

COOPERATIVE BANKS ON THE MUNICIPAL FINANCE MARKET (POLISH EXAMPLE)

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Purpose: The research aimed to assess the proportion of cooperative banks in the market of entities servicing commune budgets and to identify the specific characteristics of local government units whose budgets are handled by cooperative banks.

Design/methodology/approach: Covering 1 116 communes across six chosen voivodeships in Poland, the study encompassed regions with diverse conditions and traditions influencing cooperative banking models. Primary data were sourced from the official websites of the communes and Statistics Poland's Local Data Bank. The research, conducted in the first half of 2023, employed indicators of structure and dynamics, descriptive statistics, and the non-parametric χ^2 test for analysis.

Findings: The findings revealed that cooperative banks accounted for 80% of entities servicing commune budgets. Notably, they predominated in Little Poland Voivodeship and were more prevalent in rural and urban-rural communes, as well as in less populated areas and communes with own revenue per capita below PLN 2,000.

Research limitations/implications: While the study acknowledges limitations due to the evolving nature of the cooperative banking sector and the changing dynamics of commune-bank cooperation, it suggests the need for future research to track these transformations.

Practical implications: Practically, the research outcomes can inform the strategies and marketing plans of cooperative banks.

Social implications: Socially, they contribute to enhancing trust in cooperative banks among the public and commune authorities, underscoring their significance in local development processes.

Originality/value: The study's novelty lies in its exploration of cooperative banks' market share in communal finances and its identification of commune characteristics associated with cooperative banking. It addresses a gap in management and economics literature, offering insights previously unexplored in both domestic and foreign publications, and providing current, concrete data on the subject.

Keywords: bank account; commune budget; financial institution; municipality.

Category of the paper: Research paper.

1. Introduction

Commune governments constitute a significant element of the public finances sector, thereby presenting an attractive market for the banking sector to offer their services. In Poland, following the reforms conducted in the 1990s, there are three levels of self-government. With the new general three-level territorial division of the country implemented on 1 January 1999, counties and voivodeships were introduced in addition to the already existing communes. As local government units were endowed with legal personality and material means to fulfil the tasks assigned to them, it created ample opportunities for cooperation between the local government sector and the banking sector, including cooperative banks.

There are multiple arguments in favour of cooperation between commune governments and banks. The rationale for such collaboration on the part of local government units includes the increased effectiveness of managing finances through access to innovative financial instruments that facilitate the management of financial liquidity, debt, and cash. Another benefit is the transparency and efficiency of transaction settlements, for instance, in monitoring the inflow of tax receivables or payments for services. Moreover, such cooperation ensures access to financial advisory services, which are integral to providing other banking services such as instruments enabling the investment of financial surpluses of local governments or modern instruments for securing financial means for investments, thereby fostering local development.

Cooperation with local government units is beneficial to banks as well. Since local government units do not have bankruptcy capacity, they represent clients who carry a lower risk of insolvency compared to individual or corporate clients. Another argument in favour of cooperation with such units is the reduced cooperation risk stemming from the transparency of public finances and the availability of information on the financial condition of local government units through public reporting data. Another significant advantage is the consistent demand from local authorities for financial services such as budget servicing, which, according to prevailing regulations, is provided by a bank selected by public tender. An additional benefit is the elevated prestige and improved image of a bank as an institution that offers comprehensive financial services to local government units.

Due to the numerous mutual benefits of cooperation, commune governments constitute an important segment of banks' clientele. Given their specificity as clients, most banks have established separate organizational units specializing in providing customized services to local government units. This is evidenced by the continuous updating and enrichment of offers targeted at local government units, both by commercial and cooperative banks.

The literature on the subject encompasses a great many publications addressing issues surrounding the cooperation between local government units and financial institutions. However, little attention is specifically given to cooperation between commune governments and cooperative banks. Yet, this subject is vital, as both these types of entities fulfil fundamental

roles in local communities. In light of the above, it seemed reasonable to undertake research aimed at determining the share of cooperative banks in the market of entities servicing the budgets of communes and identifying the characteristics of local government units whose budgets are serviced by cooperative banks.

The analysis of the collected material should provide answers to the following research questions:

1. Do cooperative banks dominate in servicing municipal budgets in Poland?
2. Which features of municipalities are related to the legal form of the bank servicing the budget of the local government unit?

The article begins with an introduction in which the choice of the topic is justified and the research gap is identified. The next part of the study is a literature study on the subject. Then, data sources and research methods were presented. The next section presents the research results and discussion. Finally, the conclusions resulting from the analysis and possible directions for further research are presented.

2. Literature review

In recent decades, development has emerged as a paradigm of transformations, leading to increased indicators of productivity, economic growth, and consequently, improvements in the quality of life in the social sphere. For many years, the objectives of economic policies in the majority of countries worldwide were subordinated to the creation of changes promoting economic development. It was only in recent years that other concepts, such as the zero growth model (Priewe, 2022) or degrowth (Kallis et al., 2018), gained significance. The concept of development, when applied to units of a country's territorial division, takes the form of local development, treated as a process of positive quantitative and qualitative transformations aimed at elevating a commune to a higher stage of development and improving the standard of provided public services (Filipiak, Kluza, 2022).

Creating the appropriate conditions and undertaking adequate actions conducive to local development processes in a given territory is the responsibility of local government units. Their powers include taking actions aimed at creating and accelerating local resources to stimulate development (Kozera et al., 2021). Communes' tasks also include proper coordination of stakeholders (residents, businessmen) and other "players" within local communities to articulate desirable directions of development and transform the reality (territory) within which they pursue their activities to match their preferences (Maśloch et al., 2015). Importantly, in this case, it is necessary to gain the required level of acceptance among all representatives of the local environments, whose interests often conflict with one another. This conciliatory role, in addition to outlining the strategic vision (Sokołowicz et al., 2022) of the desired changes in

a given area, falls within the tasks of the bodies of local government units. To fulfil them, they must have a strategic vision, capability of long-term planning, and the ability to gain acceptance of the proposed directions of transformations.

Due to the factors presented above, local development is a long-term process that takes place in a certain socio-economic environment, engages local resources, and requires mobilization of substantial financial means (Chrzanowska et al., 2013). Communes, which fulfil a very broad range of public tasks, struggle with the problem of diminishing financial autonomy (Głowicka-Wołoszyn, 2018). Both in performing day-to-day tasks and making investments, they are supported by services provided by financial market institutions, namely banks.

Banks, like many other economic entities, operate in a competitive environment, with their boards of directors aware of the pressure from other institutions providing financial services. One way of coping in a highly competitive environment is to seek the growth of the entire market serviced by banks. An increasing number of economic entities, an increase in their economic size, and a growing population in a given territory create growth opportunities for banks (including smaller, local ones) without the need for destructive competition with other larger entities. In this way, a bank's continuity and growth are inherently connected with local development. By recognizing this relationship, both bank managers and commune authorities channel their efforts in a unified direction, leveraging the strategic synergy effect. The overall results of such cooperation are better than the sum of the results would be if all the entities acted in an uncoordinated manner.

A high level of commune development attracts people with higher economic status to settle down in its territory. They often include individuals engaged in economic activity. These individuals become attractive clients for local banks, showing greater interest in the array of banking products. Thus, the benefits of commune development are not limited to local government institutions and residents but become an important driver of activity in the banking sector (Marks-Krzyszowska, Rudolf, 2024).

The selection of a proper bank and effective cooperation between financial sector institutions and local government units are necessary conditions for the financial management of communes, the proper delivery of public services, and the improvement of residents' quality of life. This is because the effective execution of the tasks of all local government units (both local government units and their organizational units) requires adequate financial means, their rational spending, and, in the event of debt – debt management (Poniatowicz et al., 2018; Kotlińska, 2022).

In the age of increasing globalization and financial market unification, cooperative banks strive to retain their distinctiveness and specificity as institutions rooted in a given territory and local environment, connected with local entrepreneurship (Hakenes et al., 2015). The nature of cooperative banks enables them to properly identify the needs of local communities and, consequently, tailor their offerings to better suit the needs of residents and local government

units. In this way, cooperative banks stimulate local development processes, and simultaneously, by benefiting from these positive changes, they may intensify their expansion in a market that grows larger due to increasing entrepreneurship and resident engagement.

The cooperation between local government units and banks is governed by numerous legal regulations to ensure the safe management of public money, which constitutes the common good and contributes to the creation of present and future conditions for the functioning of self-governing communities (Zioło, 2016). According to Article 264 of the Act on Public Finances (2009), banking services for local government units are provided by a bank selected according to the principles laid down in public procurement law. However, the aforementioned act does not define the term "banking budget servicing". In practice, this term is assumed to refer to a set of activities carried out by a bank that are connected with budgeting, understood as the administration of the financial management of a local government unit (Kowalewska, 2018). Meanwhile, Srokosz (2012), defines bank servicing of a local government unit's budget as any financial services necessary for the proper functioning of a budget, understood as financial resources. This researcher indicates that opening and running bank accounts constitute the minimum scope of banking service, with these activities filling the scope of the term "cashier service of budget". The author emphasizes that the cashier service provided by banks involves cash operations carried out through an account (receiving payments, execution of withdrawals). Generally, one can conclude that bank service of a local government unit's budget is a broader term than cashier service of a budget.

The principles of providing banking services are laid down in an agreement concluded between a bank and the executive body of a local government unit. This means that the executive board of a commune¹ is the sole body responsible for choosing the bank. The decision-making and control body, i.e., the commune council, has no authority to specify in its resolution a particular bank to provide banking services to the commune and its organizational units, nor to formulate any criteria or requirements for such an entity. The only criteria are laid down in the Act on Public Procurement (Leńczuk, 2014).

Banking services for local government units can be provided both via bank branches and electronic banking, defined as clients' (local government units') access to bank accounts via electronic distribution channels. Currently, electronic banking services for local government units encompass various areas: modem banking, terminal banking, phone banking, internet banking, mobile banking, and mobile payments (G2C, G2B, G2G, C2G, B2G) as well as electronic payment instruments (Świecka, 2016; Miklaszewska et al., 2018). It is worth stressing that the innovative banking services available enable the fulfilment of all tasks of local

¹ In accordance with art. 99.1. of the Law of 20 June, 2002 on direct election of the head of commune, mayor and president (Journal of Laws 2002, 113) "Whenever the existing provisions refer to the tasks and competencies of the executive board of a local government unit with reference to the executive board of a commune or to the tasks and competencies of the executive board of a commune, they become the tasks and competencies of the head of a commune (mayor, president of a city)".

government units related to the collection of payments and taxes, and redistribution of funds without the need to visit a cash service point at the office of the local government unit or at a bank branch. Although cash service is still available, it is becoming less important in the era of increasing digitalization of public services (Samorządy..., 2022).

The first stage in the process of selecting a bank to service a local government unit is the Terms of Reference (TOR), which are drawn up by the local government unit as the contracting authority and made available to tenderers. The legislator requires that the subject of the contract be described clearly and exhaustively with accurate and comprehensible terms, taking into consideration the requirements and circumstances relevant to preparing tenders (Ustawa Prawo..., 2019). The Terms of Reference typically include the following elements: the name and address of the contracting authority, the contract award procedure, a description of the subject of the contract, and the contract execution date. Other elements of the Terms of Reference are typically technical in nature and are subject to the provisions of public procurement law.

Currently, banks provide comprehensive financial services to local government units and their associated organizational units. Depending on the needs of local government units at the commune level, the scope of the public service contract can include, among other things, opening and maintaining bank accounts. This includes a current account, which allows for contracting a loan to finance budget deficits, subsidiary accounts, deposit sums accounts, and a payroll account used for processing payments related to the remuneration of local government unit employees. Other services may include mass payment services, processing transfer orders, providing cash services (deposits/withdrawals), and issuing payment cards (Świecka, 2016).

A tender procedure for the selection of a bank is announced and conducted by the head of the commune (in the case of a rural commune), a mayor (in the case of an urban commune), or a president (in cities with a population of over 100 000). A contract with a bank for servicing the budget of a local government unit cannot be concluded for a period longer than four years. However, the contracting authority may conclude a contract for a period longer than four years if the execution of the contract over a longer period saves costs compared to a four-year contract (Ustawa Prawo..., 2019). Most often, local government units conclude a contract with a bank for a period of 2-3 years (Sitek, Sawicka, 2016).

Selecting a bank to service the commune budget does not preclude a local government unit from using services offered by other banks. According to Article 264.3 of the Public Finances Act (2009), "The decision-making body of the local government unit can authorize the executive body of the local government unit to deposit spare budgetary resources in accounts with other banks or invest them in the form of a deposit with the Ministry of Finances". Moreover, "The executive body of a local government unit can, within the confines of the powers laid down in the budgetary resolution, contract credits in banks of its choice in accordance with the procedure specified in public procurement law" (Ustawa o finansach...,

2009, Art. 264.4). However, it should be borne in mind that no power of attorney to use the local self-government unit's bank account can be granted to secure a credit or a loan.

In practice, only two situations allow local government units to use the services of banks or cooperate with them without the requirement to apply Public Procurement Law. The first situation applies to any type of services whose value does not exceed PLN 130 000, while the second pertains to the issue, sale, purchase, and transfer of securities or other financial instruments (Ustawa Prawo..., 2019).

The most typical and common type of issuing financial instruments in local government units is the issuance of debt instruments to obtain funds. In accordance with Article 89.1 of the Public Finances Act (2009), a local government unit can issue securities:

- to cover its temporary budget deficit throughout the year,
- to finance its planned budget deficit,
- to repay previously incurred liabilities due to the issuance of securities as well as loans and credits,
- for the purpose of advance financing of financial measures with funds from the European Union budget.

According to Dylewski (2016), these conditions of cooperation, exclusive of the principles of the Public Procurement Act, can be viewed as both positive and negative. Positively, the presented legal situation grants a local government unit more freedom to create terms for incurring liabilities, including the issuance of securities. Conversely, the negative aspect pertains to the unequal treatment of different debt instruments such as credit and securities. In the case of a bank credit, the Public Procurement Act is applied, whereas in the case of securities, it is not. Changing the terms of a credit agreement is not as straightforward, as it must adhere to the conditions of this act.

Based on the analysis of the literature on the subject, as well as in the context of the main goal adopted in the article, the following research hypotheses were accepted for verification:

- H1: Budgetary services for municipalities in Poland are provided mainly by cooperative banks.
- H2: The characteristics of municipalities that are associated with the legal form of the bank servicing the commune budget are: its location, type of municipality, population and the height of the devices per capita.

3. Methods

The provision of banking services to local government units is a subject that has received less attention compared to servicing commercial businesses. This is attributed to the historical trend where such entities primarily utilized traditional banking products, such as bank accounts,

credits, and payment processing services. However, in recent times, financial institutions have expanded their offerings to local government units, providing a wide range of innovative financial services, including virtual accounts, prepaid cards, and advisory services related to financing structures or investment models. Not only is this aspect an interesting research topic, but the findings of such research may also have practical applications in the development of bank-applied strategies.

The purpose of the research was to determine the share of cooperative banks in the market of entities servicing the budgets of communes and to identify the characteristics of local government units whose budgets (basic account) are serviced by cooperative banks. The research encompassed communes from voivodeships showing clear differences in the conditions and traditions of cooperative banking development (annexations) and in population density:

- high population density: Little Poland Voivodeship (former area annexed by Austria), Mazovia Voivodeship (Congress Kingdom of Poland, former area annexed by Russia),
- medium population density: Great Poland Voivodeship (former area annexed by Prussia), Subcarpathian Voivodeship (former area annexed by Austria),
- low population density: Warmia-Masuria Voivodeship (former area annexed by Prussia), Podlaskie Voivodeship (former area annexed by Russia).

In total, 1 116 communes were analyzed. The study aimed to identify banks servicing basic accounts and was conducted in the first half of 2023, relying on information available on the official websites of the communes and banks.

The banks servicing the communes in the analyzed voivodeships were classified into one of five groups:

- cooperative banks affiliated with Bank Polskiej Spółdzielczości SA (BPS group),
- cooperative banks affiliated with Spółdzielcza Grupa Bankowa SA (SGB group),
- cooperating banks operating independently,
- commercial banks,
- Bank Gospodarstwa Krajowego (BGK).

Changes in the market size (revenue and expenditures in commune budgets) were presented for the period 1999-2022, which serves as the background for the discussion. In the detailed discussion, while searching for the characteristics differentiating the communes serviced by the individual bank groups, information from Statistics Poland's Local Data Bank (www.stat.gov.pl) was utilized.

To fulfil the main purpose of the paper, indicators of structure and dynamics, descriptive statistics indicators, and the non-parametric chi-square test (χ^2) were used. The chi-square test allows the evaluation of the significance of the relationship between two variables when at least one of them is non-measurable. The χ^2 statistic involves comparing the observed frequencies with expected frequencies, assuming that the null hypothesis (stating that no relationship exists

between these two variables) is true (Stanisz, 2006). To calculate the expected frequencies, formula 1 was used.

$$E = \frac{r \cdot c}{t} \quad (1)$$

where:

E – expected frequency,

r – number of rows,

c – number of columns

t – total number.

Whereas the value of χ^2 test was calculated according to formula 2.

$$\chi^2 = \sum \frac{(O - E)^2}{E} \quad (2)$$

where:

E – expected frequency,

O – observed frequency of the cell.

Assuming that the null hypothesis is true (indicating no relationship between the variables), the described statistic has an asymptotic distribution of χ^2 with $df = (k-1) \cdot (p-1)$ degrees of freedom (where k is the number of columns and p is the number of rows). Since the minimal number of observations in the cells of a contingency table should be 8 (Greń, 1976; Kukuła, 1998), in the analysis, only two bank groups were distinguished using the non-parametric χ^2 test: cooperative banks and other banks. The cooperative bank group included cooperative banks operating independently, banks affiliated with Bank Polskiej Spółdzielczości SA, and banks belonging to Spółdzielcza Grupa Bankowa. The other bank group consisted of commercial banks and Bank Gospodarstwa Krajowego. For the same reason, cities with county status were not distinguished within urban communes. Table 1 presents the corrections applied for the χ^2 test.

Table 1.

Corrections for χ^2 test

Numbers	Test type
n>40 and all expected numbers > 10	χ^2 test
n>40 and any of the expected numbers < 10	χ^2 statistic built based on Z statistic
n>40 and any of the expected numbers < 5	χ^2 test with Yates's correction
20<n≤40 and all expected numbers > 5	χ^2 test with Yates's correction
20<n≤40 and any of the expected numbers < 5	Fisher's exact test
n≤20	Fisher's exact test

Source: Stanisz, 2006, p. 405.

All null hypotheses were verified using a significance level of $p = 0.05$. The results were processed using the statistical package STATISTICA, version 13.3, and presented in descriptive, graphical, and tabular forms.

4. Results and Discussion

Local governments constitute an important market segment for the banking sector. This is due to their number as well as the quantity of financial resources that flow through the accounts of banking institutions servicing them, and which are used to fulfil their own and commissioned tasks assigned to communes, counties, and self-governing voivodeships. As of December 31, 2021, there were 16 voivodeships in Poland, 314 land counties, and 2477 communes (1523 rural communes, 652 urban-rural communes, 236 urban communes, and 66 urban communes which were also cities with county status) (Bank Danych Lokalnych, 2023). These units have been provided with the legal and technical capabilities of collecting revenue and executing expenditure. Within this scope, they can use their budgets and services provided by banking institutions. The financial streams flowing through the budgets of local governments (communes, counties, voivodeships) in the form of revenue and expenditure stood at around PLN 350 billion in 2022 (see Table 2), with over 30% of this sum flowing through the budgets of cities with county status and 50% in the budgets of other communes. The cited figures illustrate the size of the market serviced by banking institutions servicing commune budgets.

Table 2.

Level of budget revenue and expenditure of local governments in Poland in PLN million (current prices)

Description	Budget revenue		Budget expenditure	
	1999	2022	1999	2022
Communes excluding cities with county status	32 353.5	171 813.5	32 834.9	175 500.6
Cities with county status	19 388.2	110 196.3	19 961.5	114 568.1
Land counties	9 847.4	39 020.5	9 784.9	40 003.2
Self-governing voivodeships	3 288.4	24 642.7	3 264.6	23 780.8
In total	64 877.5	345 672.9	65 845.9	353 852.8

Source: own study based on data from Bank Danych Lokalnych. Retrieved from: <https://bdl.stat.gov.pl>, 9.09.2023.

The market for commune budget servicing is growing systematically. In the period 1999-2022, the level of commune revenue (excluding cities with county status) increased by 431.1%, while the level of expenditure grew by 434.5%. The revenue and expenditure of cities with county status grew even faster during that period, namely by 468.4% and 473.9% respectively. To evaluate the real market growth, annual consumer goods and service price indices published by Statistics Poland were used (Bank Danych Lokalnych, 2023).

Following an analysis that took into consideration inflation, it can be estimated that the total revenue of communes and cities with county status grew by 166.3% in real terms, while their expenditure increased by 168.5%. This means that the market more than doubled over 23 years.

However, the change in the volume of cash flows going through commune budgets was not uniform throughout the entire period of analysis (see Figure 1). The turning point, after which the growth of communes' revenue and expenditure accelerated, was the year 2015. Until this

year, the value of the financial resources collected by communes as revenue and spent on task execution recorded an annual average growth of 7% in nominal terms. After the launch of the Family 500+ program, a visibly faster increase was observed in both revenue and expenditure.

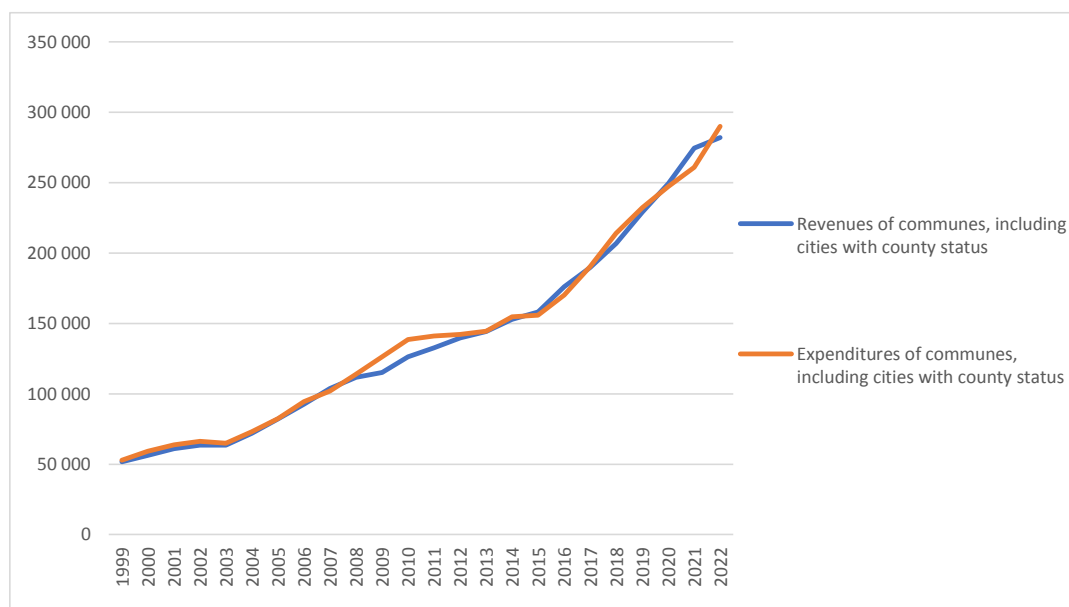


Figure 1. Level of the revenue and expenditure of commune budgets between 1999 and 2022 in PLN million (current process).

Source: own study based on data from Bank Danych Lokalnych. Retrieved from: <https://bdl.stat.gov.pl>, 9.09.2023.

Communes in Poland vary in many respects, which to some extent affects the attractiveness of individual entities as business partners for banks. Significant differences can be observed in various parameters such as size (ranging from 3 to 634 km²), number of inhabitants (ranging from 1200 to 1 863 100), and population density (ranging from 4.2 to 4 036.9 persons per km²). In the context of budget servicing by banks, important features of a territorial unit affecting its attractiveness from a bank's perspective are the volume and structure of cash flows, including budget revenue and expenditure (Wierzbicki, 2016). Urban communes typically have much higher revenue than rural communes (Table 3). For instance, in 2021, both the budget revenue and expenditure in the capital city of Warsaw were over 2000 times higher than in the rural commune of Podedwórze (Lublin Voivodeship).

When seeking to identify the characteristics of communes that make them more likely to use the services of cooperative banks, it is worthwhile, at this stage of the discussion, to identify banks servicing commune budgets.

The banking sector constitutes the largest segment of the financial market in Poland. Based on the criterion of a bank's organizational form, there are three types of banks operating in the Polish banking sector: state banks (in Poland, there is only one such bank – Bank Gospodarstwa Krajowego), commercial banks, and cooperative banks. As the analyses revealed, in the vast majority of cases, the budgets of the examined communes were serviced by cooperative banks (80.2%). Bank Gospodarstwa Krajowego provided its services to 12 communes in

Subcarpathian Voivodeship. Simultaneously, the statistical analyses showed that the commune's location influences its choice of bank for budget servicing. A significant statistical relationship exists between the type of bank handling a commune's budget and the voivodeship where this commune is located ($\chi^2 = 27.14$, $df = 2$, $p = 0.0000$).

Table 3.

Selected characteristics of municipalities in Poland in 2021

Description		Commune		
		urban*	urban-rural	rural
Surface area: (km ²)	mean	47.0	165.7	125.1
	min	3.0	10.0	8.0
	max	517.0	634.0	575.0
	median	27.0	145.0	111.0
Overall population: (thousand)	mean	60.1	13.8	7.1
	min	1.2	1.6	1.4
	max	1 863.1	95.7	41.9
	median	26.3	10.9	5.6
Population density: (persons/km ²)	mean	1 172.9	101.9	72.8
	min	10.0	7.9	4.2
	max	4 036.9	833.5	577.1
	median	1 099.9	72.5	49.9
Overall revenue of the commune: (million PLN)	mean	484.3	86.7	47.1
	min	11.3	10.3	10.5
	max	21594.8	708.6	319.5
	median	163.5	67.3	38.2

* including cities with county status

Source: own study based on data from Bank Danych Lokalnych. Retrieved from: <https://bdl.stat.gov.pl>, 9.09.2023.

Cooperative banks had the greatest involvement in providing services to local government units in Little Poland Voivodeship, accounting for almost 90% (Table 4). Compared to the other analyzed regions, this voivodeship has the lowest proportion of urban communes. Additionally, within this voivodeship, cooperative banking boasts long and rich traditions in financing rural areas and agriculture. The first advance payment society, based on Schulz's principles, was established in Krakow in 1869, while the first credit union, following Raiffeisen's principles, was founded by F. Stefczyk in Czernichow near Krakow in 1890 (Orzeszko, 1998).

Table 4.

Commune structure by location and type of bank servicing the budget in %

Voivodeship	BPS group	SGB group	Other cooperative banks	Commercial banks	Bank Gospodarstwa Krajowego
Little Poland	59.0	26.2	1.1	13.7	0.0
Mazovia	59.4	0.3	25.9	14.4	0.0
Subcarpathian	68.8	2.5	0.6	20.6	7.5
Podlaskie	73.8	2.5	5.9	17.8	0.0
Warmia-Masuria	47.4	8.6	12.9	31.1	0.0
Great Poland	1.3	76.6	0.4	21.7	0.0
The analyzed voivodeships in total	49.2	25.0	6.0	18.7	1.1

Source: own study (n = 1116).

The lowest share of cooperative banks in servicing commune budgets was observed in Warmia-Masuria Voivodeship (68.9%) and Subcarpathian Voivodeship (71.9%). The first of these voivodeships is characterized by a higher share of urban communes and urban-rural communes compared to the other analyzed regions. In these units, budgets were mainly serviced by commercial banks, with Powszechna Kasa Oszczędności Bank Polski and Bank Millenium SA leading the way.

In contrast, in Subcarpathian Voivodeship, the lower share of cooperative banks among those servicing commune budgets is a result of the compulsory restructuring of Podkarpacki Bank Spółdzielczy in 2020. The problems connected with this process, such as blockades of communes' accounts hindering the execution of current payments, undermined trust in the cooperative banking sector. Therefore, Bank Gospodarstwa Krajowego holds a significant share in this voivodeship, servicing nearly every twelfth commune budget. According to the law, this bank has no bankruptcy capacity.

Another criterion for dividing the analyzed communes was the administrative criterion (commune type). Rural communes predominated (2/3). Every fourth unit was an urban-rural commune, and every tenth one was a city. The highest share of cooperative banks was recorded in servicing the budgets of rural communes (Table 5). Nearly 90% of rural communes were serviced by cooperative banks. Within the group of urban-rural communes, this share was smaller, constituting 75.6%. Cooperative banks serviced over one-third of urban communes; however, these were smaller cities. The analysis shows a statistically significant relationship between the character of a commune (urban/rural/urban-rural) and the type of bank that services its budget ($\chi^2 = 180.816$, $df = 2$, $p = 0.0000$).

Table 5.

Commune structure by type and type of bank servicing budget in %

Commune type	BPS group	SGB group	Other cooperative banks	Commercial banks	Bank Gospodarstwa Krajowego
urban*	24.1	10.7	0.00	65.2	0.0
rural	57.6	24.6	7.1	9.3	1.4
urban-rural	38.5	31.4	5.7	23.7	0.7

* Urban communes also include cities with county status

Source: own study (n = 1116).

The cooperative banking sector holds a dominant position in the market of financial services for smaller local government units, primarily in rural areas. This is attributed to their strong roots in local environments and close ties, cultivated over many years of cooperation, with self-governing institutions, residents, and local economic entities. However, as population density increases in a given area, commercial banks become more appealing, displacing cooperative banks from the region (Table 6). In areas with lower population density, cooperative banks service 90% of communes, whereas in areas with the highest population density, the share of this group of banks is under 47%. Research by Jakubowska and Grabowska-Powaga (2015)

indicates that both representatives of local governments and bank officials emphasize that cooperation is primarily based on mutual trust, followed by high-quality communication, and, subsequently, customized offers and willingness to negotiate. Moreover, Nowacka and Szewczyk-Jarocka (2015) emphasize the local nature of cooperative banks' operations and the limited scope of their activities, which facilitate the formation of strong ties between clients and the bank. Additionally, it is easier to discern the bank's commitment to the local community in its mission. The findings of the cited research explain why in smaller communities, where residents are familiar with one another, caring about local development is a shared interest of both the local government and the bank. Consequently, trust has been built over the years, leading to cooperative banks being more frequently chosen to service budgets.

Table 6.

Commune structure by population density and type of bank servicing budget in %

Population density (person/km ²)	BPS group	SGB group	Other cooperative banks	Commercial banks	Bank Gospodarstwa Krajowego
< 100	52.1	33.0	4.3	9.8	0.8
100-149	60.9	10.1	11.6	15.2	2.2
150-200	49.3	9.2	12.3	27.7	1.5
> 200	30.0	10.5	6.3	52.2	1.0

Source: own study (n = 1116).

This is confirmed by the results of statistical analysis, which reveal a statistically significant relationship between the population density of communes (persons/km²) and the type of bank that services the commune budget ($\chi^2 = 175.091$, $df = 3$, $p = 0.0000$). The more significant role of cooperative banks in areas with lower population density is primarily due to the lack of interest shown by commercial banks in these regions. In contrast, more populous areas, particularly those housing larger cities, attract more commercial bank offices (Cruz García et al., 2021). Furthermore, research by Wang et al. (2022) suggests that the effectiveness of cooperative banks is influenced not only by the size of the bank and its business strategy but also by local factors such as the unemployment rate, community size, and relative wealth.

Another factor that can increase commercial banks' interest in servicing commune budgets is the attractiveness of the commune-client, which can be expressed by the wealth of a given local government unit. Increased wealth of a commune can lead to smaller cooperative banks being pushed out of the market. The conducted analyses show that with the increase in the wealth of communes, the share of banks organized according to cooperative principles responsible for servicing their budgets decreases (Table 7). Similar observations regarding banks' specialization in client service by wealth were made in the Japanese market (Glass et al., 2014). In 2021, cooperative banks serviced nearly 90% of the examined communes where revenue did not exceed PLN 2000 per person, whereas they only serviced 58.7% of the communes with the highest revenue (>PLN 4000 per person).

Table 7.*Structure of communes by wealth level and type of bank servicing budget in %*

Own revenue per capita	BPS group	SGB group	Other cooperative banks	Commercial banks	Bank Gospodarstwa Krajowego
< PLN 2000	57.34	24.42	7.73	8.81	1.70
PLN 2001-3000	38.95	29.07	3.78	27.91	0.29
PLN 3001-4000	31.65	16.46	5.05	46.84	0.00
> PLN 4000	41.30	17.40	0.00	41.30	0.00

Source: own study (n = 1116).

The conducted statistical analyses confirm the described relationship. The level of wealth (measured by the amount of own revenue per capita) was one of the factors determining the type of bank providing basic services in the area of servicing commune budgets ($\chi^2 = 100.188$, $df = 3$, $p = 0.0000$).

5. Conclusions

The present paper presents research results concerning the role of cooperative banks in servicing the budgets of communes. It also attempts to identify the characteristics of local government units that may increase the interest in them on the part of cooperative banks. The research encompassed 1,116 communes located in six voivodeships of Poland. The regions exhibited significant variations in the conditions and traditions shaping the development of diverse models of cooperative banking. The conducted research shows that the share of cooperative banks in the servicing of the budgets of the analyzed communes was almost 80%. The presented research results allow the adoption of the first hypothesis (H1), which assumes that budgetary services for municipalities in Poland are provided mainly by cooperative banks. The other communes cooperated with commercial banks (19%) and Bank Gospodarstwa Krajowego (1% of local government units). Cooperative banks from the BPS group were most active in the examined market.

The conducted statistical analysis revealed that characteristics such as location (voivodeship), commune type (urban, urban-rural, rural), population density, and the amount of own revenue per capita were associated with the legal form of the bank servicing the commune budget. Banks organized according to cooperative principles clearly dominated in the servicing of the communes in Little Poland Voivodeship. Additionally, a higher share of such banks in budget servicing was observed in rural and urban-rural communes, as well as in the least populous areas and less affluent communes. The presented research results therefore allow the adoption of the second hypothesis (H2), which assumes that the mentioned characteristics of municipalities are related to the legal form of the bank that provides budgetary services for the municipality.

A higher share of commercial banks in servicing the examined local government units was observed in communes within Warmia-Masuria Voivodeship, where banks organized according to the principles of a stock company serviced every third commune. Commercial banks also dominated in servicing urban communes, units located in areas with the highest population density, and the wealthiest communes.

The identified regularities do not constitute deliberate behaviour of local government units, but they effectively illustrate banks' interest in the communal market, particularly in the segment of servicing communes' budgets. They also set the stage for the presentation of results from in-depth research on the criteria for choosing a bank to service commune budgets, which will be presented in future papers.

In conclusion, it should be emphasized that the issues addressed in the paper constitute a broad research area that requires further exploration due to constant changes in the sector of cooperative banks. Furthermore, as the significance and scope of cooperation between communes and banks evolve, along with the increasing number and variety of their tasks, it would be interesting to replicate the research presented in the paper in the coming years to determine the dynamics and directions of the changes.

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