Warsaw School of Economics

Collegium of World Economy

Executive remuneration and corporate performance

Evidence from the Warsaw Stock Exchange companies

Michał Bartłomiejczyk

PhD dissertation written under the supervision of:

dr hab. Maria Aluchna, professor WSE
Department of Management Theory

dr Tomasz Napiórkowski
World Economy Research Institute

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Executive summary

The aim of the dissertation and the hypothesis

The topic of this dissertation refers to the remuneration of executives and its relationship with corporate performance. The thesis provides the review of the compensation and corporate governance theories with the focus on the principal-agent theory, which describes the conflict of interests between shareholders and executives. It delivers a broad review of corporate governance models, and its control mechanisms. Executive remuneration is a motivational mechanism that should solve the agency problem by aligning incentives of the managers and the shareholders. The dissertation involves the review of the structures of remuneration across selected countries, including Poland. It shows different performance measures and their correlations with the executive remuneration in the international studies.

The main objective of this dissertation is to examine the relationship of executive remuneration of the companies listed on the Warsaw Stock Exchange (WSE), particularly the chief executing officer (CEO) total compensation and corporate performance, measured by the changes in market valuation. The hypothesis of this paper is:

The total CEO compensation has a positive relationship with firm performance measured by the stock valuation for non-financial companies listed on the Warsaw Stock Exchange.

Justification for the topic selection and theoretical background

Investors on the Warsaw Stock Exchange are looking for the maximization of their returns. Effective corporate governance mechanisms of the companies, of which they own shares, are one of the factors that influence the performance and valuation of these companies. Executive remuneration is one of the control mechanisms that may lead to stock price movements through its role in solving the principal-agent problem, which serves as the primary conceptual framework in this dissertation. According to Ross[1], an

[1] Ross, S. (2006). The economic theory of agency. The principal's problem. An account by one of the theory's originators. Katz Graduate School of Business, University of Pittsburgh.

agency relationship arises between two or more parties, when one, known as agent, acts for, on behalf of, or as representative for the other, known as principal, in particular domain of decision problems. Executive remuneration along with long-term motivational programs play a significant role in solving agency problems as well as aligning the interests of principals and agents[2]. The agency theory assumes the positive correlation between the executive remuneration and corporate performance. The relation between CEO compensation and market valuation of the Warsaw Stock Exchange companies, studied in this dissertation, may help to find whether agency theory is appropriate to explain the relations between executive compensation and performance on to the Polish market.

Literature gap and motivation for the research

According to J. Miroński and R. Dembowski (2017)[3], the first research studying the relation between management compensation and company performance dates back to 1980s, where scholars such as K.J. Murphy (1985)[4], A.T. Coughlan and A.M. Schmidt (1985)[5], and G.J. Benston (1985)[6] provided evidence confirming the correlation between these two measures. Further G.P. Baker, M.C. Jensen, and K.J. Murphy (1988)[7] studied the influence of the executive remuneration on the company performance, which is the topic of the research included in this dissertation. Later many scholars studied also the links of particular components of the executive compensation with corporate performance. These studies are also briefly reviewed in the dissertation, although they are not tested in the main research due to low availability of data on the Polish market.

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[2] Aluchna, M. (2015). Własność a corporate governance. Systemy, rynki, przedsiębiorstwa. Warszawa: Wydawnictwo Poltext.

[3] Miroński, J., & Dembowski, R. (2017). Executive compensation. Its structure, links to company performance, executives' perception, and international differences. Journal of Management and Financial Sciences, vol. X, Issue 29, September 2017, Warsaw School of Economics, 47-72.

[4] Murphy, K. (1985). Corporate performance and managerial remuneration: An empirical analysis. Journal of Accounting and Economics, 7 (1-3), 11-42.

[5] Coughlan, A., & Schmidt, R. (1985). Executive compensation, management turnover, and firm performance: An empirical imestigation. Journal of Accounting and Economics, 7 (1-3),, 43-66.

[6] Benston, G. (1985). The self-serving management elypothesis: Some evidence. Journal of Accounting, 7 (1-3), 67-84.

[7] Baker, G., Jensen, M., & Murphy, K. (1988). Compensation and incentives: Practice vs. theory. The Journal of Finance, 43(3), 593-616.

The Literature review has demonstrated that the results of prior research vary across the countries. To start with the researchers that achieved positive relationship between executive compensation and company's performance, John M. Abowd (1990)[8] research results showed that payment of an incremental 10% bonus for good economic performance was associated with a 0.3% to 0.9% increase in the expected after-tax gross economic return in the following fiscal year. The same payment of an incremental raise of 10% following a good stock market performance is associated with a 4% to 12% increase in expected total shareholder return. Fong, Eric A., Vilmos F. Misangyi, and Henry L. Tosi. (2010)[9] achieved a significant positive correlation between CEO overpayment and change in return on assets (ROA). Jayant R. Kale, Ebru Reis, and Anand Venkateswaran (2009)[10] found that the total compensation gap between CEOs and VPs (vice-presidents) is positively correlated with the company's performance, measured both in ROA and firm Q, defined as the sum of market value of equity and the book value of debt to total assets. Wilbur Lewellen, Claudio Loderer, Kenneth Martin and Gerald Blum (1992)[11] came to the results that show statistically significant and positive relationship between the level of compensation of three top paid executives and the firm's common stock returns. A 10% increase in senior executive remuneration is associated with 0.5% higher stock return. The results of the tests of the second hypothesis also showed positive relationship between the remuneration of top paid three executives and the return on equity. Tim Manders (2012)[12] achieved positive although nonsignificant relationship between total CEO compensation and firms ROA and Tobin's Q (total market value / total assets value).

[8] Abowd, J. (1990). Does performance-based managerial compensation affect Corporate Performance? Industrial and Labor Relations Review, 43.

[9] Fong, E. A., Misangyi, V. F., & Tosi, H. L. (2010). The effect of ceo pay deviations on ceo withdrawal, firm size, and firm profits. Strategic Management Journal 31, No. 6, 629-51.

[10] Kale, J. R., Reis, E., & Venkateswaran, A. (2009). Rank-order tournaments and incentive alignment. The effect on firm performance. The Journal of Finance, Vol. 64, No. 3, 1479-1512.

[11] Lewellen, W., Loderer, C., Martin, K., & Blum, G. (1992). Executive compensation and the performance of the firm. Managerial and decision economics, vol. 13, no. 1 (Jan. - Feb., 1992), published by: Wiley, 65-74.

[12] Manders, T. (2012). Executive compensation structure and company performance. Tilburg University.

Numerous studies reveal a negative relationship between executive remuneration and firm performance. John E. Core, Robert W. Holthausen, David F. Larcker (1999)[13] found negative correlation between predicted excess compensation, based on board structure and ownership structure, and firm performance. The results prove that the higher the predicted excess compensation, the lower the performance of the company. 40% of increase in excess compensation (one standard deviation) decreased ROA by 1.36% (1 year), 1.19% (3 year), 0.97% (5 year). The same 40% increase in excess compensation decreased annual stock returns by 4.97% (1year), 2.82% (3 years), 1.78% (5 years). Emre Kazan (2016)[14] received results that show a non-significant negative relationship between CEO total compensation and firm performance measured with ROA and ROE (return on equity). The findings of Johan Grunditz and Johan Lindqvist research (2003)[15] show that there is no significant relationship between any of the salary components (bonus, base salary) of the CEO on ROE. It is worth noticing that, although insignificantly, the base salary is negatively correlated with ROE. Using ROA as a proxy for firm performance, there is no significant correlation with the bonus. The authors observed a weak negative correlation with the base salary. There is no relationship between EPS (earnings per share) and either base salary or bonus.

These mixed results, which range from significant positive relations, through nonsignificant results, to significant negative relations between executive compensation and firm performance lead to the demand to further research this topic on more markets. This kind of complex research that would study the relationship between executive remuneration and corporate performance has not been performed yet on the Polish market, nor in the region of Central and Eastern Europe. Some of the scholars, particularly A. Słomka-Gołębiowska[16] and P. Urbanek[17], have conducted

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[13] Core, J., Holthausen, R., & Larcker, D. (1999). Corporate governance, chief executive officer compensation, and firm performance. Journal of Financial Economics, 371-406.

[14] Kazan, E. The impact of CEO compensation on firm performance in Scandinavia. 8th IBA Bachelor Thesis Conference. Twente: University of Twente.

[15] Grunditz, J., & Lindqvist, J. (n.d.). CEO compensation and company performance. An empirical study of the situation in Sweden's listed companies. Graduate Business School of Economics and Commercial Law, Göteborg University, ISSN 1403-851X, Printed by Elanders Novum.

[16] Słomka-Gołębiowska, A. (2016). Polityka wynagradzania kierownictwa banków. Regulacje i praktyka. Wolters Kluwer.

[17] Urbanek, P. (2012). Nadzór korporacyjny a stabilność sektora finansowego. Łódź: Wydawnictwo Uniwerytetu Łódzkiego.

some research, but with the focus on only financial sector companies. The purpose of this study is to address this inconsistency of the prior studies and to fill the gap in the literature by conducting the research on the Polish market for all the companies outside of financial services industry.

Research method

This thesis is based on the quantitative analysis on the sample of all Warsaw Stock Exchange companies that disclose the data about their CEO compensation with the exception of financial services sector for years: 2011-2015.

The hypothesis would be tested with linear regression using IBM SPSS Statistics version 24 for each of the years 2011-2015. All variables are entered at the same time. The standard method of multiple regression would be used.

To test for a relationship between CEO total compensation and the market value of the company, the following regression equation will be estimated:

$$Ln\ (Market\ Value)_i = \beta_0 + \beta_1\ Ln\ (Total\ CEO\ Compensation)_i + \beta_2\ Ln\ (Total\ Assets)_i + \beta_3\ Ln\ (Sales)_i + \beta_4\ Price\ to\ Book\ Value_i + \beta_5\ Debt\ Ratio_i + \Sigma\ Industry_i + \varepsilon_i$$

Where

$Ln\ (Market\ Value)_i$	Natural logarithm of market valuation of firm i
$Ln\ (Total\ CEO\ Compensation)_i$	Natural logarithm of total compensation of the Chief Executive Officer of firm i. This includes all the salary, bonuses and any other incentives received by the CEO in particular year
$Ln\ (Total\ Assets)_i$	Natural logarithm of total assets of firm i
$Ln\ (Sales)_i$	Natural logarithm of sales of firm i
$Price\ to\ Book\ Value_i$	Market price to book value of firm i
$Debt\ Ratio_i$	Total debt to total assets of firm i
$\Sigma\ Industry_i$	Sum of industry dummies of firm i
ε_i	Error term

In order to study the long-term effects of CEO remuneration on company's valuation in the years following, the one- and two-year shift will be analyzed as well.

The structure of the dissertation

The first chapter reviews corporate governance and compensation theory. It starts with definition of corporate governance to set the background for the problem of the dissertation. It involves such compensation theories as reinforcement and expectancy theories, equity theories, agency theory, transaction cost theory and incomplete contracts theory. Later corporate governance models are presented. First of them is simple financial model, which is based on the agency theory. The second one, stewardship model, bases on the contradicting stewardship theory. The stakeholder model introduces various groups of stakeholders in addition to shareholders discussed so far. The political model talks about the role of political influence in the corporation. The resource dependency theory emphasizes the role of resources directors bring along to the company. Later internal, external and motivational control mechanisms are introduced, with the main aim of minimizing the impact of agency problem. They are supported with corporate governance principles contained in Cadbury report and Principles of Corporate Governance reports from OECD.

Chapter two reviews different corporate governance models as well as executive compensation structures across selected countries. It starts with the review of corporate governance models of the selected major countries, and compares these models with Poland. Later the components of executive remuneration are defined and listed, which is followed by empirical evidence from selected countries, including Poland. The structure of executive remuneration is compared between countries, along with other useful statistics.

Chapter three presents the studies on the relationship between executive remuneration and corporate performance. It starts with the definition of corporate performance, its measures, as well as internal and external performance factors. Later it reviews the determinants of executive remuneration. Finally, it presents the literature review of the main topic of this dissertation, which is the influence of executive remuneration on corporate performance. The studies presented come from multiple markets. This chapter provides a solid background, involving studies of other researchers, methodologies and best practices, which will be used as a base for the research made on the Warsaw Stock Exchange listed companies. It ends the theoretical and literature review part, based on the secondary data. The research part attempting to fill the gap on the Polish market will be presented in chapter four.

Chapter four presents the evidence from the empirical research of the sample of companies listed on the Warsaw Stock Exchange. Multiple authors have researched the influence of company performance on executive remuneration. The aim of this research is to fill the gap in the opposite, less covered relation, which is the influence of the executive remuneration on company's performance. It starts with a brief literature review of the results of similar research, which allows to formulate the hypothesis. It follows with the definition of the scope of data, with the explanation of the exclusions of the companies. Later the analysis of the sources of data is conducted, which are mainly financial statements made public by the companies, or data available from the Warsaw Stock Exchange. It reviews the structure of CEO compensation and various other statistics with segmentation by gender, industry, year or breakdown by components of the remuneration. There is a brief description of the methodology and tools used in the study. There is a detailed analysis of variables used by other researchers in similar research, which leads to the choice of variables for this study. It is followed by the key descriptive statistics. Then the model is presented and its quality assessed with the tools described earlier. Finally, the results and conclusions are presented.