Piotr Karaś
Andrzej Walitza

POLISH COMMERCIAL BANKS' EFFICIENCY IN 2009–2016 UNDER STRESS CONDITIONS FOR RECAPITALIZATION

Abstract

In response to the outbreak of the global financial crisis, central banks and regulatory and supervisory bodies undertook a number of measures to mitigate the effects of the crisis and minimize its impact in the future. Changes were also made in Poland in 2009–2016, among others, in the areas of monetary policy (since 2015 interest rates have been at historically low levels), prudential regulations, the functioning of the deposit guarantee scheme, structured bankruptcy, and the so-called bank tax. The aim of this study is to attempt to answer the question of how changes in monetary policy and the regulatory environment affected the efficiency of banks in Poland. The study period was the years 2009–2016 and the sample consisted of the seventeen largest banks, divided into two groups. The division criterion was the value of the solvency ratio as a measure of a bank's capital strength (the limit value adopted was the total capital ratio of 9%). Based on the research conducted, it can be argued that despite the fact that banks with lower capital ratios still achieve higher profitability on banking operations, better capitalized banks have significantly compensated for the gap by further improving the return on assets compared to less capitalized institutions.

Piotr Karaś, Cracow University of Economics, Department of Banking, Rakowicka 27, 31-510 Kraków, Poland, e-mail: piotr.karas@uek.krakow.pl, ORCID: https://orcid.org/0000-0002-2360-0848.

Andrzej Walitza, Cracow University of Economics, Department of Banking, Rakowicka 27, 31-510 Kraków, Poland, e-mail: andrzej.walitza@uek.krakow.pl, ORCID: https://orcid.org/0000-0002-0390-9450.

1. Introduction

In 2008, the global financial crisis broke out. At first it affected the financial systems of the developed countries and then translated into crises in the economies of those countries and also of less developed countries, including Poland. Central banks, legislators and regulators have taken a number of steps to mitigate the effects of the crisis and minimize the risk of its recurrence.

A financial crisis can affect banks on two levels: liquidity problems may arise, and losses suffered by these entities may adversely affect their equity holding. From this perspective, it seems reasonable to ask how the changing market conditions are affecting the banking sector in Poland and the possibility of its further growth. In particular, of greatest interest is the question of the efficiency of commercial banks depending on the level of equity they hold.

This text consists of two major parts. The first contains the general characteristics of the banking sector in Poland in 2009–2016. The second is a study of the efficiency of the functioning (in 2009–2016) of the largest banks, divided according to the criterion of equity held. In addition to traditional measures, the Data Envelopment Analysis (DEA) method was used in the study.

2. The Banking Sector in Poland in 2009–2016

The Polish banking sector was tested after the collapse of Lehman Brothers and the subsequent capital tensions which spread throughout the European Banking after 2009. Despite its strong domestic fundamentals, the deep interdependence of local commercial banks and their foreign parent companies turned out to be dangerous. In 2011 65% of banking assets in Poland were controlled by international investors, mostly west-European banking groups. Moreover, over 70% of the financing of domestic activities was by foreign capital. The Basel III implementation schedule and European Banking Authority stress tests enforced the transmission of capital pressure to the Polish banking sector. Political and supervisory actions limited direct capital transfers. Nevertheless, due to group capital evaluation methods for minimal capital ratio requirements, local subsidiaries started aggressive

deleveraging procedures. In 2009–2010, foreign controlled banks reduced credit lines provided to Polish companies by PLN 19 billion, which related to 12.5% of global exposure. The main reason for this, as shown by several analyses, was Capital Adequacy Ratio diversity (Kawalec & Gozdek 2012).

The years 2009–2016 were a period of continuous growth of the banking sector in Poland (Table 1). The growth of this sector took the form of both a steady increase in lending and total deposits[1]. In all those years there were positive dynamics in both areas. Only in 2012 was there a significant decline in these dynamics, although they remained at positive levels[2]. The average growth rate of both deposits and loans was 7%. The increase in deposit and loan activity was accompanied by a systematic improvement in capital condition as measured by the solvency ratio (only 2011 and 2014 saw a slight decrease in this indicator).

Table 1. Commercial Banks in Poland in 2009–2016

Specification	2009	2010	2011	2012	2013	2014	2015	2016
Total loans (in billion PLN)	713.9	787.5	911.3	935.2	971.9	1,043.1	1,118.5	1,172.1
Total deposits (in billion PLN)	836.0	918.2	1,014.2	1,035.9	1,088.3	1,173.5	1,246.3	1,342.5
Net profit in the current year (in billion PLN)	8.3	11.4	15.5	15.5	15.2	15.9	11.2	13.9
Solvency ratio (%)	13.29	13.84	13.10	14.74	15.66	14.69	16.31	17.72
ROA	0.0113	0.0142	0.0169	0.0165	0.0156	0.0153	0.0101	0.0119

Source: Reports on the situation of banks for the years 2011–2016, Polish Financial Supervision Authority Office – UKNF (2012–2016, 2017b).

On the other hand, the sector's profitability measured both in absolute terms (as financial profit/loss) and return on assets (ROA) did not follow the growth in operations. Net profit in the current year in the first and last years of the analysed period was significantly lower than that achieved in

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[1] At the end of 2015, for the first time in eight years, the value of deposits from the non-financial sector exceeded the value of loans for this sector (UKNF 2016, p. 5).

[2] According to the Polish Financial Supervision Authority Office (Urząd Komisji Nadzoru Finansowego – UKNF), the reduction in lending growth in 2012 was due to the lower growth of loans to households and businesses, which was caused by the economic downturn and a worse outlook for economic growth and jobs (UKNF 2013, p. 6). On the other hand, the fall in the rate of lending growth to the levels recorded in the final years of the analysed period was not, in the opinion of the NBP, a cause for concern, as the rate was close to the nominal GDP growth rate. It should not have therefore led to the accumulation of imbalances in the economy or been an obstacle to the development of the economy (UKNF 2016, p. 44).

2011–2014. The ROA systematically decreased in 2011–2015. The years 2010–2012 and 2015 were a period of negative dynamics for both measures, and in 2012–2014 the dynamics were close to zero. Considering both international capital pressure and the strength of domestically controlled banks, the fundamental question is whether the higher capital can make banks not only more secure but also more profitable. If this hypothesis were shown to be true, then market regulators and supervisory authorities would have a mandate to pursue further actions focused on banking sector stabilization and long term growth.

3. Determinants of the Profitability of the Banking Sector in 2009–2016

The profits or losses generated by a commercial bank can translate into both its current capital condition and the possibility of raising additional funds on the market. On the other hand, it seems that sufficient equity can determine the ability to generate profit.

The factors that affected the decline in the profitability of the banking sector in 2009–2016 included new banking regulations, low interest rates, increasing charges paid to the Bank Guarantee Fund – BGF (Bankowy Fundusz Gwarancyjny – BFG) and the introduction of the so-called bank tax (Jakubiak 2012, pp. 15–18; UKNF 2017b, p. 28).

The key regulations relating to the capital position of banks during the studied period were Basel 2.5 and Basel III. The first set of regulations was implemented into Polish law in the years 2008–2011 (the legislation introducing these new regulations was: Resolution No. 380/2008; Resolution No. 367/2010; and Act of 28 April 2011). The second package was implemented by the amendment of the Banking Law Act (Act of 1 November 2015).

Basel 2.5 increased the capital requirements for securitizations and correlation trading positions within a bank's trading book as well as incorporated add-ons for stressed Value-at-Risk and incremental risk requirements. Limits were imposed on the ability to manipulate the value of a bank's own funds. Banks were obliged to establish a robust liquidity risk management framework i.e. to develop a strategy, policies and practices to manage liquidity risk in accordance with risk tolerance and to ensure that the bank maintained sufficient liquidity. The rules for the preparation of input data for IRB models were clarified and the so-called concentration limit in another entity was introduced. The most important changes resulting from Basel III included: an increase in the amount and quality of equity;

separation of the Common Equity Tier 1 (CET1), which is intended to cover losses under the solvency conditions of a bank; and the obligation to allocate Tier2 supplementary capital to cover losses in the event of a loss of solvency or liquidation of a regulated entity.

International research shows that low interest rates and a flat yield curve can contribute to poorer financial results for banks[3]. Furthermore, in a low interest rate environment, the net interest margin (understood as interest income to interest-bearing assets) is reduced[4].

Table 2. Selected Interest Rates for 2009–2016 (Annual Average Values in %)

Specification	2009	2010	2011	2012	2013	2014	2015	2016
NBP reference rate	3.67	3.50	4.25	4.60	2.92	2.38	1.58	1.50
Average MFI interest rates on outstanding amounts, PLN denominated								
Deposits: total, overnight included	3.46	2.94	2.99	3.37	2.37	1.67	1.23	1.02
Loans: total, overdrafts included	8.40	8.35	8.47	8.71	7.13	6.25	4.92	4.73

Source: author's own study based on NBP data.

In the first part of the study period, a slight increase in interest rates can be observed (Table 2). However, since October 2010 this trend has changed. Since 2015, interest rates have been historically low.

As part of the adjustment of Polish legislation to the requirements of the EU as of 31 December 2010, the amount guaranteed by the Bank Guarantee Fund was increased to the equivalent of EUR 100,000 (from the previous level of EUR 50,000). Moreover, in the analysed period the parameters of obligatory payments to the BGF were changed[5]. In the meantime, the bankruptcy of two banks occurred[6]. All these factors translated into a steady increase in the burden on the banking sector towards the BGF (Table 3).

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[3] This conclusion was based on the analysis of 110 large banks from 14 developed economies for the years 1995 to 2012 (Borio, Gambacorta & Hofmann 2015).

[4] Empirical research was conducted on a sample of 3,418 banks from 47 countries for 2005–2013 (Claessens, Coleman & Donnelly 2016).

[5] For example, in 2011 the mandatory annual fee payable by banks to the aid fund increased from 0.045% to 0.099% of the calculation basis (BFG 2010, p. 23; BFG 2011, p. 24).

[6] In 2015 – for the first time since 2001 – there was a case of disbursement of funds guaranteed to depositors of a bank in connection with the fulfilment of the condition of the BGF guarantee (this concerned the Spółdzielczy Bank Rzemiosła i Rolnictwa in Wołomin – SK Bank). The amount of funds disbursed amounted to about PLN 2 billion. To cover all the liabilities towards the BGF, banks had to make an additional payment to the Fund (BFG 2016, pp. 30–31; UKNF 2015, p. 35). In addition, the bankruptcy of the Bank Spółdzielczy in Nadarzyn (BS Nadarzyn in: BFG 2017) was announced at the end of 2016.

Table 3. Banking sector payments to the BGF in 2009–2016 (PLN million)

Specification	2009	2010	2011	2012	2013	2014	2015	2016
Total amount	320	299	736	824	936	1,165	4,243	2,391

Source: authors' own study based on UKNF data.

On 9 October 2016, the Act on the Bank Guarantee Fund, the Deposit Guarantee Scheme, and Forced Restructuring came into effect (Act of 10 June 2016). This is an implementation of the Bank Recovery and Resolution Directive (BRRD) and the Deposit Guarantee Schemes Directive (DGSD) into the Polish legal system. This law has transformed the existing funds into two new ones: the bank guarantee fund and the bank forced restructuring fund[7]. The funds of the deposit guarantee scheme in banks are expected to reach a level equivalent to 2.6% of guaranteed funds by 3 July 2030[8]. In addition, the Act introduces the so-called forced restructuring mechanism, which aims to minimize the bankruptcy costs of banks[9].

Also in 2016, the Act introducing the so-called bank tax came into effect (Act of 15 January 2016). Pursuant to it, the tax covers all entities of the banking sector that hold assets – adjusted for decreasing items[10] – exceeding PLN 4 billion. The tax base is the surplus above this value. Tax is calculated and paid on a monthly basis. The tax is 0.0366% of the tax base per month. Introducing the tax already in the first year has put considerable pressure on banks' financial profits (UKNF 2017b, p. 34). In 2016 two-thirds of the banking sector paid the bank tax. The banks paid 3198 mln PLN into the state budget (UKNF 2017c).

In view of the above, the question arises as to how banks with different capital levels managed to cope in 2009–2016. In other words, were the banks with higher equity capital more effective at this time than those with a smaller capital base?

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[7] Similar funds were created for cooperative savings and credit unions.

[8] At the end of 2016, the security ratio for the deposit guarantee system in banks (bank deposit guarantee facilities / bank guarantee funds) was 1.65% (BFG 2017).

[9] The mechanism of resolution is comprehensively characterized by, for instance, Szczepańska, Dobrzańska and Zdanowicz (2015).

[10] The value of assets is reduced by: own funds, treasury securities, assets acquired from the NBP as collateral for a refinancing loan granted by the NBP. The banks associating cooperative banks further reduce the value of assets by the funds collected in all accounts of affiliated cooperative banks.

4. Methodology

In order to verify the research hypothesis, it was decided to compare the values of selected traditional measures for evaluating banks' activity – i.e. lending growth, ROA and net banking activity income – with those obtained using Data Envelopment Analysis (DEA)[11]. In this case, the DEA method is used to measure the relative technical efficiency of banks[12]. It is a deterministic method that allows us to assess the relative efficiency of a studied entity in terms of its ability to convert inputs into effects[13]. This method is particularly justified when conducting research under strict market regulations, where simple indicator methods do not give a full picture of the situation (cf. e.g. Ćwiąkalska-Małys & Nowak 2009)[14]. It is based on mathematical programming[15], which allows us estimate how effectively banks operate in changing market conditions and whether increasing capital standards has forced an increase in their efficiency.

[11] This is a method developed by A. Charnes, W. W. Cooper and E. L. Rhodes (1978) to measure effectiveness by estimating the edges of a set of production capacities for an empirical function of production. Among the most popular methods of measuring effectiveness alongside the DEA method is the Free Disposable Hull approach (cf. e.g. Tulkens & Vanden Eeckaut 1989).

[12] Technical effectiveness is, in addition to allocation and cost assessment, one of the three most popular research perspectives for the market strength of entities. Technical effectiveness speaks of the ability of an entity to convert inputs into effects. It evaluates the trends determining the market strength of the entities as a result of the changing business environment. In contrast to the allocation perspective, measuring technical effectiveness does not require knowledge of prices, which may be a trade secret of the entities. On the other hand, technical effectiveness is far more applicable than cost analysis, especially in the area of changing capital standards.

[13] In the DEA methodology, it is important to assess the capability of the results obtained depending on the scale of resources used. Market parameters determining the position of a given entity against the competition are treated as results. Typically, these are market parameters that indicate the profitability, scale of a business or the efficiency of an entity. These factors are termed effects in deterministic research. Resources available on a different scale, depending on the specificity of the entity, are applied to their implementation. Typically, they are divided into own resources, which include: fixed assets, know-how, labour and capital, and foreign resources such as customer deposits. These resources are called inputs.

[14] In order to obtain reliable test results, it is necessary to ensure proper selection of the test sample in which the studied entities operate under identical market conditions and pursue similar objectives using identical tools. The differences between entities should arise from the scale of the inputs used and the proportion between them.

[15] Statistical surveys, as well as deterministic methods, use parametric methods that are based on econometric estimation. They allow us to determine the maximum potential level of effectiveness under given market conditions. However, a significant limitation for the use of such methods is the need to estimate parameters and to adopt assumptions about production functions even before the start of the study. The difficulty arises especially in the case of a test sample whose distribution differs from the normal distribution and when the population is relatively small, which is unfortunately the case when analysing a group of commercial banks operating in Poland.

For the purpose of the study, an approach was adopted to show the possible variable scale effects[16]. Evaluation of the technical efficiency of individual entities studied (Decision Making Units – DMUs) is based on solving a linear task defined by the following formula (Matuszyk & Nowak 2012):

$$\theta_o = \max_u z_0 = \frac{\left(\sum_{r=1}^{s} u_r y_{r0} - u_0\right)}{\sum_{i=1}^{m} v_i x_{i0}}$$

$$\sum_{i=1}^{m} \mu_r y_{rj} - \sum_{i=1}^{m} v_i x_{i0} - u_0 \leq 0 \ \forall \ j$$

$$u_r, v_i > \varepsilon \ \forall \ r, i,$$

where:

s – number of effects produced,

m – number of inputs,

μ_r – decision variable, weight associated with the r-th effect in the task referring to the o-th object,

v_r – decision variable, weight associated with the r-th input in the o-th object,

x_{ij} – the value of the i-th input in the j-th *DMU*,

v_{ij} – the value of the r-th effect in the j-th *DMU*,

θ_o – the efficiency index of the o-th *DMU*,

o – index indicating the studied decision-making unit.

ε – infinitesimal constant.

Then, the transformation should be performed using the Charnes-Cooper transformation (linearization) to achieve the linear programming task:

$$\sum_{i=1}^{m} V_i X_{i0} = 1$$

$$\max_u z_0 = \sum_{i=1}^{m} u_r y_{r0}$$

$$\sum_{j=1}^{n} \lambda_j x_{ij} + S_i^+ = \varnothing x_{ij} \ \forall i,$$

where:

S_i^+ – slack values or free variables with non-zero values indicate the inefficiency of the unit.

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[16] The basic DEA model assumes the existence of constant return to scale and works especially in shorter research periods. In the case of a time series covering an eight-year period characterized by strong market changes and far-reaching regulatory changes, it is justified to assume the possibility of variable scale effects.

The next step is to add a condition:

$$P(x, y) = \min\{x \to X\lambda, y \leftarrow Y\lambda, e\lambda = 1, \lambda \to 0\},$$

where:

$e\lambda$ – efficiency measure, which is the sum of the linear combination coefficients.

This allows the model to be independent of the variability of the scale effects.

5. Sample

The sample covered commercial banks that were active on the Polish banking market throughout the study period[17]. The study included the seventeen largest banks in Poland, representing almost 80% of the banking sector in Poland, taking into account the balance of loans granted[18]. The choice of sample was dictated by the limitations of the measurement instrument, which is the need to preserve the uniformity of the group in terms of the pursuit of goals and determinants of their activity. The diversification of activity should primarily concern the volume of inputs and the intensity of their application.

The banks were divided into two groups. The first included entities characterized by a potential shortage of sufficient equity. These include: Bank Handlowy w Warszawie SA, Bank Millennium SA, Bank Zachodni WBK SA, Deutsche Bank PBC SA, Euro Bank SA, mBank SA, Bank Polska Kasa Opieki SA (Bank Pekao), Raiffeisen Bank Polska SA, Santander Consumer Bank SA. The second included entities characterized by a better capital position, determining the ability to expand under conditions of rising capital requirements. This group includes: Alior Bank SA, Bank Pocztowy SA, BGŻ BNP Paribas Bank Polska SA, Credit Agricole Polska SA, ING Bank Śląski SA, Powszechna Kasa Oszczędności SA – Bank Polski (Bank PKO). The division of banks into two groups was based on the results of the first comprehensive survey of banks' capital strength in the European Union – the so-called capital exercise – carried out by the

[17] The number of all commercial banks that operated in Poland during the study period decreased by 30% (from 49 to 35).

[18] As of 31 December 2016, the value of granted loans in the portfolio of the studied banks amounted to PLN 918 billion. During the research period, the market share of the studied banks increased from 64.75% to 78.95%, taking into account the balance of loans granted (based on the monthly banking data published by the Polish Financial Supervision Authority Office (UKNF 2017b) and the individual bank data in the Bankscope and Orbis databases from Bureau van Dijk.

European Banking Authority (EBA). The study was the first to show the real level of capital ratios based on Basel III recommendations (EBA 2012). As a limit value, the total capital ratio was determined at 9.00%. In the case of banks included in international banking groups, the value of the ratio was established at the group level. The impact of market regulation was assessed by comparing the average effects achieved by both groups of entities.

6. Findings

Over the whole studied period, banks' lending activity has been growing (see Table 4 for a summary of the percentage changes in the variables tested for each of the groups). Entities from the first group gained an average lending growth of about 8% per year, while those in the second group gained 12%. Characteristic is the significant slowdown in lending growth in 2012 and – also observed in both groups of banks – the gradual slowdown in the final years of the period under review.

Table 4. Continued Relative Growth (%) of the Analysed Variables in the Studied Banking Groups in 2010–2016

Specification	2010	2011	2012	2013	2014	2015	2016
Lending							
Group 1	5.7	15.1	5.7	11.4	10.1	8.0	1.8
Group 2	14.1	14.2	5.8	9.7	18.5	13.7	7.5
Net banking activity income							
Group 1	7.95	4.97	3.97	9.43	2.38	0.32	4.83
Group 2	16.23	10.08	3.68	−0.63	9.00	0.20	11.46
ROA							
Group 1	1.87	−3.58	−2.05	−9.38	−8.04	−11.88	3.63
Group 2	1.91	−6.47	−1.83	−5.21	−7.61	−9.41	3.10
Technical efficiency							
Group 1	−2.51	4.17	−0.10	−4.79	1.16	−1.29	0.26
Group 2	−11.84	11.68	0.52	3.00	−0.74	8.73	0.00

Source: authors' own study.

The analysis of two elementary measures of bank efficiency, i.e. net banking activity income and the rate of return on assets, allows us to conclude that in both groups the changes in the first measure are relatively different, while the changes in profitability are parallel. The banks from the

group stronger in terms of capital are generally characterized by a higher growth rate of banking activity (except in 2013). In turn, in nearly all of the analysed period, the ROA decreased in both groups of surveyed entities, while the banks in the first group recorded slightly greater decreases. The decline of this indicator was halted only in 2016.

In most of the analysed years, the average[19] technical efficiency of all surveyed banks improved. The only exceptions were the years 2010 and 2013. Interesting conclusions may be drawn from the efficiency analysis broken down into poorly and heavily capitalized banks[20]. By 2013, banks with lower capitalization were characterized by higher levels of technical efficiency. In subsequent years the banks in the second group were more effective. It seems that this may be related to the adoption of Basel III at the EU level and determining the directions of the BRRD directive. Higher capitalization banks have become more effective, which can be understood as taking the competitive advantage in a market where capital has become a key asset for business.

7. Conclusions

The years 2009–2016 were a difficult time for banks in Poland. The global financial crisis translated into a downturn both in the external environment and domestically. In response to the crisis, the major central banks and the NBP conducted a lenient monetary policy, which resulted in interest rates falling to historically low levels. The tightening of provisions was made at the regulatory level, including the introduction and implementation of new banking regulations into domestic legislation (e.g. Basel 2.5 and Basel III). Additionally, in Poland, the banks' charges to the Bank Guarantee Fund increased due to obligatory contributions to the Fund, and in the last analysed year, the bank tax was introduced. All these changes had an impact on the banking sector. Based on the research conducted, it can be argued that, in this changing economic and regulatory environment, banks with lower capital levels continue to be more profitable in terms of banking operations, but in recent years higher capitalized banks have been more effective, as they have further improved asset yields compared to less capitalized institutions. These findings should be taken into account when preparing legislation aimed at stimulating long-term sustainable financial market growth. This contradicts the widespread view that increased capital

[19] Calculated as a simple arithmetic mean.

[20] The details for individual banks can be found in the Appendix.

buffers can have positive impact on profitability based on the market share of the institution.

Appendix

Table A1. The Value of the Technical Efficiency Index for the Commercial Banks Surveyed

Bank	2009	2010	2011	2012	2013	2014	2015	2016
Alior Bank	1.00	0.55	1.00	0.79	0.68	0.84	1.00	1.00
Bank Handlowy w Warszawie	0.42	0.32	0.86	0.36	0.45	0.32	1.00	1.00
Bank Millennium	1.00	1.00	1.00	1.00	1.00	0.90	0.88	0.80
Bank Pocztowy SA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
BNP Paribas Bank Polska SA	1.00	0.75	1.00	0.81	1.00	1.00	1.00	1.00
Bank Ochrony Środowiska SA-BOŚ SA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bank Zachodni WBK SA	0.92	0.92	0.57	1.00	0.76	1.00	0.95	0.84
Credit Agricole Polska Group	0.55	0.44	0.37	0.82	0.87	0.58	1.00	1.00
Deutsche Bank PBC SA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96
Euro Bank SA	1.00	0.98	1.00	1.00	1.00	0.92	0.85	0.54
Getin Noble Bank SA	0.79	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ING Bank Śląski SA	0.94	0.68	0.79	0.78	0.87	0.94	1.00	1.00
mBank SA	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00
Bank Polska Kasa Opieki SA-Bank Pekao SA	1.00	1.00	0.92	0.98	0.95	0.90	0.95	1.00
Powszechna Kasa Oszczędności Bank Polski SA-PKO BP SA	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00
Raiffeisen Bank Polska SA	0.88	0.80	1.00	1.00	0.79	1.00	0.41	1.00
Santander Consumer Bank SA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.81
Arithmetic mean	0.91	0.85	0.91	0.91	0.90	0.91	0.94	0.94

Source: author's own study.

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Abstract

Efektywność polskiego sektora bankowości komercyjnej w warunkach zwiększonych obciążeń kapitałowych w latach 2009–2016

W reakcji na wybuch globalnego kryzysu finansowego banki centralne, instytucje regulacyjne i nadzorcze podjęły szereg działań, których celem było łagodzenie skutków kryzysu oraz minimalizowanie prawdopodobieństwa jego wystąpienia w przyszłości. Także w Polsce w latach 2009–2016 dokonano zmian m.in. w obszarach: polityki pieniężnej (od 2015 r. stopy procentowe są na historycznie niskich poziomach), regulacji ostrożnościowych, zasad funkcjonowania systemu gwarantowania depozytów, uporządkowanej upadłości oraz tzw. podatku bankowego. Celem badania jest próba odpowiedzi na pytanie, jak zmiany w polityce pieniężnej i otoczeniu regulacyjnym wpłynęły na efektywność banków w Polsce. Okres badania obejmował lata 2009–2016, próba badawcza składała się z 17 największych banków podzielonych na dwie grupy. Kryterium podziału była wartość współczynnika wypłacalności jako miary wyposażenia kapitałowego banku (jako wartość graniczą ustalono: współczynnik wypłacalności Total Capital Ratio na poziomie 9%). Na podstawie przeprowadzonych badań można postawić tezę, że mimo iż słabsze kapitałowo banki nadal osiągają wyższą rentowność z działalności bankowej, to lepiej skapitalizowane banki istotnie nadrobiły dystans, dodatkowo poprawiając rentowność aktywów w relacji do instytucji słabiej skapitalizowanych.

Słowa kluczowe: bankowość komercyjna, DEA, regulacje bankowe, efektywność funkcjonowania banków.