CEO COMPENSATION LEVEL DETERMINANTS. EVIDENCE FROM SWITZERLAND

by

Andrii Syliuk

A thesis submitted in partial fulfillment of the requirements for the degree of

MA in Business and Financial Economics

Kyiv School of Economics

2020

Thesis Supervisor: ______________________ Professor Maksym Obrizan

Approved by
Head of the KSE Defense Committee, Professor [Type surname, name]

Date ______________________

## Acknowledgments

The author wishes to express the deepest appreciation to his thesis advisor Professor Maksym Obrizan for the important comments and ideas through the process of writing this master thesis.

I am thankful to Olga Beregova and Anna Kuzenkova who acted as industry experts and informal advisors for this work.

I would like to say thank you to Anastasia Mikhniuk for moral support and inspiration.

Table of Contents

LIST OF TABLES

LIST OF FIGURES

## LIST OF ABBREVIATIONS

**BoD** Board of Directors

**CEO** Chief Executive Officer

**OLS** Ordinary Least Squares

**TDC** Total Direct Compensation

**AB** Annual Bonus

**KPI** Key Performance Indicator

# Chapter 1. Introduction

The choice of the theme of the analysis inspired by last working experience as a compensation consultant at Swiss-based internationally operated enterprise. I found out that the compensation of the Board of Directors as well as of the executive committee is a critical issue in corporate governance. Mainly because the board and the managers are supposed to maximize shareholder's value.

On its basis owners of a company – shareholders hire managers to run their business and remunerate such managers for their work. But depending on the targets that determine the compensation of executives, directors often tend to make decisions in their own interest which quite often disagree with shareholders' goals and vision of the future of a company.

In the 21st century, corporations have resolved the issue through calibrated compensation schemes based on a variety of KPIs directed for aligning shareholders' and managers' interests.

Modern compensation plans for top executives of the largest Swiss corporations are complicated enough. Along with the fixed cash, the schemes include a variety of equity instruments – blocked/restricted shares, performance shares (are paid if certain performance condition is reached), options, etc. Variable remuneration is separated into an annual bonus and long-term incentive with the average vesting period of 3 years.

Multiple quantitative and qualitative KPIs, formulas, restrictions, and allowances applied to design an efficient remuneration system. The aim of the proper compensation system is to attract and retain the best managers, and then motivate them for achieving outstanding results while having shareholder's and executive director's interests aligned and balanced.

Basically, compensation of any C-level manager of Swiss company contingently consists of three parts: base salary – fixed part; variable compensation – contains annual bonus plus deferred compensation; and other benefits including social security, pension benefits, car allowances, travel expenses, etc.

An annual bonus is subject to performance targets. The payout of AB usually has lower and upper limits. For example, the upper limit of AB is 200% of base salary, and the lower limit 50% of base salary. The lower limit could be zero which implies no payout if target conditions have not been met. Such targets for the annual bonus are qualitative (mostly financial) and qualitative (strategy) objectives. The recent trend is ESG – environmental, social, and governance-related targets set at most Swiss corporations.

Deferred compensation is either part of an annual bonus subject to the vesting period or LTI – long-term incentive program subject to performance condition. Variable compensation especially deferred in most cases paid in derivatives – shares, options, or other debt instruments.

Members of the corporate executive committee are required to hold shares of the company they work in equal to a portion of the fixed base salary and target bonus on annual basis. The reason for such ownership requirements is to make executives owners of the company and motivate for better performance.

Variable compensation to CEOs is often subject to various forms of forfeiture and clawback rules. Such rules allow the company to retain unpaid shares of options (forfeiture) or even recover already paid in cash or shares compensation (clawback). The company applies these instruments if the executive violates internal rules, guidelines, or policies, conflicts with management standards, commits fraud, or in case of termination of employment.

The motivation of the work to verify whether the executive director's compensation level depends on the factors we used to refer to in professional activity while developing KPIs compositions and target setting.

The research question is to determine what drivers the amount of the remuneration chief executive officer receives. To which extend the performance of the company or corporate governance influences the CEO pay.

The theme of executive compensation has had a lot of attention since the development of corporations. The reason for such attention is that any firm has its owner; publicly traded firms have multiple shareholders. The firm is operating in order to earn profit for its owners. But the firm is managed by a small group of people – executives, who have their own interests. The system is working as far as the shareholders and manager's interests are aligned. Otherwise, the Agent-principal problem may arise.

The agent-principal problem occurs for an agent when a conflict of interest arises between a person who is acting on behalf of another person. The conflict of interest arises when the agent and the principal pursue controversial objectives. In corporate world, such an agent is the CEO and the principal is shareholders. After Jensen and Meckling (1976) the managerial power and discretion problem is being analyzed as "agency problem". Shleifer and Vishny (1997) discovered a solid number of ways managers can benefit themselves personally.

In order to eliminate the agency problem CEOs' remuneration must depend on company results, shareholders are interested in. Modern compensation schemes set KPIs such as stock return, sales growth, EBIT margin, or any other which is in the best interest of shareholders.

Since multiple studies confirm the significant influence of the quality of corporate governance on the CEO's remuneration we will separately review studies concerning the firm's performance and corporate governance factors that influence CEO pay.

2.1 CEO compensation and performance-related studies

The results of the studies investigating the effect of either market or accounting performance on CEO compensation is ambiguous. Bell and Reenen (2012) found a strong influence of a firm's performance on the CEO compensation level among 400 UK firms. He has also discovered that a 10% increase in a firm's value is associated with an increase of 3% in CEO pay.

Quite similar results were obtained from 143 largest American companies by Klinedinst and Mark (1991). The power of sales as an explanatory variable for compensation level was observed. "The concrete estimated effect states that for every $1 million increase in sales, CEO compensation will take 2.1 percent of this increase, or $21,000" .

But sales is the accounting-based performance measure. The following study written by Yamina and Mohamed (2017) in the research of French companies supports the statement that the compensation level depends on accounting performance. "The level of total executive compensation is linked with relatively improved performance; the pay of executive increases with the increase of financial performance, whereas, the bonus depends on the level of accounting performance". The high weight of accounting KPIs in an indication of weak corporate governance which is associated with compensation contracts that put more weight on accounting-based measures of performance (ROA) than on stock-based performance measures according to Davila and Penalva (2004).

"This strong connection between sales and CEO pay, and not between ROE and CEO pay, gives support to Berle's and Means' hypothesis that these executives are looking after the welfare of their bureaucracy and not necessarily the owners of the firm.".

The contrary results come from the USA. Gary F. Keller (2016) in "linkages between CEO compensation, net income and stock prices" they prove statistically significant relationship between the annual salaries of the CEOs of public traded firms in the State of Wisconsin, USA and increases/decreases in the price of their corporations' stock price and net income.

Barroso, Missonier-Piera, and Oyon (2005) confirm the statement that firm size and certain governance schemes largely explain compensation level but no performance link was found.

## 2.2 Corporate governance and CEO pay literature

The influence of corporate governance on the executive pay level is quite univocal. Most of the studies agree that the better-organized governance the better results of the firm. According to Davila and Penalva (2004) weaker governance rely more on cash compensation. The remuneration scheme in such a company less developed. Cyert, Kang, Kumar and Shah (1997) found a dependence between governance and tenure – explaining that the "relationships between CEO and BOD are likely to become more cooperative over time. Moreover, the CEO's "learning" about directors naturally leads to selections of friendly, over antagonistic, board members. A congenial compensation environment over time can translate into larger CEO compensation, other factors being equal."

Kuo and Li and Yu (2013), focus on the share-based pay to CEOs and its impact on firm performance. They find that an increase in share-based pay has beneficial effects on firm performance. This is because the CEOs who earn share-based payments are more motivated to increase performance since it can result in higher remuneration. This increase in performance is also supported by the stakeholder theory, which suggested that when CEOs buy or receive company shares it positively influences firm performance.

Briskerm, Autore, Colak and Peterson (2013) empirically prove that companies with a high equity-based part in compensation are tent to have abnormally low stock returns. Managers are more likely to act in the interests of shareholders by issuing equity when they know that shares are overvalued.

We conclude that the effect of the company's performance either market or accounting has a different influence on the CEO compensation level depending on internal and external factors and conditions. Despite corporate governance peculiarities lead to more predicted outcomes, our aim is to identify the determinants of CEO compensation amount for largest Swiss corporations for the very recent 2017-2019 years.

On its basis, the payout for any level managers is determined according to the fulfillment of particular targets either quantitative or qualitative. The majority are quantifiable objectives based on financial and operational metrics for their area of responsibility; for the CEO and Corporate Officers, they are typically strategic objectives set by the Board of Directors.

Quantitative individual measures include items such as Business or Regional Revenue, Operational EBITA (EBIT or Net Income) and its Margin, Operating cash flow, Demand Orders, amount of new blanches opened – any parameter that can be measured in figures. Qualitative individual metrics refer more to the fulfillment of the strategy of the company, providing internal controls and functional effectiveness often include items such as::

- Creation of the new operating model;
- Product and service innovation
- Risk behavior
- Progress on safety, sustainability, and compliance.
- Effectiveness of the internal control system
- Talent management and staff engagement
- Developing a brand reputation;
- Other

The discretion for the assessment of the fulfillment of the qualitative targets is laid on the Remuneration Committee of the Board of Directors.

The performance of a manager evaluated based on a combination of quantitative and qualitative KPIs by the end of the financial year can result from zero bonus payout up to a capped level of 200% of a base salary for example.

The nature of the determination of the compensation level of a CEO is performance-oriented. So logically CEOs of better-performing companies should earn more. But as discussed in the literature review section it is not always the case.

## 3.1 Hypotheses

Since there is no general consensus in pay-performance relation, the first hypothesis is as follows:

Hypothesis 1: The performance of the company positively affects the remuneration of the CEO.

Having proven that there exists a CEO-BoD bargaining relationship with respect to CEO compensation in the US, the next hypothesis addressed to check this pattern for Swiss-based corporations:

Hypothesis 2: CEO tenure influences the compensation level.

There could be a variety of reasons for tenure to affect the compensation. The BoD has some discretion at the appointment of the CEO as well as the Director's wellbeing (conditions and perks) depend on the CEO. This type of interaction worth a separate study. The relationships between the chief executive officer and the Board of Directors could simply become more cooperative over time – this causality we examine by the second hypothesis.

Following the empirical evidence that the higher equity part in CEO's remuneration structure the better firm performs, we are going to examine the dependence between CEO pay level and the share of the TDC paid in equity:

Hypothesis 3: The higher the deferred part in the total direct compensation the higher total direct compensation itself.

The very first step in performing the analysis for a particular theme is the data collection. The data is publicly available but requires considerable efforts to gather it into one place and prepare for the processing. The data collected by analysts of a consulting company HCM International Ltd. according to their own-developed methodology. The collecting process includes a few cross-checking by consultants stages to ensure the quality of the data. The preparation of the data starts with its clearing from the observations that could potentially lead to inaccurate results. The steps taken described in sufficient detail later in chapter 4.

To test the hypotheses we will run used in the vast majority of compensation and governance studies OLS model. In this study, we refer to the model used by Yamina and Mohamed (2017) in "The Impact of Firm Performance on Executive Compensation in France". The only divergence is that most studies including the last-mentioned use cross-section data, while we have panel data over 3 years. To eliminate the potential bias of using the panel data and enhance the accuracy of the calculations we apply the fixed effect to the model. Having run both OLS and Fixed effect models we observe a slight difference in the output of the regressions. After the fixed effect was applied the output of the regression has slightly changed.

## 3.2 The dependent variables

In order to get a broad view of the influence of the explanatory factors (described below) on the CEO compensation, we regress each element of a regular compensation scheme. Those elements are base salary, annual bonus, long-term incentive (the sum of the last 3 is TDC) and other benefits. Base salary and other benefits are fixed components of the remuneration, while annual bonus and LTI depend on the fulfilment of qualitative and quantitative KPIs.

The regression equation has the following shape:

$$Y_{it} = \alpha + \beta_1 LMCAP_{it} + \beta_2 LROA_{it} + \beta_3 TSR_{it} + \beta_4 TENURE_{it} + \beta_5 SUPERBOARD_{it} + \beta_6 DEFFRACT$$

3.3 The independent variables

There are six explanatory variables in this model:

1-2. The market performance is measured by TSR. For the measurement of accounting performance ROA is used according to Yamina and Mohamed (2017). Using ROA, in this case, is absolutely rational. Taking to the account that our data includes companies which represent different industries we can’t use sales as a measure for accounting performance because the forming of sales differs from industry to industry, especially for financial companies and banks;

3. LMCAP: As a measure of size we use log (market capitalization) according to the study we refer to;

4. TENURE: the number of years experienced in executive management in the company the one became CEO;

5. DEFFRACTION: the share of equity-based compensation (long-term incentive) in total direct compensation;

6. SUPERBOARD: binary variable indicating 1 if the CEO is a board of directors member, 0 otherwise.

As a result, all the dependent and independent variables are expressed in absolute values except for market capitalization, which was transformed to logarithm for enhancing regression purposes better distribution. Second, we address several specifications of the dependent variable in order to discover whether different parts of total compensation are structured differently.

Results for pooled data are quite similar to those running the separate regressions for each year – the "year effect" is small and insignificant.

Pooled OLS is not working if we observe the same sample along different periods of time. The fixed or random effect model in this case is correct. Our regressions show high enough R2 so there is no need to create a dummy variable for a year. Hausman test rationale the usage of fixed effect.

There is no evidence of heteroskedasticity in the model.

# Chapter 4. Data

Swiss consulting company HCM International LTD., which specializes in corporate governance and compensation issues, kindly provided the data for this analysis.

The panel data was collected from annual reports publicly available usually at the company's webpages. The information on the remuneration of the executive committee is disclosed in the Compensation report – part of an annual report. Also, the composition of the board of directors as well as executive management is disclosed in the corporate governance part of the annual report.

The reason for the publicly traded companies to reveal such information is the obligation of SIX Swiss Exchange where all of the analyzed companies are listed at. SIX Swiss Exchange is Switzerland's principal stock exchange. The exchange also trades securities such as Swiss government bonds and derivatives such as stock options.

The complexity of data collection lies in the varied manner of companies in disclosure of the information on the remuneration of Executives. Different companies have diverse compensation structures. Methods of revealing the peculiarities of the payout to the shareholders are not quite similar. For this reason, the data provider developed its own methodology of collection and structuring the records.

The beginning data included 300 observations – top 100 largest (at market capitalization) companies of the year under review - 2017-2019. The top 100 list changes from year to year since market cap is inconstant.

Some observations were excluded from the analysis because of unusual events happening that year. Such unusual events could be:

- change of CEO – 24 observations - leads to interrupts in CEO compensation according to the compensation design set – interim CEO appointed usually in the middle of the financial year is compensated differently;
- IPO – 2 observations - management often receives additional (excessive) bonuses for a successfully conducted initial public offering (SIG Combiblock – 2018; Softwareone – 2019);
- Parts of LTIP can not be adequately foreseen – 13 observations (e. i. target number of performance shares is not disclosed, etc.)

Annual reports are generally published in 2-3 months after the financial year is ended, which usually coincides with calendar year-end. That's why the year 2019 is available. But at the same time not full 2019 was collected – 87 out of 100 were available at the time of data collection.

### 4.1 Dependent variables

Depended variables are different components of the Remuneration structure. Each executive member's compensation package includes fixed salary, annual bonus, long-term incentive plan (3 years performance period of average), and other benefits (pension benefits, expense allowances, additional social security, car, etc.). The first three components compose total direct compensation (TDC) and the sum of all of the components is total compensation (TC). Due to diversity of remuneration designs some pay schemes could not include each element of total compensation described above. For example, remuneration of a particular company may not contain an annual bonus or long-term incentive (or other benefits). Other benefits are usually the smallest part of remuneration. Other benefits consist of Pension benefits, Share purchase programs, Social securities, Contractual/notice payment, Sign-on/Replacement award, and counts for 13% of total compensation on average for our data.

From table 1 we may observe that TDC varies from its min value of CHF 378,100 to max value of CHF 3,010, 611 annual pay. TC varies from its min CHF 422,821 to max value of CHF 3,354, 386 annual pay. It worth mentioning that TC of CEO at some excluded company is more than 15 million CHF per year. Maximum annual bonus among observations equals CHF 784,772 while Min is 0. Some companies compensate for the annual bonus with a larger fixed part or with the LTI or vice versa compensate the absence of LTI with large AB of base salary. That is why long-term incentives vary from 0 to CHF 1,286,083.

| | Base salary, CHF | Annual bonus, CHF | Long-term incentive, CHF | Total direct compensation, CHF | Other benefits, CHF | Total Compensation, CHF |
|---|---|---|---|---|---|---|
| Min | 268,125 | 0 | 0 | 378,100 | 0 | 422,821 |
| 25% | 525,000 | 244,000 | 179,778 | 1,086,000 | 170,877 | 1,274,317 |
| Median | 782,002 | 486,000 | 480,000 | 1,917,746 | 275,000 | 2,205,396 |
| 75% | 1,040,000 | 1,164,575 | 1,452,134 | 3,806,000 | 423,126 | 4,254,086 |
| Max | 4,000,000 | 3,788,400 | 10,333,361 | 14,333,361 | 1,621,693 | 15,585,433 |
| Average | 939,756 | 784,772 | 1,286,083 | 3,010,611 | 343,775 | 3,354,386 |
| N | 231 | 231 | 231 | 231 | 231 | 231 |

Table 1. Percentile analysis of compensation components

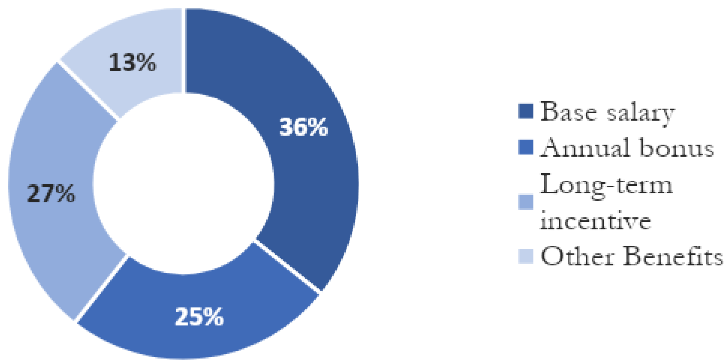
As we see from the table "Percentile analysis of compensation components", the weights of compensation elements differ from plan to plan. Chart 1 shows the average

Figure 1. Average compensation structure

composition of compensation elements in a compensation scheme. Base salary amounts to 36% of TC on average that is quite 1/3 of the entire payout. The annual bonus composes 25% of Total compensation. Long-term incentives account for 27%. Variable parts together (annual bonus and LTI) assemble 52% of total remuneration. Other benefits, as discussed previously add 13% to the total payout on average.

Table 2. Structural analysis of compensation scheme

| | Base salary | Annual bonus | Long-term incentive | Other Benefits | |
|---|---|---|---|---|---|
| Average | 36% | 25% | 27% | 13% | 100% |
| Max | 86% | 82% | 72% | 41% | 100% |
| Min | 10% | 0% | 0% | 0% | 100% |




From table 2 we observe that there is a company where base salary assembles almost the entire compensation – 86%. On the contrary, some other players devoted only 10% for the fixed part. The maximum annual bonus is 82%. LTI is within 0-72% of TC.

### 4.2 Independent variables

This section of the data analysis describing independent variables is divided into two categories: 1) the variables describing company's performance; 2) variables, which characterize corporate governance and compensation design. Such division applied for easier perception.

#### 4.2.1 Performance variables

As a measure of performance I used two variables – ROA – return on assets for measuring accounting-based performance and Total Shareholder's Return as a measure on market performance. The data was extracted from the official Thomson Reuters platform.

Return of assets is an indicator of a company's profitability relative to how effective the assets are used. ROA gives an understanding of how effective the assets are used, consequently is a measure of how productive the managers are. This indicator is widely used when drawing up remuneration schemes.

Total shareholders return measures total return gained by a stockholder from owning a share. TSR comprises capital gains – an increase in share price and dividends received over a particular period of time from a given amount of shares. TSR is also widely used in constructing remuneration systems since most of the investors in the 21st century expect a growing market capitalization of the company they are about to invest in.

The Market capitalization variable belongs to this section as well, since the company's values are a reflection of the work of management.

Percentile analysis of performance variables presented in table 2. We observe that companies under analysis differ in capitalization greatly. Min market cap equals 884 million Swiss Francs while the top company in the list has CHF 311,825 million.

| | Market capitalization, CHFm | Return on assets, % | TSR, % |
|---|---|---|---|
| Min | 884 | -41% | -46% |
| 25% | 1,720 | 1% | -5% |
| Median | 3,646 | 5% | 14% |
| 75% | 11,692 | 10% | 32% |
| Max | 311,825 | 31% | 96% |
| Average | 15,827 | 6% | 15% |
| N | 231 | 231 | 231 |

Table 3. Percentile analysis of performance variables

Average figures show that in general Swiss companies improved return on assets by 6% (median 5%). An average TSR of 15% makes the Swiss stock market attractive for any investor. High enough returns given the sound reputation of the country in the world.

### 4.2.2 Corporate governance & compensation design variables

This part characterizing details of the compensation scheme and corporate governance peculiarities presented by 3 more variables:

- Tenure – simply the amount of years one serves in executive management (not serving as CEO, but time working in C-level management, usually 3-7 top people in the company);
- Superboard – binary variable – 1 if the CEO performs as board member at the same time, 0 otherwise;
- Deffraction – refers to the design of the composition of compensation. Value from 0 to 1 showing the fraction of deferred compensation element (long-term incentive) in TDC.

The variable "superboard" requires further clarification. It has been explained the reasons for the exclusion of observations at the beginning of the chapter. But one more reason was consciously missed to be taken care of now. One person being a CEO and the board member (or even chairman) at the same time is a pretty common event (roughly 1/8 of CEO serve as a board member). Some companies reveal the compensation for such CEOs separately for Executive and Board functions. But some others show only a single value for such a person which would lead to bias in our calculations using these figures in the model. By making an assumption that additional function implies additional pay I decided to remove those observations where payout for CEO-board members was not revealed apart for different functions. After excluding such observations we have received the results explained down below.

We end up with a balanced sample of 231 observations.

Table 3 showing the percentile analysis of corporate governance and compensation design variables is on the next page. It shows that the median tenure of a chief executive officer is 8 years, average tenure equals 9 years, while the maximum is 34 years. The share of those executive officers serving in the executive committee at the same time as in the board of directors is 13%.

Speaking about the part of long-term incentives in the compensation structure we observe that for some companies LTI is 0 which means no long-term targets determine CEO payout. The annual bonus usually compensates for the lack of strategic oriented elements in compensation plans. On the contrary max weight of LTI equals 78% - almost the entire remuneration depends on future results. The median and average share of the deferred part of the compensation in total direct compensation is 29% and 30% respectively. In other words, 1/3 of total direct compensation depends on meeting long-term objectives.

Table 4. Percentile analysis of corporate governance & compensation design variables

| | Tenure | CEO is a board member at the same time | Deferred variable compensation (TLI) % TDC |
|---|---|---|---|
| Min | 0 | 0 | 0% |
| 25% | 4 | 0 | 18% |

| | | | |
|---|---|---|---|
| Median | 8 | 0 | 29% |
| 75% | 13 | 0 | 42% |
| Max | 31 | 1 | 78% |
| Average | 9 | 0.13 | 30% |
| N | 231 | 231 | 231 |

Unfortunately, there was no available information on the gender composition of the top 100 most capitalized Swiss companies. Most of the CEOs are men.

To obtain the results of the equation "CEO compensation level determinants" the data on Swiss-based corporations over 2017-2019 is used. In this analysis, we are going to test the effect of a firm's performance and corporate governance on the level of remuneration of the chief executive officer. We will define how performance and governance factors affect different aspects of total compensation. For this reason, we ran five regressions on (1) base salary, (2) annual bonus, (3) long-term incentive, (4) total direct compensation, (5) other benefits. We analyze the effect of total shareholders return, return on assets, market capitalization, CEO tenure, a fraction of long-term incentive in total direct compensation, and membership in the Board of Directors as factors influencing total compensation of chief executiveofficer.

The interpretation of the results is organized in the following way: the outputs are presented for each of the hypotheses tested; firstly, we comment on the signs of the coefficients estimated, then we look at the coefficient's marginal effect in order on access the variable magnitude and statistical significance. In order to eliminate the possible inaccuracy of OLS estimated results for panel data we apply a fixed effect to the model.

## 5.1 The effect of firm's performance on CEO compensation level

For estimating the performance effect, we use two variables return on assets (ROA) and total shareholder's return (TSR). As we may see from table 1. "Consolidated results of the compensation level determinants equation" both of the performance estimating variables show similar results. In 8 out of 10 cases the signs are negative which is quite illogical because a regular compensation contract provides higher payout depending on better operational and market results. Moreover, the only more or less statistically significant coefficients are in the regression for the base salary which has nothing to do with the efficiency of usage of assets or market performance since base salary is a fixed part of any compensation plan.

The indirect result is the absolute base salary lower in those companies performing better – TSR and ROA are higher in companies that put less weight to base salary consequently those should have higher variable performance-oriented compensation elements. But we can't confirm it through regression since the estimations are insignificant for the other compensation elements apart base salary.

Taking into account that we use absolute values for the base salary we should pay respect to the variable showing the size of the firm. Because market capitalization in our model has proved to stand as a significant determinant of compensation level. P-value of less than 0.001 for each compensation element (even for Other benefits) makes market cap a solid parameter in the equation. According to the estimated results 1% change in market capitalization leads to CHF 3,259 change in base salary, CHF 2,977 change in annual bonus, CHF 6,336 change in long-term incentive, and CHF 1.019 change in other benefits. For total direct compensation change in market capitalization by 1% results in CHF 12,571 change.

Because of insignificant estimations for other compensation elements apart from base salary we can neither reject nor accept hypothesis 1 about the positive correlation between company's efficiency in the form of return on assets or total shareholders return which are frequently used while designing compensation schemes and setting up targets for executive managers and executive managers payout level.

5.2. The effect of tenure on CEO compensation level

The signs of coefficients describing the influence of tenure show a positive effect on CEO compensation level – the more years one serves as executive director the higher his remuneration as CEO is. The positive relation between tenure and compensation level would confirm the finding of Cyert, Kang, Kumar, Shah (1997) that the BoD-CEO bargaining relationships increase over years.

Table 5. Consolidated results of the compensation level determinants equation (in CHF) of OLS model with fixed effect applied

| | Base salary | Annual Bonus | Long-term Incentive | Total Direct Compensation | Other Benefits |
|---|---|---|---|---|---|
| lmcap | 325862.0*** | 297655.0*** | 633538.0*** | 1257055.0*** | 101947.2*** |
| | -14.19 | -7.73 | -10.12 | -13.77 | -6.98 |
| | | | | | |
| roa | -8545.6* | -8298 | 6398.9 | -10444.8 | -2865.3 |
| | -2.27 | -1.31 | -0.62 | -0.70 | -1.20 |
| | | | | | |
| tsr | -3129.5** | 600 | -5395 | -7924.6 | -884.4 |
| | -2.65 | -0.3 | -1.68 | -1.69 | -1.18 |
| | | | | | |
| tenure | 3751.3 | 3216.4 | 16932 | 23899.7 | 4519.7 |
| | -0.89 | -0.45 | -1.47 | -1.42 | -1.68 |
| | | | | | |
| superboard | 175212.7* | 372867.7** | 614553.3** | 1162633.8*** | -37297.5 |
| | -2.28 | -2.89 | -2.93 | -3.8 | -0.76 |
| | | | | | |
| deffraction | 549976.0*** | -439944 | 5284568.8*** | 5394600.8*** | 315380.7*** |
| | -3.76 | (-1.79) | -13.26 | -9.28 | -3.39 |
| | | | | | |
| _cons | -1953086.4*** | -1647988.7*** | -5877816.8*** | -9478891.9*** | -621736.3*** |
| | -10.54 | -5.30 | -11.63 | -12.87 | -5.27 |
| | | | | | |
| N | 231 | 231 | 231 | 231 | 231 |

t statistics in parentheses* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Unfortunately, our model shows insignificant estimations in tenure-compensation relation. We fail to reject the second hypothesis of tenure effect on total direct compensation.

## 5.3. The effect of the fraction of deferred part oftotal direct compensation

Four out of five regressions disclose positive dependence between the fraction of deferred compensation in total direct compensation and remuneration elements including total direct compensation itself. The coefficient has even positive signs for the Base salary – which means that the companies that put more weight on the variable, especially the long-term part of compensation pay more.

Having full significance of the influence of company size coefficient on compensation level we derive the common for two variables output: larger companies use deferred part of compensation as the main compensation element; and larger companies (those relying on long-term incentives) pay more.

The deferred fraction coefficient has the highest significance level in explaining all elements of remuneration except for the annual bonus. The annual bonus is the component of total direct compensation. The coefficient is significant for total direct compensation at 1%.

At this point, we fail to reject the hypothesis 3 and conclude that companies which have a larger share of total direct compensation devoted to long-term compensation mechanisms result in higher remuneration level of their chief executive officers.

Possibly the larger portion of TC is variable and depends on the realization of strategic goals the more efficient and motivated the managers are.

According to Davila, Penalva (2004) «firms with weaker governance rely more on cash compensation» supports our findings that companies pursuing higher weight to variable compensation element pay more and large firms pay more. The fact that larger firms have better governance looks quite logical.

The coefficients for "superboard" are strongly significant. It shows that CEOs who are also board members receive higher remuneration. Note that CEOs paid for the board responsibilities separately, those whose remuneration is single for both functions are excluded from the analysis.

# Chapter 6. Conclusions and Recommendations

A considerable amount of attention has been paid to the topic of the company's performance and quality of corporate governance influence on the remuneration of executive directors. Researchers studied compensation from different angles. The remuneration level determines the composition of the Board of Directors and its number, shareholders structure, number of KPIs, and many other factors.

The literature review resulted in no single conclusion in the relationship between performance and remuneration. There are miscellaneous results varying depending on the specific time period, economic phases, changing from industry to industry, and from country to country.

Corporate governance aspects influence studied along with the performance factors over the last years are more homogeneous. Generally better governance in terms of remuneration design quality results in the interdependence between the better performance of the firm and higher executive directors' pay level.

In this study we examined the relationship between indicators of firm's performance (using return on assets as accounting performance measure and total shareholders return for market-based metric) and chief executive officer pay level; and the relationship between some corporate governance characteristics and the level of compensation of executive director.

The data obtained for the analysis was carefully collected and processed in order to get as reliable results as possible. The evidence from the top 100 Swiss companies by market capitalization over 3 years (2017-2019) has been analyzed.

The results of the analysis are categorized according to the hypotheses tested.

The effect of the performance turned out to be negative in relation to the base salary component of remuneration. For other elements of compensation, the coefficients showed insignificant results. Since a firm's performance negatively affects an absolute base salary amount we may derive a conclusion that companies performing worse pay higher fraction of fixed salary. The following results (see below) support this statement that companies that put more weight on variable parts of compensation show better results in terms of market growth and operational performance. It makes sense from the point of view that managers whose pay depends on certain operational or market KPIs will be working in order to maximize their own paycheck by an overreaching particular individual and group performance targets.

We also examine the effect of tenure. Some authors argued that a specific bargaining relationship arises and develops through the time of interaction of chief executive officer and the board of directors. Explaining that the relations become more friendly and cooperative over time – which doesn't benefit shareholders at all.

The output of this analysis show a positive but not significant relation between tenure and CEO compensation level. The only coefficient for other benefits lies in the 10% significance level. But other benefits are the smallest component of total compensation and is often does not correlate with other (more representative) elements so this result poorly contributes to our main goal of defining the determinants of the executive officer's remuneration level.

Finally, the most significant and reliable results were obtained while testing the last hypothesis about the size of the deferred part of compensation. The weight of variable compensation in compensation structure determines the quality of the remuneration policy aspect of corporate governance. The results declare a significant positive relationship between the fraction of deferred compensation in total direct compensation and the absolute amount of each component of the compensation scheme. This means that those companies relying more on deferred variable compensation, which is result-driven perform better and generally pay more.

Market capitalization turned out to be a reliable determinant of remuneration level according to the estimation results obtained. The variable "lmcap" meaning natural logarithm of market capitalization shows strong dependence between the size of the firm and CEO compensation level – the larger company the more it pays and the more variable pay oriented it is.

REFERENCES


Bell, B and Van Reenen J. Firm performance and wages: evidence from across the corporate hierarchy. CEP Discussion paper. 2012; 1088.

Brick, Ivan E., Oded Palmon, and John K. Wald. "CEO compensation, director compensation, and firm performance: Evidence of cronyism?." *Journal of Corporate Finance* 12.3 (2006): 403-423.

Core, John E., Robert W. Holthausen, and David F. Larcker. "Corporate governance, chief executive officer compensation, and firm performance." *Journal of financial economics* 51.3 (1999): 371-406.

Cyert, R., Kang, S., Kumar, P., and Shah, A. (1997). Corporate governance and the level of CEO compensation. Working Paper, Carnegie Mellon University.

Davila, T., Pe˜nalva, F., 2006. Corporate governance and the weighting of performance measures in CEO compensation. Rev.Account. Stud. 11 (4), 463---493.

Frydman, Carola, and Dirk Jenter. "CEO compensation." Annu. Rev. Financ. Econ. 2.1 (2010): 75-102.

Gary, F. Keller, 2016. "Linkages Between Ceo Compensation, Net Income And Stock Prices," Global Journal of Business Research, The Institute for Business and Finance Research, vol. 10(1), pages 1-9.

Jensen, Michael C., and William H. Meckling. 1976. "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure." *Journal of Financial Economics* 3 (4): 305–60.

Klinedinst, Mark, 1991. "Are CEO's paid their marginal product? An empirical analysis of executive compensation and corporate performance," MPRA Paper 36650, University Library of Munich, Germany.

Nourayi, M. M., and Mintz, M. (2008). Tenure, firm's performance, and CEO's compensation. Managerial Finance, 34(8), 524–536

Raul, Barroso Casado, Franck Missonier-Piera and Daniel Oyon, 2005. "Executive Compensation in Switzerland - An Empirical Study," Working Papers hal-00515863, HAL.

Shleifer, Andrei, and Robert W. Vishny. 1997. "A Survey of Corporate Governance." *The Journal of Finance* 52 (2): 737–83.

Yamina, Amarou and Mohamed Bensaid, 2017. "The Impact of Firm Performance on Executive Compensation in France," *Mediterranean Journal of Social Sciences*, Sciendo, vol. 8(2), pages 63-69, March.