National Research University Higher School of Economics

as a manuscript

Artem E. Anilov

MANAGERIAL COMPENSATION, OVERCONFIDENCE AND PAYOUT POLICY

PhD Dissertation Summary
for the purpose of obtaining academic degree
Doctor of Philosophy in Economics

Academic supervisor:
Doctor of Science
Irina V. Ivashkovskaya

JEL: G34, G35, G41

Moscow – 2020

This PhD dissertation has been prepared in association with the School of Finance, in the Economic Faculty of the National Research University Higher School of Economics.

Chief Executive Officer (CEO) can be considered as one of the most powerful and influential decision-makers in a company. Although the corporate decisions should be approved by shareholders and by the board of directors, that represents shareholders' interests, the survey shows that companies' executives consider themselves as major decisions makers [Brav et al, 2005]. Thus, it is argued that corporate decisions are affected not only by firm-level characteristics, but also by some factors, which are attributed to top executives, especially to CEOs. These factors may have rational background in the form of compensation incentives [Fenn, Liang, 2001] or inherent risk-aversion [Graham et al., 2013]; or may be explained by personal characteristics and experiences, such as personal financial habits [Cronqvist et al., 2012], early life or career experiences [Dittmar, Duchin, 2016; Bernile et al., 2017] and moreover - by behavioral biases, such as overconfidence [Malmendier, Tate, 2005] and others. The interaction of rational compensation incentives, personal traits and irrational biases of a CEO may also influence corporate policies [Gervais, Heaton, Odean, 2011]. Corporate decisions that are affected by CEO-level characteristics include payout decisions among others.

The results of recent research in the area of payout policy have shown that CEO-level characteristics such as rational compensation incentives of a CEO and other top executives [Caliskan, Doukas, 2015; Burns et al., 2015; Geiler, Renneboog, 2016; Wu, Wu, 2020] and irrational biases, such as CEO's overconfidence [Ben-David et al., 2007; Deshmukh et al., 2013; Shu et al., 2013; Banerjee et al., 2018(a)] play important roles in shaping the payout policy.

First, authors show that different types of CEO's compensation (equity-based compensation, inside debt) affect payout decisions. Equity-based compensation leads to a decrease in the total payout [Fenn, Liang, 2001; Cuny,

Martin, Puthenpurackal, 2009] and in the level of cash dividends [Burns et al., 2015; Geiler, Renneboog, 2016] if the incentives are not dividend protected, which is true in the case of executive stock options. Equity-based compensation may provide incentives for an increase in the level of share repurchases [Fenn, Liang, 2001; Aboody, Kasznik, 2008], as repurchases do not reduce the value of executive's equity portfolio.

CEOs with compensation in the form of inside debt set higher levels of cash dividends [Caliskan, Doukas, 2015; Wu, Wu, 2020], while the effects of inside debt on share repurchases are unclear. Inside debt aligns CEO's interests to those of debtholders and provides incentives for risk-averse behaviour, which may lead to a smaller set of attractive investment opportunities and to higher levels of cash dividends.

Second, it has been shown by recent studies that overconfident CEOs tend to set and maintain lower levels of cash dividends [Ben-David et al., 2007; Deshmukh et al., 2013]. On the other hand, repurchases are higher in companies with overconfident CEOs [Shu et al., 2013; Banerjee et al., 2018(a)]. Such CEOs may consider the company's shares to be undervalued by investors and possess upwardly-biased estimates of a company's value. Moreover, as their compensation mostly consists of equity-based instruments [Humpherry-Jenner et al., 2016] they may be induced to repurchase shares to avoid the negative impact of cash dividends on the value of their portfolio.

Finally, since overconfident CEOs tend to set lower levels of payout in the form of cash dividends, the question has been raised as to the possibility of monitoring and utilizing the benefits of CEO's overconfidence in order to protect the interests of shareholders. It is argued that the adverse impact of biased CEOs on corporate decisions may be significant when corporate governance is weak and limited in its ability to provide enough monitoring to force such CEOs to make rational decisions [Baker, Wurgler, 2012]. The theory of corporate governance, which showed that boards of directors are a primary tool for protecting shareholders' interests, has been deepened recently by new evidence that boards of

directors are capable of managing the CEO's overconfidence [Kolasinski, Li, 2013; Banerjee, Masulis, Upadhyay, 2018], leading to an increase in the level of cash dividends in companies with overconfident CEOs [Banerjee et al., 2015]. The findings suggest that a corporate governance of higher quality is able to provide optimal incentives for a CEO through different remuneration options, accounting for his or her overconfidence, in order to increase shareholders' wealth.

Although researchers have already shown that CEO-level characteristics affect payout policy and that these effects can be mitigated by improvements in corporate governance, we have defined some areas of possible contribution. First, it has been shown that inside debt and its components do not affect the level of repurchases or the choice of payout channel [Wu, Wu, 2020; Borah et al., 2020]. Because of the growing importance of repurchases for payout policy, we believe that this question requires further investigation on a more recent time period.

Second, different components of inside debt (pension benefits and deferred compensation) may provide different incentives for payout decisions because pension benefits are a longer term compensation tool than deferred compensation. However, recent research has not shown the differences between the impact of pension benefits and deferred compensation on payout decisions.

Third, several approaches have been developed to measure CEO's overconfidence. Two of them have been proved to be the most reliable: the first uses data on the strike prices and holding periods of executive stock options to construct time-invariant variables [Deshmukh et al., 2013], while the second constructs continuous variables by using data on vested but unexercised options value and amount [Banerjee et al., 2018(a)]. It may be the case that the second approach may capture not only the effects of CEO's overconfidence, but also the compensation incentives, because this approach is based on the information about option-based compensation. Although these two approaches yield similar results when applied separately on different samples, it may be of interest to check the stability of these results on a single sample.

Fourth, to assess the ability of board's work to mitigate the impact of CEO's overconfidence on corporate decisions, including payout policy, previous research has used the implementation of Sarbanes-Oxley Act of 2002 to account for corporate governance improvements [Banerjee et al., 2015]. Although the results support their hypothesis that improved corporate governance has led to increased payouts in companies with overconfident CEOs, this effect may as well be driven by the dividends tax cut of 2001. Thus, this result requires further verification and application of other methods to measure improvements in corporate governance.

Fifth, previous research studied the effects of compensation incentives and CEO's overconfidence on payout decisions separately, using different samples and time periods. Thus, it was not possible to test whether both rational incentives and irrational overconfidence affect CEO's decisions about payout and to compare these effects, which may be of interest to better understand the drivers of CEO's decisions.

Finally, previous research, especially for the relationship between CEO's compensation and payout policy, has been mostly conducted on the data from 1990-2010. It may be interesting to check whether the obtained results are still relevant using more recent dataset.

The analysis and investigation of these gaps **is the primary motivation behind this research**.

The aim of this research is to find evidence for the impact of a CEO's rational incentives and irrational bias such as overconfidence on payout decisions. For the purpose of our research, the term 'payout decisions' is defined as a set of financial decisions about the payout itself in the form of dividends and repurchases; about the level of payout in the form of cash dividends and share repurchases; and about the choice of payout channel.

The objectives of this research are the following:

1. To identify the impact of CEO's incentives on the probability of paying cash dividends and repurchasing shares, on their respective levels, and on the choice of payout channel;

2. To determine the differences between the impact of various compensation incentives (i.e. stocks, options, inside debt) on payout decisions;
3. To find out the impact of CEO's overconfidence on the probability of paying cash dividends and repurchasing shares, on their respective levels, and on the choice of payout channel;
4. To test whether corporate governance of higher quality is able to better monitor and mitigate the impact of CEO's overconfidence to benefit shareholders.

To achieve these objectives, we use a sample of 813 companies from the USA for the period of 2007-2019. To run empirical tests, we use open data from the Securities and Exchange Commission (SEC) and the commercial databases of S&P Capital IQ, Thomson Reuters Eikon, and Bloomberg as **the main sources** of financial data, data on CEO compensation, and data on the characteristics of board of directors.

Contribution. We contribute to three strands of literature: on the impact of CEO's compensation incentives on payout decisions; on the impact of CEO's overconfidence on payout decisions; and on the ability of high-quality corporate governance to effectively monitor CEO's overconfidence to benefit shareholders.

The impact of CEO's compensation incentives on payout decisions. First, to our knowledge, we are first to link inside debt and decisions about repurchases and to show that higher levels of inside debt may lead to higher probability and levels of share repurchases. Higher levels of inside debt also incentivize a CEO to choose repurchases as a main payout channel. This means that repurchases, along with cash dividends, are the channels through which inside debt alleviates agency problems.

Second, as far as we know, we are first to show that different components of inside debt may provide different incentives in terms of payout decisions and the choice of payout channel. Namely, deferred compensation provides incentives for higher levels and probabilities of repurchases, while pension benefits - for higher

levels and probabilities of cash dividends. We argue that as pension benefits are providing longer-term incentives than deferred compensation, they may motivate a CEO to establish more stable and conservative payout policy, which is to pay cash dividends, to avoid the deterioration of company's funds. On the other hand, deferred compensation is not so long-term and may provide incentives for less commitment-intensive payout policy, which is to repurchase shares.

Third, although we show that the probabilities of cash dividends and repurchases and their respective levels are higher in companies where the CEO's compensation in the form of company's stocks is higher, which is in line with previous findings [De Cesari, Ozkan, 2015], we are first to show that CEOs with higher option-based compensation are less likely to repurchase stocks and are less likely to choose repurchases as a main channel of payout. These findings contradict previous results that options lead to dividends being substituted for repurchases [Fenn, Liang, 2001; Geiler, Renneboog, 2016]. We assume that these results may be driven by the fact that such CEOs try to increase the value of their options portfolio by increasing the volatility of company's stocks. For this purpose they may take up high risk investment projects at the expense of share repurchases programs.

The impact of CEO's overconfidence on payout decisions. First, we contribute by showing that the probability of cash dividends is higher in companies with overconfident CEOs. Although previous research has found that the *level* of cash dividends is lower, when a CEO is overconfident [Deshmukh et al., 2013], we are first to show that the *probability* of cash dividends is higher in such companies. This means that overconfident CEOs may have different motivation behind the decision about paying cash dividends and the decision about the level of cash dividends.

Second, we show that the fraction of repurchases is higher in companies with overconfident CEO's. This may be a sign that such CEOs choose repurchases as a primary channel of payout. This result is novel, because previous researchers either have not found significant relationship between overconfidence and fraction

of repurchases [Deshmukh et al., 2013], or have considered repurchases as a substitute for excess (unexpected) dividends, showing that overconfident CEOs repurchase stocks while reducing the excess dividends [Banerjee et al., 2018(a)]. Our approach does not control for unexpected dividend changes, instead we are interested in whether or not repurchases are the dominant payout channel in companies with overconfident CEOs.

Third, we contribute by testing hypotheses using two approaches to measurement of CEO's overconfidence. We provide evidence that different approaches yield qualitatively similar results for the probabilities and levels of repurchases. However, for the probabilities and levels of cash dividends the situation is different. The lower level of cash dividends in companies with overconfident CEO is true for continuous measures of overconfidence (which are based on the value of vested but unexercised executive stock options), while higher probability is true for time-invariant measures (which are based on the moneyness of option and exercise data). As continuous measures are based on the value of executive stock options, they may capture not only the effects of overconfidence, but also those of CEO's compensation (the detailed description of overconfidence measures is provided below).

The ability of high-quality corporate governance to effectively monitor CEO's overconfidence to benefit shareholders. First, using the index of corporate governance quality, developed in this dissertation, we show that corporate governance of higher quality may reduce the impact of CEO's overconfidence on payout decisions. More specifically, it reduces the negative effects of overconfidence on the level of cash dividends and positive effects of overconfidence on the level of repurchases. This means that the level of cash dividends will be higher and the level of repurchases will be lower in companies with overconfident CEOs, if the quality of corporate governance is higher. We argue that it may be the case that boards of directors consider cash dividends as a more preferable payout channel than repurchases, and they force overconfident CEOs to rebalance the payout mix. We contribute to the existing literature

[Banerjee et al., 2015] by showing these effects using the index that captures company-level corporate governance quality more directly than the implementation of Sarbanes-Oxley Act in 2002, which was used in previous studies, and isolating possible effects of dividend tax cut of 2001 by using the more recent dataset.

Second, we have shown that corporate governance of higher quality not only mitigates the effects of CEO's overconfidence on payout decisions, but also utilizes the benefits of overconfidence for the purposes of value creation. Both market and operating performance are higher in companies with overconfident CEOs, if the quality of corporate governance is higher. We contribute by providing evidence based on the company-level characteristics of boards of directors and not on the exogenous effects of implementation of Sarbanes-Oxley Act.

Third, we show that different components of corporate governance quality index have different impact on the relationship between overconfidence and payout decisions. For example, gender diversity and audit committee independence show better ability to reduce the impact of CEO's overconfidence on payout decisions than the size of the board, board of directors' independence, and CEO duality. Although previous researchers have used gender diversity of the board [Banerjee, Masulis, Upadhyay, 2018] and optimal size and board's independence [Kolasinski, Li, 2013] to check their ability to reduce the effects of overconfidence on corporate decisions, we are first to implement this approach to payout decisions.

Research methodology. To distinguish between different types of compensation incentives we use information on CEO's compensation in the form of salary and bonuses; stocks; restricted stock units; executive stock options; deferred compensation; and pension benefits [Geiler, Renneboog, 2016; Wu, Wu, 2020]. We use this information to construct the variables that capture various compensation incentives of CEOs.

To measure CEO's overconfidence we use two approaches. For the first approach we use data on the exercises of executive stock options from the Form 4 of SEC. We use these data to define the moneyness of each option tranche at the

beginning of its expiration year, and whether it was exercised during the expiration year. Following this approach [Malmendier, Tate, 2005; 2008; 2015], we define a CEO as overconfident if he or she exercised an option during its expiration year, even if it was at least 40% in the money at the beginning of the expiration year. This is a time-invariant measure of overconfidence.

For the second approach we use data on the value and amount of vested but not exercised options, provided by S&P Capital IQ. Following previous research, [Banerjee et al., 2018(a); Banerjee et al., 2020] we find the value per option by dividing the value by amount, and then divide it by the stock price at the corresponding year's end. The higher the measure is, the higher is the overconfidence. This measure is a continuous measure of CEO's overconfidence. We also develop an alternative continuous measure by dividing the value of vested but not exercised options over the value of all vested options. This measure may capture the effects of CEO's overconfidence, as it shows the fraction of unexercised options in total vested options holdings, which may show the CEO's willingness to postpone the option's exercise.

To assess the impact of a CEO's compensation and overconfidence on the choice of payout channel, and on the level of dividends and share repurchases, we use panel tobit regressions with robust standard errors clustered by firms. To account for endogeneity we include dummy variables for industries and years.

To check the robustness of results, we use the generalised method of moments (GMM), applying Arellano and Bond's estimator [Arellano, Bond, 1991] with adjustments by Roodman [Roodman, 2009]. This method is applicable to the present study as our sample has a large number of observations (companies) and a small number of years. This method also helps to solve some endogeneity issues concerning independent variables and also takes lags of dependent variables into consideration. To assess the models' quality, we use Hansen's specification test and Arellano-Bond's test on autocorrelation.

To assess the influence of a CEO's compensation and overconfidence on the probability of dividends and repurchases, we use a panel probit regression [Wooldridge, 2005] with dummies for industries and years.

To evaluate the ability of corporate governance of higher quality to reduce the influence of a CEO's overconfidence on payout decisions, we develop an index of corporate governance quality. The following significant characteristics of boards of directors have been defined and included in our index: the size of the board of directors [Kolasinski, Li, 2013; Muravyev, Berezinets, Ilina, 2014]; the number of independent directors on the board [Kolasinski, Li, 2013]; the gender diversity of the board [Green, Homroy, 2018; Banerjee, Masulis, Upadhyay, 2018]; the independence of audit committee [Mande et al., 2012; Zhu, 2014]; and CEO duality – when a CEO serves simultaneously as board chairman [Al-Ahdal et al., 2020]. With the use of this set of characteristics, we apply the principal components method to construct the index. To check the robustness of obtained results, we develop another index using the equal weights for boards' characteristics, and investigate the impact of each characteristic on the relationship between overconfidence and payout decisions separately.

Theoretical implications. Our findings may be used to support existing theories in corporate finance. First, the findings may add to agency theory. As inside debt may lead to higher levels of not only dividends, but also repurchases, we believe that this type of compensation may align CEO's interests to those of bondholders *and* shareholders. Inside debt alleviates agency conflicts through dividends and repurchases, which supports agency theory.

Second, we add to the theory of corporate governance. We show that payout levels are higher in companies with overconfident CEOs, if the quality of corporate governance is higher. This supports the theoretical predictions that better governance leads to higher payouts.

Finally, this research provides models, metrics and frameworks that can be applied in further research. The econometric models applied in this dissertation can be used in future research on companies internationally, including those in

emerging markets. Moreover, the methodology of calculation of the index of corporate governance quality that we developed may be used in future research on corporate governance in various topics. The role of the boards in mitigating behavioral biases that we introduced and studied in relation to payout policies can be further applied in the area of behavioural corporate finance.

Practical implications. First, relying on the results of this dissertation, shareholders may start the processes of improving corporate governance quality in their companies, in order to protect themselves from the effects of CEO's overconfidence. A system of corporate governance can be established and adjusted according to shareholders' interests and CEO's overconfidence in order to utilise the benefits of this bias for the purposes of increasing a company's performance indicators.

Second, based on the results obtained in this research, companies' shareholders and boards of directors, who are responsible for representing and protecting shareholders' interests, have the opportunity to develop and implement remuneration tools that would adjust CEO's behaviour optimally in terms of meeting the demands of shareholders. Measures and methods developed in this dissertation may be used in companies to determine CEO's overconfidence and to assess its impact on different strategic decisions (including payout policy), in order to be able to adjust company's remuneration and staff policy accordingly.

The results of this dissertation **are published in the following research papers:**

1. Anilov, A. (2017). "Behavioral Motives of the Payout Policy Choice: Literature Review", Journal of Corporate Finance Research, 11 (4), pp. 93-112;
2. Anilov, A.E., Ivashkovskaya, I.V. (2019). "Do Boards of Directors Affect CEO Behaviour? Evidence from Payout Decisions". Journal of Management and Governance 24 (4), pp. 989-1017, https://doi.org/10.1007/s10997-019-09491-z. (Scopus Q2);

3. Anilov, A. (2019). “Do Overconfident CEOs Pay More to Shareholders? Evidence from the US Market” // Journal of Corporate Finance Research, Vol. 13. No. 2. pp. 25-35.

The results of this dissertation **have been presented in the following conferences and workshops:**

1. Report on the 15th Workshop on Corporate Governance of European Institute of Advanced Studies in Management (EIASM) in November, 2018 in Brussels, Belgium with the study titled «Do Boards of Directors Affect the CEO’s Behaviour? The Evidence from Payout Decisions». The paper received one of the four ‘Best Paper’ awards and was recommended for publication in the Journal of Management and Governance.
2. Report on the 4-th International GSOM Emerging Markets Conference 2017 in the Graduate School of Management (Saint-Petersburg State University) in October, 2017 with the research titled «CEO risk preferences and payout policy choice».
3. Report on the International PhD Workshop “Financial Markets and Corporate Strategies: Comparative Studies” as a part of the XIX April International Academic Conference of Higher School of Economics in April, 2018 with the research titled «Overconfident CEOs and payout policy choice».
4. Report on the international conference «Lomonosov-2018» in Moscow State University in April, 2018 with the study titled «Overconfident CEOs and payout policy choice». The award for 2nd place was received.
5. Report on the “EURAM – 2019” of European Academy of Management in June, 2019 in Lisboa, Portugal with the research paper «Do Boards of Directors Affect the CEO’s Behaviour? The Evidence from Payout Decisions». The report was named one of the best among the special track “Special interest group in corporate governance”.

The results of this dissertation have also been reported and discussed on several workshops and seminars, organized by the School of Finance and Doctoral School of Economics in the Higher School of Economics.

References

1. Aboody, D., and R. Kasznik. (2008), "Executive stock-based compensation and firms' cash payout: The role of shareholders' tax-related payout preferences". *Review of Accounting Studies* 13, pp. 216–251;
2. Al-Ahdal, W. M., Alsamhi M. H., Tabash M. I., Farhan N. H. S., (2020), "The Impact of Corporate Governance on Financial Performance of Indian and GCC Listed Firms: An Empirical Investigation", Research in International Business and Finance 51, pp. 1-13;
3. Anilov, A. (2017). "Behavioral Motives of the Payout Policy Choice: Literature Review", *Journal of Corporate Finance Research*, 11(4), pp. 93-112;
4. Anilov, A.E., Ivashkovskaya, I.V. (2019). "Do Boards of Directors Affect CEO Behavior? Evidence from Payout Decisions". *Journal of Management and Governance,* https://doi.org/10.1007/s10997-019-09491-z;
5. Anilov A. (2019), Do Overconfident CEOs Pay More to Shareholders? Evidence from the US Market // *Journal of Corporate Finance Research*. Vol. 13. No. 2. pp. 25-35;
6. Arellano, M., Bond S. (1991), Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economic Studies* 58, pp. 277–297;
7. Baker, M., Wurgler J., (2012), Behavioral corporate finance: An updated survey. In Handbook of the Economics and Finance, ed. G.M. Constantinides, M. Harris, R.M. Stulz, NY:Elsevier, Chapter 5, pp. 357-424;
8. Banerjee, S., M. Humphery-Jenner, and V. Nanda (2015). Restraining overconfident CEOs through improved governance: Evidence from the Sarbanes-Oxley Act. The Review of Financial Studies 28 (10), pp. 2812-2858;

9. Banerjee, S., Humphery-Jenner M., Nanda V., (2018), “Does CEO Bias Escalate Repurchase Activity?”, Journal of Banking and Finance 93, pp. 105-126;
10. Banerjee, S., Masulis R. W., Upadhyay A., (2018), “Mitigating Effects of Gender Diverse Boards in Companies Managed by Overconfident CEOs”, SSRN Working Paper, pp. 1-71;
11. Banerjee, S., Dai L., Humphery-Jenner, M., Nanda, V., (2020), “Governance, Board Inattention, and the Appointment of Overconfident CEOs”, Journal of Banking and Finance 113, pp. 1-26;
12. Ben-David, I., Graham, J.R., Harvey, C.R. (2007), Managerial Overconfidence and Corporate Policies: NBER Working Paper No. 13711. Cambridge, MA: NBER;
13. Bernile, G., Bhagwat V., Rau P.R., (2017), What Doesn’t Kill You Will Only Make You More Risk-Loving: Early-Life Disasters and CEO Behavior. Journal of Finance, 72(1), pp. 167-206;
14. Borah, N., Hui Liang J., Jung C.P. (2020) “Does CEO Inside Debt Compensation Benefit both Shareholders and Debtholders?”, Review of Quantitative Finance and Accounting 54, pp. 159-203;
15. Brav, A., Graham, J., Harvey, C., Michaely, R., (2005). Payout policy in the 21st century. Journal of Financial Economics, 77, pp. 483–527;
16. Burns, N., McTier, B., Minnick, K. (2015), Equity-Incentive Compensation and Payout Policy in Europe. Journal of Corporate Finance, 30, pp. 85—97;
17. Caliskan, D., Doukas, J. (2015), CEO Risk Preferences and Dividend Policy Decisions. Journal of Corporate Finance, 35, pp. 18—42;
18. Cronqvist, H., Makhija, A., & Yonker, S. (2012). Behavioral consistency in corporate finance: CEO personal and corporate leverage. Journal of Financial Economics 103, pp. 20-40;
19. Cuny, C.J., Martin, G.S., Puthenpurackal, J.J. (2009), Stock Options and Total Payout. Journal of Financial and Quantitative Analysis, 44, 2, pp. 391—410;

20. De Cesari, A., Ozkan, N. (2015). “Executive Incentives and Payout Policy: Empirical Evidence from Europe”, *Journal of Banking and Finance*, 55, pp. 70—91;
21. Deshmukh, S., Goel, A.M., Howe, K.M. (2013), CEO Overconfidence and Dividend Policy. *Journal of Financial Intermediation*, 22, 3, pp. 440–463;
22. Dittmar, A., and Ran Duchin, (2016), Looking in the rearview mirror: The effect of managers’ professional experience on corporate financial policy, Review of Financial Studies 29, pp. 565–602;
23. Fenn, G.W., Liang, N. (2001), Corporate Payout Policy and Managerial Incentives. *Journal of Financial Economics*, 60, 1, pp. 45—72;
24. Geiler, P., Renneboog, L. (2016) Executive Remuneration and the Payout Decision. Corporate Governance: An International Review, 24, 1, pp. 42—63;
25. Gervais, S., Heaton, J.B., Odean, T., (2011). “Overconfidence, compensation contracts, and capital budgeting”. The Journal of Finance 65, pp. 1735–1777;
26. Graham, J., Campbell, H., Manju P. (2013) “Managerial Attitudes and Corporate Actions”. Journal of Financial Economics, 109, pp. 103—121;
27. Green, C. and Homroy, S. (2018). Female Directors, Board Committees and Firm Performance. *European Economic Review*, 102, pp. 19-38;
28. Humphery-Jenner, M., L. L. Lisic, V. Nanda, and S. D. Silveri (2016). Executive Overconfidence and Compensation Structure. The Journal of Financial Economics 119 (3), pp. 533- 558;
29. Kolasinski, A., and X. Li. (2013). “Do strong boards and trading in their own firm’s stock help CEOs make better decisions? Evidence from corporate acquisitions by overconfident CEOs”, Journal of Financial and Quantitative Analysis 48, pp. 1173–206;
30. Malmendier, U., Tate, G. (2005) CEO Overconfidence and Corporate Investment. Journal of Finance, 60, 6, pp. 2661—2700;
31. Malmendier, Ulrike and Geoffrey Tate, (2008), “Who Makes Acquisitions? CEO Overconfidence and the Market's Reaction,” Journal of Financial Economics 89, pp. 20-43;

32. Malmendier, U., Tate, G. (2015), Behavioral CEOs: The Role of Managerial Overconfidence. Journal of Economic Perspectives, 29, 4, pp. 37-60;
33. Mande, V., Park, Y., & Son, M. (2012). Equity or debt financing: does good corporate governance matter? Corporate Governance: An International Review, 20(2), pp. 195-211;
34. Muravyev, A., Berezinets I., Ilina Y., (2014), "The Structure of Corporate Boards and Private Benefits of Control: Evidence from the Russian Stock Exchange", *International Review of Financial Analysis,* Vol. 34, pp. 247-261;
35. Roodman, D. (2009), "How to do xtabond2: An introduction to difference and system GMM in Stata", *The Stata Journal* 9 (1), pp. 86-136;
36. Shu, P.G., Yeh Y.H., Chiang T.L., Hung J.Y., (2013), "Managerial Overconfidence and Share Repurchases", International Review of Finance 13:1, pp. 39-65;
37. Wooldridge, Jeffrey M. (2005). "Simple Solutions to the Initial Conditions Problem in Dynamic, Nonlinear Panel Data Models with Unobserved Effects". *Journal of Applied Econometrics*, Vol. 20, No. 1, pp. 39-54;
38. Wu, Ruei-Shian, Wu Yi-Rong, (2020), "Payout policy decisions: the effect of compensation structures", Asia-Pacific Journal of Accounting & Economics, 27:1, pp. 71-92;
39. Zhu, F. (2014). "Corporate Governance and the Cost of Capital: An International Study", *International Review of Finance* 14, pp. 393-429.