 December 2015, although in several parts it refers to more recent data, where available. Activities related to the supervision of individual institutions are not covered.



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OVERVIEW



OVERVIEW

EURO AREA ECONOMIC GROWTH CONTINUED TO PICK UP IN 2015

Several favourable macroeconomic trends of 2014 were confirmed in 2015. The euro area's annual GDP growth reached its highest level since 2011, supported mainly by the positive impact of falling oil prices on domestic consumption as well as by the ECB's significant monetary policy accommodation. The policy stance pushed down the cost of loans, while the euro area's competitiveness was boosted considerably by the euro's exchange rate against the dollar being at its lowest level for 13 years.

Alongside the macroeconomic upturn, however, there were increasingly negative signals from the external environment. In particular, slowing growth was observed in emerging market economies (EMEs) in general and the Chinese economy in particular, which stoked volatility in financial market markets. Adverse scenarios for financial markets became more likely to materialise as the year progressed.

The low interest rate environment remains a particular risk to financial stability, as it undermines banks' profits and their current business models, consequently reducing appetite for trading in their shares. Low interest rates have also been a catalyst for the increasing indebtedness of the public and private sectors, which will have a negative impact on future economic growth.

HOUSEHOLD LOAN GROWTH WAS THE MAIN TREND IN THE SLOVAK FINANCIAL SECTOR, AS IT REACHED A NEW HISTORICAL HIGH

Household loan growth maintained an upward path throughout 2015. In absolute terms, the year-on-year increase in the outstanding amount of bank loans provided to Slovak households reached an all-time high in December 2015. The annual growth rate for retail loans recorded in Slovakia in 2015 was the highest of any country in the euro area and of almost any country in the EU as a whole. With housing loans making up a large share of the retail loan portfolio, their annual growth rate of 13.5% contributed significantly to the portfolio's overall growth rate. The annual rate of growth in consumer loans eased

somewhat in 2015, but remained very high at more than 16%. From the risk perspective, the lengthening of average interest-rate fixation periods in 2015 was a favourable development, since it means that customers are becoming less exposed to potential increases in interest rates.

The quality of the banking sector's retail loan portfolio improved in 2015, with the non-performing loan (NPL) ratio falling to 3.9%. On the other hand, household debt continued to rise sharply, reflecting not only an increase in the number of indebted households, but also increases in the debt service burdens of existing borrowers.

UPWARD TREND IN AVERAGE PRICES OF FLATS CONTINUED IN 2015

In 2015 the average price of flats increased, year-on-year, by 7%, and although that growth was modest, it continued the trend observed at the end of 2014. There were increases in new flat prices, in secondary market prices, and in both advertised and selling prices of flats, as well as in flat prices in most regions and main regional towns. As regards risks related to the property market, they include the prevalence of unfinished flats among new flats on the market and the increasing number of transactions in the primary and secondary market. These are harbingers of the potential emergence of imbalances.

LENDING TO NON-FINANCIAL CORPORATION WAS HIGHER THAN AT ANY OTHER TIME IN THE POST-CRISIS PERIOD

After increasing towards the end of 2014, lending to non-financial corporations (NFCs) maintained this trend in 2015. The growth rate was relatively robust with regard to the breakdown of loans by both economic sector and the ownership of borrowing firms. There was increased lending both to large firms and to SMEs. The pick-up in the credit market was related to the improving performance of the corporate sector as well as to brightening sentiment in the domestic economy. Furthermore, credit standards were eased during 2015, mainly in respect of interest margins, maturities and loan amounts. The quality of the corporate loan portfolio improved in 2015, with decreases in both the overall amount and ratio of NPLs.



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Growth in lending for property developments was supported by increasing demand for new flats and by increasing office rental activity.

BANKS' PROFITS INCREASED, BUT THEIR OUTLOOKS FOR THE NEXT PERIOD ARE WORSENING

The banking sector's profit growth in 2015, as in the previous year, was largely based on growth in lending and on decreases in funding costs and credit risk costs. One difference in comparison with 2014 was that the positive impact of lending growth was largely cancelled out by a significant decline in the rate of return on retail loans. The outlook for profitability deteriorated. Credit risks costs are not expected to fall further, and the remuneration of several deposit products has been reduced almost as far as it can be. Lending growth was insufficient to offset falling interest margins in 2015, despite a historically high absolute increase in loans, and it will be even less likely to do so in the period ahead as the availability of simplified housing loan early repayment accelerates the decline in margins. In such circumstances, the question arises as to whether the traditional business model of the Slovak banking sector is sustainable.

In 2015 all banks in Slovakia continued to meet the minimum capital requirements, including capital buffer requirements, and their common equity Tier 1 ratio remained unchanged at 16%.

INSURANCE PREMIUM GROWTH WAS RECORDED IN BOTH LIFE AND NON-LIFE BUSINESS, BUT INSURERS' PROFITS FELL AMID INCREASING OPERATING COSTS AND LOWER RETURNS ON INVESTMENT

As regards the structure of the insurance market in 2015, it was significant that branches of foreign insurers increased their market share at the expense of subsidiaries. After remaining flat in the previous year, standard life insurance business increased moderately. Premium revenue growth in motor third party liability (MTPL) insurance increased in 2015, unlike in 2014, and did so despite a drop in average premium prices in this business line.

The aggregate profit of insurance companies was 20% lower in 2015 than in 2014, owing mainly to increased operating expenses related to the implementation of the Solvency II regime. Looking ahead, the main source of risk to the sector's

profit outlook remains a low interest rate environment in which insurers cannot earn sufficient returns on debt securities.

IN THE SECOND PENSION PILLAR, THE VALUE OF ASSETS UNDER MANAGEMENT FELL AND THERE WERE INCREASES IN BOTH PENSION FUNDS' RETURNS AND IN THE LEVEL OF MARKET RISK

In the second pillar of the pension system – the old-age pension scheme operated by pension fund management companies – the number of pension savers and volume of assets fell in 2015 owing to another 're-opening' of the scheme (i.e. a temporary period in which it is permitted to withdraw from what is usually a mandatory scheme). This was accompanied by a drop in the amount of assets under management in pension funds, especially in guaranteed bond funds. The main trends in this sector were an increase in the average maturity and duration of portfolios, a decrease in government bond investments, and an increase in the equity component. A related development was the increase in the market risk exposure of most types of pension fund. The current pension-point value was therefore more volatile than at any time since 2008. For pension savers, however, the heightened volatility related to the increase in the equity share of investments, which led to an increase in the return on their pension fund assets.

Certain similar trends were observed in the third pillar of the pension system – the supplementary pension scheme operated by supplementary pension management companies (SPMCs). In particular, the share of equities in the investment portfolio increased and that of Slovak government bonds decreased, and there were increases in the maturity and duration of bond portfolios. Unlike second pillar funds, supplementary pension funds recorded a negative return on average.

THE VALUE OF ASSETS HELD IN INVESTMENT FUNDS INCREASED AND SO DID THE RISK EXPOSURE OF THESE FUNDS, WHILE THE RETURNS ON THESE INVESTMENTS FELL SLIGHTLY

The net asset value (NAV) of investment funds increased in 2015 owing to growth in net sales. The most notable trends were the increase in mixed funds and the substantial redemptions of bond funds. Like pension funds, almost all categories of investment funds saw an increase in their mar-



OVERVIEW

ket risk exposure. Although average returns on investment funds remained positive, they were below the levels of the previous two years.

STRESS TEST RESULTS DEMONSTRATED THE BANKING SECTOR'S RESILIENCE AGAINST AN ADVERSE SCENARIO

Even on the though stricter stress testing parameters, the banking sector is still resilient to

adverse developments in the real economy. Under the adverse scenario, the sector's capital is €3 million short of the minimum requirement, or €132 million short if the additional capital conservation buffer is included. The favourable results reflect the sector's robust level of capitalisation and ability to generate profit even under adverse circumstances.



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CHAPTER 1

EXTERNAL AND DOMESTIC DEVELOPMENTS RELEVANT FOR FINANCIAL SECTOR STABILITY

1 EXTERNAL AND DOMESTIC DEVELOPMENTS RELEVANT FOR FINANCIAL SECTOR STABILITY

CONTINUING ECONOMIC RECOVERY IN THE EURO AREA

RELIANT ON INTERPLAY OF SEVERAL SUPPORTING FACTORS

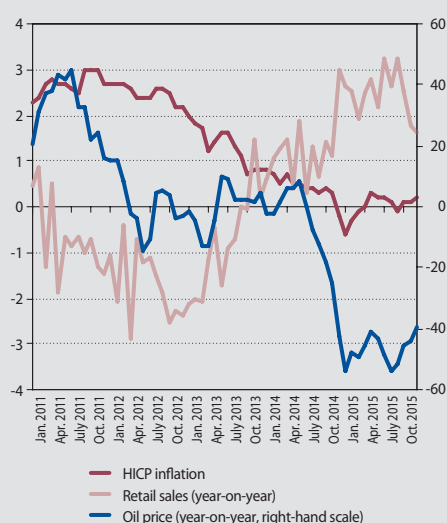
The euro area economy in 2015 took a further, this time firmer, step towards recovery from the consequences of the debt crisis. Annual GDP growth increased to 1.6%, its highest level since 2011. This upturn stemmed mainly from a rapid fall in oil prices, which boosted household disposable income through the impact of lower energy prices and lower headline inflation. Amid improved consumer confidence, a sizeable share of the additional income was allocated to consumption, which consequently was the principal component of the GDP growth.

Another significant stimulus to domestic demand in the euro area was the further easing of monetary policy. The ECB became the last of the major central banks to embark on quantitative easing, when it decided to expand its asset purchase programme (APP) with sizeable monthly bond purchases, mainly of government bonds, in the secondary market. In addition to this measure, the deposit facility rate was reduced

at the end of 2015 by 10 basis points, to -0.3%, therefore moving further into negative territory. These steps had a favourable impact on conditions for financing of the real economy. Interest rates on new loans fell, most notably on new loans to firms. In addition, the fragmentation in lending rates across euro area countries was reduced. Banks eased their credit standards in other ways, too. The annual growth rate of loans to the private sector switched from negative to positive figures, reflecting the growing demand for credit and increasing availability of loans from the beginning of 2015. A credit cycle upturn was evident not only in expanded bank lending, but also by the increasing extent to which NFCs obtained financing from bond and capital markets.

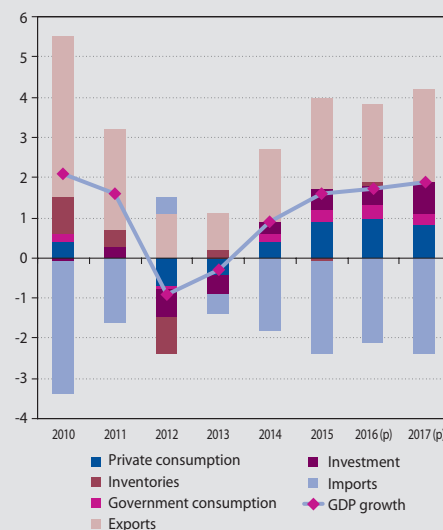
The last of the three key factors supporting the recovery in 2015 was a marked depreciation of the euro's exchange rate against the US dollar and other currencies back at the turn of the year. The weakening reflected downward revision of expected interest rate differentials between the

Chart 1 Oil prices, HICP inflation and retail sales (%)



Sources: Eurostat and Bloomberg.

Chart 2 Euro area GDP growth (%) and its composition (p.p.)



Source: European Economic Forecast – Winter 2016.
(p) = projection.

euro area and other countries. The effect of the depreciation was to make goods and services produced in the euro area more competitively priced in world markets and thus to increase their sales abroad. This occurred mainly in the first half of 2015, and despite a slowdown in global demand.

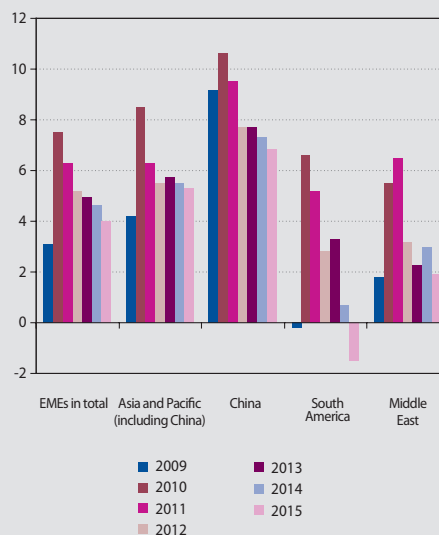
As the economy gained momentum, the labour market, too, gradually picked up. Headcount employment increased, year-on-year, by 1.1%, with the highest growth recorded in those countries that had been hardest hit by the crisis, including Spain, Italy and Portugal. With employment growth came an increase in household disposable income. At the same time, net job creation pushed down the unemployment rate, which in December 2015 stood at 10.4%, a full percentage point lower than its level 12 months earlier.

Going forward, the continuation of the euro area's economic upturn is projected by a number of key institutions (including the ECB, IMF and OECD). Annual GDP growth in the euro area in 2016 and 2017 is expected to be at least as strong as in 2015, or moderately higher. These forecasts assume, among other things, that the positive impact of monetary policy accommodation and falling oil prices on domestic demand will continue, following the further fall in oil prices observed more recently.

GLOBAL ECONOMIC SLOWDOWN CAUSED BY INCREASING DIFFICULTIES IN EMERGING MARKET ECONOMIES

Although conditions within the euro area are relatively favourable, they are increasingly threatened by developments in a global economy that faces several major challenges. Perhaps the most discussed challenge is the transformation of China's economic growth model into one based less on industry, exports and investment, and more on services and domestic consumption. This evolving process is gradually subduing China's economic performance, but so far in a steady and largely controlled way. Since around summer 2015, however, the situation in China has attracted close scrutiny amid mounting fears that the economy may face a 'hard landing'; i.e. slow down more severely than originally expected. Such a scenario would include the materialisation of risks related to accumu-

Chart 3 Economic growth in emerging market economies (%)



Source: World Bank.

lated macroeconomic imbalances, such as over-leveraged firms, excess production capacities in certain industries, and dependence on foreign currency funding.

For most of the post-crisis period, EMEs were the main driver of global demand growth and seemed set to occupy that position for some time to come, but in the recent period that assumption has begun to appear severely flawed. Average economic growth across all EMEs fell markedly in 2015, to 4.0%, from 4.6% in 2014. Although the IMF envisages a gradual pick-up in EME demand, the projected pace of that recovery has been repeatedly, over time, revised down. The prevailing view is that the performance of these economic economies will not within the foreseeable future rebound to the elevated levels of previous years. Such a situation appears natural, at least in hindsight, since the trends observed in EMEs until recently were based largely on unsustainable fundamentals, such as rising prices of commodity exports, enormous dependence on Chinese demand, and the use of cheap money from advanced countries to stimulate domestic demand via credit expansion. All three of these factors have recently turned to the disadvantage of EMEs, not only weighing on GDP growth, but also exposing economic and financial imbalanc-

es. As regards the risks related to these factors, the situation in EMEs may further deteriorate and, consequently, affect macroeconomic conditions in the euro area.

Another process that could constitute a risk to the global economic outlook is the normalisation of monetary policy in the United States. The US Federal Reserve decided in December 2015 to proceed with the long-signalled increase in the federal funds rate, which for seven years had been at virtually zero. The decision was based on the healthy state of the US economy (in a mature phase of recovery), with particular regard to the improvement in labour market conditions. The further gradual tightening of US monetary policy is expected to be contingent on developments in domestic inflation pressures. The Federal Reserve's interest rate hike may, however, give rise to less favourable financial conditions in other parts of the world. The countries most exposed to this risk are EMEs, which could see increasing funding costs, capital flight, and depreciation of their domestic currencies against the US dollar. Furthermore, this is all happening at a time when public and private debt ratios have risen significantly in several EMEs, often through borrowing in foreign currencies.

RETURN OF HEIGHTENED VOLATILITY TO FINANCIAL MARKETS IN THE SECOND HALF OF 2015

The deteriorating outlook for EMEs had a major impact on financial market developments in 2015. The Chinese stock market in particular became a centre of attention, since after growing strongly in the first months of 2015, it was affected by a turnaround in sentiment and lost almost half of its value in the period from June. This downward trend was initially a local affair, but a share-price slump in August triggered a sharp increase in risk aversion that spilled over into other global financial markets. Similar turbulence occurred again in the first days of 2016. In both cases the stock market losses were exacerbated by the less than convincing response of the Chinese authorities to the emerging situation. Overall, there was a heightening of uncertainty and volatility across global financial markets in the later months of 2015. While equity prices were falling by tens of per cent, prices of lower-rated bonds also declined, the exchange rates of EME currencies depreci-

Chart 4 Performance of selected equity indices

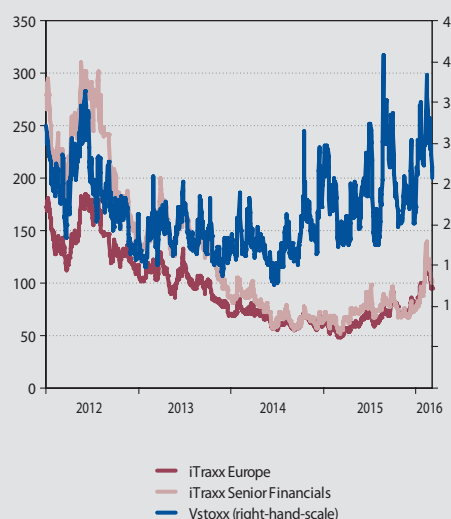


Source: Bloomberg.
Normalised (1 January 2015 = 100).

ated, and prices of a broad range of commodities decreased.

The most serious long-running risk to financial stability – an increase in risk premia and in financial market volatility – materialised to some extent in 2015, both in the euro area and globally. This risk nevertheless remains a factor since the

Chart 5 Selected market risk indicators



Source: Bloomberg.

risk premia of some assets are still at historically low levels. The proportion of assets trading at a negative yield to maturity soared during the period under review, owing to the impact of expansionary monetary policy in the euro area, Japan and some non-euro area European countries.

The situation in European markets mirrored global trends to a large extent. However, the recent slump in the share prices of euro area banks, down to their lowest level since the financial crisis, was further amplified by the return of fears about the soundness of Europe's banking sector. In response to the deteriorating sentiment, banks' CDS spreads increased. Perceptions of risk in the banking sector were notably heightened after the ECB reduced its deposit facility rate to negative figures and signalled the possibility of further steps to ease monetary policy. Investors apparently began to place greater weight on the complications faced by banks in generating profits amid long-standing low or negative interest rates; consequently, investors had diminishing confidence in the effectiveness of monetary policy as a means of reviving the euro area economy. Another source of elevated uncertainty in the European banking sector is new regulation, in particular the launch of the second pillar of the banking union and, with it, a shift in the burden of resolution from the shoulders of taxpayers to banks' creditors.

ALONG WITH EXTERNAL THREATS, THE EURO AREA CONTINUES TO FACE ALSO SERIOUS DOMESTIC CHALLENGES

Despite the improvement in its economic performance, the euro area continues to face significant risks associated with internal developments in the region. One consequence of HICP inflation being below the ECB's target for an extended period has been the slower repair of corporate and, even more so, government balance sheets. As was apparent in early summer 2015, the state of the Greek economy and the level of Greek public debt entail a potentially serious threat to stability in the euro area. Investors also became increasingly concerned about Portugal, as was reflected in the increase in spreads on Portuguese government bonds. The euro area's progress may also

Chart 6 Yields to maturity of 10-year government bonds (%)



Source: Bloomberg.

be impaired by the refugee crisis if no satisfactory solution to this issue is found within the foreseeable future.

Another important consideration is whether the euro area will be able to find sustainable growth impulses for its economy after the exceptional impact of falling energy prices and euro depreciation has faded. Economic indicators in recent months point to looming complications. Slowdowns have been recorded in all the principal areas, including retail sales, industrial production and exports. Furthermore, most leading indicators of confidence and sentiment point to declining optimism among agents in the real economy. Given the nexus of internal developments, trends in other parts of the world, and elevated volatility in financial markets, the risks to the euro area have risen.

SLOVAKIA'S ECONOMIC GROWTH IN 2015 WAS SUBSTANTIALLY SUPPORTED BY EU FUNDS, BUT IN FUTURE WILL BE EVEN MORE RELIANT ON THE CAR INDUSTRY

Slovakia's economy grew by 3.6% in 2015. In contrast to the previous period, when net exports accounted for most of the GDP growth, within last two years domestic demand was the main driver of growth in 2015. Household consumption was buoyed by employment growth,

real wage growth in a low inflation environment, and continuing lending growth. Net exports, on the other hand, made a negative contribution to growth, as increased investment activity resulted in imports increasing more than exports.

Investment was the strongest-growing component of GDP growth in 2015. The overall investment growth of more than 10% was generated largely by public investment, reflecting the absorption of outstanding EU funds from the 2007-2013 programming period. Private sector investment also contributed positively to economic growth.

The impact of general government on growth was based mainly on goods and services consumption boosted by the increased absorption of EU funds and by employee compensation trends in the sector.

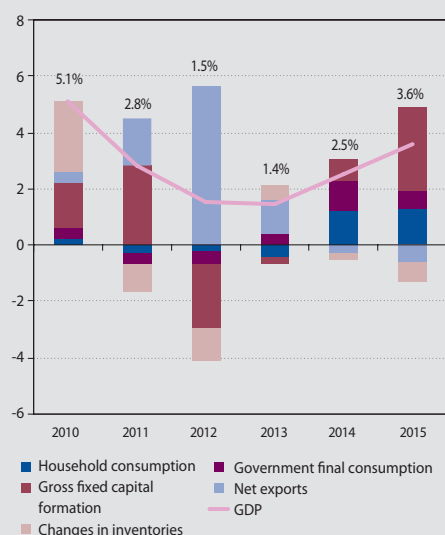
Economic growth began to feed through to labour market developments in 2015. Headcount employment returned to pre-crisis levels, with job growth supported not only by the strength-

ening economy, but also by the temporary factor of higher EU funds absorption. Employment recorded 2% growth, and the unemployment rate fell to 11% in December 2015, its lowest level since 2009. Average annual nominal wage growth in 2015 surpassed 2.5%, and in a low inflation environment has translated into an increase in real terms, too.

The annual inflation rate turned more negative in 2015, reaching -0.3%. The drop reflected falling prices of oil and, to a lesser extent, food. By contrast, prices of services and non-energy industrial goods increased year-on-year, but not by enough to offset the impact of negative energy inflation. Net inflation, excluding automotive fuel prices, stood at 0.9%.

The favourable economic trends in 2015 were mirrored in an improvement of the financial situation of both, households (as their real disposable income increased) and NFCs (as their sales and profits grew). On the one hand, this implies that households and firms could pay down their debts but, on the other hand, the strong growth in loans and private sector debt continued.

Chart 7 Annual GDP growth and its components (% p.p.)



Sources: SO SR and NBS.

Slovakia's annual GDP growth in 2016 is expected to exceed 3%. Its slight drop in pace, in comparison with the previous year's performance, reflects the base effect of high EU funds absorption in 2015 and the slow start to the absorption of funds under the new 2014-2020 programming period. At the same time, the new investment of the carmaker Jaguar Land Rover in Slovakia is expected to see construction of a new car plant. The current trends in the labour market are expected to continue into the next period, supporting a reduction in the unemployment rate and growth in consumer demand.

Current GDP growth outlooks for Slovakia and its main trading partners are subject to the upside risk of persisting low oil prices and to the downside risks of uncertainty about developments in EMEs (especially Brazil, Russian and China) and the potential escalation of certain geopolitical conflicts.



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CHAPTER 2

INTEGRATED OVERVIEW OF THE FINANCIAL SECTOR



2 INTEGRATED OVERVIEW OF THE FINANCIAL SECTOR

ASSET GROWTH INCREASED IN MOST FINANCIAL MARKETS' SEGMENTS IN 2015

Most segments of the financial market continued to report strong asset growth in 2015. Gradually accelerating economic growth and its favourable impact on the labour market and corporate sales was reflected in increases in the amount of assets, including loans provided. This growth, however, was not as strong as in 2014, and it was increasingly fragmented across segments.

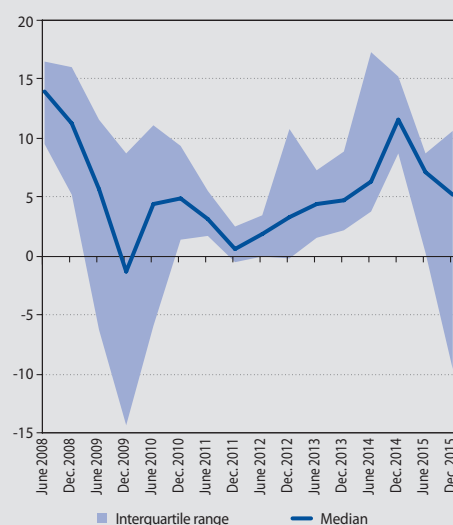
The banking sector's asset growth was particularly robust, reaching its highest level since 2008. This increase was driven mainly by lending to households, largely in the form of housing loans. At the same time, however, lending to NFCs also increased gradually, as did credit provided by non-bank entities in the form of leasing or hire purchase.

The insurance sector also reported asset growth, and, after adjustment for a methodological change¹, the amount of assets invested by insurers increased in year-on-year terms. The amount

of assets managed by pension fund management companies (PFMCs) fell in the first half of 2015. This drop followed a law change that allowed people to leave the second pillar of the pension system between 15 March 2015 and 15 June 2015 (note: the pillar comprises the defined contribution old-age pension scheme operated by PFMCs; entry in the scheme is voluntary, but leaving the scheme is not permitted in normal circumstances). Almost 160,000 people opted out of the second pillar, with their savings being transferred to the state-run Social Insurance Agency. The total amount transferred was € 579 million. As for the people who remained in the second pillar, their aggregate savings increased.

The economy's stable growth was to an extent reflected in the profits of financial institutions. Each segment of the financial market reported a profit, although the aggregate average profit of financial institutions declined year-on-year. Return on equity (ROE) followed a steady trend in all segments, reflecting the post-financial crisis recovery and stabilisation. The prolonged low

Chart 8 Assets and managed assets in the Slovak financial sector (annual percentage changes)



Source: NBS.

Note: The chart includes assets of, and assets managed by, banks, insurers, collective investment funds, PFMCs, SPMCs, investment firms, and leasing, factoring and hire-purchase companies.

Chart 9 Return on equity (%)



Source: NBS.

¹ As of 1 April 2015 the legal status of the largest life insurer in Slovakia, MetLife Amslico, was changed when it became a branch of a foreign insurance company. Consequently, its assets are not included in the aggregate data for the insurance sector as at end-2015.

interest rate environment still did not weigh on banks' profits, thanks probably to growth in bank lending. The profits of PFMCs and supplementary pension management companies (SPMCs) were reduced slightly by lower income from performance-related fees, with funds' investment returns being adversely affected by financial market turbulence.

CREDIT RISK INDICATORS IMPROVED IN BOTH THE RETAIL AND CORPORATE SECTORS

Credit quality indicators for retail loans showed broad improvement. The aggregate non-performing loan (NPL) ratio for retail loans decreased, down to 3.9% at the end 2015. In contrast to previous years, the amount of NPLs fell, too. The default rate² for the whole retail portfolio decreased to 0.3% and the rate for housing loans alone was as low as 0%. These results were supported by an improving labour market situation, further reductions in interest rates, and a general upturn in the macroeconomic environment.

The NPL ratio for loans to non-financial corporations also fell in 2015, by 1.3 percentage points to 7.3%, although part of that drop was caused by bad debt being written off or sold off. The NPL inflows were heterogeneous over the year, with their downward trend in the first three quarters followed by an upward path in the last quarter.

The aggregate debt servicing burden of NPCs fell during 2015, reflecting the impact of trends in interest rates and corporate sales.

EXPOSURE TO MARKET RISKS INCREASED FOR MOST FINANCIAL MARKET PARTICIPANTS IN 2015

Each financial market segment recorded a year-on-year increase in exposure to most market risks in 2015. There were increases in equity risk, foreign exchange risk and interest rate risk (Table 1).

Interest rate risk may be proxied by duration, with higher duration denoting a greater adverse impact in the event of an increase in interest rates. In the banking sector, the rising trend in the average duration of the whole portfolio came to an end, although the duration of the securities portfolio increased slightly. The insurance sector continued to report an increase in the share of debt securities, and in particular corporate bonds, while duration remained unchanged. In the PFMC and SPMC sectors the duration of debt securities increased by 0.8 years and 1.1 year respectively, thereby lengthening the average duration of each sector's aggregate portfolio even while the share of debt security investments fell. The increase in duration was moderate across collective investment funds and the share of debt securities also fell slightly. Across assets in-

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		
	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015
Banks	0.4	0.3	0.4	0.2	0.4	0.3	22.3	20.6	19.8	3.6	3.9	4.0	1.1	1.2	1.2	4.5	5.0	4.6
Insurers	2.8	3.4	3.7	0.7	0.4	0.4	74.7	79.7	84.9	6.5	6.8	6.8	5.8	6.1	6.0	8.5	8.6	8.4
PFMC funds	10.3	11.6	16.5	3.1	4.9	5.4	67.4	71.6	69.4	3.4	3.4	4.2	2.2	2.1	2.9	4.4	4.5	5.1
SPMC funds	20	22.6	28.4	8.7	10.2	13.9	66.9	59.6	54.2	3.3	3.5	4.6	2.1	1.7	2.5	4.4	4.8	5.6
Collective investment funds	23.6	28.9	34.2	15.3	12.8	14.5	25.9	25.4	22.9	2.1	1.8	2.0	0.7	0.5	0.6	2.8	2.7	2.6
Unit-linked insurance ¹⁾	74.3	75.8	76.8	11.8	12.2	8.4	21.4	22.9	22.0	4.3	3.4	4.1	0.8	0.6	0.8	4.9	4.2	4.3

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) Assets invested by insurers under unit-linked life insurance policies.

2 The default rate denotes the amount of loans that default within a twelve-month period as a share of the outstanding amount of all loans at the beginning of that period.

vested under unit-linked insurance contract, duration also increased, despite the share of debt securities remaining low.

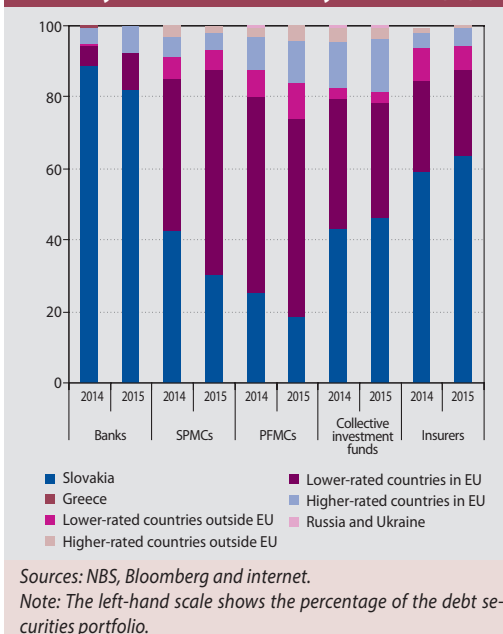
These changes in duration and the differing approaches of individual financial market segments may be partly attributed to differences in strategy. Funds that adjust all assets to fair value (in particular SPMC funds, investment funds, and unit-linked insurance funds) are increasing duration as a way of earning higher returns in the current environment of extremely low yields, with 2015 seeing a steepening of the yield curve and at the same time a further drop in yields on shorter maturity securities. Banks and insurers are continuing in their long-term strategy, where most of their bond purchases are held to maturity. Insurers report the highest durations for their portfolios, as they attempt to ensure asset coverage of expected insurance contract cash flows.

As for equity risk, all types of fund continue to see a trend of rising exposure to equities and investment fund shares/units. This may in part be because the search for higher yield is increasing purchases of higher-risk assets. Higher investment in equities and exchange-traded funds (ETFs) is associated with higher exposure to foreign exchange risk in these market segments. The differences between segments also reflect the extent to which each uses derivatives for hedging foreign exchange risk. The funds that experienced the largest rise in exposure to foreign exchange risk were SPMC funds and collective investment funds. Among unit-linked insurance funds, by contrast, this exposure declined. As for PFMC funds, their exposure to foreign exchange risk continued to increase slightly, but remained relatively low.

EXPOSURE TO LOWER-RATED COUNTRIES IS INCREASING, BUT REMAINS MODEST

As Chart 10 shows, the composition of the bond portfolio, which in all segments of the financial market constitutes a significant part of the overall portfolio, remains conservative with respect to counterparty risk and specifically to the geographical breakdown of counterparties. As for exposure to countries which in the light of recent developments are perceived as relatively more risky (Greece, Russia, Ukraine), in no segment of the financial market did it exceed 0.5% of the value of the bond portfolio at the end of 2015

Chart 10 Debt securities portfolio broken down by riskiness of country of issuer (%)



and that share is not increasing. Although exposure to other lower-rated countries, in particular those within the EU, is also low, it is increasing in several segments of the financial market.

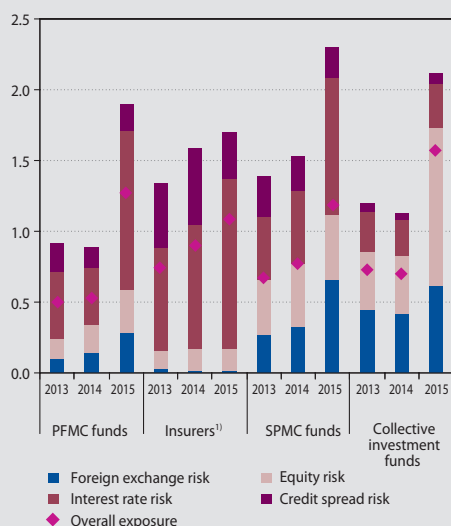
At end-2014 the highest exposure to lower-rated countries was observed in the SPMC sector (11% of total assets), followed by the PFMC and collective investment sectors (4%). In 2015 this exposure increased slightly in the PFMC and collective investment sectors, and fell slightly in the SPMC sector. Where the exposure did increase, it was due mainly to investments in Irish and Italian debt. As Chart 10 also shows, exposure to the domestic economy continues to constitute a major, albeit decreasing, part of the bond portfolio.

THE GLOBAL EXPOSURE OF THE FINANCIAL SECTOR, AS MEASURED BY VAR³, INCREASED IN 2015 AMONG MOST PARTICIPANTS

Chart 11 shows that the global exposure of most financial market segments was markedly higher in 2015 than in the previous two years, owing to increasing exposure to particular risk types as well as to the increasing volatility of individual risk factors. Among PFMC and SPMC funds, exposure to interest rate risk increased the most, due to increases in duration as well as to the volatility of interest rates in 2015. In the insurance sector, the exposure to interest rate risk increased only

³ Value at Risk (VaR).

Chart 11 VaR across financial market segments (%)



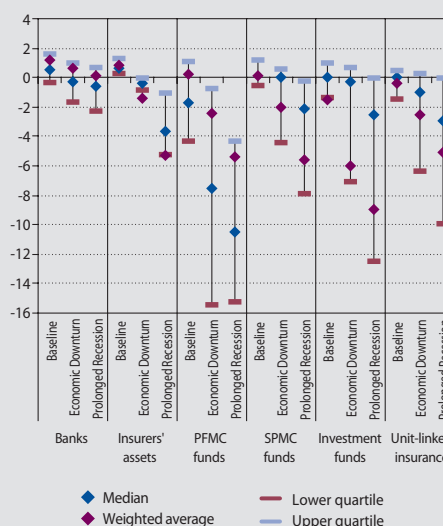
Sources: NBS, Bloomberg and internet.

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

Chart 12 Distribution of the impact of macroeconomic scenarios on the financial sector (%)



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 2016.

In the case of banks, the quartiles refer to the ratio of the total estimated net profit for the two-year period under review to net assets as at 31 December 2015.

The data for insurance companies include only the change in the fair value of assets and impact of insurance risks on their profitability. The stress testing does not include assets covering technical provisions for unit-linked insurance policies, nor the impact on the value of insurance company liabilities.

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

slightly, with the portfolio duration remaining unchanged. All fund types, and collective investment funds in particular, saw a rise in their foreign-exchange and equity risk exposures. The increase in the global exposure of the financial sector reflected not only these higher exposures, but also the heightening volatility of financial markets during 2015.

THE IMPACT OF RISKS UNDER ADVERSE SCENARIOS WAS ASSESSED THROUGH MACRO STRESS TESTING

The impact of adverse developments in financial markets and the real economy on different segments of the Slovak financial sector was again assessed using macro stress testing. The stress test exercise assumed adverse developments in the real economy and in financial markets, which were quite severe under the 'Prolonged Recession' scenario. A detailed description of the stress

test scenarios and the results are provided in Chapter 6.

The adverse projections for financial market developments have the most severe impact, on average, on all types of fund – PFMC, SPMC, collective investment, and unit-linked insurance funds. The funds are affected appreciably not only by the assumed increases in interest rates and credit spreads, but also by falling equity prices. Insurers, too, see their assets significantly impaired under the adverse scenario, mainly because their bond portfolio has a long duration (and consequently is more sensitive to interest rate movements), and because they are sensitive to credit spread risk. Under the projected increase in risk-free interest rates, this impairment is accompanied by a fall in the value of liabilities, which reduces the overall losses.



NÁRODNÁ BANKA SLOVENSKA
EUROSYSTEM

CHAPTER 3

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

THE ANNUAL RATE OF LENDING GROWTH STABILISED, AT A RELATIVELY HIGH LEVEL

The annual rate of growth in retail loans stabilised gradually over the course of 2015, at around 12.7%, and closed the year at 12.4% in December. Nevertheless, the volume of retail loans increased during the year by €2.9 billion, which was the highest increase in the history of retail lending in Slovakia. In international comparison, retail lending in Slovakia continued to grow at the fastest pace within the EU.⁴ The average figure for the euro area fluctuated around 1% year-on-year during 2015. Positive volume changes were recorded by all banks that were active in the retail loan market.

HOUSING LOAN GROWTH REMAINED THE DOMINANT TREND IN THE RETAIL SECTOR

The main factor behind the growth in retail loan portfolios was, as in the previous period, lending

for housing purposes. By December 2015, these portfolios had grown in volume by 13.5% year-on-year, though their growth rate fluctuated during the year around 13.7%. In absolute terms, the total volume of retail loans increased by €2.4 billion, which was by 60% more than the year-on-year increase in retail loans observed at the end of 2011, when these loans rose with the same annual rate.

Interest rates stabilised for all categories of housing loans. At the end of 2015, the average rate for new loans hovered around the level of 2.6%. The difference between interest rates on existing and new loans diminished only slowly, it fluctuated around one percentage point until the end of the year. This also provided a basis for the continuing loan refinancing trend (roughly 28% of the new loans came from refinancing). This share decreased somewhat during 2015 in comparison with the period preceding the entry into force of Recommendation No 1/2014 of Národná banka Slovenska of 7 October 2014 in the area of macroprudential policy on risks related to market developments in retail lending (hereinafter 'NBS Recommendation'), when this figure was above 31%. This was attributable mainly to a decline in loan refinancing with a material increase in principal.

Mortgage loans did not follow the rapidly accelerating trend from the previous year and, after a certain slowdown, their annual growth rate stabilised at a level close to 10%. The slowdown took place in virtually all relevant institutions. Interest rates on these loans were relatively stable during the year; they averaged 2.9% (excluding the state interest subsidy effect for young borrowers).

The volume of intermediate loans grew at a pace of 8.8%, which was lower than the average growth rate of the sector. This was a certain slowdown in comparison with the middle of 2015, but the average growth rate was relatively stable. The average rates for new loans were for roughly two years almost two percentage points higher than the figure for new housing loans.

Chart 13 Annual rates of change in selected categories of loans (%)



Source: NBS.

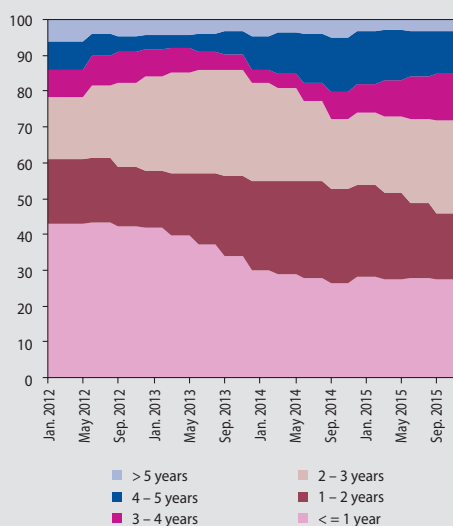
⁴ Excluding the United Kingdom where, unlike in Slovakia, relatively volatile lending growth was recorded in the last months of 2015.



Unlike in the previous years, the four large banks managed to strengthen their market position in 2015, with a share of 76% in new housing loans and 71% in the outstanding amount of housing loans as at end-December. This was achieved despite the fact that large banks provided loans at the highest rate of interest on average. Medium-sized domestic banks had a market share of 10% in the outstanding amount of loans; the market share of home savings banks continued to decrease, below 12%. Branches of foreign banks recorded a steady increase in their market share, to almost 7% of the outstanding amount of housing loans. In 2013 and 2014, some medium-sized and small banks recorded sharp year-on-year increases in their portfolios, in the range from 30% to 65%. In 2015, smaller increases were reported, only a few banks recorded an increase of 30-40%. These banks provided new loans at the lowest average rate of interest.

Average interest rates in most banks were more or less identical to the annual percentage rate of charge (APRC), with an average difference of 0.3 percentage point between them. Certain banks, however, offered loans at below-average rates with a relatively high APRC. This implies that these banks used low interest rates as a marketing strategy. The low rates, however, were compensated for by various fees charged in connection with the loans.

Chart 14 Outstanding amount of housing loans broken down by the period of residual rate fixation (%)



Source: NBS.

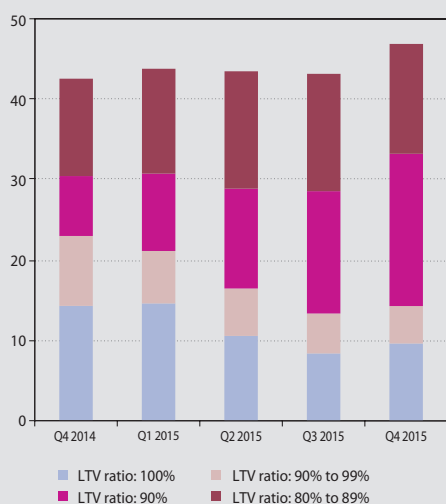
HOUSING LOANS WERE DOMINATED BY LONG MATURITIES, WITH AN INTEREST RATE FIXATION PERIOD OF UP TO THREE YEARS

In terms of maturity, housing loans were dominated by loans with a maturity of 30 years; more than half of the new loans had such maturity (except for loans for refinancing other loans). Roughly one-third of the loans refinanced with a material increase in principal, and 15% of the loans refinanced without a material increase in principal were provided with a maturity of 30 years. Other maturities of up to 30 years were represented with a roughly equal share. The share of loans with a maturity of over 30 years was negligible.

The period of initial rate fixation for the outstanding amount of housing loans has undergone significant changes in the last few years. The share of loans with an interest rate fixation period of one year, which reached 37% at the end of 2012, dropped to 25% as at end-September 2015. They were followed by loans with an interest rate fixation period of up to two years and up to three years, with a share of 20% to 27% in the last two calendar years. The share of loans with a period of up to four years and up to five years increased during these years. After both together accounted for less than 15% of the portfolio in 2012, they started to expand in 2013, with the share of the former reaching 13% and of the latter 12% in September 2015. Loans with an initial rate fixation period of over 5 years were historically of minor significance. The portfolios of medium-sized and small banks consist almost entirely of loans with shorter initial rate fixation periods (loans with rates fixed for up to 3 years account for more than 90%). Hence, these banks are increasingly exposed to the risk of a potential rise in interest rates.

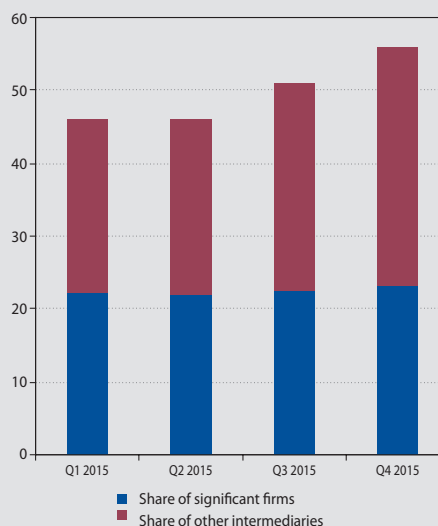
The gradual lengthening of rate fixation periods was also reflected in the decreasing annual share of refixed loans in the portfolio. In 2013, in value terms, 42% of the loans reached the end of the rate fixation period (with a possibility of setting a new fixation rate), compared with only 27% in 2015. In the long term, however, loans repaid before maturity account for approximately 10% of the loan portfolio per year. So although customers are entitled to have a loan from another bank refinanced free of charge as of the end of the rate fixation period, they do not switch to another bank as a rule. This phenomenon is highlighted

Chart 15 Share of new loans by loan-to-value ratio, excluding loans refinanced without a material increase in principal (%)



Source: NBS.

Chart 16 Share of intermediated loans in new loans (%)



Source: NBS.

Note: Significant firms comprise intermediaries with a share of at least 1% in the volume of new loans in 2015.

by the fact that refinancing takes place partly at a date other than the end of the rate fixation period.

LOANS WITH A LOAN-TO-VALUE RATIO OF 90% INCREASED DURING THE YEAR, AS WELL AS THE SHARE OF FINANCIAL INTERMEDIATION

The loan-to-value (LTV) ratios of new loans and loans refinanced with an increase in principal were influenced during 2015 by the NBS Recommendation. The share of loans with an LTV ratio of over 90% decreased during the year, from 23.1% in the first quarter to less than 14.4% in the fourth quarter. Both the market and individ-

ual banks provided less such loans than NBS had recommended. As Chart 15 shows, loans with an LTV ratio of 100% were replaced with loans with an LTV ratio of 90% as recommended. Loans with an LTV ratio of more than 80% accounted for 44% of the portfolio.

The share of financial intermediation followed an increasing trend during 2015, from 46% of new loans in the first quarter to 56% in the fourth quarter. Marked differences were identified between banks, ranging from 13% to 78% of the loan portfolio. The share of individual banks changed only minimally during 2015.

Box 1

RESIDENTIAL PROPERTY MARKET DEVELOPMENTS IN SLOVAKIA AND IN ITS CAPITAL CITY

FLAT PRICES INCREASED SLOWLY BUT STEADILY, WITH THE NUMBER OF FLATS SOLD GROWING DYNAMICALLY IN PROPORTION TO THE NUMBER OF FLATS ADVERTISED FOR SALE

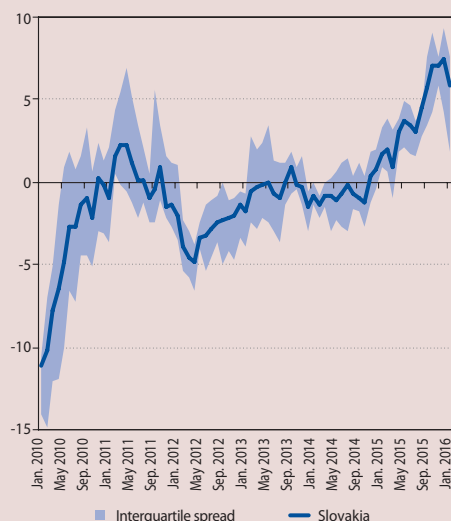
Flat prices in Slovakia started to increase in the middle of 2014. The annualised rate of increase has so far been moderate but stable, at around 6%. The growing floor space of flats is an in-

dication of housing availability, though the falling supply of flats may give rise to imbalances. The secondary market features robust rising trends across all Slovak regions, as well as across the categories of flats.

It should be noted in the first place that, according to the available data,⁵ that these de-

⁵ Cenová mapa nehnuteľností (Real Estate Price Map).

Chart A Annual changes in average flat prices in Slovak regions (%)



Source: CMN.

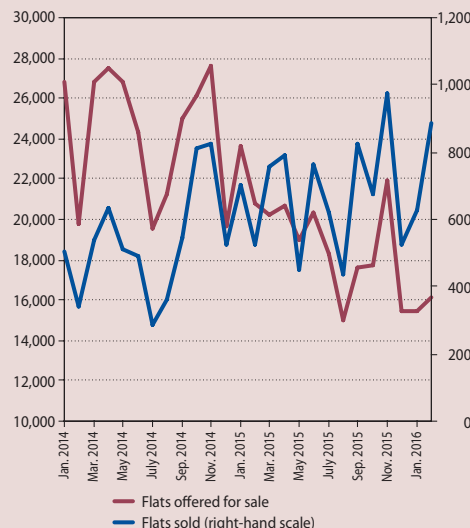
developments almost fully reflect the rise in flat prices in the secondary market. Data from the market for new flats advertised for sale⁶ in the Bratislava Region indicate that the prices of these flats grew during 2015 at a somewhat slower pace (about 4% year-on-year).

The developments in flat prices under monitoring were homogeneous: the price increases in the individual regions correlated, except for the stagnating prices in the Banská Bystrica Region and the steeply rising prices in the Prešov Region, where a small number of expensive flats in the Vysoké Tatry Region affected the average price level. With this category of flats left out of account, price developments in the Prešov Region were in line with the rest of Slovakia.

Homogenous price developments were also observed in the individual categories of flats (price increases in all categories). Prices rose most rapidly for studio flats and five-room flats.

The number of flats sold on the secondary market per month increased from an average of 531 in 2014 to 670 in 2015. At the same time, the number of flats offered for sale decreased significantly from an average of 24,289 in 2014 to 19,214 in 2015. Both trends took place across all Slovak regions. These developments may lead to insufficient supply on the second-

Chart B Number of flats advertised and sold in the Slovak secondary market



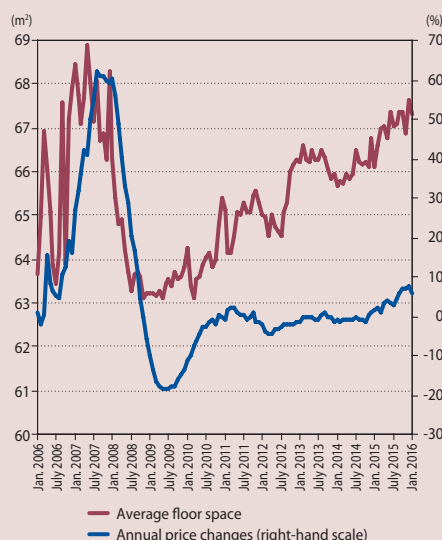
Source: NBS.

ary market for flats and thus give rise to an excessive price increase.

THE AVERAGE FLOOR SPACE OF FLATS SHOWS A GROWING TENDENCY IN THE LONG TERM, MAINLY IN THE BRATISLAVA REGION

The floor space of flats advertised for sale has been growing steadily since the beginning of 2009 (by 1 m² per two years). Thus, flats offered for sale had an average floor space of 67 m² at

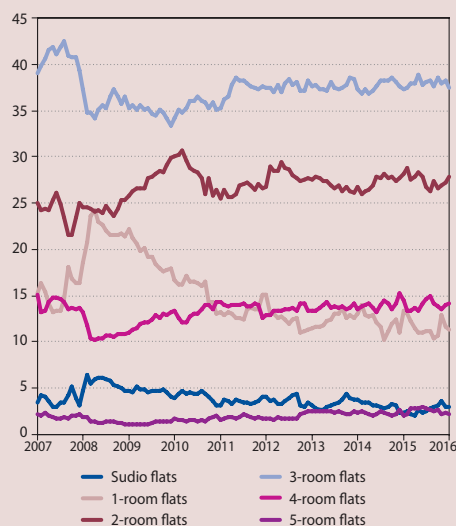
Chart C Flats in Slovakia: average floor space and prices



Source: CMN.

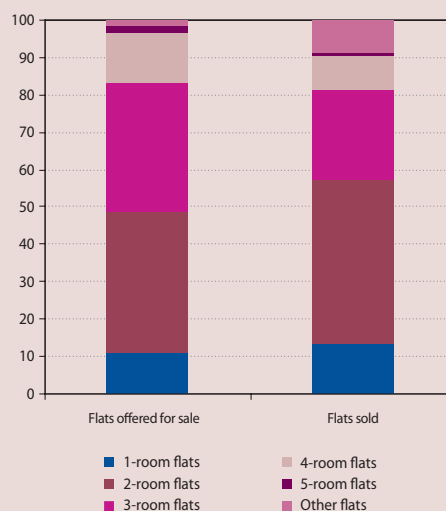
6 Lexxus.

Chart D Share of individual types of flats in the Bratislava Region (%)



Source: CMN.

Chart E Flats in the primary market broken down by the number of rooms (Bratislava, 2015, %)



Source: Lexxus.

the end of 2015. The floor space of flats grew most rapidly in the Bratislava Region, where the average figure increased from 65 m² in the first half of 2009 to 78 m² in the second half of 2015. During 2015, the floor space of flats also increased in Košice and Trnava, as well as in Nitra and Žilina. The other regions witnessed stagnation in this area.

Monitoring of the average floor space of flats is important for the assessment of sustainability of flat prices per 1 m². A decrease in the floor space would indicate that potential customers are forced to buy smaller flats because of the high unit price.

The number of rooms in flats offered for sale remained virtually unchanged in the period under review. The market was dominated by three-room and two-room flats with a two-third share. This indicator does not suggest a correction on the market similar to the one that happened in Bratislava at the turn of 2007/2008, when the number of three- and four-room flats decreased and that of one-room flats and studio flats increased.

FLAT PRICES IN BRATISLAVA AND IN THE REST OF SLOVAKIA FOLLOWED SIMILAR TRENDS

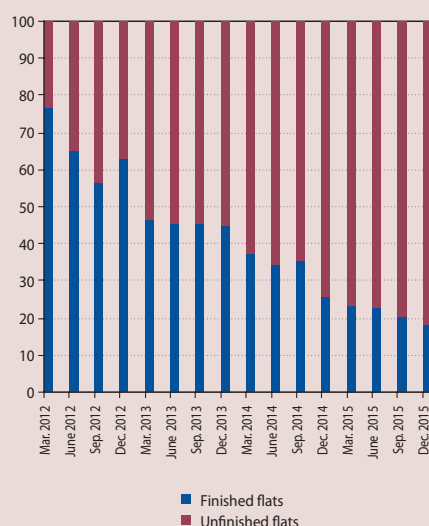
In Bratislava city, the prices of flats sold on the secondary market rose by about 7%. On the

primary market, flat prices rose by only 4%, with the steepest rise recorded in the District of Bratislava 1. The structure of flats offered for sale did not fully correspond to the structure of flats sold; the share of finished flats offered for sale decreased still further.

The ratio between average prices on the primary and secondary markets decreased for the third successive year. The converging prices on these two markets may indicate a deterioration in the quality of flats on the primary market, either that the flats offered for sale are characterised by lower standard or that there are more unfinished flats than finished ones. At the beginning of 2015, the primary market performed better than the secondary market in terms of flat sales; the disproportion between the two markets broadened over the course of 2015. Despite the higher number of flats, prices on the primary market were more volatile, owing probably to the one-off effects of various property development projects.

The structure of flats offered for sale was dominated by two- and three-room flats, which accounted for 72% of the total number of flats offered for sale, both with a roughly equal share. Four-room flats accounted for 14% and one-room flats for 11%. The structure of flats sold indicates that mostly two-room flats are

Chart F Share of finished and unfinished flats offered on the primary market in Bratislava (%)



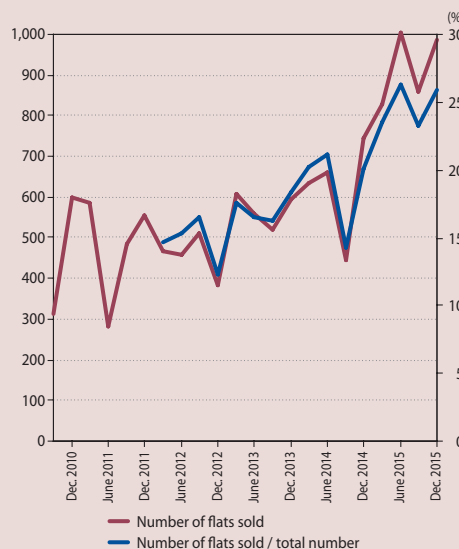
Source: Lexxus.

in demand (44%), followed by three-room flats (24%), one-room flats (14%) and four-room flats (9%). The average floor space of flats in the individual categories remained unchanged during 2015.

The share of finished new flats continued to decrease in the year under review, to one-fifth of the flats offered for sale in the fourth quarter. Thus, supply lagged behind demand on the primary market.

Starting from 2011, the share of residential projects that recorded sales in the given quarter

Chart G Number of flats sold on the primary market in Bratislava



Source: Lexxus.

increased steadily, up to 75% in 2015. On the one hand, this can be viewed as an increase in the attractiveness of property development projects or, on the other hand, as a decrease in customer requirements. Although this trend was positive to some extent, it could also be influenced by speculations on the residential property market.

The total number of flats offered for sale was relatively volatile, and fluctuated between 2,600 and 2,800. Nonetheless, the number of flats sold in the given quarter increased (it doubled during the period from 2011/2012 to 2015).

CONSUMER LOAN GROWTH SLOWED SOMEWHAT AND THE CONCENTRATION OF CONSUMER LOANS DECREASED, TOO

After accelerating sharply in 2014, the annual rate of growth in consumer loans slowed gradually in 2015, from 20.1% in March to 16.2% as at end-December. Average interest rates were stable during the previous years, except in 2013 and 2015 when sharp falls were recorded. In 2012, the average rate stood at 14.1 %, in 2014 at 12.8%, and in the last month of 2015 at 10.8%. The annual percentage rate of charge (APRC) was on average approximately 0.5 percentage point higher in all institutions. With the entry into force of the aforementioned NBS Recommendation, the refinancing of consumer loans

declined somewhat, from 30% to 25% of the new loans and continued until the end of 2015. The volume of consumer loans repaid before maturity, however, was almost twofold higher. This can be attributed, inter alia, to consolidating several consumer loans into one housing loan.

Despite the important market concentration, the share of the three most significant banks in this segment had decreased gradually over the last three years, by 10 percentage points to 71% of the outstanding amount of consumer loans as at the end of 2015. This may be a consequence of developments in the market share of these three banks on new production, which had been fluctuating around 70% in the last few years. In terms of

maturity, the market continued to be dominated by loans with a maturity of over five years, with a share of 80%.

Lending for consumption and housing purposes differed in the use of longer maturities. After 1 March 2015, almost two-thirds of the refinanced consumer loans (with or without a material increase in principal) were provided with the highest possible maturity (nine years). At the same time, only half of the loans that were not intended for refinancing had such a maturity. This was due probably to the consolidation of several short-term loans into one loan with a longer maturity, with a view to reducing the debt service burden.

In the segment of consumer loans, financial intermediation remained insignificant with a share of less than 4% of the volume of new loans.

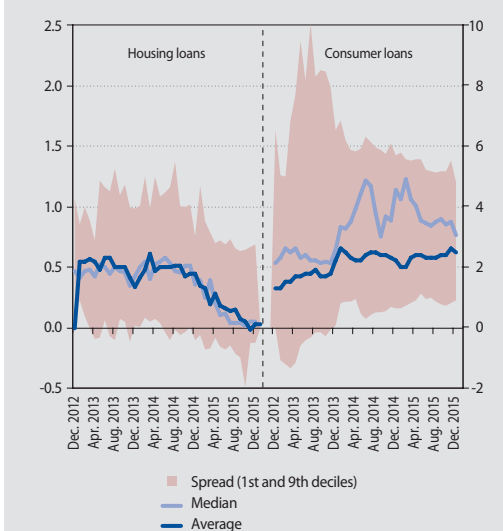
CREDIT STANDARDS WERE CHANGED IN RESPONSE TO AN NBS RECOMMENDATION

The changes in credit standards in the first half of the year reflected the tightening of the banks' policies in connection with the implementation of the relevant NBS Recommendation. A questionnaire about credit standards confirmed that the persisting low interest rates and decreasing margins stimulated growth in demand. In the second half-year period, credit standards were changed only by some of the banks and only minimally. This was largely attributable to the weakening risk tolerance of banks and the resulting requirements for the solvency of customers. Margins continued to decrease for both average and riskier loans, though the pressure of competition weakened in this area, mainly in relation to consumer loans. Demand continued to decline for both main types of retail loans, which was in line with banks' expectations from the first half of 2015, as well as with the persisting low interest rate environment. At the end of 2015, the vast majority of banks expected a tightening of credit standards in the period ahead.

THE CREDIT QUALITY INDICATORS OF LOAN PORTFOLIOS RECORDED POSITIVE CHANGES

The share of non-performing loans decreased during 2015, to 3.9% in December. Housing loans accounted for 2.7%, consumer loans for 7.3%. While the stagnation in the share of non-performing loans in the previous years was

Chart 17 Retail loan default rates (%)



Source: NBS.

Notes: The median and the spread cover only banks and branches of foreign banks that are active in the relevant segment. The average was calculated on the basis of data for the entire banking sector. The increase in the volume of non-performing loans was adjusted for changes caused by a methodological change introduced in connection with the implementation of the EBA's Technical Standards on Supervisory Reporting (Forbearance and non-performing exposures). This increase has no effect on the quality of loan portfolios.

caused mainly by the strong lending growth, the last year saw a decline in the volume of non-performing loans. Even if write-offs and sell-offs are taken into account, the volume of non-performing loans increased only marginally, while that of non-performing housing loans remained virtually unchanged. The only subcategory that recorded a rise in this area was that of intermediate loans, which thus maintained their share in the volume of non-performing loans.

Default rates⁷ decreased during the year, to an average of 0.3% in the fourth quarter, representing about one-fourth of the figure for the same period of 2014. The default rate of consumer loans fell to 2.5%, and that of housing loans to 0%. These positive changes in credit quality took place across the entire banking sector.

THE PROSPECTS FOR THE HOUSING LOAN MARKET ARE PREDOMINANTLY GOOD, BUT LENDING GROWTH MAY BE RESTRICTED BY DEMOGRAPHIC DEVELOPMENTS

The period of low interest rates persisted with a still wide difference between the outstanding loans and the new loans. This acted as an incentive for people to take on new loans or to

⁷ Default rate – change in the volume of non-performing loans over a period of 12 months as a percentage of the total volume of loans as at the beginning of the given period.

refinance their existing loans. This trend was also supported by the growing economy.

In 2015, the credit quality of loan portfolios was favourably influenced by the sharpest fall in unemployment recorded since the outbreak of the financial crisis. Unemployment fell in all regions of Slovakia. In Bratislava, it fell to a lesser extent, because its overall level was lower.

The demographic conditions for the expansion of the loan portfolio deteriorated during the period under review. The number of people aged 20-39 decreased during 2010-2014 by 5%. By 2018, their number is expected to fall by a further 5%. By 2024, a cumulative decrease of 25% can be expected in comparison with the reference year (2010).

THE ANNUAL RATE OF GROWTH IN RETAIL DEPOSITS ACCELERATED TO A SIGNIFICANT EXTENT

Retail deposits grew in volume by 8.9% during 2015, representing the strongest growth since the outbreak of the financial crisis. This corresponded to €2.45 billion in absolute terms. Retail deposits were dominated by sight deposits, the share of which increased by 20%. Time deposits decreased in volume for the third successive year, though at a slower pace. By December 2015, they had decreased by 2.2% year-on-year. Deposits redeemable at notice grew in volume

by 15.1%, which, in view of their high volatility, was not a particularly large increase.

Average interest rates on deposits fell still further in 2015, to 0.7% in December, which was in line with the trend that started in the middle of 2012. Interest rates on sight deposits changed only minimally, to a level close to 0.1%. Interest rates on time deposits fell during the year, to 1.4% in December. The rates for deposits with higher maturities naturally remained higher. A traditional exception was one-day deposits, which paid higher yields than deposits with a maturity of up to one year, but the volume of such deposits remained broadly unchanged.

The share of banks in the outstanding amount of retail deposits remained unchanged during 2015, while that of the four largest banks hovered around the level of 60%. Medium-sized and smaller domestic banks had a market share of 20%; the share of home savings bank stood at 10%. In sight deposits, large banks had a robust share, approximately 73%. In time deposits, their share decreased slowly but steadily, to 42% at the end of the year. This, at the same time, caused an increase in the share of other banks and home savings banks.

THE CORPORATE SECTOR

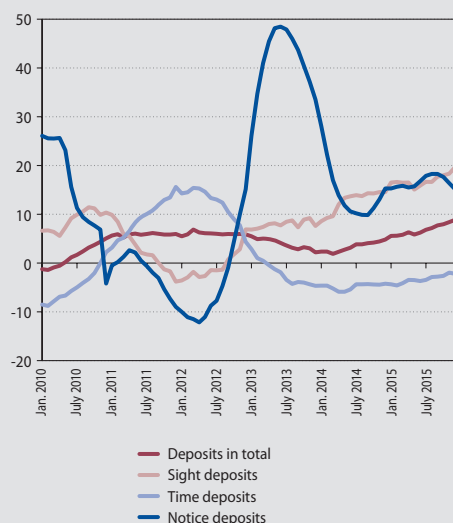
ACCELERATING GROWTH IN CORPORATE LOANS WAS DRIVEN MAINLY BY PRIVATELY OWNED FIRMS; THE VOLUME OF CREDIT LINES PROVIDED INCREASED, TOO

The year under review saw a gradual upturn in lending activity in the corporate sector. This led to growth in the volume of corporate loans, at the fastest pace recorded in the post-crisis period, i.e. 9% year-on-year in December, compared with 2% at the beginning of 2015. As a result, the volume of the corporate loan portfolio exceeded €16 billion in the last quarter of 2015.

The growing trend in lending to the corporate sector was also reflected in the off-balance sheet items, which increased in volume by an average of 8.5% during 2015. Credit lines were provided in a total amount exceeding €8 billion as at end-2015, one-third of which were irrevocable credit commitments.

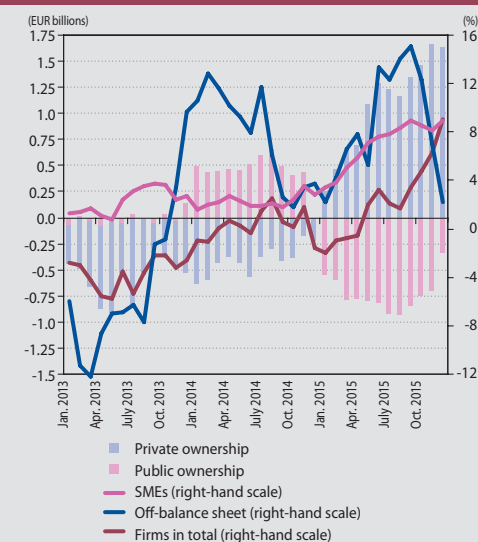
Growth in corporate lending was driven by private firms in domestic or foreign ownership. In

Chart 18 Annual volume changes in retail deposits (%)



Source: NBS.

Chart 19 Annual rate of change in stock of loans, broken down by type of firm ownership



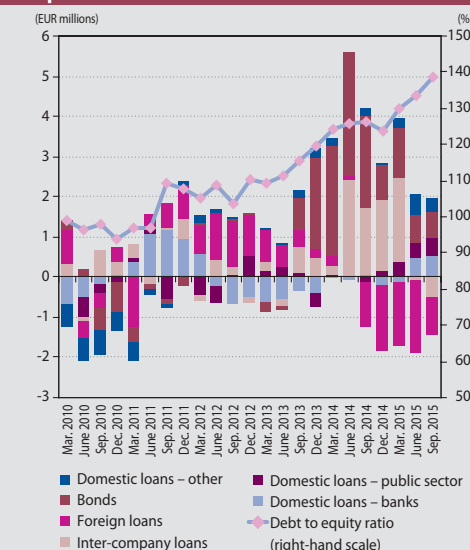
Source: NBS.

year-on-year terms, the credit granted to these corporates increased by slightly more than 10% during the second half of the year. A similar trend was observed in lending to small and medium-sized enterprises, with the annual rate of growth exceeding 8%. An important factor in lending growth in terms of the purpose of use was the category of investment loans, which grew in volume at an annual rate of 14% in December 2015.

Lending growth was adversely affected during the year by developments in the segment of state-owned firms, despite increased borrowing in this segment towards the end of the year, which considerably moderated the relatively sharp year-on-year decline in these loans. This increase favourable influenced the volume of loans to large firms, which increased in the last quarter of 2015 to a significant extent.

Looking at the sectoral development, relatively robust lending growth could be observed in most of economic sectors. Negative changes were only recorded in a limited number of sectors. Among the significant economic sectors (in terms of their share in the corporate loan portfolio), the steepest year-on-year increases in the volume of loans were recorded in industry (10%) and energy supply (9.5%). The increase in lending in the energy supply and transport & storage

Chart 20 Contributions to annual debt growth in the corporate sector by the source of funding and changes in the corporate sector's indebtedness



Source: NBS.

Notes: 'Domestic loans - other' are loans provided by resident entities, except banks, firms and public sector entities. Such loans are provided mostly by other financial intermediaries (Sector S125), excluding insurance firms and pension funds. The right-hand scale shows the debt to equity ratio, where debt includes all liabilities of firms, except for own funds.

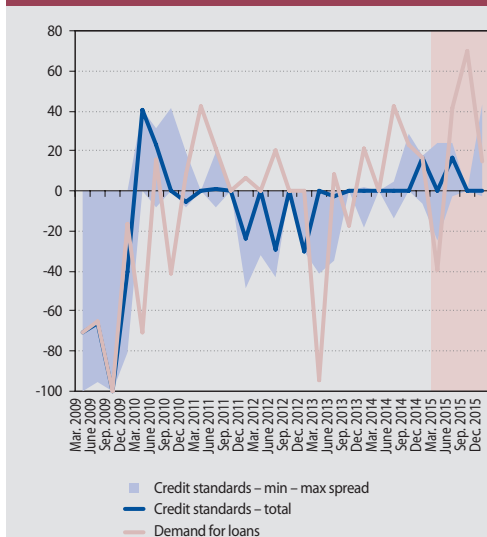
sectors at the year-end was caused probably by the provision of loans to large state-owned firms. Furthermore, relatively strong lending growth was recorded in administrative and support services, retail trade, agriculture, mining and quarrying, and in the automotive industry.

Lending by individual banks underwent relatively homogeneous developments across the banking sector during 2015. Except in a few medium-sized banks, the volume of corporate loans provided increased in most banks. This development led to an increase in the market share of the five largest banks and a rise in the Herfindahl-Hirschman index of the market share for 2015. This trend started in the second half of 2014 and continued in 2015 to the detriment of the aforementioned medium-sized banks.

LENDING GROWTH WAS CONNECTED WITH THE GROWTH IN THE TOTAL VOLUME OF FOREIGN FUNDS IN THE CORPORATE SECTOR

Apart from loans from domestic banks, loans from public sector entities also continued to grow in year-on-year terms. Growth was also recorded in

Chart 21 Developments in demand for, and supply of, corporate loans



Source: NBS.

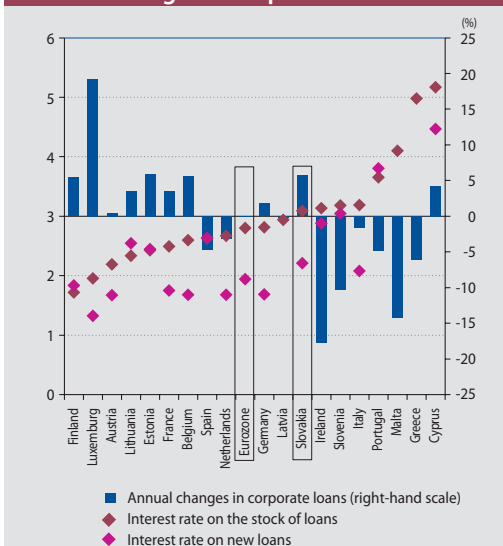
Notes: A positive value denotes an increase in demand / easing of credit standards. A negative value denotes a decrease in demand / tightening of credit standards. The chart shows the min - max spread of banks' credit standards.

the volume of bonds issued, but its pace slowed considerably. Foreign loans continued to show a falling tendency. Although the total volume of foreign funds in the corporate sector increased slightly, this increase did not cause a deterioration in any of the indicators such as the ratio of total debt to GDP or the ratio of total debt to annual sales (Chart P33) owing to the favourable economic situation. The rising indebtedness of the corporate sector, however, was reflected in the debt to equity ratio.

THE GROWING DEMAND FOR CORPORATE LOANS WAS FUELED BY THE FAVOURABLE ECONOMIC PERFORMANCE

The positive economic performance in 2015 was reflected in the corporate sector, inter alia, in the form of accelerating sales growth. A significant role in this development in the corporate environment was played by exports. Looking at the economic sectors, relatively robust growth could be observed in sales, especially in construction, automotive manufacturing, and also in industry. Some of the forward-looking indicators of the domestic economy, however, point to less favourable developments: the economic sentiment indicator and the business confidence indicator stagnated or fell year-on-year during the period under review (Chart P23).

Chart 22 International comparison of interest rates on corporate loans and of annual volume changes in corporate loans



Source: NBS.

During 2015, banks reported a gradual rise in demand for corporate loans with culmination in the third quarter; this rise weakened at the end of the year. At the beginning of 2016, banks still expected steady growth in demand, but at a decelerating pace.

SUPPLY ON THE CORPORATE LOAN MARKET WAS INFLUENCED BY THE LOW INTEREST RATES AND THE EASING OF SOME LENDING CONDITIONS

As for credit standards, the year under review saw a gradual easing of credit standards, though with lower intensity. The easing of credit standards related to the margins, the amount of loans, maturities, and the non-interest income. The main factors exerting pressure for the easing of credit standards were, according to banks, competition on the part of other banks and the positive perception of the overall economic situation. Banks do not expect a further easing of credit standards.

The low interest rate environment continued to influence the costs of corporate financing, when interest rates on the outstanding amount of loans dropped by 42 basis points year-on-year (and closed the year at 2.82%). This development led to a fall in interest income from the corporate portfolios of banks. Interest rates on new loans rose somewhat, but this rise remained within the limits of historical volatility. Compared with the

other euro area countries, the rates of domestic banks were slightly above the average rates.

LENDING ACTIVITY IN THE COMMERCIAL REAL ESTATE SECTOR INCREASED IN REACTION TO THE OPTIMISTIC SENTIMENT IN THIS SECTOR

The solid economic performance and the low interest rate environment were reflected in the sentiment in the residential segment, which had a good year in terms of sales: the number of flats sold grew considerably on a year-on-year basis in each quarter of 2015. Demand for new flats was also mirrored in the growing share of unfinished flats sold and in the accelerated speed of sales, i.e. the share of flats sold in the given quarters since their placement on the market. However, these indicators of growth in demand, coupled with stagnation in the number of free flats, may imply that supply does not follow demand.

Demand growth in the office segment was driven by an increase in rental activity in the office space, which was reflected partly in the level of vacancy rates and partly in the share of pre-leased offices under construction with expected completion in 2016 (which reached approximately 50%). A significant factor in the fall in the vacancy rate to 8.76% was the relocation of tenants from the Apollo 1 business centre. The supply of office

premises in 2016 is expected to be increased to the level seen before the crisis, which is a sign of optimism among property developers. Expectations regarding the planned completion of office premises in the next two years, however, are not so optimistic; the supply of office premises is expected to remain at the post-crisis level.

The positive sentiment in the commercial real estate segment was coupled with the growing volume of loans, which increased gradually from the beginning of the year to a level close to 9% in the second half-year period. The banking sector underwent relatively heterogeneous developments in this segment, with some banks recording a marked year-on-year increase in lending while other banks recorded a decrease or stagnation. Some of the banks that recorded a marked increase in lending experienced significant rise of exposure against this segment.

DEPOSITS IN THE CORPORATE SECTOR FOLLOWED THE TRENDS FROM THE PREVIOUS YEARS

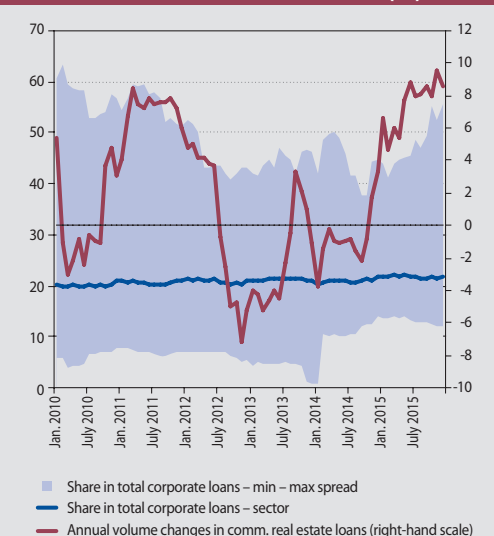
The volume of corporate deposits grew steadily throughout 2015 and closed the year with year-on-year increase of 11.6% at end-December. The volume of deposits exceeded €11 billion, for the first time. This development was probably due to the favourable economic situation, which stimulated sales growth. The growth in deposits was driven mainly by sight deposits, which grew at an average annual rate of 14%. By contrast, the volume of time deposits followed a negative trend, but these deposits traditionally belong to the volatile balance-sheet items of banks.

Deposits grew despite the falling interest rates. The average interest rate on corporate deposits fell during the year to 0.1%. The average rate for time deposits dropped even markedly by as much as 17 basis points, to 0.4%. Developments in the individual banks were rather volatile in 2015, but most banks recorded an increase in the volume of deposits. Like in the case of loans, the share of the five largest banks in the total volume of corporate deposits increased.

THE QUALITY OF BANKS' CORPORATE LOAN PORTFOLIOS IMPROVED DURING THE YEAR

The share of non-performing loans followed a positive trend during the year under review. It decreased from 8.6% as at end-2014 to 7.3% as at end-December 2015. This trend was supported

Chart 23 Annual volume changes in loans and changes in their share in total corporate loans in the commercial real estate sector (%)



Source: NBS.

Note: The min – max spreads were calculated for banks whose commercial real estate portfolio accounts for at least 1% of the total commercial real estate portfolio.

by the strong growth in corporate loans but also by the year-on-year decline in the volume of non-performing loans. It should, however, be noted that some of the banks increasingly wrote-off or sold their non-performing loans towards the end of the year. With these write-offs and sales taken into account, the share of non-performing loans increased slightly on a year-on-year basis. Despite this, the share of non-performing loans would continue to show a decreasing tendency. Broken down by volume, the most significant improvement was recorded in loans of up to €250,000, which are traditionally provided to small firms. In 2015, two conflicting trends were observed in the volume of newly defaulted loans: year-on-year decline until September, followed by strong year-on-year growth, measured in terms of the default rates calculated according to both, the number and volume of loans (Chart P28).

Non-performing loans underwent relatively homogeneous developments across the banking sector, with most banks recording a fall in the volume of these loans. Relatively large differences in quality between the corporate loan portfolios of individual banks were however still present.

The share of non-performing loans in most economic sectors followed the prevailing sectoral trend. From the main economic sectors from the banking sector's perspective, a significant improvement was recorded in construction and

manufacturing. The situation in retail trade had been stagnant for a longer period, while wholesale trade recorded a correction of the significant rise in non-performing loans from the end of the previous year.

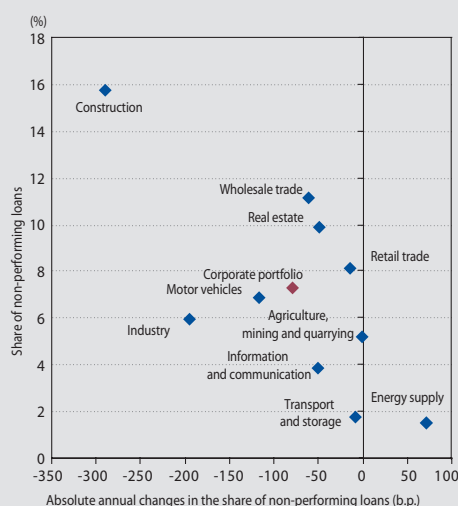
A deterioration in the ability of firms to repay their liabilities may lead to a deterioration in quality of the domestic sector's corporate portfolio in the period ahead. In terms of credit risk, a favourable development was that the corporate sector's debt service burden decreased still further in 2015, despite the dynamic growth in the volume of loans. This was due partly to the falling interest rates on loans and partly to the improvement in sales. The debt service burden indicator also fell in the case of fixed interest rates at the pre-crisis levels (Chart P30).

THE QUALITY OF LOANS IN THE COMMERCIAL REAL ESTATE SECTOR REMAINED VIRTUALLY UNCHANGED, BUT THE SECTOR WAS STILL A SIGNIFICANT SOURCE OF CREDIT RISK

As regards the sectoral concentration in the portfolios of individual banks, the commercial real estate sector was the most significant. In addition, certain banks were heavily exposed to this sector. In some banks, the exposure against this sector increased still further in 2015. As regards the non-performing loans, the concentration was even higher.

The share of non-performing loans remained virtually unchanged: it fluctuated around 10%. This can be ascribed to growth in both, the outstanding amount of loans and the amount of non-performing loans. The individual banks recorded relatively homogeneous developments in the share of non-performing loans, but there were marked differences in the quality of loans.

Chart 24 Share of non-performing loans and their annual changes in economic sectors



Source: NBS.

3.1.2 SECURITIES

THE TOTAL VOLUME OF BOND INVESTMENTS WAS STAGNANT, OWING TO HETEROGENEOUS DEVELOPMENTS ACROSS THE SECTOR

During 2015, the total volume of debt securities in portfolio increased only slightly, from €12.9 billion to €13.3 billion (by 4%). This was practically stagnation, caused by divergent developments in the individual components of the portfolio. While the total volume of domestic government bonds remained virtually unchanged (it fell by

only 1.4%, from €10.5 billion to €10.3 billion) and the volume of foreign bank bonds decreased significantly, by more than 20% (from €343 million to €266 million), the volume of bonds issued by domestic banks grew by more than 15% (from €576 million to €665 million) and the volume of foreign government bonds increased by almost 80% (from €0.8 billion to €1.5 billion).

Owing to stagnation in the volume of domestic government bonds, the share of these assets in the balance sheet total continued to decrease, to 14.7% at the end of 2015 (from 16% at the end of 2014). A fall in volume or stagnation was recorded in all banks holding a significant amount of Slovak government bonds. The volume of government bonds increased more significantly only in banks with a smaller volume of investments.

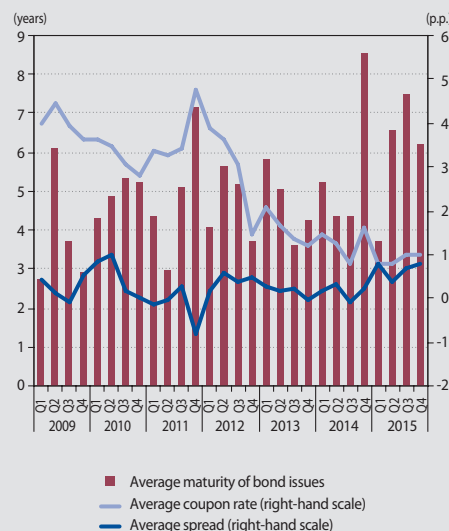
THE SHARE OF DEBT SECURITIES HELD IN THE AVAILABLE-FOR-SALE PORTFOLIO INCREASED TO THE DETRIMENT OF BONDS IN THE HELD-TO-MATURITY PORTFOLIO

Banks continued to hold debt securities mostly in their held-to-maturity (HTM) portfolio (54% as at the end of 2015), though the share of such securities in their available-for-sale (AFS) portfolio increased during the year (to 42% as at the end of 2015). During 2014-2015, banks invested in the HTM portfolio only a small part of the funds they obtained from maturing bonds and used these funds predominantly to purchase bonds for the AFS portfolio. For accounting purposes, securities were transferred between these portfolios only in negligible amounts. The volume of the AFS portfolio reflected to some extent the fact that the market price of government bonds held in the portfolios of banks had risen as a result of a fall in the yields on these bonds. The rise in bond prices in the AFS portfolio led to growth in the volume of own funds. This factor, however, was much less significant than the effect of bond purchases for the AFS portfolio.

BANKS CONTINUED TO ISSUE MOSTLY MORTGAGE BONDS

Mortgage bonds accounted for almost 90% of the total nominal volume of securities issued during 2015 (€1.8 billion). The total volume of mortgage bonds issued increased in line with the growth in the volume of mortgage loans provided and reached €4 billion at the end of 2015 (a year-on-year increase of more than 10%). The 70% limit on the minimum ratio of the volume of mortgage bonds issued to the volume of mort-

Chart 25 Average spreads and maturities of mortgage bonds issued



Source: NBS.

Notes: Spreads, coupon rates and maturities are weighted by the nominal amount of mortgage bonds issued.

Average coupon rates and spreads were calculated for mortgage bonds with a fixed coupon.

gage loans provided was fulfilled, except in certain banks in certain months.

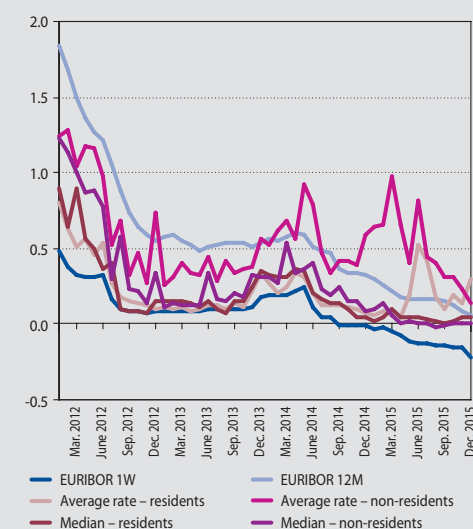
Approximately two-thirds of the total volume of mortgage bonds was issued with a fixed coupon and one-third with a floating coupon linked to the three- or six-month EURIBOR rate. The average maturity of mortgage bonds issued during 2015 was somewhat higher than the long-term average, which was due probably to the favourable conditions in terms of the coupon required. As regards mortgage bonds with a fixed coupon, the value of the coupon fell more gradually than yields on government bonds with a comparable maturity. Hence, the spread increased slightly but remained comparable with the historical figures or with the margin in the case of mortgage bonds with a floating coupon (this margin fluctuated during the year between 0.25 and 0.9 percentage points).

3.1.3 THE INTERBANK MARKET

INTERBANK TRANSACTIONS REMAINED ONE OF THE VOLATILE BALANCE-SHEET ITEMS USED FOR LIQUIDITY MANAGEMENT

Interbank transactions continued to be used mainly for the management of short-term li-

Chart 26 Domestic interbank market interest rates



Source: NBS.

Notes: Average rate – non-residents – average interest rate on interbank deposits received from non-resident banks.

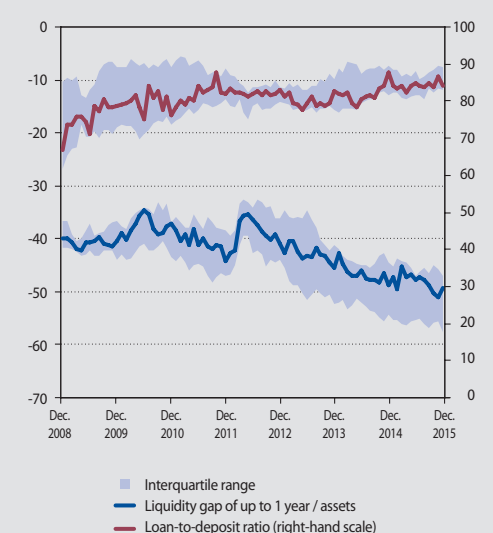
Average rate – residents – average interest rate on interbank deposits received from resident banks.

Interest rates were calculated from the month-end stock of short-term loans and deposits received with a maturity of up to one year in EUR.

The rates were calculated as averages weighted by the volume of individual transactions.

Data on interest rates are in per cent.

Chart 27 The liquidity gap / asset ratio and the loan-to-deposit ratio (%)



Source: NBS.

Note: Liquidity gap means the difference between assets and liabilities with the same maturity.

3.1.4 CONCENTRATION RISK AND LIQUIDITY RISK

CONCENTRATION RISK IS STILL PRESENT IN THE DOMESTIC BANKING SECTOR

A characteristic feature of the Slovak banking sector is its relatively high exposure to concentration risk. This risk continued to be present also in 2015. In the banking sector, there were clients and groups of economically linked clients to which the sector was heavily exposed. The failure of these clients would cause a fall in own funds below the level of 10.5% in the case of selected small and medium-sized banks. Some of the banks remained exposed to their own financial groups to a relatively large extent. This exposure, however, decreased over the course of 2015.

THE LIQUIDITY POSITION OF BANKS CONTINUED TO WEAKEN GRADUALLY DURING THE YEAR

In December 2014, a new definition was adopted for the regulatory short-term liquidity ratio. Thus, 2015 was the first year when banks were required to meet the modified liquidity requirement. As at end-December 2015, all banks and branches of foreign banks satisfied this new requirement. In terms of short-term liquidity, the situation in the banking sector remained unchanged and banks continued to hold sufficient liquid assets to be

quidity. During 2015, both borrowings from foreign banks and loans to foreign banks increased to some extent. These transactions were almost exclusively transactions within the own groups of banks. Such transactions were the most frequent transactions conducted with foreign banks, with a share of almost 90% on the asset side and more than 90% on the liability side.

Interest rates on short-term funds from the interbank market remained consistent with the EURIBOR rates. Owing to transactions with selected banks, the average rates were higher than the median value.

During February, the last funds received via the ECB three-year longer-term refinancing operations (3Y LTRO) matured. Targeted longer-term refinancing operations (TLTRO) were used directly in smaller amounts than one- and three-year LTROs and only by some of the banks.

able to face the negative scenario defined in the regulation.

On the other hand, the moderate but long-term adverse trends continued in the structure of banks' balance sheets in terms of liquidity. During 2015, the ratio of the liquidity gap of up to one year to total assets reached a new historical high, while the loan-to-deposit ratio remained at its highest level ever recorded. This was a natural consequence of developments in traditional banking activities in the area of lending to firms and households.

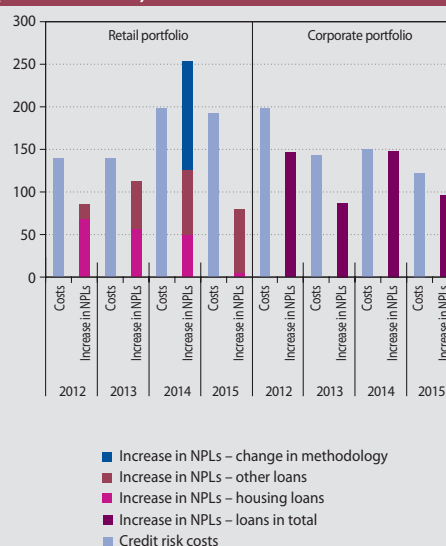
3.2 FINANCIAL POSITION OF THE BANKING SECTOR

3.2.1 PROFITABILITY

In 2015, the banking sector achieved an aggregate net profit of €626 million, representing a year-on-year increase of 11.7%. Losses were reported by one bank and five branches of foreign banks.

As in the previous period, the rise in banks' profits was generated by growth in retail lending, accompanied by a fall in the price of financing and

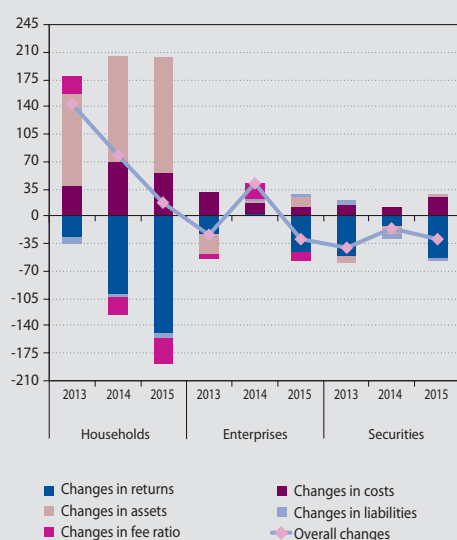
Chart 29 Credit risk costs in comparison with the increase in non-performing loans (EUR millions)



Source: NBS.

Notes: The increase in the volume of non-performing loans is expressed in gross terms, i.e. not reduced by write-offs and sell-offs. The increase in non-performing loans resulting from a methodological change is connected with the implementation of the EBA's Technical Standards on Supervisory Reporting (Forbearance and non-performing exposures). This increase has no effect on the quality of loan portfolios, nor of profits in the banking sector.

Chart 28 Annual changes in interest income and non-interest income in the individual segments and the factors behind these changes (EUR millions)



Source: NBS.

a fall in credit risk costs. The positive impact of growth in retail lending on the level of interest and non-interest income was largely cancelled by a significant decline in the rate of return on retail loans, which fell year-on-year from 5.9% to 5.1%. At the same time, the fee ratio⁸ also decreased somewhat, mainly in the second half of 2015. Thus, interest income and non-interest income from the retail sector increased year-on-year in 2015, but to a much lesser extent than in 2013 and 2014. Income from the corporate segment decreased, because the period of lending growth was too short to compensate for the decline in returns. Interest income from bond portfolios had been declining for several years.

Credit risk costs fell most significantly in the segment of corporate loans, in connection with the decreasing share of non-performing loans in this segment. The share of non-performing loans also decreased in the retail loan portfolio (mainly in the segment of housing loans), though credit risk costs did not fall in this segment. In the banking sector, the coverage of non-performing loans by provisions increased in year-on-year terms, from

⁸ The fee ratio was calculated as the ratio of net fee income to the average value of loans and deposits.

Table 2 Expenses of banks related to the bank levy, the Deposit Protection Fund and the Resolution Fund

	2014	2015
Bank levy	H1: 0.4% of liabilities H2: 0.2% of liabilities (€153 million)	0.2% of liabilities (€106.4 million)
Deposit Protection Fund	H1: 0.2% of protected deposits H2: 0.01% of protected deposits (€32.4 million)	0.03% of protected deposits (€12.2 million)
Resolution Fund	€0 million	€33.6 million

Source: NBS.

54.1% to 55.7%, which was a positive development from the perspective of financial stability.

One of the factors behind the rise in profits was a fall in expenses on the payment of bank levy and contributions to the Deposit Protection Fund. On the other hand, a new requirement for banks in 2015 was to pay contributions to the Resolution Fund. More detailed data and the rates of individual contributions are given in Table 2.

Although developments in the last few years had been favourably influenced by the low interest rate environment (through increased lending, lower credit risk costs, and lower prices for financing), the trends seen in 2015 indicate that mostly adverse effects can be expected in the years ahead. Net interest income from the corporate loan and securities portfolios decreased, while the growth in net interest income from the retail portfolio came practically to a halt, with negative prospects for the future. In addition, the implementation of the law on housing loans, which stipulates that the fee for loan repayment before maturity outside the interest rate fixation period should not be higher than 1%, tends to accelerate the rate of decline

in returns on retail loans. Hence, banks will probably be forced to change their business strategy with the aim of restricting the negative effects of the low interest rate environment on their profits.

3.2.2 CAPITAL ADEQUACY AND LEVERAGE

The common equity Tier 1 (CET1) ratio for the banking sector as a whole reached 16.0% at the end of 2015. This ratio had been hovering around this level without marked changes since the beginning of 2014. The overall capital adequacy ratio, however, rose slightly in 2015 (as in 2014), from 17.5% to 17.8%, owing to a rise in the additional Tier 1 capital ratio in the form of hybrid capital instruments.

At the end of 2015, the lowest value of the CET1 ratio stood at 11.2% and that of the overall capital adequacy ratio at 13.0%. Thus, all banks met, with a margin, the regulatory capital requirement (8%), as well as the capital buffer requirement (2.5%).



NÁRODNÁ BANKA SLOVENSKA
EUROSYSTEM

CHAPTER 4

THE INSURANCE SECTOR

4 THE INSURANCE SECTOR

THE TRANSFORMATION OF METLIFE AMSLICO INTO A BRANCH OF A FOREIGN INSURANCE UNDERTAKING HAS AFFECTED THE INSURANCE MARKET'S AGGREGATE DATA

With effect from 31 March 2015, Metlife Amslico poisťovňa, a.s., changed its legal form to a branch of an insurance undertaking from another EU Member State. Thus, the aggregated data on the insurance sector as at 31 December 2015 do not cover Metlife Amslico.⁹ As a result, almost all the volume indicators of the Slovak insurance sector fell on a year-on-year basis. The following part of this section contains an evaluation of the individual indicators, adjusted for the effects of Metlife Amslico's transformation.

THE SIGNIFICANCE OF FOREIGN ENTITIES IN THE SLOVAK INSURANCE MARKET HAS BEEN INCREASING

At the end of 2015, there were 24 branches of insurance or reinsurance undertakings from other EU countries in the Slovak insurance market, including three universal insurers, one life insurer and one reinsurer. At the same time, there were 103 entities operating in the market on the basis of the principle of free provision of cross-border services. The significance of branches in the insurance market has been increasing over time and will further increase significantly, mainly in life insurance, as a result of Metlife Amslico's transformation into a branch.

The share of branches in the volume of technical premiums in life insurance fluctuated between 4% and 5% of the total volume (approximately €50 million). With Metlife Amslico taken into ac-

count, this share would increase to 12.7%. While branches previously had a significant share only in Unit-linked insurance (ULI) (12% to 13% of the technical premiums), they are likely to have a significant share in traditional life insurance and reinsurance as well (starting from 2015). Written premiums from cross-border insurance services reached €15.4 million in 2014, representing 1.4% of the total volume of premiums in the life insurance line.

The share of branches of foreign insurers in premium income from non-life insurance steadily increased, from 5% in 2009 to almost 9% in 2014. These figures were not affected materially by the transformation of Metlife Amslico. The individual non-life insurance lines, however, underwent different developments. The branches of foreign insurers had a smaller share in the key insurance lines (5% in MTPL¹⁰ insurance, 2-3% in CASCO¹¹ insurance, and 7-8% in property insurance). By contrast, the share of foreign branches in some of the smaller insurance lines was higher, mainly in legal protection insurance (almost 90% since 2013), credit and financial loss insurance (40%), accident and sickness insurance (20-30%), assistance insurance (15-20%), general insurance against damage and active reinsurance (10-15%). The only insurance line in which the share of foreign branches decreased was damage insurance for vehicles other than road vehicles (from 15% in 2009 to 8% in 2014). Written premiums from cross-border insurance services reached €28.3 million in 2014, representing

Table 3 Impact of Metlife Amslico on the insurance sector's aggregate data

Indicator	Value as at 31.12.2014 (EUR millions)	Annual change as at 31.12.2015 (%)	Share of Metlife Amslico as at 31.12. 2014 (%)	Annual change as at 31.12.2015 adjusted for the impact of Metlife Amslico (%)
Total assets	7,259	-10.0	10.9	1.1
Equity capital	1,412	-11.2	9.7	-1.6
Technical provisions	5,226	-9.8	12.1	2.7
Net profit	181	-28.3	10.0	-20.6
Premiums (life-ins.)	1,167	-9.6	9.9	1.1
Premiums (non-life)	939	2.8	1	3.8

Source: NBS.

⁹ The branches of insurers from other Member States report data to NBS only for the end of the calendar year, in a limited range and with a considerable time delay.

¹⁰ MTPL – motor third party liability insurance.

¹¹ CASCO – comprehensive motor vehicle insurance.

2.6% of the total volume of premiums in non-life insurance.

The share of branches of foreign insurers in total assets also increased gradually, to 4.7% at the end of 2014. With Metlife Amslico taken into account, this share would have increased to 15%. At the end of 2014, the technical provisions of foreign branches accounted for 2.4% of the total volume of technical provisions, the share of provisions for IL insurance reached almost 11%. With Metlife Amslico taken into account, this share would have been 15.7%. In 2009 and 2010, the branches of foreign insurers made a loss; they started to generate profits in 2011. Their profits, measured in terms of returns on assets (ROA), are comparable with the rest of the insurance sector.

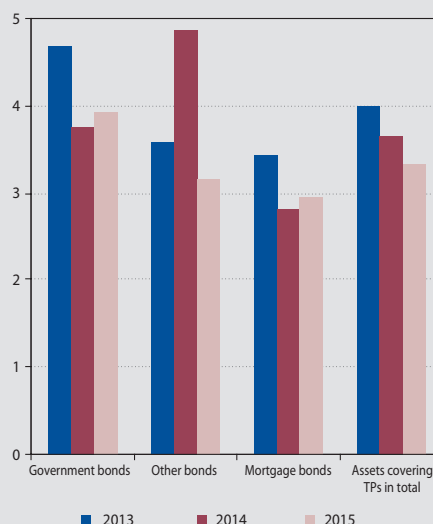
THE PROFITS OF INSURERS FELL IN YEAR-ON-YEAR TERMS, OWING TO AN INCREASE IN THEIR OPERATING EXPENSES AND A DECREASE IN THEIR FINANCIAL RESULTS

In 2015, the profits of insurers dropped by 20%, to almost €130 million. This drop in profits was caused mainly by a deterioration in their financial result and in the technical results in non-life insurance. The total loss of insurers that ended the year with a negative financial result reached €1.1 million, representing a fall in comparison with 2014.

The overall technical result in non-life insurance fell by €16.7 million as a result of growth in operating expenses. The growth in expenses on claims paid was accompanied by a fall in technical provisions for the payment of claims and by an increase in earned premiums.

The technical result in life insurance improved by €19 million, while the financial result deteriorated by €29 million. Investment in ULI with the risk borne by the customer accounted for €25.4 million of this amount, while investment with the risk borne by the insurer accounted for €3.7 million. With the technical result in life insurance adjusted for the loss from investment in ULI, which reduces the cost of provisioning, the technical result in life insurance deteriorated by almost €6 million. This development was due mainly to growth in operating expenses, which was not covered by growth in earned premiums. The increase of operating expenses in both life and non-life insurance, could be a result of increased

Chart 30 Net returns on assets covering technical provisions in life and non-life insurance, excluding technical provisions in Unit-linked insurance (%)



Source: NBS.

Notes: The chart shows net returns only on assets that have a share of more than 10% in the coverage of technical provisions in life insurance.

TPs – technical provisions.

Data for 2013 and 2014 include the financial results of Metlife Amslico.

expenses incurred in connection with the preparation and implementation of the new regulation – Solvency II. In total, operating expenses increased by €34 million, in particular with commissions growing by 7.5% year-on-year.

Returns on assets covering technical provisions in life insurance increased in spite of the persisting low interest rate environment, but by only 0.1 percentage point to 3.3%. In the individual classes of assets, however, different trends were observed during the year under review. While returns on government bonds increased year-on-year by 0.1 percentage point to 3.9%, those on other bonds, time deposits and real property decreased. Returns on equities and mutual fund shares/units increased to 1.6%, after fluctuating in negative territory in 2014.

TRADITIONAL LIFE INSURANCE EXPERIENCED GROWTH, WHILE UNIT-LINKED INSURANCE SUFFERED A DECLINE

After falling somewhat in 2014, technical premiums in life insurance continued to grow, though at a very moderate pace (0.3%). This growth took place mainly in supplementary insurance and

traditional life insurance. Unit-linked insurance recorded a fall in technical premiums.

Premium income in traditional life insurance increased by 1.7% to €571 million, while the number of insurance contracts increased moderately, too. Premium income from new business continued to fall, by 6.3%. Both the number and volume of benefits paid (including surrenders) remained virtually unchanged in year-on-year terms. The frequency of surrenders reached 4.9%, which was less than in 2014 (5.2%). Surrenders still accounted for roughly 60% of the benefits paid, while assurance on survival to a stipulated age accounted for about 30%. The accrued acquisition costs of insurance contracts continued to increase by 23% year-on-year, in line with the trend that started in 2012. By contrast, annual premiums in new business fell in that period (except in 2013). This development could point to an increase in provisions.

Premiums in ULI fell in volume by 7% in 2015, to €300 million. The number of insurance contracts decreased by 4%, but premium income from new business increased by 1.8%. In ULI, both the volume and number of insurance benefits paid decreased, by 18% and 15% respectively. Approximately two-thirds of the insurance benefits were paid in the event of surrenders; the second most frequent insurance event was 'survival to a stipulated age,' which had replaced the event 'death.'

Premiums in supplementary insurance continued to grow dynamically in 2015, at an annual rate of 10%, and reached €171 million at the end of the year. Annual premiums continued to grow, as well as the number of insurance contracts. This growth, however, was accompanied by an increase in expenses on, and in the number of, insurance benefits paid. Two-thirds of the expenses on benefits paid were incurred as a result of accidents.

The smallest insurance line, i.e. pension insurance, recorded an increase in premium income (5%) after eight years of decline. The declining trend was reversed by the launch of the pay-out phase of the retirement pension saving scheme's second pillar. Annuities¹² from old-age pension savings were offered by three insurers in 2015. A total of 308 contracts were concluded during

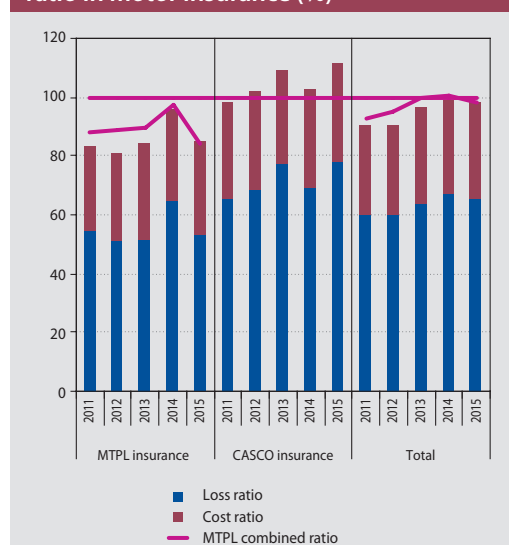
the year, with one-off premiums paid in the total amount of €1.76 million. The majority (72%) of these contracts and 93% of the premiums were linked to non-indexed life annuities. Almost 15% of the contracts and 3.6% of the premiums were linked to temporary annuities, two-thirds of which were paid from savings. Insurance benefits were paid in the total amount of €38,000, representing 2.1% of the premiums. Operating expenses amounted to €88,000 in 2015. Life reinsurance activity remained an insignificant component of the Slovak insurance market.

NON-LIFE INSURANCE CONTINUED TO GROW; MOTOR INSURANCE STARTED TO INCREASE, TOO

Technical premiums in non-life insurance followed the growing trend from 2014 and reached €965 million at the end of 2015 (a year-on-year increase of 2.8%). This growth was driven mainly by motor insurance (MTPL and CASCO insurance) and active reinsurance.

Premiums in motor third party liability (MTPL) insurance grew by 2.7%, representing the most rapid growth seen in the last ten years, while the growth rate of premiums in comprehensive motor vehicle (CASCO) insurance accelerated to 3.3%, from 2.2% in the previous year. The pre-

Chart 31 Loss ratio, cost ratio and combined ratio in motor insurance (%)



Source: NBS.

Note: The MTPL combined ratio is calculated similarly as the combined ratio; the amount of technical claims paid is increased by contributions to the Slovak Insurers' Bureau (SKP) and by changes in the provisions maintained for liabilities to the SKP, while the amount of premiums earned is reduced by transfers to Slovak Interior Ministry.

¹² Annuity is a product in the case of which the customer pays a one-off premium and subsequently receives income from the insurer at regular intervals.



mium growth was driven by an increase in the number of insurance contracts (12%). In absolute terms, the number of insurance contracts increased in both MTPL and CASCO insurance, by €278,000 and €74,000 respectively. Both new business and prolonged contracts recorded an increase in number. On the other hand, the average premium per contract continued to decrease in 2015. The average premium in MTPL insurance fell from €111 to €104 per year and that in CASCO insurance from €372 to €354 per year. In MTPL insurance, the difference in price for new and prolonged contracts was minimal. In CASCO insurance, however, it reached 28% (€301 for new contracts and €385 for prolonged ones).

As regards the other segments, premiums continued to grow dynamically in active reinsurance (39%), assistance insurance (29%), and credit and financial loss insurance (17%). Premiums in other insurance lines remained virtually unchanged (+/-1% year-on-year).

In terms of the loss ratio, the situation in car insurance was the opposite to that seen in 2014: the loss ratio in MTPL insurance fell substantially, while that in CASCO insurance continued to rise. The combined ratio in MTPL insurance dropped to 85%, mainly as a result of a fall in provisions for reported but unsettled insurance events. The combined ratio recorded a sharp fall even if its value was calculated with regard to the transfer of part of the premiums to a special account of the Ministry of the Interior, the contribution to the Slovak Insurers' Bureau (SKP) and the change in technical provisions for the coverage of liabilities to the SKP. This was due mainly to the cancellation of provisions for the coverage of liabilities to the SKP. Insurers paid contributions to the SKP only in a total amount corresponding to roughly half of the technical provisions as at the end of 2014.

In CASCO insurance, the combined ratio rose from 103% in 2014 to 112% in 2015, reflecting an increase in the amount of claims paid. However, the overall combined ratio in motor insurance dropped from 99% to 98%. With the aforementioned additional factors taken into account, the combined ratio in MTPL insurance fell from 100.3% to 98.3%.

The combined ratio in CASCO insurance exceeded 100% in all insurance undertakings operating in

the Slovak financial market. In MTPL insurance, the 100% level was exceeded by only three insurers. According to data from 2014, the combined ratio in branches of foreign insurers reached 102.7% for CASCO insurance and 85.8% for MTPL insurance.

The combined ratio in property insurance rose slightly, to 69.6%. The cost ratio increased slightly in most segments. The combined ratio remained below 100% in all segments, except in CASCO insurance. The overall combined ratio in non-life insurance rose by 1.4 percentage points, to 85.8%. In branches of foreign insurers, the overall combined ratio for non-life insurance reached 100.5% in 2014. The branches of foreign insurers and insurers licensed in Slovakia recorded comparable loss ratios, but the cost ratio in branches of foreign insurers was approximately 14 percentage points higher, which may be due to their small insurance portfolios.

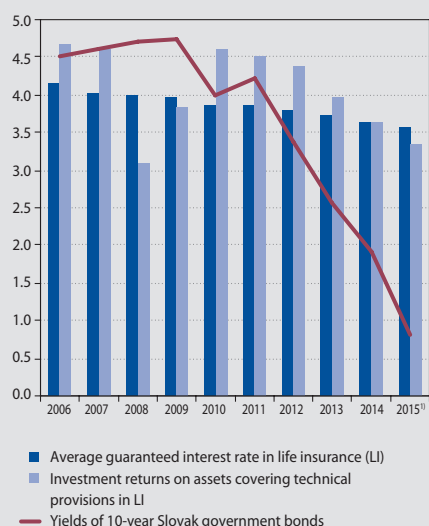
The increasing trend in the share of premiums assigned to reinsurers in non-life insurance came to a halt in 2015, when this share decreased to 30.6%, from 31% in 2014.

TECHNICAL PROVISIONS AND THEIR INVESTMENT

Technical provisions increased during 2015 by 2.7% to €4.6 billion, as a result of growth in provisions in life insurance. Growth was observed mainly in deficit provision created on the basis of a test of adequacy; these provisions increased by €143 million. Technical provisions also continued to grow in ULI, by 2.8% year-on-year. By contrast, technical provisions in non-life insurance fell by 3.7%. This was due mainly to the cancellation of technical provisions for the coverage of liabilities to the SKP in the amount of €36.5 million, which are not classified as eligible provisions under the Solvency II regime. The members of the SKP decided to repay these provisions. Provisions for reported but unsettled insurance events also decreased to some extent.

The volume of assets invested in equities and mutual fund shares/units stopped growing in the second half of 2015. It even decreased slightly in comparison with the volume as at 30 June 2015. A fall was also recorded in the volume of assets invested in government bond and bank bonds, including mortgage bonds. In the second half of 2015, the volume of investment in corporate bonds increased by €113 million year-on-year.

Chart 32 Guaranteed interest rates and actual returns (%)



Source: NBS, Bloomberg.

Note: 1) Since the average guaranteed rate figures for 2015 are not yet available, the data for 2014 are used as an estimate.

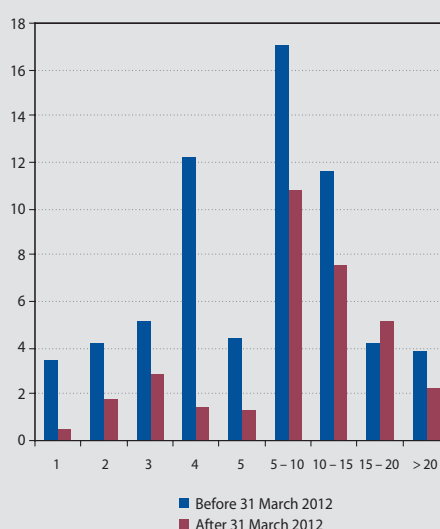
Thus, investment in corporate bonds became the second most important type of investment with a share of 14.2% in the total volume of funds invested for the coverage of technical provisions in traditional life insurance.

THE RISKS IN THE INSURANCE SECTOR WERE ASSOCIATED MAINLY WITH THE PERSISTENCE OF LOW RETURNS IN THE FINANCIAL MARKETS

The persisting low interest rate environment remained the dominant risk in the insurance sector in 2015. Interest rates in the euro area continued to fall and reached new historical lows. It was increasingly problematic for insurers to achieve sufficient investment returns to cover the returns that were guaranteed in life insurance contracts. Investment returns on assets covering technical provisions had been falling gradually since 2010. In 2015, the average rate of return was lower than the estimated average interest rate guaranteed in life insurance contracts. In the portfolios of insurers, bonds with higher returns matured gradually and insurers replaced them with new investments with lower returns, which may aggravate the situation still further.

The low interest rate environment also involves an element of reinvestment risk. In 2016, approximately 4% of the bond portfolio will fall due, then 6% and 8% in the following years. By the

Chart 33 Maturity profile of the insurance sector's bond portfolio by the date of issue (%)



Source: NBS.

Notes: The horizontal scale shows the maturity of bonds in years. The vertical scale shows the share of bonds with the given maturity in the total volume of the sector's aggregate bond portfolio divided, according to the date of issue, to bonds issued before and after 31 March 2012. Yields of bonds issued after 31 March 2012 dropped substantially on the financial markets.

end of 2019, the contractual maturity of roughly one-third of the bond portfolio will have expired, while up to four-fifth of these maturing bonds are higher-yielding bonds issued before 2012.

Starting from the end of 2013, the volume and share of investment in equities and mutual fund shares/units grew at a fast pace, owing to a rise in the value of these investments accompanied by purchases of further equities and mutual fund shares/units. At the same time, investment in corporate bonds showed dynamic growth in 2015. It is possible that insurers responded to the persisting low interest rate environment in this manner. These instruments pay higher yields but carry the risk of higher loss in the event of unfavourable developments in the market.

Credit risk remained virtually unchanged in the period under review. Almost a half of the bond portfolio was formed by Slovak government bonds. Government bonds from other EU countries accounted for 10%, Slovak bank bonds for 13%, banks bonds from the EU and the United States for 11%, and corporate bonds from the EU and the United States for 11%. The foreign exchange risk remained insignificant.



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EUROSYSTEM

CHAPTER 5

OTHER SEGMENTS OF THE FINANCIAL MARKET

5 OTHER SEGMENTS OF THE FINANCIAL MARKET

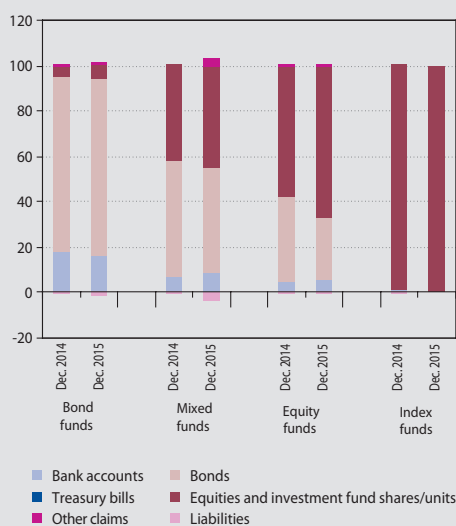
5.1 THE OLD-AGE PENSION SCHEME (SECOND PILLAR OF THE PENSION SYSTEM)

A REOPENING OF THE SECOND PILLAR RESULTED IN DECLINES IN BOTH THE NUMBER OF SAVERS AND AMOUNT OF ASSETS UNDER MANAGEMENT

The second pillar of the pension system – comprising the defined contribution old-age pension scheme operated by pension fund management companies (PFMCs) – was temporarily reopened in 2015 for the fourth time in its history, thus allowing people to enter and leave the scheme (note: people may enter the scheme at any time up to the age of 35, but may then enter or leave it only if and when the scheme is ‘reopened’). During the reopening, from 15 March to 15 June, far fewer people opted in than opted out, with the net outflow of savers numbering around 136,000. The overall drop in the number of savers in 2015 was somewhat lower, at 122,000, since a proportion of under-35s entered the scheme in the second half of the year. The outflow of savers was made up largely of people enrolled in guaranteed bond pension funds. By contrast, net inflows of savers were recorded in equity pension funds and, to an even greater extent, index pension funds.

As regards the size of the sector in terms of the net asset value under management in pension funds, a novel situation occurred in 2015. In contrast to regular increases recorded in the past, NAV declined by €100 million (almost 2%) in 2015. The drop was related to the sizeable amount of funds, €579 million, that was transferred out of the scheme as a result of the reopening. A large part of that outflow was, however, offset by the regular contribution of remaining savers. Returns on assets also helped in this regard, but compared to the contributions, the increase in funds asset value due to performance was not significant in absolute terms. Ten years after the old-age pension scheme was established, its distribution stage began in 2015, meaning that people

Chart 34 Composition of assets in pension fund portfolios broken down by fund type (%)



Sources: NBS.

could draw pensions under the scheme for the first time. Since, however, only several hundred savers entered into a pension payment contract during the period under review, the impact of this factor on the sector’s NAV was only marginal.

The decline in NAV in 2015 was concentrated among guaranteed bond pension funds. Both mixed and equity pension funds registered, on average, NAV growth of around 10%, while index pension funds increased their NAV far more markedly, by one and a half times, thus increasing their share of overall NAV from 1.4% to 3.8%. One PFMC stood apart from the others in reporting an increase in the aggregate NAV of its pension funds and, consequently, slightly strengthened its market share in the sector.

THE EQUITY COMPONENT OF EQUITY PENSION FUNDS INCREASED AND THE MATURITIES OF INTEREST RATE INSTRUMENTS GENERALLY ROSE

The most significant change in the composition pension fund asset portfolios in 2015 was

observed in equity pension funds. The share of equity-related investments in the aggregate NAV of equity funds increased by nine percentage points, to end the year at 62%. In almost all equity pension funds, the equity component increased mainly at the expense of the bond component, and did so mainly through investments in ETF instruments that track major equity indices. This increase, while continuing a trend observed in the previous two years, occurred only in the first quarter of 2015, when financial market sentiment was still predominantly optimistic and equity prices were rising. In mixed pension funds, where equity investments also feature prominently in the asset portfolio (with a share of around one-third of the funds' NAV), the equity component fell slightly during the period under review.

In guaranteed bond pension funds, assets in the form of bank deposits fell further in 2015, to a historical low of 15%. The trimming of bank deposits may be a consequence of low deposit rates and the search for higher-yielding bond assets. Another factor in 2015 may have been the use of liquid bank deposits to cover asset transfers for savers leaving the scheme.

In all fund categories apart from index funds, indirect exposure to bonds – via investments in investment funds and ETF instruments – increased as a share of the NAV. In the case of bond pension funds, this component exceeded 6%.

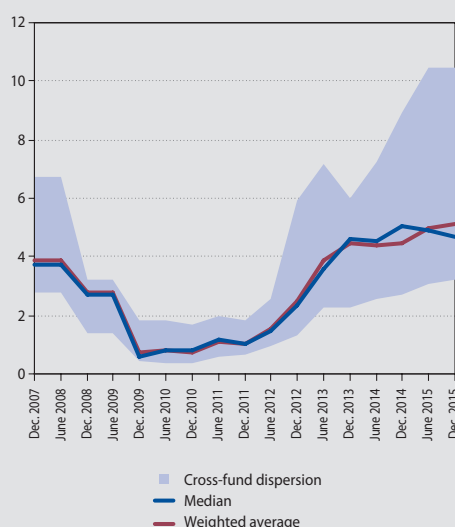
The asset portfolios of a few pension funds acquired currency derivatives or interest rate derivatives. As for the nominal value of the respective funds' forwards, swaps and futures traded solely in the EUR/USD currency pair, it did not at any point exceed 8% of NAV. Interest rate futures turned up in only one pension fund's portfolio in 2015, and at some points their nominal value was as high as one-quarter of the fund's NAV.

The weighted average residual maturity of all debt securities in pension fund portfolios increased by around half a year in the first three months of 2015, after remaining unchanged in 2014. Subsequently, this average stabilised at this elevated level, at just over five years. The increase in maturity was broadly-based across all fund categories. The range of average residual maturities for individual pension funds also widened in 2015. Alongside the lengthening of maturities, the average duration of the sector's debt securities increased, too, implying growing sensitivity to market interest rate movements. Nevertheless, the average bond coupon rate fell gradually throughout 2015.

Similarly, in the case of bank time deposits, the weighted average agreed maturity increased by around three months, to 1.5 years as at 31 December 2015. Apparently in consequence, the average interest rate on time deposits initially increased slightly. In the second half of the year, however, time deposit interest rates were more affected by the pass-through of decreasing market interest rates and fell back to their earlier level of around 1.1%.

The share of domestic assets in the pension funds' portfolios began declining in 2014 and that trend continued in 2015. This reflected mainly the disposal of Slovak government bonds, as the amount of these securities held by pension funds plummeted by 45%. These were replaced

Chart 35 Residual maturity of debt securities (in years)



Source: NBS.

Note: The coloured range indicates the dispersion of residual maturities across pension funds in the sector.



mostly with securities of issuers from the United States, Ireland, Croatia, France, Austria and Luxembourg and other claims on residents from these countries. The EME sovereign debt component increased by almost one-quarter, albeit from a relatively low base and with its entire increase accounted for by its increase in a single pension fund.

Owing largely to the disposal of Slovak government bonds referred to above, pension funds' holdings of debt securities issued by general government maintained their extended downward trend. But whereas in previous years corporate bonds increased at their expense, in 2015 bonds issued by financial institutions did so.

Although foreign currency exposure rose slightly in the sector, its aggregate level remains low. At the same time, however, the distribution of non-derivative assets denominated in foreign currency is uneven, since in around one-half of all pension funds their

share is more than 10%, while in the other half it is zero or negligible. The share was highest in equity pension funds. As for the currency breakdown of these assets, the US dollar still has the leading position.

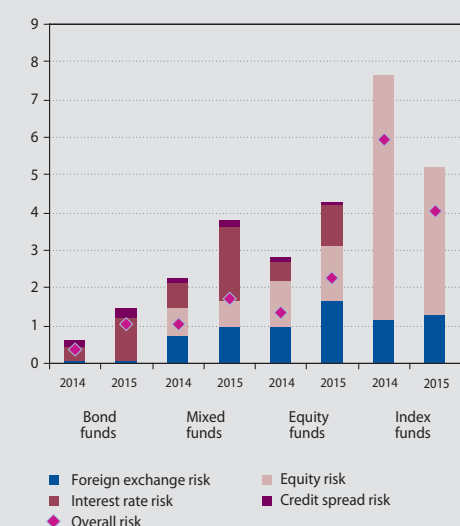
In all types of fund apart from index funds, the risk exposure, as calculated using the VaR approach increased year-on-year in 2015. The increase in the overall risk exposure of mixed, bond and, to a lesser extent, equity funds reflects mainly the upward impact on interest rate risk of the increase in bond portfolio duration as well as of rising interest-rate volatility. Foreign exchange risk edged up owing to the increased volatility of exchange rates. Index funds saw a drop in their equity risk that reflected investment adjustments.

THE ANNUAL PERFORMANCE OF PENSION FUNDS IN AN ENVIRONMENT OF ELEVATED VOLATILITY CORRELATED POSITIVELY WITH THE SIZE OF THE EQUITY COMPONENT IN THEIR PORTFOLIOS

A combination of heightened uncertainty in global financial markets and the existing asset structure of pension funds resulted in the funds' current pension-point value of 'becoming more volatile in 2015 than at any time since 2008. The impact of that volatility was concentrated on index pension funds, whose entire portfolio is exposed to what happens in equity markets. At the same time, index funds benefited more than any other type of pension fund from the resulting changes in the current pension-point value for 2015, as their average annual nominal return for the year was 7.5%. The next best performing pension funds were equity funds (2.8%) and mixed funds (2.7%). In a low interest rate environment, the average return on bond funds was 0.5%. Since the inflation rate was negative, the real investment returns for savers in all four types of fund were positive.

The aggregate annual profit of PFMCs slumped by 44% in 2015, to €11.1 million, thus ending the previously continuous upward trend in their overall result. The drop in profit was largely attributable to lower income from performance-related fees for pension funds. In the second half of the year in particular, this income was

Chart 36 VaR of pension funds (%)



Source: 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%.

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



completely flat, as adverse developments in financial markets were reflected in the current pension-point values. Another contributing factor was an approximate one-third increase in fee and commission expenses. Nevertheless, all PFCMs reported a profit for 2015.

5.2 THE SUPPLEMENTARY PENSION SCHEME (THIRD PILLAR OF THE PENSION SYSTEM)

OVERALL ASSET GROWTH IN THE SECTOR WAS DRIVEN BY ASSET GROWTH IN SMALLER SUPPLEMENTARY PENSION FUNDS WHOSE PARTICIPANTS HAVE A YOUNGER AGE PROFILE

In the third pension pillar – the supplementary pension scheme operated by supplementary pension management companies (SPMCs) – the number of participants increased by almost 19,000 in 2015, to total 701,000 by 31 December 2015.

The NAV of supplementary pension funds (SPFs) increased, year-on-year, by 5% or €77 million, bringing the aggregate NAV to more than €1.5 billion. In contrast to previous years, the NAV growth in 2015 was based entirely on the inflow of new participants' contributions, since the average rate of return on funds was negative. This also explains why NAV growth was lower in 2015 than in the previous year.

The increase in the amount of assets under management continued to be higher in niche investment SPFs than in SPFs pursuing a balanced investment strategy, owing to the younger age profile of participants in the former. Although balanced SPFs received the bulk of total contributions, they also recorded greater outflows related to the payment of pension benefits.

The distribution of managed assets across SPMCs altered very little in 2015, with one company reporting no change in their amount and the other three companies reporting increases. After not changing for an extended period, the number of SPFs in the sector was increased in

2015 by the addition of two new funds, bringing the total number to 17.

THE MOST NOTABLE CHANGES IN THE AGGREGATE PORTFOLIO OF SPFs WAS AN INCREASE IN THE AVERAGE RESIDUAL MATURITY OF BONDS AND A REDUCTION OF SLOVAK GOVERNMENT BOND HOLDINGS

In several balanced SPFs – constituting the bulk of third pillar funds – the share of debt securities in their aggregate asset portfolio declined in 2015. The overall exposure of these SPFs to bond assets fell slightly (from 68% to 66%), despite a significant increase in the amount of assets allocated to investment funds oriented on bond markets. On the other hand, the equity component, including indirect investments through other funds, increased its share of the portfolio, to 20% as at 31 December 2015.

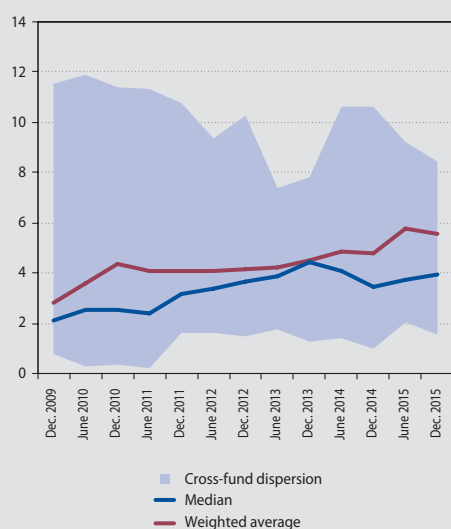
The opposite development was observed in SPFs with a growth-focused investment strategy, as the bond component of their asset portfolio increased at the expense of equities. Across funds, however, no clear common trends were observed.

In all but one of the conservative and distribution SPFs, there was a shift away from bank deposits and towards bonds and, consequently, the share of bank deposits in the aggregate portfolio declined.

In most growth and balanced SPFs, derivative transactions were used for portfolio management. These transactions predominantly involved forwards, swaps or futures linked to the exchange rates of foreign currencies. In two SPFs, the portfolio included futures contracts linked to equities or bonds. The nominal value of these instruments, however, fell steadily during the second and third quarters, down to around one-third of the original level. This decline may have been caused by the increase in financial market volatility during this period.

In a similar development to that observed in the second pillar, the weighted average residual maturity of debt securities across SPFs increased during the first four months of 2015. In year-on-year terms this average maturity increased by 0.8 year and its level as at 31 December 2015 was 5.6

Chart 37 Residual maturity of debt securities (in years)



Source: NBS.

Note: The coloured range indicates the dispersion of residual maturities across SPFs in the sector.

years. The lengthening of the maturity was fully reflected in the increase of the bond portfolio's duration.

The weighted average agreed maturity of time deposits in the aggregate portfolio also increased initially, from eight to eleven months, before falling sharply in the second half of the year to a level of six months. The average interest rate on these deposits fell year-on-year, following a similar cycle to that of the maturity.

The volume of investments in the Slovak economy fell across the sector, from 54% at the beginning of the year to 45% at the end. This slump was caused largely by a drop in in SPFs' holdings of Slovak government bonds, which were mostly replaced with German and Polish government bonds.

Overall, the share of government bonds in the aggregate portfolio declined during the first six months of 2015, but in the wake of the summer's financial market turmoil, SPMCs apparently decided to increase the relatively less risky bond component in SPFs' asset portfolios. A mirroring trend was apparent in the share

of debt securities issued by agents in the real economy.

As for non-derivative assets denominated in foreign currency, their share of all the assets under management in SPFs increased by three percentage points in 2015, to stand at 22% as at 31 December 2015. The dispersion of these assets across funds was however, rather heterogeneous: in some funds there was zero exposure to foreign currencies, while in others up to 45% of the assets were denominated in foreign currency.

THE AVERAGE NOMINAL RETURNS ON SPFs WERE NEGATIVE, WITH THE EXCEPTION OF RETURNS ON SPFs WITH A CONSERVATIVE INVESTMENT STRATEGY

The average nominal return on all SPFs in 2015 was slightly negative. The worst performing funds were growth-targeting SPFs, with an average nominal return of -2.9%. For balanced SPFs, the average nominal return was -1.7%, and for distribution SPFs it was -0.2%. Only funds with a conservative investment strategy made a positive return (0.4%).

The aggregate profit of SPMCs fell to €5.9 million in 2015, which was 5% lower than the profit for 2014. Although the overall profit fell in the previous year, too, the drop in 2015 was far more moderate. Fees and commissions had a neutral impact on the final result of SPMCs, since a small increase in fee and commission income was cancelled out by an increase in fee and commission expenses. The items that made the difference were increasing operating expenses and declining other income.

5.3 COLLECTIVE INVESTMENT

INFLOWS INTO INVESTMENTS FUNDS BEGAN THE YEAR STRONGLY BEFORE WANING AMID A WORSENING SITUATION IN FINANCIAL MARKETS

In Slovakia's collective investment sector, the total net assets of investment funds increased in 2015 for a fourth successive year – by 10.6% year-on-year or €669 million. The asset increase was, however, lower in 2015 than in the previous two years, since in 2015 it was concentrated

at the beginning and end of the year, whereas before it had risen continuously over the 12 months. Indeed, the amount of assets under management fell slightly between May and September 2015.

The sector's NAV growth was driven mainly by net sales of investments funds. The inflows were most marked in the first months of the year and then declined, apparently because rising financial market volatility related to Greece's recovery programme had a downward impact on demand for investment funds. On the other hand, risk appetite did not fall to the extent of triggering flight from the sector and net sales remained in positive territory. The above-mentioned temporary decline in NAV was therefore a consequence of the slump in value of funds' assets during the summer months. It was also the case that the overall contribution of investment returns to NAV growth was lower than in previous years

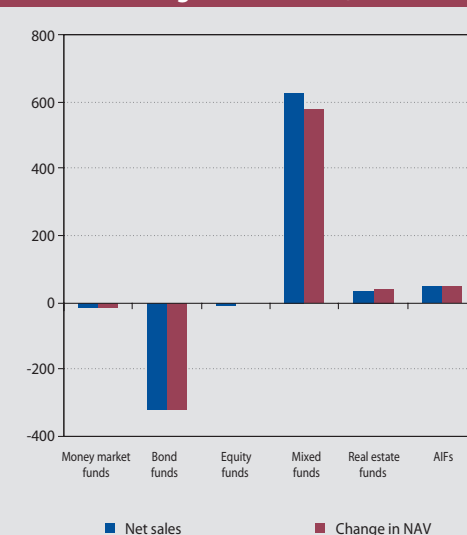
Before 2015, in every year apart from 2009, NAV growth was mostly driven by an increase in the NAV of domestic investment funds, but in 2015 the increase in the NAV of the sector's foreign and domestic funds was approximately the same. In fact, the foreign investment funds recorded their highest ever NAV growth, amounting to €339 million. By contrast, asset growth in the domestic part of the sector was at its lowest level since 2011 and less than half of its level in 2013 and 2014.

Of the six asset management companies that (AMCs) provide the domestic investment funds, four reported an increase in the amount of assets under management and two reported a decrease. During 2015 four domestic investment funds were established and three were discontinued, and so the total number of these funds increased by one.

ALMOST ALL NAV GROWTH AMONG DOMESTIC INVESTMENT FUNDS CONSISTED OF GROWTH IN MIXED FUNDS, WHILE BOND FUNDS, MAKING UP THE LARGEST PART THE SECTOR, RECORDED SUBSTANTIAL REDEMPTIONS AFTER MANY YEARS OF POSITIVE NET SALES

Inflows to domestic investment funds in 2015 went mainly to mixed funds, whose aggregate NAV increased by 40% or €579 million. In con-

Chart 38 Net sales of domestic investment funds and change in their NAV (EUR millions)



Source: NBS.

trast to mixed funds, bond funds saw their aggregate NAV reduced by €323 million as a result of redemptions. In the previous year these funds had reported strong net sales. A closer look at the monthly data provides a partial explanation for this development. While the recent period of low interest rates has stimulated the allocation of savings to collective investment funds in the expectation of higher returns, the inflows in 2015 differed from those in 2014 in that mixed funds displaced bond funds as the principal destination, especially so in the first part of the year when euro area stock markets became strongly bullish. Demand for bond funds was dampened by the diminishing prospects of price growth in debt instruments and the increased risk of their downward repricing, which reflected, among other things, expectations for the tightening of US monetary policy. The divergent trends in mixed and bond investment funds may also have resulted from differing levels of risk aversion among investors in the respective funds at a time when volatility returned to financial markets.

Alternative investment funds (AIFs) and real estate funds also enjoyed positive net sales and consequently increased their net assets, by €51 million and €44 million respectively. In the case



of AIFs, assets increased from a lower base and their growth rate of 50% surpassed even that of mixed funds.

The remaining two types of investment fund – equity funds and money market funds – reported modest outflows. Their impact on the overall results for the sector was not significant.

Households were the main source of the inflows to domestic investment funds in 2015. Banks accounted for a smaller part of these inflows, while among other financial institutions there was modest net redemption of shares/units.

The structure of the change in the asset volume of foreign investment funds marketed in Slovakia was different from that observed in domestic funds. The growth in their total assets was more evenly spread across fund categories. The strongest demand was for bond funds, possibly reflecting the partial substitution of domestic bond funds with their foreign counterparts. The foreign investment funds that recorded the next highest inflows were mixed, equity, structured and real estate funds.

The overall risk exposure of domestic investment funds, calculated as at 31 December 2015 using VaR, increased significantly compared with

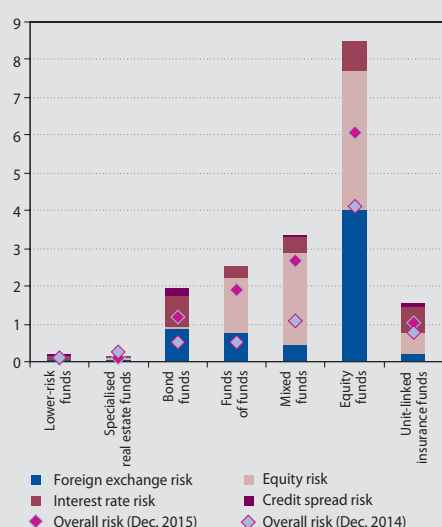
2014, with the increase spread across all types of funds and all types of risk. The increase in risk stemmed from mounting exposure to individual risks, as well as to rising volatility in risk factors. The risk exposure of investment funds is heavily concentrated in the equity and foreign exchange components of the asset portfolio. Equity funds were by far the most exposed funds, while mixed funds also had a relatively higher risk exposure. Other categories of investment funds were characterised by low risk exposure.

INVESTMENT FUND PERFORMANCE WAS WORSE THAN IN PREVIOUS YEARS

In terms of their average nominal returns, investment funds were less successful in 2015 than in the previous two years. Among all domestic and foreign investment funds marketed in Slovakia, equity funds earned the highest average return in 2015, at 3.7%, followed by real estate funds, at 2.5%. Money market funds, bond funds and AIFs recorded average returns ranging from 0.2% to 0.6%. Mixed funds, which attracted the strongest demand during the period under review, reported the worst average return, with a negative result of -1.7%.

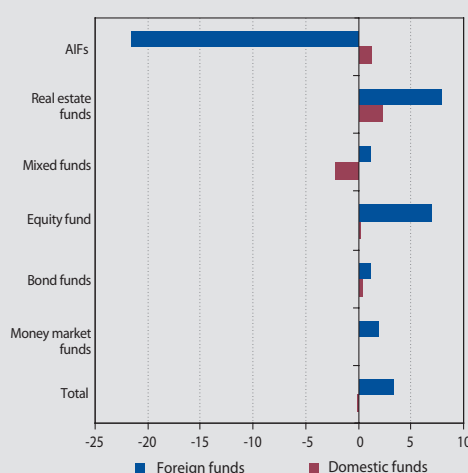
The aggregate profit of domestic AMC's was 6% higher in 2015 than in 2014, at €19.4 million. That growth was achieved even though net fee and

Chart 39 VaR of domestic investment funds (%)



Sources: NBS, Bloomberg and internet.

Chart 40 Average return on funds by category (%)



Sources: NBS and SAAM.

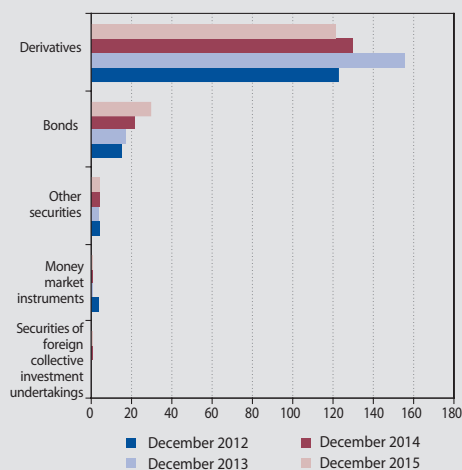
commission income fell by 7% (as expenses under this item increased more than income). The drop in fee and commission income was offset by savings in operating expenses. Every AMC in the Slovak market reported a profit.

5.4 INVESTMENT FIRMS

Overall in 2015, investment firms operating in Slovakia conducted transactions amounting to €157 billion, almost the same as the total volume reported for the previous year. By far the most traded instruments continued to be derivatives, although their volume fell for a second successive year as did their share in the overall volume of transactions (from 82% to 77%). As their share fell, the bond component maintained its long upward trend. Transactions in other types of instrument continued to be relatively small in volume.

The sector saw a significant change in the area of customer assets under management. The value of customer assets managed by institutions holding an investment firm license fell from €2 billion in 2014 to €351 million in 2015, as a result of the departure from this segment of the firm that had previously dominated it. In the year-on-year comparison abstracting from the result of this particular firm, the overall result would have been a slight increase of 2%.

Chart 41 Investment firms' overall transactions broken down by financial instrument (EUR billions)



Source: NBS.

Chart 42 Amount of customer assets under management in the investment firm sector (EUR billions)



Source: NBS.



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CHAPTER 6

MACRO STRESS TESTING OF THE SLOVAK FINANCIAL SECTOR



6 MACRO STRESS TESTING OF THE SLOVAK FINANCIAL SECTOR

THE STRESS TEST BASELINE SCENARIO ASSUMES ECONOMIC GROWTH OF MORE THAN 3% AND FAVOURABLE DEVELOPMENT OF UNEMPLOYMENT IN 2016 AND 2017, WHILE THE ADVERSE SCENARIOS ENCOMPASS A RELATIVELY SHARP SLUMP IN FOREIGN DEMAND AND IN THE DOMESTIC ECONOMY AS WELL AS SIGNIFICANT UNCERTAINTY IN FINANCIAL MARKETS

Macro stress testing of the Slovak financial sector was conducted as at 31 December 2015. As in previous such exercises, the stress test covered a horizon of two years, in this case from the beginning of 2016 to the end of 2017. The resilience of financial institutions was tested under three scenarios.

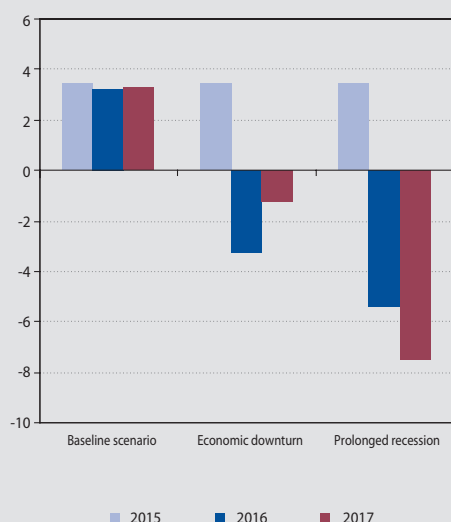
The baseline scenario is based on the update of the December 2015 NBS Medium-Term Forecast, published in January 2016. Accordingly, it assumes that real GDP growth will be more than 3%, but lower than the rate in 2015. As in previous years, growth is expected to be driven mainly by domestic demand. Growth is assumed to be slower in 2016 and 2017 than in 2015 owing to weaker foreign demand and the base effect of the temporary growth-supporting impulse of in-

creased absorption of EU funds in 2015. Annual inflation accelerates gradually and stands at 1.8% in 2017. The unemployment rate falls gradually, down to 9.3% in 2017.

Under the economic downturn scenario, GDP growth in EMEs is assumed to be weaker than expected. This stokes uncertainty in financial markets, capital flight from the countries affected, and a contraction of the global economy. The consequent foreign demand shock has a negative impact on the domestic economy and results in a rise in unemployment. Inflation is assumed to remain low over the stress test horizon, with a slight rising trend.

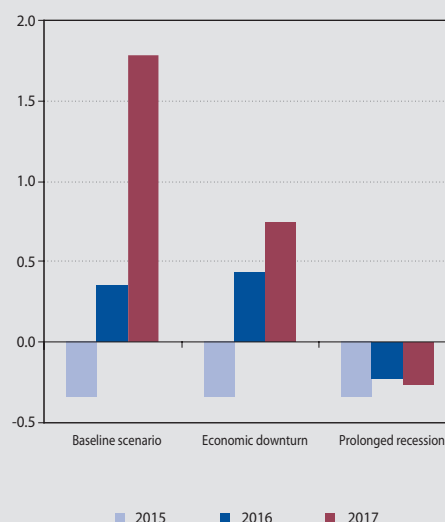
Under the prolonged recession scenario, the negative trends captured in the previous scenario are assumed to last longer, resulting in a deepening of the recession in 2017. Based on the assumed recession and lower oil price, inflation is projected to be more subdued under this scenario than under the economic downturn scenario, remaining slightly negative throughout the stress test horizon.

Chart 43 Real GDP growth assumptions in the stress test scenarios (%)



Source: NBS.

Chart 44 Annual inflation assumptions in the stress test scenarios (%)



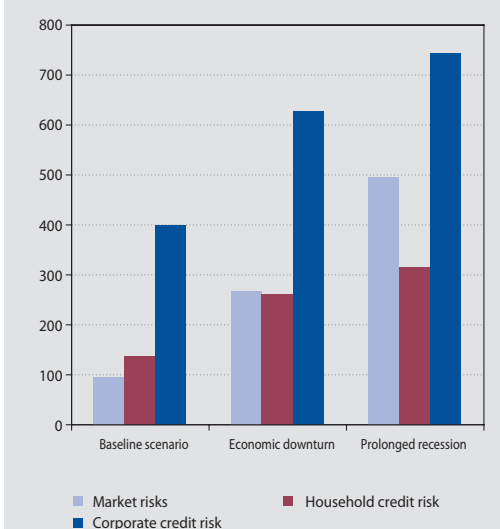
Source: NBS.

DESPITE STRICTER STRESS TESTING PARAMETERS, THE BANKING SECTOR REMAINS QUITE RESILIENT TO ADVERSE SHOCKS IN THE REAL ECONOMY AND IN FINANCIAL MARKETS

The stress test results again show the banking sector's resilience to adverse shocks in the real economy and in financial markets. Under the baseline scenario, not one bank reports a capital ratio below the 8% or 10.5% capital requirement threshold. In the economic downturn scenario, all banks meet the 8% minimum capital requirement, and the sector reports a capital shortfall against the 10.5% threshold of €16 million (or 0.3% of own funds as at end-2015). In the prolonged recession scenario, the sector has a capital shortfall against each threshold, amounting to €3 million (or 0.05% of own funds) and €132 million (or 2.4%) respectively. This result is worse than the corresponding figures in the previous stress test exercise due largely to the more stringent methodology for the total risk exposure amount (see Box 1).

The resilience of the banking sector is underpinned mainly by banks' strong capital adequacy (as at end-2015) and by their ability

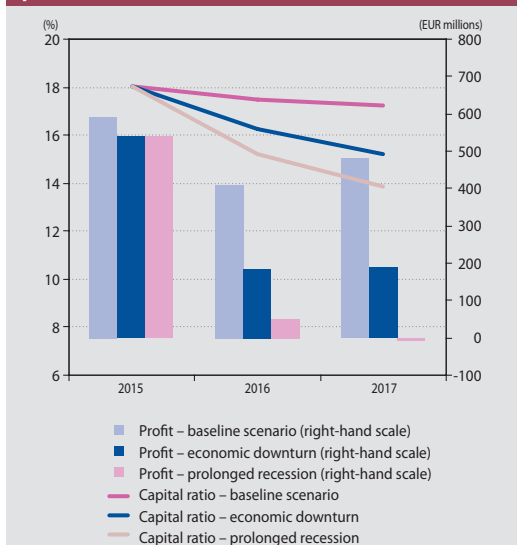
Chart 46 Estimated losses in the stress test scenarios (EUR millions)



Source: NBS.

Note: The chart shows the total loss over the stress test horizon.

Chart 45 Estimates of capital ratio and profit in the stress test scenarios



Source: NBS.

Note: Capital ratios as at the end of 2015 are adjusted to include the assumed impact of capital increases.

to generate net interest income. The sector's net after-tax profit is however lower for both 2016 and 2017 than for 2015, even under the baseline scenario, due to several factors. The first is a conservative approach to credit risk losses (particularly in the corporate portfolio), as a consequence of which loan-loss provisions for 2016 and 2017 are assumed to be higher than for 2015. Second, the baseline scenario already incorporates a slump in equity indices by 15% in the first months of 2016. Third, the assumed decrease of interest rates results in net interest income falling in 2016 (by €70 million, compared with 2015) and in 2017 (by €6 million, also compared with 2015), despite an increase in lending.

In the economic downturn scenario, the aggregate net profit is further trimmed by the impact of increased expenses related to credit risk and market risks. In the prolonged recession scenario, the sector as a whole records a slight loss in 2017. Four banks make a loss for the two-year period under the baseline scenario, while eight do so under each of the adverse scenarios.

The risk losses over the stress test horizon arise principally from the corporate credit portfolio. In the economic downturn scenario, market risk losses are on a par with household credit risk losses. In the prolonged recession scenario market risk losses are higher than household credit risk losses.

THE LEVEL TO WHICH THE LEVERAGE RATIO IS ASSUMED TO FALL IS SIMILAR IN ALL THREE STRESS TEST SCENARIOS, WHILE THE MOST MARKED DROP IN THE LIQUID ASSET RATIO IS ASSUMED IN THE PROLONGED RECESSION SCENARIO

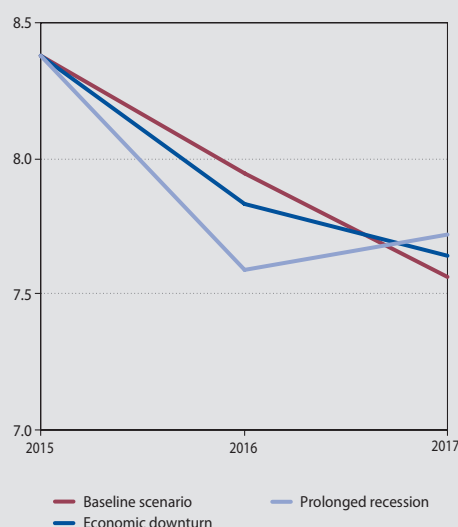
In all three scenarios, the average leverage ratio is assumed to decline from 8.4% at the end of 2015 to around 7.6-7.7% by the end of 2017. In the baseline scenario this drop stems from the projected favourable trends in the economy and financial sector and their upward impact on growth in own funds as well as loans, both for corporate and retail portfolios. Since the assumed growth in lending is higher than the assumed growth in own funds, the leverage ratio decreases. In the economic downturn scenario, the fall in own funds is accompanied by lower growth in the outstanding amount of loans, particularly in 2017, while in the prolonged recession scenario the even greater decline in own funds is accompanied by stagnation in the

stock of loans as well as by a decline in the fair value of the bond portfolio. Thus, under each of the adverse scenarios, the fall in the leverage ratio is caused mainly by a decline in own funds

The estimated development of the liquid asset ratio in the stress test scenarios reflects changes in the fair value of liquid assets through downward repricing of the bond portfolio (including the held-to-maturity portfolio) and the fact that overall retail deposits increase. The impact of the second of these assumptions is identical across all three scenarios, since the same change in the amount of deposits is assumed. Since positive cash flows are confined to loan repayments and loans maturing within 30 days, a change in the stock of loans would have only a marginal impact and therefore it was not calculated in the stress test (and hence the conservative approach to calculations was maintained).

The results show that the average ratio for the banks under review falls from 1.53 at the end of 2015, to between 1.45 and 1.36 depending on the scenario. In the baseline scenario, the decline stems mainly from the assumed growth in deposits (if the amount of liquid assets were

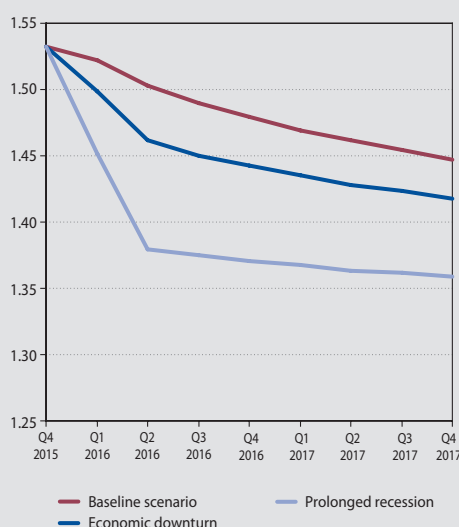
Chart 47 Estimated development of the leverage ratio in the stress test scenarios (%)



Source: NBS.

Note: The chart shows the average ratio for the banks covered by the stress test.

Chart 48 Estimated development of the liquid asset ratio in the stress test scenarios



Source: NBS.

Note: The chart shows the average ratio for the banks covered by the stress test (including banks and subsidiaries of foreign banks).



constant, the resulting ratio would be 1.47). In the adverse scenarios, this decline is exacerbated significantly by the impact of bond portfolio repricing. In the prolonged recession scenario, several banks approach or even fell under a ratio of 1.

THE TEST OF SENSITIVITY TO A SHARP DROP IN THE AVERAGE INTEREST RATE ON HOUSING LOANS INDICATES A POTENTIALLY QUITE SIGNIFICANT IMPACT ON THE STRESS TEST RESULTS

The current results of the stress test do not take account of the fact that the recently approved law on housing loans will reduce the cost of housing loan prepayments. In doing so it may lead to increased refinancing of housing loans, given that loans can be refinanced also at times other than at the end of interest rate fixation periods. This may imply a greater drop in the average interest rate on the stock of housing loans, as is assumed in the stress test scenarios.

Since it is quite difficult to estimate the refinancing rate for housing loans, this factor was taken into account by carrying out a simple sensitivity test. It is assumed that two-thirds or one-half of the overall housing loan portfolio

will not be refinanced and therefore that the average interest rate for that part of the portfolio will decrease as per the stress test assumption. As for the remaining one-third or one-half of the portfolio, there will be a jump downward in the respective interest rate to 1.75% (with the scenarios identified as 1/3 refinancing and 1/2 refinancing).

The results show that in such case there would be a relatively marked decline in the projected profit for the sector as whole, compared with the profit estimated in the stress test (i.e. with no assumption of an increase in refinancing).

Assuming that one-third of the portfolio is refinanced, the sector's overall profit for the two-year period 2016-2017 is lower than the profit projected in the scenarios excluding refinancing; it falls by more than €140 million, or 16%, under the baseline scenario, by just under €140 million under the economic downturn scenario, and by more than €170 million under the prolonged recession scenario (meaning that the sector as a whole makes a loss for 2016-2017).

The comparative decline in profit for 2016-2017 is even more marked under the assumption that one-half of the portfolio is refinanced. It is more than €210 million in the baseline scenario, more than €200 million in the economic downturn scenario and €240 million in the prolonged recession scenario. In all three scenarios the profit is around €70 million lower than it is under the assumption that one-third of the portfolio is refinanced.

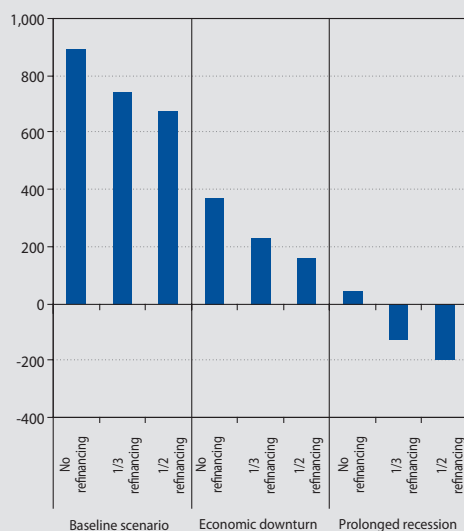
In the baseline scenario, under the assumption of one-third of the portfolio being refinanced, the sector registers a capital shortfall of €3 million against the 10.5% minimum capital requirement. Under the assumption of one-half of the portfolio being refinanced, that shortfall increases to more than €11 million. The corresponding figures in the economic downturn scenario are €33 million and more than €43 million. In the prolonged recession scenario, the respective capital shortfalls amount to €190 million and €202 million, and the capital shortfalls against the 8% requirement are also higher: at

Chart 49 Assumptions for the average interest rate on the stock of housing loans – baseline scenario (%)



Source: NBS.

Chart 50 Estimation of the banking sector's aggregate profit in the stress test scenarios (EUR millions)



Source: NBS.

Note: The chart shows the banking sector's net after-tax profit for the two-year period 2016-2017.

€45 million where one-third of the portfolio is refinanced, and €48 million where one-half is refinanced.

THE INSURANCE SECTOR IS RESILIENT TO LOSSES UNDER THE STRESS TEST SCENARIOS¹³

Given the composition of its portfolio, the insurance sector does not experience significant changes in net interest income over the two-year stress test horizon, not even when there are larger marked shifts in market conditions. Under the economic downturn scenario, net interest income manages to cover cumulatively the decline in the fair value of its financial assets (see Chart P56 in Annex 1). Where this shock is combined with an increase in claims/benefits paid, the insurance sector makes a loss of around €194 million in 2016 and its equity declines by one-quarter, while in 2017 it records a profit of €126 million. Under the prolonged recession scenario, the drop in equity is more than twice as large. In both adverse scenarios, the financial result in 2016 is in negative territory. Nevertheless, the sector is assumed to maintain adequate solvency.

Even though as much as three-quarters of the assets covering technical provisions for unit-linked

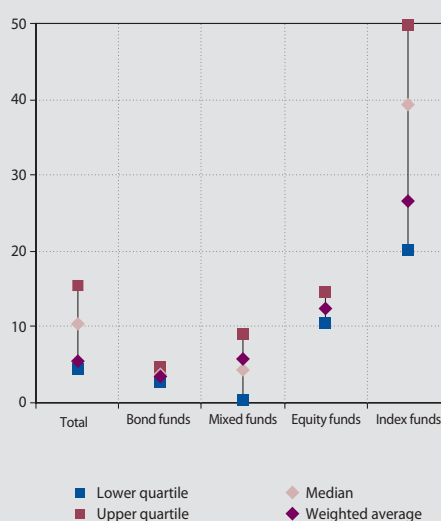
life insurance are allocated to investment funds, the negative impact of the economic downturn scenario on ULI funds is less than half of its negative impact on collective investment funds (see Charts P55 and P58 in Annex 1) and similar to its impact on the PFMC and SPMC sectors. By the end of the stress test horizon, the value of ULI funds' assets is reduced by 2.3% under the economic downturn scenario and by 4.8% under the prolonged recession scenario.

STRESS TEST RESULTS FOR OTHER SEGMENTS

An increase in market risks in other segments of the financial market was reflected in the stress test results, in terms of both the composition of funds' investments and the preferences of investors themselves.

The increase in risk exposure is observed also in less-risky funds, including pension funds operated by PFMCs. In the past, under adverse stress test scenarios, bond pension funds were relatively stable or experienced only a slight drop in returns, but the negative impact of the adverse scenarios on these funds as at end-2015 is more marked. This is due in large part to the increase in credit spreads, but also to the increase in the aggregate portfolio's duration.

Chart 51 Distribution of the impact of the stress test scenarios on pension funds (%)



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 2016.

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

¹⁴ The stress testing does not capture the impact on insurers' liabilities.



Under the prolonged recession scenario, the total net assets of pension funds decline, on average, by 4.5% over the first six months of the stress test horizon, and by 3.6% over the first 12 months. For the sector as a whole, including the higher-risk funds, the decline in total net assets is around 5.5%, which is similar to the impact that the financial crisis had on pension funds in 2008. Further details of the impact of the stress test scenarios on pension funds are given in Chart 30, as well as in Chart P53 in Annex 1. Furthermore, given the current situation in financial markets, as described in Section 1 (External and domestic developments relevant for financial sector stability), not only has the impact increased, so has the likelihood that the set of events assumed in the scenarios will materialise.

A gradual increase in the risk exposure of portfolios in 2014 and 2015 was observed also in supplementary pension funds (SPFs) operated by SPMCs. The average impact of the prolonged recession scenario is approximately the same on SPFs as on pension funds.

The adverse stress test scenarios had their greatest impact on collective investment funds. In the prolonged recession stress scenario, the average decline in asset value reaches 9%. This is partly caused by the increase in the share of mixed funds at the expense of bond funds, which have a lower risk exposure. Nevertheless, the investment fund sector remains considerably heterogeneous, and funds making up around one-third of the market share do not make a loss under the adverse scenarios.

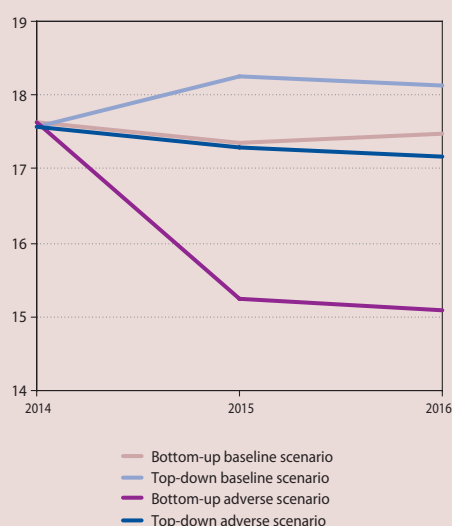
Box 2

A COMPARISON OF BOTTOM-UP AND TOP-DOWN RESULTS FOR SELECTED BANKS

Bottom-up stress tests were conducted in five banks in 2015 on the basis of the stress test scenarios used in the macro stress testing exercise conducted as at 31 December 2014. While both the bottom-up and top-down approach used the same scenarios, in the bottom-up

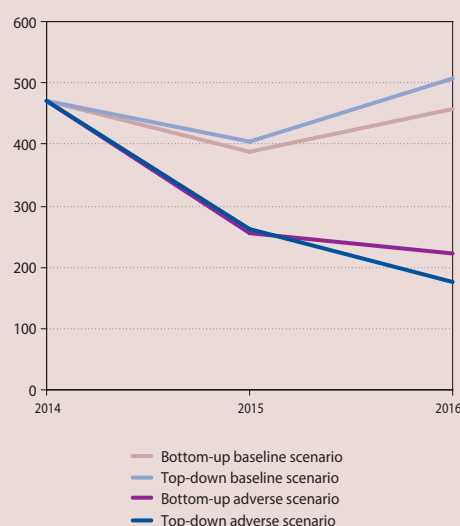
exercise, the banks themselves performed the calculations, whereas in the top-down exercise NBS performed them. Each exercise was conducted at the level of the Slovak banking sector and was not related to EU-level stress tests. Hence the results for the banks involved

Chart A Capital ratio estimations (%)



Source: NBS.

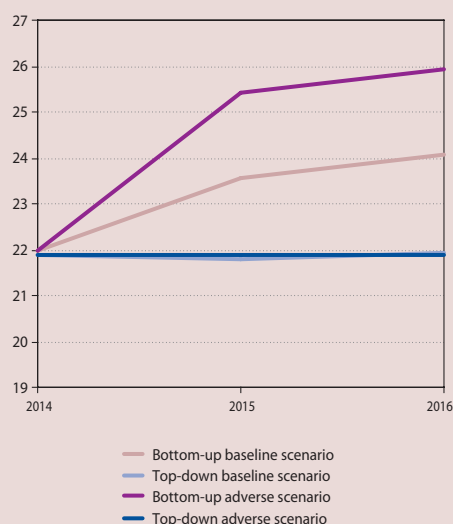
Chart B Net after-tax profit estimations (EUR millions)



Source: NBS.

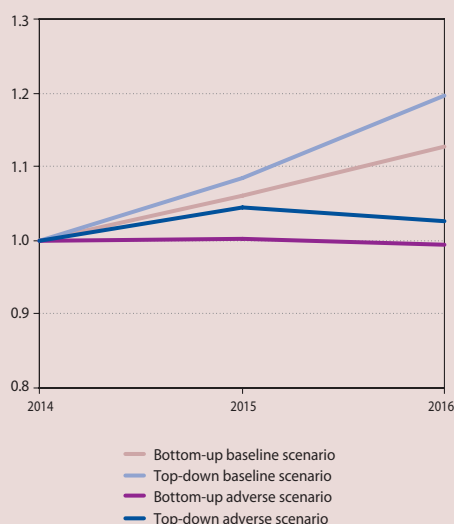


Chart C Overall risk exposure estimations (EUR billions)



Source: NBS.

Chart D Total loan volume estimations (index)



Source: NBS.

Note: Index for the amount of loans: 31 Dec. 2014 = 1.

may be compared. The total assets of the five banks make up almost 79% of the total assets of the institutions covered by the macro stress tests.

The average capital ratio of the five banks is lower in the bottom-up exercise than in the top-down exercise, under both the baseline scenario and adverse scenario (the assumptions of the adverse scenario are the same as those in the financial crisis scenario presented in the Analysis of the Slovak Financial Sector – 2014).

The estimated capital ratio is impacted by three factors: estimates of net after-tax profit, distribution of dividends, and total risk exposure amount. The estimated net profit after tax for the five banks is generally similar between the top-down and bottom-up exercises. Although there are notable differences in respect of certain banks, these may have arisen because the estimations for certain items in the macro stress test are made for the sector as a whole (e.g. the assumptions for loan and deposit volumes) and the results are translated into bank-level data using simple assumptions.

While the assumption for bank dividend policy changes from year to year, thereby making it quite difficult to draw conclusions from a comparison of results, in the case of the estimation of total risk exposure amount in the macro stress test adverse scenarios it is possible to point to the not so conservative assumption that the amount of these exposures remains constant. Under the bottom-up exercise, the average total risk exposure amount of the five banks is estimated to increase over the two-year stress test horizon by 18% (by more than 15% in the first year and more than 2% in the second year), compared to the constant total risk exposure amount under the top-down approach. This assumption was adjusted for the macro stress test used in this edition of the ASFS, with each of the adverse scenarios assuming an increase in the total risk exposure amount.

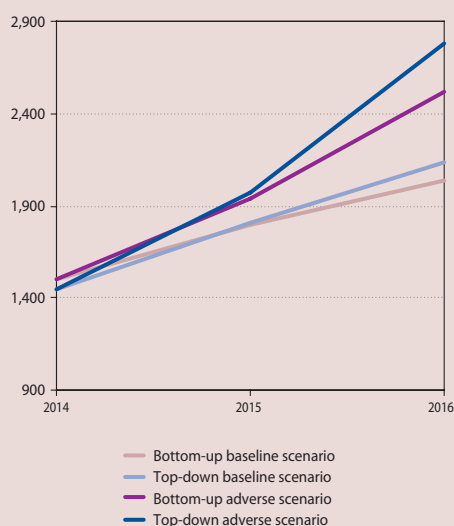
The estimation of the outstanding amount of loans is slightly higher in both the baseline scenario and adverse scenario in the macro stress test exercise; however, the trend differences are not significant and may be attributed in part to differences between banks' assumptions (with some banks assuming



constant amount of loans in the adverse scenario) and to differences in the composition of the loan portfolio (with some banks including off-balance sheet items as well). It follows that differences in the estimation of the total risk exposure amount under the adverse scenario stem more from an increase in the risk parameters (probability of default, loss given default, etc.) used to calculate risk exposures in the bottom-up exercise than from divergence in the assumptions for the outstanding amount of loans.

The assumption for the total amount of non-performing loans (across the retail and corporate portfolios) is likewise similar between the two exercises, being slightly more stringent in the top-down exercise (especially in the second year of the stress test horizon).

Chart E Total NPL volume estimations (EUR millions)



Source: NBS.



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ANNEX 1

MACROPRUDENTIAL INDICATORS

A1

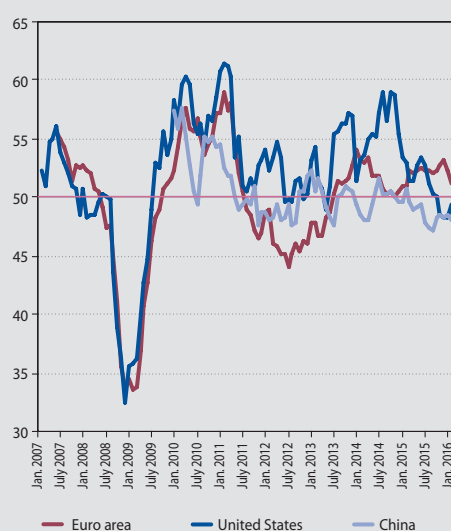


MACROPRUDENTIAL INDICATORS

General note: 'index: 31 December 2015 = 1' means that the given index was normalised so that its value on the specified date (31 December 2015) was equal to 1.

MACROECONOMIC RISK INDICATORS

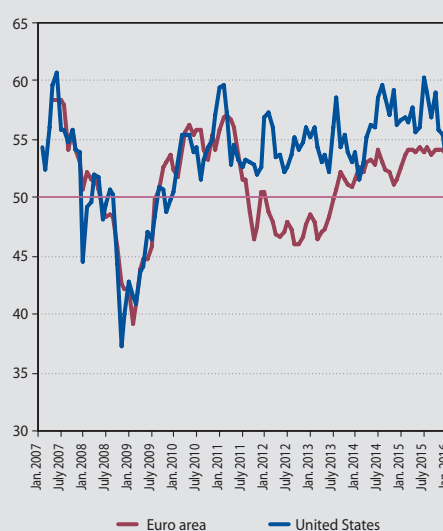
Chart P1 Manufacturing Purchasing Managers' Index (PMI) in selected economies



Source: Bloomberg.

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

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

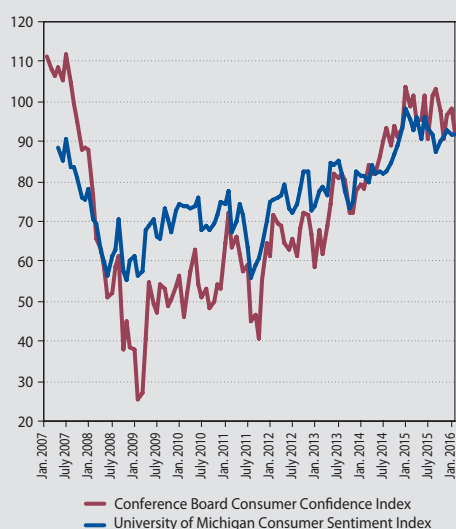


Source: Bloomberg.

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



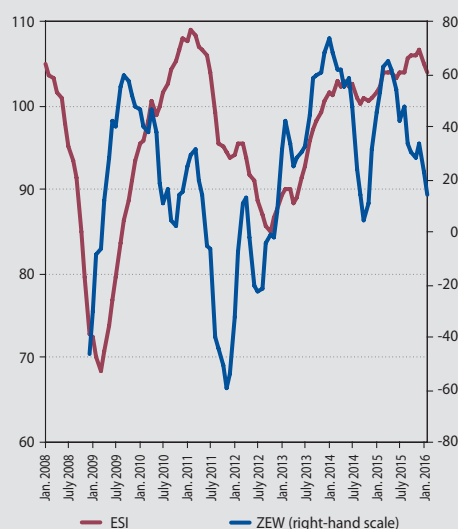
Chart P3 Consumer confidence indicators in the United States



Source: Bloomberg.

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

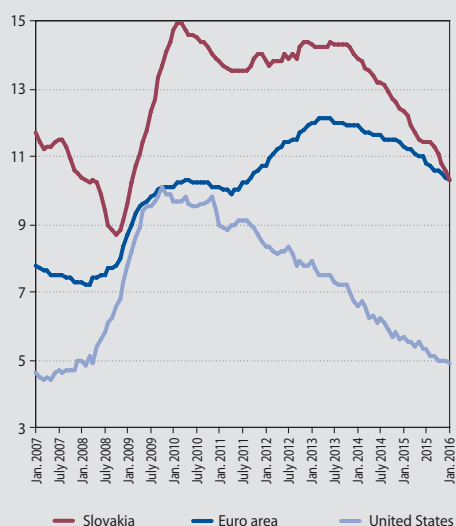
Chart P4 Economic sentiment indicators in the euro area



Source: Bloomberg.

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

Chart P5 Unemployment rates in selected economies (%)



Sources: Eurostat and Bureau of Labor Statistics.

Note: Seasonally adjusted.

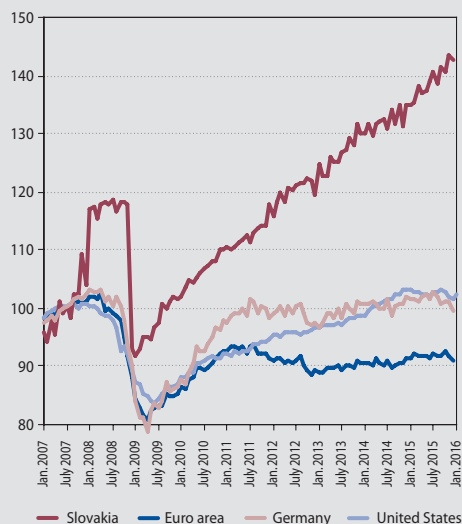
Chart P6 Consumer price inflation in selected economies (annual percentage changes)



Sources: Eurostat and Bureau of Labor Statistics.

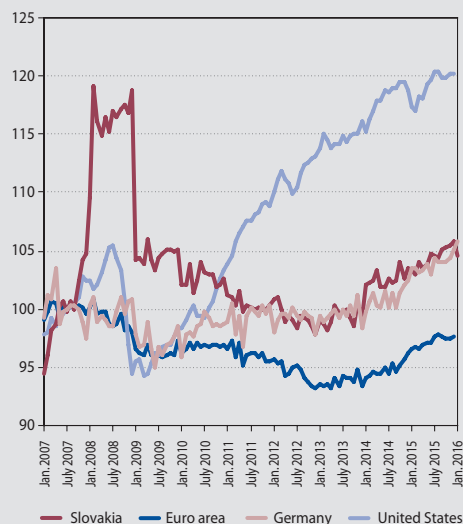


Chart P7 Industrial production indices in selected economies



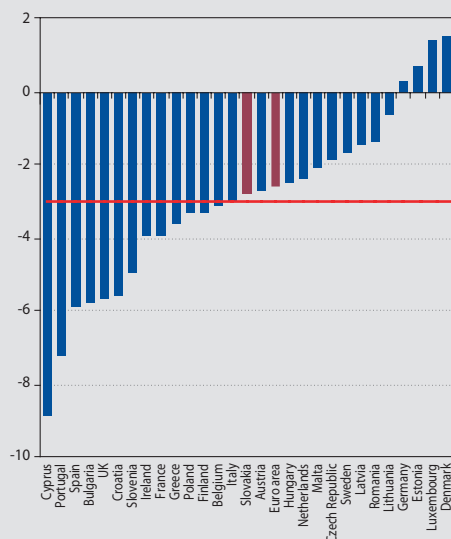
Sources: Eurostat and US Federal Reserve.
Notes: Rebalanced (average: 2007 = 100); seasonally adjusted.

Chart P8 Retail sales indices in selected economies



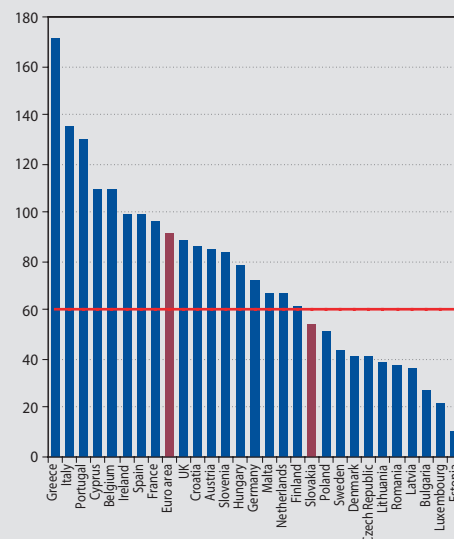
Sources: Eurostat and US Department of Commerce.
Notes: Rebalanced (average 2007 = 100); seasonally adjusted.

Chart P9 General government balances of EU countries in 2014 (percentages of GDP)



Source: Eurostat.

Chart P10 Gross government debt of EU countries in the third quarter of 2015 (percentages of GDP)



Source: Eurostat.



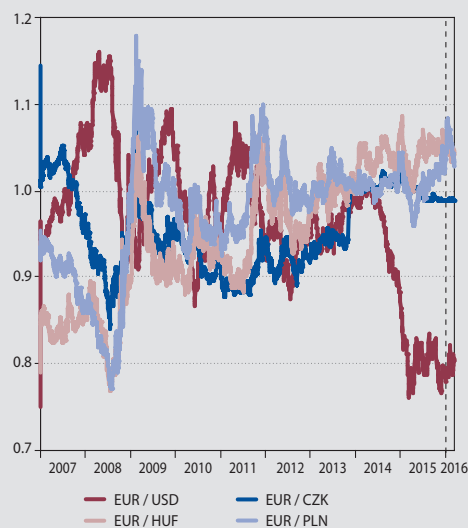
FINANCIAL MARKET RISK INDICATORS

Chart P11 Price commodity indices
(31 December 2014 = 1)



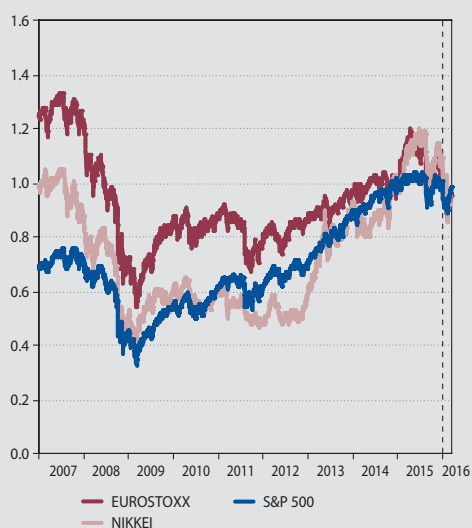
Sources: Bloomberg and NBS.

Chart P12 Exchange rate indices
(31 December 2013 = 1)



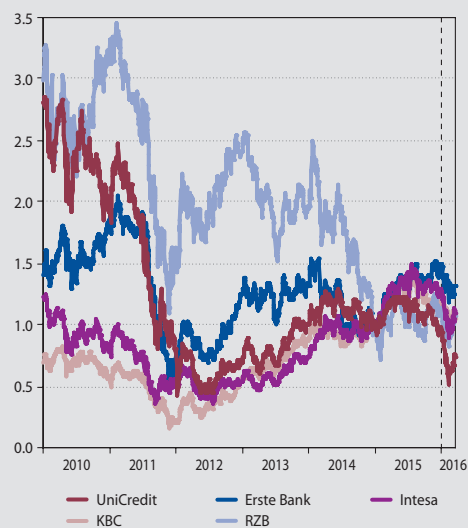
Sources: Bloomberg and NBS.

Chart P13 Equity indices
(31 December 2014 = 1)



Sources: Bloomberg and NBS.

Chart P14 Share price indices of the parent institutions of the five largest domestic banks
(31 December 2014 = 1)



Sources: Bloomberg and NBS.



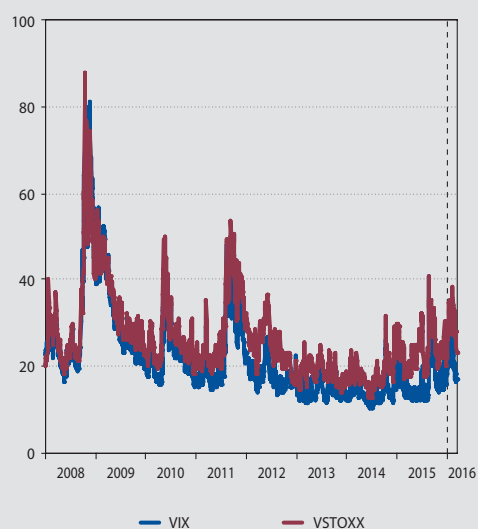
Chart P15 Yield curve slope in selected economies (p.p.)



Sources: Bloomberg and NBS.

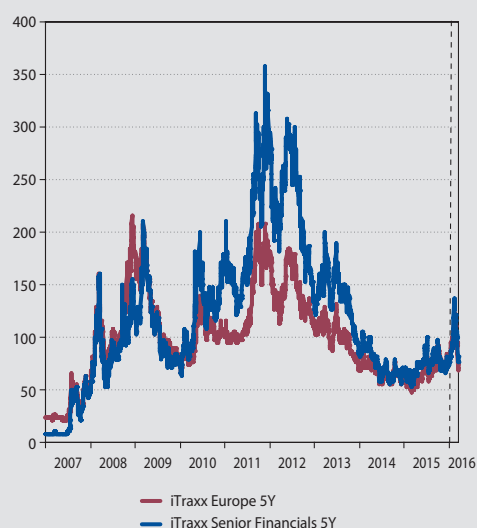
Note: The yield curve slope is expressed as the difference between the yield to maturity on 10-year and 3-month government bonds.

Chart P16 Volatility of equity indices



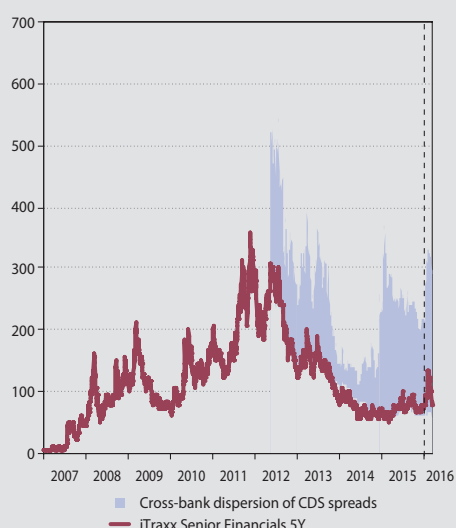
Source: Bloomberg.

Chart P17 CDS spread indices (b.p.)



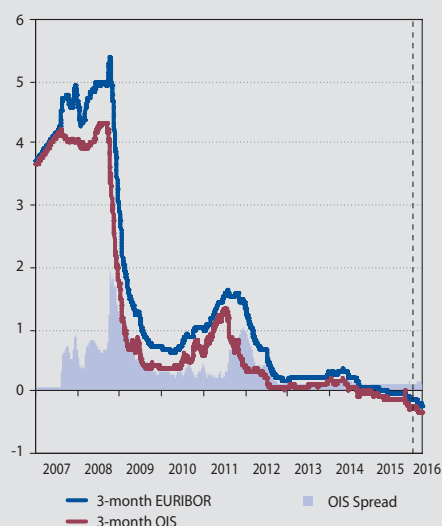
Sources: Bloomberg and NBS.

Chart P18 CDSs of the parent institutions of the largest Slovak banks (b.p.)



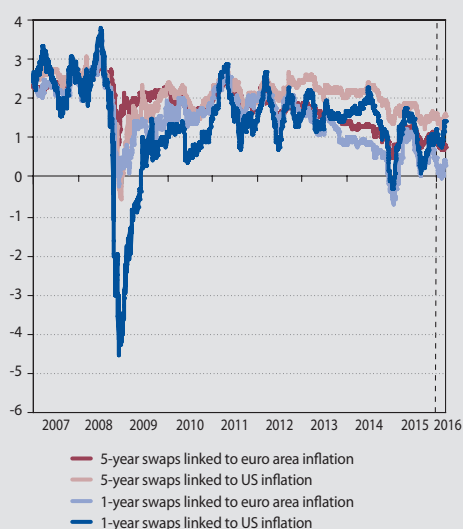
Sources: Bloomberg and NBS.

Chart P19 Three-month rates and the OIS spread (percentages; p.p.)



Sources: Bloomberg and NBS.

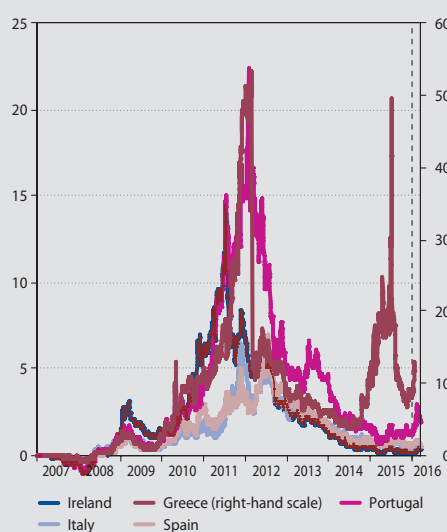
Chart P20 Inflation-linked swap prices (p.p.)



Sources: Bloomberg and NBS.

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

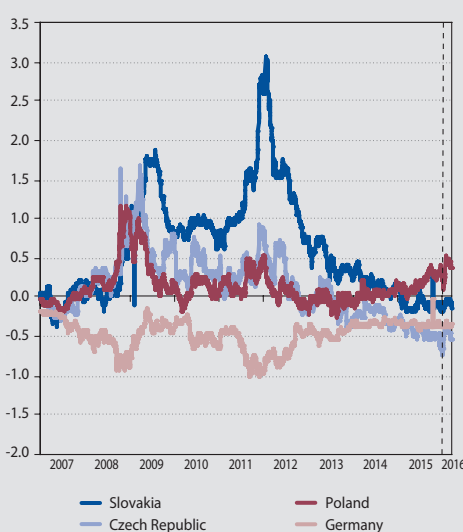
Chart P21 Credit spreads on 5-year government bonds issued by lower-rated countries (percentage points)



Sources: Bloomberg and NBS.

Note: The vertical scales show 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)



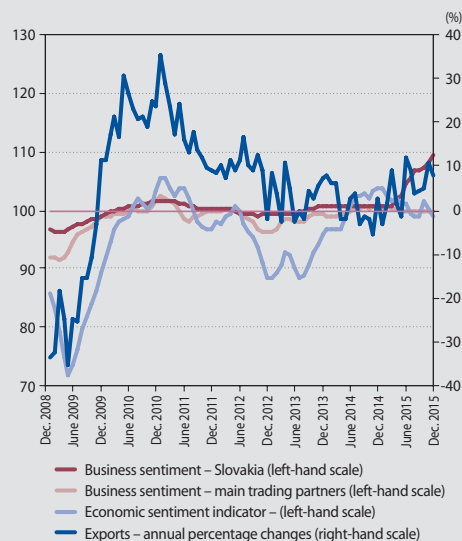
Sources: Bloomberg and NBS.

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.



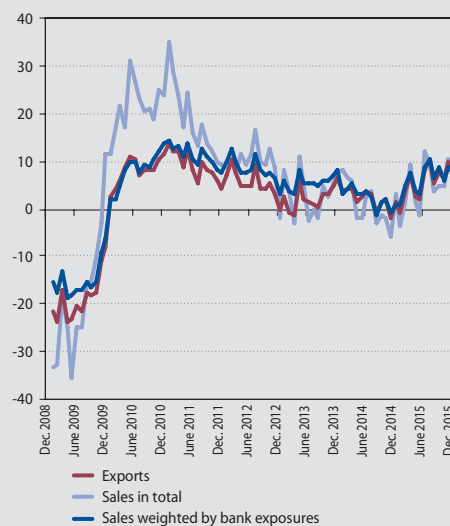
CORPORATE CREDIT RISK INDICATORS

Chart P23 Exports and the business environment



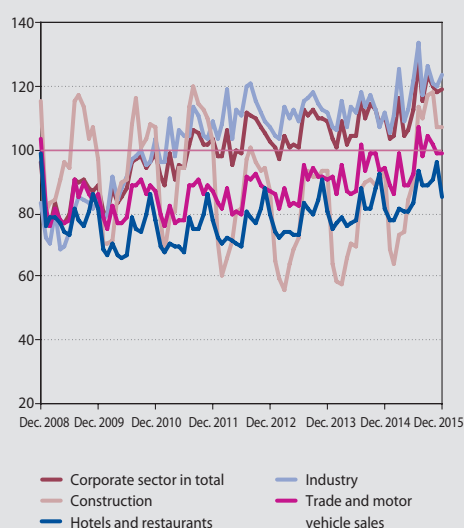
Sources: NBS, OECD and SO SR.

Chart P24 Exports and corporate sales (annual percentage changes)



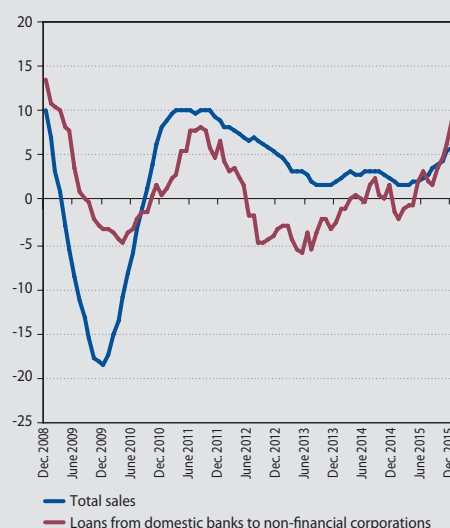
Sources: SO SR, Slovak Economy Ministry, OECD and NBS.

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



Source: SO SR.

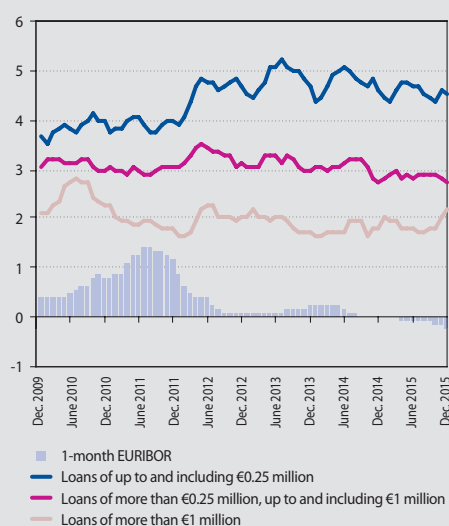
Chart P26 Corporate loans and sales (annual percentage changes)



Sources: NBS and SO SR.



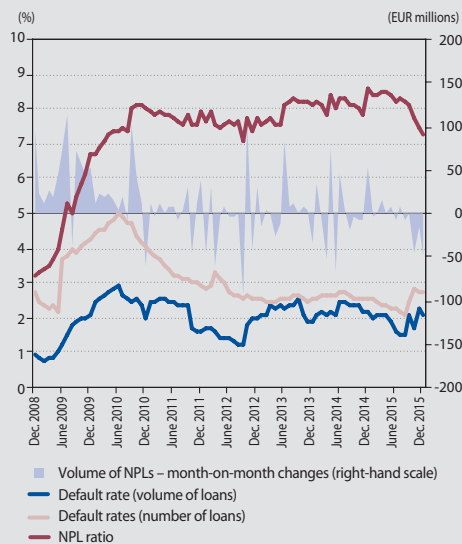
Chart P27 Interest rate spreads on new loans to NFCs (%)



Sources: NBS and EBF.

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

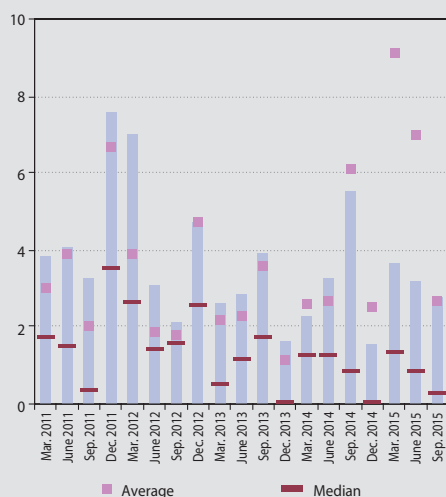
Chart P28 Non-performing loans (NPLs) and default rates



Source: NBS.

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

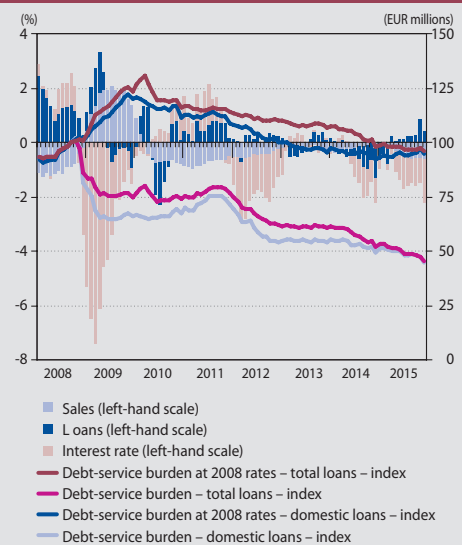
Chart P29 Loans at risk (percentages)



Source: NBS.

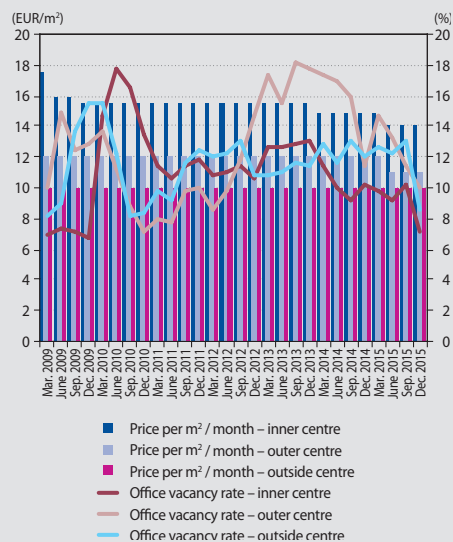
Note: The chart shows interquartile ranges.

Chart P30 The debt-service burden and its components



Sources: NBS and SO SR.

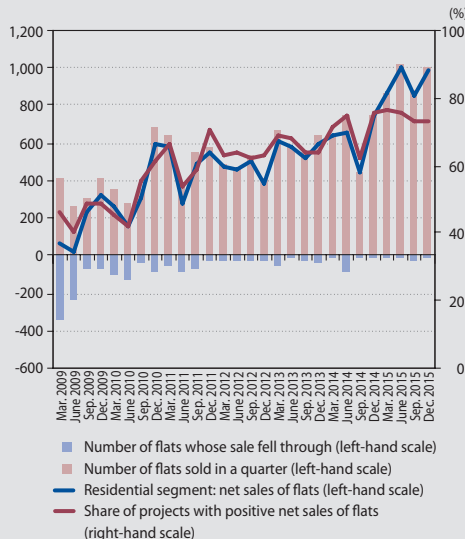
Chart P31 Commercial real estate: prices and vacancy rates in the office segment



Source: CBRE and NBS.

Note: The chart shows prices and vacancy rates in Bratislava.

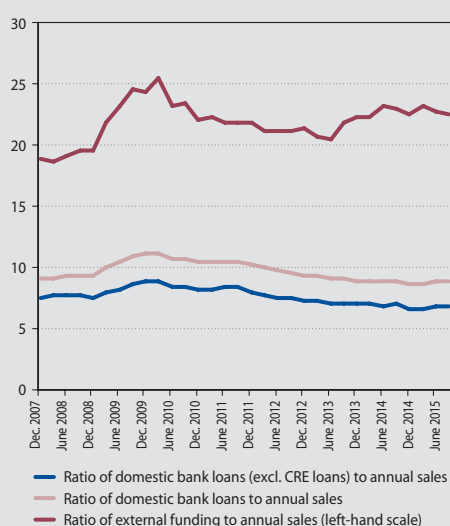
Chart P32 Commercial real estate: sales in the residential segment (new flats)



Sources: Lexus and NBS.

Note: The chart shows developments in Bratislava.

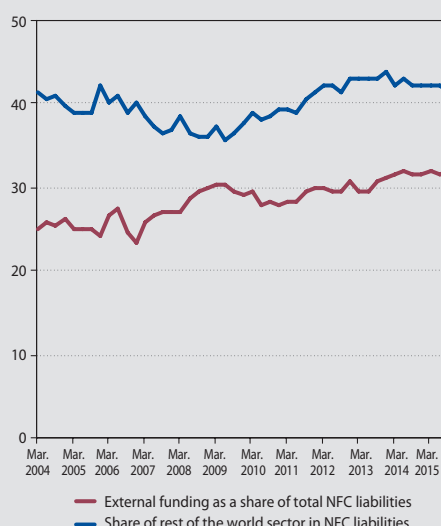
Chart P33 Comparison of corporate balance sheets and sales (%)



Sources: NBS and SO SR.

Note: CRE – commercial real estate.

Chart P34 Structure of NFC liabilities (%)

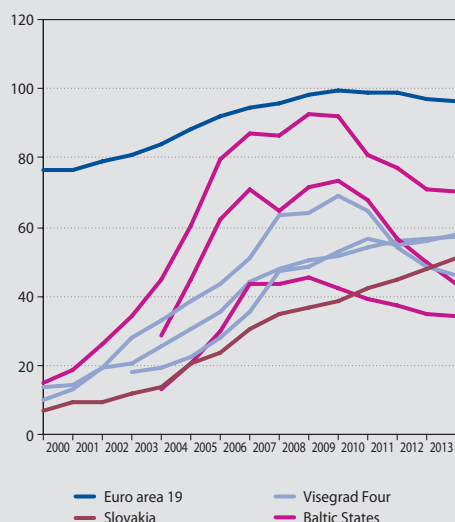


Source: NBS.



HOUSEHOLD CREDIT RISK INDICATORS

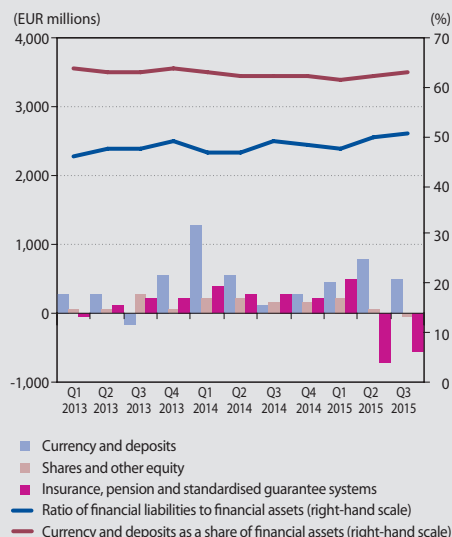
Chart P35 Household indebtedness in Slovakia and in selected countries (percentages)



Source: Eurostat.

Note: The indicator is calculated as the ratio of households' total debt to their disposable income.

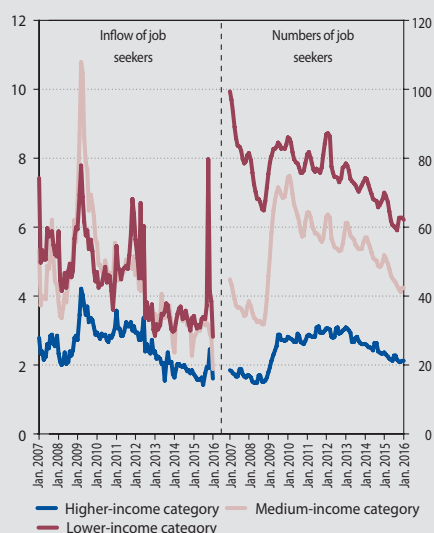
Chart P36 Changes in household financial assets



Source: NBS.

Notes: The data refer to quarter-on-quarter changes. Owing to a methodological change, historical data are not available yet.

Chart P37 Number of unemployed by income category

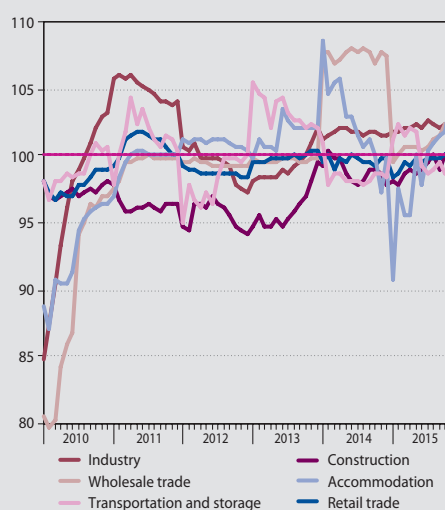


Source: Central Office of Labour, Social Affairs and Family of the Slovak Republic.

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'.

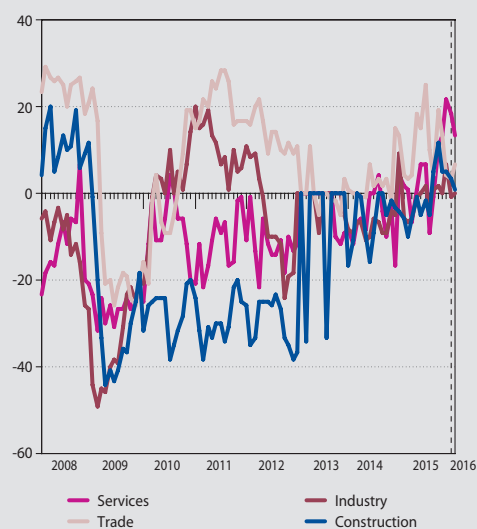
Chart P38 Employment in selected sectors – index (year-on-year changes)



Source: SO SR.

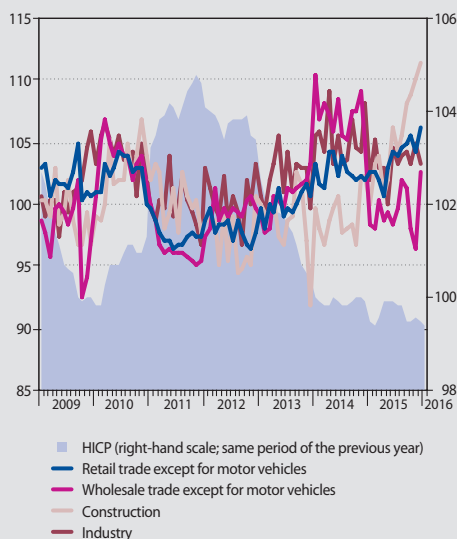


Chart P39 Expected employment in selected sectors – index



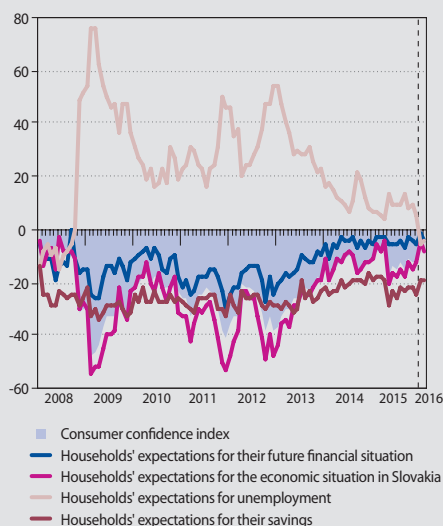
Source: SO SR.

Chart P40 Real wages in selected sectors – index



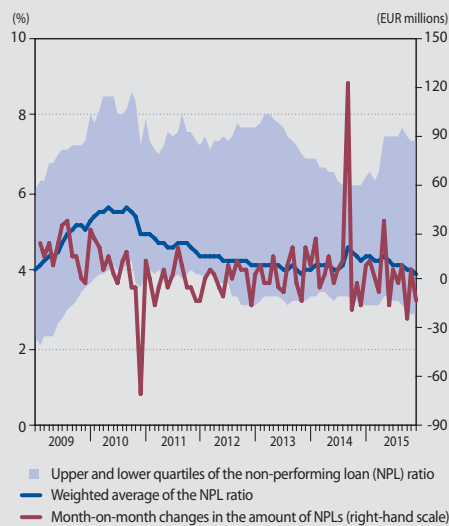
Source: SO SR.

Chart P41 The consumer confidence index and its components



Source: SO SR.

Chart P42 Non-performing household loans

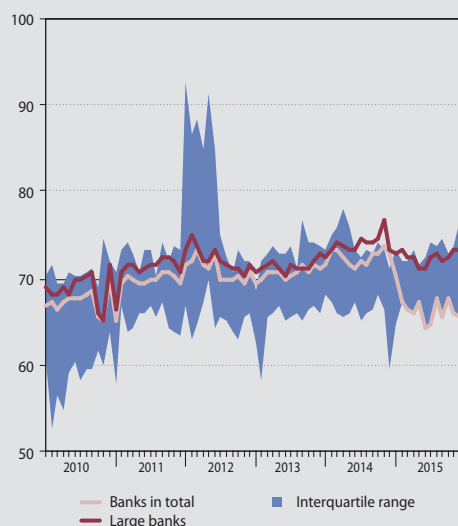


Source: NBS.

Note: The left-hand scale shows the NPL ratio for the aggregate household loan portfolio.



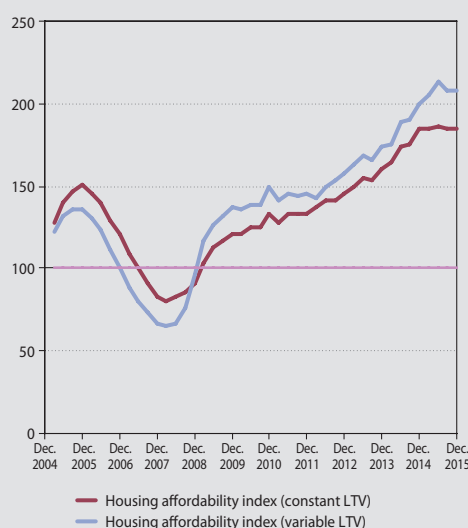
Chart P43 Loan-to-value (LTV) ratio (%)



Source: NBS.

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

Chart P44 Housing affordability index

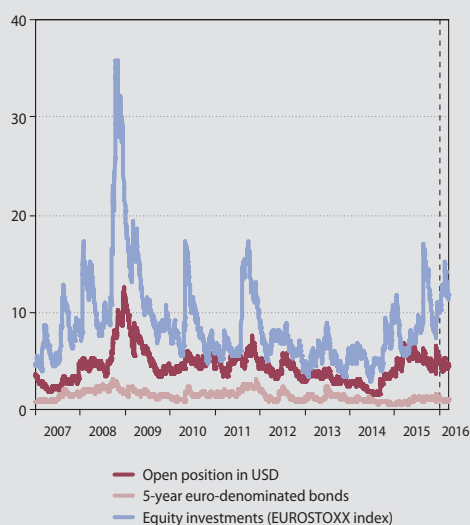


Sources: NBS and SO SR.

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

MARKET RISK AND LIQUIDITY RISK INDICATORS

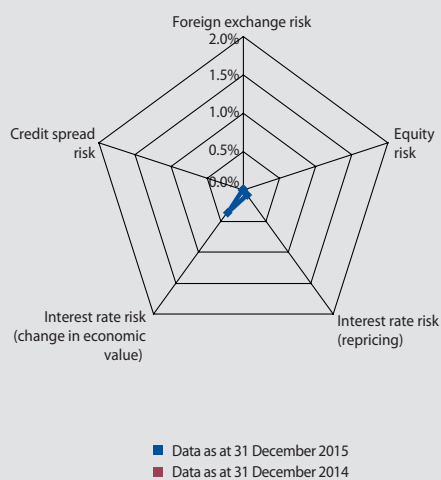
Chart P45 Value at Risk for investments in different types of financial instruments (%)



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.

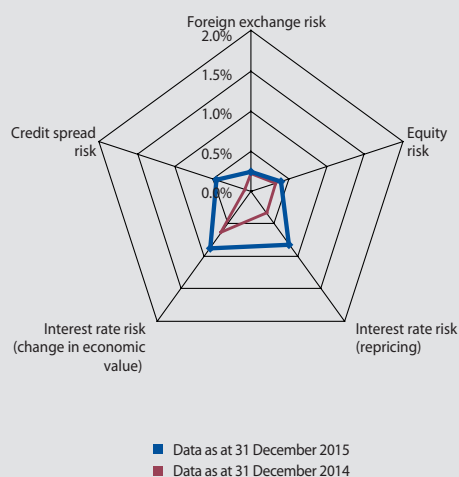
Chart P46 The sensitivity of the banking sector to different risk types



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'.

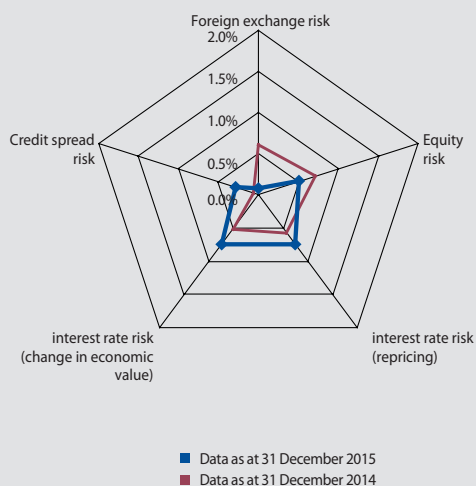
Chart P47 The sensitivity of PFMC-managed pension funds to different risk types



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'.

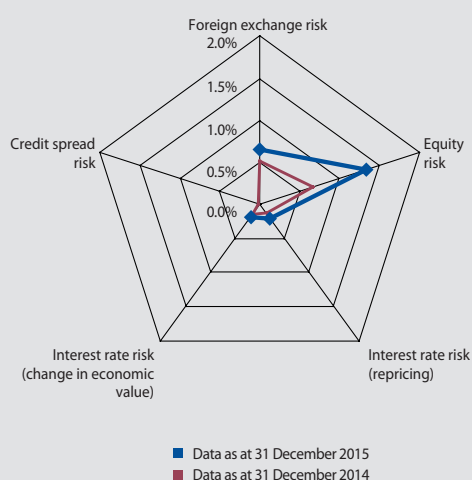
Chart P48 The sensitivity of SPMC-managed supplementary pension funds to different risk types



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'.

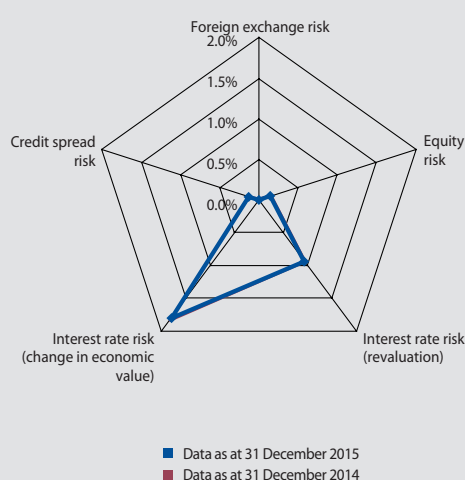
Chart P49 The sensitivity of collective investment funds to different risk types



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

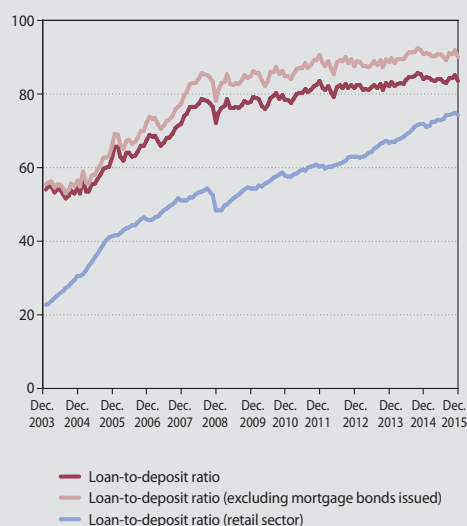


Sources: Bloomberg and NBS.

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'.

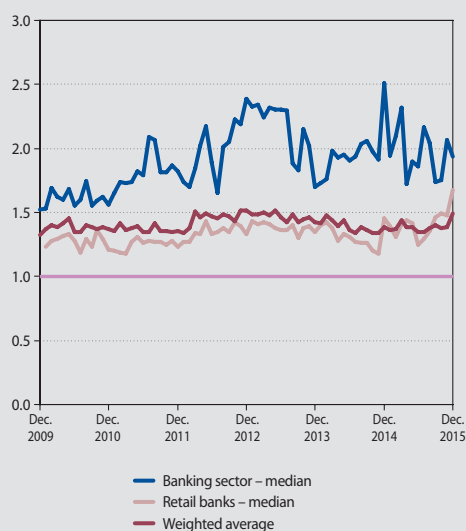


Chart P51 Loan-to-deposit ratio (%)



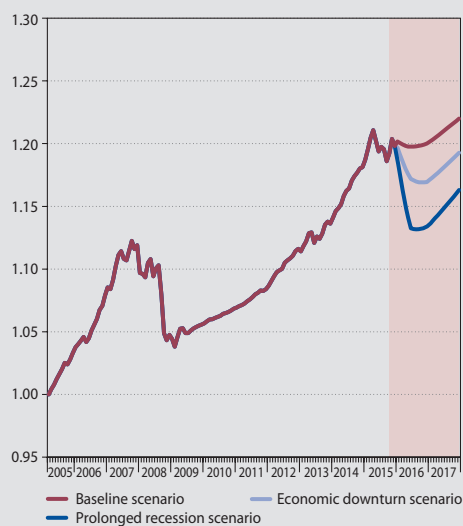
Source: NBS.

Chart P52 Liquid asset ratio



Source: NBS.

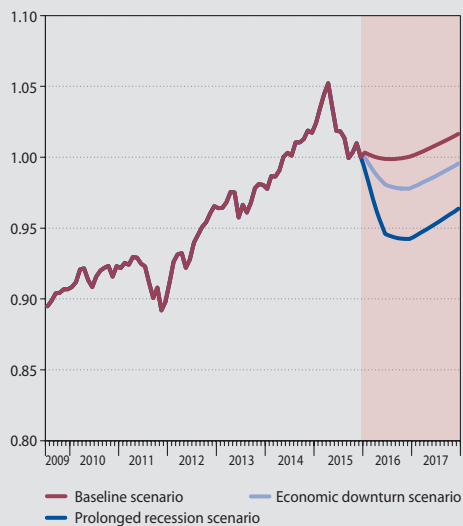
Chart P53 Impact of stress test scenarios on PFMC-managed pension funds



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.

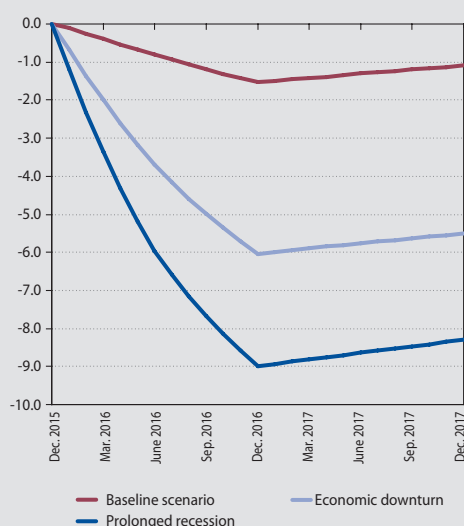
Chart P54 Impact of stress test scenarios on SPMC-managed distribution supplementary pension funds



Sources: NBS, ECB, Bloomberg and internet.

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

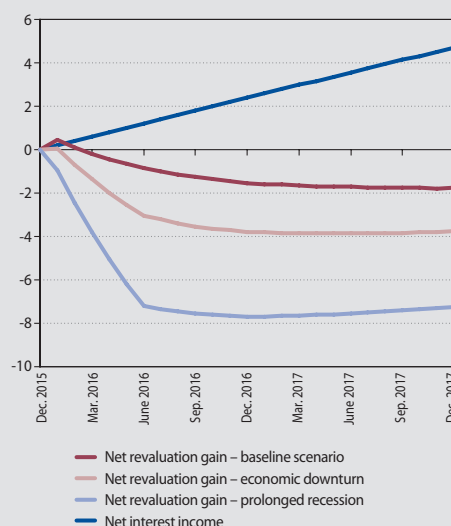
Chart P55 Impact of stress test scenarios on collective investment funds (%)



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 NAV of individual funds.

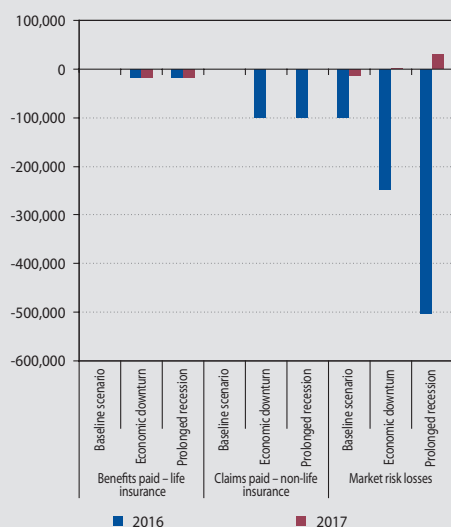
Chart P56 Impact of stress test scenarios on the insurer's assets (%)



Sources: NBS, ECB, Bloomberg and internet.

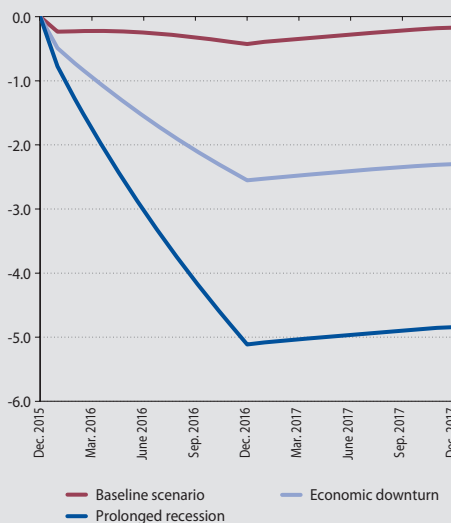
Notes: The left-hand scale shows the estimated profit or loss as a share of assets (except for assets covering technical provisions for unit-linked insurance) weighted by assets of individual insurers. The impact of the stress test scenarios on the value of liabilities was not taken into account.

Chart P57 Additional expenses that the insurance sector would incur under the stress test scenarios (EUR millions)



Source: NBS.

Chart P58 Impact of stress test scenarios on the assets of unit-linked insurance funds (%)



Source: NBS, ECB, Bloomberg and internet.

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



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GLOSSARY AND ABBREVIATIONS



GLOSSARY

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

combined ratio – the value of claims and expenses relative to premiums earned.

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

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

households – the population, i.e. the accounts of individuals.

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

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

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

liquidity gap – the difference between assets and liabilities at a given maturity

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

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

NBS Recommendation – Recommendation No 1/2014 of Národná banka Slovenska of 7 October 2014 in the area of macroprudential policy on risks related to market developments in retail lending.

net interest rate spread – the difference between the rate of return on loans (the ratio of interest income 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 with impairment of more than 50% of their value or with the borrower's payment past due by more than 90 days.

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



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

premium – the price agreed in individual insurance contracts regardless of the method of their financial reporting.

provisions for unit-linked insurance policies – technical provisions created for life insurance business associated with investment funds in the A4 insurance line.

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.



ABBREVIATIONS

AFS	available for sale (portfolio)
APRC	annual percentage rate of charge
b.p.	basis point
CRE	commercial real estate
CDS	credit default swap
EME	emerging market economy
ESI	economic sentiment indicator
ETF	exchange-traded fund
EIOPA	European Insurance and Occupational Pensions Authority
EURIBOR	euro interbank offered rate
GDP	gross domestic product
HTM	held to maturity (portfolio)
IF	investment fund
CASCO	comprehensive motor vehicle insurance
KZAM	Klasifikácia zamestnaní / Employment Classification
LAR	loans at risk
LTV	loan-to-value (ratio)
MPD	Macroprudential Policy Department
MTPL	motor third-party liability (insurance)
NAV	net asset value
NFC	non-financial corporation
NPL	non-performing loan
OECD	Organisation for Economic Co-operation and Development
PFMC	pension fund management company
p.p.	percentage point
RBLG	Register of Bank Loans and Guarantees
ROE	return on equity
RWA	risk-weighted assets
SKP	Slovenská kancelária poisťovateľov / Slovak Insurers' Bureau
SASS	Slovenská asociácia správcovských spoločností / Slovak Association of Asset Management Companies
SPMC	supplementary pension management company
SO SR	Statistical Office of the Slovak Republic
Tier 1/2/3	categories of capital used in the calculation of capital ratios
ULI	unit-linked (life) insurance
ÚPSVaR	Office of Labour, Social Affairs and Family
VaR	value at risk



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