

DETERMINANTS OF BANKS' COMPETITIVENESS IN LOCAL FINANCIAL MARKETS

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Abstract

The article presents the analysis of determinants of banks' competitiveness in local financial markets, with respect to local (cooperative) banks and branches of large commercial banks. The paper also evaluates the competitive position of the banks using the synthetic measure of competitive advantage M_{PK} . The article proves that there are considerable differences between the analyzed groups of banks, in terms of their competitiveness and its determining factors (which are banks' assets). The paper also indicates the areas in which particular banks should make changes in their resources and operational strategies in order to improve their competitiveness in local financial markets.

JEL Classification: G21, D53

Keywords: banks, local financial market, competitiveness

DOI: <https://dx.doi.org/10.65748/fiqf-2012-0001>

Received: 16.09.11

Accepted: 27.03.2012

Introduction

The local financial market is one of those economic categories still awaiting a clear-cut definition. This market is distinguished by means of the territorial (spatial) criterion, however in specialist literature and economic practice it is often identified with an area covering the whole country or even several countries (as opposed to the global market) or with an area covering the region, a few districts or a single town, district or commune. Simultaneously, financial institutions are often divided, depending on territorial scope of their operations, into global, international, national, regional and local. For the purpose of this article we assume that *the local financial market* should be understood as a market whose territorial scope does not exceed one district, the large part of which is constitutes of rural areas.

An issue closely related to local financial markets is the problem of their fragmentation (also called segmentation). It is a geographical and institutional isolation of financial markets and institutions (appearing especially in rural areas), which accounts for the origin of wide divergences in effective prices of financial services (Kulawik, 2008, p. 12). Conducting banking operations in this type of market is associated with above-average operational costs (resulting from building and maintaining a network of outlets in the area) and higher transaction costs (related to information asymmetry, underdevelopment of information systems, dispersion and spatial remoteness of clients, etc.). Moreover, lower and less differentiated demand for financial services does not support achieving high profitability of banking operations.

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It is natural that financial institutions pursue their own interests and prefer the most attractive areas which offer a possibility of high profitability of banking operations (Kulawik and Ziółkowska, 2006, p. 19). Not all banks are interested in conducting their operations in local markets, especially in rural areas, although it is connected with considerably weaker competitive pressure from other financial intermediaries than in the wide financial market. Moreover, due to dynamic tele-information development, banks now have a possibility of conducting operations through virtualization of the client-bank relations. Clients may use banking services via electronic channels. In this area, however, there are a number of constraints, particularly referring to retail banking². This type of banking, offering services to individuals and economic entities run by individuals (micro-enterprises, farmers and companies belonging to the SME sector), as opposed to investment or corporate banking, is still largely local business, basing on more or less developed network of traditional bank outlets.

We have local banking operations when they are conducted in direct proximity to clients from local communities. We should remember that the inclination to create banking outlets in the area results from banks' belief that the physical presence of a service provider in a place where its clients operate will increase the chances of a market success of its services. This does not mean, obviously, that the service provider must be of local origin, as apart from local banks, such as cooperative banks, such areas are also services by local branches of large commercial banks, which operate nationally, cross-nationally and even globally.

The necessary condition for the success in the financial market is the bank's competitiveness. This applies to local markets as well, though the determinants of competitive advantage are often different from the ones which guarantee success in the general financial market. Also the competitiveness should be perceived here in a wider perspective, that is not only as the ability to operate and survive in a competitive environment, but also an ability to offer such products and services (or even creating demand for them) which will allow the bank to achieve satisfactory financial results despite difficulties and constraints resulting from the nature of local market operations.

Gorynia (2000, p. 48) points out that the competitiveness of economic entities should be considered in three dimensions (areas), as:

- 1) competitive position, which is result competitiveness,
- 2) competitive potential, that is resource competitiveness,
- 3) competitive strategy (instruments of competition), that is operational (functional) competitiveness.

The competitive position of an enterprise is the result of the market evaluation (especially by customers) of what it offers. The most basic and synthetic measures of competitive position of each enterprise are its market share and achieved financial results.

The competitive potential describes all resources used or available for use by the enterprise. The achievement of a desired competitive position is determined by possession of competitive advantage. Competitive advantage, on the other hand, is the effect of applying a set of instruments of competition, which are elements of competitive strategy (Gorynia, 2000, p. 50). The instruments of competition include, for example: quality of products, price, size of product range, advertising, sales promotion.

² These are technical and economic barriers associated with poorly developed technical infrastructure and social and behavioral barriers resulting from habits, fears of safety of using the Internet banking services and gaps in information and economic education. Special accumulation of these barriers can be found in rural areas (Polasik 2007).

The aim and methodology of research and sources of material

The aim of the article is to analyze the determinant of banks' competitiveness in local financial markets and to determine differences in this aspect between local banks and branches of large commercial banks. Taking into account the above theoretical assumptions, banks' competitiveness will be analyzed in the context of their competitive position (for example we will analyze their share in local financial market and their competitive advantage). Competitive advantage is the effect of using its competitive potential and applying appropriate competitive strategy by the bank.

The analysis will cover two groups of banks, namely cooperative banks, which perform the function of local banks and operation (territorial) branches of commercial banks operating in town and country areas. Such division of analyzed units is justified due to the differences in their models of operation but also in aims and strategies of banking operations between these two groups. This encourages us to formulate a hypothesis that there are considerable differences between these banks as far as determinants of competitive advantage are concerned, that is the used advantages (creating competitive potential) and differences in their level of competitiveness in local financial markets. To determine competitive position of the banks in the local financial market we used synthetic measure of competitive advantage M_{PK} . To calculate this ratio, we used the multivariate analysis method, and more precisely the so-called method of pattern development (Bał, 1999).

The tool enabling us to obtain information for our analysis was the questionnaire. The questionnaire survey, conducted in 2009, covered 62 randomly chosen units from the area of south-east Poland, that is 38 cooperative banks (CB) and 24 branches of commercial banks (CMB)³. In the latter case the survey covered the branches with determined level of operational independence (we did not survey lower rank branches, such as outposts of branches, banking agencies, cash stands, etc.). The sample included operation branches of 5 commercial banks. These were the banks with the largest network of bank outlets in Poland, thus such banks which have their branches in small and medium-sized towns and which operate in local financial markets. The questionnaire respondents were chairs of cooperative banks and heads of commercial bank branches.

Characteristics of the analyzed sample

At the end of 2008, the surveyed banks⁴ had 421 outlets at their disposal, including 359 subordinate outlets (Table 1). Compared with 2006, there was a nearly 10% growth in the number of outlets, but it amounted to 12.9% in case of cooperative banks, out of which 2/3 were branches and cash stands opened in towns. On the other hand, commercial banks (CMB) increased the number of their outlets by 8.2%, however this almost exclusively referred to branches and outposts (banking agencies) located in large cities.

The surveyed units covered with their operations the area of 540 communes (in 2006 this area covered 516 communes, which show an increase of 4.7%). Among surveyed units, 22.6% operate only in rural areas, and this exclusively refers to cooperative banks (in this set this constitutes 36.8% of banks). Around 2/3 of the units operate on town and country areas (with rural areas dominating), while 12.9% of banks (5.3% of CB and 41.7% of CMB) conduct their activi-

³ The survey was conducted within the research project No N113 24 18 36 called. "Endogenous and institutional conditions of relations between farms and banks" financed by the Ministry of Science and Higher Education with the resources allocated to science.

⁴ As already explained, in case of commercial banks, the survey covered operational branches, however, in order to maintain conciseness of the message in the further section of the article, all surveyed units will be called banks.

ties mainly in urban area, but they also have posts in neighboring rural areas. The average area of the bank's operational activity covered 8 communes, and one bank outlet services on average the area of 3 communes (Table 1).

Table 1: Territorial scope of operations, employment and number of outlets and client accounts in surveyed units (as of the end of 2008)

Item	Cooperative banks (CB)	Commercial banks (CMB)
1. Number of surveyed units (banks)	38	24
2. Total number of bank posts of lower rank, subordinated to surveyed units	307	52
• average number of lower-rank posts	8	2
3. Percentage of units with lower rank posts (%)	94.7	54.2
4. Characteristics of operational area in which the bank operates (% of units)		
• only rural communes	36.8	-
• town and country communes	57.9	58.3
• urban and rural communes ¹	5.3	41.7
5. Percentage of clients from rural areas (average)	70.2	36.2
6. Number of communes in which banks operate	315	225
- including the average number of communes per one bank unit	0.9	3.0
7. Average number of employees	58	29
- including average per 1 lower-rank outlet	7	13
8. Average number of deposit accounts	12 831	15 817
9. Average number of credit accounts	4 519	3 725
- including average per one bank outlet:	562	2286

¹ the bank operates both on the area of the town and in rural areas

Source: Own elaboration

According to the estimates made by bank management, on average 57% of clients are inhabitants of villages and farmers and entrepreneurs operating in the country. As we could easily predict, this rate was much higher at cooperative banks and reached on average 70.2%. It should also be noted that in $\frac{3}{4}$ of BS it was not lower than 61%. On the other hand, in analyzed units of commercial banks, on average 36.2% of their clients are inhabitants of villages and economic entities from the country. In a quarter of these posts this rate was below 20% and in half of them below 25%. On average, one outlet of a cooperative bank employed 7 people, while the commercial bank one – 13 (Table 1). The structure of education and professional experience of the employees (measured by their length of service) does not show any significant differences between two analyzed groups of banks. Nevertheless, in commercial banks more employees (66.1%) had higher education than in cooperative ones (50.4%). On the other hand, the CB personnel had slightly richer experience⁵.

⁵ For example, employees with over 10 years of service accounted for 47% of CB staff and 38.5% of CMB staff.

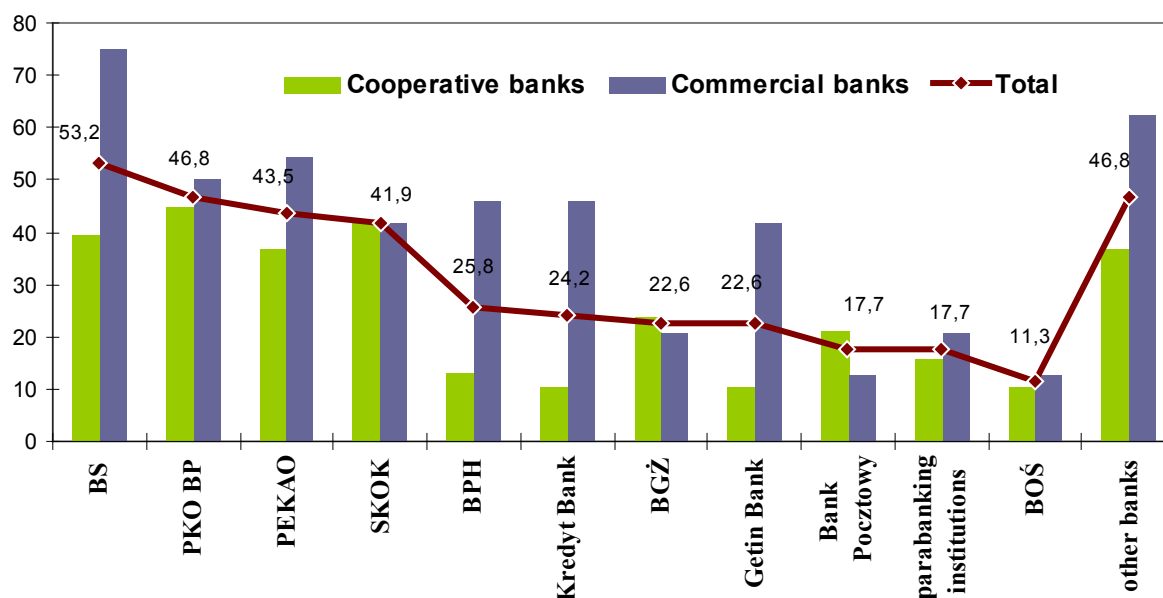
An average cooperative bank had 4.5 thousand credit accounts and around 13 thousand deposit accounts, while a branch of a commercial bank had respectively 3.7 thousand and 15.8 thousand (Table 1). Per one employee commercial banks had approximately twice as many deposit and credit accounts as cooperative banks⁶. This data may indicate greater effectiveness of employment in commercial banks than in cooperative ones, but we should bear in mind that more outlets of BS were located in rural areas, with much lower population density, lower saturation with economic entities and usually lower incomes of customers.

The relation of deposit accounts to credit accounts in cooperative banks was 3 to 1, while in commercial banks 5 to 1, moreover, the differentiation of cooperative banks in this respect was lower than commercial banks. In banking practice, when talking about the relation between customer credits and deposits (volume, number of accounts) that a particular bank is ‘deposit’ or ‘credit’ one. The information presented here shows that cooperative banks have relatively more credit accounts (in relation to deposit ones). This may mean that they engage more in financing local economy than commercial banks, whose numerous branches are rather ‘deposit’ ones.

Banks’ competitive position and its determinants

The pressure from competitors is felt in the area of their operations by all commercial banks and 86.1% of cooperative ones. This data indicates that some cooperative banks are monopolists in their local financial market, however this refers to fewer than 14% of them. Typically, representatives of analyzed banks indicated four competitors operating in the same local financial market (CB representatives had three competitors, commercial banks – five).

Figure 1: Main competitors in local financial markets – according to bankers’ indications (in %)



Source: Own elaboration

⁶ In CB an average number of deposit accounts per one employee was 239, while credit ones – 85, in commercial bank it was respectively 556 and 143.

Cooperative banks usually compete with commercial banks which have the largest network of outlets in the country (PKO BP and PEKAO S.A.), with Cooperative Deposit and Credit Associations (CDCA) as well as with other cooperative banks (such competition was indicated by 39.5% of CB representatives). The biggest competitors of commercial banks in local financial markets are cooperative banks (75% of indications) and other commercial banks, CDCA's as well as para-banking institutions (Figure 1).

Representatives of bank management were asked to evaluate the competitive position of their outlet in the local financial market. The evaluation focused on 15 various aspects of operational activity of their banks (Table 2). If the bank was better than its competitors in a given aspect, it was assigned 1 point, if it was definitely better – it received 2 points. And vice versa, if the competition was better, the bank received -1 or -2 points. Such comparison with the direct competitors of the bank in a given market offered better reliability of evaluations, as they were formulated with reference to a particular situation in the market and particular financial intermediaries. The average results of these evaluations were presented in Table 2. They are interesting, as they show that the perception of one's competitive position and the evaluation of particular aspects of operations vary a lot between groups of banks. In case of cooperative banks, there is a much greater span of evaluations (from -1,21 to 1,08). In roughly half of analyzed aspects representatives of these banks evaluate their units better than competitors. They emphasize their advantage over them in such areas as: independence of operations, low fees and commissions, affordable interest rates on credits, high quality of customer service, simplified procedures and flexibility of their offer and quick reaction to changing situation in the market. They also discern their advantages in staff (their experience and competencies). They believe that they are worse than competitors as far as own equity, use of banking marketing tools, technical potential (especially tele-information one), additional benefits of services, client's access to self-service (network of cash-points, Internet banking) are concerned. They also discern the competitors' advantage in differentiated product offer and location as determining ability to generate revenue (city centers, shopping centers, etc.). On the other hand, representatives of commercial banks in all analyzed aspects pointed at the advantage of their banks over competitors, however, their average evaluations were in the range from 0.04 to 0.79, which implies that this advantage is not very noticeable. The relatively weakest evaluation was provided for such aspects as: independence of operations, quick reaction to changing situation in the market and flexibility of their offer of services. These are the aspects of banking activity in which cooperative banks see their clear advantage, thus the opinions of commercial banks representatives make this evaluation credible.

For commercial banks developing their network of own and partner outlets the degree of territorial outlet autonomy constitutes a major challenge. According to Kulawik (2007, p. 91), good local managers may to some extent soften the shortages of managerial competences of the headquarters. The survey results show that many representatives of local commercial bank branches notice this problem and signals a need for greater autonomy for their units. This problem may also begin to concern cooperative banks, which due to consolidation processes (forced by capital thresholds), and in recent years as a result of a dynamic development of their networks, adopt some patterns of organization of banking activities and the model of management based on the concept of agency. According to Szambelańczyk and Mielnik (2006, p. 415) this may lead to 'distancing' the banks from local communities and loss of independence of territorial units (especially those which used to function as independent units and were taken over by another CB). The survey results do not confirm such problems yet, but they seem real as the natural commercialization of activities of some large cooperative banks continues. In con-

ditions of expanding the operating scale, it is becoming increasingly difficult to achieve bank objectives in the traditional regime of social bonds or close ties with local communities, and it is much easier to implement and use formalized and centralized banking procedures. This then constitutes a real challenge for cooperative banks, resulting from the necessity of maintaining market competitiveness and vital scale of operations guaranteeing economic effectiveness and, on the other hand, from the need to realize the mission of cooperative banking and maintain ‘relations capital’ with local social and economic communities.

Table 2: Comparison of banks and their competitors in particular aspects of their activities in the opinion of management of surveyed units

Aspect	Average evaluation ^a	
	CB	CMB
Independence of operations	1.08	0.04
Fees and commissions	1.05	0.50
Customer service	0.82	0.58
Simplified procedures of provided services	0.68	0.14
Level of interest rates	0.66	0.25
Flexibility of deposit and credit offer	0.55	0.04
Quick reaction to changing situation in the market	0.52	0.17
Staff	0.18	0.21
Product offer	-0.18	0.79
Location of outlets	-0.24	0.17
Client access to self-service (cash-points, <i>home office</i> , Internet)	-0.37	0.29
Equipping services with additional benefits	-0.66	0.34
Technical equipment	-0.74	0.20
Using the banking marketing tools	-1.03	0.17
Capital possibilities	-1.21	0.25

^a point measure in scale from -2 (the bank is much worse than competition) do 2 (the bank is much better than competition); evaluation 0 indicates the lack of differences.

Source: Own elaboration

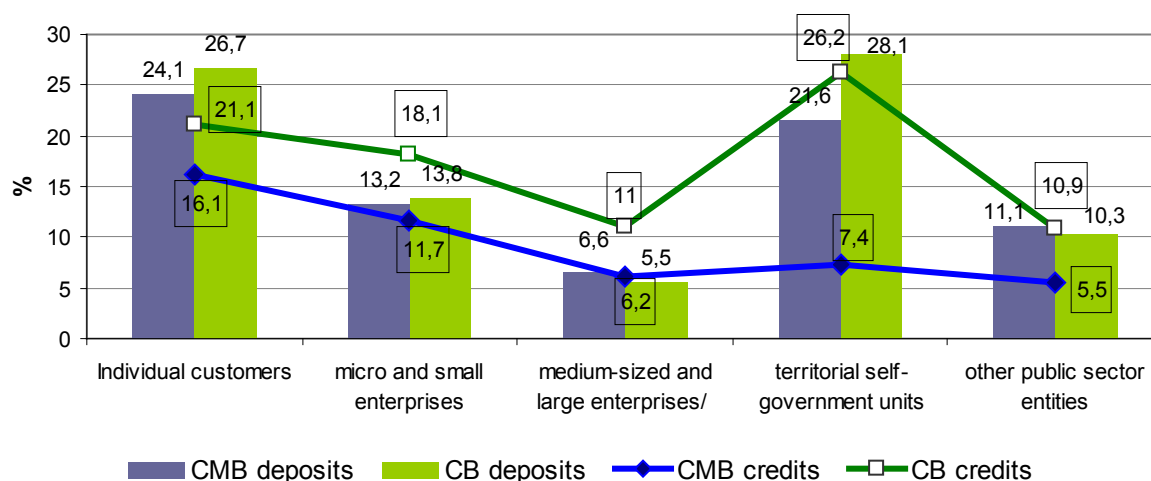
The representatives of the surveyed commercial banks relatively poorly evaluated the location of their banks and other subordinate outlets (Table 2). It seems that in this case such opinion was influenced not by comparison to competitors but the reference to other branches of their own bank. The surveyed units were usually situated in small and medium-size towns and mostly services the ‘adjacent’ rural areas, therefore they found it hard to obtain similar revenues from banking activity as ‘big city’ branches.

The representatives of bank management were then asked to determine the share of their units in the local credit and deposit market, in terms of particular segments of this market (Figure 2). The differentiation of the surveyed community was quite huge⁷. The results confirm however, that both

⁷ In the whole analyzed sample, the coefficient of variation of bank share in particular market segments varied from 90.3% (deposits of individual customers) to 216%.

cooperative and commercial banks operate in a competitive environment. In case of cooperative banks, the value of the third quartile (Q_3) in none segment of deposit and credit market was higher than 39%, while in case of commercial banks – 33%. This means that 75% of the surveyed units did not gain higher share of the market. The share of CB which had a dominant (above 50%) share in the local credit market was only 10.5% (these were banks operating exclusively in rural areas).

Figure 2: Shares of banks in local financial market in particular segments of customers



Source: Own elaboration

Banks achieved the highest share in the deposit and credit market in the segment of individual customers, local self-governments and small enterprises (Figure 2). Such clients pay more attention to the ‘locality’ of the bank, its spatial proximity and long-term relations than medium-sized and large enterprises or other public sector entities (for example Health Care Centers). Moreover, in case of commercial banks, enterprises (with the exception of small businesses run by individuals), territorial self-government units and other public sector entities are often ‘taken over’ by specialist corporate branches located in large cities. Local branches of these banks either do not participate in their servicing or only serve as ‘stands’ for receiving and passing particular documents⁸. This situation, though economically justified (reduction of bank’s running costs, transaction costs, more specialist service, etc.), does not encourage commercial banks to develop their roots in the local social and economic community.

At the next stage of the survey, we asked bankers to describe the most important factors determining the competitiveness of their banks in the local financial market (Table 3), and then, as if referring to these features, to provide the advantages of their units (Figure 3).

The responses indicate that the bank’s competitive advantage in the local financial market is based on trust and good reputation of the bank in the local community, and then on competitive offer of deposits and credits and low fees and commissions on banking services. Of vital importance is also the knowledge of the local market (clients, specificity of local business, etc.) and the range and quality of provided services, as well as access to the bank, understood generally, as both through traditional channels (proximity of outlets, opening hours, parking etc.), and through electronic channels (Table 3).

⁸ This situation concerned of branches the three analyzed commercial banks.

Table 3: Factors determining in the bankers' opinion the bank's competitiveness in the local financial market*

Item	total (%)	CB		CMB	
		on the 1st place	total (%)	on the 1st place	total (%)
1. Trust and good reputation of the bank in local community	72.6	31.6	84.2	29.2	54.2
2. Competitive deposit and credit offer	45.2	13.2	34.2	29.2	62.5
3. Low fees and commissions	37.1	13.2	39.5	12.5	33.3
4. Range and quality of provided services	35.5	7.9	26.3	16.7	50.0
5. Knowledge of local market (clients, business specificity, etc.)	30.6	21.1	42.1	-	12.5
6. Wide access to bank services (location, cash-points, Internet services, etc.)	30.6	10.5	34.2	-	25.0
7. Staff qualifications	14.5	2.6	5.3	4.2	29.2
8. Flexible offer, negotiable terms of contract	14.5	2.6	10.5	8.3	20.8
9. Efficient organization and management	12.9	-	15.8	-	8.3
10. Technical progress and innovations	8.1	-	10.5	-	4.2

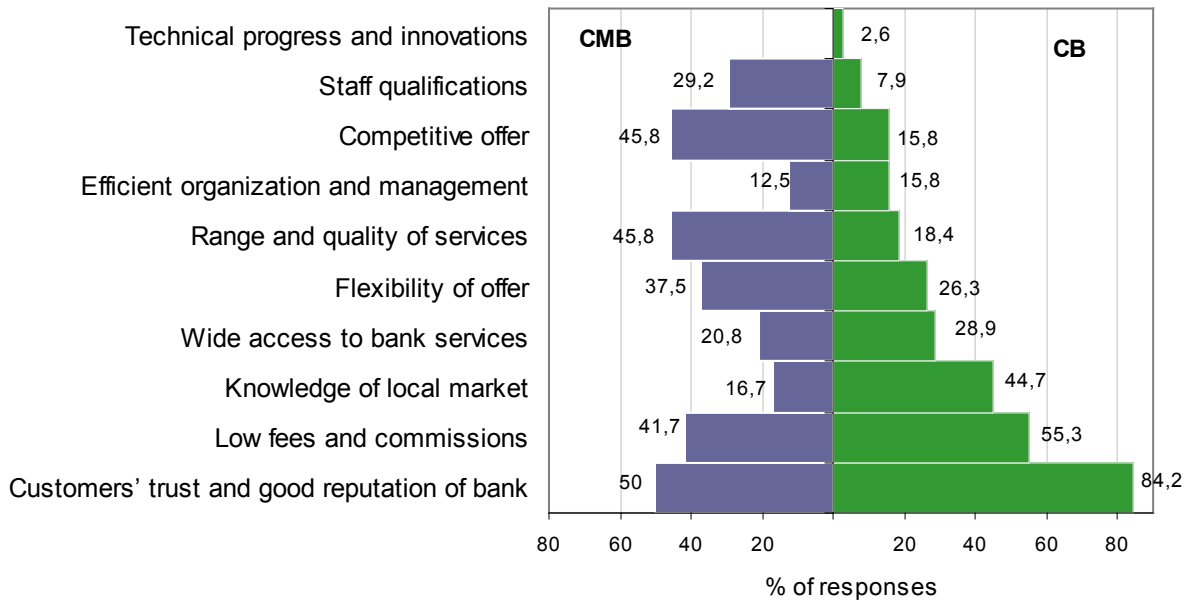
* respondents were allowed to indicate 3 factors according to their weight from 1 to 3

Source: Own elaboration

The survey shows that there are some differences in the evaluation of competitive advantage factors between the groups of banks. For example, the knowledge of the local market (clients, specificity of the local economy) is a crucial factor for the bank's competitiveness for 42.1% of cooperative banks representatives, and for 21.1% of them – the single most important factor, whereas only 12.5% of commercial banks representatives indicated this feature as important, though nobody placed it as number one. Moreover, cooperative banks valued more such features as trust and good reputation of the bank in the local community and wide access of clients to services (but mainly via traditional channels), and finally low fees and commissions. Commercial banks, on the other hand, preferred competitive deposit and credit offer, wide range and quality of provided services, flexibility of their offer and staff qualifications (Table 3).

The comparison of competitive advantages indicated by bankers with those possessed by the banks they manage shows significant similarity (Figure 3). These results imply that banks are trying to turn into their advantages those factors which in their opinion will allow them to achieve competitive edge in the local financial market. For cooperative banks these are mostly the features associated with their 'relations capital', knowledge of local market and clients and low fees and commissions. With reference to the structure of indicated competitive advantages we could observe a certain gap in the competitiveness of the deposit and credit offer of CB as well as in technological progress and innovations. Commercial banks see their advantages mostly in customers' trust and in 'good brand' of their banks as well as in competitive and broad offer of banking services, flexibility of their offer and in their staff qualifications. In the human factor aspect, cooperative banks focus on their staff experience, which allows them better identification of the specificity of the local economy and clients, while commercial banks emphasize their staff qualifications, perceived through their education and training.

Figure 3: Advantages of banks in the local financial market according to bankers*



* respondents could indicate 3 factors (advantages of banks)

Source: Own work

In order to present synthetically the ‘gap’ between the factors considered by bankers to be vital competitive advantages in the local financial market, and the advantages of their banks indicated by them, we used the synthetic *measure of banks’ competitive advantage* M_{PK} . The narrower the ‘gap’ (that is the value of the measure is close to 1), the stronger the competitive position the bank holds in the local market, as objectively established determinants of competitive advantage are the bank’s advantages (or are very similar to it).

In order to calculate the M_{PK} indicator, we used the multivariate analysis in form of the development model method. This method is one of linear ordering methods, aiming at ordering the objects from the worst to the best one, and the ordering criterion is the level of the complex phenomenon. The specificity of the linear ordering methods among other methods of multivariate comparative analysis consists in the necessity of determining the nature of all variables describing the complex phenomenon (Siedlecka, 1999, p. 109). In the development model method we assume that the variables values are normalized and are stimulants or de-stimulants. In the next stage we establish an abstract object, the so-called development model z_0 which has the best values for each variable and the so-called anti-model z_{-0} with the worst values for each variable. Then we examine the similarity of the objects to the best object via calculating the distance (Euclidean or Manhattan one) of each object from development model (Paliszkiwicz, 2010, p. 345). For the Manhattan metric the formula can be presented in the following way:

$$d_{i0} = \sum_{j=1}^m |z_{ij} - z_{0j}| \quad (i=1,2, \dots, n), \text{ or} \quad (1)$$

The next step is to establish the so-called development measure for each object, according to the formula:

$$m_i = 1 - \frac{d_{i0}}{d_0}, \quad (i=1,2, \dots, n) \quad (2)$$

where: m_i – development measure for i -th object,
 d_0 distance between the model and anti-model.

The development measure is constructed so as to meet the following criteria:

- 1) The higher the level of complex phenomenon, the higher m_i ,
- 2) m_i values are contained in the range $[0,1]$, the development measure calculated for the model equals 1, and for the anti-model - 0.

For synthetic calculation of the banks' competitive advantage M_{PK} we used the indications of the managers of the surveyed outlets concerning the factors creating competitive advantage in the market (3 factors, ranked according to their weight) and banks' advantages (also 3 factors ranked according to their weight). In case of the presented analysis, all variables entered into the analysis were considered stimulants.

While constructing the measure, the following assumptions were made:

i – number of the bank, $i = 1, \dots, 62$

j – number of the variable in the ranking of advantages, $j = 1, \dots, 11$

v_j – variables (competitive advantages, banks' advantages)

z_{ij} – the sum of the values of variables ranks v for the object i

z_0 – the model, that is the object with the highest (optimum) sum of values v

Stages of calculation:

- 1) on the basis of the hierarchy of bankers' indications concerning competitive advantage factors in the local financial market, we establish their ranking: particular variables v_j were assigned ranks (point values) according to their place in the ranking (from 11 points for the 1st place to 1 point for the last one),
- 2) we determined the development model z_0 being the sum of the values of a hypothetical set of 3 variables v_{0j} with the highest ranks, which would constitute the greatest competitive edge in the local financial market (in bankers' opinion): the bank which will indicate as its advantages an identical set of 3 variables will obtain value z_{ij} corresponding to the value of the model,

$$z_0 = \sum_{j=1}^k v_{0j} + v_{01} + v_{02} + v_{03} \quad (3)$$

where: $v_{01} = 11$ pts, $\dots v_{03} = 9$ pts, total $z_0 = 30$ pts,

- 1) the i -th bank indicated 3 features being its advantages in the local financial market; for each variable which was in line with the model, a certain number of points were assigned (if the variable was in a different place than in the model, 1 point was subtracted), for other variables (bank's advantages inconsistent with the model) points were assigned according to the arithmetic mean of the ranks of the variables which occupied positions 4-11 in the ranking; for particular objects z_{ij} was calculated as the sum of point values assigned to variables v_j of the bank i ,
- 2) the anti-model z_{-0} was established, that is a set of variables v_j which gives the lowest sum of points,
- 3) the development measure m_i was calculated, using the above formula (2), which is also the value of the competitive advantage measure M_{PK} .

Table 4: Statistical parameters of the measure of banks' competitive advantage M_{PK} in the local financial market

Item	Banks in total	CB	CMB
Average value of M_{PK}	0.58	0.63	0.51
- standard deviation S	0.20	0.20	0.19
- coefficient of variation V (%)	35.0	31.7	37.2
- minimum	0.00	0.31	0.00
- quartile Q_1	0.41	0.42	0.36
- median	0.58	0.71	0.46
- quartile Q_3	0.73	0.78	0.69
- maximum	1.00	1.00	0.83

Source: Own elaboration

The average value M_{PK} in the surveyed sample of banks is 0.58, which is exactly the value of the median (Table 4). The range of the measure value is contained between 0 and 1. This means that in the surveyed sample there was a bank (CB) which pointed as its advantages exactly those (and in the same order) that according to bankers are the best in creating competitive edge. There was also the bank (commercial one) which did not list as its advantages any of the variables considered vital in creating competitive edge in the local financial market. Around 1/4 of the banks indicated the advantages which were very close to the model (these are the outlets whose value of the measure was above 0.7).

Conclusions

Cooperative banks obtained on average slightly higher values of the measure of competitive advantage than commercial banks (the difference between M_{PK} medians is particularly big in those groups of banks). This may prove that their advantages are better suited to competing in local financial markets. An example of such advantages could be good knowledge of local economic and social conditions, strong ties with local economic entities and trust and good 'brand' of the bank among clients, which all constitute the so-called 'relations capital' of the bank in the local environment. Some commercial banks, on the other hand, possess advantages which in a wide financial market create competitive advantage, but in a local market are ineffective (in bankers' opinion), such as access to the bank via electronic channels, additional services, etc.

The results of the survey indicate certain aspects of banking activity in which banks should seek the possibilities of improving their effectiveness and their competitive position. These possibilities are slightly different in case of cooperative banks (for example improving the attractiveness of provided services and expanding their offer), and different in case of commercial banks (creating stronger ties with local social and economic communities, greater orientation to relations, better adjustment of their offer to the needs of local customers).

References

- Bąk, A. (1999). Wykorzystanie metod wielowymiarowej analizy porównawczej w analizie finansowej. *Prace Naukowe Akademii Ekonomicznej we Wrocławiu*, No 811, Wrocław.
- Gorynia, M. (2000). Luka konkurencyjna w przedsiębiorstwach a przystąpienie Polski do Unii Europejskiej. *Gospodarka Narodowa*, No 10, 48-67.
- Kulawik, J. (2008). Europejska integracja finansowa i monetarna a rolnictwo. Raport PW, No 96. Warszawa: IERiGŻ-PIB.
- Kulawik, J. (2007). Globalizacja finansowa a funkcjonowanie i rozwój banków. Raport PW, No 62. Warszawa: IERiGŻ-PIB.
- Kulawik, J., Ziółkowska, J. (2006). System finansowy rolnictwa a globalizacja finansowa. Raport PW, No 50. Warszawa: IERiGŻ-PIB.
- Paluszkiewicz, O. J. (2010). Wykorzystanie metody wzorca rozwoju do klasyfikowania przedsiębiorstw pod względem poziomu zarządzania wiedzą. In: R. Knosala (ed.), *Komputerowo zintegrowane zarządzanie*, Vol. 2, (p. 344-350). Opole: Oficyna Wydawnicza PTZP.
- Polasik, M. (2007). Uwarunkowania i perspektywy rozwoju detalicznej bankowości internetowej w Polsce. In: M. Marcinkowska, S. Wieteska (ed.), *Harmonizacja bankowości i ubezpieczeń w skali narodowej i europejskiej* (p. 120-128). Warszawa: Difin.
- Siedlecka, U. (1999). Metody porządkowania liniowego. In: W. Ostasiewicz (ed.), *Statystyczne metody analizy danych*. Wrocław: Wydawnictwo AE we Wrocławiu.
- Szambelańczyk, J., Mielnik, M. (2006). Problemy efektywności banków spółdzielczych w Polsce w procesach konsolidacji. In: J. Węclawski (ed.), *Bankowość*, Lublin: Wydawnictwo UMCS.