



universität
wien

DIPLOMARBEIT

Titel der Diplomarbeit

„ Does Pay-for-Performance Work?
An Investigation of Top Management Incentives”

Verfasser

Thomas Neuwirth

angestrebter akademischer Grad

Magister der Sozial- und Wirtschaftswissenschaften
(Mag. rer. soc. oec.)

Wien, im Mai 2010

Studienkennzahl lt. Studienblatt: 157

Studienrichtung lt. Studienblatt: Internationale Betriebswirtschaft

Betreuer/Betreuerin: Univ.-Prof. Dr. Oliver Fabel, M.A.

Eidesstattliche Erklärung

„Ich erkläre hiermit an Eides Statt, dass ich die vorliegende Arbeit selbstständig und ohne Benutzung anderer als der angegebenen Hilfsmittel angefertigt habe. Die aus fremden Quellen direkt oder indirekt übernommenen Gedanken sind als solche kenntlich gemacht. Die Arbeit wurde bisher in gleicher oder ähnlicher Form keiner anderen Prüfungsbehörde vorgelegt und auch noch nicht veröffentlicht.“

Wien,

Datum

Unterschrift

Danksagung

Mein Dank gilt allen, die mir durch ihre Unterstützung den Weg durch dieses Studium geebnet haben. Ganz besonders möchte ich mich bei Manuela bedanken, die mir durch ihre Geduld und ihr Verständnis geholfen hat mein Ziel zu erreichen. Ebenso danke ich meinen Eltern und deren Lebenspartnern, die mir immer zur Seite standen und mir den nötigen Rückhalt gegeben haben. Mein Dank gilt auch meinen Großeltern und allen Verwandten für ihr Vertrauen und ihre Wertschätzung.

Ich bedanke mich bei Herrn Univ.-Prof. Dr. Oliver Fabel, M.A., für den Anstoß zur Idee dieser Arbeit, sowie seiner Betreuung und bei allen Korrekturlesern und Unterstützern.

Abstract:

This thesis is based on a recently published meta-analysis of Katja Rost and Margit Osterloh which compiles the huge amount of empirical work on pay-for-performance for executives. The authors describe performance pay as a long-standing management fashion that has not achieved its goals. Rost and Osterloh found the link between pay and performance to be negligible and interpret their results as proof of the failure of pay-for-performance.

This thesis is a critical evaluation of this argument. The first part describes the main problem of the modern corporation as the basis of today's executive compensation schemes. Subsequently, the determinant components of executive pay as well as their strength and weaknesses are summarized. This critical analysis should reveal where the underlying problems are located. Furthermore, the empirical methods used in the works on which the study is based will be analysed in order to clarify the fundamental structural difficulties inherent in such investigations. In addition, the thesis deals with the question of whether the results (which are primarily based on US data) can be transferred to any given national economy and whether additional factors are then involved in the evaluation of a pay-performance relationship. Finally, a review of the behavioural impacts of incentive compensation is presented.

Keywords:

Pay-for-Performance, Executive Compensation, Meta-analysis;

Kurzzusammenfassung:

Die vorliegende Arbeit basiert auf einer kürzlich veröffentlichten Metastudie von Katja Rost und Margit Osterloh, welche versucht, die große Anzahl an Empirie im Zusammenhang mit leistungsabhängiger Entlohnung von Führungskräften zusammenzufassen. Die Vergütung nach Leistung wird von den Autoren als ein bereits langanhaltender, aber gescheiterter Management-Trend bezeichnet. Dieses Argument wird für Rost und Osterloh durch die Ergebnisse ihrer Metastudie bestätigt, in der sie lediglich einen unwesentlichen Zusammenhang zwischen Leistung und Entlohnung feststellen konnten.

Diese Arbeit versteht sich als kritische Auseinandersetzung mit dieser Rechtfertigung. Zu Beginn wird das Hauptproblem der modernen Aktiengesellschaft aufgezeigt, da es die Grundlage für die bestehenden Entlohnungsmodelle bildet. In weiterer Folge werden die einzelnen Komponenten der heutigen Managervergütung und ihre Vor- und Nachteile beleuchtet. Hier wird deutlich, wo sich die Grundproblematik befinden mag. Die Analyse der Empirie, die der Metastudie zugrunde liegt, bildet den Hauptteil. Dabei wird insbesondere auf die Schwierigkeiten und strukturellen Unterschiedlichkeiten hingewiesen. Darüber hinaus beschäftigt sich diese Arbeit mit der Frage, ob die, vorwiegend dem US-amerikanischen Markt zugrundeliegenden Ergebnisse, auch auf andere Wirtschaftsräume übertragbar sind und welche Faktoren dann auf den Zusammenhang zwischen Leistung und Entlohnung Einfluss nehmen. Abschließend werden verhaltensspezifische Auswirkungen dieser Entlohnungsform diskutiert.

Schlagworte:

Leistungsentlohnung, Managementvergütung, Metastudie;

Inhaltsverzeichnis

1. INTRODUCTION	1
2. AGENCY THEORY	4
2.1 THE COMMON VIEW	4
2.2 POSSIBLE SHORTCOMINGS OF THE AGENCY VIEW	5
2.3 THE MARKET-BASED VIEW	7
2.4 ADDITIONAL DISCUSSION	8
3. INCENTIVE-BASED COMPENSATION	11
3.1 BONUSES	11
3.2 THE BASIC PROBLEMS WITH BONUSES	12
3.3 BONUSES AND PERFORMANCE	14
3.4 EQUITY-BASED COMPENSATION	15
3.4.1 Stock Grants	16
3.4.2 Stock Options	16
3.5 EQUITY-BASED COMPENSATION AND PERFORMANCE	17
3.6 HOW TO BASE STOCK OPTIONS ON RELATIVE PERFORMANCE	20
3.7 DECISIONS ON EQUITY-BASED PAY	21
4. EMPIRICAL EVIDENCE: A REVIEW AND ANALYSIS	23
4.1 THE IMPACT OF FIRM PERFORMANCE ON MANAGERIAL PAY	24
4.2 COMMON RESEARCH CONSTRUCTION	26
4.3 MEASURING EXECUTIVE COMPENSATION	27

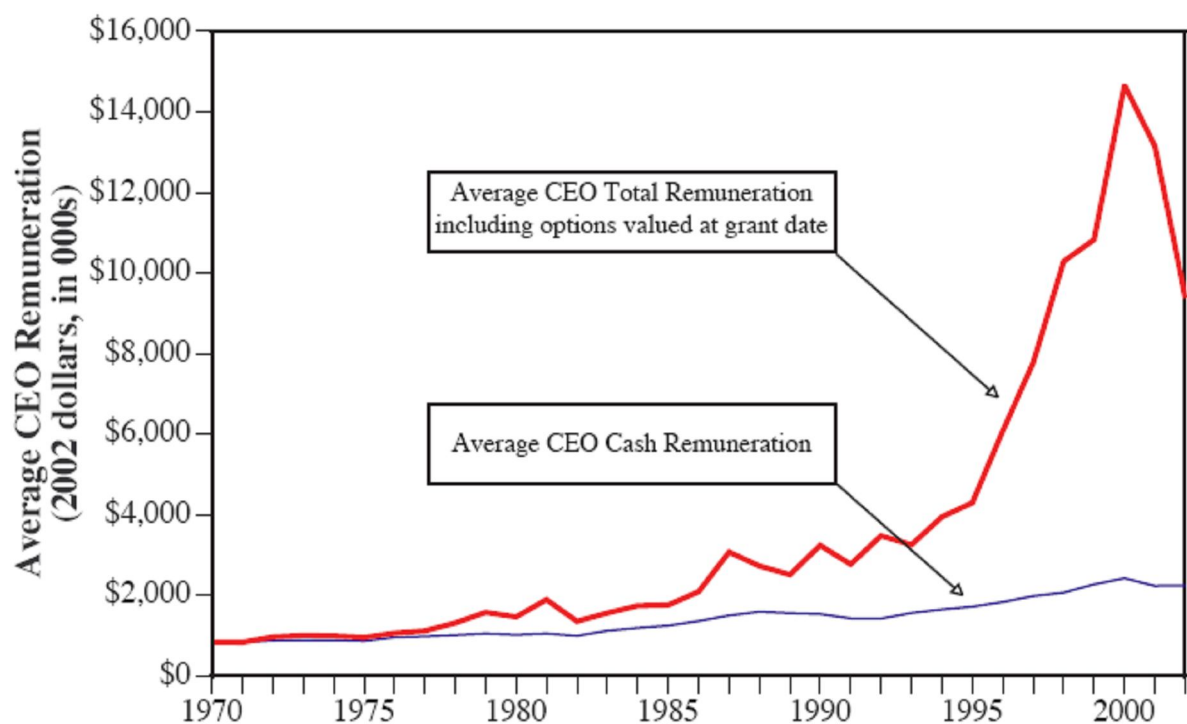
4.4	STOCK OPTION AND LTIP VALUATION	28
4.4.1	The Black-Scholes model	28
4.4.2	Alternatives	29
4.5	THE COST AND VALUE OF OPTIONS	30
4.6	DETERMINATION OF THE PAY VARIABLE	32
4.7	MEASURING FIRM PERFORMANCE	34
4.8	CORPORATE GOVERNANCE ISSUES	36
4.9	ADDITIONAL VARIABLES INCLUDED IN COMPENSATION MODELS	38
4.9.1	Risk	38
4.9.2	Time	39
4.10	FIRM CHARACTERISTICS AND THE PAY-PERFORMANCE RELATION	40
4.10.1	Size	40
4.10.2	Industry	41
4.11	CEO TURNOVER	43
4.12	ADDITIONAL ISSUES AND DISCUSSION	46
5.	SUBJECTS OF INVESTIGATION	49
5.1	US BASED RESEARCH	49
5.2	EVIDENCE FROM THE UK	49
5.3	LIMITED NON-US INVESTIGATIONS	53
6.	REASONS FOR GLOBAL INCENTIVE DISPARITIES	54
6.1	CULTURE	56
6.2	TAX	58
6.3	LAW	59
6.4	ADDITIONAL FACTORS	61

7. BEHAVIORAL IMPACTS OF INCENTIVE COMPENSATION	63
7.1 SELF-SELECTION	63
7.2 EARNINGS MANAGEMENT	64
7.3 RISK TAKING AND STRATEGIC DECISIONS	67
8. CONSIDERING HUMAN NATURE	70
9. INTRINSIC AND EXTRINSIC MOTIVATION	72
10. FINAL DISCUSSION AND CONCLUSION	74
LIST OF ABBREVIATIONS	76
LIST OF FIGURES	77
LIST OF TABLES	78
BIBLIOGRAPHY	79
APPENDIX	96

1. Introduction

The current financial and economic crisis has again brought top management remuneration to the centre of attention. The sharp increase in executive remuneration during the 1990's has only marginally been decelerated by the two heavy crisis of the 21st century. Data shows that this tremendous increase has mainly been driven by a change in compensation practices. Starting in the US, it can primarily be ascribed to the trend of equity-based compensation that has led to the dramatic boost of executive compensation (see Figure 1).

Figure 1: Average CEO Compensation in S&P 500 Firms¹



Note: Total compensation includes cash payment, long-term incentive plans and stock options

Although the US represents the outlier of this trend, it is not limited to the United States. Actually the question about an Americanisation of

¹ Source: Jensen, Murphy and Wruck (2004), p. 25

executive compensation has arisen.² While for a long time praised as the main solution to overcome the problems of the separation of control and ownership in the modern corporation, the tendency towards pay-for-performance has raised a lot of criticism as well. Corporate scandals like Enron, WorldCom or Tyco have disclosed the dark side of executive pay structures, which, though, has not led to a substantial trend reversal. The financial crisis, which started in 2007, could have lent support to a reconsideration of executive compensation throughout the world. Highlighted in the media, excessive CEO pay and rewards for failing executives, has resulted in public outrage. More than ever it seems as top-level pay is an issue for policy makers and legislation.³

The amount of research on pay-for-performance has grown steadily since the beginning of the new century and today doubt about the effectiveness of executive remuneration practices is prevalent. In the recently published study by Katja Rost and Margit Osterloh, a meta-analysis is used to summarize the huge amount of work on this topic. Generally based on the US, they argue, that pay-for-performance as a management fashion has not proven to be the promised tool to solve the agency problem.⁴

The principal-agent problem, as the primary basis of contemporary compensation schemes, will occupy the first part of this thesis. Corporations today are faced with the problem that, due to the lack of perfect contracts, monitoring and incentives are necessary to align the interests of shareholders (company owners) and managers.⁵ Linking pay to corporate performance is aimed at solving the agency problem of moral hazard. Interestingly, empirical results, as those of Rost and

² Cf. Cheffins (2003)

³ Cf. Ferrarini, Moloney and Ungureanu (2009)

⁴ Cf. Rost and Osterloh (2009)

Osterloh, have not supported the application of the agency model to executive remuneration.

⁵ Cf. Fong and Tosi, (2007)

2. Agency Theory

2.1 The Common View

Pay-for-Performance is generally based upon the agency theory. The separation of ownership and control in the modern corporation lead to a classical agency relationship where the shareholders (the principal) want the manager (the agent) to act on their behalf, and in their best interests. This may not always be the case, as the attitudes towards risk taking, size of the firm, how much effort to exert and how much leisure time to enjoy may vary greatly between the two parties. The principal cannot observe all actions taken by the agent due to asymmetric information.

Agency theory assumes that humans are self-interested individuals and act in a way to maximize their personal utility. As the utility for managers might be higher pursuing other goals than maximizing shareholder wealth, a conflict of interests occurs that could only be solved by complete contracts. In the absence of such contracts agency costs arise. Referring to Jensen, and Meckling (1967) agency costs consist of

- Monitoring costs by the principal
- Bonding expenditures by the agent and
- The residual loss

Both the principal and the agent have incentives to reduce these costs.

6

Performance-based pay is not the only instrument to overcome the conflicts of interest between owners and the manager. Agency theory predicts that, in addition to incentive providing remuneration contracts,

⁶ Jensen, Michael C. and William H. Meckling (1976), p.5-6.

monitoring by large shareholders and the board of directors, equity ownership by executives, the market for corporate control, and the managerial labor market cooperate to align the interests of managers with those of shareholders.⁷

2.2 Possible Shortcomings of the Agency View

Taking a closer look at the above mentioned governance systems, critics have found various obstacles in the official view. Large shareholders have the time, the financial resources, and the interest, to monitor the CEO. However, they can rarely be found in modern corporations except for continental Europe, and the goals of large blockholders may differ from those of minority shareholders, as well.⁸ Corporate governance codes around the world emphasize the monitoring role of the board of directors. However, the literature contains serious debates about the effectiveness of boards as supervisors. Critics argue that board members (especially independent directors) may not have the time and information to effectively monitor the CEO.⁹

It is again the board that is responsible for the CEO pay setting. Thus, it is the role of the board of directors to work out contracts with the manager and consequently provide the right incentives for them to increase performance. Nowadays remuneration committees, which are comprised of mainly independent directors, undertake this task; however, this is no guarantee that CEO contracts are set in the right way to increase shareholder value. Researchers have listed a number of factors providing doubt about the fact that boards are bargaining at

⁷ Cf. Balsam, Michael (2002)

⁸ Cf. Thomsen, Steen (2005)

⁹ Cf. Bebchuk, Fried (2004)

arm's length with CEOs over their pay.¹⁰ Although in principle based on US companies, these problems can easily be transferred to two-tier board systems as well.

First, directors have financial incentives to favor the CEO. They want to be reelected to the board, which ensures them a certain income and additional benefits. Although elected by the shareholders, the CEO keeps decisive influence in the nomination process of directors.¹¹ CEOs might benefit directors directly or indirectly due to their power and influence. Although listing requirements impede the use of certain actions, it is still common that, for instance, non-profit organizations headed by a director receive considerable donations.¹²

Other subjects of heated debate are interlocking directorates, where the CEO of company A sits on the board of company B and vice versa. Contributing to the financial incentive theory is the fact that CEO overpayment leads to overpayment at lower levels, which does not provide motivation for part of the work force to fret about excessive CEO pay. The link between executive and directors' compensation has been proven in various studies already.¹³

Beside the above mentioned, mainly financial reasons, there might well also exist psychological and social reasons for directors to bargain less aggressive with CEOs over their pay. Directors may have the support of the CEO to become a board member. Very often they are friends or a relationship based on loyalty has evolved over time. The perception of

¹⁰ Cf. Bebchuk, Fried (2004)

¹¹ Cf. Hermalin, Weisbach (1998)

¹² Cf. Bebchuk, Fried (2004)

¹³ Cf. Wade, O'Reilly and Pollock (2006); Brick, Palmon and Wald (2002)

the CEO as a person to respect and as an authority might also lead to a departure from optimal contracting.¹⁴

As board members are lacking time and information, it is no surprise that the use of compensation consultants is becoming more and more popular. Among the Fortune 250 companies about one-half are making use of outside advisors.¹⁵ In many cases it is the head of the human resource department who is responsible for the hiring of compensation consultants. And again, it is his boss, the CEO, who actually employs those advisors. Therefore, it can be doubted that compensation consultants will vigorously try to limit CEO compensation.¹⁶

2.3 The Market-based View

In light of the managerial power theory discussed above, which includes captive boards, it might be left to the market to discipline managers in their "rent-seeking" behavior. One part of the story identifies the market for corporate control as an important means to align the interests of shareholders and managers. The basic idea is that managers in publicly traded companies cannot ignore the value of company stock, as a low stock value would make his/her firm a possible takeover target. A low stock value might signal poor management. Therefore the bidder might consider being able to manage the target firm more effectively, and the former management might be replaced.¹⁷

According to Fama (1980), the market for corporate control contributes far less to the enhancement of disciplining effects for managers, than

¹⁴ Cf. Bebchuk, Fried (2004)

¹⁵ Cf. URL: <http://www.workforce.com/section/00/article/25/35/31.html> [Nov., 11th 2009]

¹⁶ Cf. Jensen, Murphy, Wruck (2004)

¹⁷ Cf. URL: <http://www.econlib.org/library/Enc/MarketforCorporateControl.html> [Nov., 12th 2009]

the managerial labor market does. On the one hand, managers monitor themselves top-down and bottom-up internally. Interestingly, Fama mentions the possibility for lower managers to benefit by identifying a shirking or incompetent superior. This clearly runs counter to the above mentioned friendship and loyalty argument.¹⁸ On the other hand, it is the external market for managers which might price managers to their performance.

The managerial power theory may not explain the increase in CEO pay considering that boards are becoming more and more independent and that the number of externally hired managers (less united with the board) steadily increases.¹⁹

2.4 Additional Discussion

The discussion above is crucial for answering the question of whether performance pay works. In fact, pay-for-performance is based on the idea that governance structures make it possible to overcome agency problems, and that the goals of shareholders and managers can be aligned through an incentive-based form of compensation. The managerial power approach makes CEO pay a function of its power to capture the board and the lack of complete contracts, which is clearly in opposition to the former view.

In this context it is important to note that a common use of benchmarking can be observed in today's compensation setting process. Peer groups generally include companies in the same industry and similar in size.²⁰ Benchmarking has often been used as an explanation for the CEO pay explosion. Bizjak, Lemmon and Naveen

¹⁸ Cf. Fama (1980)

¹⁹ Cf. Murphy, Zbojnik (2004)

²⁰ Cf. Faulkender, Yang (2007)

(2008) found that the majority of companies set CEO pay at or above the 50th percentile and some even try to keep it above median of the peer group, which results in a ratcheting effect. Their study found that compensation of CEOs who are paid below the median of their peer group rises more than the pay of CEOs who are above the peer group. Nevertheless, their sampling also showed that this is less likely in case of poor performance. Their results are inconsistent with the frequent view that benchmarking produced compensation packages that are independent of firm performance.

Bizjak, Lemmon and Naveen cite a recommendation in "The Conference Board Commission on Public Trust and Private Enterprise" which consists of a number of current and former CEOs, that

"...the Compensation Committee should exercise independent judgment in determining the proper levels and types of executive compensation to be paid unconstrained by industry median compensation statistics."²¹

Faulkender and Yang (2007) were the first to analyze benchmarking behavior after the Security and Exchange Commission issued new disclosure requirements in 2006 which made it necessary for companies to state:

"Whether the registrant engaged in any benchmarking of total compensation, or any material element of compensation, identifying the benchmark and, if applicable, its components (including component companies)." [August 29, 2006, SEC final rules 33-8732a, Item 402(b)(2)(xiv)]

They found that firms try to justify their high CEO pay by choosing a highly paid peer. Furthermore they argue that their results do not justify the high pay setting, but do they support the manipulation argument of Bebchuk and Fried (2004).

²¹ Bizjak, Lemmon and Naveen (2008), p.152

The model of comparison discussed above should be distinguished from the tournament or “superstar” model based on the works of Rosenbaum (1979) and Rosen (1981). This theory emanated from the motivation of managers to compete against each other for the position at the peak of the company which is rewarded by a much higher salary.²² Results concerning the tournament theory differ in the literature, as do the methods used. Arguments supporting this view are mainly based on the fact that CEO pay is generally much higher than what managers at the next hierarchical level receive.²³

²² Cf. DiPrete, Eirich and Pittinsky (2009) quoting Rosenbaum (1979) and Rosen (1980)

²³ Cf. O'Reilly, Main and Crystal (1988)

3. Incentive-based Compensation

Before analyzing the research on this topic it might be necessary to mention the various incentive-based compensation components and its possible shortcomings. What at first sight seems obvious reveals a number of doubts at the second glance. Hereafter it will be demonstrated that the design of the various pay components definitely contributes to whether they produce the right incentives, or not.

Compensation contracts generally consist of a base salary, bonuses (short- or long-termed) and long-term incentives (equity-based compensation). Often pensions, benefits and perquisites are granted additionally. Although salary usually consists of a fixed amount it can be renegotiated. The specific negotiation position may well rely on past performance and may therefore also present an incentive for executives to work hard. The subsequent investigation focuses on bonuses and equity-based incentives as the classical performance-related pay components. Praised as the main solution to the principal-agent problem, performance pay has in fact not replaced fixed compensation, but is actually paid additionally.²⁴

3.1 Bonuses

During the financial crisis, annual bonuses have been the most widely discussed pay components. This form of compensation is pretty popular in the financial sector, which is where it all started. Critics argue that bonuses are in many cases much too short-term oriented. Thus, they induce managers to take higher risk, mainly believed to be the cause of the financial turmoil. At present politics call for a reformation of bonus plans to make them more dependent on long-term performance.²⁵

²⁴ Cf. Rost and Osterloh (2009)

²⁵ Cf. URL: <http://www.spiegel.de/lexikon/64258385.html> [Dec., 30th 2009]

In general, a bonus is tied to one or more performance measurements, which might be financial measures like accounting earnings, stock price performance, or sales, as well as non-financial measures like market share, or customer satisfaction. In reality, there are few limitations to performance goals unless tax issues are concerned. In the US for instance, the tax deduction for pay components that are non-performance based is limited to \$ 1 million.²⁶ The advantages of bonus plans over equity-based incentives are that they can be designed to reach specific operational goals and that these cash awards are generally more tangible and immediate to executives.²⁷

3.2 The Basic Problems With Bonuses

Do bonuses offer the right incentives for executives to work hard? Much doubt has been expressed about the effectiveness of bonuses and their dubious excrescences. The basic question that compensation committees have to face is where to set the lower and/or upper bounds. Let us, as an example, take the growth of operating earnings per share as a parameter. The threshold under which no bonus is paid is 10%. If this growth rate is reached the executive is granted a bonus of 20% of his base salary. There will be an upper bound at 20% and until that rate the executive can reach up to 100% of base salary as a bonus. Initially there is the danger of setting the bounds to low or to high. Bounds that are set too low will not induce the executive to work hard. If bounds are set too high the risk increases that executives get frustrated and demotivated and not even try to reach the goals.

Inasmuch as one year's performance sets the threshold for next year's parameters, some more problems may appear. Executives who have

²⁶ Section 162(m) of the Internal Revenue Code

²⁷ Cf. Jensen, Murphy and Wruck (2004)

reached the upper bound will find no motivation to further increase performance, as this might reduce their expected bonus for the next period. These issues are reflected in the manipulation of earnings by executives, a fact that has been proven empirically by various researchers²⁸ and will be discussed in more detail later on.

As Jensen, Murphy and Wruck (2004) point out, performance standards in general, and their misuse in particular, can significantly increase shirking among executives. The above-mentioned issue demonstrates the problem of using this year's bonus as a basis for the performance in the next period. Managers themselves often determine target budgets for following periods. Thereby they benefit by trying to keep the targets as low as possible.

If performance is compared to that of peer groups, standards provide incentives for executives to select "weak" peers. To overcome some of these problems, the authors suggest that these non-linear pay-performance relations should be replaced by linear ones that allow for a negative bonus and have very high or no caps. This would as well contribute to solving the problem of executives trying to keep targets for the following year as low as possible. Linear designs of bonus plans make targets unneeded and internal performance standards that can be influenced by managers are avoided.

Failing to create the right incentives not only weakens the pay-performance link, but also destroys long-run firm value.²⁹ While these problems seem obvious, Murphy ten years ago reported that, of a sample of 177 US companies, only 11% extensively used external

²⁸ Cf. Healy (1985), Brown (1999), as examples

²⁹ Cf. Jensen, Murphy and Wruck (2004)

standards based on external peer groups, or a firm's cost of capital, as well as timeless standards.³⁰

3.3 Bonuses and Performance

Variable pay should reward managerial effort and be decoupled from market or industry changes that are beyond their control. If possible, bonuses should reflect performance of executives relative to peer groups as this would reduce windfall profits. But research has shown that in a majority of firms this is not the case.³¹

Sometimes bonuses have other goals. Firms pay a retention bonus for the executive to stay with the company.³² Aimed as an incentive for CEOs to be employed with the corporation, it is independent of performance and a way of circumventing an increase in base salary. The same applies to "golden hellos" that often come in form of bonuses to attract some star manager.³³ While compensation committees might try to limit such clauses due to section 162(m) of the tax code, other bonuses will be designed to meet with the tax deductibility requirements, although their performance enhancing purposes are doubtful.

Often criticized are bonuses for acquisitions. Grinstein and Hribar (2004) analyzed mergers and acquisitions from 1993 to 1990 and indicate that about 40% of the acquiring firms paid out bonuses to their CEOs, mainly in form of cash. Those bonuses were not negligible and amounted to \$14 million. They found that acquiring firm's shareholders face substantial losses due to M&A's. Their findings are

³⁰ Cf. Murphy (2000)

³¹ Cf. Murphy (1998)

³² Cf. Balsam (2002)

³³ Cf. Bebchuk and Fried (2004)

consistent with other studies which discovered that the larger the deal, the more shareholder value is destroyed. In many cases acquirers pay too much for their targets, leaving shareholders with a loss in stock price and the substantial payout to their CEO's.³⁴ Critics of these forms of bonuses argue that reasons for executives to engage in M&A's are primarily empire building and the overconfidence about their ability to enhance the value of the target firm.³⁵

Indeed, many arguments exist to raise doubt about the effectiveness of equivocal bonus schemes to improve managerial performance.

3.4 Equity-based Compensation

Stock-based compensation – more than any other component of payment – provides incentives for executives to increase shareholder value in form of stock price increases. Equity-based pay comes mainly in form of restricted stock grants and stock options, which are both non-tradable. Primarily, equity compensation should align the interests of shareholders and managers, but, as evidence shows, it is often used to attract and retain executives. However the latter function only works in situations where stock prices are rising. Only then would the manager leave valuable options or shares behind which he/she might not want to be forfeited.³⁶

Basically, the quantity of stock-based compensation needs to reflect the risk that managers have to bear compared to a fixed cash inflow. Thus firms need to pay a premium to make up for the risk of this non-

³⁴ Cf. Grinstein and Hribar (2004); Moeller, Schlingemann and Stulz (2003); Jensen and Ruback (1983)

³⁵ Cf. Bebchuk and Fried (2004)

³⁶ Cf. Balsam (2002)

tradable compensation. A main difficulty with equity-based compensation is the determination of its value to the recipient.³⁷

3.4.1 Stock Grants

While in the US stock options are by far more widely used, nevertheless about 20% of US companies additionally grant company stock to their CEO's.³⁸ Compared to stock options they have no exercise price and therefore have value as long as the share price is above zero. Stock grants come in form of unrestricted or restricted stock and/or performance shares. Restrictions might be based upon longevity or the achievement of performance targets by the CEO. If the executive leaves the company too earlier, or does not meet the required performance level, the shares are forfeited. Restricted stock that aims at retaining the CEO for a period of time does not directly provide the CEO with incentives to improve performance. Basically he/she only has to stay in the job. The main purpose of unrestricted stock, therefore, is the increase of managerial ownership in the company.

3.4.2 Stock Options

Stock options are granted to executives to allow them to buy shares of stock of their company at a fixed "exercise price" over a pre-specified period of time. In general, options are not immediately exercisable but become "vested" after a certain performance target has been reached or after some time has passed. As soon as the options vest they can be exercised until a certain expire date, which normally lies within 10 years from the grant date. In most of cases the exercise price equals the grant-date share price and unvested options are forfeited if the executive leaves the company. Replications of stock options are stock

³⁷ Cf. Guay, Core and Larcker (2003)

³⁸ Cf. Balsam (2002), based on ExecuComp data including S&P 500, S&P MidCap 400 and S&P SmallCap600

appreciation rights which pay the holder the difference between the current market price and the exercise price in form of cash and/or shares.

As Jensen, Meckling and Wruck (2004) among others have shown, the granting of stock options became very popular in the US during the 1990's. From an average of \$22 million in 1992 the value of stock options granted per company in the S&P 500 increased to \$238 million by 2000. A common explanation is that companies are unaware of the true cost and value of options as no direct cash outlay is required.³⁹

Before 2005 stock options did not appear on the income statement as an expense. Feng and Tian (2009) reported that option expensing has indeed contributed to the decrease in the use of options. They attributed the decline in stock option grants from 2002 onwards to the fact that firms already prepared for the modification in accounting treatment. The tax treatment of stock options may as well have contributed to its popularity. Performance-based options are not subject to Section 162(m) of the Internal Revenue Code and its limited tax deductibility of one million dollars. Besides, stock option grants offer the advantage of deferred tax deduction.⁴⁰

3.5 Equity-based compensation and Performance

Rost and Osterloh doubt the effect of pay-for-performance in general, while the majority of economists believe in its power to provide the requested incentives, but hold the poor design structures responsible for its "failure".⁴¹ The main mistake made by compensation committees was, and possibly is, that they grant too many options. Habib and

³⁹ Cf. Jensen, Murphy and Wruck (2004)

⁴⁰ Cf. Guay, Core, Larcker (2003)

⁴¹ Cf. Jensen, Murphy, Wruck (1998); Bebchuk and Fried (2004)

Ljungqvist (2005) investigated stock option grants to CEO's of US public companies from 1992 to 1997 and reported exactly that problem. They found that, all else being equal, shareholder value would be enhanced by reducing CEO option holdings.

Some authors dealt with the issue of the timing of stock option grants. Yermack (1997) found abnormal stock price increases after grants of executive stock, and evidence from Aboody and Kasznik (2003) suggests that managers time the announcement of good news after a scheduled stock grant, while accelerating bad news before the grant date.

In the light of the stock market boom of the late 1990's it was especially the impact of windfalls, which was most frequently criticized about conventional option plans. Bebchuk and Fried (2004) have particularly emphasized this issue. They argue that standard, non-indexed options make executives' rewards dependent not only on their own performance, but also on overall market or industry effects. Favorable market conditions or falling interest rates may boost share prices and reward managers independently of their performance compared to peer groups.

Of course, executives are exposed to negative shocks, as well. However, the negative scenario can at the worst make the option worthless, regardless of how poor the shares are performing. Positive shocks on the other hand can increase the value of an option by an unlimited amount.⁴² This suggests that incentive effects of underwater options, which lead to programs like re-pricing, replacement or buy-outs, are questionable.

⁴² Cf. Bebchuk and Fried (2004)

Table 1: US Firms Re-pricing Options, by Year⁴³

Year	Number of repricers	Firms repricing (%)
1992	13	0.97
1993	30	1.81
1994	39	2.25
1996	59	3.01
1997	80	3.94
1998	86	4.36
1999	37	2.05
2000	6	0.58

Re-pricing denotes the resetting of the exercise price of out-of-the money options. The re-pricing of stock options limits the risk to CEO's and might destroy their incentives. A motivation for re-pricing is to retain managers, as underwater options make it less costly for other firms to hire them away.⁴⁴

Since December 1998 re-priced options in US companies have incurred an accounting expense. Carter and Lynch (2001) found that firms accelerated re-pricing stock options around that date and made less use of this method after the change in accounting treatment.⁴⁵ At first sight, the data in Table 1 supports their findings. A sudden drop in the use of re-pricing after 1998 suggests that firms indeed tried to avoid these additional expenses. Other explanations for the drop include the life extension of options or the more frequent option grants.⁴⁶

⁴³ Source: Balsam (2002)

⁴⁴ Cf. Guay, Core, Larcker (2003)

⁴⁵ Cf. Carter and Lynch (2001)

⁴⁶ Cf. Balsam quoting Leonhardt (2000)

Sometimes out-of-the-money stock options are replaced by other forms of remuneration like stock grants or cash. These methods of rewarding the CEO for a loss in shareholder value are legitimated by some authors with the argument that long-term contracts can, and should be re-negotiated if a firm wants to retain the CEO.⁴⁷ Indeed, conventional stock options reward or punish managers also for effects that are out of their control. The mentioned practices to handle underwater options do not contribute to a pay-performance relation, but reflect the problems of absolute performance measures which cryptically still represent the primary bases for stock option grants.

3.6 How to Base Stock Options on Relative Performance

Economic literature has presented a variety of ideas to decouple executive option gains from overall market effects. In practice however, the majority of firms has done little to change their stock option structure.⁴⁸

A simple approach to unwind stock options is the indexing of the exercise price to the average performance of market or sector benchmarks. Although this method may not remove all external influences it provides an easily adoptable form of relative performance measurement.⁴⁹ An even less complicated form to avoid windfall profits is the use of performance-conditioned options. The exercise of these options depends on the attainment of certain performance targets. These targets can be indexes or other benchmarks like earnings per

⁴⁷ Cf. Guay, Core, Larcker (2003) quoting Saly (1994), Acharya (2000)

⁴⁸ Cf. Murphy (1998)

⁴⁹ Cf. Meulbroek (2001), who criticizes the incomplete method of linking exercise prices to indexes and presents an alternative approach which ties the option to an appropriate performance-benchmarked portfolio with a fixed exercise price.

share or return on capital. If executives do not reach the performance targets the options forfeit.⁵⁰

The prevalence of conventional options is mainly attributed to their accounting treatment. Before 2005 companies in the US did not have to recognize an expense for “fixed” options under the FASB rules. Options were considered as fixed if the exercise price and the number of shares and the expiration date were known in advance. Indexed and performance conditioned options lacked these requirements. This was asserted to be the main explanation for the reluctance of firms to use variable options.⁵¹

3.7 Decisions on Equity-Based Pay

Considering the different incentives they provide for managers, it seems necessary to use both stock options and stock grants to balance managerial decision making. Stock options may induce CEO’s to take more risk, or to favor riskier investments, while stock grants have the opposite effect.⁵² The same conflict occurs in the decision of a manager to pay out dividends if non-dividend-adjusted options are granted. As a stock option holder, the executive will suffer a decrease in share value, while as a shareholder, he/she can pocket the dividend. It has indeed been proven that firms where executives hold a large amount of options pay lower dividends.⁵³

Apparently the prevailing methods of incentive-based executive compensation involve some doubt about their effectiveness to improve managerial performance. Changes in remuneration practices due to

⁵⁰ Cf. Bebchuk and Fried (2004)

⁵¹ Cf. Balsam (2002); Bebchuk and Fried (2004)

⁵² Cf. Guay (1999)

⁵³ Cf. Fenn and Liang (1999)

regulatory modifications are obvious, while some flawed compensation methods lack the necessary reforms. It is important to note that stock compensation depends on CEO-specific parameters like his/her wealth, diversification portfolio, and risk aversion,⁵⁴ as well as on firm-specific factors like the investment policy or the level of debt.⁵⁵

⁵⁴ Cf. Lambert, Larcker and Verrecchia (1991)

⁵⁵ Cf. Choe (2001)

4. Empirical Evidence: A Review and Analysis

Given the findings of the majority of past quantitative studies, it is no surprise that the Rost and Osterloh meta-analysis confirms once again the predominantly reported weak link between top management pay and company performance. Analyzing the 75 underlying studies, however, brings to light a variety of disparities with regard to methods, instruments, data sets or measures used.

While most of the surveys focus on the CEO only, some consider the top five highest paid executives⁵⁶ or even include lower level managers.⁵⁷ The periods under investigation reach from 1940-1963⁵⁸ to the early years of the 21st century with the majority concentrated on the 1970s, 1980s and 1990s. All of the studies share the objective to identify possible determinants of executive compensation. Thus they do not necessarily or ostensibly aim on detecting a pay-performance relationship. They generally draw on the agency theory placing executive compensation as the dependent variable in their analyses. This indicates an ex post determination of pay according to prior performance.⁵⁹

On the other hand, studies investigating the influence of pay (independent variable) on performance (dependent variable) generally treat compensation as a motivational tool and therefore as the predictor rather than the predicted variable. The two approaches are based on differing theories and may be incompatible, but some believe that observations about their interrelatedness are important for

⁵⁶ Cf. e.g. Aggarwal and Samwick (1999)

⁵⁷ Cf. e.g. Werner and Tosi (1995)

⁵⁸ Cf. Lewellen (1968)

⁵⁹ Cf. Fama (1980)

understanding executive compensation.⁶⁰ The following review focuses basically, but not exclusively, on the quantitative studies underlying the Rost/Osterloh meta-analyses. Later on I will refer to psychological and motivational theory as well.

4.1 The Impact of Firm Performance on Managerial Pay

Rost and Osterloh report an overall contribution of 0.64% of variable CEO income on firm performance and that cash-based, short-term plans have an influence on performance which is more than double that of equity plans (long-term). Moreover they found the pay-performance relation to diminish over time. The already only moderate correlation of pay and performance by 1950 further weakened till the year 2005 in their model. Although the authors quote various studies showing similar results, their findings do not run parallel with all executive compensation investigations.

A study frequently mentioned as the seminal one is that of Jensen and Murphy (1990). Their work includes longitudinal data on executive compensation from 1974 to 1986 and a large sample of over 1,000 US corporations. They report an average change in CEO wealth of \$3.25 for every \$1,000 change in shareholder wealth. Jensen and Murphy furthermore found that the pay-performance relation has declined since the 1930s. But in contrast to Rost and Osterloh, who criticize the performance pay in general, they attribute the cutback to the decreasing fractions of firm shareholdings by the CEO.⁶¹

The study cited most often by the majority of scholars contradicting the pay *without* performance results is the one by Hall and Liebman. Their findings are based on fifteen years panel data from the period of 1980

⁶⁰ Cf. Devers et al. (2007)

⁶¹ Jensen and Murphy (1990)

to 1994 and included 478 of the largest US companies. They found the change of CEO wealth in relation to the change of shareholder wealth to be four times larger than reported by Jensen and Murphy (1990). Their results indicate that CEO wealth often changes considerably with changes in firm value. For example, they pronounce that the median total CEO compensation is \$5 million if the firm's stock has an seventieth percentile annual return (20.5 percent) while it is only \$1 million for the CEO of a firm that has a thirtieth percentile annual return (-7.0 percent).

This example also demonstrates the differences in measuring the pay-performance relation and in formulating the interrelation. These circumstances clearly hamper the comparability of the various findings.

Hall and Liebman argue that the interpretation of the Jensen and Murphy sensitivity should account for the large denominator (market value) of a Fortune 500 firm. The change of CEO wealth seems small viewed in isolation. Again contrary to Rost/Osterloh or Jensen/Murphy their empirical results exhibit a pay-performance relation that increases over time. The elasticity of CEO pay relative to firm market value more than tripled from 1.2 in 1980 to 3.9 in 1994. The authors attribute this sharp increase to the rise of stock and stock option grants to CEOs.⁶² This argument is frequently found in the executive compensation literature to support equity-based pay and its effect on the pay-performance link.⁶³

⁶² Hall and Liebman (1998)

⁶³ Jensen and Murphy (1990) blame their small pay-performance sensitivity on the small fractional CEO stock holdings; Conyon and Murphy (2000) relate their findings of a higher pay-performance relation in the US than in the UK on the higher equity-based compensation of the former.

4.2 Common Research Construction

Quantitative research has frequently employed Ordinary Least Squares (OLS) multiple regression models with executive compensation as the dependent variable and performance as the independent or control variable. Murphy (1998) presents how year-to-year pay changes due to performance changes are typically modeled. Researchers in general assume that time trends and pay-performance relations are constant across executives and therefore estimate:

$$\Delta(\text{CEO Pay})_{it} = \alpha + \beta \Delta(\text{Performance})_{it}.$$

Studies need to consider (i) which CEO pay components to include (and if they should be measured in dollars or in logarithms), (ii) how to measure performance, and (iii) the lag structure. CEO pay may be measured in dollars or in logarithms. As regards the performance measure, researchers choose between dollar values and rates of return. These choices determine whether the regression coefficients are disclosed as “pay-performance sensitivities” or “pay-performance elasticities”. The main differences between these approaches are that sensitivity has a more natural economic interpretation but varies monotonically with size (higher sensitivity for smaller firms), whereas elasticities are comparatively invariant to firm size.⁶⁴

The data on executive pay was in some cases provided by consulting firms or by the Forbes 500 list, but is primarily obtained from the “ExecuComp” database for the US, and from “Datastream” for the UK. Additional information is often drawn from proxy statements or annual reports. However, the use of predetermined measures from the above mentioned databases might constrain the analysis of executive compensation.⁶⁵ For example, ExecuComp provides values for stock

⁶⁴ Cf. Murphy (1998)

⁶⁵ Cf. Farmer (2008)

options that are currently “in the money” only, thereby ignoring options that are slightly “out of the money” for the moment. The same holds true if the stock price jumps beyond the exercise price for the time reported only.⁶⁶ Financial data (company performance data), in the reviewed literature, was predominantly obtained from the Standard and Poor’s Compustat database.

4.3 Measuring Executive Compensation

Farmer (2008) supposes that the inconsistent findings of a pay-performance relation are, at least in part, a result of the inconsistent determination of the pay variable. Indeed, a great deal of the studies included in the meta-analysis only used cash compensation (salary + annual bonus) to determine executive pay. Some only include stock options for measuring long-term effects⁶⁷, while others also account for stockholdings.⁶⁸ Early or non US based works struggled with the availability of stock option data while the complexity of the valuation further limited the inclusion of long-term incentive plans (LTIPs) or stock options. It is presumed that the effect of equity compensation on performance measures like total shareholder return (TSR), or earnings per share (EPS), would have enhanced the pay-performance relation in studies that did not include long-term pay components.⁶⁹

On the other hand, even non-equity compensation in pay-performance studies might lack some unreported components like pensions, deferred compensation, post-retirement perks, consulting fees or loan arrangements. Critics of this “hidden” additional income for CEOs argue that it might further mitigate the already low performance enhancing

⁶⁶ Cf. Aggarwal and Samwick (1999)

⁶⁷ Cf. e.g. McKnight and Tomkins (1999)

⁶⁸ Cf. e.g. Jensen and Murphy (1990)

⁶⁹ Cf. Farmer (2008)

incentives of non-equity pay.⁷⁰ Another weakness reported is that many works exclusively focus on total executive compensation instead of measuring the effect of the various components separately. Each pay component might be targeted at different performance goals and might be influenced by different factors.⁷¹

4.4 Stock Option and LTIP Valuation

Studies which include long-term compensation need to cope with the issue of how to value these grants. To deal with this uncertainty is not an easy task. The value of stock options plans, for example, depends on future firm performance, if the CEO stays with the company, and the CEOs risk preference.⁷²

4.4.1 The Black-Scholes model

A common method used for their stock option valuations is the Black-Scholes option pricing model. Although commonly used, this method has frequently been the subject of criticisms. The general opinion is that the Black-Scholes formula overstates the value of stock options because certain assumptions do not apply to executive option grants.

First, stock options are normally non-transferable and do not yield constant dividends, nor a constant stock-price variance. Second, the Black-Scholes formula does not account for the possibility of forfeiture of the option if the executive leaves the firm prior to vesting. This reduces the cost of the option. Finally, the formula assumes that stock options can be exercised only at the maturity date. In fact, most

⁷⁰ Cf. Bebchuk and Fried (2004)

⁷¹ Cf. McKnight and Tomkins (1999), Their work is one of few that measures short-term effects and long-term effects separately. However, as mentioned above, they only included stock options in their valuation of LTIPs.

⁷² Cf. Henderson and Fredrickson (1996)

options can be exercised upon vesting. On the one hand this increases the value of the option to outside investors which raises the option's cost. But then the firm's cost of the options is decreased by the tendency of risk-averse and undiversified executives to exercise much earlier than a rational investor would do.⁷³

4.4.2 Alternatives

McKnight and Tomkins (1999) use the minimum share option valuation model (MSO). They argue that this method may possibly capture the personal value of options to the CEO more precisely. From the motivational perspective of incentive providing options it is essential to know, how the CEO values his/her gain from stock options. Indeed, McKnight and Tomkins have already touched on this issue by conducting interviews with about 60 executives of two multinationals. While it was difficult to draw clear conclusions out of the investigation due to complex psychological factors influencing CEO perception of gains, they found at least some justification not to employ the Black-Scholes model.

In fact, the authors found changes in the value of stock options to be significantly positively related to shareholder returns (coefficient 8.1, t-value 8.8). Expressed in pounds sterling this means that executive stock option value increases by £1.07 for each £1,000 increase in firm value. Their results are surprising especially in comparison to findings of previous studies.⁷⁴ Furthermore they emphasize the importance of considering different option valuation models and their implications on

⁷³ Cf. Kerr and Kren (1997); Murphy (1998); Bettis, Bizjak and Lemmon (2005), who found in their sample that on average, employee stock options are exercised a little over two years subsequent to vesting and more than four years prior to expiration.

⁷⁴ Cf. McKnight and Tomkins (1999); Jensen and Murphy (1990), who report a pay-performance sensitivity of CEOs stock options of 15 cents per \$1.000 change in shareholder return; Main, Bruce and Buck (1996), who found a 9 pence per £1.000 sensitivity.

the pay-performance sensitivity.⁷⁵ The "heuristic" approach may however understate the true option value as no value is reported unless the market price of the stock exceeds the exercise price of the option.⁷⁶

Stock option values from proxy statements are either based on the Black-Scholes model or on a simpler formula provided by the Security and Exchange Commission (SEC), as only those two are allowed. Some researchers have used the present value formula of the SEC to determine stock option values.⁷⁷ Others have just valued stock options at 25 percent of their exercise price and argue that this method produces similar results as more elaborated methods like the Black-Scholes formula.⁷⁸

4.5 The Cost and Value of Options

As already briefly mentioned, it is important to distinguish between the cost of the stock option to shareholders (objective value) and its value to the executive (subjective value). The knowledge of the former might be necessary for shareholders. As far as the incentive-providing character of executive stock options is concerned research should rather focus on the latter. However, as Bettis, Bizjak and Lemmon (2005) argue, the purpose of stock option grants is not always clear. Besides the incentive effect, stock options might be granted instead of cash compensation by firms lacking liquidity.

⁷⁵ It should be noted that the authors explicitly mention that the results may be biased by the period under investigation, which was characterized by a continuous bull market.

⁷⁶ Cf. Kerr and Kren (1997)

⁷⁷ Cf. e.g. Carpenter, Sanders and Gregersen (2001)

⁷⁸ Cf. Henderson and Frederickson (1996)

The authors also examined the exercise behavior of executives by means of a large database and transformed their observations into a utility-based model which measures option values and option incentives alike. Subsequently they compared the valuation and incentive measures with those produced by models used to value standard tradable options. They found that if in the standard model the maturity is modified according to the expected time of exercise (which was found to be much earlier than the expiration date), option values were similar to those presented by the utility-based model. However, if early exercise is not adjusted for, it results in significant bias.

Furthermore, Bettis, Bizjak and Lemmon report that subjective values of stock options for executives lie approximately 20% under the objective values calculated, and vary with stock price volatility (decreasing in high volatility groups). Carpenter (1998) introduced an alternative for complex utility-based models. Her exogenous model accounts for early exercise and forfeiture but focuses only on the cost of options to shareholders and not on the value to executives.⁷⁹

Given the diverse methods used in stock option valuation it is no surprise that studies on executive compensation lack conformity. Furthermore, with regards to stock options the data content varies significantly as well. Most compensation measures in empirical works only include options granted during the year (e.g. Finkelstein and Hambrick [1995], Carpenter, Sanders and Gregersen [2001], Frye, Nelling and Webb [2006], Grossman, Wayne and Cannella [2006], Coombs and Gilley [2005]). Others concentrated solely on option gains realized by the executive (e.g. Hallock [1997], Wade, Porac and Pollock [1997]). Some researchers have considered the payouts to executives plus the value of option grants during the year (e.g. Aggarwal and

⁷⁹ Cf. Carpenter (1998)

Samwick [1999], Roulstone [2001]), but only few studies also accounted for changes in the value of all outstanding stock options, like Jensen and Murphy (1990) did.

Another source of discussion is the valuation of long-term incentive plans (LTIPs). Buck et al. (2003) define LTIPs as “grants of cash or shares (usually the latter) with performance conditions”. They also describe a methodology to determine the interim value of those grants for a particular year. At the same time, using a case study of HSBC, they provide an example for the possible complexity of LTIPs.⁸⁰ The necessity of interim valuations is however questionable given the argument that the contingency of LTIPs on performance makes the gain for executives only “current” upon vesting and not at grant.⁸¹

4.6 Determination of the Pay Variable

Farmer (2008) explored the literature on executive compensation with regards to the measurement of executive pay and puts it as follows:

“It is recognised that the range of definitions, calculations and valuation techniques used to measure chief executive compensation enriches the literature which must be beneficial; however, it may also be a reason for the inconsistent results reported in the chief executive pay-performance literature.”⁸²

He suggests the use of hand-collected data from annual reports, as then the measure can be adapted for the objective of the research. Furthermore he argues for the separation of executive compensation into its components (see e.g. McKnight, Tomkins [1999]), as each component might be influenced by different factors. Finally he presents the following framework for the determination of the dependent pay variable to be used in future quantitative studies:

⁸⁰ Cf. Buck, Bruce, Main and Udueni (2003)

⁸¹ Cf. Farmer (2008)

(i) Data should be hand collected from the annual report and accounts to allow for the required flexibility to measure all components of compensation.

(ii) Basic pay is to be measured as the annual salary/fees as reported in the directors' remuneration report.

(iii) Short-term incentive is to be measured as the annual paid bonus as reported in the directors' remuneration report.

(iv) Deferred cash compensation is to be measured at the time it is deferred if it is already earned and guaranteed. Otherwise at the point of vesting if further performance conditions are attached.

(v) Performance options are to be measured as the value of share options vesting in the current year. Time-vested options are to be measured at grant.

(vi) Performance shares are to be measured as the payout in the current year. Non-performance restricted shares are to be measured at grant.

(vii) Cash value of benefits in kind, pension contribution and other cash are to be measured as reported in the directors' remuneration report.

(viii) Exclude saving plans as they constitute a personal investment.⁸³

⁸² Farmer (2008), p.11

⁸³ Farmer (2008), p.12

4.7 Measuring Firm Performance

Kerr and Kren (1997) concluded that it is unclear which performance measures firms use to evaluate the CEO's performance (skill and effort).

However, scholars have tried to bring to light at least the objective performance criteria. Murphy (1998) for example, presents a Towers Perrin survey of bonus plans of 177 large US companies for 1996, divided by three industry groups. It was shown that while 68 firms only used a single performance measure, others already used multiplicative measures, where the bonus level for one criterion is contingent on the realization of another criterion.

Firms mainly used some form of earnings to measure performance which includes net income, pre-tax net income, return on assets (ROA), return on equity (ROE) and return on capital (ROC). Operating profits like EBIT were frequently employed as well. Measures included dollar-values as well as per share ratios like earnings per share (EPS).

Except in the finance and insurance industry, corporations also used non-financial performance measures. Those came in form of performance relative to pre-specified goals, subjective evaluations, customer satisfaction, as well as operational and/or strategic objectives measures. Corporations in the sample used a variety of performance standards. Most frequently those standards were determined as (i) the company's budget, (ii) prior year performance, (iii) peer group performance, or (iiii) they followed discretionary plans.⁸⁴

The accounting-based measures used in empirical studies generally reflect the above-mentioned criteria. From the variety of alternatives given, ROA or ROE are in general preferred throughout the literature.

⁸⁴ Cf. Murphy (1998)

It is obvious that cross-sectional analyses are unable to account for the complexity of some bonus schemes in distinct corporations. With regards to market-based performance measures the main focus of empirical studies lies on total shareholder return (TSR). According to the shareholder value theory of corporate governance it is the stock market performance which should be focused on. It seems plausible that high earnings positively affect stock prices; however, accounting-based measures reflect current firm performance while stock prices reflect investors' perception of future value. Therefore stock markets in general already incorporate anticipated earnings.⁸⁵ In fact, investigations on the effect of earnings on market performance have reported mixed results.⁸⁶

A less commonly used performance measure is Tobin's Q, defined as the market value of the firm divided by the replacement cost of its assets. Unavailability of input data has mainly contributed to the avoidance, or to the use of approximations of Tobin's Q.⁸⁷ The seminal work on this issue is the study by Morck, Shleifer and Vishny (1988) which examined the relationship between managerial stock holdings and performance measured as Tobin's Q. They found performance to increase with managerial equity holdings between 0% and 5% and for board holdings in excess of 25%. Holdings between 5% and 25% lead to a negative effect on Tobin's Q. Thus they document a non-linear relationship with the decrease of performance being less significant.⁸⁸

Tosi et al. (2000) critically discuss the use of archival databases resulting in proxy variables which reflect purely economically rational

⁸⁵ Cf. Devers et al. (2007)

⁸⁶ Cf. Wade, O'Reilly and Pollock. (2006); Devers et al. quoting Core and Larcker (2002), Morgan and Poulsen (2001)

⁸⁷ Cf. Finkelstein and Boyd (1998)

⁸⁸ Cf. Morck et al. (1988)

performance criteria. Those criteria may only cover part of the CEO's job requirement and may therefore be imperfect. They further state, that

"...the objective performance measures found in the executive compensation literature may be "deficient" for evaluation purposes by those responsible for corporate governance, who in turn then use a subjective evaluation process to assess the executive's contributions. If this is the case, it would not be surprising that weak empirical relationships using archival-based criteria are found."⁸⁹

They therefore question if the methodologies used, are in fact able to measure performance according to the agency contract.

4.8 Corporate Governance Issues

Various studies (some included in the Rost/Osterloh meta-analysis) engage in the corporate governance discussion. Empiricists typically include one or more of the following variables in their models:

- *Board Composition* (proportion of outside directors on the board)
- *CEO Duality* (the unity of the CEO/chairman of the board position)
- *Inside Ownership* (proportion of firm's stock owned by managers and directors)
- *Institutional Blockholdings* (proportion of stock held by large outside investors: individuals, investment firms, mutual funds, pension funds etc.)
- *Presence of/ Proportion of Nonexecutive Directors on Remuneration Committees*

A common approach is to measure the effect of the miscellaneous governance variables on the level of CEO compensation.⁹⁰ Some have

⁸⁹ Tosi et al. (2000) p.331

⁹⁰ Cf. e.g. Mangel and Singh (1993); Core, Holthausen and Larcker (1999)

additionally explored their impact on the CEO pay mix. David et al. (1998) for example, reported that institutional owners - which have only an investment relationship with the firm – increase the proportion of long-term pay incentives in total compensation. Of course this does not necessarily induce a higher pay-performance relation (it was not an aim of the study either). Other scholars have included the effect of corporate governance variables on the pay-performance link by calculating interaction terms. Among the corporate governance literature these contributions are of special interest considering optimal incentive contracts.

Finkelstein and Hambrick (1995) document that in externally controlled firms (where a major non-manager blockholder does exist) changes in CEO pay were more positively related to changes in ROE than in manager-controlled firms (without a major blockholder). Conyon and Peck (1998) found for the UK that the pay-performance link (performance measured as total shareholder return) was significantly larger for firms with boards or remuneration committees consisting of more (equal or above 40 percent) nonexecutive directors. Again for the UK, and drawing on stock performance, Benito and Conyon (1999) reported only a modestly higher pay-performance relation for firms having installed a remuneration committee or split the role of the CEO and chairman.

Apart from the Rost/Osterloh bibliography Kraft and Niederprüm (1999) documented for the German manufacturing industry that shareholder concentration negatively influenced the pay-performance link. Hartzell and Starks (2003) also examined the influence of institutional investors on executive pay by means of a large sample of US companies. They found that although large institutional ownership was negatively related to the level of managerial compensation, it increased pay-performance sensitivity. They argue that their findings confirmed the

monitoring role of large blockholders which seems to mitigate the principal-agent problem.

4.9 Additional Variables Included in Compensation Models

4.9.1 Risk

Researchers have commonly controlled for some sort of risk in their empirical works. However, they have seldom accounted for its various meanings and complexity. More precisely, empiricists have often used organizational risk as a proxy for managerial risk.⁹¹ The motivation to control for risk lies in the prediction of agency theory that high risk firms need to compensate their risk-averse executives for bearing this uncertainty.⁹²

Scanning the literature shows that scholars have frequently employed stock volatility, or the variance of total returns as proxies for firm risk. Cordeiro and Veliyath (2003) for example, additionally controlled for firm diversification. Diversification generally raises firm complexity.

According to Palmer and Wiseman (1999) complexity refers to one of the environmental factors which in turn influence *organizational risk*. In contrast, they argue that the change in diversification is attributed to the strategic choices of executives which are associated with *managerial risk*. They concluded that although managerial risk taking influences firm risk it is essential to examine these variables in isolation and to understand their causal relationship. However, evidence on methodological considerations of this issue is scarce.⁹³

⁹¹ Cf. Palmer and Wiseman (1999)

⁹² Cf. Cordeiro and Veliyath (2003)

⁹³ Cf. Devers et al. (2007)

In general, agency theory predicts that the pay-performance sensitivity decreases with the variance of firm performance. This has been confirmed by various studies. Aggarwal and Samwick (1999) for example, underlined the importance of performance variability as a determinant of compensation and the pay-performance verification. They further documented that the omission to account for this variance results in estimates of the pay-performance sensitivities that are biased towards zero. Findings of Kraft and Niederprüm (1999) supported the negative relations between firm risk and pay-performance sensitivity for Germany as well.

4.9.2 Time

The importance of time is not limited to the point in time or period in which a study was conducted (issues in this context have been mentioned above), but also with regards to methodologies used in empirical analysis.

The studies reviewed here diverge in their use of lags for the various variables (specifically for pay and performance). The very early contribution of McGuire, Chiu and Elbing (1962) documented that managers are not only compensated for current, but also for past performance. However, they could not significantly identify a dominating lag. Since that time, the inconsistency on this issue has remained.

The timing of the various pay components contributes to the difficulty of the lag determination. Stock options for example, may in some cases be scheduled in advance. Thus, executives may have mentally accounted for option grants in time $t-1$ for grants taking place in time

t.⁹⁴ Considerations of time within the pay-performance literature are certainly subject to change with modifications of compensation schemes. For instance, in the aftermath of the financial crisis bonuses may discontinue as measures for short-term incentives only, as their performance valuations become more and more long-term.

4.10 Firm Characteristics and the Pay-Performance Relation

4.10.1 Size

Firm size has been shown to be the main driver of managerial pay. Tosi et al. (2000) attributed 40% of variance of CEO compensation to differences in company size while performance contributed less than 5%. On the other hand, the sensitivity of pay for changes in size was similar to that for changes in performance (5% and 4% respectively of the explained variance in pay).

Schaefer (1998) documented that the Jensen and Murphy pay-performance sensitivity decreases with firm size, which implies that "the value of providing incentives for effort does not increase with size as fast as the cost of risk bearing by the executive."⁹⁵ Murphy (1998) reported that the media pay-performance sensitivity of S&P Mid Cap (\$15.38 per \$1,000) and Small-Cap firms (\$28.23 per \$1,000) far outperforms that of the largest half of the S&P 500 (\$4.36 per \$1,000). He argues that the findings are not surprising given the small fractional stock ownership managers have of these large corporations. The increase in size is clearly accompanied by a rise in agency costs. This trade-off requires attention and delivers a crucial argument for the consideration of firm-size heterogeneity in comparative studies.

⁹⁴ Cf. Devers et al. (2007)

⁹⁵ Schaefer (1998) p.436

From a shareholder value view it is extremely important to determine the effect of firm size on managerial pay and the incentives involved. Managers might be interested in “empire building” which would enhance her/his prestige, power and pay, and involves actions that might decrease shareholder value (e.g. unfavorable acquisitions).⁹⁶

4.10.2 Industry

Executive pay structures vary heavily between industries and so do pay-performance sensitivities. As mentioned above, the main focus of the reviewed research on executive compensation lies on indexes or other lists including the largest corporations of the United States. Though comparison is certainly demanding, it might be necessary to consider incentive alignment differences among various industries, particularly in consideration of the inconsistency to control for industry pay in quantitative works.⁹⁷

The literature delivers various examples of studies addressing only a single industry. The advantage of the restriction on a specific industry eliminates the variations due to cross-industry differences.⁹⁸ Hermalin and Wallace (2001) surveyed executive compensation and firm performance in the savings and loan industry. Mehran (1994) focused on manufacturing firms, Rajagopalan (1996) on electric utility companies and Veliyath (1999) on the pharmaceutical industry. Those studies vary in their methodological structure, objectives and measures, which reflects the comparability issue touched on above.

⁹⁶ See Tosi et al. (2000) for a detailed review of the literature in this context

⁹⁷ Cf. Veliyath (1999), who argues that not controlling for industry differences may represent a main weakness of executive compensation studies. I found that empiricists commonly, but not entirely, controlled for it.

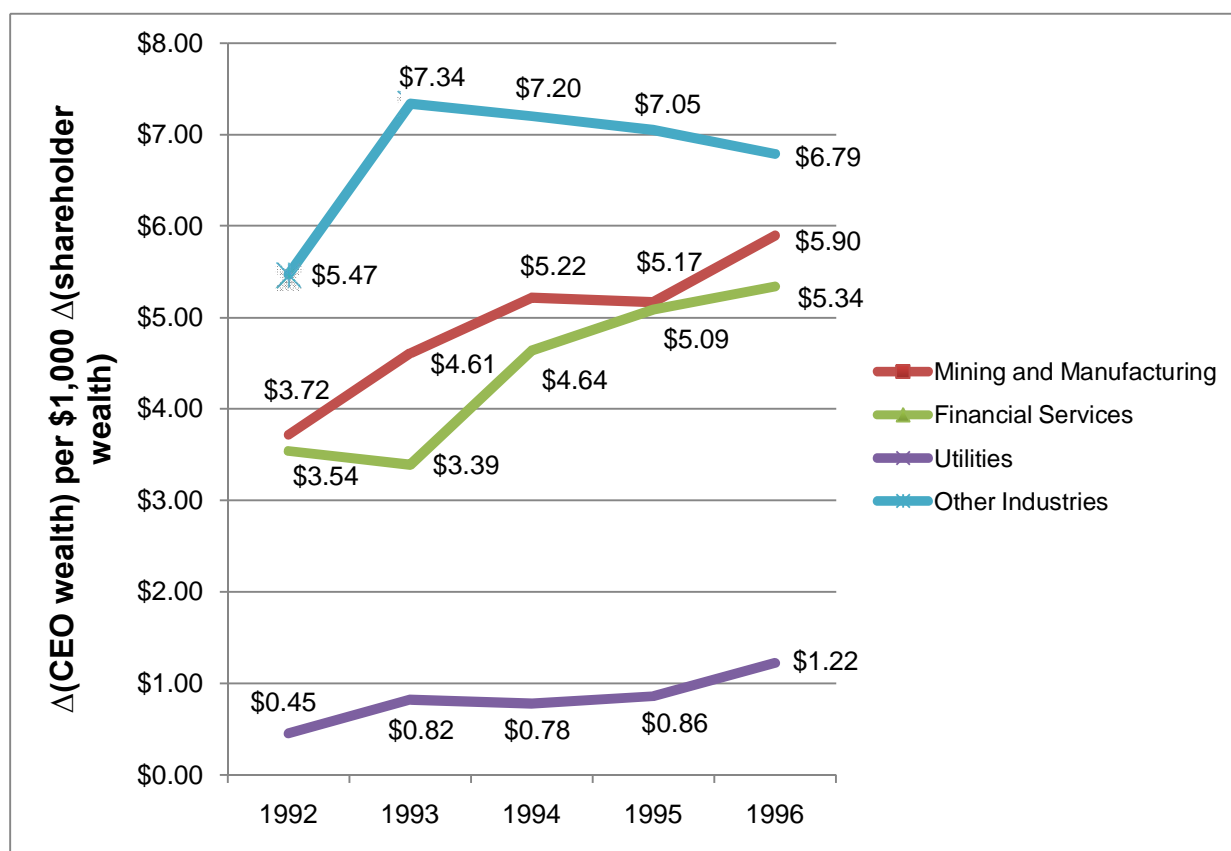
⁹⁸ Cf. Veliyath (1999)

Hallman and Hartzell's study (1999) will be mentioned in more detail as their employment of the Jensen and Murphy (1990) pay-performance sensitivity allows for some comparison with earlier documented results. The authors compared the compensation of managers of real estate investment trusts (REITs) to the compensation of general partners of real estate limited partnerships (RELPs). Thus, they were the first to empirically investigate pay-performance relationships between different organizational forms. They argue that managers of REITs and general partners of RELPs perform similar jobs with the main difference that firing general partners is more costly. Their results reflect the assumption that, due to the poor termination incentives for general partners of RELPs, their compensation is much more closely tied to performance. The change in wealth for general partners was \$253.57 per \$1,000 change in the value of limited partner shares, while REIT managers' change was \$25.30 per \$1,000 change in shareholder value.⁹⁹

Figure 2 presents pay-performance sensitivities from Murphy (1998) for S&P 500 firms divided by four major industries. What clearly emerges is the fact that regulated utilities exhibit far lower than average pay-performance sensitivities. Furthermore, industries other than financial services, mining and manufacturing produce higher changes in CEO wealth in connection with changes in shareholder wealth. Moreover, the graph presents a trend towards rising pay-performance sensitivities for the period under investigation.

⁹⁹ Hallman and Hartzell used a simulation methodology to calculate the pay-performance sensitivity for general partners of RELPs

Figure 2: Median Pay-Performance Sensitivities for S&P 500 CEOs, by Industry, 1992-1996¹⁰⁰



Note: Included are all S&P 500 firms. Manufacturing include firms with 2-digit SIC codes 10-29; financial services 60-69, and utilities 49.

4.11 CEO turnover

Theory suggests that besides incentive contracts, the threat of dismissal represents another strong force to discipline managers and to make them act in order to increase shareholder value. Literature on CEO turnover therefore is increasing and is already manifold. In the most effective case CEOs are dismissed following poor firm performance. Indeed, early US studies reported a negative relation between CEO turnover and company performance, arguing that their

¹⁰⁰ Source: Murphy (1998), p.83

findings are consistent with principal-agent theory.¹⁰¹ Empiricists documented similar results for the UK and for Germany.¹⁰² CEO turnover is not tantamount to CEO dismissal, but it is typically not possible to exactly distinguish between fires, quits and retirements.¹⁰³ In fact, the early studies mentioned above note that the reasons behind executives' dismissals for poor performance are rarely specified. Murphy (1998) argues that in the 1990s the situation has somehow changed. He mentions various cases of forced resignations that were openly discussed.

Evidence indicates that the CEO turnover rate is increasing as well. Jensen and Murphy (1990) documented that during their thirteen-year sample average CEO tenure was more than ten years. A more recent study by Kaplan and Minton (2006) registered, as well for large US companies, that CEOs between 1992 and 1998 on average held their job for less than seven years, and more recently, between 1998 and 2005 for less than six years (see Figure 3). Moreover they found a strong and significant relation between stock performance and internal turnover (board driven), but no significant results for the link between performance and external turnovers (following M&As). They also find turnover-performance sensitivities to increase in block shareholder ownership, board dependence and Sarbanes-Oxley act.¹⁰⁴

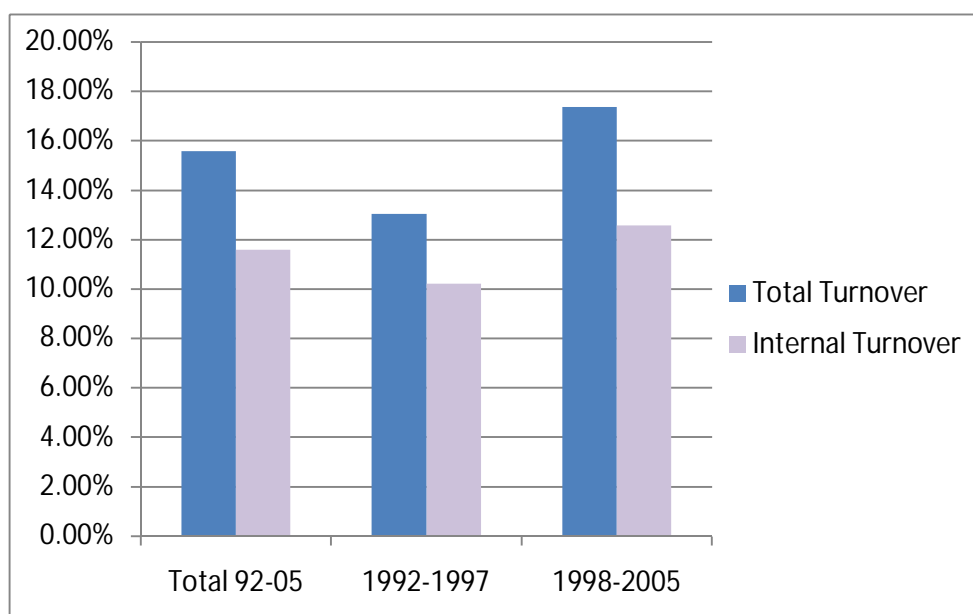
¹⁰¹ Cf. Coughlan and Schmitt (1985); Warner, Watts and Wruck (1988); Weisbach (1988); Jensen and Murphy (1990)

¹⁰² Cf. Cosh and Hughes (1997); Conyon (1998); Kaplan (2006)

¹⁰³ Cf. Jensen and Murphy (1990)

¹⁰⁴ Cf. also Weisbach (1988), who was the first to report that CEO dismissal for poor performance is enforced if boards are predominantly composed of independent outside directors.

**Figure 3: Annual Internal and Total CEO Turnover, Fortune 500
from 1992-2005 by Sub-period¹⁰⁵**



Thus, these findings confirm the notion of other researchers that corporate governance improvements raised CEOs' threat of dismissal following poor performance.

Jensen and Murphy (1990) address the importance of penalties if a manager is dismissed. They note that even a low probability of termination can provide the right incentives for managers as long as they are punished hard enough in case of dismissal. Penalties, like forgone earnings, are in reality often mitigated by gratuitous departure payments. These exit "sweeteners" on top of contractual severance packages are highly criticized to be not consistent with optimal contracting.¹⁰⁶

¹⁰⁵ Source: Kaplan (2006), p.26

¹⁰⁶ Cf. Bebchuk and Fried (2004)

In another recent work, Jenter and Kanaan (2008) tried to shed more light on incentive effects in conjunction with CEO turnover. Their investigation including all firms of the S&P ExecuComp database from 1993 to 2001 revealed that poor industry and market performance significantly increased CEO turnovers. They infer from their results that boards do not sufficiently filter out peer group performance when deciding about the CEO's retention. Moreover, underperforming CEOs compared to their peers are more vulnerable to forced turnover following low industry returns. Their attempt to detect possible explanations for the lack of relative performance evaluation did not find empirical support.

It is argued that current evidence on CEO tenure suggests that S&P's ExecuComp data may overvalue executive compensation. Options in the ExecuComp database are treated as if they have seven years of lifetime which overstates its value if CEOs leave the company on an average of six years. This of course only holds true under the assumption that CEOs face the forfeiture of unvested options and must exercise already vested options upon termination of employment.¹⁰⁷ Restricted stock grants may as well be overvalued as ExecuComp treats them as fully vested though they generally vest over a period of time. The shorter CEO tenure and the increased turnover-performance relation may enhance the performance dependency of stock options.¹⁰⁸

4.12 Additional Issues and Discussion

Unravelling the weak pay-performance link documented by the majority of research remains a challenge. Nevertheless continuous

¹⁰⁷ Yermack (2006) notes that only 16% of internal turnovers deviate from this policy

¹⁰⁸ Cf. Kaplan and Minton (2006)

interest in this issue exists, which is accompanied by the development of further concepts.

Hermalin and Wallace (2001) offer a theoretic explanation for the weak relations found between executive pay and company performance. They note that the treatment of firms by standard empiricism as if they all offer the same compensation scheme may be a possible reason. Firms may employ different schemes based on a number of heterogeneous dimensions, like firm size, managerial ability, and to which degree executive performance can exert influence on firm performance. By accounting for heterogeneity in firm compensation schemes and by calculating pay-performance relationships for each firm individually, they found executive pay to be significantly more positively linked to firm performance than standard specification revealed. In consideration of the fact that their investigation solely focused on a regulated industry (low pay-performance sensitivities in general – see utilities above), it would be interesting to explore the effect of this alternative specification on other data sets.

It is surprising that in spite of the large amount of literature on this issue, little consistence with regards to data collection, statistical techniques, samples, moderator, mediator and control variables used can be observed.¹⁰⁹ Still there might be political, organizational or institutional moderators which might not have been addressed adequately yet.

With reference to meta-analysis various strength and weaknesses have been documented. Meta-analyses offer little bias in the studies included, objective weighting of studies, allowance for the examination of moderating variables, allowance for the estimation of relationship

¹⁰⁹ Cf. Tosi et al. (2000); Devers et al. (2007)

stability, and the capability to overcome problems of causal, narrative reviews of the literature. Possible weaknesses of meta-analysis reported are that “poor” studies may bias the results, a bias towards published studies, low power in detecting moderating relationships, and the role judgments may possibly play in the results.¹¹⁰

The relatively easy accessibility to quantitative data compared to the difficulty of gaining access to the “actors” may explain the lack of quantitative work on this issue. However, it would probably be beneficial to stress this point more deeply.

¹¹⁰ Cf. Tosi et al. (2000) quoting Schmitt and Klimoski (1991); Wolf (1986)

5. Subjects of Investigation

5.1 US Based Research

As mentioned above, the issue of executive compensation is highly discussed, not only in the media, but also in research. As the pay-for-performance literature is mainly based on the US, the question arises, if the empirical results can be transferred to any world economy, or if they are limited to the United States. In fact, there is little research on other national economies, nor on cross-country comparisons. Examining the sources included in the study by Rost and Osterloh indicates again that it is basically the US that is under investigation. Far behind it, some research on performance related pay is attributed to the UK, along with individual studies on other countries.

The simple reason why most research is about conditions in the US is the lack of data from other economies, due to less restrictive disclosure requirements. While in the US the Security and Exchange Commission (SEC) enacted the first disclosure rules already in 1938, in large parts of the world details of CEO compensation remained unclear for a long time.¹¹¹ However, the appearance of more and more corporate governance codes, in conjunction with more stringent legislation, are leading to more transparency of executive compensation around the world.¹¹²

5.2 Evidence from the UK

Among European countries the UK has been the outrider in terms of disclosure of executive compensation. Still a lot later than in the US, it was the Greenbury Report (1995) and the Hampel Report (1998) that

¹¹¹ Cf. Donahue (2008)

¹¹² Cf. Baird and Stowasser (2002), as an example of Germany and the UK

led to more transparency of CEO pay.¹¹³ The UK corporate governance structure seems to be quite similar to the US one, as both are characterized by a one tier board and dispersed ownership. Furthermore, common law is predominant in both economies.¹¹⁴ The ratio of performance related compensation to total pay is the largest in the UK, compared to other European countries. Nevertheless, total compensation cannot keep up with sums that CEOs in the US receive. In 1997 Disney's Michael Eisner pocketed more than the top 500 UK CEO's. It might be necessary to have a closer look at the studies including the UK to find out if the results of the meta-analysis are in any case transferable to the UK.

New disclosure requirements have made comprehensive data from the UK available from 1997 onwards. Before that time researchers often relied on data from compensation consultants or other surveys.¹¹⁵ In his early work Main (1991) additionally used data from annual reports to analyze executive pay and performance for 241 British industrial companies for 1985. He reports an empirically modest relationship. Main, Bruce and Buck (1996) were already able to include data on stock options. Based on a small sample of 60 companies they analyzed data from 1981 to 1989. They expanded the literature by not only focusing on the CEO but on the total board remuneration. They found executive compensation to be statistically significantly connected with firm performance. They reported an average boardroom pay increase of £0.239 for each extra £1,000 shareholder value.

Benito and Conyon (1999) present pay-for-performance results for the years 1985 to 1994. However, they were forced to exclude long-term

¹¹³ Cf. Conyon and Murphy (2000)

¹¹⁴ Cf. La Porta et al. (1998)

¹¹⁵ Cf. Conyon and Murphy (2000)

incentives like share options and equity holdings when determining CEO pay. Considering this and the fact that they included a large sample of firms (also small ones) they found executive pay to increase by £1,852 for each increase of 10% in shareholder return. Moreover, they report a raise of the pay-performance relation over time.

Conyon and Murphy (2000) compared CEO compensation of the United States and the United Kingdom with the available data of long-term incentive plans also for the latter. For the year 1997 they found higher overall pay-performance sensitivity for the US and more incentives for their CEOs to increase shareholder wealth. They attributed these results to the fact that CEOs in the UK held less shares of stock, less share options, as well as equal or less long-term incentive plan shares. CEOs in the US only earned 45% more in terms of cash pay but 190% more in total pay than their British counterparts.

Interestingly, the UK represents a country where the mean percentage share of equity based compensation to total compensation for a long time did not increase that much compared to other economies. Referring again to the Conyon and Murphy study, option grants and long-term incentive plan shares accounted for 19% of total CEO pay in 1997 for the 510 largest companies of the UK.

Ferri and Maber (2009) analyzed CEO compensation levels and compositions for the years 2000 to 2005 based on a governance database compiled by BoardEx for a large sample of about 600 UK companies. Their results show a quite stable share of equity based compensation to total pay from the year 2000 to 2004 with a low in 2002 and the largest increase from 2004 to 2005 (see Table 2).

Table 2 : Mean Composition of CEO Pay in the UK 2000-2005¹¹⁶

Year	2000	2001	2002	2003	2004	2005	All
Salary	53%	54%	56%	50%	48%	44%	51%
Bonus	14%	13%	15%	16%	17%	18%	16%
Cash Pay	67%	67%	70%	66%	65%	63%	67%
Stock Options	16%	16%	11%	14%	11%	8%	13%
Restricted Stock	8%	7%	7%	11%	14%	20%	11%
Equity Pay	23%	23%	19%	25%	25%	29%	24%
Other Pay	9%	10%	11%	9%	10%	9%	10%
Total Pay	100%	100%	100%	100%	100%	100%	100%

This indicates that pay-for-performance sensitivity comparisons (like the one of Conyon and Murphy) have not suddenly led to a more stock-based compensation structure in other countries.¹¹⁷ Institutional conditions might have hindered this development.

A basic question for researchers is whether indeed stock options in the US led to higher performance compared to other countries, or whether the rising stock market has led managers and boards to support the boost of options. From today's viewpoint it is interesting to know that compensation of the highest paid executives in the UK in 2008 comprised of more than 50% long-term incentives (including all equity-

¹¹⁶ Source: Ferri and Maber (2009), p.11, 48

¹¹⁷ Cf. Zhou (1999) for a comparison between Canada and the US. Again a higher pay to performance relationship and a higher bonus and option proportion of pay was found for the US.

based compensation) which is not too far from the over 60% in the US.¹¹⁸

5.3 Limited Non-US Investigations

As noted, studies on economies outside the US are rare due to lack of disclosure. Some Authors have nevertheless tried to find out about pay and performance relationships - mainly in their home country - despite the difficult informational environment.

Included in the Roth/Osterloh meta-analysis, a study of Cheng and Firth (2005) tries to explore top management pay in Hong Kong. While data on executive pay from East and South East Asia is limited, Hong Kong was one of the first countries to introduce disclosure requirements. Firms in this part of the world are largely characterized by high family stock ownership. It is of course interesting to analyze pay-for-performance under these circumstances. Unfortunately Cheng and Firth yet could not include stock options, and data on other compensation components remained unclear as well. Thus, the explanatory power is limited, as more than 50% of the sample firms had already implemented stock options by 1999.

One study included in the meta-analysis investigated compensation and performance in Taiwan. As the authors point out, Taiwan has a unique stock bonus compensation system which legally dictates that firms have to grant their employees stock bonuses when corporate earnings are positive, and dividends are paid out. The study does not explicitly refer to CEO incentives, but rather to the overall stock bonus compensation which makes comparison with other studies difficult.¹¹⁹

¹¹⁸ Cf. The Economist (May, 28th 2009)

¹¹⁹ Cf. Wen Chung, Shin-Rong and Yu-Wen (2006)

Data from Canada is represented with one early study only which compares this closely linked neighboring country with the United States. This work analyzing the early 1990s found similar results for this century as the comparison by Conyon and Murphy (2000) for the UK and the US mentioned above. The study shows that overall CEO compensation, pay-for-performance components as well as pay-for-performance sensitivity are higher in the United States. Besides US companies again outperform their opponents in terms of stock prices.¹²⁰

6. Reasons for Global Incentive Disparities

It is useful to pose the question, what causes the differences in CEO pay between economies. The answer to this question should provide insights into the diverse developments of executive compensation, possible future conditions and potential limits or chances of convergence. Furthermore, it is essential to keep in mind the distinct organizational and institutional structures and conditions that executive remuneration relies on when confronted with the mainly US based literature.

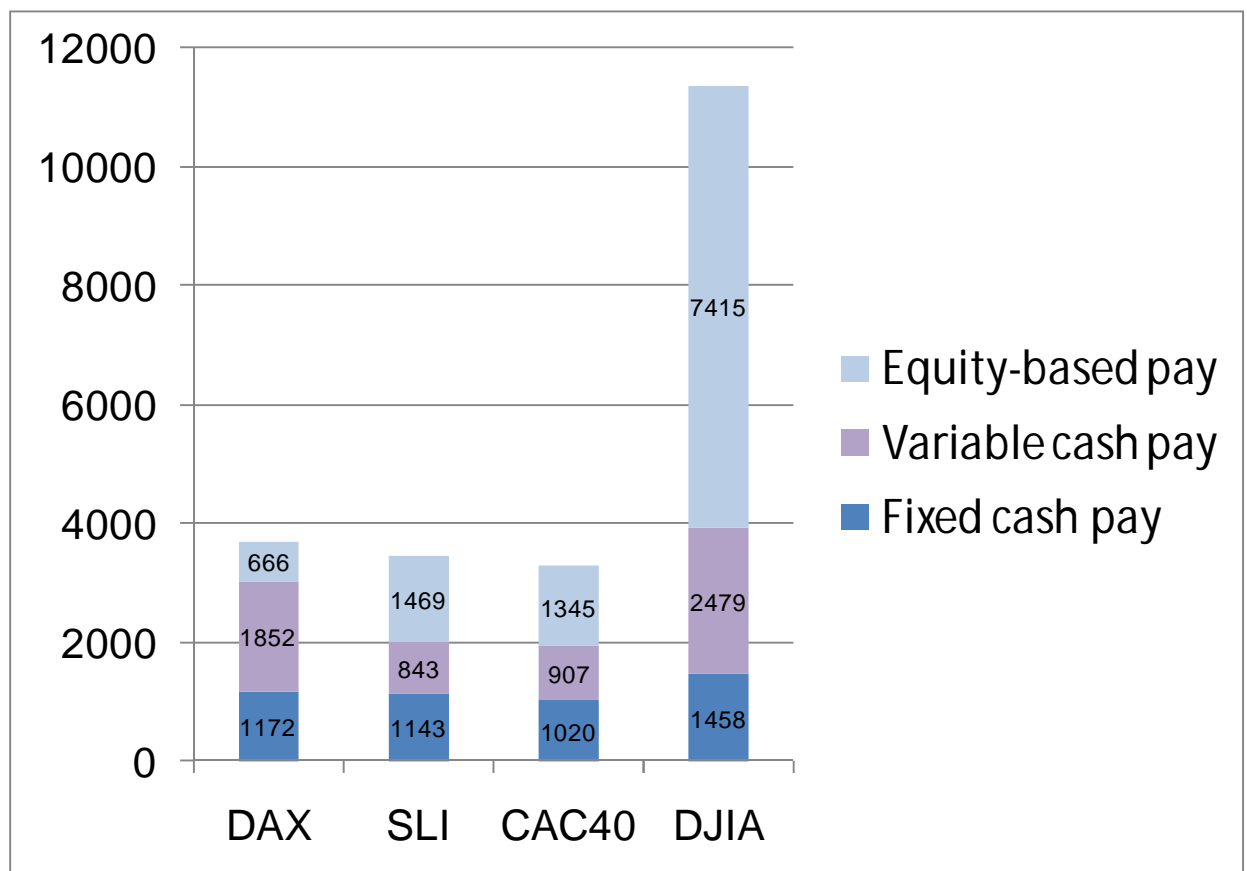
As globalization continuous, accompanied by cross-country mergers and acquisitions, the issues of the varying pay structures will grow, especially for multinational firms. Ten years ago Gross and Wingerup already diagnosed the situation:

“No longer can HR assume that pay for performance will work in every culture, that higher levels of cash pay will motivate employees everywhere, or that providing lavish stock options is a desirable retention tool globally.”¹²¹

¹²⁰ Cf. Zhou (1999)

¹²¹ Gross and Wingerup (1999), p.25-26

Figure 4: Average Total CEO Pay in 2008 (in thousand EUR)¹²²



Note: DAX (Deutscher Aktienindex), Germany
 SLI (Swiss Leader Index), Switzerland
 CAC40 (Cotation Assistée en Continu 40), France
 DJIA (Dow Jones Industrial Average), USA

Figure 4 illustrates differences in CEO pay levels, as well as pay compositions, for Germany, Switzerland, France and the United States for 2008. It is easily visible that fixed salary does not vary that much along these economies and that the clear outlier in terms of equity-based compensation is the United States. In addition, one can observe fundamental variances within the European countries in terms of variable pay. While overall compensation is the highest in the DAX, the composition of variable pay in the largest German firms differs a lot compared to Switzerland and France. German companies pay their

¹²² DWS-Studie zur Vorstandsvergütung 2009

CEOs far more in terms of variable cash compensation i.e. bonuses, while French and Swiss firms focus much more on equity-based remuneration. A cross-country comparison would certainly be a topic on its own but it is surely necessary to present an overview of the key issues of divergence at this point.

6.1 Culture

Often mentioned as a main barrier to the globalization of pay, the cultural aspect is used in various non-economic studies to explain the determination and development of executive compensation.

An example is the study by Tosi and Grackhamer (2004) which points out that culture influences compensation practices. They also refer to previous comparisons, such as the work of Conyon and Murphy, mentioned above, who have analyzed CEO pay in the US and UK. The authors argue that this study provides a good example for the view that the structural environment does not fully explain differences in compensation setting. Both Anglo-Saxon economies are characterized by a similar ownership structure, a one-tier board system, and the same origin of law. Although other influencing factors (most of them will be mentioned below) might play a role, culture may best explain the existing differences in CEO compensation.

Tosi and Grackhamer examine the relationship between executive compensation and the cultural dimensions of Hofstede (1983) according to data of twenty-three countries for the years 1997-2001. Hofstede's "Power Distance" measures, to what extent inequality is accepted in a society and how authorities in organizations are centralized. Not surprisingly, the authors found a positive relationship of power distance to total CEO pay. Interestingly, they postulated that power distance was negatively related to the proportion of variable pay

to total pay (VC/TC). They argued that every variable pay component represents risk and that powerful CEOs would therefore aim to reduce performance related pay. In effect, the results were contradictory to their hypothesis; the authors explained the discrepancy by the fact that firms do not use variable pay components to transfer the risk of poor performance. They indicate that their findings support the managerial power theory, where CEOs want to increase their personal wealth.

The second dimension, "Individualism-Collectivism", shows how self-interest and individual needs are placed above those of groups or organizations. People in collectivist countries are born into in-groups and share the values and beliefs of this group. The positive relation of both CEO total compensation and variable compensation to total compensation to individualism have led Tosi and Grackhamer to assume that these findings reflect in part the tournament theory, which basically awards personal success. They argue that in individualistic countries like the US, the transfer of performance risk is evident to motivate CEOs.

High "Uncertainty Avoidance" as the third dimension indicates that people prefer rules and standard procedures to protect themselves from the unpredictable. Not surprisingly, the authors found a negative relationship between uncertainty avoidance and the proportion of variable pay to total pay. Again, this reflects the preference to avoid risk for the CEO through variable compensation.

With regard to the last dimension, "Masculinity-Femininity", the authors did not establish any link to the proportion of variable to total compensation. It is important to note that the macroeconomic and corporate governance variables, to be discussed later, might also be

affected by culture itself, a fact that was also stressed by the authors as a caveat to their results.¹²³

Embedded somewhere in the dimensions of Hofstede are the circumstances which other authors emphasized as influencing the differences in compensation practices. Referring again to the comparison of the US and the UK by Conyon and Murphy, Hofstede fails to provide many answers to the cultural question. Both countries scored quite similar in his study. An explanation might be the different “outrage constraints” which take effect in contemporary discussions about excessive pay and which are supported by media scrutiny.¹²⁴ This would fit to the opinion that the US as the “market for superstars”¹²⁵ registers less public outrage.

6.2 Tax

Referring to taxation issues, one has to consider the income tax paid by the executives, as well as corporate tax rates and rules. At present a heavy debate has started about a “supertax” of 50% that the British Government wants to be levied on bankers’ bonuses, in order to moderate short-termed incentives.¹²⁶ Bonuses may induce managers to take higher risk and are therefore viewed as a main cause of the financial crisis. It is easily imaginable that such actions lead to changing pay compositions.

The income tax level can have effects on the level of CEO pay, as well as on its composition. Firms try to introduce pay structures that make

¹²³ Cf. Tosi and Greckhamer (2004)

¹²⁴ Cf. Bebchuk, Fried and Walker (2002)

¹²⁵ Cf. Conyon and Murphy (2000) quoting Rosen (1981)

¹²⁶ Cf. URL: http://www.ft.com/cms/s/0/1c0163c2-eb55-11de-bc99-00144feab49a.html?nclink_check=1
[Dec., 19th 2009]

it possible for their leaders to keep as much as possible of what they earn. Some studies have shown that low income tax rates are correlated with higher executive compensation.¹²⁷ According to Gross and Wingerup (1999) in much of Europe high tax rates on cash pay lead to the use of perquisites and other non-cash based benefits, to remunerate company's CEOs. This makes incentive based compensation and its performance effect more elusive.

Much discussed is the proposition that tax rules have a serious influence on the use of stock options. It is widely believed that the special treatment of stock options has at least partly contributed to the massive use of this form of compensation in the US. Gains from exercised share options are deductible as ordinary business expenses. On the other hand the deductibility of non-performance-based pay components (salaries, restricted stock and discretionary bonuses) is limited to \$1 million in the United States.¹²⁸ However, some authors doubt that taxation policies have had a great impact on the boost of stock options in the US and argue that other factors played a more important role.¹²⁹

6.3 Law

Various factors that are influencing CEO pay level also have an effect on the composition of executive remuneration. The same applies to matters of law. The financial crisis has raised calls on a broad basis for stricter legislation. Critics argue that short-term incentives have been emphasized too much. Law can indeed have a strong impact on compensation setting. In Germany for example, the legal minimum holding period for stock options was doubled from two to four years

¹²⁷ Cf. Abowd and Bognanno(1995); Cheffins (1997)

¹²⁸ Cf. Conyon and Murphy (2000)

¹²⁹ Cf. Hall and Liebman (2000)

recently. Furthermore bonuses have to be set in a way to make them more long-term oriented.¹³⁰ This would be to the disadvantage of CEOs who are short-term interested and might lead to reconsiderations of pay structures.

Law can also determine disclosure requirements. While especially in Continental Europe some criticize the lack of disclosure of executive compensation, others assert that more disclosure would lead to an Americanization of pay. This view is based on the above mentioned "ratchet-effect", which continuously tends to raise executive compensation. "Soft laws" like corporate governance codes generally treat executive compensation superficially, most of them only with some advice to link pay to performance.¹³¹

Accounting Standards generated by private organizations like the US Financial Accounting Standards Boards (FASB) are considered soft laws as well. Different treatments of pay components may stimulate or curb the use of these instruments. Hall and Murphy (2003), as just one of many examples, value the special treatment of stock options under the US accounting rules as an additional contribution to the growth of option grants. For a long time no accounting expense was recorded for options, which may have obscured recognition of their economic costs.

Feng and Tian (2009) picked up this approach and analyzed the use of equity incentives after options expensing became mandatory in the US. They state that, although the obligation effectively was introduced after June 15, 2005, firms started to prepare in 2002 by changing their incentive plans. Basically, they try to explain why the median CEO option incentives increased by a rate of 25% a year from 1993 to 2001,

¹³⁰ Cf. DSW Studie zur Vorstandsvergütung 2009

¹³¹ Cf. Cheffins (2003)

but then started to decrease a year after 2001 by 17% yearly till 2005. They controlled for several firm and CEO characteristics as well as for market and economic events like the Sarbanes-Oxley Act of 2002, the backdating scandal and the 2000 stock market crash, and found that mandatory option expensing had a significant impact on the use of stock options. The impact was larger for high incentive firms, which might have overused this form of compensation.

6.4 Additional Factors

Conyon and Schwalbach (2000) compared executive compensation in Europe and found that countries with a two-tier board structure (Germany, Austria, Denmark, the Netherlands and Switzerland) have a higher share of CEO cash compensation than economies characterized by a one-tier board structure (UK, Ireland, Italy, Spain and Belgium). Updates on these issues would be desirable.

According to the incentive theory it seems logical that the shareholder structure influences compensation setting. Nakazato, Ramseyer and Rasmusen (2008), as an example, argue that due to the control of large shareholders Japanese firms do not have that much need for incentive-based compensation. This would again mean that both practices, monitoring and incentives, allow for the disciplining of managers.

It is obvious that variances in governance and ownership structures basically lead to the often discussed differentiations between Anglo-Saxon and Continental European countries or Japan, but do not explain differences within these cultural clusters. Referring once again to the US – UK comparison, some authors claim that US CEOs are more rewarded for risk. The first argument is that CEOs in other countries, as for example in the UK, are more risk averse, trying to avoid variable

pay which entails much more risk. Secondly, some authors mention that US CEOs might have more responsibilities, more decision rights and more influence over corporate results, than for example CEOs in the UK.¹³²

There are certainly some more factors that might influence CEO compensation setting in various ways. The size of the economy, collective bargaining or the stage of development of capital markets might play a role as well, the latter especially for firms granting equity-based incentives. Generally we see that various criteria drive CEO pay level, composition, and its incentive effect. Moreover, the review recommends caution in a free transfer of the US results to other economies.

Unfortunately, international comparisons of real pay to performance relationships are scarce. The trend towards an Americanization of executive compensation may have come to a standstill, particularly due to the current crisis. Many voices attribute the financial turmoil to flawed incentive compensation, particularly at Wall Street corporations.

¹³² Cf. Conyon and Murphy (2000)

7. Behavioral Impacts of Incentive Compensation

According to agency theory, executive compensation ought to provide the appropriate incentives for managers to increase shareholder value. The majority of the compensation literature examines the indirect impact of pay on performance without particularly considering executive behavior.¹³³

It has been shown that due to flaws in compensation schemes executive behavior might deviate from what is optimal for shareholders. Components in compensation contracts aiming at manager-shareholder interest alignment might simultaneously leave space for opportunistic behavior of executives. More recently, researchers also have tried to identify the behavioral effects of contracting structures. Some evidence of behavioral patterns that negatively influence shareholder-manager goal alignment - like option backdating or dividend policy - has already been discussed. Other subjects of heavy interest will be reviewed below.

7.1 Self-Selection

The process of self-selection is based on the assumption that individuals know their abilities and select their employers accordingly. Oversimplified, the argument is that strong incentive-based pay components attract individuals who believe themselves to possess the skills to perform well enough to earn the payoffs from these performance contracts. Individuals, who believe that they are not able to achieve the payoffs, will perceive the expected compensation as too low.¹³⁴

¹³³ Cf. Devers (2007)

¹³⁴ Cf. Wruck (2000)

Performance pay provides employees with extrinsic motivation. It is therefore argued that incentive compensation schemes attract extrinsically motivated individuals, who are mainly motivated by pecuniary awards, instead of individuals who draw their motivation from doing his or her duty, and who are therefore intrinsically motivated.¹³⁵

Rynes et al. (2005) summarize some literature on this issue. Accordingly, incentive compensation is more attractive to those higher in academic achievement (Trank et al. [2002]), need for achievement (Bretz et al. [1989]) and self-efficacy (Cable and Judge [1994]). Banker et al. (2001) found that the implementation of performance-based incentive plans attracts and retains more productive employees.

Interestingly, Dunford et al. (2005) noted that job searching was positively related to the percentage of underwater options held by executives. They argued that the risk associated with underwater options lead executives to seek new job possibilities rather than to increase effort. Rost et al. (2008) argue that the trend to hire new CEOs externally, i.e. from outside the company, reflects the self-selection process. They suppose that the CEO position is less attractive for intrinsically motivated persons.

7.2 Earnings management

Scholars have been engaged in the detection of possible side effects of executive compensation. A major issue in this context is the opportunistic earnings management hypothesis, which suggests that managers use information asymmetries to report corporate results in

¹³⁵ Cf. Rost and Osterloh (2009) quoting Bohnet and Oberholzer-Gee (2000); Backes-Gellner and Wolff (2001); Osterloh and Frey (2005).

ways to increase their personal benefit.¹³⁶ The cost to firms engaged in earnings management come in the form of litigation risk. The announcement of accounting fraud involvement of firms may lead to considerable losses in shareholder value. Dechow et al. (1995) found for their sample an average shareholder wealth loss of 9%. Managers involved additionally face loss of reputation.

Authors found that incentives for executives to manipulate earnings by using discretionary accruals vary with compensation and corporate governance arrangements. Gao and Shrieves (2002) report that discretionary accruals are lower the higher a manager's salary. They argue that base salary does therefore rather provide an incentive not to engage in earnings management, because of the possible costs associated with it. In terms of bonuses, Gao and Shrieves document a positive and significant relationship with the use of discretionary accruals, which is consistent with earlier results.¹³⁷

More recently, scholars have particularly been interested in the impact of stock and option holdings on the misreporting of corporate results. It is believed that equity-based compensation has been a main driver of aggressive accounting practices, as the rise in accounting fraud goes hand in hand with the increase in stock-based pay.¹³⁸ Burns and Kedia (2006) compared firms that restated financial statements - as their original statements were not in accordance with GAAP - with firms that did not restate. They note that the greater the sensitivity of CEO wealth to stock performance emerging from stock options, the greater is the probability of earnings management. Additionally, they found no

¹³⁶ Cf. Chan et al. (2001); Gao and Shrieves (2002)

¹³⁷ Cf. Healy (1985)

¹³⁸ Cf. Cohen et al. (2005); Cheng and Warfield (2004); Bergstresser and Philippon (2006); Burns and Kedia (2006)

association between equity and restricted stock grants and restatements. Their results are similar to other findings.

Gao and Shrieves (2002) conclude that stock options and the intensity of stock options are significantly positively related to earnings management, measured as the absolute value of discretionary accruals. They found as well no significant impact of restricted stock on misreporting, except for the incentive intensity of restricted stock. It is argued that, in contrast to options, the linear payoffs of restricted stock to the value of firm stock movements limit the incentives for managers to engage in earnings management.¹³⁹ Not surprising and uniform are the results for long-term incentive plans. Due to their long-term effects on CEO wealth they are not associated with short-term earnings manipulation.

Empirical evidence from the literature suggests that the structure of the compensation contract impacts managers' behavior to engage in earnings management. Furthermore, it is shown that different elements of executive pay provide different incentives for earnings management, but that the positive effect of stock options on misreporting far exceeds the impact of other compensation components. Therefore, the relation between stock options and aggressive accounting is of strong interest to scholars.

Bergstresser and Philippon (2006) document that periods of high accruals are periods when CEOs and other insiders are exercise unusually large quantities of options and sell large quantities of shares. McAnally et al. (2008) report that even anticipated option grants lead to misreporting. They found that just before large stock option grants CEOs are more likely to miss critical earnings targets.

¹³⁹ Cf. Gao and Shrieves (2006)

Authors noted that discretionary accruals in one period need to be reversed in subsequent periods, which leads to a tradeoff between current and future earnings reporting.¹⁴⁰ This fact might in the long run somehow limit managers' potential to increase personal wealth. However, managers are aware of the reversal and might try to report higher earnings in periods when the share of stock options on compensation is relatively high, or when discretionary positive accruals can lead to the reporting of positive instead of negative earnings.¹⁴¹

Burns and Kedia (2006) argue that the issue of misreporting contributed to the increasing use of equity and restricted stock instead of stock options by large corporations like General Electric and Microsoft.¹⁴² While Kaplan and Minton (2006) conclude that their findings of shorter CEO tenures over time might create incentives for managers to engage in earnings management, several studies have proofed that enhanced corporate governance significantly reduces the probability of earnings management.

7.3 Risk taking and Strategic Decisions

Executives are assumed to be risk averse, as they are overinvested in their own firms with their personal wealth and human capital.¹⁴³ Shareholders, on the other hand, are assumed to be risk neutral to investment decisions as they are able to diversify their wealth across firms. Agency costs may arise due to managerial avoidance of risky but possibly profitable projects.¹⁴⁴ Therefore scholars point to the necessity

¹⁴⁰ Cf. Dechow, Sloan and Sweeney (1995); Gao and Shrieves (2002)

¹⁴¹ Cf. Gao and Shrieves (2002)

¹⁴² Cf. Burns and Kedia (2006) quoting The Financial Times, September 19, 2003, "The Largest Groups rein in Excessive deals," by Adrian Michaels.

¹⁴³ Cf. Jensen and Meckling (1976)

¹⁴⁴ Cf. Wiseman and Gomez-Mejia (1998)

to align the dissimilar risk preferences of managers and shareholders.¹⁴⁵ It has been argued that convex payoffs, which are particularly inherent in stock options, are a useful means for risk preference alignment.¹⁴⁶

Datta et al. (2001) share this view based on their analysis of stock option compensation and managerial acquisition behavior. They document greater post-acquisition firm risk if the acquirer's executive compensation contains higher shares of stock options. They further found option pay to be negatively related to acquisition premiums. Similarly, Rajgopal and Shevlin (2001) reported riskier investment decisions (measured as the coefficient of variation in expected future cash flows) associated with stock option pay in the oil and gas industry.

The literature embodies a large quantity of theoretical and empirical contributions on this issue. It would go beyond the scope of this work to list the numerous and differing conclusions of the studies.¹⁴⁷ An outline of the results indicates that incentive compensation does exert influence on managerial attitudes towards risk. These attitudes in turn lead to strategic decisions which might improve goal alignment, or significantly deviate from what is optimal for shareholders.¹⁴⁸ In fact, work on this issue leads to the assumption that performance pay and risk have a complex relation, or as Nohel and Todd (2001) concluded for investment decisions:

“...managerial incentives to invest are multi-dimensional and highly sensitive to option strike prices, the manager's wealth, degree of diversification, risk aversion, and career concerns.”¹⁴⁹

¹⁴⁵ Cf. Hirshleifer and Suh (1992)

¹⁴⁶ Cf. Jensen and Meckling (1976); Guay (1999), among others

¹⁴⁷ See Coles, Daniel and Naveen (2006); or Devers et al. (2007) for a review

¹⁴⁸ Cf. Nohel and Todd (2001), who found that due to over and under-investment, hurdle rates range from 20 percentage points below to 35 percentage points above rates of return required by shareholders.

¹⁴⁹ Nohel and Todd (2001) p.21-22

Considering the financial crisis 2007-2009 the prevailing notion is that modern compensation schemes increase managerial incentives to take risk.¹⁵⁰

¹⁵⁰ Cf. Landskroner and Raviv (2009)

8. Considering Human Nature

Agency theory does not distinguish between individual personality differences. It is assumed that a lack of controls result in opportunistic behavior of agents.¹⁵¹ However, this view may draw a too simplistic picture of complex human behavior.¹⁵² Economists have largely ignored this issue.

Based on the critical voices regarding the oversimplification of human action, Fong and Tosi (2007) tested the assumption that unequal motivation towards opportunism among individuals should lead to differing effects of agency controls. Among the “Big Five” personality factors they selected conscientiousness as the characteristic shown to have the greatest influence on individual performance. Attributes associated with conscientiousness indicate that conscientious individuals are less likely to behave opportunistically and engage in shirking at the cost of the principal. Agency controls (incentive alignment and monitoring) should therefore have little effect on conscientious agents.

The authors also distinguish between effort and performance. This is an important point given the fact that agency theory focuses on agent effort, but empiricists basically measure performance. Though certainly related, effort, however, does not guarantee performance.¹⁵³

They tested their assumptions by means of a field study including 150 students. Overall their results revealed that less conscientious agents reacted to incentives by increasing their effort and performance, while incentives had little or no effect on the effort and performance of highly

¹⁵¹Cf. Jensen and Meckling (1976)

¹⁵² Cf. Donaldson (1990a, 1990b); Doucouliagos (1994)

¹⁵³ Cf. Fong and Tosi (2007) quoting Christen et al. (2006)

conscientious agents. Thus, the absence of incentive alignment mechanisms leads to opportunistic behavior by low-conscientious individuals. Those agents require incentives to reduce or avoid moral hazard and to increase performance.

On the other hand, there is no need for incentive alignment as far as conscientious individuals are hired. Besides some limitations of the study, Fong and Tosi suggest that the poor results of the pay-for-performance literature may to some degree be explained by not accounting for human nature as a moderator variable.¹⁵⁴

¹⁵⁴ Cf. Fong and Tosi (2007)

9. Intrinsic and Extrinsic Motivation

Based on pay-for-performance criticism from psychological economists and motivational psychologists, Rost and Osterloh (2009) support the notion that the crowding-out effects of intrinsic motivation by external incentives represent a serious argument against performance pay. The trade-off between extrinsic and intrinsic motivation was primarily reported by Edward L. Deci and has been picked up by others, specifically by Bruno S. Frey. A large number of laboratory experiments and empirical results support the crowding effect, which contradicts the standard economic model.¹⁵⁵

It is however necessary to note that the crowding out effect depends on certain conditions. Most importantly, the agent must have a high intrinsic motivation in the first place. Moreover, the incentive needs to be perceived as controlling. If the intervention is perceived as informative, intrinsic motivation may be not affected, or even be enhanced.¹⁵⁶ To affect performance, the loss of intrinsic motivation must not be compensated by extrinsic motivation.¹⁵⁷

The theory suggests that setting executive compensation requires knowledge about the a priori motivation of the agent. Additionally, as far as extrinsic motivation could make up for the loss of intrinsic motivation, firms need to ask themselves how their managers should be motivated. The answer to this question may mainly depend on the operational environment and goals of the firm. Indeed, compensation in non-profit organizations is less contingent on performance.¹⁵⁸ Managers in non-profit organizations are found to be more intrinsically

¹⁵⁵ Cf. Deci, Ryan and Koestner (1999), who conducted a comprehensive meta-analysis; or Frey and Jegen (2001), who provide an overview of empirical results

¹⁵⁶ Cf. Frey (1998)

¹⁵⁷ Cf. Osterloh and Frey (2000)

¹⁵⁸ Cf. Frey (1997) quoting Roomkin and Weisbrod (1994)

motivated which increases the risk of motivation being crowded out by performance based compensation.¹⁵⁹

Besides the advantages and disadvantages of intrinsic motivation it is probably the issue of feasibility to account for all factors influencing intrinsically motivated individuals why in practice the focus lies on the more understandable and simpler practice of extrinsic rewards.¹⁶⁰

¹⁵⁹ Cf. Frey (1997)

¹⁶⁰ Cf. Wruck (2000)

10. Final Discussion and Conclusion

Pay-for-performance has been praised as the instrument capable of overcoming the agency problem inherent in the modern corporation. It has even gained access into compensation schemes of public institutions. Research has however largely been unable to identify a significant link between executive compensation and corporate performance. The meta-analysis of Rost and Osterloh (2009) provides another argument for the weakness of pay-for-performance in aligning the interests of managers and shareholders. Based on their results, Rost and Osterloh question why this “management fashion” is still applied at all, as it has obviously not achieved its intended aims.

Other authors (e.g. Bebchuk and Fried [2004] and Jensen et al. [2004]) have expressed strong criticism on current executive compensation as well. In opposition to Rost and Osterloh, they believe in the management concept per se, but call for urgently required improvements in pay scheme designs and corporate governance to make the incentives of performance-based compensation work. Furthermore, they even provide useful solutions to overcome certain flaws in compensation and firm structures. This investigation moreover mentions that current pay schemes and governance structures are imperfect and leave enough room for improvements.

This might be one possible reason for the ability of performance to explain only a minor part of CEO compensation, which stays a fact in empiricism and is underlined by the Rost/Osterloh meta-analysis. However, the meta-analysis has certain limitations on its own. As noted by Rost and Osterloh, it does not allow for a fixed-effect approach. Furthermore, the inconsistent data with regards to the CEO pay variable have raised difficulties. This fact was accented by this review of the underlying studies which additionally has demonstrated that the dependent variable is not the only source of heterogeneity

among the empirical contributions. Certainly the difference in data quality is especially noteworthy but it has been shown that pay-for-performance studies vary greatly with regards to statistical techniques, samples and variables used as well. Furthermore, empiricism lacks homogeneity regarding which valuation methods and lags are employed. Reviewers have already tried to provide frameworks which should guide future research (e.g. Farmer [2008]; Devers et al. [2007]) and may contribute to the unraveling of the weak pay-performance link documented.

In spite of the huge amount of literature on executive compensation little attention is given to economies outside the United States. While lack of transparency might still hinder detailed investigations this review has illustrated that US results are not one to one transferable to other economies. Cross-country comparisons reveal that the determinants and conditions which drive incentive compensation are numerous and vary greatly. In particular multinational companies need to consider those differences, when they are faced with compensation decisions in their subsidiaries.

Yet, there are observers who argue that executives are well paid for performance and that not least the increasing frequency of CEO firings affirms this fact.¹⁶¹ However, the current debates in the aftermaths of the recent financial crisis oppose this view. Mentioned as a symptom and cause of the crisis, pay and governance structures are being reconsidered which might be necessary to mitigate the “dark side” of incentive compensation and to dismantle deficiently designed pay schemes. Some modifications have taken place and others may follow. Future research will analyze their fruitfulness before pay-for-performance is to be buried like other possible management fashions.

¹⁶¹ Cf. Steven N. Kaplan at URL: <http://www.economist.com/debate/days/view/402> [April, 25th 2010]

List of Abbreviations

CEO	Chief Executive Officer
Cf.	confer (compare)
e.g.	for example
i.e.	that is
US	United States
UK	United Kingdom
S&P	Standard & Poor's
LTIP	Long-term Incentive Plan

List of Figures

Figure 1 - Average CEO Compensation in S&P 500 Firms	p.1
Figure 2 – Median Pay-Performance Sensitivities for S&P 500 CEOs, by Industry, 1992-1996	p.43
Figure 3 - Annual Internal and Total CEO Turnover, Fortune 500 from 1992-2005 by Sub-period.....	p.45
Figure 4 - Average Total CEO Pay in 2008 (in thousand EUR)	p.55

List of Tables

Table 1 – US Firms Re-pricing Options, by Year p.19

Table 2 - Mean Composition of CEO Pay in the UK 2000-2005 p.52

Bibliography

Aboddy, David and Ron Kasznik (2000), CEO Stock Option Awards and the Timing of Corporate Voluntary Disclosures, *Journal of Accounting and Economics* 29, pp.73–100.

Abowd, John M. and Michael L. Bognanno (1995) International differences in executive and managerial compensation; in R. B. Freeman and L. F. Katz (eds) Differences and Changes in Wage Structures, Chicago: *University of Chicago Press*, pp. 67-103.

Acharya, V., K. John, and R. Sundaram (2000), On the Optimality of Resetting Executive Stock Options. *Journal of Financial Economics* 57, pp.65-101.

Aggarwal, Rajesh K. and Andrew A. Samwick (1999), The Other Side of the Trade-Off: The Impact of Risk on Executive Compensation, *Journal of Political Economy* 107, pp.65-105.

Baird, Jonathan and Peter Stowasser (2002), Executive compensation disclosure requirements: the German, UK and US approaches, *Global Counsel*, October 2002, pp. 29-42.

Balsam, Michael (2002), *An Introduction to Executive Compensation*, Academic Press.

Banker Rajiv D., Seok-Young Lee, Gordon Potter, and Dhinu Srinivasan (2001), An Empirical Analysis of Continuing Improvements Following the Implementation of A Performance-Based Compensation Plan, *Journal of Accounting and Economics*, 30(3), pp.315-350.

Bebchuk, Lucian and Jesse Fried (2004), *Pay without Performance. The Unfulfilled Promise of Executive Compensation*, London: Mass.

Bebchuk, Lucian, Jesse Fried and David Walker (2002), Managerial power and rent extraction in the design of executive compensation, *University of Chicago Law Review*, 69, pp.751-846.

Benito, Andrew and Martin J. Conyon (1999), The Governance of Directors' Pay: Evidence from UK Companies, *Journal of Management & Governance* 3, pp.117-136.

Bergstresser, Daniel and Thomas Philippon (2006), CEO Incentives and Earnings Management, *Journal of Financial Economics* 80, pp.511–529.

Bizjak, John M., Michael J. Lemmon and Lalitha Naveen (2008), Does the use of peer groups contribute to higher pay and less efficient compensation?, *Journal of Financial Economics* 90, pp152-168.

Brick, Ivan E., Oded Palmon, and John K. Wald (2002), *Working Paper, Rutgers University Business School*, 29.

Brown, Larry (1999), Managerial Behavior and the Bias in Analysts' Earnings Forecasts, *Working Paper, Georgia State University*.

Buck, Trevor, Alistair Bruce, Brian G. M. Main and Henry Udueni (2003), Long Term Incentive Plans, Executive Pay and UK Company Performance, *Journal of Management Studies* 40, pp.1703-1721.

Burns, Natasha and Simi Kedia (2006), The Impact of Performance-based Compensation on Misreporting, *Journal of Financial Economics* 79, pp.35-67.

Carpenter, Jennifer N. (1998), The Exercise and Valuation of Executive Stock Options, *Journal of Financial Economics* 48, pp.127-158.

Carpenter, Mason A., Gerard W. Sanders and Hal B. Gregersen (2001), Bundling Human Capital with Organizational Context: The Impact of International Assignment Experience on Multinational Firm Performance and CEO Pay, *Academy of Management Journal* 44, pp.493-511.

Carter Mary E. and Luann J. Lynch (2001), The Effect of Accounting on Economic Behavior: Evidence from Stock Option Repricing. *Working Paper, Columbia University*

Chan, Konan, Louis K.C. Chan, Narasimhan Jegadeesh, and Josef Lakonishok (2001), Earnings Quality and Stock Returns, *NBER Working Paper 8308, Cambridge, MA.*

Cheffins, Brian R. (1997) *Company Law: Theory, Structure and Operation*, Oxford: Oxford University Press.

Cheffins, Brian R. (2003), Will Executive Pay Globalise Along American Lines?, *Corporate Governance: An International Review*, Vol.11, pp.8-24.

Cheng, Qiang and Terry Warfield (2005), Equity incentives and earnings management, *Accounting Review* 80, pp.441–476.

Cheng, Suwina and Michael Firth (2005), Ownership, Corporate Governance and Top Management Pay in Hong Kong, *Corporate Governance: An International Review* 13, pp.291-302.

Choe, Chongwoo (2003), Leverage, Volatility, and Executive Stock Options, *Journal of Corporate Finance* 9, pp.591-609.

Cohen, Daniel A., Aiysha Dey, and Thomas Z. Lys, (2005), *Trends in earnings management and informativeness of earnings announcements in the pre- and post-Sarbanes Oxley periods*, Available at SSRN: [/http://ssrn.com/abstract=658782S](http://ssrn.com/abstract=658782S).

Coles, Jeffrey L., Daniel D. Naveen, and Lalitha Naveen (2006), Managerial Incentives and Risk-taking, *Journal of Financial Economics* 79, pp.431-468.

Conyon, Martin J. (1998), Director's Pay and Turnover: An Application to a Sample of Large UK firms, *Oxford Bulletin of Economics and Statistics* 60, pp.485-507.

Conyon, Martin J. and Joachim Schwalbach (2000), European differences in executive pay and corporate governance, *Zeitschrift für Betriebswirtschaft Ergänzungsheft* 1/2000, pp.97-114.

Conyon, Martin J. and Kevin J. Murphy (2000), The Prince and the Pauper? CEO-pay in the United States and United Kingdom, *The Economic Journal* 110, pp.640-671.

Conyon, Martin J. and Simon I. Peck (1998), Board Control, Remuneration Committees, and Top Management Compensation, *Academy of Management Journal* 41, pp.146-157.

Coombs, Joseph E. and Matthew K. Gilley (2005), Stakeholder Management as a Predictor of CEO Compensation: Main Effects and

Interactions with Financial Performance, *Strategic Management Journal* 26, pp.827-840.

Cordeiro, James J. and Rajaram Veliyath (2003), Beyond Pay for Performance: A Panel Study of the Determinants of CEO Compensation, *American Business Review* 21 (1), pp.56-66.

Core, John E., Robert W. Holthausen, and David F. Larcker (1999), Corporate Governance, Chief Executive Officer Compensation, and Firm Performance, *Journal of Financial Economics* 51, pp.371-406.

Cosh, A. and Hughes, A. (1997). Executive remuneration, Executive Dismissals and Institutional Shareholdings. *Working paper: WP19, International Journal of Industrial Organization*, Vol. 15, pp.469–492.

Coughlan, Anne T. and Ronald Schmidt (1985), Executive Compensation, Management Turnover, and Firm Performance: An Empirical Investigation, *Journal of Accounting and Economics*, Vol. 7, pp. 43–66.

Datta, Sudip, Mai Iskandar-Datta, and Kartik Raman (2001), Executive Compensation and Corporate Acquisition Decisions, *Journal of Finance* 56, pp.2299–2336.

Dechow, Patricia M., Richard G. Sloan, Amy P. Sweeney (1995), Detecting Earnings Management, *The Accounting Review* 70 (2), pp.193-225.

Deci, Edward L., Richard Koestner, and Richard M. Ryan (1999), A Meta-Analytic Review of Experiments Examining the Effects of Extrinsic

Rewards on Intrinsic Motivation, *Psychological Bulletin* 125, pp.627-668.

Devers, Cynthia E., Albert A. Cannella, Gregory P. Reilly, and Michael E. Yoder (2007), Executive Compensation: A Multidisciplinary Review of Recent Developments, *Journal of Management*, Vol. 33:6, pp.1016-1077.

DiPrete, Thomas A., Greg Eirich and Matthew Pittinsky (2009), Compensation Benchmarking, Leapfrogs, and The Surge in Executive Pay, *Working Paper, Stanford Centre for the Study of Poverty and Inequality, Stanford CA: Stanford University*.

Donahue, Sean M. (2008), Executive Compensation: The new Executive Compensation Disclosure Rules do not result in complete Disclosure, *Fordham Journal of Corporate & Financial Law*, Vol. 13, No. 1, pp. 59-87.

Donaldson, Lex (1990a), The Ethereal Hand: Organizational Economics and Management Theory, *Academy of Management Review* 15, pp.369-381.

Donaldson, Lex (1990b), A Rational Basis for Criticism of Organizational Economics: A Reply to Barney, *Academy of Management Review* 15, pp.394-401.

Doucouliaos, Chris (1994), A Note on the Evolution of Homo Economicus, *Journal of Economic Issues* 28, pp.877-883.

DSW Studie zur Vorstandsvergütung 2009

Dunford, Benjamin, John Boudreau, and Wendy Boswell (2005), Out-of-the-Money: The Impact of Underwater Stock Options on Executive Job Search, *Personnel Psychology*, 59(1), pp.67-102.

Fama, Eugene F. (1980), Agency Problems and the Theory of the Firm, *The Journal of Political Economy*, Vol. 88, No. 2. pp.288-307.

Fama, Eugene. F. (1980), Agency problems and the theory of the firm, *Journal of Political Economy* 88(2), pp.288-307.

Farmer, Mark (2008), *Chief Executive Compensation and Company Performance: A Weak Relationship or Measurement Weaknesses?*, 17th EDAMBA Summer Academy.

Faulkender, Michael W. and Jun Yang (2007), Inside the Black Box: The Role and Composition of Compensation Peer Groups, *AFA 2008 New Orleans Meetings Paper*.

Feng, Yi and Yisong S. Tian (2009), Option Expensing and Managerial Equity Incentives, *Financial Markets, Institutions & Instruments*, Vol.18, Issue 3, pp.195-241.

Fenn, George W. and Nellie Liang (1999), Corporate Payout Policy and Managerial Stock Incentives, *Working Paper, Federal Reserve, Washington DC*.

Finkelstein, Sydney and Brian K. Boyd (1998), How much does the CEO matter? The Role of Managerial Discretion in the Setting of CEO Compensation, *Academy of Management Journal* 41, pp.179-199.

Finkelstein, Sydney and Donald C. Hambrick (1995), The Effects of Ownership Structure on Conditions at the Top: The Case of CEO-pay Raises, *Strategic Management Journal* 16, pp.175-193.

Fong, Eric A., and Henry L. Tosi (2007), Effort, Performance, and Conscientiousness: An Agency Theory Perspective, *Journal of Management* 33, pp.161-179.

Ford, Jason (2009), Restraints on executive pay: Attacking the corporate gravy train, *The Economist* May 28th 2009.

Frey, Bruno S. (1997), On the Relationship Between Intrinsic and Extrinsic Work Motivation, *International Journal of Industrial Organization* 15, pp.427-439.

Frey, Bruno S., and Reto Jegen (2001), Motivation Crowding Theory: A Survey of Empirical Evidence, *Journal of Economic Surveys* 15 (5), pp.589-611.

Frey, Melissa B., Edward Nelling and Elizabeth Webb (2006), Executive Compensation in Socially Responsible Firms, *Corporate Governance: An International Review* 14, pp.446-455.

Gao, Pengjig and Ronald E. Shrieves (2002), *Earnings Management and Executive Compensation: a Case of Overdose of Option and Underdose of Salary?*, Unpublished working paper, University of Tennessee, Knoxville.

Grinstein, Yaniv and Paul Hribar (2004), CEO Compensation and Incentives – Evidence from M&A Bonuses, *Journal of Financial Economics* Volume 73, Issue 1, pp.119-143.

Gross, Steven E. and Per L. Wingerup (1999), Global Pay? Maybe not Yet!, *Compensation Benefits Review* 31; 25, pp.25-34.

Grossman, Wayne and Albert A. Cannella (2006), The Impact of Strategic Persistence on Executive Compensation, *Journal of Management* 32, pp.257-278.

Guay, Wayne R. (1999), The Sensitivity of CEO Wealth to Equity Risk: An Analysis of the Magnitude and Determinants, *Journal of Financial Economics* 53(1), pp.43-71.

Guay, Wayne R. (1999), The Sensitivity of CEO Wealth to Equity Risk: An Analysis of the Magnitude and Determinants, *Journal of Financial Economics* 53, pp.43–71.

Guay, Wayne, John E. Core and David F. Larcker (2003), Executive Equity Compensation and Incentives: A Survey, *Economic Policy Review*, April 2003, pp.27-50.

Habib, Michel A. and Alexander P. Ljungqvist (2005), Firm Value and Managerial Incentives: A Stochastic Frontier Approach, *The Journal of Business*, 2005, vol. 78, no. 6, pp.2053-2093.

Hall, Brian J. and Kevin J. Murphy (2003), The Trouble With Stock Options, *Journal of Economic Perspectives*, Vol.17, pp.49-70.

Hall, Brian L. and Jeffrey B. Liebman (2000), Are CEOs Really Paid like Bureaucrats?, *The Quarterly Journal of Economics* 113, pp.653-691.

Hall, Brian L. and Jeffrey B. Liebman (2000), The taxation of executive compensation, *NBER Working Paper* 7596.

Hallman, Greg and Jay C. Hartzell (1999), *Optimal Compensation Contracts with Pay-for-Performance and Termination Incentives*, NYU

Working Paper No. FIN-99-053, available at URL:
<http://www.stern.nyu.edu/fin/workpapers/papers99/wpa99053.pdf>

Hallock, Kevin F. (1997), Reciprocally Interlocking Board of Directors and Executive Compensation, *The Journal of Financial and Quantitative Analysis* 32, pp.331-344.

Hartzell, Jay C., and Laura T. Starks (2003), Institutional Investors and Executive Compensation, *Journal of Finance* 58(6), pp. 2351-2374.

Healy, Paul (1985), The Effect of Bonus Schemes on Accounting Decisions, *Journal of Accounting and Economics* 7, pp.85-107.

Healy, Paul (1985), The Impact of Bonus Schemes on the Selection of Accounting Principles, *Journal of Accounting and Economics* 7 (April), pp.85-107.

Henderson, Andrew D. and James W. Fredrickson (1996), Information-Processing Demands as a Determinant of CEO Compensation, *Academy of Management Journal* 39, pp.575-606.

Hermalin, Benjamin E. and Michael S. Weisbach (1998), *American Economic Law Review* Vol.88: 96-9.

Hermalin, Benjamin E. and Nancy Wallace (2001), Firm Performance and Executive Compensation in the Savings and Loan Industry, *Journal of Financial Economics* 61, pp.139-170.

Hirshleifer, D., and R., Suh (1992), Risk, Managerial Effort, and Project Choice, *Journal of Financial Intermediation* 2, pp.308-345.

Hofstede, Geert (1983), The cultural relativity of organizational practices and theories, *Journal of International Business Studies*, 14, pp.75-89.

Jensen, Michael C. and Kevin J. Murphy (1990), Performance Pay and Top-Management Incentives, *Journal of Political Economy* 98, pp.225-264.

Jensen, Michael C. and Richard Ruback (1983), The Market for Corporate Control: The Scientific Evidence, *Journal of Financial Economics* 11, pp.5-50.

Jensen, Michael C., and William H. Meckling (1976), Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, *Journal of Financial Economics* 3, pp.305-360.

Jensen, Michael C., Kevin J. Murphy and Eric G. Wruck, (2004), Remuneration: Where We've Been, How We Got to Here, What are the Problems and How to Fix Them, *Harvard NOM Working Paper No. 04-28; ECGI - Finance Working Paper No. 44/2004*.

Kaplan, Steven N. (2006), Corporate Governance and Incentives in German companies: Evidence from Top Executive Turnover and Firm Performance, *European Financial Management*, Vol. 1, Issue 1, pp.23-36.

Kaplan, Steven N., and Bernadette A. Minton, 2006, *How has CEO turnover changed?, Increasingly Performance Sensitive Boards and Increasingly Uneasy CEOs*, Working Paper, University of Chicago.

Kerr, Jeffrey L. and Leslie Kren (1997), The Effects of Outside Directors and Board Shareholdings on the Relation Between Chief Executive

Compensation and Firm Performance, *Accounting and Business Research* 27, pp.297-209.

Kraft, Kornelius and Antonia Niederprum (1999), Determinants of Management Compensation with Risk-Averse Agents and Dispersed Ownership of the firm, *Journal of Economic Behavior and Organization*, 40(1), pp.17-27.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, Robert W. Vishny (1998), *Law and Finance*, 106 *Journal of Political Economy*, pp.1113- 1155.

Lambert, Richard, David F. Larcker and Robert E. Verrechia (1991), Portfolio Considerations in Valuing Executive Compensation, *Journal of Accounting Research* 29, pp.129-149.

Landskroner, Yoram, and Alon Raviv, (2009), *The 2007-2009 Financial Crisis and Executive Compensation: an Analysis and a Proposal for a Novel Structure*, Available at SSRN: <http://ssrn.com/abstract=1420991>.

Lewellen, Wilbur G. (1968), *Executive Compensation in large Industrial Corporations*, New York: National Bureau of Economic Research.

Mangel, Robert and Harbir Singh (1993), Ownership Structure, Board Relationships and CEO Compensation in Large US Corporations, *Accounting and Business Research* 23, pp.339-350.

McKnight, Phillip J. and Cyril Tomkins (1999), Top Executive Pay in the United Kingdom: A Corporate Governance Dilemma, *International Journal of the Economics of Business* 6, pp.223-243.

Mehran, Hamid (1994), Executive Compensation Structure, Ownership, and Firm Performance, *Journal of Financial Economics* 38, pp.163-184.

Moeller, Sara B., Frederik P. Schlingemann and René M. Stulz (2003), Do Shareholders of Acquiring Firms Gain from Acquisitions?, *Working Paper 9523, Ohio State University*.

Morck, Randall, Andrei Shleifer and Robert W. Vishny (1988), Management ownership and market valuation: an empirical analysis. *Journal of Financial Economics*, 20, 293–315.

Murphy, Kevin J. (1998), *Executive Compensation*, Handbook of Labor Economics, <http://ssrn.com/abstract=163914>, or doi:10.2139/ssrn.163914.

Murphy, Kevin J. (2000), Performance Standards in Incentive Contracts, *Journal of Accounting & Economics*, Vol.30, No. 3, pp.245-278.

Murphy, Kevin J. and Ján Zábajník (2004), A market-based explanation for recent trends, *American Economic Review*, May 2004.

Nohel, Tom, and Steven Todd (2001), *Stock Options and Managerial Incentives to Invest*, EFMA 2002 London Meetings, Available at SSRN: <http://ssrn.com/abstract=279212> or doi:10.2139/ssrn.279212.

O'Reilly, Charles A., Brian Main and Graef S. Crystal (1988), CEO Compensation as Tournament and Social Comparison: A Tale of Two Theories, *Administrative Science Quarterly*, Vol. 33, No. 2 (Jun., 1988), pp. 257-274.

Osterloh, Margit and Bruno S. Frey (2000), Motivation, Knowledge Transfer and Organizational Form, *Organization Science* 11, pp. 538-550.

Palmer, Timothy B. and Robert M. Wiseman (1999), Decoupling risk taking from income stream uncertainty: A holistic model of risk. *Strategic Management Journal* 20(11), pp.1037-1062.

Rajagopalan, Nandini (1996), Strategic Orientations, Incentive Plan Adoptions, and Firm Performance: Evidence from Electric Utility Firms, *Strategic Management Journal* 18, pp.761-785.

Rajgopal, Shivaram, and Terry J. Shevlin (2002), Empirical Evidence on the Relation Between Stock Option Compensation and Risk Taking, *Journal of Accounting and Economics* 33, pp.145–171.

Rost, Katja and Margit Osterloh (2009), *Management Fashion Pay-for-Performance for CEOs*, SSRN. University of Zürich - Institute for Organization and Administrative Science at the University of Zürich.

Rost, Katja, Sören Salomo, and Margit Osterloh (2008), CEO Appointments and the Loss of Firm-specific Knowledge – Putting Integrity Back into Hiring Decisions, *Corporate Ownership and Control* 5(3), pp.86-98.

Roulstone, Darren T. (2001), The Relation Between Insider-Trading Restrictions and Executive Compensation, *Journal of Accounting Research* 41, pp.525-551.

Rynes, Sara L., Barry Gerhart, and Laura Parks (2005), Personnel Psychology: Performance Evaluation and Pay for Performance, *Annual Review of Psychology*, 56, pp.571-600.

Saly, Jane P. (1994), Repricing Executive Stock Options in a Down Market, *Journal of Accounting and Economics* 18(3), pp.325-356.

Schmitt, Neal W. and Richard J. Klimoski (1991), *Research Methods in Human Resources Management*, Cincinnati, OH: South-Western Publishing Co.

Thomsen, Steen (2005), Conflicts of Interest or Aligned Incentives? Blockholder Ownership, Dividends and Firm Value in the US and the EU, *European Business Organization Law Review* 6, pp.201-225.

Tosi, Henry L., Steve Werner, Jeffrey P. Katz and Luis R. Gomez-Mejia (2000), How much does performance matter? A meta-analysis of CEO pay studies, *Journal of Management* 26, 301-339.

Tosi, Henry L. and Thomas Greckhamer (2004), Culture and CEO compensation, *Organization Science* 15, pp.657-670.

Veliyath, Rajaram (1999), Top Management Compensation and Shareholder Returns: Unravelling Divergent Models of the Relationship, *Journal of Management Studies* 36, pp.123-143.

Wade, James B., Charles A. O'Reilly, and Timothy G. Pollock (2006), Overpaid CEOs and underpaid managers: *Fairness and executive compensation*, *Organization Science* 17, pp.527-544.

Wade, James B., Joseph F. Porac and Timothy G. Pollock (1997), Worth, Words, and the Justification of Executive Pay, *Journal of Organizational Behavior* 18, pp.641-664.

Warner, Jerold B., Ross L. Watts and Karen H. Wruck (1988), Stock Prices and Top Management Changes, *Journal of Financial Economics*, Vol. 20, pp. 461–92.

Weisbach, Michael S. (1988), Outside Directors and CEO Turnover, *Journal of Financial Economics*, 20(1-2), 461-60.

Wen-Chung, Guo, Shiah-Hou Shin-Rong and Yang Yu-Wen (2006), Stock Bonus Compensation and Firm Performance in Taiwan, *Managerial Finance* 32, pp.862-885.

Werner, Steve and Henry L. Tosi (1995), Other People's Money: Effect of Ownership on Compensation Strategy and Managerial Pay, *Academy of Management Journal* 38, pp.1672-1691.

Wiseman, Robert M. and Luis R. Gomez-Mejia (1998), A Behavioral Model of Managerial Risk Taking, *The Academy of Management Review*, Vol.23, No.1, pp.133-153.

Wolf, Fredric M. (1986) *Meta-Analysis: Quantitative Methods for Research Synthesis*, Newbury Park, CA: Sage Publications.

Wruck, Karen H. (2000), *Compensation, Incentives and Organizational Change: Ideas and Evidence from Theory and Practice*, Chapter 13 in *Breaking the Code of Change*, Michael Beer and Nitin Nohria, editors. Harvard Business School Press, Boston, 2000, pp.269-305.

Yermack, David (1997), Good timing: CEO Stock Option Awards and Company News Announcements, *Journal of Finance* 52, pp.449–477.

Zhou, Xianming (1999), Executive Compensation and Managerial Incentives. A Comparison between Canada and the United States. *Journal of Corporate Finance* 5, pp.227-301.

[URL:http://www.econlib.org/library/Enc/MarketforCorporateControl.html](http://www.econlib.org/library/Enc/MarketforCorporateControl.html) [accessed on Nov., 12th 2009]

[URL:http://www.workforce.com/section/00/article/25/35/31.html](http://www.workforce.com/section/00/article/25/35/31.html) [accessed on Nov., 11th 2009]

[URL:http://www.ft.com/cms/s/0/1c0163c2-eb55-11de-bc99-00144feab49a.html?nclick_check=1.html](http://www.ft.com/cms/s/0/1c0163c2-eb55-11de-bc99-00144feab49a.html?nclick_check=1.html) [accessed on Dec., 19th 2009]

[URL:http://www.spiegel.de/lexikon/64258385.html](http://www.spiegel.de/lexikon/64258385.html) [accessed on Dec., 30th 2009]

[URL:http://www.economist.com/debate/days/view/402.html](http://www.economist.com/debate/days/view/402.html) [accessed on April, 25th 2010]

Appendix

Lebenslauf

Thomas Neuwirth

Fischergasse 8/1

A-3500 Krems an der Donau, Austria

Mobiltelefon: 0699-11657307

thomas_neuwirth@gmx.net

PERSÖNLICHE DATEN:

Geburtsdatum: 1.2.1982
Geburtsort: Krems/Donau
Staatsbürgerschaft: Österreich
Familienstand: ledig
Präsenzdienst: abgeleistet von September 2001 bis Mai 2002
Führerschein: A + B

AUSBILDUNG:

Seit Sept. 2005 Studium der Internationalen Betriebswirtschaft an der
Universität Wien
Abschluss: **Magister der Sozial- und Wirtschaftswissenschaften**

Schwerpunkte: International Management, Industrial Management
Diplomarbeit: "Does Pay-for-Performance work? An Investigation of Top
Management Incentives"

Juni 2000 **Matura** an der Handelsakademie Krems/Donau

ANSTELLUNGEN:

Mai 2002 bis **Traffic Manager**

September 2005 *der LKW-Walter Transportorganisation AG in Wiener Neudorf in der England Division (Österreich-Großbritannien und vice versa).*

- Zuständig für Kundenakquisition und -betreuung, Preisgestaltung, Frachteinkauf sowie die Disposition von LKW-Transporten

Seit Juni 2007 **Touristenführer, freier Mitarbeiter bei Veranstaltungen**

(Teilzeit, neben *Stift Göttweig*
dem Studium)

WEITERBILDUNG:

Seminare: Rhetorik
Projektmanagement
Bewerbung und Assessmentcenter
(alle im Bildungsforum Wien)

COMPUTERKENNTNISSE:

- MS Word, Excel und PowerPoint sowie AS-400

FREMDSPRACHEN:

- Englisch (verhandlungssicher)
- Spanisch (schriftlich und mündlich, hohes Niveau)