KNF | KOMISJA NADZORU FINANSOWEGO

REPORT ON THE SITUATION IN THE BANKING SECTOR IN 2019

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Table of contents

1. Key data

This report on the banking sector describes the developments in the economic and financial situation of banks and branches of credit institutions in 2019. The events that occurred after the reporting date have not been considered in the report. In 2019:

- The net result of the banking sector amounted to PLN 14 225.9 million and was higher by PLN 1 179.7 million (or 9.0%) than the result achieved in 2018.
- The efficiency of the sector, expressed by Return on Equity (ROE), increased by 0.4 p.p. compared to the end of 2018, to 6.9%. The continuing 2019 profitability below 7% resulted from an increased burden on the net result due to, among other things, provisions for legal risk associated with mortgage loans in CHF and the reimbursement of commissions collected on consumer loans repaid before contractual deadlines.
- The net receivables from non-financial sector entities[1] increased by PLN 51.2 billion (4.8%) on a yearly basis.
- The quality of receivables from non-financial sector entities improved: the share of Stage 3/impaired receivables in total receivables decreased from 6.8% at the end of 2018 to 6.6% at the end of 2019, and the improvement occurred for both receivables from enterprises and from households.
- Deposits of non-financial sector entities increased by PLN 111.6 billion (9.6%) on a yearly basis, which translated into a decrease in the loans/deposits ratio of 3.6 p.p in the same period.
- The capital adequacy of the banking sector at the end of 2019 (YoY change):
  - Own funds: PLN 210.8 billion (+PLN 7.2 billion, +3.5%), including Tier 1 capital: PLN 188.1 billion (+PLN 4.9 billion, +2.7%);
  - Total risk exposure amount: PLN 1 102.3 billion (+PLN 33.1 billion, +3.1%), including the credit risk exposure amount: PLN 1,002.2 billion (PLN +32.5 billion, +3.4%);
  - TCR: 19.12% (+7.8 bp), T1: 17.07% (-6.8 bp);
  - Two commercial banks and four cooperative banks failed to meet the regulatory requirements on the minimum levels of capital ratios (accounting for 1.1% of the assets of the banking sector);
  - Four commercial banks and seventeen cooperative banks failed to meet the regulatory minimum requirement plus the combined buffer requirement (share in the assets of the banking sector: 5.5%). The total capital shortfall was PLN 3.2 billion. The other banks reported a capital surplus of PLN 52.8 billion above the regulatory minimum requirement plus the combined buffer requirement.
- In 2019, the Polish banking sector was characterised by a very good liquidity position. At the end of 2019, all banks complied with the mandatory LCR standard and the average value of LCR in the commercial banks sector was 156%.

[1] Portfolio A and portfolio B, including debt securities, by carrying amount.

2. Banking sector structure

At the end of 2019, there were 600 active banking sector entities.

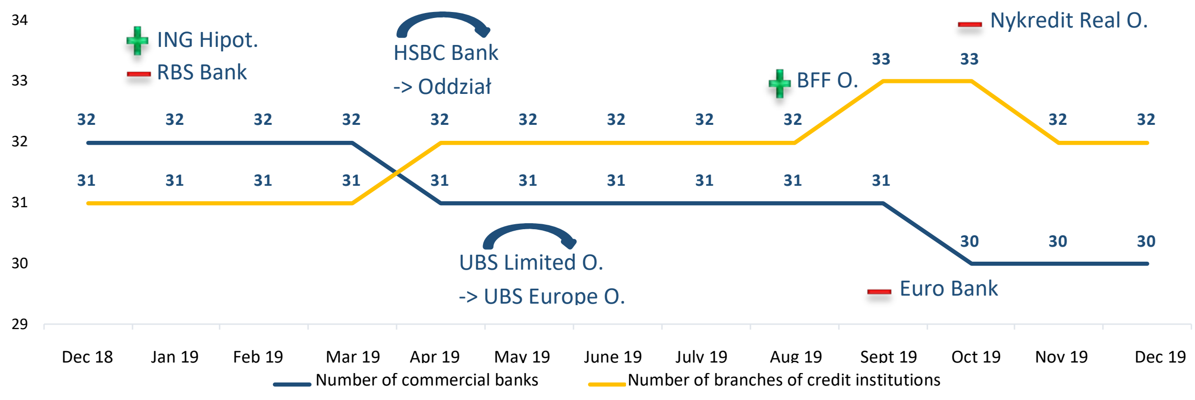
Table 1 Number of banking sector entities

Number of banking sector entities	2019 12	2018 12	Change
Commercial banks	30	32	-2
Branches of credit institutions	32	31	+1
Cooperative banks	538	549	-11

During the last year, no major changes occurred in the banking sector structure. However, a few transformations took place:

- Euro Bank was taken over by Bank Millennium,
- ING Hipoteczny started its operating activities,
- HSBC Bank Polska S.A. was transformed into HSBC France Oddział w Polsce (branch in Poland),
- RBS Bank Polska S.A. was transformed into a non-bank financial institution,
- BFF Oddział w Polsce started its operations,
- Nykredit Real Oddział w Polsce (branch in Poland) ceased its operations,
- UBS Limited Oddział w Polsce (branch in Poland) was transformed in UBS Europe Oddział w Polsce (branch in Poland).

Diagram 1 Change in the banking sector structure

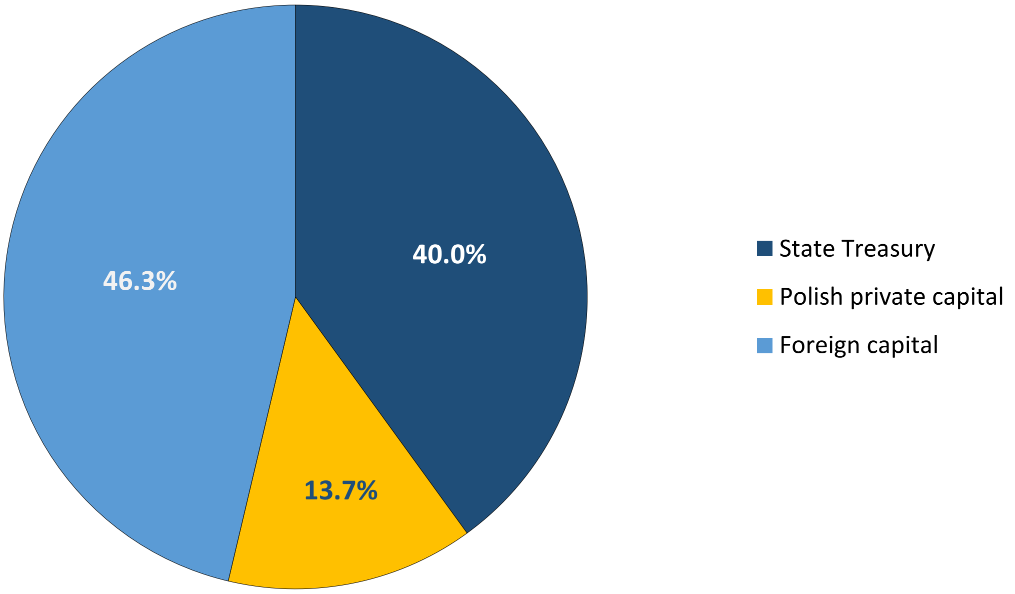


The changes did not have any material effect on the distribution of the origin of capital.

In terms of the origin of capital, the banking sector structure has not changed for more than 2 years.

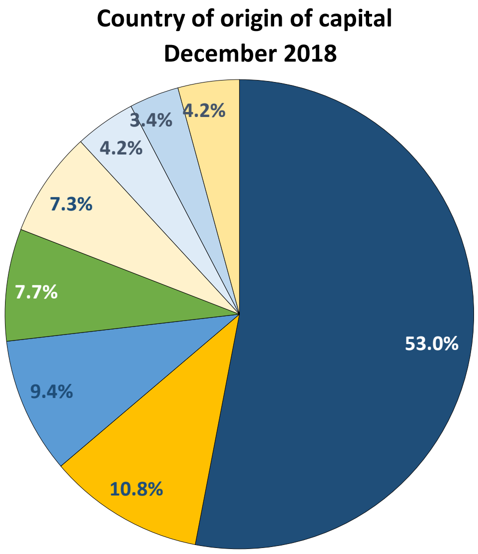
The Polish capital controls more than a half of the sector's assets: the State Treasury accounts for approx. 40% and private investors for approx. 14% of the assets.

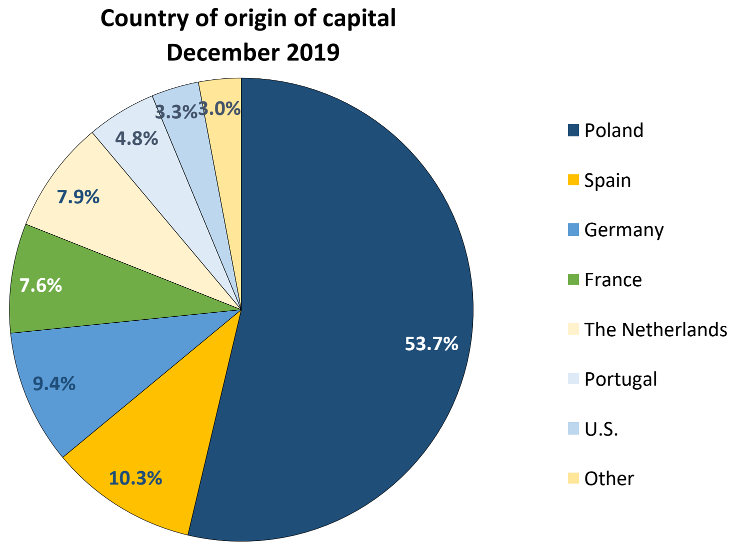
Diagram 2 Origin of capital (share in assets) – December 2019



For years, the major sources of capital from foreign investors have been Spain, Germany, France, and the Netherlands. The distribution of investors in various countries has not changed significantly. In 2019, there was a minor increase in the share of investors from Portugal (+0.6 p.p.) and the Netherlands (+0.6 p.p.).

Diagram 3 Country of origin of capital



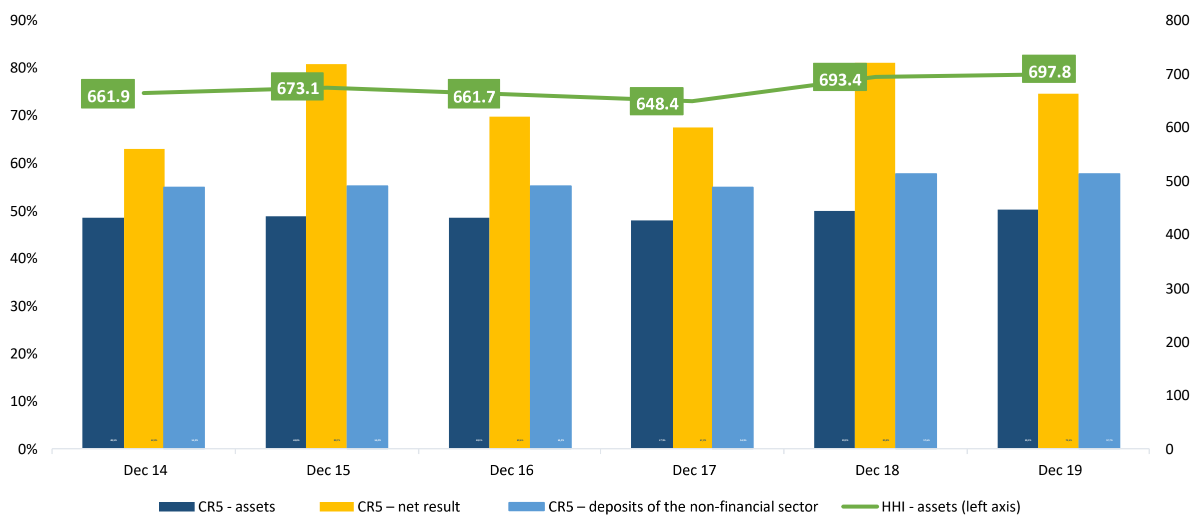


3. Concentration of the banking sector

In recent years, there has been a slight increase in the concentration of assets but the Polish banking sectors is still competitive, which is confirmed by HHI at 697.8.

In the last two years, there has been an increase in the concentration of the net result, driven by an increase in the share of loss-making banks in the sector's net result. The share of deposits of non-financial sector entities for the largest five banks has remained at a stable level of 55–58% for many years now.

Diagram 4 Concentration rates



HHI – The Herfindahl-Hirschman index (the sum of squares of banks' shares in the banking sector assets) is a measure of market concentration. The indicator takes into account not only the number of entities but also their relative size.
CR5 – indicators representing the market shares of 5 banks with the highest balance-sheet total, the highest net result and the highest amount of deposits of non-financial sector entities in the banking sector.

4. Results of the banking sector

Table 2 Selected items of the profit and loss account

Detailed list	Dec 14	Dec 15	Dec 16	Dec 17	Dec 18	Dec 19	YoY change
	(PLN million)						2019/2018
Total operating revenue	58 743.6	57 115.2	61 771.8	64 013.9	64 565.1	70 563.6	9.3%
interest income	37 157.3	35 377.1	38 024.1	42 618.9	44 820.3	49 171.1	9.7%
net fees & commissions income	13 788.7	13 316.7	12 591.8	13 764.3	12 306.1	13 337.7	8.4%
dividend income	1 168.8	1 362.7	1 308.3	1 168.5	1 505.7	2 129.5	41.4%
other	6 628.7	7 058.6	9 847.7	6 462.2	5 933.0	5 925.3	-0.1%
Operating expenses and depreciation	27 198.2	30 665.1	31 662.8	33 061.4	33 460.8	34 790.8	4.0%
staff expenses	15 040.6	15 207.6	15 727.2	16 643.2	16 991.0	17 743.1	4.4%
other administrative expenses	12 157.6	15 457.5	15 935.5	16 418.2	16 469.8	17 047.7	3.5%
depreciation	2 726.8	2 854.3	2 912.6	2 948.8	2 905.1	4 434.8	52.7%
Provisions	715.0	1 046.8	1 133.5	728.4	628.9	2 181.7	246.9%
Impairment	8 071.9	8 423.4	7 977.9	8 860.3	9 430.5	9 284.3	-1.6%
PROFIT OR (-) LOSS FOR THE YEAR	**15 877.0**	**11 189.2**	**13 897.7**	**13 686.6**	**13 046.2**	**14 225.9**	**9.0%**
commercial banks	14 932.2	12 056.0	12 982.6	12 652.3	12 215.5	13 623.9	11.5%
cooperative banks	761.0	-1 184.0	580.4	629.0	638.0	637.6	-0.1%
branches of credit institutions	183.7	317.2	334.6	405.3	192.8	-35.6	-118.4%

The net financial result of 2019 amounted to PLN 14 225,9 million and was higher by PLN 1 179.7 million (or 9.0%) than in 2018. In terms of sub-sectors, higher results were reported by commercial banks (a YoY increase of 11.5%, i.e. PLN 1 408.4 million). Whereas both cooperative banks and branches of credit institutions reported a decrease in the results compared to the previous year: by PLN 0.4 million (-0,1%) at cooperative banks, and by PLN 228.3 million (-118.4%) at branches of credit institutions.

The increase in the financial result in 2019 was caused by an increase in total operating revenue (by 9.3% YoY, i.e. by PLN 5 998.5 million), including – with the highest growth rate – dividend income (by 41.4%, i.e. by PLN 623.8 million) and – with the highest increment in value –interest income (by 9.7%, i.e. by PLN 4 350.8 million). In terms of cots, the major increase occurred in provisions (an increase of 246.9% YoY, i.e. by PLN 1 552.9 million).

Diagram 5 Net financial result of the banking sector (in PLN billion)

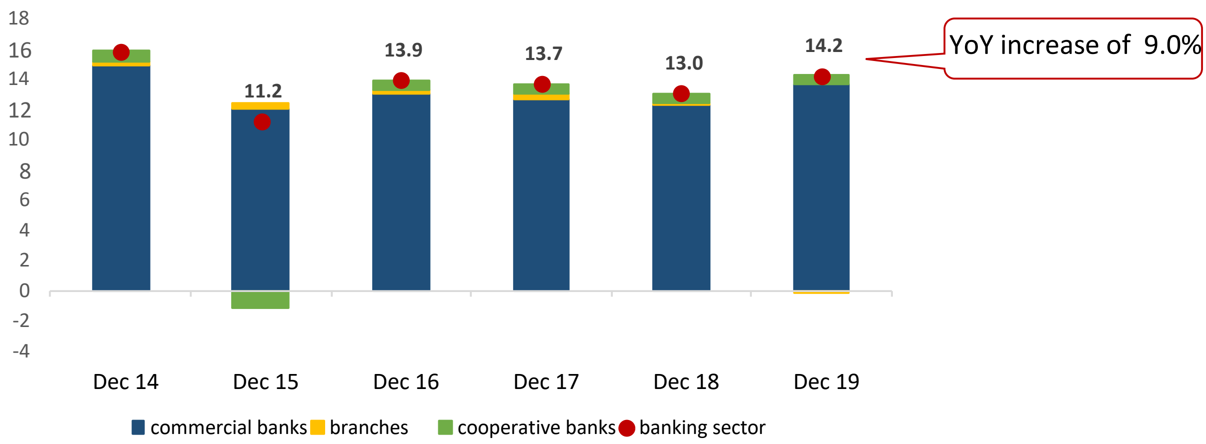


Table 3 Selected items of costs

Selected items of Administrative expenses	Dec 14	Dec 15	Dec 16	Dec 17	Dec 18	Dec 19	YoY change
	(PLN million)						2019/2018
Staff expenses	15 040.6	15 207.6	15 727.2	16 643.2	16 991.0	17 743.1	4.4%
BGF	1 164.8	4 243.3	2 396.7	2 102.9	2 116.1	2 737.8	29.4%
Banking tax	-	-	3 198.0	3 630.7	3 616.9	4 025.0	11.3%
Other administrative expenses	2 481.0	2 837.9	5 462.1	5 942.6	2 241.4	2 599.8	16.0%
IT costs	1 625.1	1 704.7	1 782.5	1 981.4	1 977.9	2 269.5	14.7%
External services - other	2 081.9	2 008.6	1 903.2	1 952.4	1 962.2	2 017.6	2.8%
Marketing	1 210.5	1 173.0	1 032.2	1 058.2	1 249.7	1 289.6	3.2%
Rent	2 848.5	2 758.4	2 639.6	2 625.6	2 459.8	1 257.6	-48.9%
External services – under the Banking Law	745.7	731.6	719.4	755.1	834.2	820.3	-1.7%

The largest share in banks' costs is represented by staff expenses, which in 2019 increased by 4.4% (or PLN 752.0 million). The greatest rate of change was reported for the fees paid for the Bank Guarantee Fund (an increase of 29.4 % YoY, or PLN 621.7 million). The costs decreased in the 'Rent' category: by 48.9% YoY, or PLN 1 202.1 million.

Diagram 6 Banking sector: net financial result at the end of the reporting period (in PLN million)

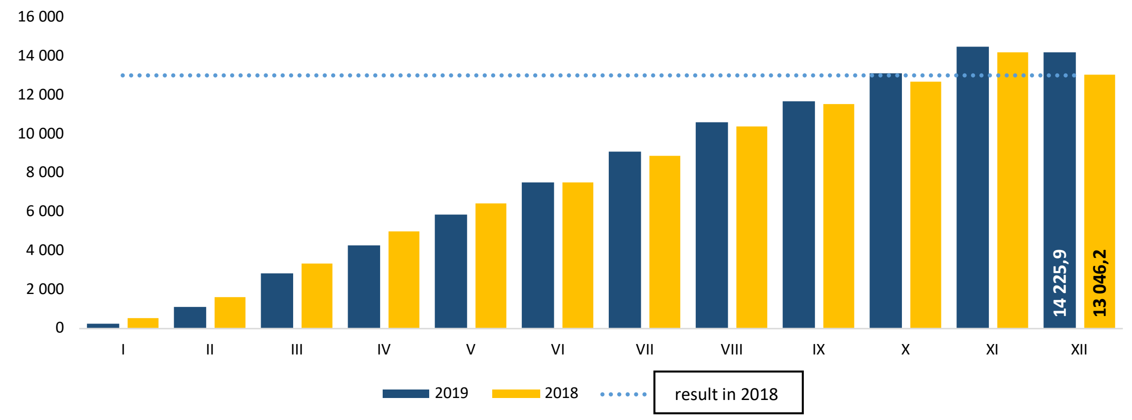


Diagram 7 Banking sector: components of the financial result (in PLN million); December 2019

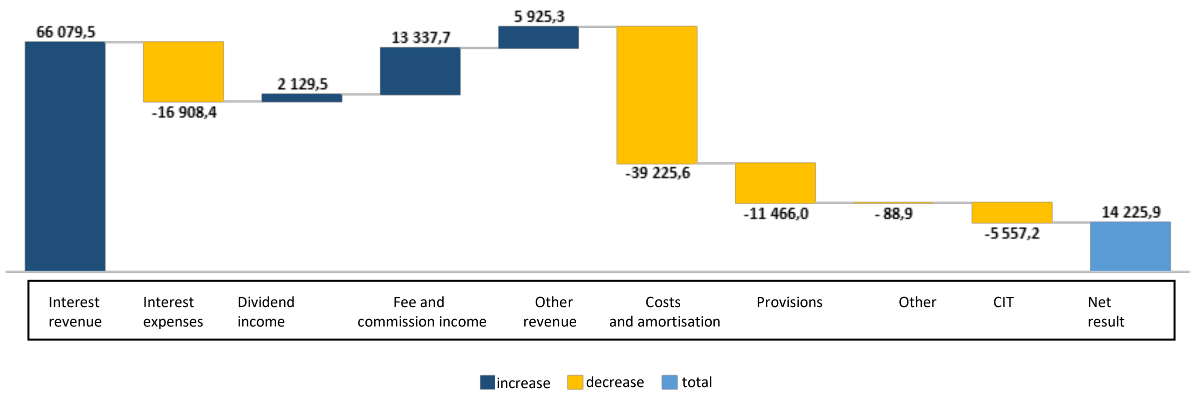
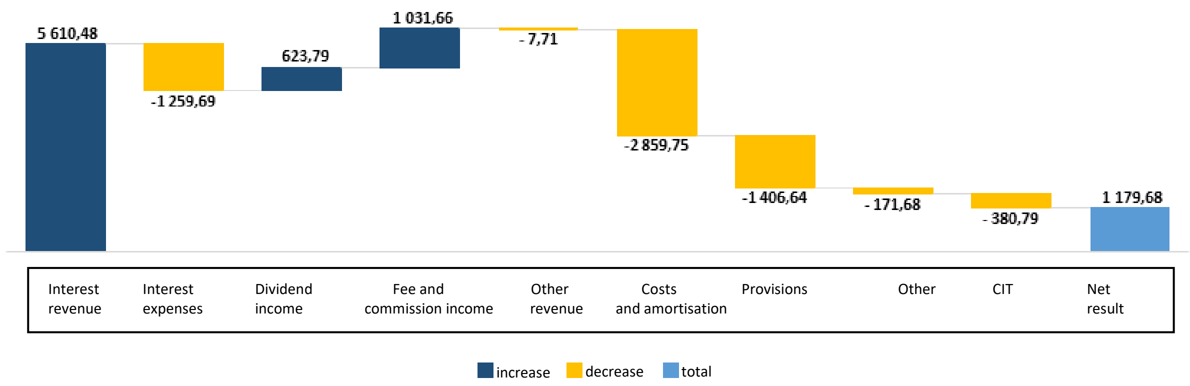


Diagram 8 Banking sector: YoY change of the result (in PLN million); December 2019



4.1 Investments in IT infrastructure

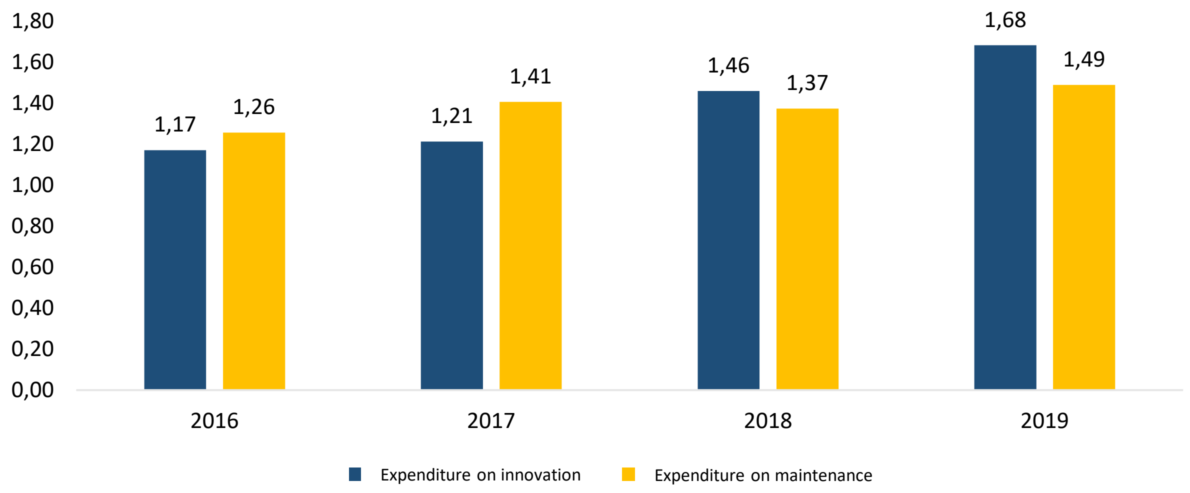
The number of individuals using electronic access channels on a daily basis has increased significantly in recent years, which requires banks to invest more in the IT infrastructure. With the development of technology and the constant pressure to reduce costs (including staff expenses and costs of rental of commercial space), it has become necessary to provide customers with an easier and more intuitive 24/7 access to online banking. This has been generally seen as a key factor in obtaining comparative advantage.

The main purpose of innovation at banks is to reduce costs. Among other objectives, banks indicate the use of new technologies to increase revenue and improve the 'client experience'. The preferences and expectations of the next generation of consumers (so called Customer 4.0), are particularly important in the new digital economy and thus the client experience becomes one of the key elements of competition in the market.

The PFSA, in cooperation with the National Bank of Poland and the largest commercial banks, carried out a study at the end of 2019 on the related changes that have taken place in the banking sector in recent years.

The study has shown that in recent years banks have significantly increased their IT expenses. At the end of 2018 and 2019, the YoY change was +8.2% and +11.9%, respectively. For comparison, the overall costs of general management increased by 0.3% and 3.5% in similar periods.

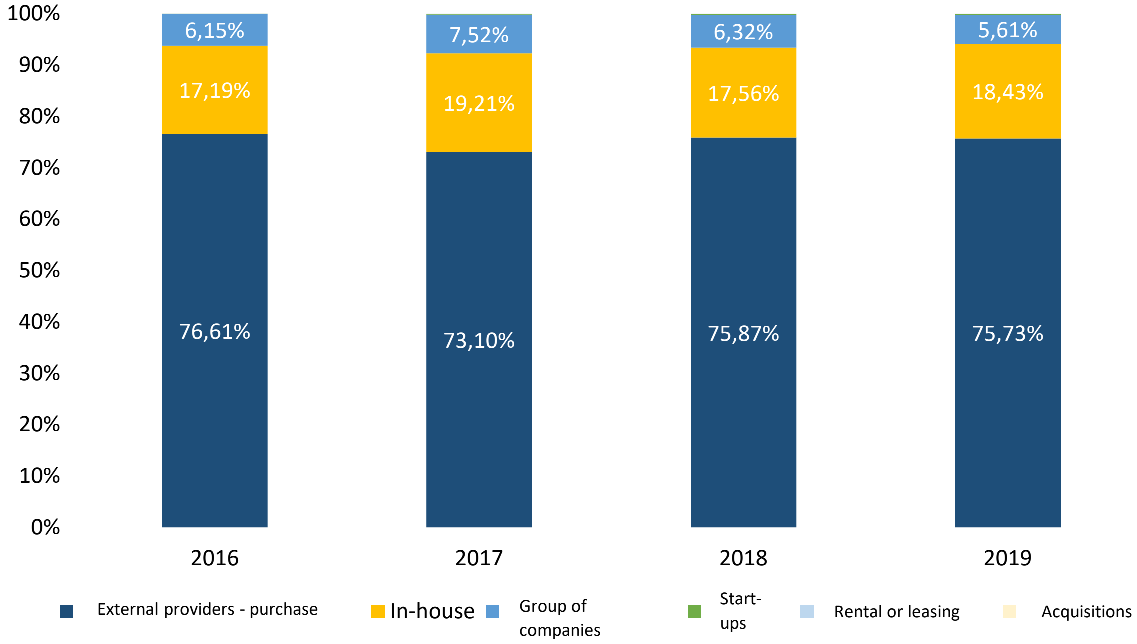
Diagram 9 Investments in IT development and infrastructure maintenance (in PLN b)



Please note the increased relation of investments in IT development to the expenses for the maintenance of the existing infrastructure. In 2016, the average relation of investments in innovation to the IT infrastructure maintenance costs at the banks surveyed was 93%. The IT expenses increased much faster than the infrastructure maintenance costs: in 2018 the relation was 106%, and in 2019 it was approx. 113%.

The structure of investments in the development of IT systems and ICT innovation by method of obtaining the innovative solution is dominated by the purchase of third-party products and/or services from outside the group. Another channel used by banks in this regard is the use of own (in-house) resources. Cooperation with start-ups and acquisitions of providers of innovative solutions are marginal.

Diagram 10 Cost structure of investment in innovation

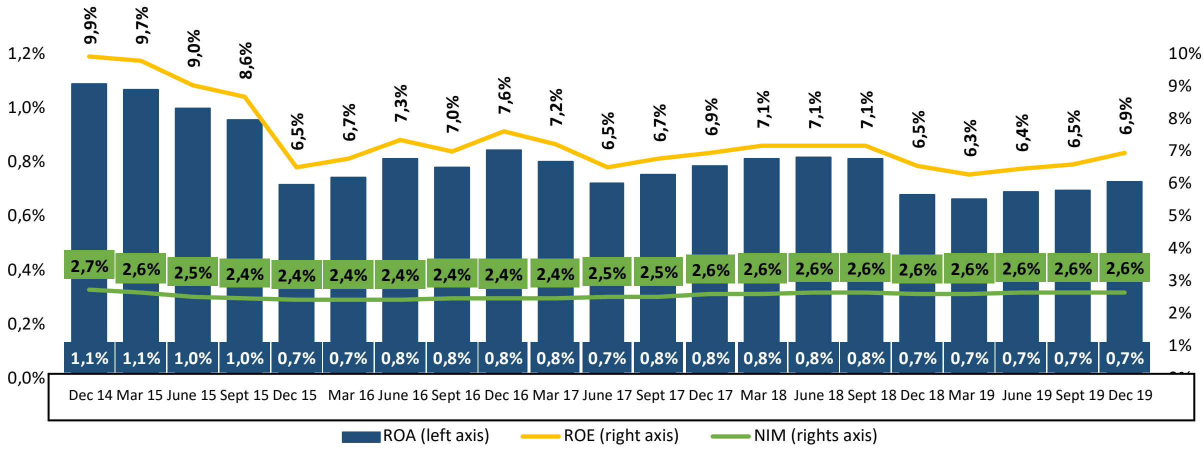


Bank representatives emphasise that the restrictions in this respect result from regulatory issues: a take-over of an innovative entity by a bank may result in many regulatory requirements being imposed on that entity (for example AML requirements). At the same time, since many innovative companies are offering their services using a public cloud, cooperation between banks and such companies requires compliance with appropriate requirements indicated by the supervisory authority in the field of outsourcing of cloud services to ensure an appropriate level of security. By its Communication of 23 January 2020 on information processing by supervised entities using public or hybrid cloud computing services, the Polish Financial Supervision Authority updated its approach to that matter.

5. Viability of the banking sector

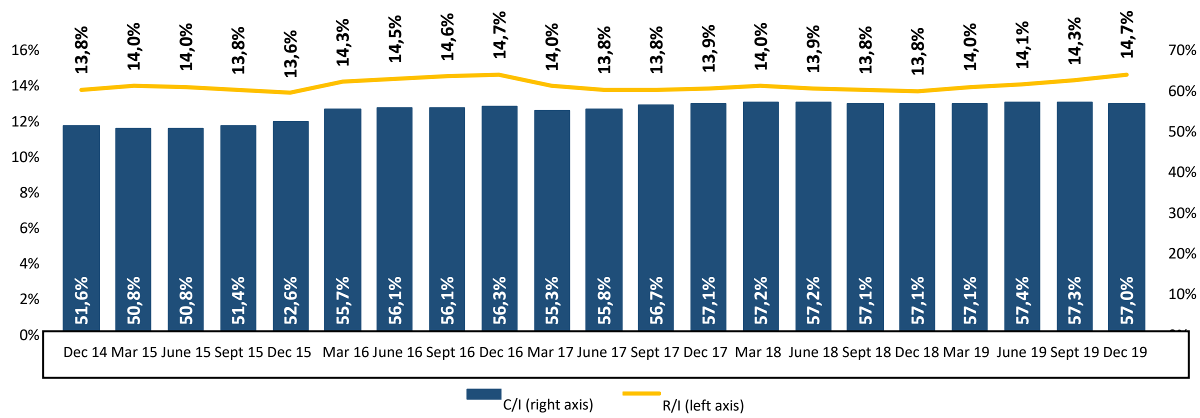
The efficiency of the sector – expressed by ROE – increased by 0.4 p.p. as compared to the end of 2018. The continuing 2019 ROE below 7% resulted from, on one hand, charges on the net result due to provisions for legal risk associated with mortgage loans in CHF and the reimbursement of commissions collected on consumer loans repaid before contractual deadlines, and, on the other hand, an increase in capital. The cost to operating income ratio in 2019 was similar (57.0%) as in 2018 (57.1%). However, the provisions and write-downs to income ratio increased by approx. 0.8 p.p. YoY.

Diagram 11 Efficiency ratios* in the banking sector (in %)



*/ ROA and ROE ratios: the relations between the financial result achieved over the last 12 months to average assets and average capital, respectively, in the same period.
ROE refers to the aggregate of commercial and cooperative banking sector (excluding branches of credit institutions), and ROA refers to the entire banking sector.
NIM (net interest margin): the relation between net interest income over the last 12 months to average interest assets in the same period.

Diagram 12 Cost to income (C/I) and provisions and write-offs to income (R/I) (in %)**



**/ C/I ratio: the relation between costs (operating costs + depreciation of fixed assets and intangible assets) to income (total net operating income); moving average of 12 months.
R/I ratio: the relation between write-offs and provisions (provisions + impairment or reversal impairment) to income (total operating income, net); moving average of 12 months.

The average ROE in the banking sector in 2019 was also affected by losses of certain commercial banks. The highest ROE was reported mostly by large universal banks.

5.1. Determinants of banks' viability

When assessing the viability of the banking sector, it is necessary to refer to the following matters:

- the financial support provided to banks by the public sector in EU countries since 2008;

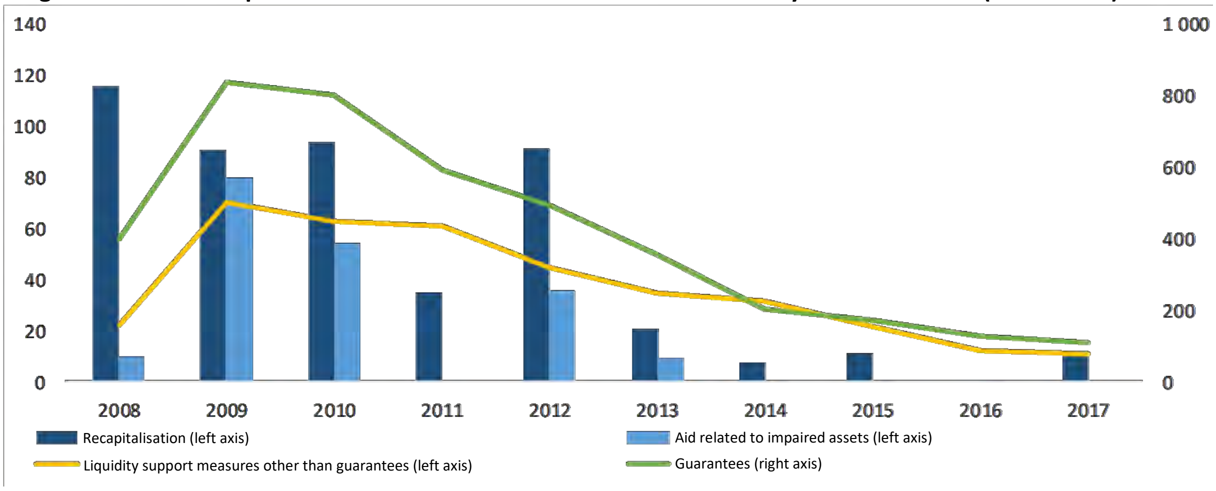
- the regulatory changes introduced after the financial crisis to strengthen the security of the banking sector;
- the differences in approaches to calculating the amount of risk-weighted exposures applied in Poland and EU countries;
- the stability of efficiency ratios in the long term.

An in-depth analysis of determinants of the viability of the banking sector in Poland in the years 1996–2018 has identified the main determinants to be: the economic cycle, the viability of each bank in the previous period, the development of the lending activity, the size of banks as well as their capital position and external costs.

5.1.1. State aid for financial institutions in the EU

According to the European Central Bank, ROE for the banking sector in Poland in 2018 reached 7.01%, approx. 1.1 p.p. below the average for EU countries. When comparing the viability of the Polish sector with the other EU countries, one should consider the significant amounts of State aid provided to banks in those countries since 2008 (Diagram 13). The total amount actually used for bank recapitalisation in the EU in the years 2008–2017 was EUR 475.9 billion, and the aid related to impaired assets[2] was EUR 189.2 billion. The state also provided guarantees and other means to banks to support liquidity.

Diagram 13 State aid provided to financial institutions in the EU in the years 2008–2017 (EUR billion)



Source: https://ec.europa.eu/competition/state_aid/scoreboard/#crisis

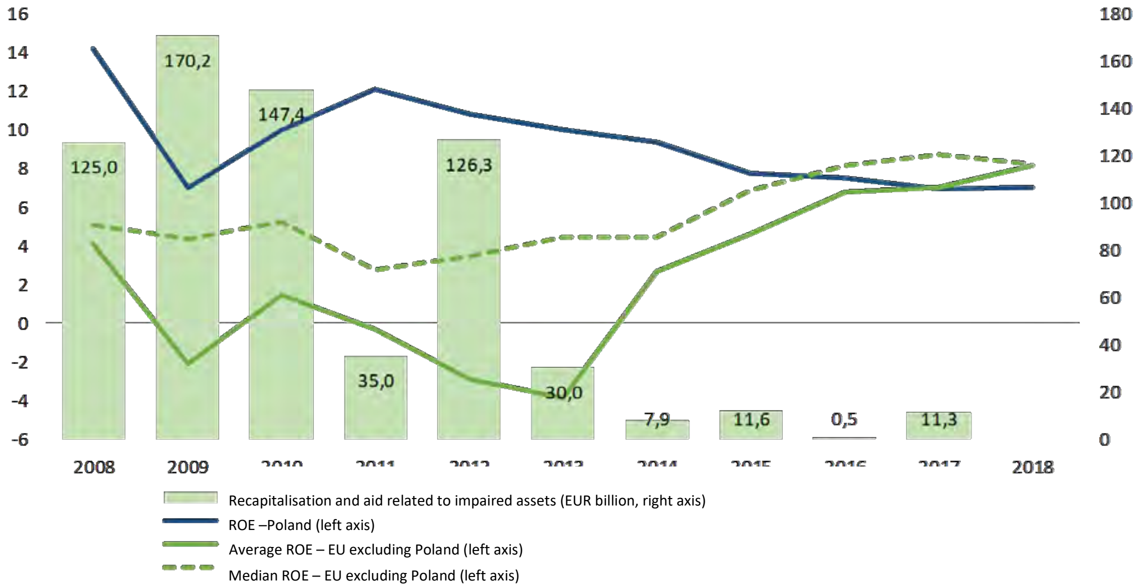
The financial support provided to the banking sector by the state affects the return on equity in two opposite directions: recapitalisation increases the denominator of the ROE ratio directly and increases the result (i.e. the numerator of the ratio), since the bank does not need to sell good assets, or it may develop the profitable business in the long term. The State aid

[2] E.g. purchase of asset, insurance of assets, asset swap.

was provided to banks with a high negative ROE, in many cases it protected them against failure and helped them restore viability.

Diagram 14 shows the values of ROE for Poland and the average value for other EU countries compared to the amounts of recapitalisation and the support related to impaired assets for the banking sector in the EU.

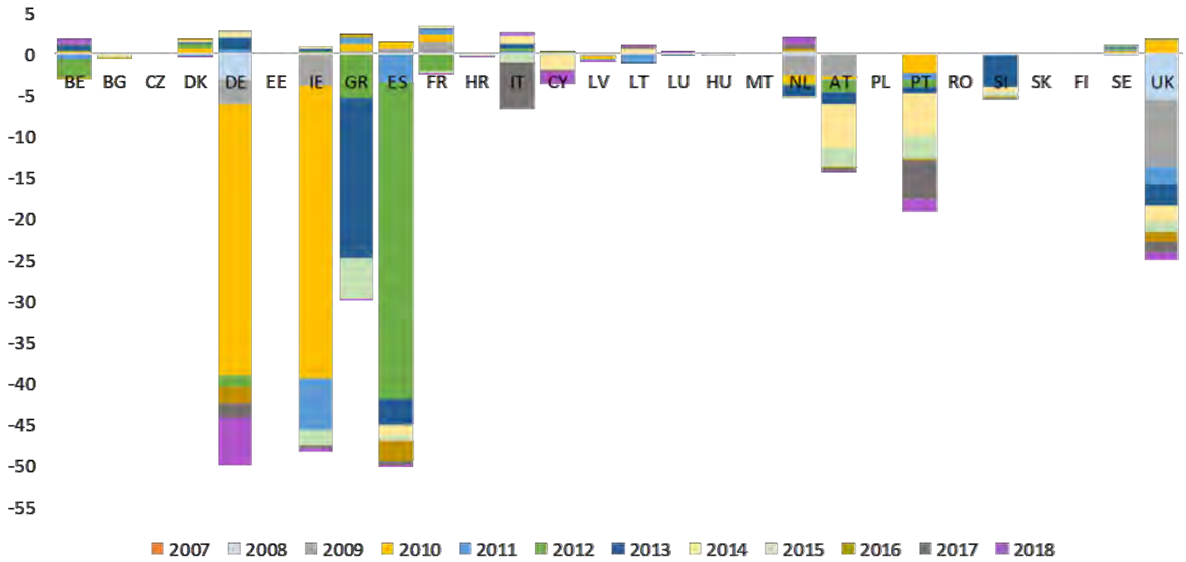
Diagram 14 ROE for Poland and the EU in 2008–2017 (%) and State aid provided to financial institutions in EU countries in 2008–2017 (in EUR billion)



Source: https://ec.europa.eu/competition/state_aid/scoreboard/#crisis and ECB Statistical Data Warehouse.

The highest costs of public intervention in the banking sector were noted in Spain, Ireland, Germany, Greece, United Kingdom, Portugal, and Austria (in total 94% of aid expenditure in the whole UE). The costs are shown in Diagram 15.

Diagram 15 The cost of State aid provided to financial institutions in EU countries in the years 2007–2018 (in EUR billion)



Source: https://ec.europa.eu/eurostat/web/government-finance-statistics/excessive-deficit/supplemtary-tables-financial-crisis

The existence of costs for the public finance sector means that taxpayers in EU countries have provided financial support to financial institutions. The problems of those institutions resulted from, for example, taking excessive risk or an overly optimistic assessment of that risk. The Polish banking sector did not require State intervention so public finances were not charged with any additional cost. The State provided to the banking sector in the EU was repaid only to a small extent.

Many EU countries introduced a banking tax on balance-sheet amounts. The purposes of such form of contribution include the fiscal purpose and the purpose to improve the state's financial stability and to raise funds to cover the past or any future expenses paid to repair the financial sector. The banking tax was introduced in the countries in which financial institutions receive State aid (Austria, Belgium, Cyprus, France, the Netherlands, Latvia, Germany, Portugal, Slovenia, Sweden, and United Kingdom) and in the countries in which no State aid was granted for the restructuring of the banking sector during the financial crisis (Finland, Poland, Romania, Slovakia, and Hungary). In most countries, the banking tax is paid directly to the State budget. The exceptions are Germany and Sweden, where the tax is paid to special restructuring funds/orderly liquidation of banks.

5.1.2. Regulations and efficiency of the Polish banking sector

The efficiency of the Polish banking sector measured at Return on Equity is shown in Diagram 16. According to the reporting data, in the years 2014–2015 the viability of the banking sector measured at ROE (defined as the sector's net result in the last 12 months divided by the average level of capital in the last 12 months) decreased from approx. 10% to approx. 7%. Since 2016, the viability of the sector has remained at a relatively steady level of approx. 7%. ROE decreased prior to the introduction of the banking tax (February 2016).

Following the entry into force of the CRR/CRD IV package, European banks were required to meet more stringent regulatory requirements (the green arrow on Diagram 16), which indirectly led to an increase in capital based on which the viability is calculated. The changes consisted in the definition of regulatory capital, which was narrowed to the capital actually capable of absorbing losses. The mandatory level of top quality capital (Common Equity Tier I) was set to 4.5% of risk-weighted assets. The required level of Tier I Capital Ratio is 6% and the Total Capital Ratio is 8%.[3] Banks were also required to cover the following additional buffers with the highest quality capital[4]:

- the capital conservation buffer – of 2.5% (introduced gradually between 1 January 2016 and 1 January 2019, when it reached its target value);
- the countercyclical capital buffer – between 0 and 2.5%;
- the systemic risk buffer – between 1 and 5% of the value of risk-weighted assets.

Moreover, additional capital buffers were introduced for systemically important institutions:

- for global systematically important institutions (G-SIIs) – between 1.0% and 3.5%;
- for other systematically important institutions (O-SIIs) – between 0.0% and 2.0%.

In consequence, commercial banks in Poland were required to maintained[5]:

- a Total Capital Ratio (TCR) of: 8% + add-on + combined buffer requirement;
- a Tier I (T1) capital ratio of: 6% + 75%*add-on + combined buffer requirement;
- a Common Equity Tier I (CET1) capital of: 4.5% + 56%*add-on + combined buffer requirement;
- additionally, banks whose parent undertakings were institutions identified as global systemically important institutions must satisfy the requirement for own funds and eligible liabilities (the TLAC requirement) of 18% of risk-weighted assets, and in accordance with Article 494 of CRR, until 31 December 2021 there will be running the transition period in which that requirement is 16% of risk-weighted assets[6].

The combined buffer requirement applicable for the Polish banking sector since early 2019 represented, at the end of 2019, the sum of the following buffers:

- the capital conservation buffer of 2.5%;

[3] Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012.

[4] Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC.

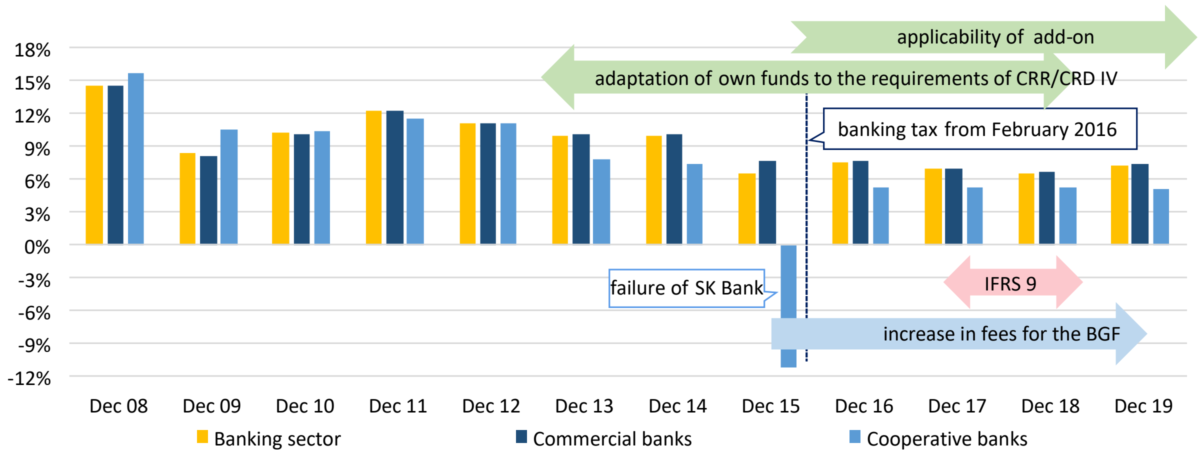
[5] Starting from 2018, banks should maintain the minimum values of capital ratios at the Pillar 1 regulatory level under Article 92 of Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (OJ EU 2013, No 176, p. 1, as amended, hereinafter: 'CRR') and Pillar II (*add-on*) under Article 138(1) point 2a of the Banking Law (consolidated text: Polish Journal of Laws 2017, item 1876) and the combined buffer requirement set out in the Act of 5 August 2015 on macroprudential supervision of the financial system and crisis management in the financial system (consolidated text: Journal of Laws 2017, item 1934).

[6] In accordance with Article 97(1) and Article 98(1) of the Act of 10 June 2016 on the Bank Guarantee Fund, the deposit guarantee scheme and compulsory restructuring (Journal of Laws 2016, item 996).

- the countercyclical capital buffer of 0%;
- the O-SII buffer – defined by way of decision of the KNF based on the relevant uniform methodology;
- the systemic risk buffer of 3% on exposures located in the territory of Poland;
- the institution-specific countercyclical capital buffer (however, the level of the buffer is low).

At the same time, in addition to the gradual increase of capitals, forced by regulations and reducing the ROE, in January 2018 a new accounting standard (IFRS 9) was introduced, which resulted in a sharp decrease of capitals for banks applying the IFRS (the opening balance as at 1 January 2018). In addition, due to a risk that was generated after the release of the CHF/EUR exchange rate[7] by the Swiss National Bank in January 2015 for banks holding credit portfolios in CHF, the KNF Board estimated the individual risk arising from those portfolios uncovered under Pillar 1 and imposed an add-on on banks with larger exposures[8]. Moreover, as recommended by the Financial Stability Committee (FSC), the risk weight for those portfolios was increased (up to 150%)[9] and the methodology for calculating the additional capital requirement was extended to include the supplementary amount on account of legal risk and concentration risk.

Diagram 16 ROE by sub-sector



Assuming the hypothetical situation No 1 – lack of foreign currency housing loans for households at commercial banks – banks would not be required to maintain the additional capital under Pillar II and could apply a lower risk weight (35% instead of: 150% in the part related to the portfolio of foreign currency housing loans since 2017, 100% between 2011 and 2017, and 75% between 2008 and 2011) to calculate the amount of exposure to the risk of the

[7] On 6 September 2011, the Swiss National Bank decided to partially fix the rate of exchange of the euro for the Swiss franc, making clear that the maximum exchange rate for those currencies must not be less than 1.2. On 15 January 2015 that decision was declared invalid due to the significant weakening of the euro in relation to the US dollar, which in turn translated into weaker Swiss franc in relation to dollar.

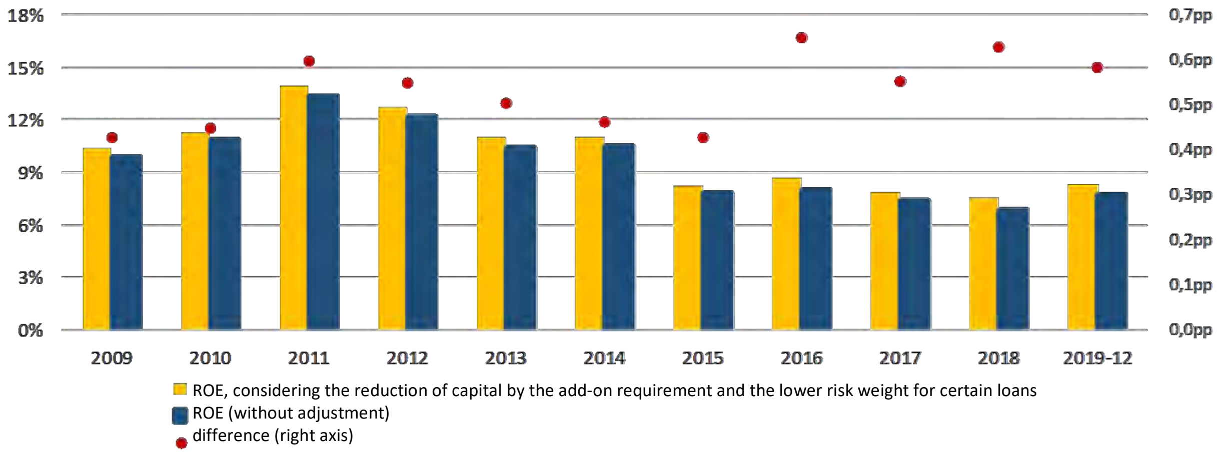
[8] The additional capital requirement for covering the risk related to foreign currency credit imposed under Pillar II.

[9] Regulation of the Minister of Development and Finance of 25 May 2017 on higher risk weight for exposures secured with mortgages on real estate (Journal of Laws 2017, item 1068).

housing loans granted. The influence of so defined hypothetical situation on the viability of banks expressed as ROE is shown in Diagram 17. The level of that rate would higher by 0.53 p.p. on average.

The prudential measures of the KNF Board and the FSC allowed for the creation of appropriate capital positively affecting the security of both banks and the banking sector in terms of their risk and any costs related to that portfolio. Another feature of a strong capital base is the capacity to raise funding at a reasonable cost and a good image of the sector perceived by external entities.

Diagram 17 Estimated ROE of commercial banks in the case of a lack of foreign currency housing loans



The biggest impact on the reduced value of the numerator in ROE came from the increase in banks' operating costs, including mainly the employee costs and the increase in the costs on account of contributions to the Bank Guarantee Fund after 2015, after the failure of SK Bank, one of the major cooperative banks in the Polish banking sectors, and several credit unions. The reduction of the financial result was also caused by the new tax imposed on certain financial institutions.

Assuming the hypothetical situation No 2 – the failure by commercial banks to pay the banking tax[10] (Diagram 18) – one can notice a level of ROE higher than in the current situation (the average difference is 0.93 p.p. – the biggest difference in December 2016 was 0.96 p.p., the smallest in December 2018 was 0.89 p.p.). In 2019, the banking tax caused a reduction in the numerator in ROE, reducing the level of ROE by 0.93 p.p.

[10] Act of 15 January 2016 on tax on certain financial institutions (Journal of Laws 2019, item 1836).

Diagram 18 ROE of commercial banks in the case of a lack of banking tax

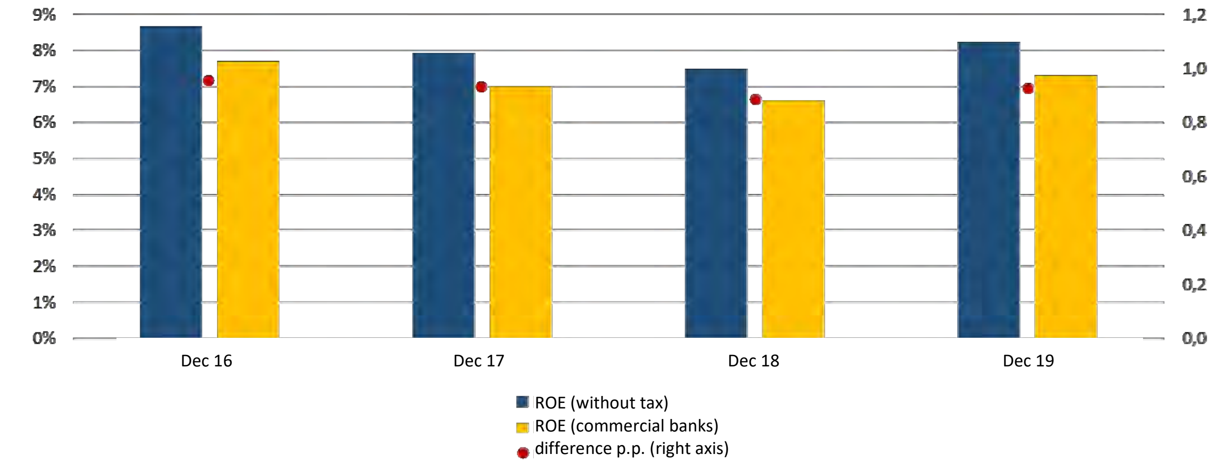
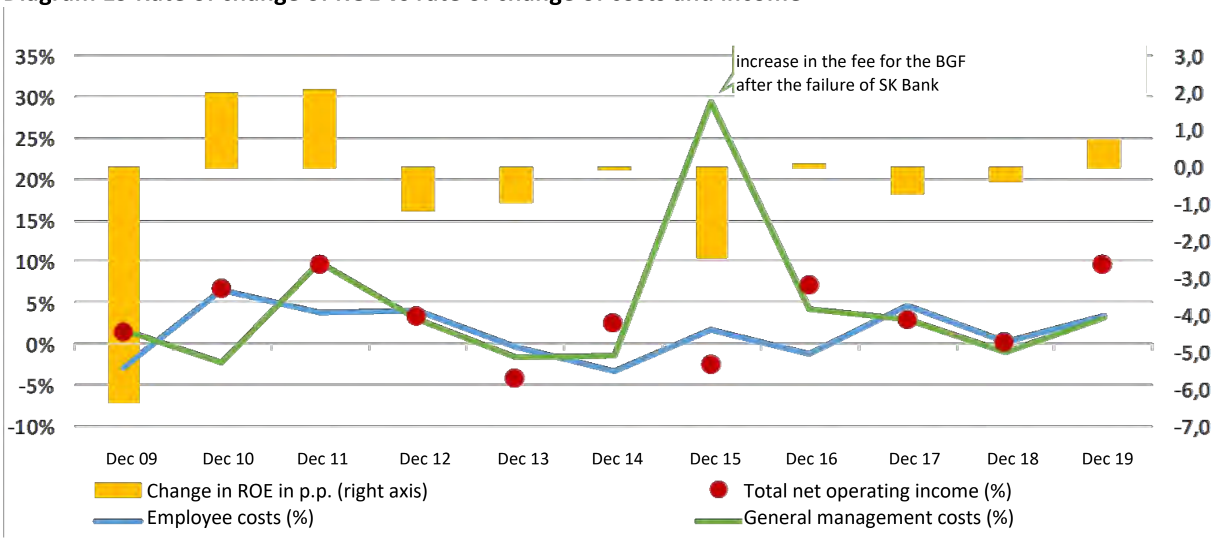


Diagram 19 shows the rate of change of ROE of commercial banks in relation to the rate of change of the operating expenses borne by that sub-sector and its total net operating income. The main components of costs in the Polish banking sector are employee costs and general management costs. In 2009-2019, employee costs were characterised by a Compound Annual Growth Rate (CAGR) of 1.3% (the YoY change from -3,3% in 2009 to 6.5% in 2010) despite the tendency for reducing the number of branches, which results from increased salaries, e.g. of highly qualified specialists. The general management costs rose faster than the staff expenses, at an average annual CAGR rate of 3.7% (the YoY change from -2.3% in 2010 to 29.4% in 2015 – an increase in contributions to the BGF after the failure of SK Bank).

Diagram 19 Rate of change of ROE vs rate of change of costs and income

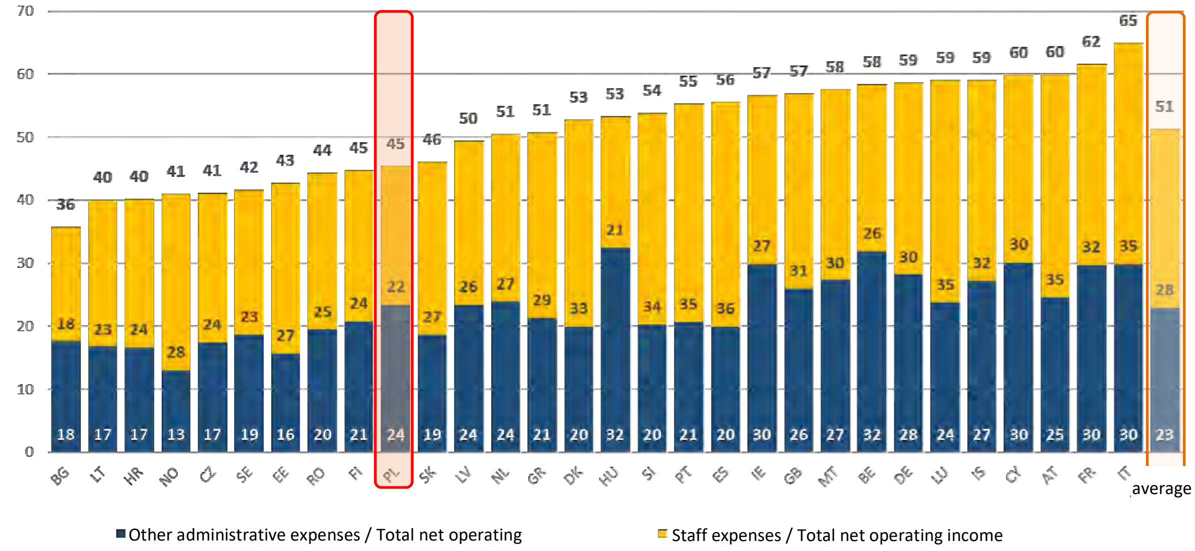


Despite the reported increase in the costs of commercial banks, the average administrative expenses to net operating income ratio for banks in the Polish banking sector is lower than the average ratio for European countries (Diagram 20).

The low cost to operating income ratio is typical of Nordic countries (Norway, Sweden, Finland), Baltic countries (Lithuania, Estonia) and Central Europe countries (Bulgaria, Croatia, Czech Republic, Romania, Poland, Slovakia).

The high administrative cost to operating income ratio occurs in Italy, France, Austria, Cyprus, Ireland, Spain, Luxembourg, Belgium, Germany, Malta, and United Kingdom.
The share of general management costs in the total net operating income in Poland is similar to the average share in European countries. The general management costs include e.g. payments to the Bank Guarantee Fund and the banking tax.
The employee cost to total net operating income ratio in Poland is much lower than the average ratio in European countries. Ratios lower than the ratio in Poland occur only in Bulgaria and Hungary.

Diagram 20 Share of administrative costs and their components in the total net operating income in 2018 (%)[11]



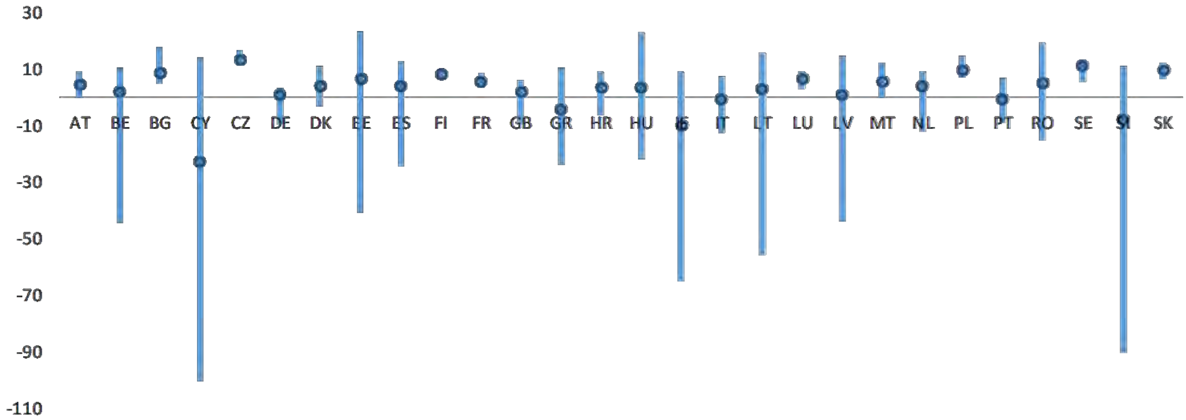
Source: EBA

5.1.3. Stability of ROE

In the years 2008–2018, the Polish banking sector was characterised by a relatively stable rate of return on equity, in contrast to most banking sectors in EU countries. Diagram 21 shows the average ROE for EU countries and the changes of that rate during the period under assessment.

[11] Data for major European banking groups on a consolidated basis.

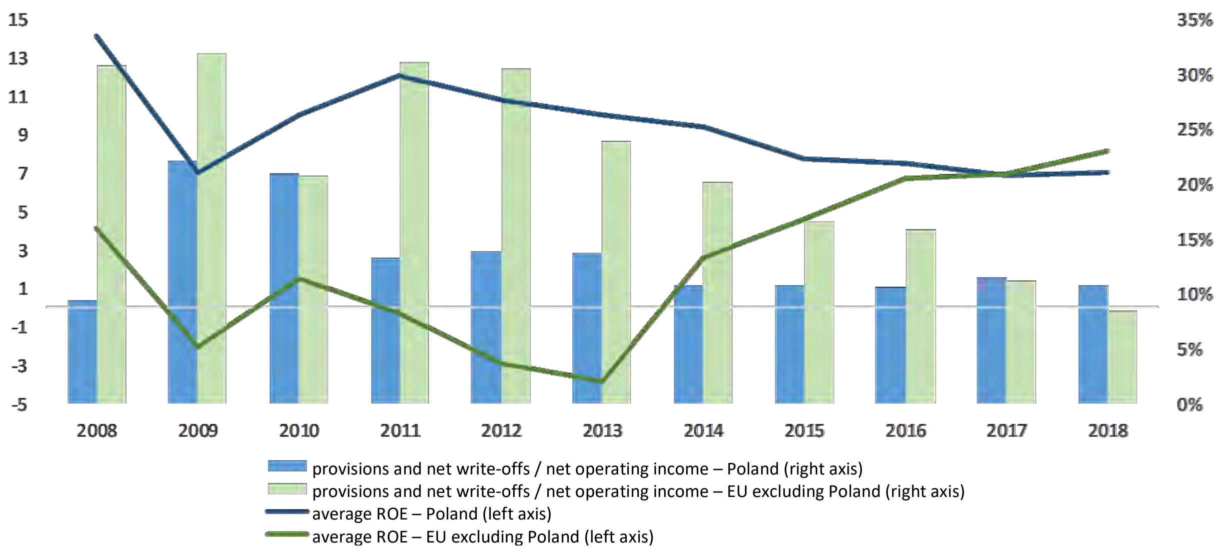
Diagram 21 Average ROE, the minimum and maximum values for banking sectors in EU countries in the years 2008–2018 (%)



Source: ECB Statistical Data Warehouse

The data of the European Central Bank show that the return on equity for the Polish banking sector in 2018 was lower than the average value for EU countries. Looking into what caused such situation, consideration should be given to the level of provisions and net write-downs in relation to net operating income in the banking sector (Diagram 22). In Poland, in the years 2008–2018 the level of provisions and write-downs was more stable than the average level in the EU. The ratio of provisions and net write-downs to net operating income in the EU, historically much higher than in Poland, in 2017 for the first time reached a level lower than in the Polish banking sector. The low volatility of the amount of write-downs may be a sign of a stable credit policy and higher resistance of the Polish banking sector to the fluctuations caused by the economic cycle.

Diagram 22 Average ROE and net write-downs as a share in the net operating income for the banking sector in Poland and the average rate for EU countries (excluding Poland) in the years 2008–2018

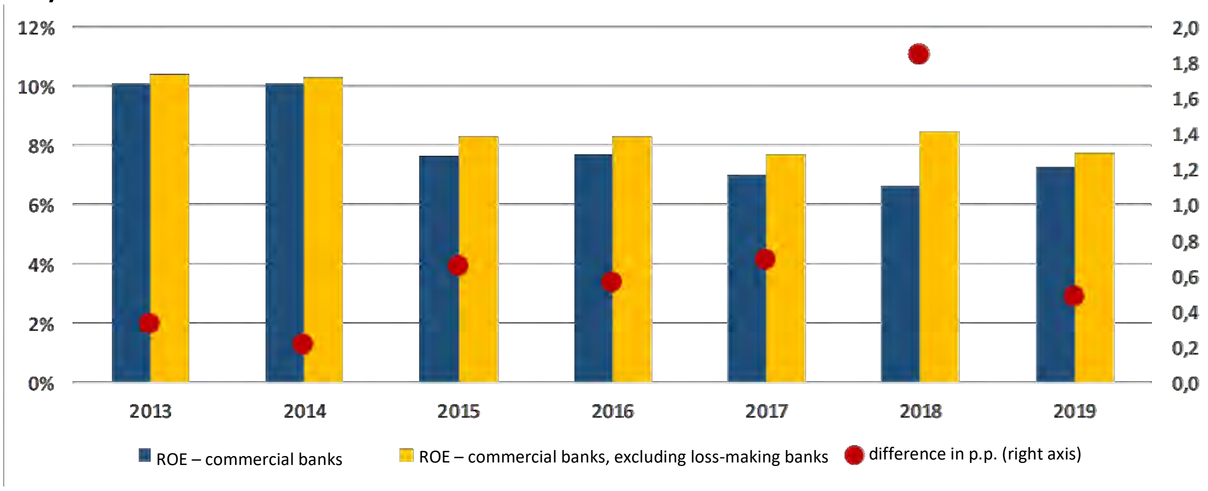


Source: ECB Statistical Data Warehouse

Long-term stability of return on equity is a desirable feature, as it reduces the investment risk. The analysis of the Polish banking sector in the years 1998–2018 has shown that the banks marked in a given year by the upper decile in terms of increase in ROE, in the next year reported an average increase in ROE that was 10 p.p. lower than the average increase in ROE in the entire sector. After two and three years, the increase in ROE was lower than the average increase in the sector by 4 p.p. and 2 p.p., respectively. The large average gap between the increases in ROE in the first year results from the losses incurred by individual financial institutions after a period of high profits, which should be associated with a policy of taking excessive risk followed by those institutions.

It should be noted that in 2018, that is in the year when the Polish banking sector achieved a return on equity below the average value in EU countries, six commercial banks in Poland incurred a record total loss of PLN 2.5 billion, which clearly reduced the average ROE for the banking sector in Poland (Diagram 23).

Diagram 23 Average ROE for all commercial banks and the banks which reached a positive financial result in the years 2013–2019 in Poland



A likelihood of a loss is an immanent feature of a business that involves risk taking. The losses incurred by banks in 2018 reduced the average ROE for the sector by more than 1.8 p.p., and in the years 2013–2017 and 2019 the loss-making banks reduced the ROE of the sector by 0.5 p.p. on average. One could simply conclude that an above-average loss incurred by some banks in 2018 led to a decrease in ROE of the Polish banking sector by 1.3 p.p. compared to the losses that could be considered typical of the years 2013–2017 and 2019.

5.1.4. Financial cycle and other determinants of return on equity

To identify the factors determining the viability of banks in Poland, an empirical study was conducted in relation to 83 commercial banks operating in the years 1996–2018. The panel included 876 annual observation units and was of an unbalanced nature. The model used the data from a financial reporting system and macroeconomic data from the resources available on the website of Statistics Poland (GUS).

The analysis of the results of the panel study allowed for the following conclusions:

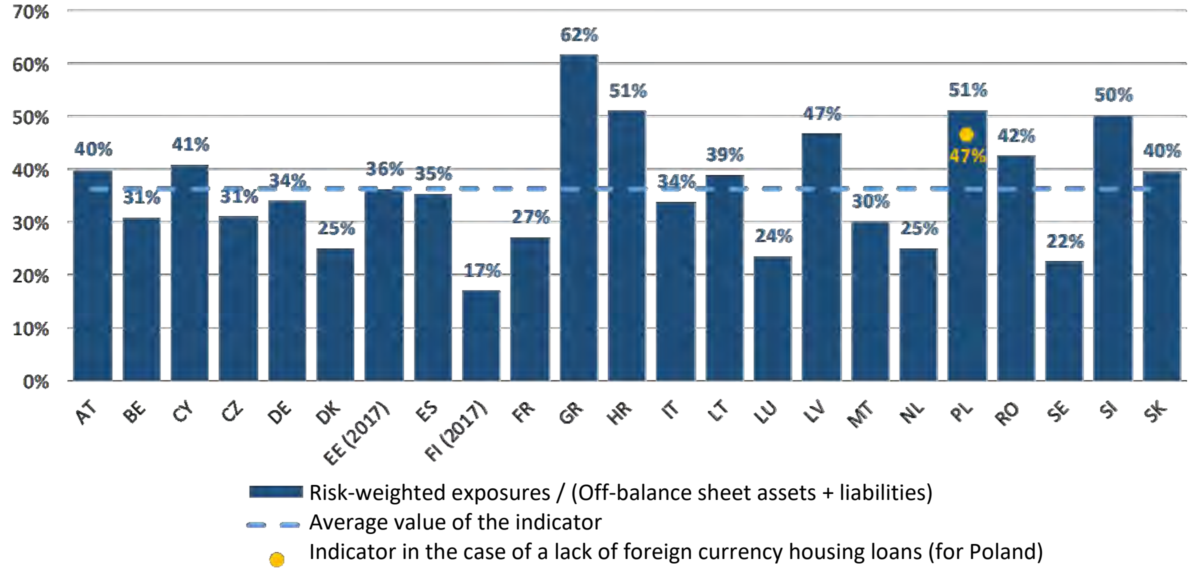
1. The viability of a bank from a previous period has a positive, statistically relevant influence on the bank's viability in a given period. Viability from earlier periods is statistically irrelevant.
2. Viability of banks depends on the economic cycle measured with changes in real GDP and inflation. The higher the GDP growth, the higher (statistically) the viability of a bank.
3. The annual change of the value of loans granted by a bank, in terms of real inflation, has a positive and statistically relevant influence on the bank's viability. The more loans the bank granted compared to the previous year, the higher (statistically) the viability of the bank.
4. The higher the value of assets of a bank, the higher (statistically) the viability of the bank.
5. The value of a bank's own funds in relation to assets has a positive effect on viability. The relation is non-intuitive. The more funds a bank receives, the higher the denominator of the ROE ratio, and the lower the value of the ratio. The negative relation between the value of own funds and the assets and the ROE ratio is also shown by the negative correlation between those values. However, the higher the value of own funds in relation to assets may indicate greater security of the bank, due to its loss-absorbing capacity. A positive influence of higher amounts of capitals may also be explained by the fact that the security of a bank reduces the funding costs, which has a positive effect on the financial result. A greater capital involvement of bank owners may be a discouraging factor when a decision is to be made on the approval of an excessively risky business strategy of the bank. The results of the study show that banks with a strong position in terms of capital have achieved greater viability during the period under assessment.
6. External costs, including banking tax and contributions to the BGF, in relation to total net operating income have a negative and statistically relevant influence on the return on equity.
7. Acquisitions of other banks or parts thereof are not statistically relevant for bank's viability in the year of acquisition or during the next two periods. A broader analysis was also carried out to examine the effect of acquisitions through a comparison of models involving various delays and various methods of defining a variable indicating the actual acquisition of assets but the effect of such a variable remained statistically irrelevant in all cases. Considering that the amount of assets has a statistically relevant influence on viability, that result may be interpreted as identification of organic increase as more optimum in terms of achieving greater viability than the purchase of assets from other entities.
8. The effect of concentration of the banking sector, measured at the Herfindahl-Hirschmann index, has a statistically irrelevant influence on the return on equity.

To examine the influence of introduction of the banking tax on the determinants of banks' rate of return, a similar study was conducted, with a modification consisting in adding the actual amount of the banking tax to the bank's gross result. When interpreting the results, one should note that it is a simplified approach – the study excluded the actual amount of the tax but the payment of the tax still had an influence on how the bank was being managed. The results of the study are similar to the output model, so the introduction of the banking tax did not materially change the determinants of return on equity.

5.1.5. The difference in methods of calculating the amount of risk-weight exposures in Poland and other EU countries

The ratio of the total amount of risk-weighted exposures to the sum of off-balance sheet assets and liabilities, calculated for the Polish sector, is 51%, while the average ratio for EU[12] countries is 36% (Diagram 24).

Diagram 24 The value of risk-weighted exposures in relation to the sum of off-balance sheet assets and liabilities in EU countries at the end of 2018 (or 2017, depending on availability of data)



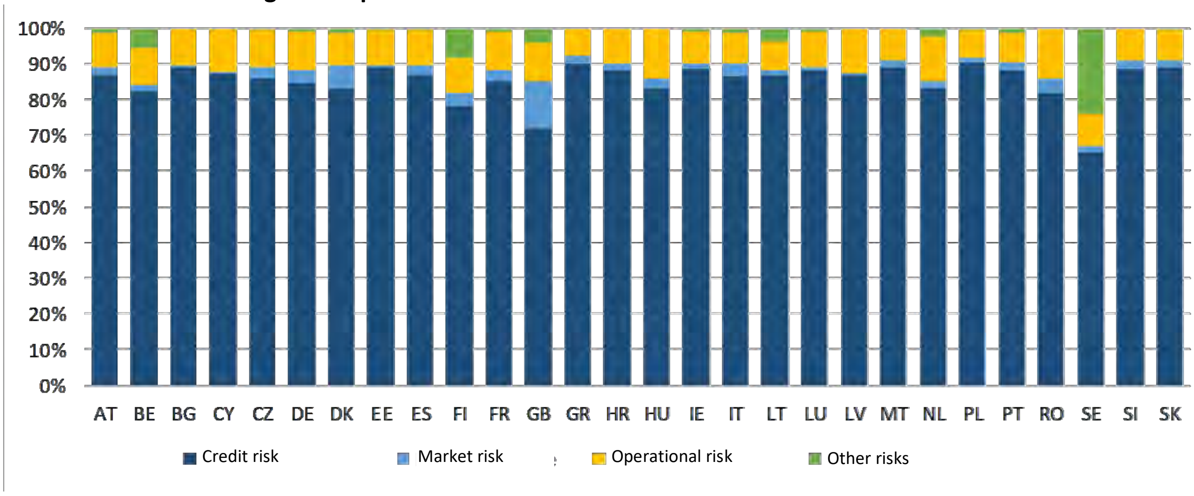
Source: ECB Data Warehouse

A higher value of risk-weighted exposures requires banks to maintain higher value of capital to achieve the minimum required levels of capital ratios.

The most important type of risk is credit risk. The credit risk-weighted exposure amount accounts for approx. 90% of the total risk-weight exposure amount (Diagram 25). The second risk in terms of importance in EU countries is operational risk. The scale of market risk is small (except for United Kingdom).

[12] For the EU countries marked in Diagram 24 as at the end of 2018 or 2017, depending on availability of data.

Diagram 25 Percentage of the amount of risk-weighted exposures for credit risk, market risk and operational risk in the total risk-weighted exposure amount in EU countries at the end of 2018



Source: ECB Data Warehouse

Diagram 26 shows the share of exposure amounts calculated using the standardised/basic approaches and sophisticated approaches in the total risk exposure amount. In the Polish banking sector, the risk exposure amount in relation to credit risk, market risk and operational risk is calculated mainly under standardised approaches.

The sophisticated approaches are more sensitive to risk as compared to standardised approaches. Banks that use standardised approaches are more conservative, and the lower sensitivity of those approaches to the risk taken makes those approaches more resistant to the defects of the applied risk measures, such as underestimation or overestimation of the risk level according to the phases of the financial cycle, i.e. the pro-cyclicality of risk measures.

An analysis of the data in Diagrams 24 and 26 leads to the conclusion that countries using mainly standardised approaches to estimate the risk exposure amount are characterised by a high ratio of the risk-weighted exposure amount to the sum of off-balance sheet assets and liabilities. The high risk exposure amount requires a higher level of capital, which in turn means that in those countries banks need to make a relatively higher return in order to ensure a comparable level of return on equity.

It should be noted, however, that the introduction of the output floor[13] will have a lesser impact on the need to increase capital in order to maintain the minimum requirements in the banking sectors where the scope of application of sophisticated approaches is narrow. In such case, banks applying sophisticated approaches will be forced to look for additional sources of

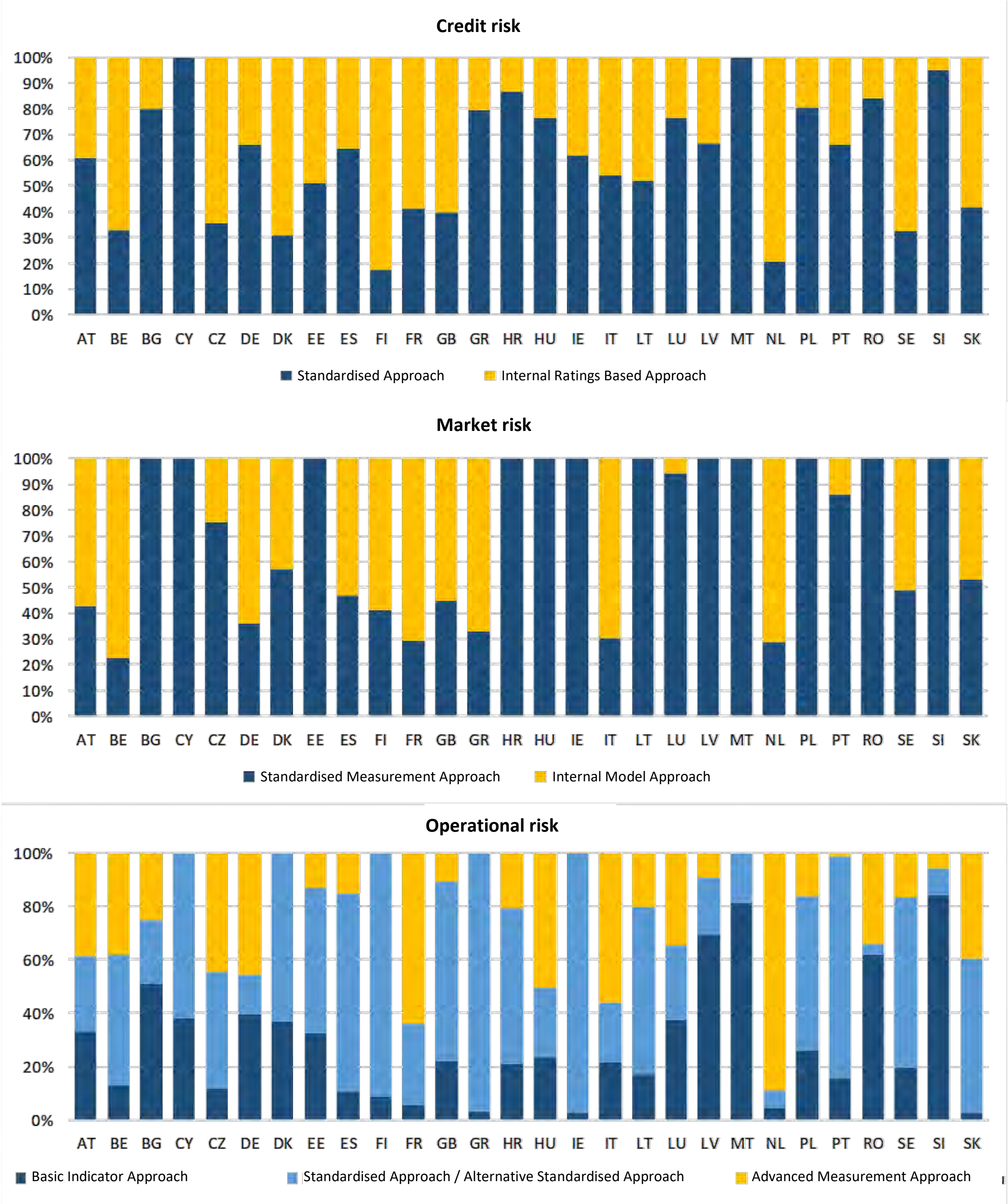
[13] According to the idea of the output floor proposed by Basel Committee on Banking Supervision (*Basel III: Finalising post-crisis reforms*, December 2017), simple approaches are to be used to determine the minimum capital requirement below which the level of capital of institutions applying sophisticated approaches could not fall.

capital. The findings of a study[14] of the European Banking Authority published in December 2019 indicate that the introduction of the output floor will give rise to an 8.6% increase in Tier 1 capital in the EU on average[15], with an impact close to zero in Poland.

[14] EBA, *Basel III reforms: Impact study and key recommendations. Macroeconomic assessment, credit valuation adjustment and market risk*, 4 December 2019.

[15] For a sample representing approx. 85% of total assets of banks being members of banking groups and other banks in the EU.

Diagram 26 Share of the risk-weighted exposure amount calculated using sophisticated approaches in the total risk-weighted exposure amount for credit risk, market risk and operational risk at the end of 2018



Source: ECB Data Warehouse

6. Balance sheet

At the end of 2019, the aggregated balance sheet total of the banking sector amounted to PLN 2 000.5 billion and had increased during the year by PLN 106.7 billion (5.6%). The impact of the change in exchange rates on the increase in the value of assets during the year was marginal.

Table 4 Balance sheet of the banking sector

	Dec 17	Dec 18	Dec 19	YoY change	
		(PLN billion)		2019 / 2018	
Sector's assets	1 776.8	1 893.7	2 000.5	106.7	5.6%
commercial banks	1 602.0	1 689.6	1 780.4	90.7	5.4%
cooperative banks	130.0	138.3	150.7	12.5	9.0%
branches of foreign banks	44.8	65.8	69.3	3.5	5.3%

Diagram 27 Product structure of the balance sheet – banking sector; December 2019 (in PLN billion)

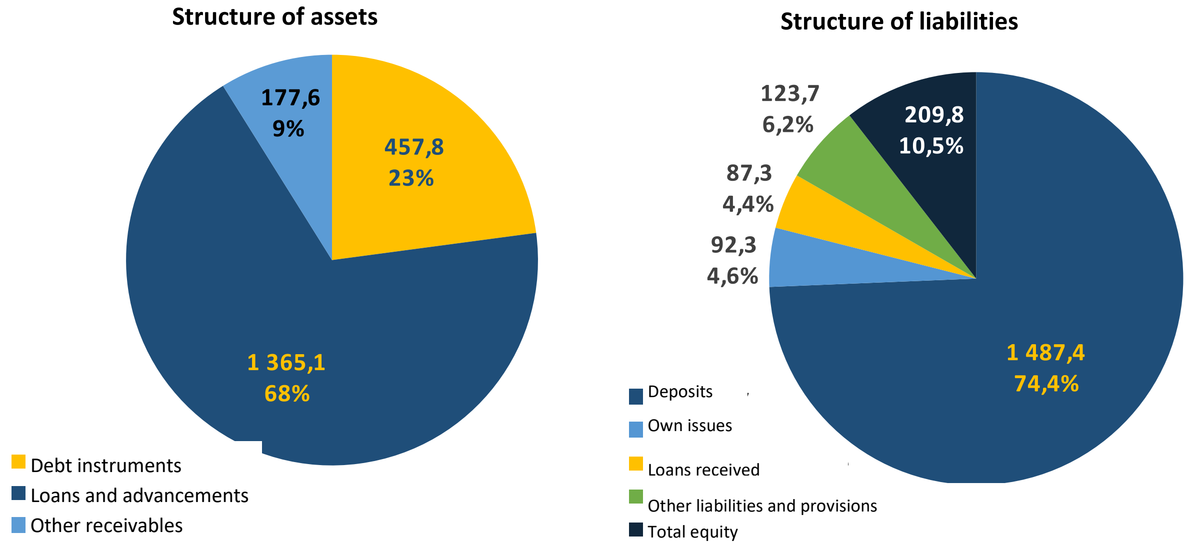


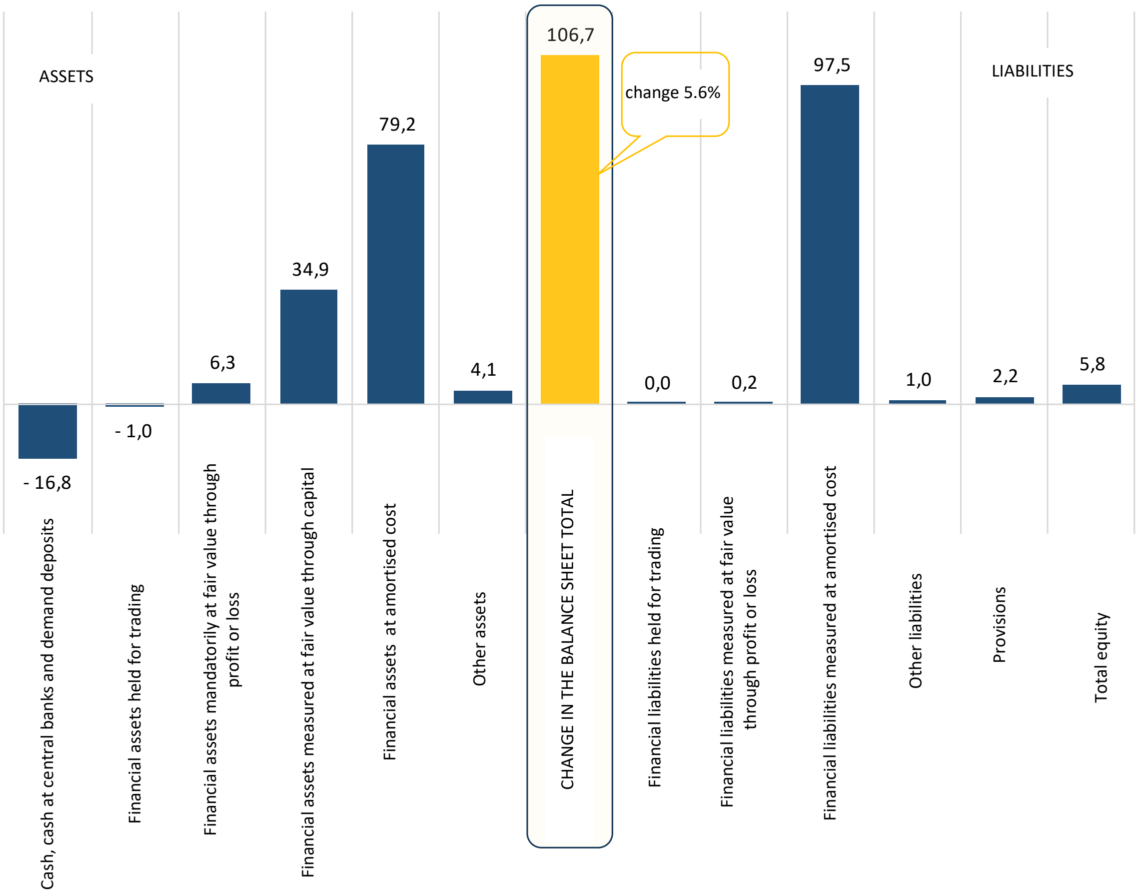
Table 5 Structure of the balance sheet of the banking sector – ASSETS

	Dec 17	Dec 18	Dec 19	YoY change	
		(PLN billion)		2019 / 2018	
Cash in hand, funds at central banks and other demand deposits	71.4	131.9	115.2	-16.8	-12.7%
Debt instrument	427.0	414.8	457.8	42.9	10.4%
Equity instruments	5.8	5.5	6.0	0.5	8.4%
Loans and advances measured at FV	0.1	29.3	48.8	19.5	66.7%
Loans and advances measured at amortised costs	1 202.1	1 237.6	1 292.0	54.4	4.4%
Other assets	70.4	74.5	80.7	6.2	8.3%

Table 6 Structure of the balance sheet of the banking sector – LIABILITIES

	Dec 17	Dec 18	Dec 19	YoY change	
		(PLN billion)		2019 / 2018	
Deposits	1 270.6	1 373.3	1 487.4	114.1	8.3%
Own debt securities issued	85.3	87.8	92.3	4.5	5.1%
Financial liabilities	100.6	99.7	87.3	-12.4	-12.4%
Other liabilities and provisions	116.4	128.9	123.7	-5.2	-4.0%
Total equity	203.9	204.0	209.8	5.8	2.8%

Diagram 28 Portfolio structure of the balance sheet of the banking sector – change in 2019



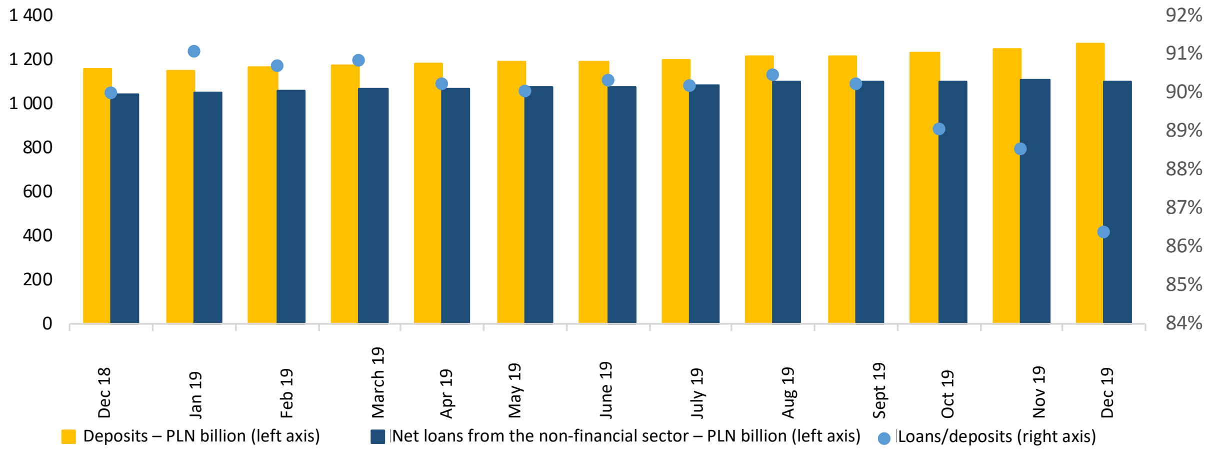
The change in the balance sheet total is mostly affected by the receivables and liabilities measured at amortised cost, dominated by loans and advances, and deposits.

The item *Loans and advances* covers receivables from all customer segments (including banks), excluding bank deposits payable on demand. The share of that category in the assets as at the end of 2019 exceeded 67%. A relatively large increase in the portfolio of loans and advances measured at fair value through the profit and loss account is a consequence of introduction of IFRS 9 in early 2018.

Table 7 Structure of loans and advances by entity

	Dec 17	Dec 18	Dec 19	YoY change	
	(PLN billion)			2019 / 2018	
Financial sector	147.7	165.6	177.3	11.8	7.1%
General governments	85.7	87.4	88.1	0.7	0.8%
Non-financial sector	987.2	1 045.6	1 099.7	54.1	5.2%

Diagram 29 Deposits vs receivables* from non-financial sector (in PLN billion)



*/ *Loans and advances at carrying amount; excluding debt instruments.*

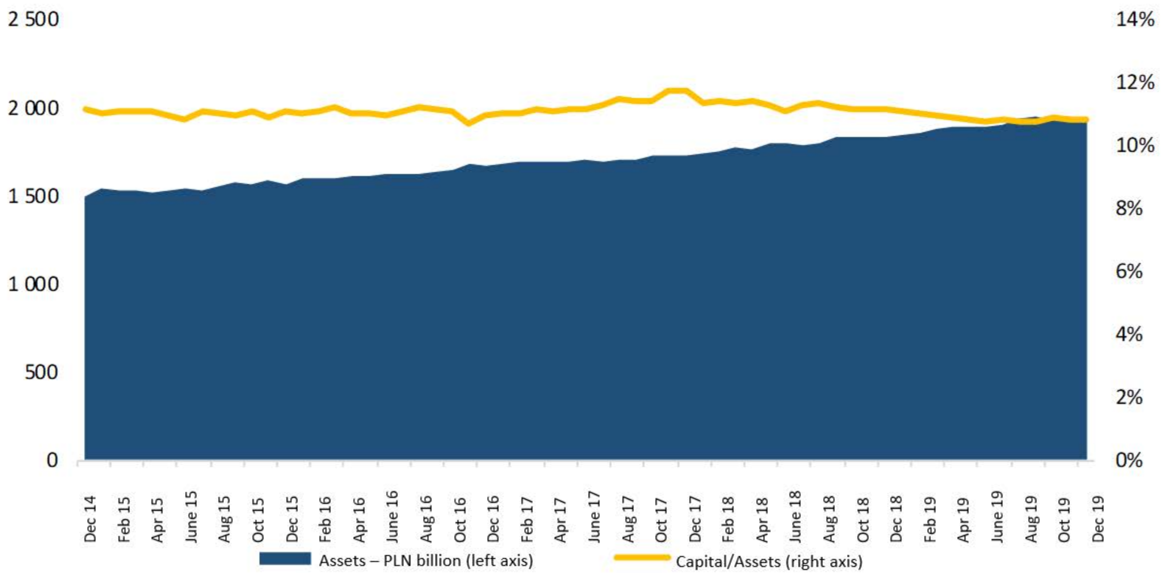
The second largest category in terms of share in assets is represented by debt securities (22.9% of the sector's balance sheet total).

Table 8 Structure of the debt securities portfolio – according to balance sheet valuation

	Dec 17	Dec 18	Dec 19	YoY change	
	(PLN billion)			2019 / 2018	
Financial sector, including:	110.1	72.9	79.7	6.8	9.3%
issued by central banks	91.2	48.7	54.8	6.1	12.6%
Non-financial sector	25.8	22.8	20.0	-2.8	-12.4%
General governments, including:	291.2	319.1	358.1	39.0	12.2%
issued by the central government	272.1	297.6	334.0	36.4	12.2%
issued by local governments	19.0	21.5	24.1	2.6	12.0%

Banks maintain a relatively stable ratio of capital to the balance sheet total.

Diagram 30 Capitals vs balance sheet total – commercial and cooperative banks



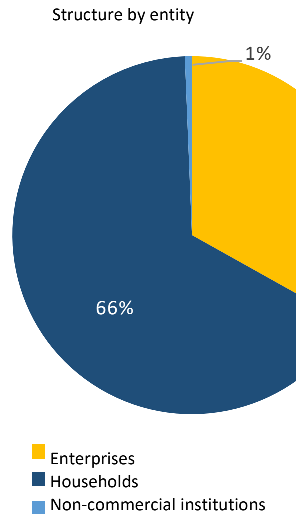
6.1. Receivables from non-financial sector entities

At the end of 2019, the gross carrying amount of loans and advances (in Portfolio B[16]) granted to non-financial sector entities reached PLN 1 136.8 billion.

Table 9 Receivables from non-financial sector entities – Portfolio B (in PLN billion)

	Dec 17	Dec 18	Dec 19	YoY change	
	(PLN billion)			2019 / 2018	
Non-financial sector in total	1 026.7	1 088.2	1 136.8	48.6	4.5%
Enterprises	347.9	373.1	383.9	10.8	2.9%
Households	671.9	707.9	745.3	37.4	5.3%

Diagram 31 Gross receivables from non-financial sector entities – Portfolio B (in PLN billion); December 2019



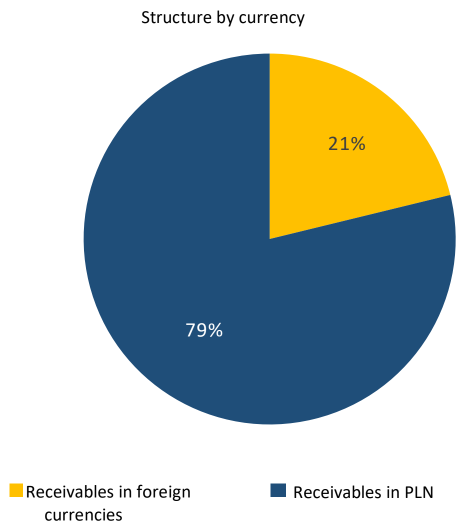
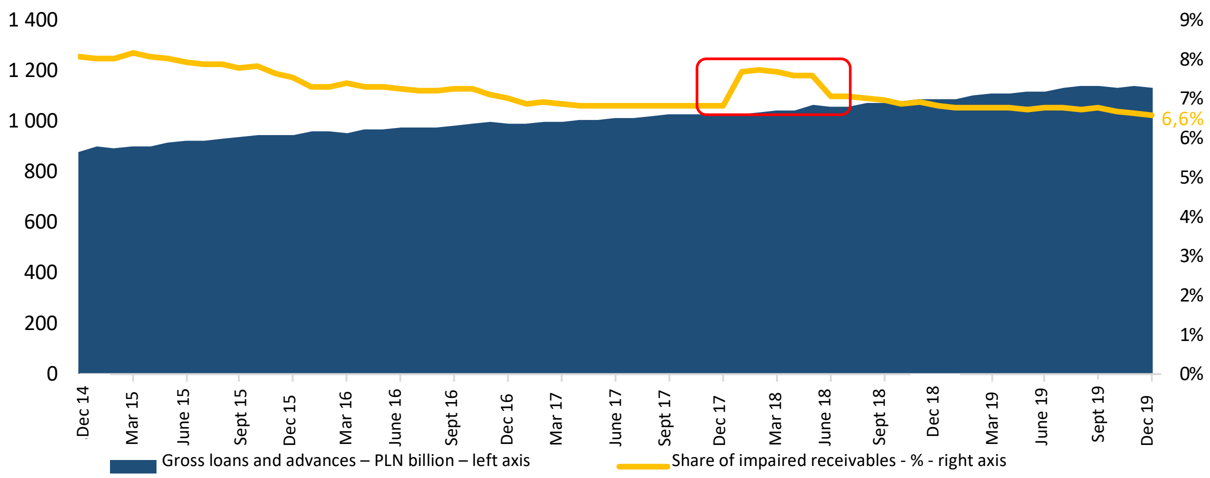


Diagram 32 Quality of receivables from non-financial sector entities – Portfolio B



The quality of receivables from non-financial sector entities measured by the ratio of the gross carrying amount of Stage 3/impaired loans and advances in to the gross carrying amount of

[16] Receivables measured at amortised cost and at fair value through other comprehensive income; excluding debt instruments

total loans and advances is gradually improving. The anomalies shown in the red box in Diagram 32 are the consequences of changes (in the classification of receivables to 'Stage 3/impaired' category) as part of the banks' mandatory reporting to the NBP (FINREP) and the banks' adjustments related to the obligation to include in the gross carrying amount also interest on Stage 3 receivables. After about six months, a substantial part of that interest was written off against the provisions.

Table 10 Quality of receivables (share of Stage 3/impaired receivables in the portfolio) from the non-financial sector entities – Portfolio B

	Dec 17	Dec 18	Dec 19	YoY change	
		(%)		2018 / 2017	2019 / 2018
Non-financial sector in total	6.81%	6.83%	6.57%	0.02pp	-0.26pp
Enterprises	8.33%	8.73%	8.40%	0.40pp	-0.33pp
Households	6.08%	5.88%	5.68%	-0.20pp	-0.19pp

Table 11 Stage 3 receivables to write-offs – non-financial sector – Portfolio B

	Dec 17	Dec 18	Dec 19	YoY change	
		(%)		2018 / 2017	2019 / 2018
Non-financial sector in total	59.37%	60.08%	58.76%	0.72pp	-1.32pp
Enterprises	58.54%	56.75%	55.99%	-1.79pp	-0.76pp
Households	48.51%	46.81%	49.17%	-1.69pp	2.36pp

6.1.1. Enterprises

Despite the preferential treatment (in accordance with CRR) of small and medium-sized enterprises, the share of receivables (Portfolio B, including debt securities) from SMEs in total receivables from enterprises is steadily decreasing: at the end of 2019 it was 51.8% compared to 53.8% at the end of 2018 and 56.4% at the end of 2017.

Table 12 Loans and advances of non-financial sector entities – Portfolio B

	Dec 17	Dec 18	Dec 19	YoY change	
		(PLN billion)		2019 / 2018	
All enterprises	**347.9**	**373.1**	**383.9**	**10.8**	**2.9%**
Large enterprises	143.9	167.7	178.5	10.7	6.4%
SMEs	203.9	205.3	205.4	0.1	0.0%

Diagram 33 Receivables from non-financial sector entities – Portfolio B (in PLN billion)

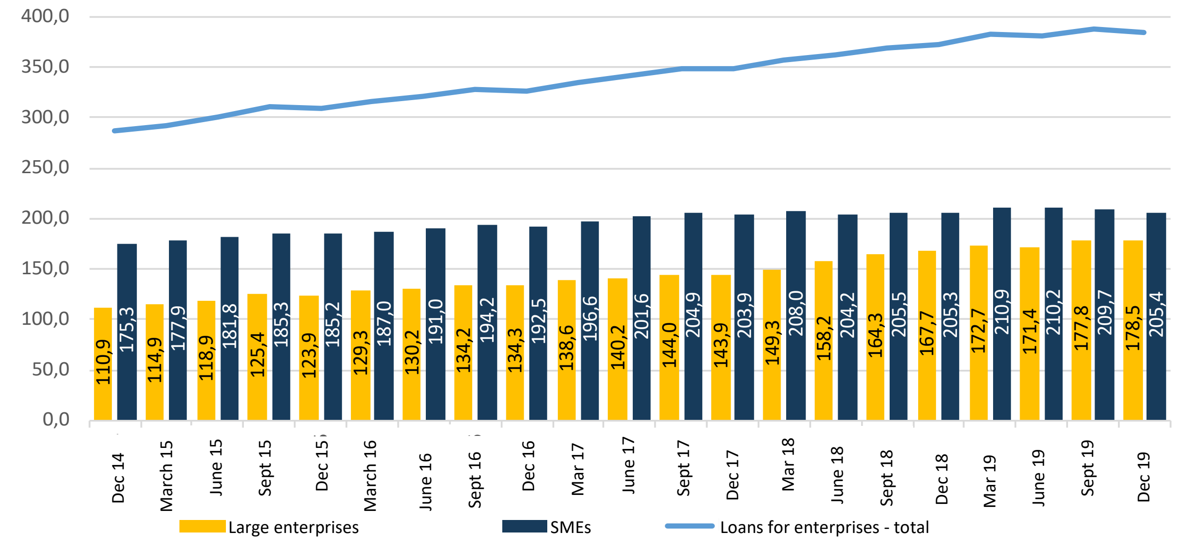


Diagram 34 Quality of receivables (share of Stage 3/impaired receivables in the portfolio) from non-financial sector entities – Portfolio B

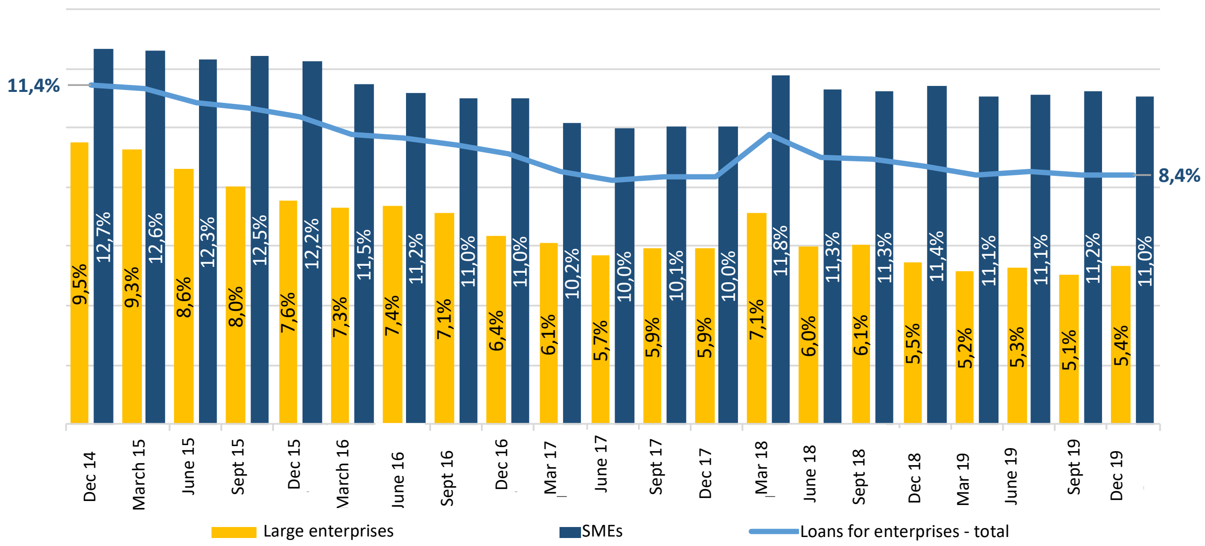
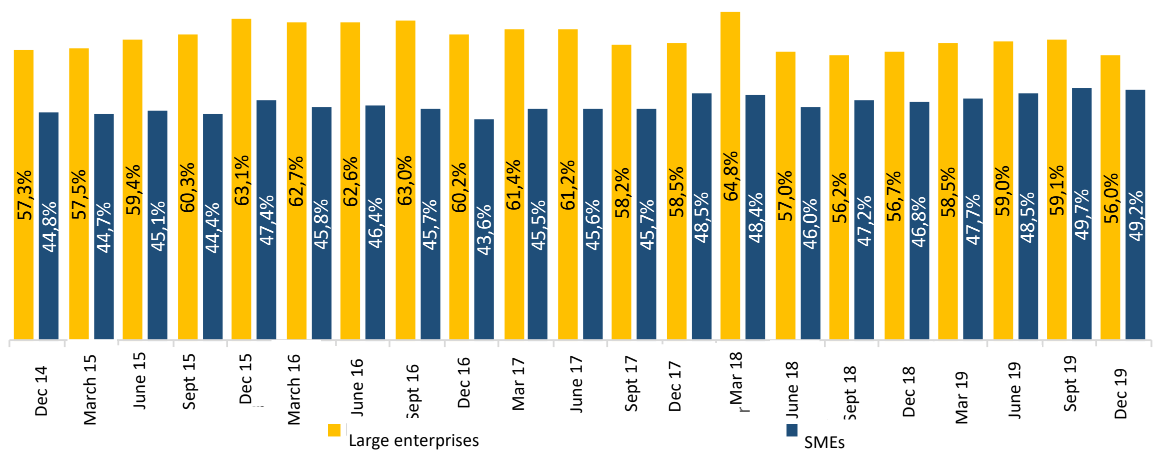


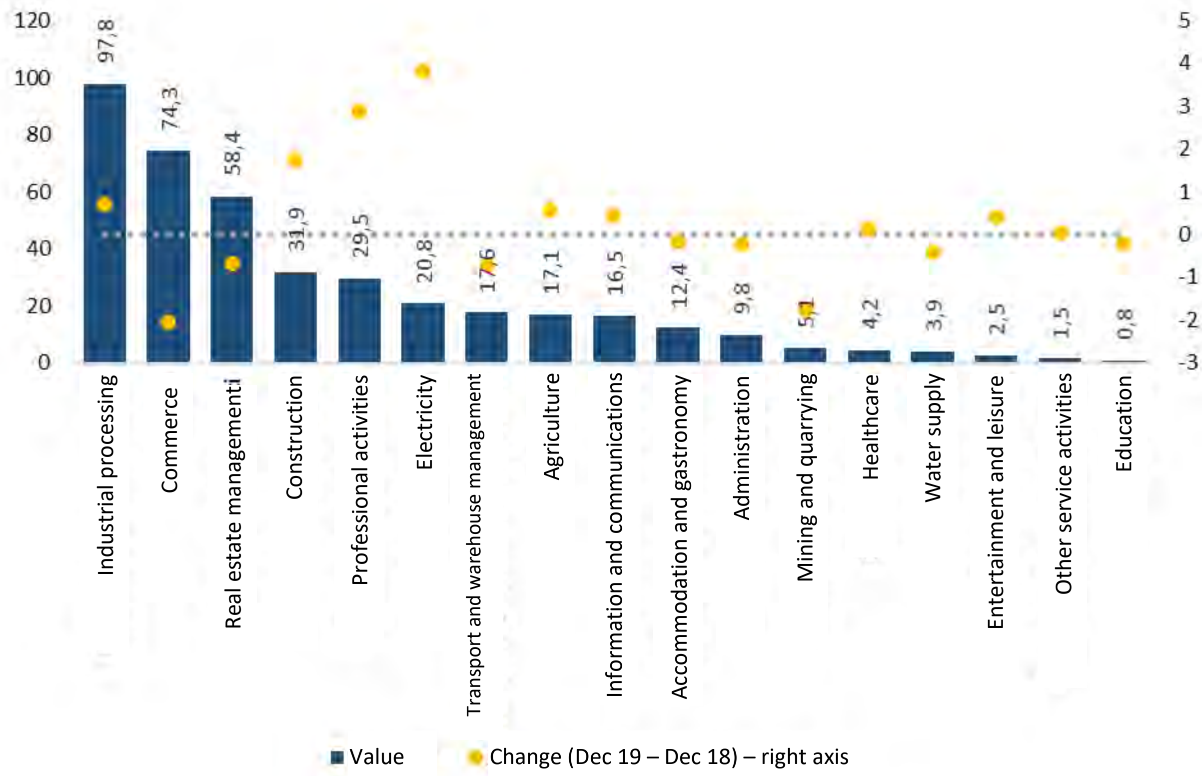
Diagram 35 Stage 3/impaired receivables from non-financial sector entities to provisions



Large exposures – NB300 reporting

As part of NB300 reporting, commercial banks report exposures of more than PLN 500 thousand. For cooperative banks, the threshold for exposure to be eligible for NB300 reporting is PLN 100 thousand. This implies a narrowing of the scope of the above section, which covers total exposures. For exposures reported under NB300, detailed information is available to analyse the volume of involvement of each PKD section in the funding and the quality of exposures in each PKD section**.**

Diagram 36 Size of exposures by PKD section (in PLN billion) and change of exposure (in PLN billion YoY)



**The size of exposures (the value of loans and other receivables) was calculated based on the NB300 reporting. The NB300 reporting covers exposures of more than half a million Polish Zloties (commercial banks) and more than 100 thousand Polish Zloties (cooperative banks).*

The total value of loans of and other receivables from non-financial sector entities at the end of 2019 amounted to PLN 404.1 billion, compared to PLN 399.6 billion at the end of 2018. In the last quarter of 2019, the total value of loans of and other receivables from non-financial sector entities decreased from PLN 409.7 billion to PLN 404.1 billion.

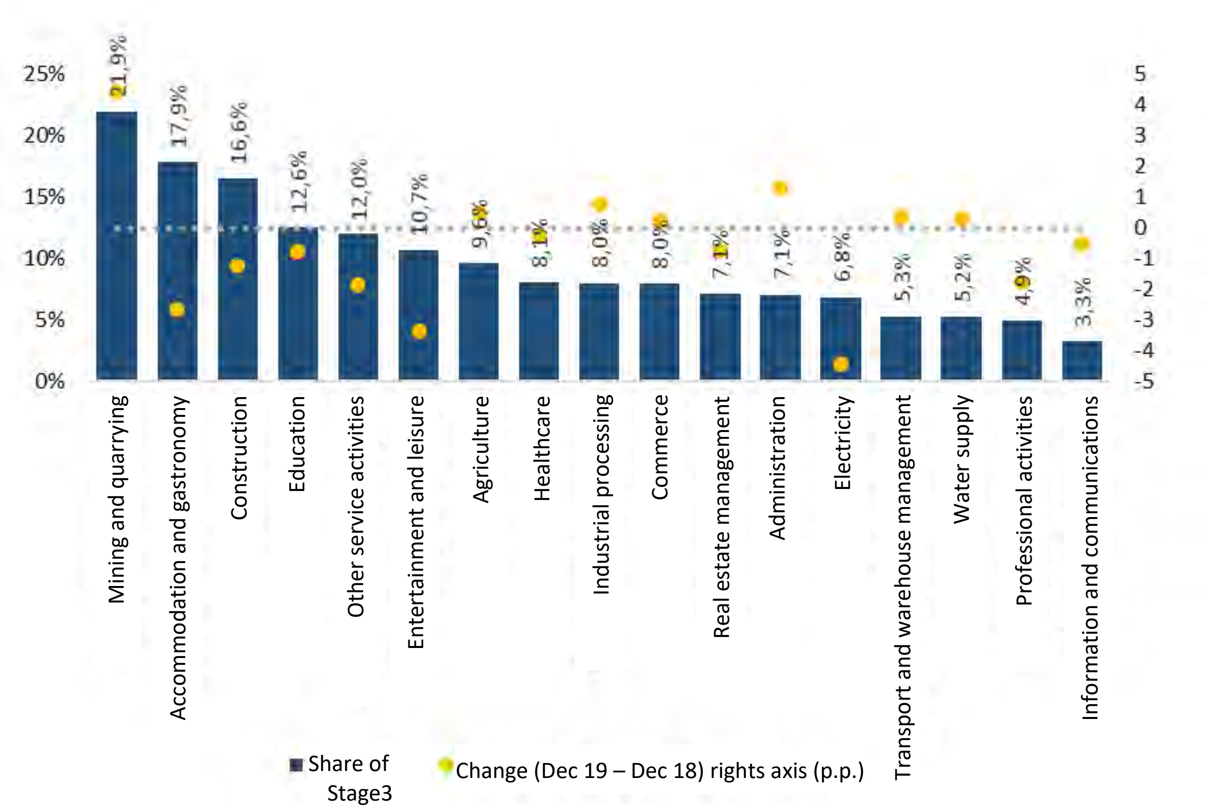
In 2019 the biggest increase was recorded in the value of loans of and other receivables from entities in the following industries: production of electricity, professional, scientific and technical activities, and construction. The biggest decrease was recorded in the value of loans of and other receivables from entities in the following industries: wholesale and retail trade, mining and quarrying.

Table 13 Amounts and quality of exposures to various industries

PKD Section		Exposure (in PLN billion)		Quality (Stage 3; %)	
Symbol	Description	2019	2018	2019	2018
A	Agriculture	17.05	16.47	9.59%	9.12%
B	Mining and quarrying	5.06	6.81	21.94%	17.48%
C	Industrial processing	97.82	97.13	8.00%	7.24%
D	Electricity	20.85	17.02	6.85%	11.28%
E	Water supply	3.89	4.27	5.19%	4.89%
F	Construction	31.86	30.11	16.55%	17.78%
G	Commerce	74.31	76.36	7.96%	7.71%
H	Transport and warehouse management	17.64	18.36	5.25%	4.89%
I	Accommodation and gastronomy	12.39	12.54	17.91%	20.57%
J	Information and communications	16.54	16.11	3.28%	3.79%
L	Real estate management	58.41	59.09	7.13%	7.87%
M	Professional activities	29.55	26.65	4.92%	6.69%
N	Administration	9.78	10.01	7.07%	5.76%
P	Education	0.82	0.78	12.55%	13.31%
Q	Healthcare	4.22	4.08	8.06%	8.33%
R	Entertainment and leisure	2.50	2.10	10.67%	14.05%
S	Other service activities	1.49	1.35	11.98%	13.86%

The value and quality of the exposures were calculated on the basis of the NB300 reporting. The NB300 reporting covers exposures of more than half a million Polish Zloties (commercial banks) and more than 100 thousand Polish Zloties (cooperative banks).

Diagram 37 Quality of exposures (the share of Stage 3 as %) by the PKD Section, and the YoY change in the quality of the exposure



At the end of 2019, the highest risk level, measured by the share of the Stage 3 exposure value in the total value of exposures, occurred in the following industries: mining and quarrying (21.19%), accommodation and gastronomy (17.9%) and construction (16.6%). The lowest share of Stage 3 occurred in: professional activities (4.9%) and information and communication (3.3%).

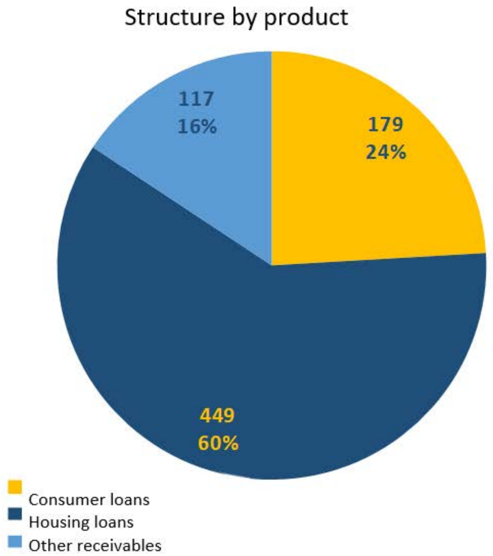
In 2019, a significant change in the share of Stage 3 in total receivables was noted in: mining and quarrying (an increase of 4.5 p.p.) and production of electricity (a decrease of 4.4 p.p.). Both industries were dominated by large enterprises and large exposures, which is why a change in the classification of exposures to one or more enterprises influences heavily the aggregate level of risk in the industry.

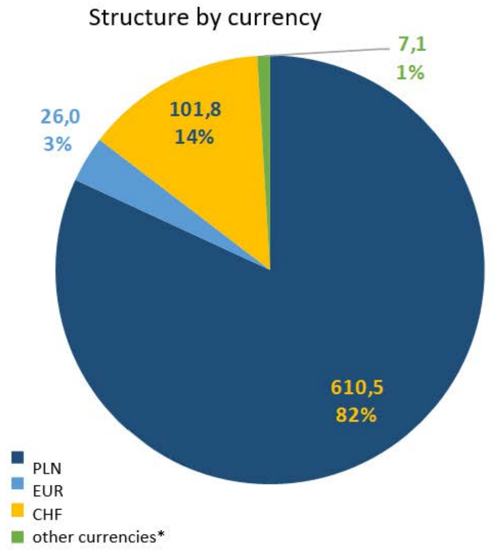
Sustainable finance

- On 29 December 2019, there came into force Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector, which is going to be applied in each EU Member State starting from **10 March 2021**. When qualifying an activity as 'sustainable', the abbreviation '**ESG**' is used to refer to the English words: *Environmental*, *Social*, and *Governance*. The reference points to the aspects such as environmental protection, social issues and corporate governance, identified as factors used to mark an activity as sustainable.
- The UKNF is actively engaged in the work on sustainable finance, ESG risks and related topics, contributing also to raising the awareness among supervised entities that such risks may have a real impact on business activities in terms of the requirements and conditions for business management, customer relations and the products offered.
- The banking sector experiences transformations that are not directly linked to the expected evolution of legislation but result from decisions of certain banks, which start to notice risks for their business stemming from climate change and consider non-financial objectives in their business decisions.
- In years to come EBA is planning to conduct stress tests focused on climate change. The main purpose of the tests will be to identify and measure banks' exposures to, in particular, climate risks, both physical and those related to the transformation. Reviews are also under way regarding possible inclusion of ESG risks in the supervisory review and evaluation process, as well as reviews regarding possible changes in the prudential regime, e.g. to assign a higher weight to assets that pose higher climate risks.

6.1.2. Households

Diagram 38 Gross receivables from households – Portfolio B (PLN billion); December 2019





*/ The 'other currencies' category was estimated on the basis of the available reporting data and may include up to approx. PLN 1 billion loans in CHF.

Table 14 Gross receivables from households – Portfolio B

	Dec 17	Dec 18	Dec 19	YoY change	
	(PLN billion)			2019 / 2018	
Households, including:	**671.9**	**707.9**	**745.3**	**37.4**	**5.3%**
Sole traders	74.0	77.5	79.3	1.8	2.4%
Private individuals	564.2	598.9	634.0	35.0	5.8%
Individual farmers	33.8	31.5	32.1	0.6	1.8%
Housing loans	394.3	421.4	448.9	27.5	6.5%
Consumer loans	163.2	171.5	179.5	8.0	4.7%
Other	114.4	115.0	117.0	2.0	1.7%

The 'other' category mainly includes loans to sole traders and farmers.

In practice, the quality of receivables from households is determined by the quality of loans granted to private individuals, whose share in the total gross value of loans for households at the end of December 2019 amounted to 85.1%. A good quality of the portfolio of loans for private individuals is determined by housing loans, whose share in the portfolio of receivables from that customer segment at the end of 2019 was 70.7%, with a 28.3% share of consumer loans. The evident deterioration in the quality of loans for individual farmers concerns mainly commercial banks – a 2 p.p. increase in the share of 'bad loans'.

Diagram 39 Quality of receivables from households; banking sector – Portfolio B

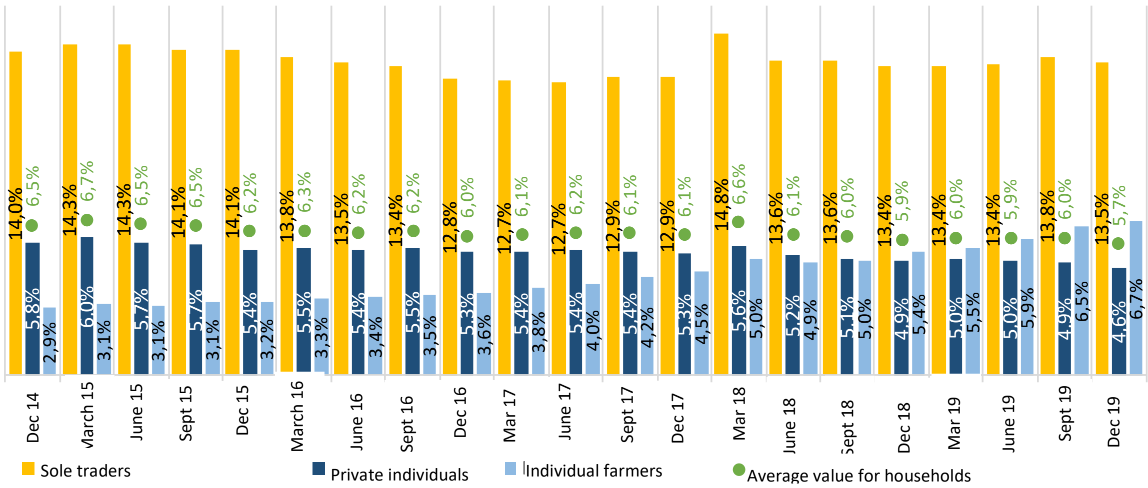


Table 15 Quality of receivables from households (share of Stage 3) – Portfolio B

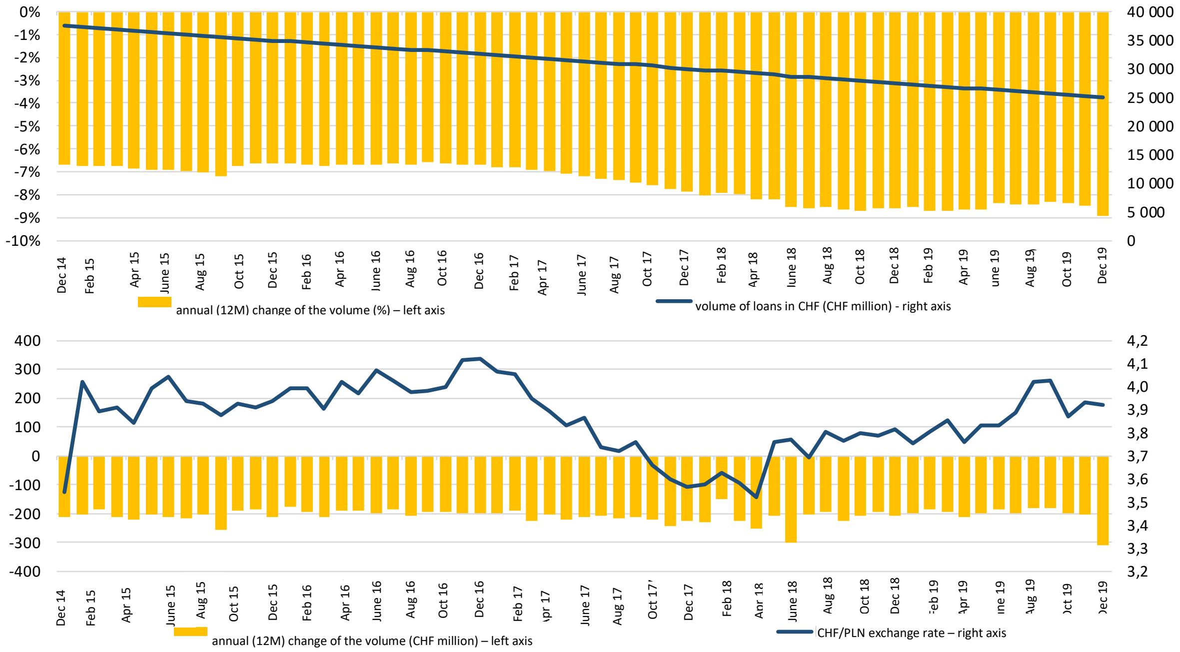
	Dec 17	Dec 18	Dec 19	YoY change	
	(%)			2018 / 2017	2019 / 2018
Housing loans	2.77%	2.46%	2.33%	-0.31pp	-0.13pp
Consumer loans	11.05%	10.77%	10.26%	-0.27pp	-0.52pp
Other	10.39%	11.10%	11.55%	0.71pp	0.45pp

Table 16 Stage 3 receivables from households to write-offs – Portfolio B

	Dec 17	Dec 18	Dec 19	YoY change	
	(%)			2018 / 2017	2019 / 2018
Housing loans	51.36%	54.45%	56.22%	3.09pp	1.77pp
Consumer loans	67.14%	69.57%	69.62%	2.42pp	0.05pp
Other	57.50%	62.48%	64.06%	4.99pp	1.58pp

Please find below the comparison of the Stage 3 receivables to write-offs ratio for various types of loans granted to households. More information about the housing loans and consumer loans can be found in Chapters 6.1.2.1 and 6.1.2.2., which are based on the results of surveys that are not part of standard reporting.

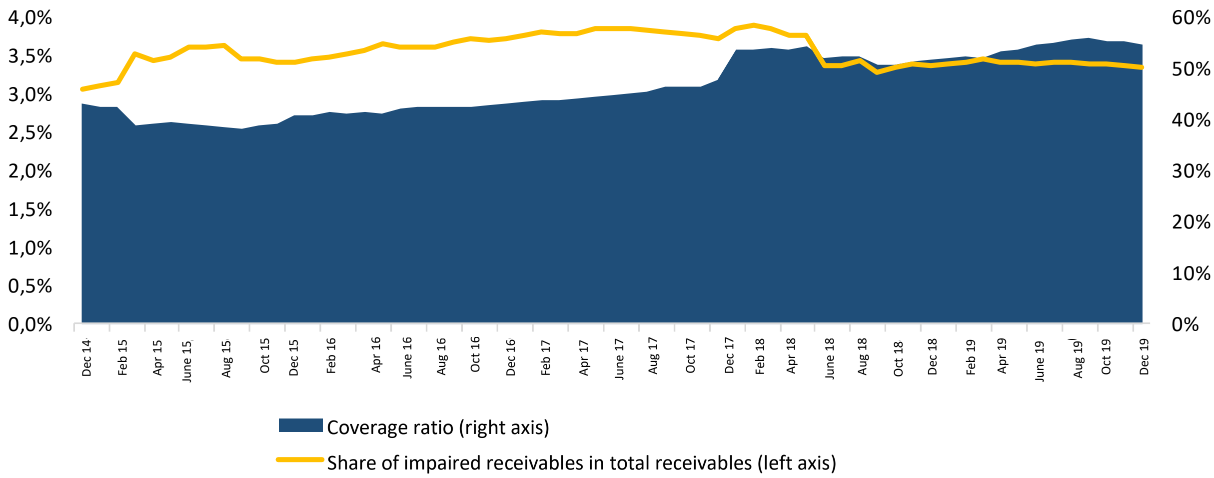
Diagram 40 Housing loans in CHF* for households – evolution of the portfolio



*The exchange rate for CHF as at the last day of a given month.

The annual change in the volume of housing loans in CHF in 2019 was -8.9 % (-8.6 % in 2018). Despite the weakening of the Zloty, in 2019 that volume decreased by PLN 6.7 billion YoY (i.e. -6.4%). The share of impaired receivables at the end of 2019 was at a similar level as at the end of 2018, i.e. 3.4%. The write-offs to the receivables ratio increased by 2.9 p.p. YoY.

Diagram 41 Quality of the portfolio, and the housing loans in CHF to households to write-offs ratio



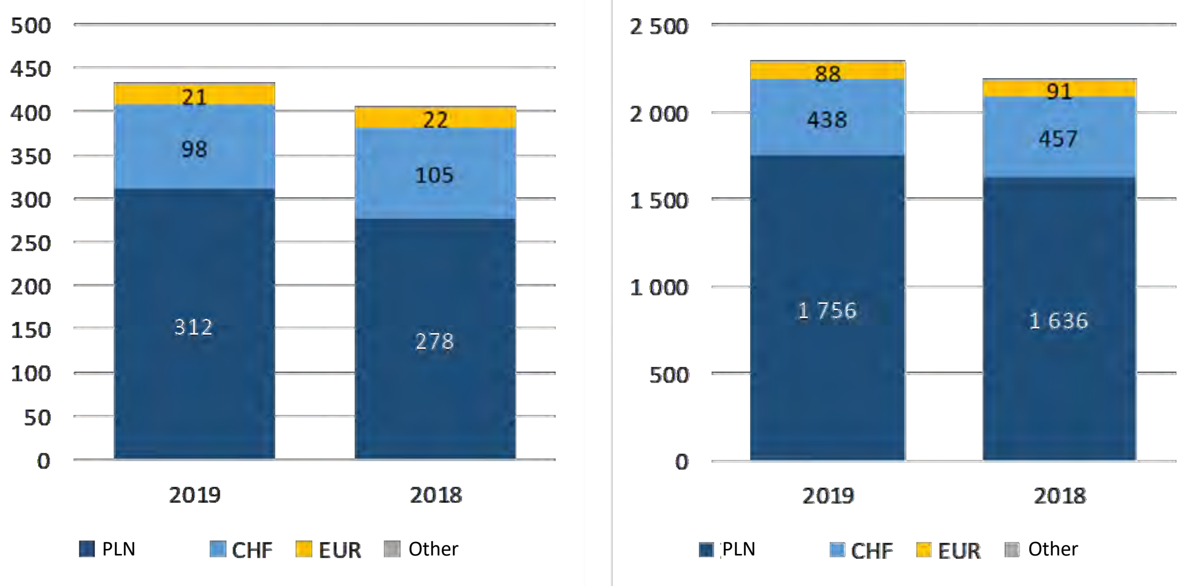
6.1.2.1. Housing loans to households

This sub-chapter contains information based on a post-reporting survey as at the end of 2019. 27 banks participated in the survey. The criterion for classification into the sample was the portfolio of housing loans to households above PLN 100 million (as at the end of November 2019).

Size and composition of the portfolio

The gross carrying amount of the portfolio of housing loans to households stood at PLN 432.2 billion at the end of 2019 and their number was 2.29 million. Compared to the end of 2018, both values increased by 6.3% from PLN 406.4 billion and 4.5% from 2.19 million respectively.

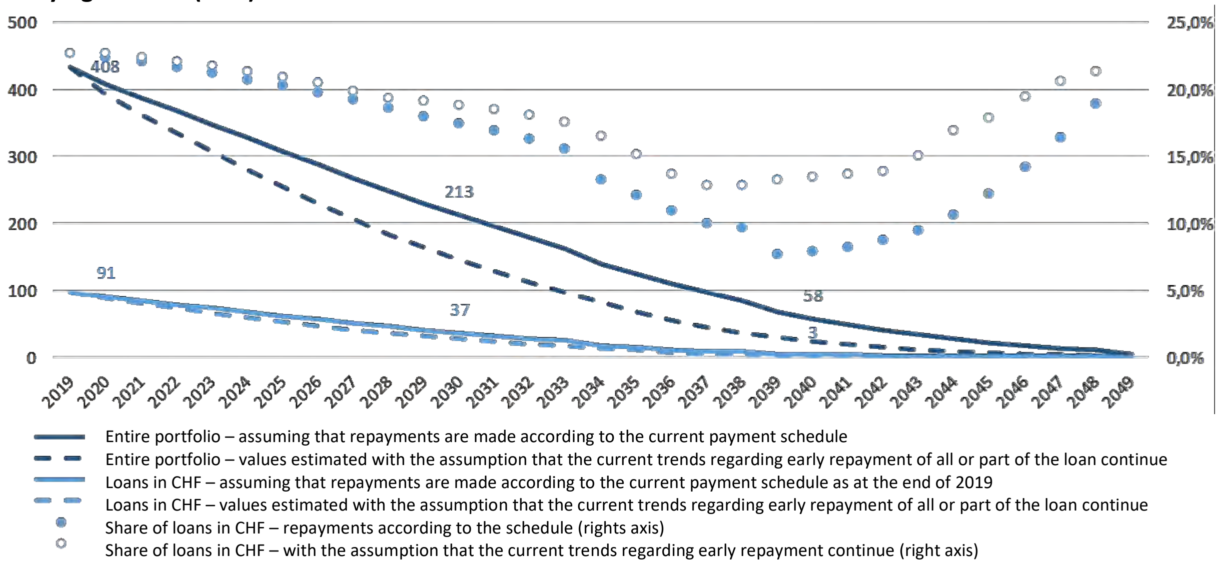
Diagram 42 Composition of the portfolio of housing loans by currency of credit at the end of 2019 and 2018 – the gross carrying amount in billions of PLN (the left diagram) and the number of credit agreements in thousands (the left diagram).



72.1% of gross carrying amount of the housing loan portfolio were loans in PLN, and 22.7% – loans in Swiss francs.

Diagram 43 shows the timing of repayments of the entire current housing loan portfolio and its part in CHF in two situations: assuming that repayments are made according to the current payment schedule as at the end of 2019 and assuming that the current trends regarding early repayment of all or part of the loan continue. The diagram does not take into account the loans that banks have granted or are planning to grant after 2019.

Diagram 43 Evolution (course of repayment) of the housing loan portfolio and its part in CHF as at the end of 2019 by gross carrying amount* (in PLN billion); share of loans in CHF in the housing loan portfolio by gross carrying amount (in %).

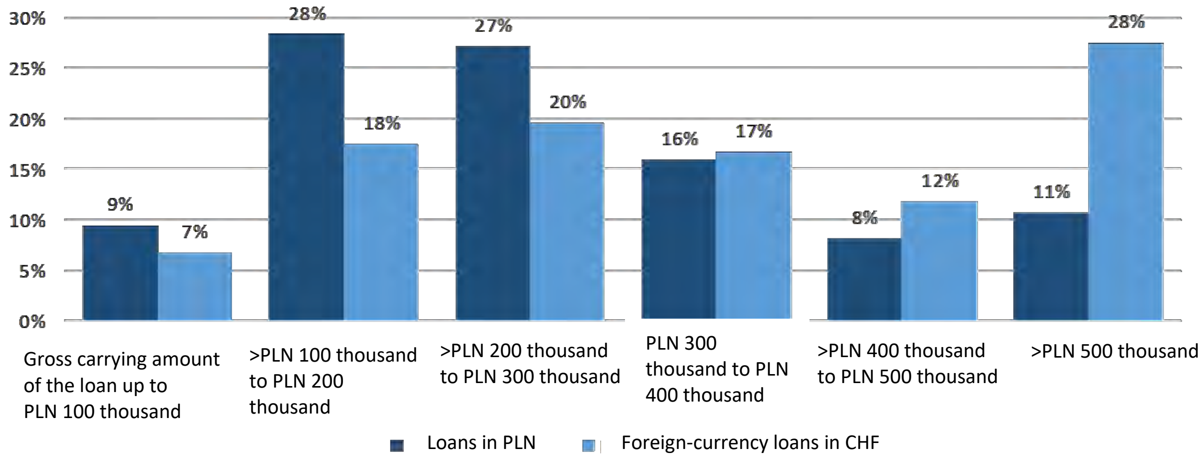


** assuming that the interest rates and currency exchange rates do not change as compared to the rates at the end of 2019*

The increase in the share of CHF loans in the housing loan portfolio maturing after 2039 means that the loans were granted on average for a longer period than the loans in PLN. Moreover, earlier repayment of loans occurs more for loans in PLN than for loans in CHF.

The average gross carrying amount of a loan in CHF at the end of 2019 was PLN 224.3 thousand and a loan in PLN was PLN 177.4 thousand. For loans in CHF, there was a large share of loans of a gross carrying amount over PLN 500 thousand. Those loans accounted for 28% of the portfolio of all housing loans in CHF (11% for loans in CHF) and the average gross carrying amount of the loan in that range was PLN 767.1 thousand (PLN 702.0 thousand for loans in PLN).

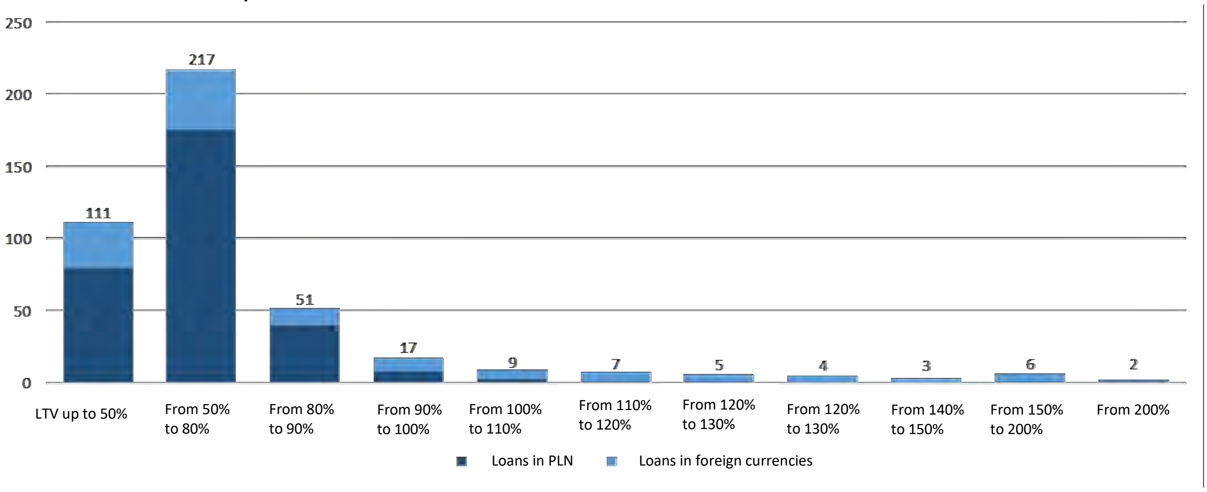
Diagram 44 Breakdown of housing loans in PLN and CHF in relation to the gross carrying amount of loans on the balance sheets of banks at the end of 2019. The breakdown is presented according to the share of loans from a given range for all housing loans in PLN and CHF (share by gross carrying amount).



Loan-to-Value (LTV)

Loans with LTV below 100% account for 92% of the housing loan portfolio, 98% of the portfolio of housing loans in PLN and 76% of housing loans in foreign currencies (share by gross carrying amount).

Diagram 45 Breakdown of housing loans in PLN and foreign currencies by gross carrying amount at the end of 2019 in relation to LTV, in PLN billion.



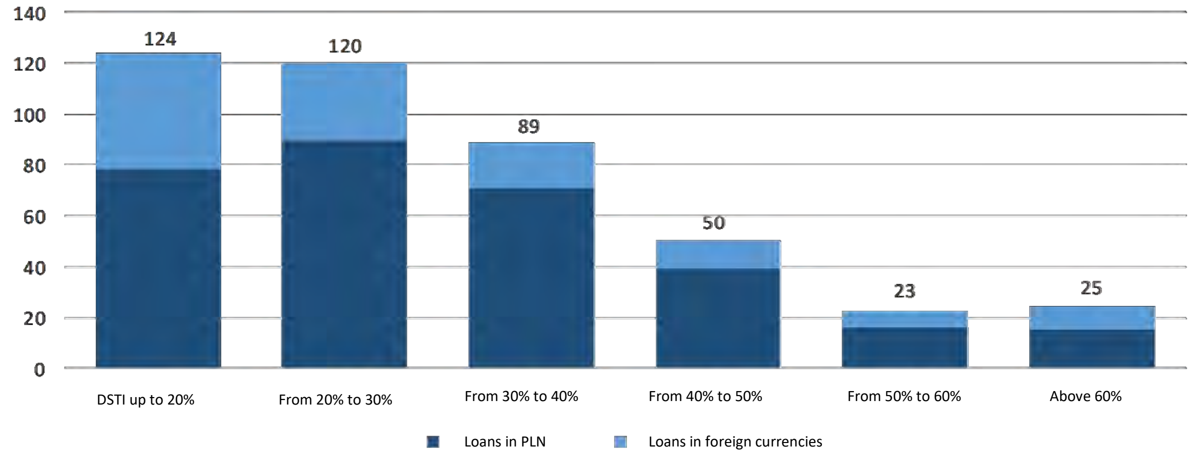
The average LTV for housing loans in the banking sector weighted by the gross carrying amount of those loans at each bank at the end of 2019 was 67%. The average LTV for non-performing housing loans in the banking sector weighted by the gross carrying amount of those loans at each bank at the end of 2019 was 97%.

DSTI

DSTI (Debt-Service-to-Income) is a ratio of the monthly value of all repayments of credit instalments to the monthly net income of households which determines that proportion of income is allocated every month for the repayment of debt (excluding credit on a credit card, in a line of credit or in a current account). DSTI considers not only the expenditure related to the handling of consumer credit but also all other credit charges.

The median DSTI at the end of 2019 was between 20% and 30%.

Diagram 46 Breakdown of housing loans in PLN and foreign currencies in relation to the DSTI ratio by gross carrying amount at the end of 2019 in PLN billion.

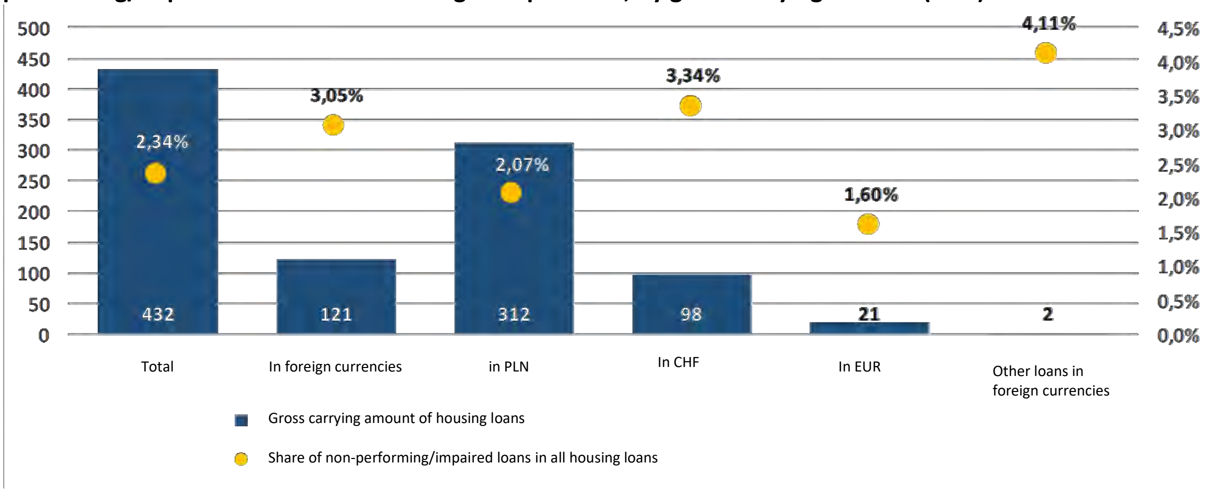


The average DSTI ratio in the banking sector weighted by the gross carrying amount of housing loans in each bank was 30%. The average DSTI ratio in the banking sector for customers with a housing loan in PLN (30%) was close to the average DSTI ratio for customers with a loan in CHF (29%).

Quality of housing loans

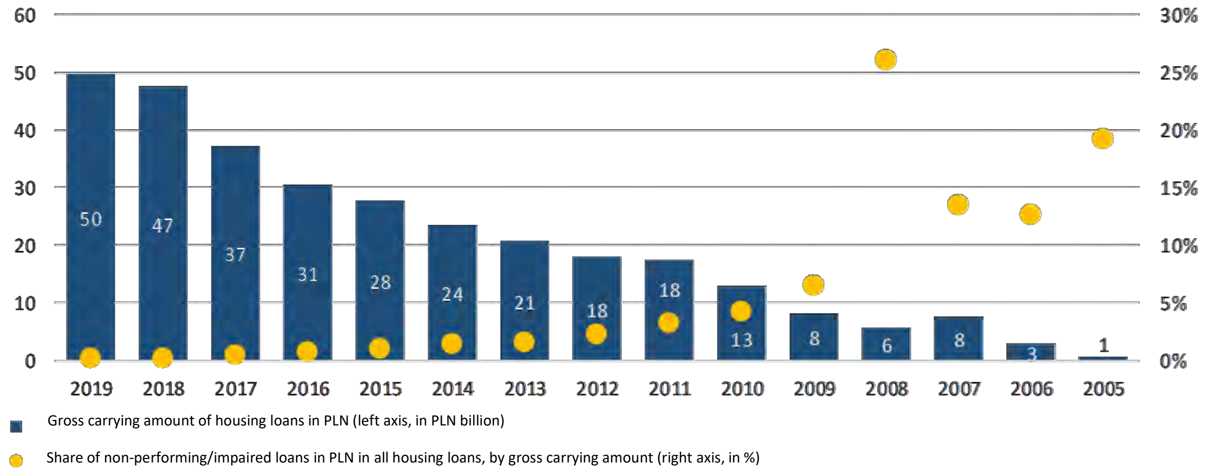
The value of non-performing/impaired loans amounted to PLN 10.1 billion and accounted for 2.3% of the total value of housing loans at the end of 2019. The quality of the portfolio has improved — at the end of 2018, the value and share of non-performing/impaired loans amounted to PLN 10.3 billion and 2.5% respectively. However, the number of non-performing loans increased from 37.1 thousand to 38.1 thousand.

Diagram 47 Gross carrying amount of housing loans (in PLN billion) by currency and share of non-performing/impaired loans in the housing loan portfolio, by gross carrying amount (in %).



Credit quality deteriorates on a linear basis as the portfolio matures but for housing loans granted in 2008 there is an incremental increase in the share of non-performing/impaired loans.

Diagram 48 Housing loans in PLN by year of disbursement – the gross carrying amount (in PLN billion) and share of non-performing/impaired loans in the portfolio of housing loans, by gross carrying amount (in %).



In 2019, there was a significant increase in the value of loans being restructured from PLN 9.1 billion at the end of 2018 to PLN 17.3 billion at the end of 2019, of which PLN 13.8 billion were 'normal' loans and PLN 3.4 billion were non-performing loans. Out of loans worth PLN 7.2 billion and benefiting from 'repayment holiday' at the end of 2019, PLN 7.1 billion accounts for 'normal' loans.

Additional characteristics

Loans maturing at the retirement age of the borrower accounted for 41.5% of the housing loans on the balance sheets of the banks surveyed. Among the housing loans granted in 2019, the share of those loans was lower and was 32.3%. The gross carrying amount of loans maturing at the retirement age of the borrower is PLN 179.4 billion at the end of 2019. The quality of those loans is comparable to the credit quality of the entire housing loan portfolio

— the share of non-performing loans in the loans in question, by gross carrying amount, is 2.8% (2.3% for the total portfolio).

40.1% of the housing loans (the share according to gross carrying amount) were granted by the banks surveyed, assuming the minimum or lower subsistence costs, 62.5% of the loans assuming that the subsistence costs at the time of granting the loan do not exceed 1.5 times the minimum subsistence figure.

Credit currency conversion

At the end of 2019, the number of loans converted from foreign currencies to the Polish currency stood at 7.5 thousand and increased by 1.3 thousand as compared to the end of 2018. The gross carrying amount of those loans at the end of 2019 was PLN 2.76 billion (PLN 2.07 billion at the end of 2018). Nearly 100% of loans converted from a foreign currency to PLN in 2019 were non-performing/impaired loans.

Sale of the portfolio and transfer to the off-balance-sheet accounts

In 2019, there was a significant increase in the value of the housing loan portfolio sold compared to the value of the portfolio sold in 2018. The gross carrying amount of the portfolio sold in 2019 was PLN 3.9 billion and of the portfolio sold in 2018 – PLN 912 million.

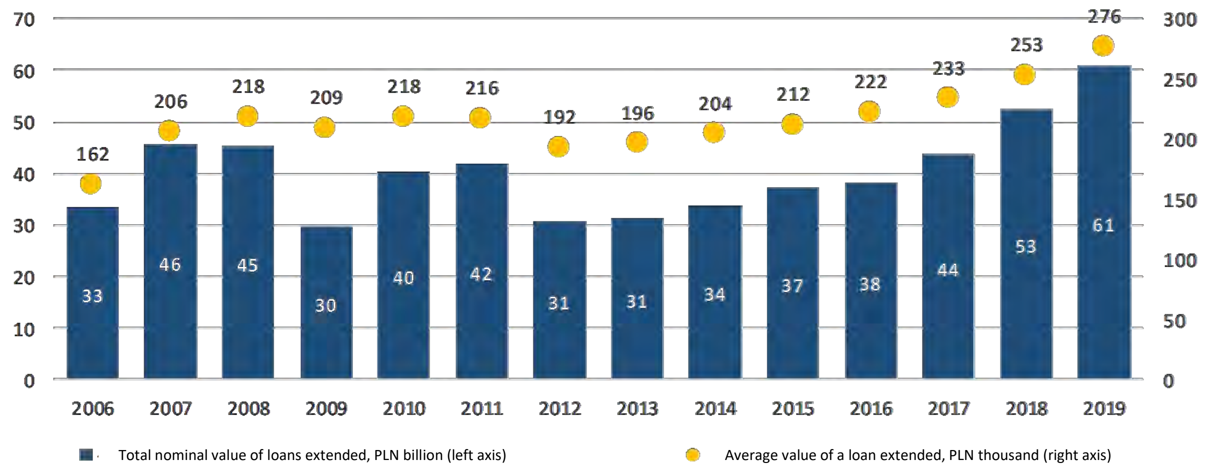
The gross carrying amount of the portfolio transferred to the off-balance-sheet accounts in 2019 was PLN 446 million (PLN 368 million in 2018).

Lending activity in 2019

In 2019, banks granted 220.7 thousand housing loans of a total nominal value of **PLN 60.9 billion**, of which PLN 5.0 billion accounted for housing loans for investment purposes[17]. The average value of a housing loan granted was PLN 276 thousand (a YoY increase of 9.3%).

[17] Housing loans for the second and subsequent real estate.

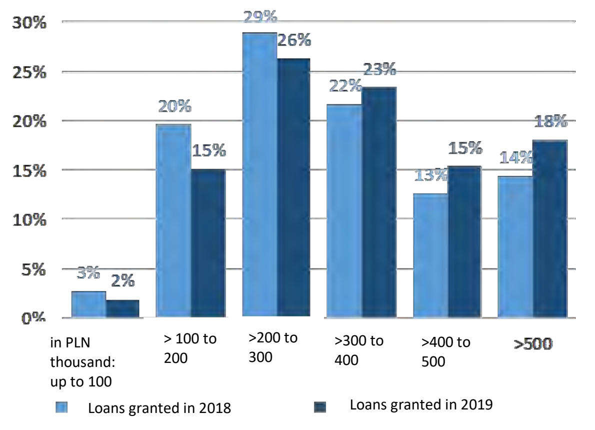
Diagram 49 Total nominal value of housing loans granted in the years 2006–2019 (in PLN billion) and the average value of a loan granted (in PLN thousand).

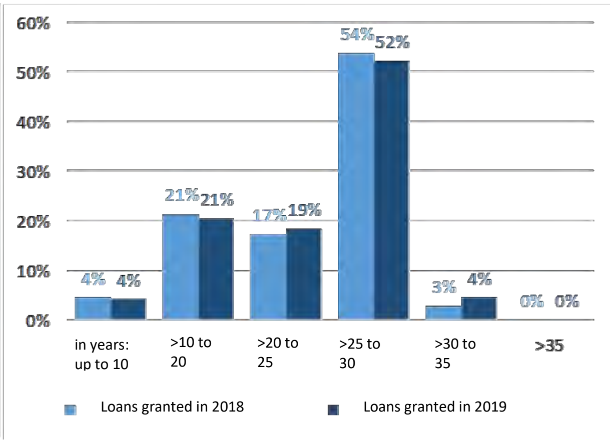


The total nominal value of housing loans granted in 2019 was **almost 16.0% higher** than the value of loans granted in 2018 with a nominal value of PLN 52.6 billion.

In 2019, the share of housing loans extended in the amount of more than PLN 300 thousands increased, while the share of loans in lower amounts decreased compared to the loans granted in 2018. 57% of the housing loans granted in 2019 (share by contract value) had an initial duration of more than 25 years. The structure of the lending activity by lending period has not changed significantly compared to 2018. The structure of the lending activity is shown in Diagram 50.

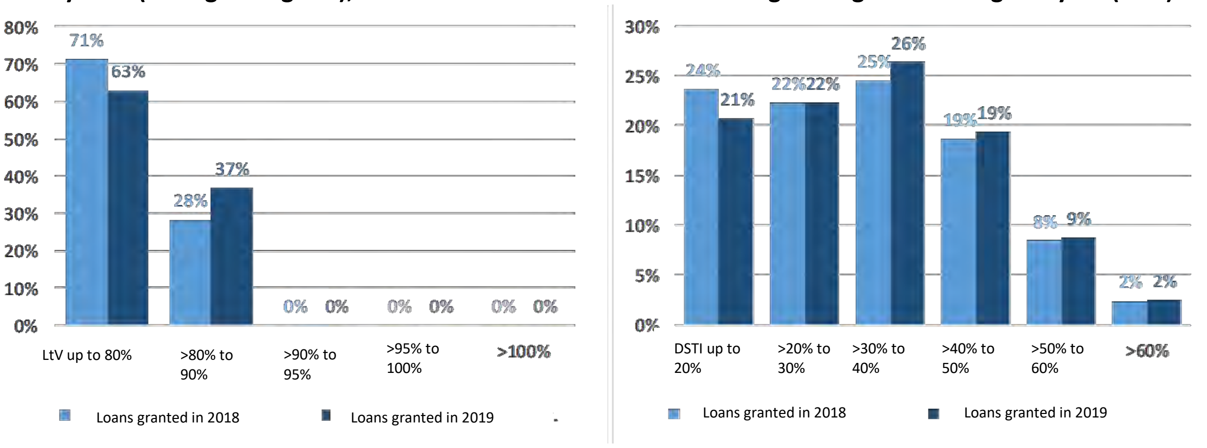
Diagram 50 Breakdown of the total contract value of loans granted in 2018 and 2019 by nominal value (the left diagram) and by initial lending period (the right diagram); the share in the total value of housing loans granted in a given year (in %).





Nearly 100% of housing loans granted in 2019 had **LtV** of up to 90% at the time of granting. As compared to 2018, the share of loans with LtV between 80% and 90% increased, at the expense of loans with LtV of up to 80%. 88.8% of housing loans (the share by nominal value) were granted to individuals for whom **DSTI** did not exceed 50%. The debt burden on borrowers increased compared to 2018, although that increase was modest – from the loans granted in 2018, the loans for which DSTI did not exceed 50% accounted for 89.2%.

Diagram 51 Breakdown of the total contract value of loans granted in 2018 and 2019 by LtV (the left diagram) and by DSTI (the right diagram); the share in the total value of housing loans granted in a given year (in %).

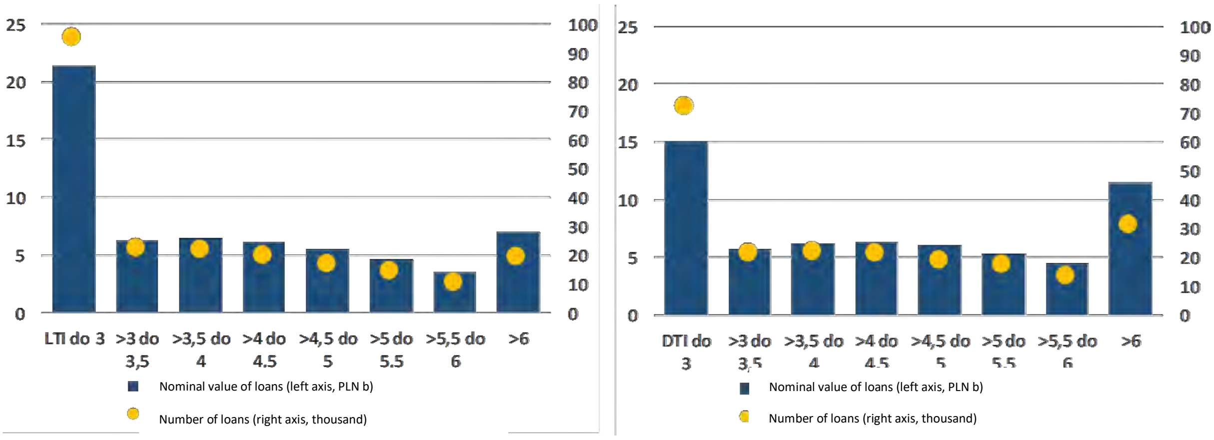


LTI (Loan-to-income) is a ratio of the mortgage credit granted to the annual net income of the customer.

DTI (Debt-to-income) is a ratio of the total debt to the annual net income of the customer.

For housing loans granted in 2019, the median **LTI** was within the range (3;3.5>, and the median **DTI** was within the range (3.5;4>. Diagram 52 shows a comparison of distribution of both ratios. For DTI, the share of the loans for which the ratio exceeds 6 is much higher than for LTI, which is the effect of the additional burden on holders of housing loans from other housing or consumer credit facilities.

Diagram 52 Nominal value (in PLN billion) and number (in thousand) of loans granted in 2019, by values of LTI and DTI.



Some banks reported in the survey that there was a group of customers who at the time of signing a housing credit agreement already had a cash loan/credit in a high amount (above PLN 50 thousand). It is possible that they were loans to finance the down payment for a housing loan. The scale of that phenomenon in the banking sector is low: the share of housing loans for which customers held high-value loans, in the portfolio of housing loans granted in 2006-2019 (the share by nominal value), was 0.42%.

The average **margin** on loans granted in 2019 weighted by their nominal value was 2.11%.

In 2019, there was an increase in the value of **fixed interest rate** loans. At the end of 2019, their gross carrying amount was PLN 2.85 billion, of which PLN 2.31 billion accounted for the loans granted in 2019, which shows that in 2019 banks started to extend fixed interest rate loans on a larger scale.

Table 17 shows the average of the maximum loan amounts that banks were ready to grant to borrowers in December 2019 for a representative loan under certain assumptions.

Table 17 Average of maximum loan amounts that banks were ready to grant to borrowers in December 2019 under certain assumptions.*

	Monthly gross income (PLN)				
A single person	4 000	5 000	6 000	7 000	8 000
age: 30 years	235 953	315 351	387 253	456 483	525 106
age: 40 years	237 911	309 951	390 742	459 516	526 293
age: 50 years	207 235	277 485	343 386	398 257	473 311
Married couple without children	8 000	10 000	12 000	14 000	16 000
age: 30 years	483 776	651 111	778 944	925 627	1 032 973
age: 40 years	468 180	628 252	774 645	898 718	1 023 294
age: 50 years	383 891	520 161	647 601	778 558	896 851
Married couple with 1 child	8 000	10 000	12 000	14 000	16 000
age: 30 years	389 525	600 014	754 485	897 203	1 034 962
age: 40 years	402 760	571 936	746 847	924 363	1 023 386
age: 50 years	319 663	491 413	630 882	772 058	868 755
Married couple with 2 children	8 000	10 000	12 000	14 000	16 000
age: 30 years	285 432	495 322	683 406	850 373	1 018 809
age: 40 years	281 669	481 137	671 338	849 872	990 381
age: 50 years	226 387	389 795	565 529	717 296	838 536

*Assumptions:
1/ A loan in PLN repaid in equal instalments
2/ Lending period 25 years
3/ WIBOR 3M 1.70%
4/ Margin 2.10%
5/ Borrower(s) has(have) the required down payment of 10%
6/ No debt due to other loans
7/ Borrowers' age: 30, 40 or 50 years (spouses as peers – for reasons of simplification)
8/ Place of residence, work and real property acquired - Warsaw
9/ For reasons of simplification it is assumed that in the case of a married couple, both spouses work, receive the same remuneration and pay the income tax individually

As a rule, the highest maximum amount of credit could be made available by banks to married couples with the highest income (a total of PLN 16 000 in the study), aged 30-40, with no children or with one child.

6.1.2.2. Consumer loans to households

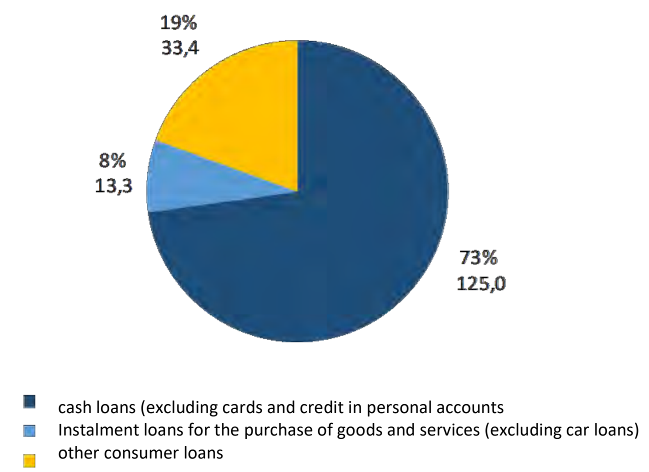
This sub-chapter contains information based on a post-reporting survey as at the end of 2019. 26 banks participated in the survey. The criterion for classification into the sample was the portfolio of consumer loans to households above PLN 100 million (as at the end of November 2019).

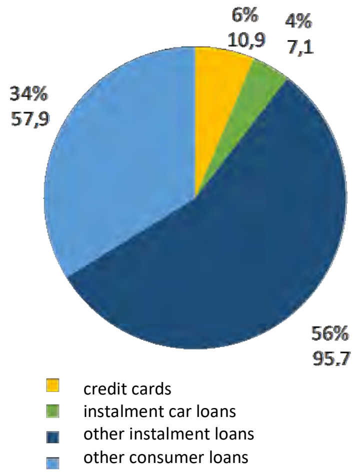
<u>Size and composition of the portfolio</u>

The gross carrying amount of the portfolio of consumer loans[18] was PLN 171.6 billion at the end of 2019. Compared to the end of 2018, there was an increase in the value of the portfolio by PLN 7.3 billion (+4.4%).

The most significant item was cash loans (excluding cards and credit in personal accounts) accounting for 73% of the gross carrying amount of the consumer credit portfolio. According to the FINREP classification, the largest share was represented by instalment loans (including car loans) – 60%.

Diagram 53 Structure of the portfolio of consumer loans at the end of 2019, gross carrying amount (in PLN billion), share in total consumer loans by gross carrying amount (in %); Classification according to FINREP (the right diagram).



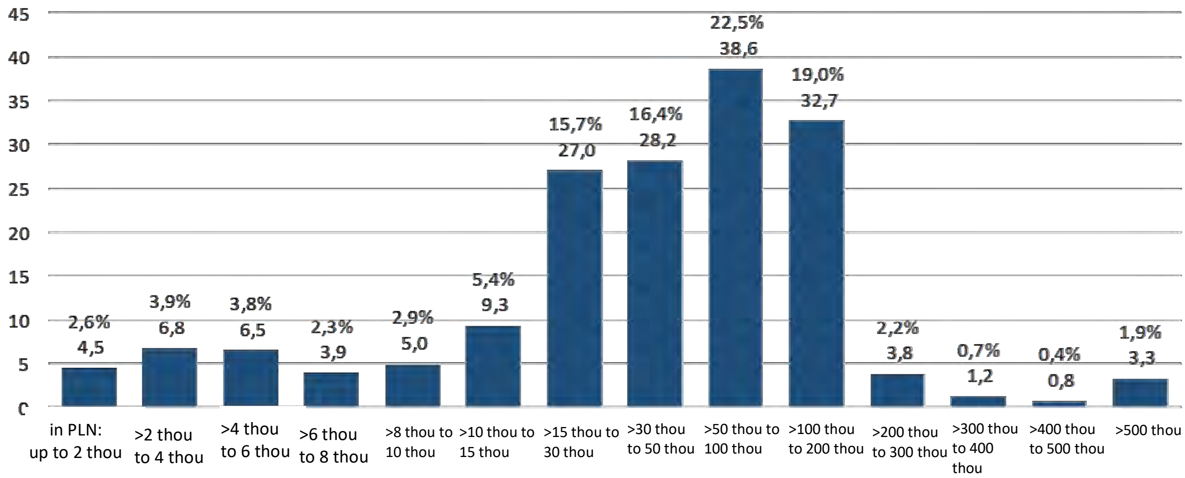


[18] The value of loans measured at amortised cost. If additionally the portfolio of loans measured at fair value is included through the profit and loss account, the value of consumer loans for all banks at the end of 2019 was 184.2 billion (an increase of 21.0 billion and 12.9% YoY).

The loans granted according to simplified rules of creditworthiness assessment (according to Recommendation T) accounted for 24% of the consumer credit portfolio (19% in 2018).

More than 70% of all consumer loans (according to gross carrying amount) are loans with a nominal value of between PLN 15 thousand and PLN 200 thousand.

Diagram 54 Breakdown of gross carrying amount of consumer loans at the end of 2019 (PLN billion) by nominal value of the loan at the time of granting, share of the individual categories in the total consumer credit (%).



<u>Quality of the consumer credit portfolio</u>

Non-performing/impaired loans account for 9.9% of total consumer credit (share in the gross carrying amount). Loans with no delay in repayment – 84.8%. The remaining part of the portfolio (5.3%) are loans with a delay in repayment but without recognised impairment.

Table 18 shows the percentage distribution of loans given the number of days of delay in repayment broken down by nominal amount at the time of granting the loan and for the original term of repayment. Loans in the lowest amount, regardless of the lending period, are characterised by the highest quality. High-amount loans (with a nominal value exceeding PLN 50 thousand) with an initial repayment period of up to 2 years have the poorest results in terms of repayment.

Table 18 Breakdown of consumer loans by number of days of delay in repayment at the end of 2019 (the share calculated based on the gross carrying amount).

Original repayment period at the time of granting the loan	Nominal value at the time of granting the loan (PLN)					
loans without delay	**up to 8 thou**	**8 thou to 15 thou**	**15 thou to 30 thou**	**30 thou to 50 thou**	**50 thou to 100 thou**	**above 100 thou**
up to 2 yrs	86%	85%	81%	73%	57%	44%
2 yrs to 5 yrs	86%	87%	87%	88%	89%	76%
5 yrs to 8 yrs	86%	87%	89%	88%	89%	84%
more than 8 yrs	87%	88%	85%	85%	85%	79%
loans with a delay of 1-30 days	**up to 8 thou**	**8 thou to 15 thou**	**15 thou to 30 thou**	**30 thou to 50 thou**	**50 thou to 100 thou**	**above 100 thou**
up to 2 yrs	5%	4%	4%	3%	3%	2%
2 yrs to 5 yrs	5%	4%	4%	4%	3%	3%
5 yrs to 8 yrs	5%	5%	4%	5%	4%	6%
more than 8 yrs	3%	5%	5%	5%	5%	6%
loans with a delay of 31-90 days	**up to 8 thou**	**8 thou to 15 thou**	**15 thou to 30 thou**	**30 thou to 50 thou**	**50 thou to 100 thou**	**above 100 thou**
up to 2 yrs	1%	1%	1%	1%	1%	1%
2 yrs to 5 yrs	1%	1%	1%	1%	1%	1%
5 yrs to 8 yrs	2%	2%	1%	2%	2%	2%
more than 8 yrs	1%	2%	2%	2%	2%	3%
loans with a delay of 91-180 days	**up to 8 thou**	**8 thou to 15 thou**	**15 thou to 30 thou**	**30 thou to 50 thou**	**50 thou to 100 thou**	**above 100 thou.**
up to 2 yrs	1%	1%	1%	1%	1%	2%
2 yrs to 5 yrs	1%	1%	1%	1%	1%	1%
5 yrs to 8 yrs	1%	1%	1%	1%	1%	1%
more than 8 yrs	1%	1%	1%	1%	1%	2%
loans with a delay of 181 days - 1 year	**up to 8 thou**	**8 thou to 15 thou**	**15 thou to 30 thou**	**30 thou to 50 thou**	**50 thou to 100 thou**	**above 100 thou**
up to 2 yrs	2%	2%	3%	4%	7%	9%
2 yrs to 5 yrs	1%	1%	1%	2%	2%	3%
5 yrs to 8 yrs	1%	1%	1%	1%	1%	1%
more than 8 yrs	2%	1%	2%	2%	2%	2%
loans with a delay of more than 1 year	**up to 8 thou**	**8 thou to 15 thou**	**15 thou to 30 thou**	**30 thou to 50 thou**	**50 thou to 100 thou**	**above 100 thou**
up to 2 yrs	6%	6%	10%	17%	31%	41%
2 yrs to 5 yrs	6%	6%	5%	4%	5%	17%
5 yrs to 8 yrs	5%	5%	4%	4%	3%	6%
more than 8 yrs	5%	4%	5%	5%	5%	9%

Table 19 Share of non-performing/impaired loans in the total credit at the end of 2019 (the share calculated based on the gross carrying amount, the upper table) and the gross carrying amount of non-performing/impaired loans (PLN million, the lower table).

Original repayment period at the time of granting the loan	Nominal value at the time of granting the loan (PLN)					
Non-performing/impaired consumer loans	up to 8 thou	8 thou to 15 thou	15 thou to 30 thou	30 thou to 50 thou	50 thou to 100 thou	above 100 thou
up to 2 yrs	8%	10%	16%	24%	40%	54%
2 yrs to 5 yrs	9%	8%	8%	7%	8%	21%
5 yrs to 8 yrs	9%	8%	7%	7%	6%	10%
more than 8 yrs	9%	7%	10%	9%	9%	14%
up to 2 yrs	982.4	382.8	471.8	397.9	486.2	485.4
2 yrs to 5 yrs	588.7	599.0	1 075.9	679.3	567.8	565.4
5 yrs to 8 yrs	117.2	196.9	547.1	797.9	971.8	1 083.0
more than 8 yrs	162.3	68.9	244.8	514.8	1 278.4	3 758.5

The gross carrying amount of non-performing/impaired loans on the balance sheets of the banks involved in the survey is PLN 17.0 billion, of which PLN 9.2 billion (54.0%) corresponds to high-value loans with a nominal value of PLN 50 thousand. High-value loans granted for a long term (more than 5 years) account for 40.2% of the consumer credit portfolio (share according to the gross carrying amount). The value of non-performing loans for this portfolio is PLN 7.1 billion and their share in the value of high-value long-term consumer loans is 10.3%. The largest share of non-performing loans occurs in the class of high-value loans with a short initial repayment period – for loans granted for amounts of more than PLN 50 thousand for up to 2 years, the gross carrying amount of non-performing/impaired loans is PLN 2.1 billion and accounts for as much as 46.1% of the value of high-value consumer loans granted for up to 2 years (Table 19). However, that portfolio account for only 1.2% of the consumer credit portfolio.

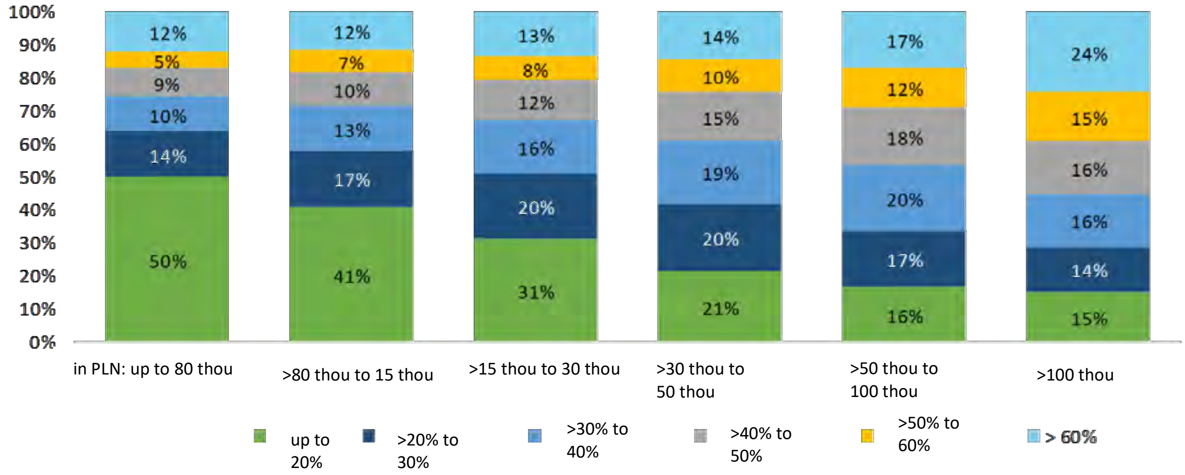
<u>DSTI</u>

DSTI (*Debt-Service-to-Income*) is a ratio of the monthly value of all repayments of credit instalments to the monthly net income of households which determines that proportion of income is allocated every month for the repayment of debt[19]. DSTI considers not only the expenditure related to the handling of consumer credit but also all other credit charges.

Diagram 55 shows the distribution of the DSTI ratio for each range according to the nominal value of the loan at the time of granting. With an increase in the nominal value of a consumer loan held by a household, the debt burden of the household increases as well.

[19] The numerator of the ratio does not take account of instalments of loans on a credit card, in a line of credit or current account.

Diagram 55 Distribution of DSTI depending on the nominal value of the loan at the time of granting (the share according to the gross carrying amount) at the end of 2019.

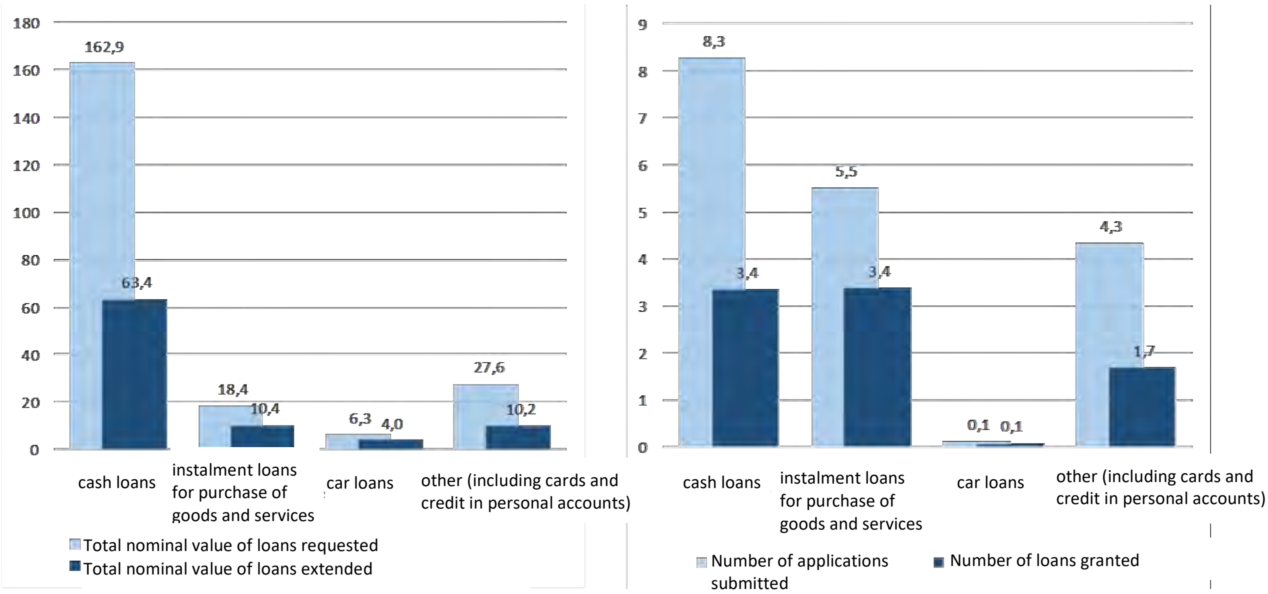


The value of consumer loans for which the DSTI ratio estimated for the end of 2019 exceeded 50% amounted, for the entire group of banks, to approx. PLN 46.4 billion, which accounts for 27% of the value of all consumer loans.

Lending activity in 2019

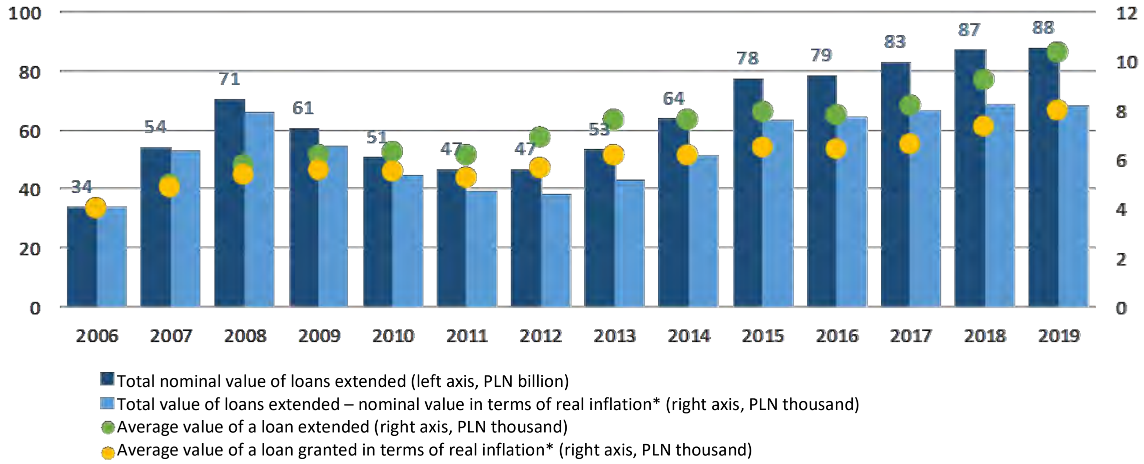
The nominal value of consumer loans granted in 2019 was PLN 88.0 billion, of which PLN 35.7 billion according to the simplified rules of creditworthiness assessment (according to Recommendation T). Diagram 56 shows the value and number of loans granted and loans requested.

Diagram 56 Nominal value (in PLN billion) and number (in million) of loans granted and loans requested in 2019



The total nominal value of consumer loans granted in 2019 was higher by PLN 745.5 million than the value of loans granted in 2018 (an increase of 0.9%). The average nominal value of a consumer loan granted in 2019 was PLN 10.3 thousand (PLN 9.2 thousand in 2018).

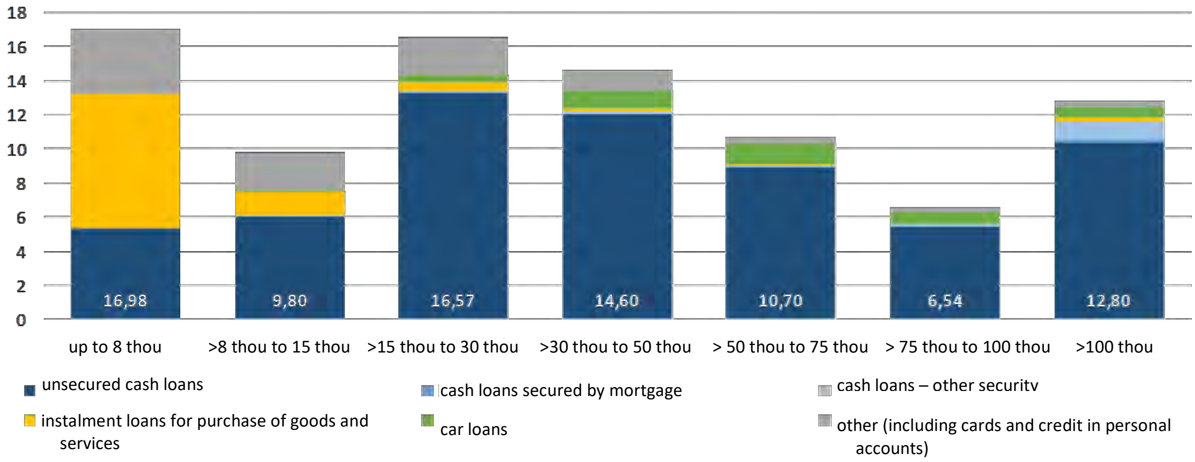
Diagram 57 Development of the lending activity in the years 2006–2019.



* Annual consumer price indices (source: Statistics Poland), price index (2006 = 100).

69.9% of consumer loans granted in 2019 were unsecured cash loans. For loans with a nominal value above PLN 15 thousand, that share exceeds 80% (Diagram 58).

Diagram 58 Total nominal value of consumer loans granted in 2019 (in PLN billion) broken down by nominal value of the loan (in PLN).



High-value loans with a nominal value of more than PLN 50 thousand accounted for 34.1% of consumer loans granted in 2019[20] (32.5% in 2018). During recent years the importance of such loans in the banks' lending activity has increased. High-value loans accounted for approx. 20% of the nominal value of all the consumer loans granted in 2013.

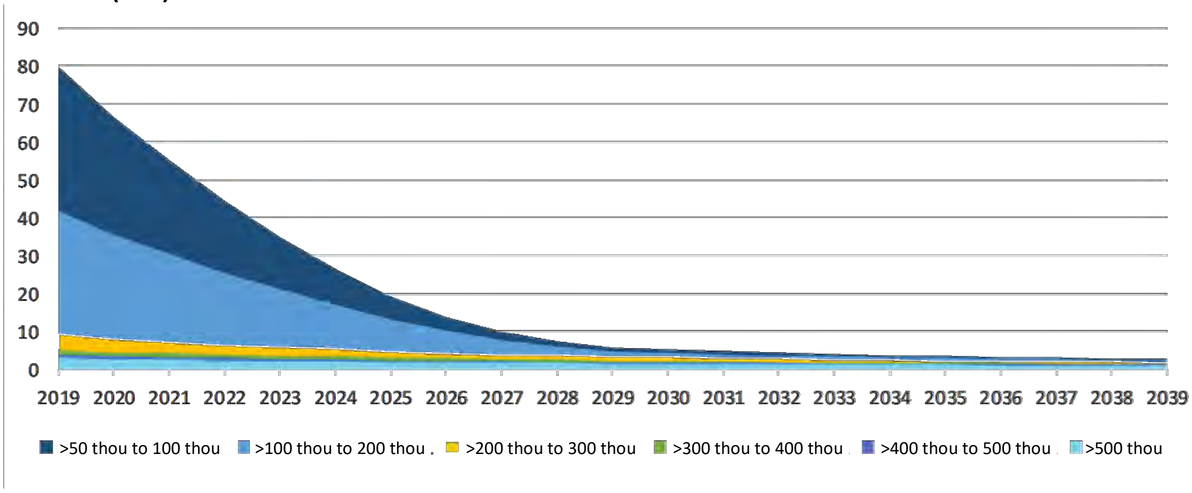
<u>High-value consumer loans with long repayment periods</u>

High-value consumer loans (with a nominal value of more than PLN 50 thousand at the time of granting) with a long initial repayment period (of more than 5 years) accounted for 40.2% of the value of consumer loans and their gross carrying amount at the end of 2019 was PLN 69 billion.

[20] The share calculated according to the nominal value of the loans.

According to the original repayment schedules, the gross carrying amount of the portfolio of high-value consumer loans as at the end of 2019 will decrease by half in 2023. The timing of repayment of that portfolio is shown in Diagram 59.

Diagram 59 Timing of repayment of the consumer credit portfolio as at the end of 2019 with an initial value of more than PLN 50 thousand, under the assumption that repayment takes place in accordance with the schedule. The timing concerns the gross carrying amount (PLN billion) broken down by initial nominal value of the loans (PLN).



Debt consolidation loans

Consumer debt consolidation loans account for 30.7% of all consumer loans. Their gross carrying amount is PLN 52.7 billion, of which PLN 15.9 billion is a volume taken over from other banks and PLN 24.0 billion is the gross carrying amount of loans that arose in the process of consolidation, without the share of loans taken over from another bank.

The gross carrying amount of impaired debt consolidation loans is PLN 5.2 billion, which accounts for 9.8% of the value of the portfolio of debt consolidation loans.

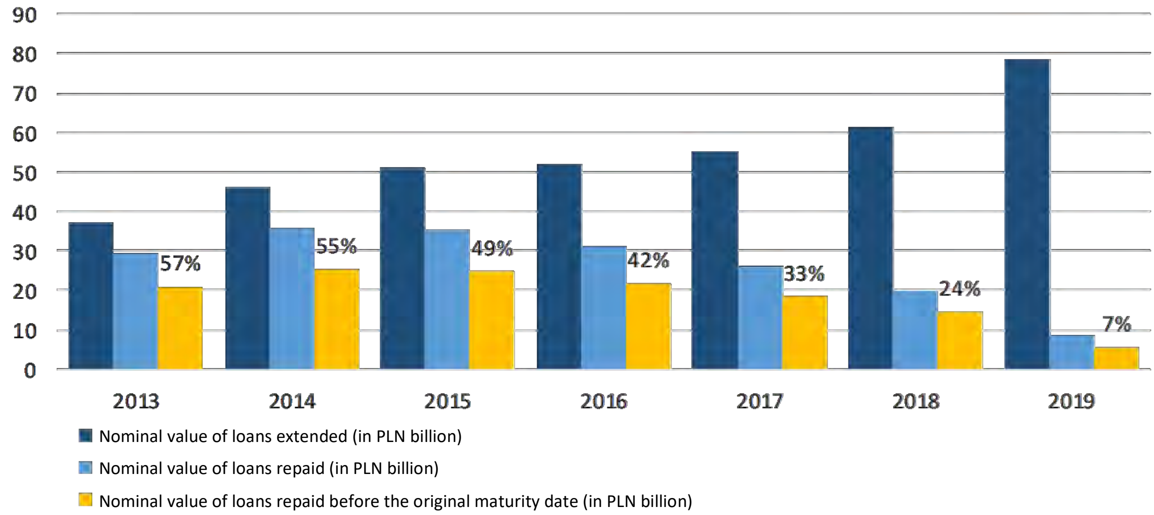
Sale of the portfolio and transfer to the off-balance-sheet accounts

Consumer loans with a total gross carrying amount of PLN 3.2 million were written off the banks' balance sheets due to sale and a total of PLN 0.8 billion due to the transfer to the off-balance-sheet accounts.

Early repayment of credit

34.6% of the consumer loans granted in the years 2013–2019 are loans repaid before the original maturity (share by nominal value). Such loans account for 70.9% of all repaid loans granted during that period. Diagram 60 shows the nominal value of loans granted, loans repaid and loans repaid before the original maturity according to the year when the loan was granted.

Diagram 60 Nominal value (in PLN billion) of the loans granted, repaid and repaid before the original maturity for loans granted in 2013–2019; the share of loans repaid before maturity at the nominal value of the loans granted (in %).



36.8% of consumer loans with a nominal value of less than PLN 50 thousand granted in the years 2013–2019 (share by nominal value) were repaid before maturity. In the case of high-value loans with a nominal value of more than PLN 50 thousand, the share is 28.7%. However, of all high-value loans repaid, 85.7% (by nominal value) were repaid before maturity. The share is 67.7% for loans with a nominal value of less than PLN 50 thousand. Therefore, granting a high-value loan entails a higher probability of early repayment than in the case of loans with a lower nominal value.

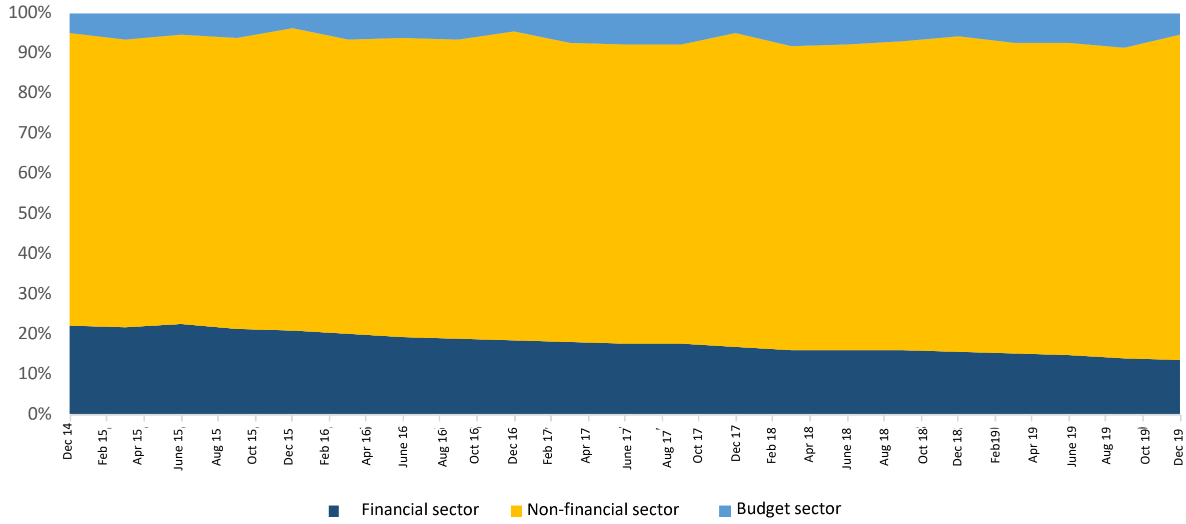
Securitisation in the Polish banking sector in 2019

- **1 January 2019** marked the effective date of Regulation (EU) 2017/2402 of the European Parliament and of the Council of 12 December 2017 laying down a general framework for securitisation and creating a specific framework for simple, transparent and standardised securitisation, and amending Directives 2009/65/EC, 2009/138/EC and 2011/61/EU and Regulations (EC) No 1060/2009 and (EU) No 648/2012.
- In 2019, a total of 5 STS securitisation transactions took place in the Polish financial market.

6.2. Liabilities

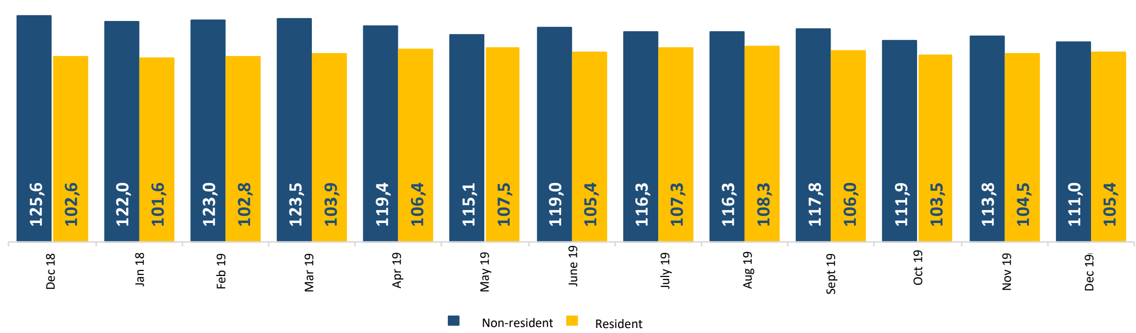
There was a sharp increase in the share of deposits from non-financial sector entities in the total amount of credit and deposit liabilities — from 72.8% at the end of 2014 to more than 80% at the end of 2019. There also occurred a gradual decrease in the financing of banks by foreign financial institutions, driven by the decreasing share of foreign-currency loans on banks' balance sheets and by a relatively large increase in the volume of deposits (compared to loans).

Diagram 61 Changes in the financing structure of the banking sector: credit received and deposits



Deposits and loans received from the financial sector remain stable, without major fluctuations. Their structure is dominated by non-residents.

Diagram 62 Deposits and loans received from the financial sector (in PLN billion)



6.3. Deposits of the non-financial sector

In 2019, the value of deposits of the non-financial sector increased by 9.6% YoY (or PLN 111.2 billion). The largest increase in the volume of deposits occurred at commercial banks (by PLN 98.0 billion) compared to 2018 (i.e. by 9.5% YoY). The largest growth rate occurred for branches of credit institutions (an increase of 30.2% YoY or PLN 3.3 billion).

Table 20 Deposits from non-financial entities – sector structure

	Dec 14	Dec 15	Dec 16	Dec 17	Dec 18	Dec 19	YoY change
	(PLN billion)						2019/2018
Banking sector	**854.1**	**938.8**	**1 028.1**	**1 070.4**	**1 158.6**	**1 269.8**	**9.6%**
Commercial banks	764.5	845.6	924.5	956.8	1 034.0	1 132.0	9.5%
Cooperative banks	83.1	86.5	96.6	105.2	113.6	123.5	8.7%
Branches of credit institutions	6.4	6.7	6.9	8.4	11.0	14.3	30.2%

The structure of deposits from non-financial sector entities is dominated by households (72.3%) and deposits in PLN (86.5%).

Diagram 63 Deposits from non-financial sector entities; December 2019 (in PLN billion)

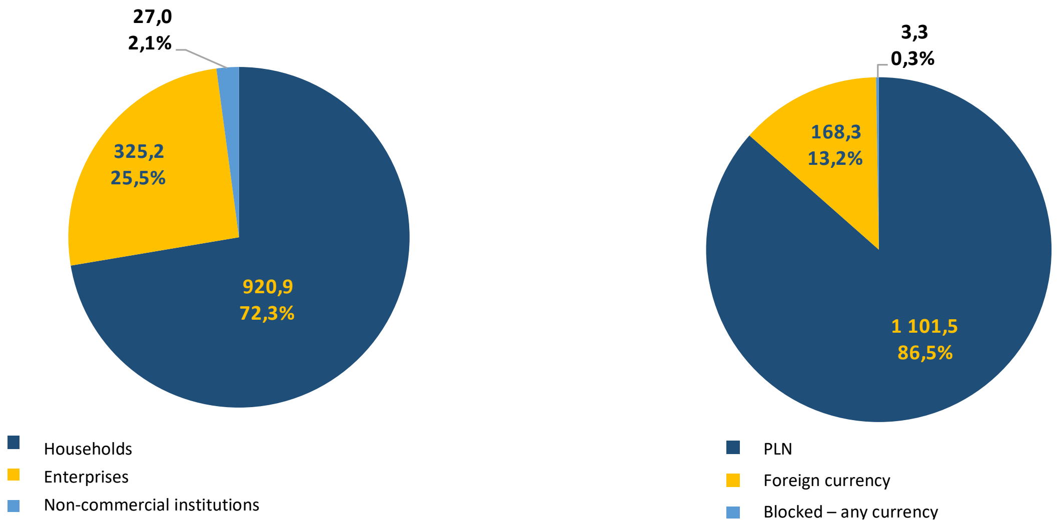


Table 21 Deposits from non-financial sector – currency and maturity structure

	Dec 14	Dec 15	Dec 16	Dec 17	Dec 18	Dec 19	YoY change
	(PLN billion)						2019/2018
Deposits of households	**606.4**	**665.7**	**730.8**	**761.3**	**838.8**	**919.9**	**9.7%**
in PLN	553.6	603.7	659.1	677.4	746.3	818.4	9.7%
in foreign currency	52.8	62.0	71.7	83.9	92.5	101.6	9.8%
Deposits of enterprises	**229.4**	**253.3**	**274.9**	**285.0**	**293.6**	**322.9**	**10.0%**
in PLN	196.1	212.4	222.5	219.7	234.5	257.1	9.6%
in foreign currency	33.3	40.9	52.5	65.2	59.1	65.8	11.5%
Current deposit	414.5	480.1	575.7	650.9	731.3	844.2	15.4%
Fixed-term deposits	439.6	458.7	452.3	419.4	427.3	425.5	-0.4%

Deposits from both households and businesses in 2019 increased: by 9.7% (or PLN 81.1 billion) and 10.0% (PLN 29.3 billion), respectively.

The volume of fixed-term deposits decreased by PLN 1.8 billion YoY (or -0.4%), with the growth rate for current deposits increased by PLN 113.0 billion YoY (or +15.4%), while in 2018 the increase was approx. 12.3%). This is confirmed by the fact that in a low interest rate environment, with rising inflation (3.4% in December 2019), the real negative interest rate encourages non-financial sector customers to seek capital investments other than deposits. There is a visible increase in current deposits where savings accounts are also recognised, as an alternative to fixed-term deposits.

Diagram 64 Deposits of households (in PLN billion)

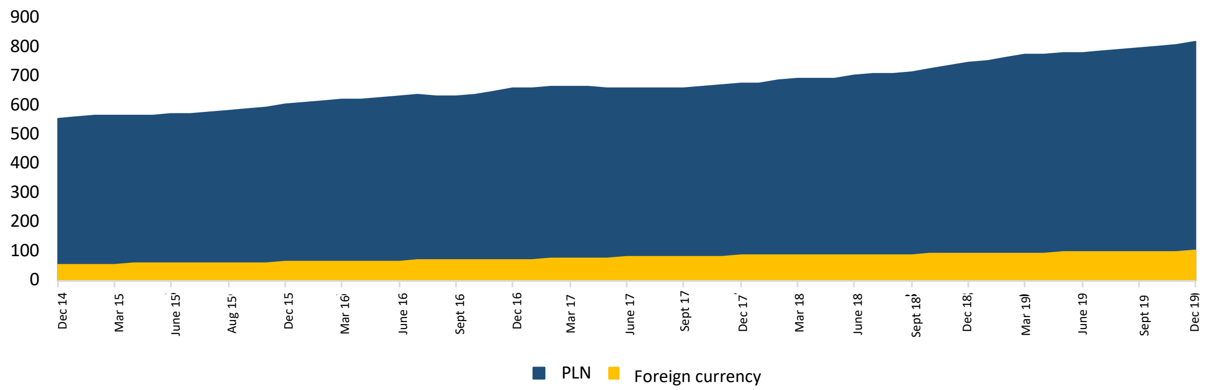
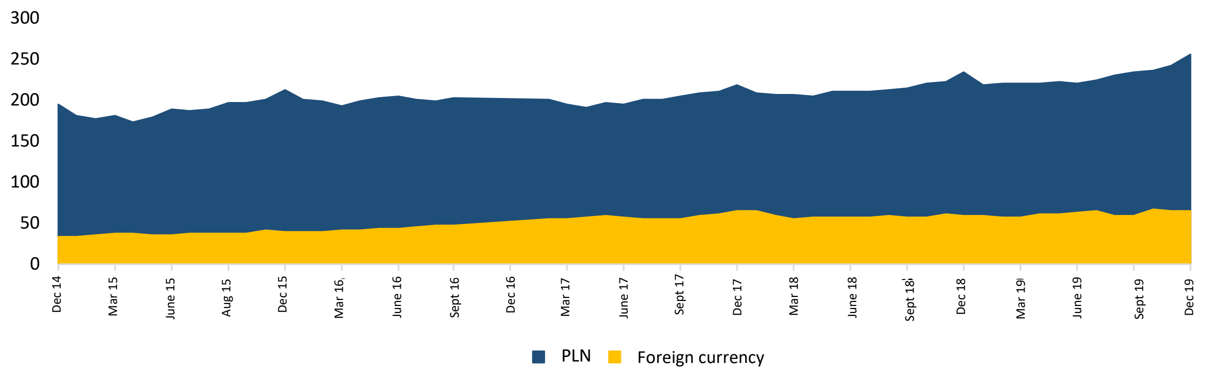


Diagram 65 Deposits of enterprises (in PLN billion)



6.3.1. Interest rate of deposits

At the end of 2019, the average interest rate of all deposits of private individuals was 1.24%.

The average interest rate of all fixed-term deposits of non-financial enterprises was 0.91%.

7. Capital adequacy

In 2019, the capital situation of the banking sector stabilised. The sector's own funds at the end of 2019 amounted to PLN 210.8 billion (a YoY increase of 3.5%). The total risk exposure amount rose at a lower rate (3.1% YoY), which resulted in an increase in the total capital ratio by 7.8 bps. TCR at the end of 2019 for the entire banking sector was 19.12%: 19.22% for commercial banks, and 17.74% for cooperative banks.

Table 22 Own funds, risk exposure amount

	Value (PLN billion)		YoY change	
	Dec 19	Dec 18	PLN billion	%
Own funds				
Banking sector	210.8	203.7	7.2	3.5%
Commercial banks	*198.4*	*191.6*	*6.8*	*3.5%*
Cooperative banks	*12.4*	*12.0*	*0.4*	*3.4%*
Tier I capital				
Banking sector	188.1	183.2	4.9	2.7%
Commercial banks	*176.2*	*171.8*	*4.5*	*2.6%*
Cooperative banks	*11.9*	*11.4*	*0.4*	*3.9%*
Tier II capital				
Banking sector	22.7	20.4	2.2	11.0%
Commercial banks	*22.1*	*19.9*	*2.3*	*11.4%*
Cooperative banks	*0.6*	*0.6*	*0.0*	*-5.2%*
Total risk exposure amount				
Banking sector	1 102.3	1 069.2	33.1	3.1%
Commercial banks	*1 032.3*	*1 001.0*	*31.3*	*3.1%*
Cooperative banks	*70.1*	*68.3*	*1.8*	*2.7%*
Exposure amount – credit risk				
Banking sector	1 002.2	969.7	32.5	3.4%
Commercial banks	*941.1*	*910.1*	*31.0*	*3.4%*
Cooperative banks	*61.2*	*59.6*	*1.6*	*2.6%*
Exposure amount – operational risk				
Banking sector	82.7	81.5	1.1	1.4%
Commercial banks	*73.7*	*72.9*	*0.8*	*1.1%*
Cooperative banks	*8.9*	*8.6*	*0.3*	*4.0%*
Exposure amount – other risks				
Banking sector	17.4	18.0	-0.6	-3.1%
Commercial banks	*17.4*	*17.9*	*-0.5*	*-2.7%*
Cooperative banks	*0.0*	*0.1*	*-0.1*	*-97.1%*

In view of the fact that the growth rate of Tier 1 capital was lower (2.7% YoY) than the growth rate of the total risk exposure amount, the Tier 1 capital ratio decreased slightly from 17.13% at the end of 2018 to 17.07% at the end of 2019. The total capital ratio increased by 7.8 bps, which was possible due to the high growth rate of Tier 2 capital (11.0% YoY).

Table 23 Capital ratios

	Dec 19	Dec 18	YoY change (bp)
TCR			
Banking sector	19.12%	19.05%	7.8
Commercial banks	*19.22%*	*19.14%*	*7.4*
Cooperative banks	*17.74%*	*17.62%*	*12.1*
T1			
Banking sector	17.07%	17.13%	-6.8
Commercial banks	*17.07%*	*17.16%*	*-8.6*
Cooperative banks	*16.95%*	*16.77%*	*18.7*
CET1			
Banking sector	17.06%	17.13%	-6.7
Commercial banks	*17.07%*	*17.16%*	*-8.5*
Cooperative banks	*16.92%*	*16.72%*	*20.9*

At the end of 2019, two commercial banks and four cooperative banks failed to meet the regulatory requirements on minimum capital ratios. The share of those banks in the banking sector's assets was 1.1%. Four commercial banks and seventeen cooperative banks failed to meet the regulatory minimum requirement plus the combined buffer requirement. Their share in the banking sector's assets is 5.5%. The total capital shortfall was PLN 3.2 billion. The other banks reported a capital surplus of PLN 52.8 billion above the regulatory minimum requirement plus the combined buffer requirement.

Table 24 Capital shortfall in the commercial banks sector

	Total capital shortfall (PLN m)	Number of banks with shortfall	Share in assets of the banking sector
Commercial banks			
In relation to regulatory minimum requirement	-477.7	2	0.9%
In relation to regulatory min. plus the combined buffer requirement	-2 896.5	4	5.0%
Cooperative banks			
In relation to the regulatory minimum requirement	-196.2	4	0.2%
In relation to regulatory min. plus the combined buffer requirement	-347.4	17	0.5%

Other systemically important institutions (O-SIIs) in Poland in 2019

By decision of the KNF Board of 14 October 2019, nine banks were identified as O-SII and were set the following buffer rates:

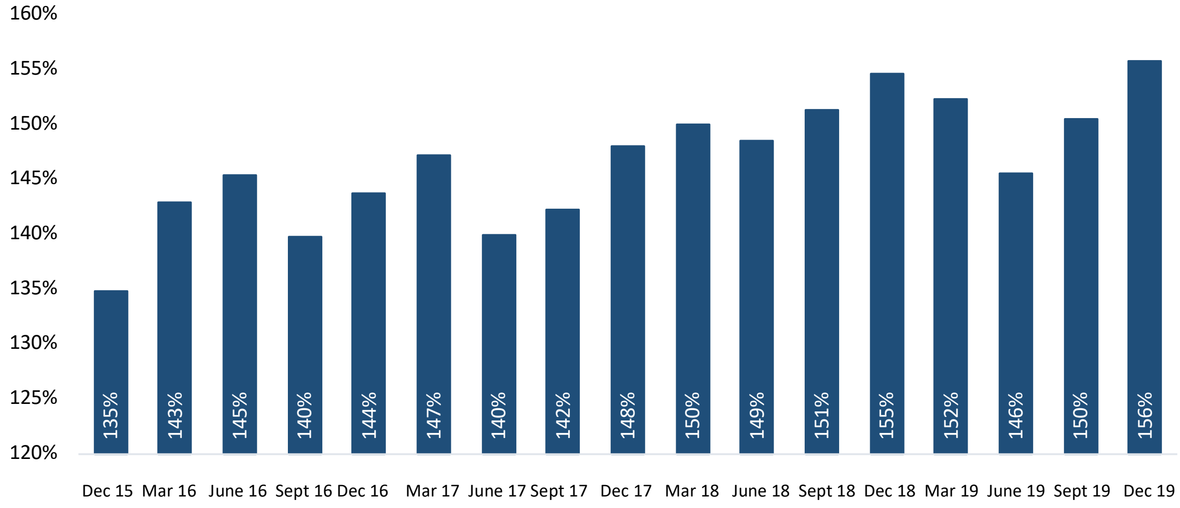
Item	Name of bank	Rate of O-SII buffer after the decision	Rate of O-SII buffer prior to the decision
1	PKO BP	**1.00%**	1.00%
2	Santander BP	**0.75%**	0.50%
3	Pekao	**0.75%**	0.75%
4	mBank	**0.75%**	0.50%
5	ING BSK	**0.50%**	0.50%
6	Bank Handlowy	**0.25%**	0.25%
7	BNP Paribas	**0.25%**	0.25%
8	Bank Polskiej Spółdzielczości	**0.10%**	0.00%
9	SGB Bank	**0.10%**	0.00%

As a result of the above decision, two banks (Deutsche Bank and Alior Bank), which had been previously identified as O-SIIs, no longer fulfil that role.

8. Liquidity

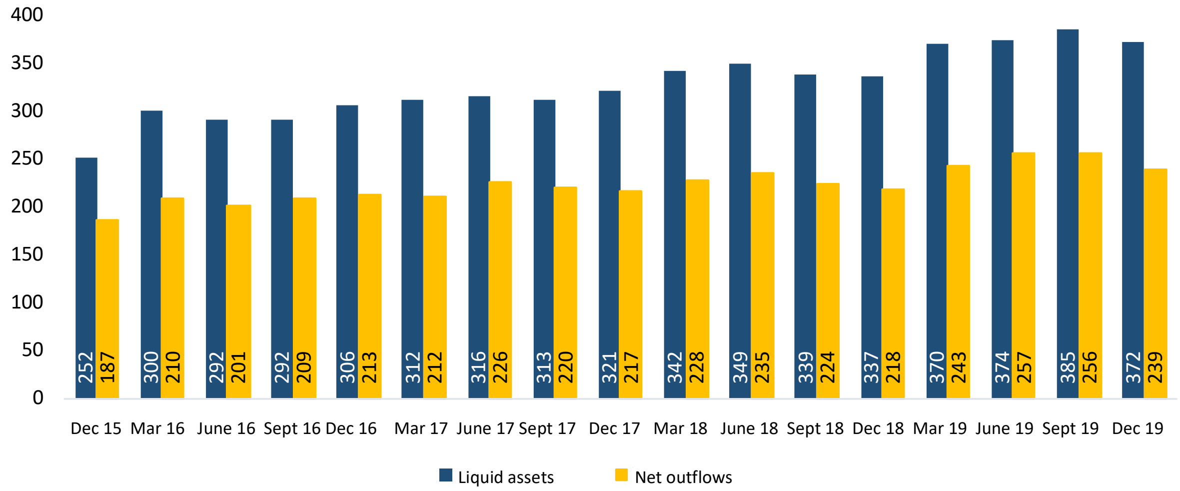
At the end of 2019, all banks complied with the applicable short-term liquidity standard – LCR (commercial banks and cooperative banks operating outside the institutional protection schemes (IPS) – individually, and banks participating in an institutional protection scheme – at IPS level). The average value of that ratio in the commercial banks sector has been above the required minimum of 100 % for years.

Diagram 66 LCR



The improving liquidity situation is driven by a faster increase in liquidity assets compared to net outflows.

Diagram 67 Relation of liquid assets to net outflows (PLN billion)



The Net Stable Funding Ratio (NSFR) in the commercial banks sector has been above 100% for years. At the end of 2019, the ratio reached 125%. Two commercial banks and 7 cooperative banks reported a value below 100% at the end of December. It should be noted that currently this is not a binding norm for banks.

Diagram 68 NSFR

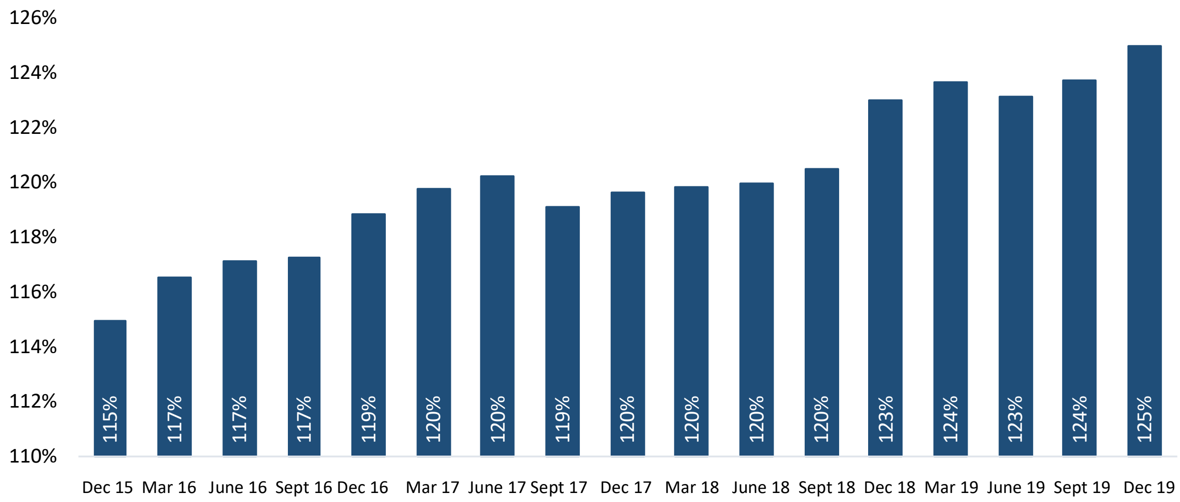
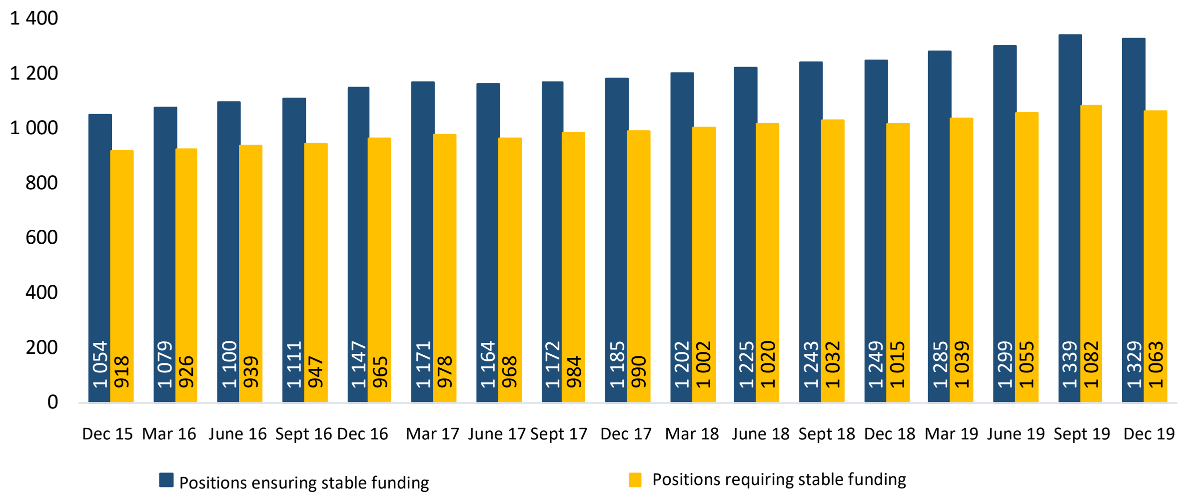


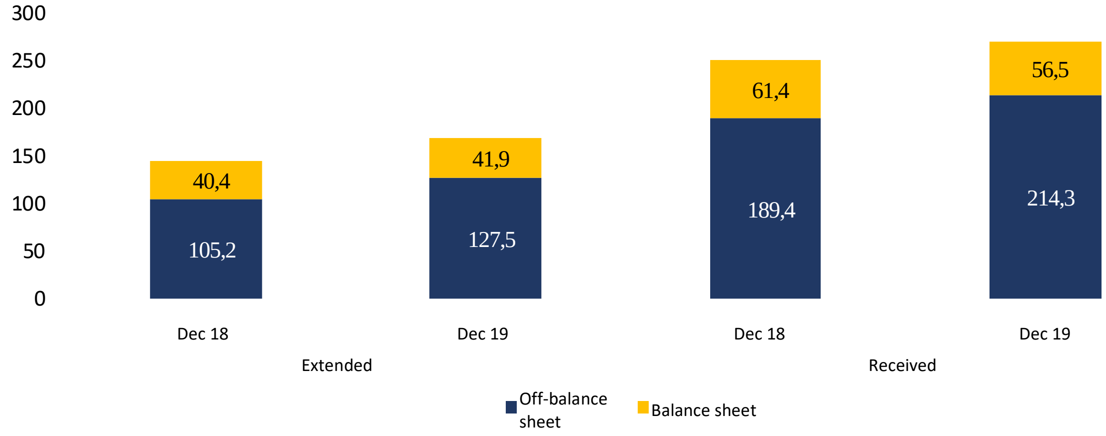
Diagram 69 Relation of positions securing stable funding to positions requiring stable funding



9. Financing as part of transactions with related parties

At the end of 2019, commercial banks with a predominance of foreign capital provided related entities with the funding of PLN 169.3 billion, most of which was off-balance sheet financing (PLN 127.5 billion). The off-balance sheet funding is predominant in the structure of funding granted and funding received. Its importance in 2019 increased compared to 2018.

Diagram 70 Funding structure (in PLN billion)



At the end of December 2019, commercial banks with a predominance of domestic capital provided related entities with the funding of PLN 52.1 billion. For banks with Polish capital, the main funding is the balance sheet funding, both granted and received.

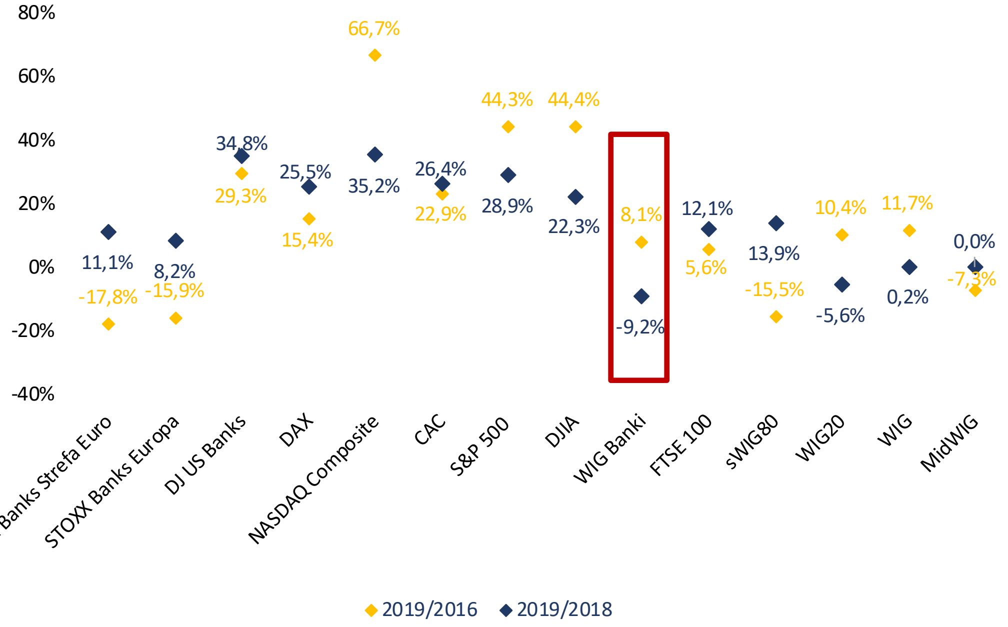
10. Situation of banks listed on the Warsaw Stock Exchange (WSE)

Table 25 Valuation of shares of Polish banks listed at the Warsaw Stock Exchange

Bank	share price	Change in price				Capitalisation (million)		P/E	P/BV
	Dec 19	1M	3M	6M	1R	PLN	EUR		
BNP Paribas BP	15.98	9.4%	2.7%	4.4%	41.8%	10 024	2 356	16.30	0.90
Millennium	5.85	6.0%	2.4%	-37.5%	-34.0%	7 097	1 668	13.00	0.79
mBank	389.40	4.6%	12.0%	-9.4%	-8.2%	16 491	3 876	17.07	1.02
Santander BP	307.40	11.8%	-2.0%	-17.1%	-14.2%	31 382	7 376	15.00	1.23
Pekao	100.45	-4.2%	-1.9%	-10.2%	-7.8%	26 365	6 197	12.18	1.13
PKO BP	34.46	-4.6%	-12.4%	-19.5%	-12.7%	43 075	10 125	10.71	1.04
ING BSK	202.50	6.6%	1.6%	0.2%	12.5%	26 345	6 192	15.87	1.73
Alior Bank	28.68	-2.8%	-26.1%	-42.4%	-46.0%	3 744	880	16.07	0.55
Bank Handlowy	51.80	-0.4%	0.6%	-3.5%	-25.0%	6 768	1 591	13.89	1.04
BOŚ	7.12	2.9%	4.4%	-8.5%	-3.1%	662	156	9.24	0.30
Idea Bank	2.40	-7.3%	8.6%	12.1%	-1.2%	188	44	2.46	0.89
Getin Noble Bank	0.30	-1.6%	-1.6%	-46.4%	-18.9%	313	74	26.23	0.11

At the end of December 2019, the WIG Banks index lost 9.2% YoY, while in three years it increased by 8.1%. On an annual basis, the WIG Banks index fell more than the main domestic indices (some of them, e.g. WIG or sWIG increased during that period). Over the same period, indices of U.S. banks (e.g. DJ US BANKS) or indices of European banks (e.g. STOXX Bank Europe) reported an increase. In each case, the Polish banks (subsidiaries of foreign companies) listed on the WSE are characterised, within a three years' perspective, by greater profitability than the parent companies.

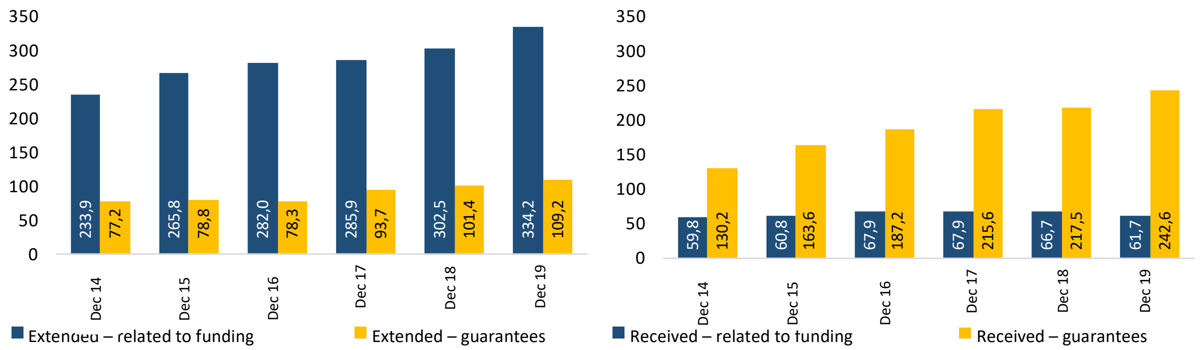
Diagram 71 Changes in the WIG Banks index against other indices



11. Off-balance sheet commitments

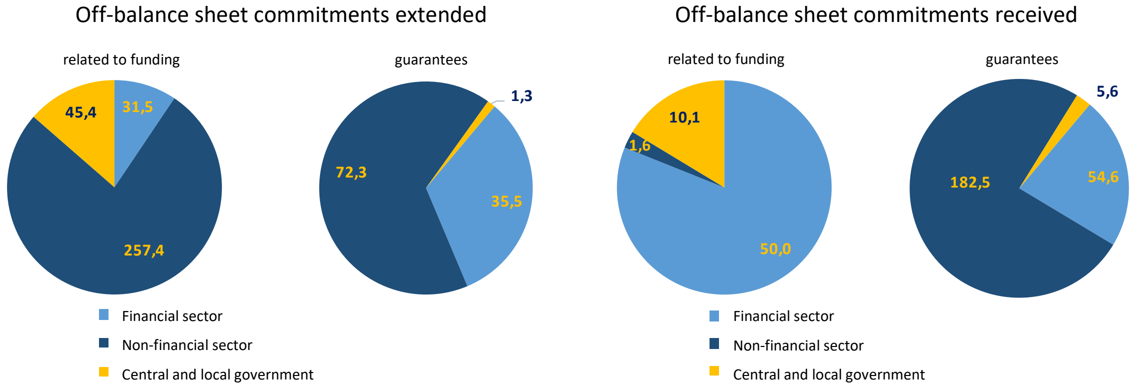
The volume of off-balance sheet commitments of the banking sector was characterised by constant trends over the last years. In 2019, one could see a further increase in the commitments extended regarding financing and guarantee-related commitments received. The tendency results from the constant development of the banking sector, which results in increased commitments concerning financing (e.g. lines of credit) and a wider scale of acquisition of guarantees (including credit repayment guarantees).

Diagram 72 Off-balance sheet commitments of the banking sector (PLN billion)



As in previous years, the structure of off-balance sheet commitments by entity did not change in 2019. Commitments extended related to financing and guarantees for the non-financial sector continued to dominate. For commitments received, the guarantees were provided from the non-financial sector, while most of the commitments related to financing were from the financial sector.

Diagram 73 Off-balance sheet commitments of the banking sector – 2019–12 – by entity (PLN billion)



List of tables

List of diagrams

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