eFinanse
financial internet quarterly

INFLUENCE OF THE ECONOMIC AND FINANCIAL CONDITION OF STRATEGIC SHAREHOLDERS UPON THE MARKET VALUE OF COMMERCIAL BANKS IN THE POLISH BANKING SECTOR

Zbigniew Korzeb*

Abstract The objective of the paper is to analyse the influence of information about economic and financial problems of strategic shareholders upon the market value of commercial banks operating in the Polish banking sector. The analysis included fourteen such cases from the years 2007-2014. The results clearly indicate that investors consider the foundations of the operation of commercial banks in Poland to be very solid. Problems of strategic shareholders led to only slight depreciation of the banks' securities quoted at the Warsaw Stock Exchange in the period directly after publication of the information. Investors decided that problems of parent companies were unlikely to threaten the stability of banks operating in the Polish banking sector.

JEL Classification: G21, G34, G15, G14, G28, F36
Keywords: commercial banks, mergers and acquisitions, cross-border, subprime crisis, bank supervision and regulation

Received: 28.04.2014 Accepted: 02.07.2014

Introduction

The 21st century brings new challenges and demands. Some of the earlier hypotheses - such as idealisation of shareholder value generation; obtaining foreign shareholders as a condition for achieving competitive advantage in the banking sector; apotheosis of commercial banks looking for sources of income outside traditional operations - have been brutally verified by the global crisis caused by subprime loans. It transpired that the directions, which according to theory ought to have contributed to the banks' success, became a source of uncertainty caused by concerns about the shareholders' actual economic and financial situation, their level of investment in high-risk financial instruments and the possibility that assets of banks operating in Poland may be used to save their parent companies. The objective of this article is to analyse the influence of information about economic and financial problems of strategic shareholders upon the market value of commercial banks operating in the Polish banking sector. The analysis included fourteen such cases from the years 2007-2014.

Contagion effect

The issue of privatisation of the banking sector and the principles of foreign capital participation in takeovers of national commercial banks has been one of the most controversial and politically charged problems of the Polish banking sector. Undoubtedly, the solution has its advantages:

1) increasing capitalisation and liquidity of the banking sector,

* Dr hab. Zbigniew Korzeb, Bialystok University of Technology, Faculty of Management, Department of Finance and Accounting, Ojca Tarasiuka Street 2, 16-001 Kleosin, e-mail: z.korzeb@pb.edu.pl.

2) increasing equity of the purchased banks and increasing their credibility (better ratings by rating agencies),
3) saving some banks in difficult financial situations, which spared other banks additional costs resulting from the necessity to pay out guaranteed deposits to depositors of failed banks,
4) introducing new standards of customer service, a broader range of products and services, or modern technologies.

Crucial disadvantages of the conception came to light as well. The most serious risks resulting from the domination of foreign strategic investors in the Polish banking sector include:

1) transferring profits abroad,
2) a possibility of contagion of commercial banks with the financial problems of parent companies or member companies of the same capital group, due to attempts to save those companies at the expense of the banks in good financial condition,
3) limited access to sources of foreign capital for companies operating in segments considered unsafe by foreign experts, newly opening companies or companies constituting serious competition for businesses originating from the strategic shareholders' countries,
4) uncritical implementation of western systems of management and risk assessment, which did not always work well in new economic and social conditions, etc.

Infiltration with foreign models, and foreign investors imposing solutions often unsuited to Polish conditions, led to the loss of importance of certain traditional elements which had earlier been identified with the Polish banking sector, and cannot be measured in strict economic terms, such as bank brands, recognisable logos, established standards of organisational culture, etc.

Financial crises arising in developed countries in 2007-2009 (caused by subprime loans), as well as in 2011 (connected with insolvency of states) brought to light the number and intensity of capital and organisational connections and the direct dangers resulting from the presence in the Polish banking system of banks which are large and systemically important on a global scale. Modern crises have demonstrated that institutions of that kind can pose real threat to stability of banking sectors and even national economies in individual countries. J. Węcławski emphasises that: "the financial sphere grew detached from the sphere of reality and it created a complicated set of instruments for shifting financial resources and risk between financial institutions" (Węcławski, 2013, p. 219). It has transpired that assets of banks too big to fail (TBTF) and too important to fail (TITF)[1] significantly exceeded GNP of their countries (Zaleska, 2013, p. 476). Identifying the problem of large banks led to a discussion and a search for solutions. The financial crisis caused by subprime loans clearly exposed the weakness of supra-national institutions. Economic interests of individual countries were expressed mainly at national level. Instead of a uniform stance and joint intervention, there were individual actions by EU member countries. Their compliance with the EU competition policy and principles of using public assistance were disputable, at best. The traditional mechanism of utilising public funding was set in motion, and taxpayers bore the cost of the crisis. B.E. Gup notes that financial aid used in such cases leads to creation of new demands, largely weakening the motivation of people managing similar banks to conduct radical restructuring of their operations (Gup, 2004, p. 43).

Classic consolidation processes give way to increasingly sophisticated and complicated investment enterprises involving over a dozen countries (Allen, Babus & Carletti, 2010). The result of this tendency is a situation where decisions about mergers and acquisitions influencing the structure of the Polish banking sector are increasingly made outside Poland (they are made by strategic shareholders subordinate to supervising institutions in their countries of origin, which execute consolidated supervision). This leads to a change in the entire philosophy of banking supervision, its scope of responsibility, and the manner of licensing banking operations and controlling the structure of the banking sector. One result of the free movement of capital and investment is the very rapid spreading of the crisis between countries. It is the so-called contagion effect, which is defined as transfer of shocks from one place (the source) to others (countries, institutions, markets) (Iwanicz-Drozdowska, 2008, p. 65). It is a multi-dimensional and dynamic phenomenon, which can result in a domino effect, i.e. a process caused by a single event, which starts a chain of similar events, resulting in certain outcomes and consequences.

The problem of the contagion effect has lately become a subject of a lot of scientific research.

1 The term TBTF is associated with a speech by the American congressman Steward McKinney, who used the expression in May 1984 to describe the situation of the Continental Illinois Bank.

eFinanse
financial internet quarterly

Reports indicate that understanding of contagion is fragmented. Learning more about it can contribute to better understanding of the occurring phenomena and to adaptation of banking systems to the changes in their environment (Wyciślak, 2013, p.7). In the case of the Polish banking sector, which was shaped by mergers and acquisitions, there is a potential risk that strategic shareholders will try to use their dominant position and apply practices which may adversely affect the operation of the entire financial market in Poland (e.g. attempts to save the parent company at the expense of the bank operating in Poland, which is in good economic and financial condition [2]; or the strategic shareholder withdrawing at a point when the bank they own is making a loss and requires extra capitalising, which shifts the formal and economic responsibility to the country of the formerly purchased bank [3], etc.).

The objective of this article is to analyse whether information about economic and financial problems of a strategic shareholder was reflected in the reaction of investors at the stock exchange, and therefore translated into quotations of shares of commercial banks operating in the Polish banking sector.

Method of research and choice of sample

The conducted research utilised the market model involving determination of the parameters of the linear regression line for each of the analysed banks. The parameters reflected the relation between the rate of return on shares of a particular bank and the rate of return on the stock exchange index in the period preceding the official announcement of the information concerning economic and financial problems of the strategic shareholder. The method is based on a measurement of additional rate of return: Cumulative Abnormal Returns (CAR).

Eugene F. Fama was the first to present the concept of event study in 1969. The model, also described as abnormal returns method, consists of comparing departure of real return rates from the value of those expected, forecasted on the basis parameters of a historically estimated trend (Fama, Fisher, Jensen & Roll, 1969). For the purpose of this paper it has been accepted that the term 'event' means the publication of official information about a relatively high loss by the shareholder, unfavourable financial forecasts, or about a fine imposed by supervising institutions.

The essence of event analysis is calculating additional rate of return of the company's shares, i.e. the difference between real and expected rate of return on bank assets, if the event did not occur:

$$AR_{it} = R_{it} - E(R_i) \qquad (1)$$

where
AR_{it} = additional rate of return on shares of i-th company achieved on day t,
R_{it} = real rate of return on shares of i-th company achieved on day t in case of information,
$E(R_{it})$ = expected rate of return on shares of i-th company achieved on day t in case the information did not happen,
$i=1,2,..,N$ = where N means the number of sampled companies.

Measurements of additional rate of return used in the research are Cumulative Abnormal Returns (CAR) and Buy-and-Hold-Abnormal Returns (BHAR).

Cumulative Abnormal Returns CAR_{iT} is calculated as the sum of daily abnormal rates of return from successive session days in the analyzed period T:

$$CAR_{iT} = \sum_{t=1}^{T} AR_{it} \qquad (2)$$

where
CAR_{it} = cumulative abnormal returns on shares of i-th company on day t,
T = period of observation, time frame measured in session days,
AR_{it} = abnormal returns of i-th company shares on day t.

Recently, especially after Ikenberry's, Lakonishok's and Vermaelen's (1995) and Barber's and Lyon's (1997) publications, buy-and-hold abnormal returns (BHARiT) have gained considerable importance. It is calculated as a difference between rate of return on investments in bank shares in period T and expected rate of return:

$$BHAR_{iT} = \prod_{t=1}^{T}(1+R_{it}) - \prod_{t=1}^{T}\left[1+E(R_{it})\right] \qquad (3)$$

where
$BHAR_{it}$ = buy-and-hold abnormal returns on shares over the period T,
T = period of observation, time frame measured in session days,

2 One such precedent in the global markets was the case of Lehman Brothers who, a few days before declaring bankruptcy, tried to save themselves at the expense of their British branch.

3 Such situation occurred e.g. when Bayerische Landesbank (BLB) withdrew from Rijecka Banka in Croatia.

R_{it} = real rate of return on shares of *i*-th company on day *t* if there was an information,
$E(R_{it})$ = expected rate of return on shares of *i*-th company if there was no information.

The average of cumulative abnormal returns for the entire analyzed sample is calculated as an arithmetical mean of individual banks' cumulative rates of return:

$$ACAR_{NT} = \frac{1}{N}\sum_{i=1}^{N} CAR_{iT} \qquad (4)$$

where
ACARNT = the average of cumulative abnormal returns on shares of banks *N* in period *T*,
N = number of companies in the analyzed sample,
CAR_{iT} = cumulative abnormal returns on shares of *i*-th company in period *T*.

Whereas the average of cumulative buy-and-hold abnormal returns with *N* shares in period *T* is defined as:

$$ABHAR_{NT} = \frac{1}{N}\sum_{i=1}^{N} BHAR_{iT} \qquad (5)$$

where
ABHARNT = the average of cumulative buy-and-hold rates of return on shares of banks *N* in period *T*,
N = number of companies in the analyzed sample,
$BHAR_{iT}$ = buy-and-hold abnormal returns on shares of *i*-th company in period *T*.

In the analyzed cases behavior of return rates on bank shares as a reaction to information about deterioration in economic-financial standings of strategic shareholders in two periods: from day *t* = -5 to day *t* = +5 session days and from day *t* = -30 to day *t* = +30 session days. Accepting such time horizons enables verification of the direct influence of such information on quotations of bank shares. In the event of applying a wider range, mistakes resulting from the impact of other information on the price of share exchange rate might arise. Estimation of linear regression parameters for shares of each bank was based on dependence of share return on the stock exchange index return rate in the period from day *t* = -250 to day t = -61 session days (independent period). This period has been determined by two factors. On the one hand it cannot be too distant in time from the observation period (assumption of parameter invariability) and on the other, it should be sufficiently distant from the event or the effect on quotations would be only slight.

WIG-banks subindex has been accepted as an activity factor. Closing prices of bank and index share quotations from given stock exchange sessions were used for calculations. Verifications of the companies allowed us to single out fourteen events happening between 2007 and 2014 for which share prices have been analyzed. Since in two cases the value of the coefficient of correlation between the quotations of the bank shares and the stock-exchange index did not support the purposefulness of constructing regression equations (weak correlation), consequently the cumulative abnormal returns were calculated for twelve cases.

Research results

Due to a relatively small sample and its heterogeneity, the results of this research should be treated with some caution. In spite of the above problems, which directly affected the final results of the research, the analysis allowed for observation of certain clear tendencies concerning the reactions of investors to the publication of information about the deteriorating economic and financial standing of strategic shareholders (Table 1.)

Table 1: Average cumulative abnormal returns and the average 'buy-and-hold' cumulative returns in the analyzed cases

Specification	*ACAR*		*ABHAR*	
	from -30 to +30	*from -5 to +5*	*from -30 to +30*	*from -5 to +5*
average	0,1009	-0,0031	0,0789	-0,0037
median	0,0556	-0,0043	0,0509	-0,0039

Source: Own research

eFinanse
financial internet quarterly

The results clearly indicate that investors consider the foundations of operation of commercial banks in Poland to be very solid. Problems of strategic shareholders contributed to only slight depreciation of shares of the banks quoted on the Warsaw Stock Exchange during the period directly after publication of the negative information. In the longer term, commercial banks operating in the Polish banking sector experienced significant growth of share prices in the analysed period.

The main reason for such behaviour of share quotations was the trust investors have in the Polish banking system. A. Gospodarowicz (2009, p. 20) emphasises the important role of: the well-functioning banking supervision; the lack of investment banks; a banking system less developed than in other western countries; the conservative bank credit granting policy; and practically no subprime loans in credit portfolios of banks. Concentrating on traditional banking meant that the analysed banks made practically no investment in "toxic" assets responsible for the erosion of capital of several financial institutions around the world.

The influence of information about the deteriorating economic and financial standing of strategic shareholders was therefore purely psychological. The investors decided that problems of parent companies would not pose a threat to stability of banks operating in the Polish banking sector. Assistance granted to strategic shareholders by governments of their respective countries of origin could also play an important role. M. Mink and J. de Haan (2013, p. 102-113) observe significant influence of such statist actions upon quotations of companies in highly developed markets and upon calming of the moods at European stock-exchanges. The behaviour of share prices of banks operating in Poland was therefore completely different from the depreciation of bank shares in the western markets, resulting from unfavourable information concerning losses made by systemically important institutions (Chevapatrakul & Tee, 2014, p. 83-105).

The present optimism of investors does not negate the fact that there are real dangers connected with possible worsening of the standing of parent companies. The crucial factor in relation to protecting the stability of the banking sector is the quality of the three main pillars of its stability: the regulatory discipline (including the operation of supervisory institutions); the market discipline; and the corporate supervision. Mature, fully developed institutional infrastructure and a well-established supervisory environment play a crucial role in preventing the contagion effect. In accordance with the third principle of the Core Principles for Effective Banking Supervision by the Basel Committee, "Where a bank will be part of a larger organisation, licensing and supervisory authorities must determine that the ownership and organisational structure will not be a source of weakness and will minimise the risk to depositors of contagion from the activities conducted by other entities within the larger organisation." (Basel Committee on Banking Supervision, 1997, p. 16). Furthermore, the document clearly indicates that "The bank should not be used as a captive source of finance for its owners." Therefore, if there is any risk to the stability of the banking system (however hypothetical), resulting from adverse effects of the worsening economic and financial condition of strategic shareholders, it is necessary to consider and discuss solutions limiting the possibility of such a situation occurring. The important role played by the banking system in a modern economy means that a crisis in one bank may spread to other participants of the market and seriously disorganise the operation of the entire banking system (in accordance with the observation that a financial system is as strong as its weakest link).

Nevertheless, it can hardly be expected that the optimal solution will be an integrated system of control over systemically important financial institutions in the European Union. Such a proposition meets with fundamental obstacles resulting from disagreements between member countries on aspects connected with financing such institutions, criteria for choosing their authorities, the manner of final decision making and distribution of responsibility for the collected deposits. Creation of integrated supervision would favour the largest countries, without solving the existing problems of the weaker ones.

It is difficult to accept a proposed model in which all or a large part of prerogatives is delegated to the supervisor from the country of origin of the capital, while it is the local taxpayers who bear the cost of a bank's bankruptcy. The idea of creating a supra-national banking supervision which would control processes taking place in global financial market is absolutely correct. But the crucial decision will concern the power of pressure available to countries such as Poland, with a healthy banking system, and the

possibilities of defence against actions aimed against local banks, should foreign investors get into trouble. If final decisions are to be made by supervisory boards chaired by a representative of the country of the parent company, then one has to question the impartiality of such decisions (Pawłowicz, 2005, p. 35). This particularly concerns liquidity management at the national level, the above mentioned attempts to drain capital from subsidiary companies abroad in order to save the parent company, or the cases of obvious negligence resulting from purposeful actions of managers aiming to maximise their salaries by running high-risk banking operations. It will be difficult to stay neutral and objective when there is a conflict of interest between saving the dominant company in crisis and increasing the risk of destabilising the banking system in the country of the subsidiary company.

Conclusions

In most cases participation in consolidation processes within the Polish banking sector was extremely successful, as far as the profitability to shareholders was concerned (Korzeb, 2010). At present, commercial banks operating in Poland are among the most valuable assets in capital groups and investment portfolios of their strategic shareholders. This does not change the fact that due to its capital structure, the banking sector requires systematic improvement of the three main pillars of its stability: the regulatory discipline (including the operation of supervisory bodies), the market discipline and the corporate supervision, including in the context of monitoring the economic and financial condition of strategic shareholders.

References

Allen, F., Babus, A., Carletti, E. (2010). Financial Connections and Systemic Risk. *Economic Working Papers,* ECO2010/30. European University Institute.

Barber, B., Lyon, D. (1997). Detecting Long-run Abnormal Stock Returns. *Journal of Financial Economics,* Vol. 43, p. 341-372.

Basle Committee on Banking Supervision (1997). *Core Principles for Effective Banking Supervision,* Basel.

Chevapatrakul, T., Tee, K.-H. (2014, August). The Effects of News Events on Market Contagion: Evidence from the 2007–2009 Financial Crisis. *Research in International Business and Finance,* Vol. 32, p. 83-105.

Fama, E., Fisher, L., Jensen, M., Roll, R. (1969, February). The Adjustment of Stock Prices to New Information. *International Economic Review,* Vol. 10, No. 1, p. 1-21.

Gospodarowicz, A. (2009). *Kryzys finansowy w USA i Europie Zachodniej i jego oddziaływanie na sektor bankowy w Polsce.* In J. Szambelańczyk (Ed.), Globalny kryzys finansowy i jego konsekwencje w opiniach ekonomistów polskich. Warszawa: Związek Banków Polskich.

Gup, B. E. (2004). *What Does Too Big to Fail Mean?* In B. E. Gup (Ed.), Too Big to Fail: Policies and Practices in Government Bailouts. Westport: Praeger Publishers.

Ikenberry, D., Lakonishok, J., Vermaelen, T. (1995). Market Underreaction to Open Market Share Repurchases. Journal of Financial Economics, Vol. 39, p. 181-208.

Iwanicz-Drozdowska, M. (2008). *Bezpieczeństwo rynku usług finansowych. Perspektywa Unii Europejskiej.* Warszawa: Szkoła Główna Handlowa Szkoła Główna Handlowa w Warszawie – Oficyna Wydawnicza.

Korzeb, Z. (2010). *Teoria kreowania wartości dla akcjonariuszy w procesach fuzji i przejęć w polskim sektorze bankowym.* Warszawa: Difin.

Mink, M., de Haan, J. (2013, April). Contagion During the Greek Sovereign Debt Crisis. *Journal of International Money and Finance,* Vol. 34, p. 102-113.

Pawłowicz, L. (2005). *Dlaczego potrzebujemy nowej architektury sieci bezpieczeństwa finansowego?* In J. Nowakowski and J. Ostaszewski (Ed.), *Wybrane zagadnienia teorii oraz praktyki finansów.* Warszawa: Szkoła Główna Handlowa – Oficyna Wydawnicza.

Węcławski, J. (2013). *Wielkie banki i ich rola w kryzysie finansowym. Annales Universitatis Mariae Curie-Skłodowska,* Sectio H: Oeconomia, Vol. XLVII, 1.

Wyciślak, S. (2013). *Efekt zarażania a działalność organizacji.* Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.

Zaleska, M., (2013). Arteriosklerоza systemu bankowego. *Zeszyty Naukowe Uniwersytetu Szczecińskiego* nr 766. Finanse, Rynki ubezpieczeniowe, Ubezpieczenia nr 62, p. 475-483.