

Activity of cooperative banks: Research on structural changes and factors related to their number in the Polish voivodeships

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Abstract: The article pertains to the topic of cooperative banking in Poland that has been significantly connected with development of the local communities since the nineteenth century. The objective of the article is a structural analysis and an examination of the relations between the number of banks in the Polish voivodeships and selected economic indicators. The analysis of cooperative banking in Poland, including the historical factors, structural changes, financial situation against the background of the banking sector and legal conditions of functioning has been conducted. On the basis of the conducted research it has been stated that a number of cooperative banks is related to the population and the number of districts in the voivodeships. The local character of these banks confirms their connection with the service of agriculture. Correlation with the number of agricultural holdings, agricultural land area or global commodity production in the voivodeships has been presented. Cooperative banks in Poland are mostly characterized by the level of equity capital which allows them to operate within the territory not exceeding the district confirming the fragmented character of this sector. The capital held by the bank and the address of its seat, resulting from normative acts regarding the activity of these banks and their financial condition, have an influence on the area of activity.

Keywords: cooperative banks, cooperative movement, banking sector

1. Introduction

Cooperative banks in Europe and Poland, present since the half of the nineteenth century, operate mainly to support local markets and communities. The double importance of these banks, implementing their activities not only to maximize profit or achieve high financial efficiency, yet, generate social values for their stakeholders, has been repeatedly emphasized (Ayadi et al., 2010; Butzbach and von Mettenheim, 2016; Spulbar and Birau, 2019; Migliorelli [ed.], 2018; Migliorelli and Dessertine [eds.], 2019). In Poland, cooperative banking

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sector, through offered services, influences development of the rural areas, operating in the locations that commercial banks are frequently not interested in (Idasz-Balina et al., 2020). Cooperative banks are listed in the Strategy for Responsible Development as local entities supporting economic development that—by providing access to finance—act against financial exclusion (Strategy, 2017).

In the last twenty years, the number of cooperative banks in Poland has decreased, mainly as a result of mergers and takeovers, being a consequence of the capital requirements imposed by law provisions. The objective of the article is to conduct the structural analysis of the sector and examine the relations between the number of banks as of February 2019 in the Polish voivodships and selected indicators. Critical analysis of the literature, normative acts and available statistical data from the Central Statistical Office, reports from the Polish Financial Supervision Authority and others constitute the research method.

2. Cooperative banks as an element of the legally regulated banking system

The banking system is regulated by law provisions aiming at ensuring its stability and, consequently, macroeconomic balance. This is particularly important with regard to the role played by banks in economy by providing access to finance and possibility of efficient allocation of the funds. By restricting the freedom of activity of the banks, legal regulations influence their functioning conditions (Matejun and Oderkiewicz, 2009). In Poland, the main regulations include the Banking Law Act, the Act on Covered Bonds and Mortgage Banks as well as Act on the Bank Guarantee Fund, Deposit Guarantee Scheme and Forced Restructuring. The activity of cooperative banks is regulated by the Act of 7 December 2000 on the operation of cooperative banks, their affiliation and affiliating banks (consolidated text, Journal of Laws of 2020, item 449).

Pursuant to the Banking Law Act of 29 August 1997 (consolidated text, Journal of Laws of 2019, item 2357), Art. 12, “Banks may be established as state banks, cooperative banks or banks in the form of joint stock companies”. The following forms of banks can be distinguished:

- state, cooperative, joint stock companies—based on the form of ownership;
- domestic banks, foreign banks—according to the location of their seat;
- established by domestic persons, foreign persons (or with participation of foreign persons), formed abroad by domestic persons (or with their participation)—due to the seat of the bank founders.

Analyzing the special function of the bank, the following are distinguished: banks running housing funds, active through investment activity on the capital market, cooperative, mortgage and other (Grzywacz, 2006).

Cooperative banks provide various types of services. Due to the nature, location and scope of these services, they are treated as universal banks, however, they are associated with the service of agriculture functioning in the rural areas (Nowacka and Szewczyk-Jarocka, 2015). It is pointed out that cooperative banks, unlike commercial ones, do not operate solely for making the profit (Sahut and Bouheni, 2019).

3. Development and mission of the cooperative banking

The cooperative banking sector in Poland arose from the need to support local peasants, merchants and craftsmen using cheap loans (Financial Supervision Authority, 2008). A cooperative bank is a bank operating in the form of a cooperative (Act of 7 December 2000). On the other hand, a cooperative constitutes a voluntary association of the unlimited number of people, with a variable membership and a variable share fund that conducts joint economic activity in the interest of its members. A cooperative may conduct social, educational and cultural activities for the benefit of its members and their environment (Act of 16 September 1982, Cooperative Law, consolidated text, Journal of Laws of 2020, item 275).

Cooperative movement is distinguished, among other organizational and legal forms operating in business, by the cooperative principles adopted at the 31st Jubilee Congress of the International Cooperative Alliance in Manchester in 1995. These principles include: self-assistance, personal responsibility of the members, democracy, equality, justice and solidarity as well as ethical values: honesty, openness, social responsibility, care for others (Gniewek, 2016). The roots of the cooperative banking in Central Europe date back to the second half of the nineteenth century and are related to the activities of Friedrich W. Raiffeisen and Franz H. Schulz in Germany, for whom development of savings and granting of loans had a social impact (Poli, 2019).

The literature highlights that the objective of cooperative banks constituting the implementation of the needs of the local communities is different from the one characteristic for commercial banks (Warsaw Banking Institute, 2019). The target of the action is a consequence of the mission that defines the basic purpose of the organization (Sengupta and Sahay, 2017). The National Association of Cooperative Banks describes the mission of the cooperative bank as “acting for the benefit of its members, customers and development of the local community by providing banking products” (KZBS, 2020).

4. Activity of cooperative banks in Poland—structural changes of the sector and financial results against the industry background

The cooperative banking sector is constantly changing, which is a result of the introduced legal regulations and economic conditions. As institutions operating on the local market, they are still strongly associated with agriculture. Over the last twenty years, the cooperative banking sector has been a subject to a number of changes that systematically cause the decrease in the number of these banks operating in Poland. The greatest changes took place until 2003 and resulted from the introduction of the Act of 7 December 2000 on the operation of cooperative banks, their affiliation and affiliating banks which, on the one hand, increased the freedom of association of cooperative banks and, on the other hand, increased capital requirements.

Introduction of this act resulted in creation of two two-tier structure—cooperative banks associated in one affiliating bank (Rolski, 2019). In 2015, the Institutional Protection System (IPS)—the BPS Association Protection System and the SGB (Cooperative Bank Group) Protection System—were created that increase the security of operation of their cooperative banks. Their target is to provide mutual support within the scope of liquidity and solvency in the event of a difficult situation in any of the banks (KZBS, 2020).

Mergers and takeovers are mainly influenced by stakeholders, such as the government or managers (Coccorese, Ferri and Spiniello, 2017). As a result of the act introduced in 2000, cooperative banks were obliged to increase their capital to 300,000 EUR by the end of 2001, 500,000 EUR by the end of 2005, 1 million EUR by the end of 2010. Due to the low level of equity capital of cooperative banks, their fragmentation and the necessity to adapt to the new legal requirements, the process of consolidation of those banks was started and in the years 1996–2003 several hundred consolidations were carried out (Figure 1). Since 2003, the consolidation process in the sector of cooperative banks has been continued, however, its dynamics is stable and concerns several bank mergers per year.

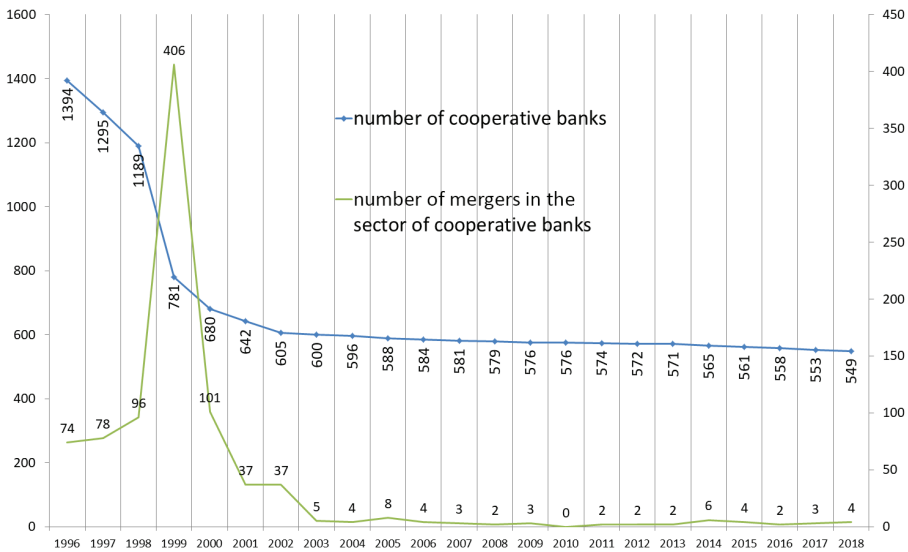


Figure 1. The number of cooperative banks and the number of mergers in the sector of cooperative banks in the years 1996–2018 in Poland

S o u r c e: Authors' own elaboration based on: KNF, 2020; Kozak, 2013.

Furthermore, since 1999, both employment and the number of branches of cooperative banks have been growing, which has strengthened their retail and relational character, with high importance of the employee–customer contact (Figure 2). These changes were a consequence of the faster economic growth, Poland's accession to the European Union in 2004, receiving the EU subsidies by the farmers and the farmers' obligation to have a bank account, and thus a greater interest in banking services on the part of people living in the rural areas.

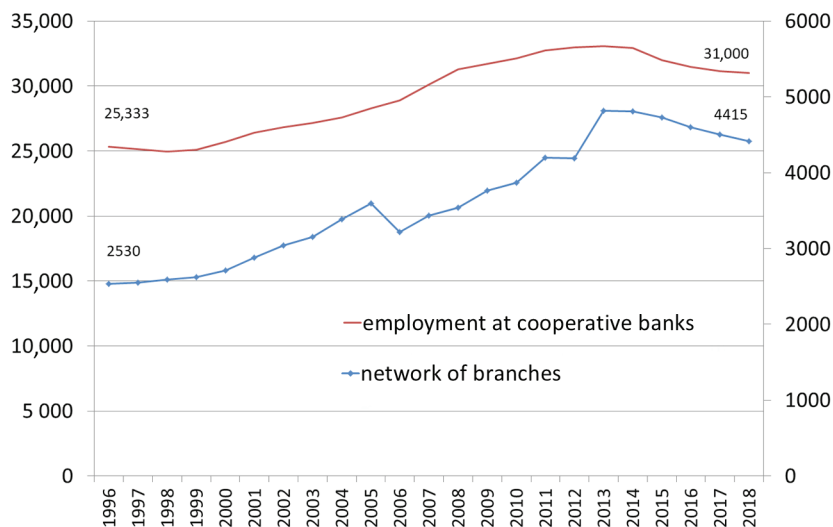


Figure 2. The number of employees and number of branches of cooperative banks

Source: Authors' own elaboration based on: KNF, 2020; EACB, 2020.

Since 2013, there has been a steady trend indicating a decrease in the number of employees and the number of branches of cooperative banks. This is a result of the development of new technologies and development of the Internet access channels to banking services, without the necessity to visit the branch of the bank. Furthermore, banks have been expanding areas of their operations by opening the branches in large cities (National Bank of Poland, 2018).

In 2018, the situation of the banking sector remained stable due to economic growth (GDP in 2018 was 5.1%), improvement in the labour market (unemployment rate 5.8%), increase in remuneration in the business sector and improvement in the mood of enterprises and consumers (UKNF, 2019a). Selected data and financial indicators of cooperative banks in the years 2003–2018 are presented in Table 1.

Table 1. Financial indicators of the banking sector in the years 2003–2018

Indicator		Banking sector in total	Cooperative banks	Commercial banks
Net financial result (mln PLN)	2018	14,531	623	13,716
	2013	15,426	757	14,669
	2008	13,935	914	12,820
	2003	2512	282	2230
Costs/Income C/ I (%)	2018	56.10	67.89	53.80
	2013	53.25	70.81	51.23
	2008	54.70	65.70	53.40
	2003	68.60	75.20	68.00

Interest income/ Total assets (%)	2018	2.58	2.96	2.59
	2013	2.81	3.68	2.77
	2008	2.87	4.85	2.84
	2003	3.10	5.60	3.00
Net result/ Total assets (ROA, %)	2018	0.79	0.47	0.83
	2013	1.10	1.14	0.81
	2008	1.60	1.70	1.50
	2003	0.50	1.20	0.50
Net result/ Average funds (ROE, %)	2018	7.08	5.15	7.21
	2013	10.09	7.90	10.24
	2008	21.20	19.60	21.00
	2003	6.20	12.30	5.90
Share of at-risk receivables from the non-financial sector in total receivables (NPL, %)	2018	6.80	9.00	6.70
	2013	8.50	6.40	8.60
	2008	4.40	2.80	4.70
	2003	20.90	7.20	21.80
The balance sheet total (mln PLN)	2018	1895.9	138.4	1691.7
	2013	1407.2	96.5	1310.6
	2008	1041.8	56.5	929.1
	2003	489.2	25.7	463.6
Number of entities conducting banking activities	2018	612	549	32
	2013	640	571	41
	2008	649	579	52
	2003	754	680	78

Source: Authors' own elaboration based on: UKNF, 2019c; 2014; 2009; 2004.

In 2018 the Tier 1 capital ratio in the banking sector was 17.2% and with reference to cooperative banks it reached 16.8% which confirms the stable capital base. Banks are required to maintain the Tier 1 capital ratio at a level not lower than 6% of the total amount of risk exposure increased by an add-on imposed under individual decisions on banks with significant exposures to the loan foreign exchange market for mortgage-backed households (UKNF, 2019c).

In 2018 and in the previous years the financial result of the banking sector was achieved thanks to commercial banks with a positive result in cooperative banks representing 4.3% of the net profit for 2018 of the banking sector in total. All indicators except interest margin are more favourable in 2018 for the commercial banking sector which confirms difficulties in achieving better results by local institutions.

It should be pointed out that effectiveness of the Polish cooperative banks is influenced by their operating model based on high deposit dynamics and favourable structure of the interest rates on the side of the assets and liabilities, and placement of surplus liquidity in the affiliating bank debt instruments of the National Bank of Poland or State Treasury. This model has lost its effectiveness in the conditions of the low interest rates, leading to worse economic indicators—particularly the interest margin (Kata, 2017). This is confirmed by the fact that deposits from the non-financial sector (mainly households) constituting over 80%

of the balance sheet total of these banks were a dominant source of funding in 2018, whereas their share in the commercial banks was about 61% (National Bank of Poland, 2019). Cooperative banks, playing an important role in mobilizing savings of the local households, do not conduct local credit activity to the extent improving their efficiency. Instead the funds from savings are invested in the affiliating bank resulting in worse results of the whole sector (Lepczyński, 2017).

Total employment in the banking sector in 2018 amounted to 162.6 thousand people including 31 thousand people in cooperative banks and the average employment in cooperative banks equals 56.8 FTEs and it is twice as high as the share of assets of the cooperative sector in the total banking sector (UKNF, 2019a). The high level of employment in these banks translates into operating costs which are difficult to reduce reflected in low C/I and ROA efficiency ratios as compared to commercial banks (NBP, 2019). The relational operating model characteristic for cooperative banking is more labour-intensive with less pressure to automate and standardize business processes preventing achievement of the scale effects (Lepczyński, 2017).

Analyzing the quality of the assets of cooperative banks, we can observe a slight deterioration. The share of at-risk receivables from the non-financial and local government sector of these banks increased from 6.4% in 2013 to 9.0% at the end of 2018. For comparison commercial banks had a 6.7% share in their assets as at the end of 2018. The increase in the share of at-risk receivables results from deterioration in the quality of receivables from the small and medium-sized enterprises and individual entrepreneurs (UKNF, 2019b). This can be associated with the fact that during this period cooperative banks were opening their branches in the large cities in an attempt to expand their activities.

It should be noted that activities of cooperative banks in contrast to commercial banks are not exclusively focused on generating profits. Most of the available analyzes and literature do not take into account the fact that the social values generated by cooperative banks are difficult to measure and directly compare their financial results with those of commercial banks (Fonteyne, 2007).

5. Factors related to the number of cooperative banks in 2018 in the voivodeships—authors' own research

According to data from the Polish Financial Supervision Authority (UKNF), there were 549 banks in Poland at the end of 2018 and some of them operated outside the associations. For comparison there were 32 commercial banks operating in Poland in 2018 which indicates high fragmentation of the cooperative banking sector.

The number of cooperative banks operating in Poland associated in the SGB (Cooperative Banking Group) and BPS (Cooperative Banks) Group in voivodeships is presented in Table 2.

Table 2. Number of cooperative banks in the Polish voivodeships associated with SGB and BPS Groups as of February 2020

Voivodeship	BPS	SGB	Cooperative banks associated at BPS and SGB groups—in total
Voivodeships in total	326	194	520
Lower-Silesian	19	7	26
Kuyavian-Pomeranian	1	28	29
Lublin	47	1	48
Lubusz	5	8	13
Łódź	10	26	36
Lesser Poland	36	0	36
Masovian	43	27	70
Opole	17	1	18
Subcarpathian	36	1	37
Podlaskie	28	2	30
Pomeranian	2	24	26
Silesian	45	0	45
Świętokrzyskie	21	2	23
Warmian-Masurian	14	5	19
Greater Poland	1	49	50
West Pomeranian	1	13	14

S o u r c e: Authors' own elaboration based on: BPS Group, 2020; SGB, 2020; KZBS, 2020.

The article examines the features influencing the number of cooperative banks in the areas covering each of the Polish voivodeships. The choice of the voivodeship is determined by selected independent variables and availability of the data for these variables as well as legal conditions for operation of cooperative banks and resulting territorial restrictions. The most up-to-date and available data i.e. for the year 2018 has been adopted for the research. The conducted research will constitute a foundation for further analyses taking into account the broader time horizon. In order to examine the relationship between the factors influencing the number of cooperative banks located in the Polish voivodeships in 2018, the Pearson correlation coefficient between the following has been calculated:

- a dependent variable—the number of cooperative banks in the particular voivodeships;
- and the following independent variables for each of the voivodeships for 2018: total area population number of agricultural holdings based on the data from 2016¹; global agricultural production² including commodities³; agricultural land area population in the urban and rural communes; number of the districts; average population in the districts (without cities with district status); poverty index⁴ and relatively high income indicator.⁵

The results of the correlation research are presented in Table 3.

Table 3. The Pearson correlation coefficient for the number of cooperative banks in 2018 and for selected independent variables for the Polish voivodeships in 2018

Independent variables by voivodeships	Dependent variable—number of cooperative banks in the voivodeship
Total area	0.619
Total population	0.833
Number of agricultural holdings	0.860
Global agricultural production including:	0.762
– agricultural production by commodities	0.735
Agricultural land—area	0.749
Population—urban communes	0.270
Population—rural communes	0.286
Number of districts	0.828
Average population in the districts	0.438
Poverty index	(-)0.152
Relatively high income index	0.485

Source: Authors' own elaboration based on Central Statistical Office reports, data from the years 2016–2018 (GUS, 2020).

The number of cooperative banks in 2018 demonstrates the strongest correlation (the Pearson correlation coefficient above 0.8) with the number of agricultural holdings population and the number of districts in particular voivodeships. High dependence on the number of the districts

¹ The next agricultural census will be conducted in 2020.

² According to the Central Statistical Office (GUS), it is the sum of the value of (unprocessed) products of plant and animal origin (GUS, 2020).

³ According to the Central Statistical Office (GUS), it is the sum of the sales of agricultural products for purchasing centre and at marketplaces, taken by % share of each voivodeship (GUS, 2020).

⁴ According to the Central Statistical Office (GUS) in 2018, the poverty line for a single-person agricultural holding was 1280 PLN (GUS, 2019).

⁵ According to the Central Statistical Office (GUS) in 2018, the high income limit for a single-person agricultural holding was 3556 PLN (GUS, 2019).

results from the Act of 7 December 2000 on the operation of cooperative banks, their affiliation and affiliating banks according to which the bank operates within the territory of the district where the seat is located. The bank may operate within the territory of the voivodeship if its initial capital is higher than the equivalent of 1 million EUR but lower than 5 million EUR whereas a bank with an initial capital of at least 5 million EUR may operate within the territory of the state. Therefore, cooperative banks in Poland are mostly characterized by the level of equity capital which allows them to operate within the territory not exceeding the district confirming the fragmented character of this sector. Consequently the area of operation of cooperative banks determines the value of their capital and the address of their seat.

High correlation with the total population and the number of agricultural holdings in the voivodeships proves the nature of the activity aimed at serving the local community confirming the relational and retail character of cooperative banking based on direct contact with the customer and the need for their presence in the economic life.

The Pearson index between the number of cooperative banks and global agricultural production including the one by commodities and agricultural land area in 2018 above 0.7 confirms the strong connection between this banking sector and agriculture in Poland. These banks mainly finance and serve agriculture. The average population in the districts and population in the rural and urban communes (Pearson index below 0.5) has a small impact on the number of cooperative banks in Poland. While analyzing the correlation with the poverty index and relatively high income index, it can be concluded that the number of these banks does not have a strong correlation with the level of wealth of the population in the voivodeships.

Research on the variables influencing the number and density of the bank branches and cooperative savings and credit unions in the districts and voivodeships in the years 2010–2016 was conducted by A. Szelałowska. Independent variables included among others: number of inhabitants, unemployment rate, area of the district, area of the voivodeship and the number of its inhabitants, number of physicians and dentists per 10,000 inhabitants, GDP per capita, housing stock, number of registered cars (Szelałowska, 2019). The conclusions presented in this article refer to the research conducted on the basis of the latest and available data for the number of cooperative banks for the year 2018. In order to extend the analysis, the research should be conducted over a longer time horizon. Further research could cover dependence of the number of cooperative banks on other indicators including economic ones and sustainable development of the voivodeships as well as extend the research to the relationship between the financial condition of banks and these indicators.

6. Conclusion

Cooperative banks in Poland, with long traditions, have been subject to numerous transformations. Consolidation processes resulting from legal regulations that have been taking place since the 1990s have influenced the number of these banks and technological development has had an impact on the employment structure. The importance of these banks is still great particularly in the sphere of their activities for the benefit of the local communities.

On the basis of the conducted research it can be concluded that a decreasing number of cooperative banks is considerably related to the number of agricultural holdings and the population in the voivodeships confirming their local character and it is based on customer relations. The large fragmentation of the sector is connected with capital requirements that do not allow banks to cross barriers of the district. These banks demonstrate a strong correlation with the number of districts global agricultural production and agricultural land area.

The challenges facing this fragmented sector arising from IT development and the necessity to implement costly systems in order to remain competitive under conditions of technological progress as well as challenges arising from legal changes have been emphasized.

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Działalność banków spółdzielczych. Badania nad zmianami strukturalnymi oraz czynnikami związanymi z ich liczbą w województwach w Polsce

Abstrakt: W artykule podjęto temat bankowości spółdzielczej w Polsce, która od XIX wieku w silny sposób jest związana z rozwojem lokalnych społeczności. Celem artykułu jest analiza strukturalna oraz zbadanie związków pomiędzy liczbą banków w województwach Polski a wybranymi wskaźnikami ekonomicznymi. Przeprowadzono analizę bankowości spółdzielczej w Polsce z uwzględnieniem czynników historycznych, zmian strukturalnych, sytuacji finansowej na tle sektora bankowego oraz prawnych warunków działania. Na podstawie przeprowadzonych badań stwierdzono, że liczba banków spółdzielczych jest związana z liczbą ludności i liczbą powiatów w województwach.

Lokalny charakter tych banków potwierdza ich związek z obsługą rolnictwa. Wykazano korelację z liczbą gospodarstw rolnych, powierzchnią użytków rolnych czy produkcją globalną towarową w województwach. Banki spółdzielcze w Polsce charakteryzują się w większości poziomem kapitałów własnych, który pozwala im głównie prowadzić działalność na terenie nieprzekraczającym powiatu, potwierdzając rozdrobniony charakter tego sektora. Wpływ na teren działania ma posiadany przez bank kapitał oraz adres siedziby, wynikające z aktów normatywnych dotyczących działalności tych banków tudzież z ich kondycji finansowej.

Słowa kluczowe: banki spółdzielcze, spółdzielczość, sektor bankowy