

Bachelor Thesis
ZHAW School of Management and Law

Where does the money for rising dividend payments come from?

**A market data analysis of listed Swiss corporations and their rising dividend
payments since the turn of the millennium**

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Management Summary

Most companies at one point in their life will have to face decisions regarding their payout strategy. Thus, dividends are a widely discussed instrument of shareholder compensation in the business world. It is often observed that firms are reluctant to reduce dividend payments, even if this forces them to raise debt, reduce cash or forgo investing activities. Market data shows that the amount of total regular dividends paid to shareholders of listed Swiss firms has increased almost every year since 2003, while at the same time the income only had a significant increase before the financial crisis in 2008, but then stagnated until 2017.

Hence, the question arises how dividends can continue to grow if the operational performance shows signs of weakness. Or put differently, how are growing amounts of dividends being financed. Therefore, this thesis set out to answer the question from where the cash for the continuously rising dividend payments comes from.

This study tried to detect where the money for the continuously rising dividend payments derives from based on a quantitative analysis of Swiss stock market data retrieved from Bloomberg. The relevant data consisted of figures from the balance sheet, the income and cash flow statements of 99 Swiss corporations listed between the year 2000 and 2017. To support the findings, scientific literature was consulted.

The results show that the sample of companies examined mainly lowers investing activities from 2010 to 2017 in order to free up cash for dividend payments. The data does not imply systematic increases or decreases in other positions that could have led to cash flows available for disbursements. However, share repurchases are a flexible instrument occasionally used by managers to steer cash flows. So, after the financial crisis, Swiss corporations did make a little less repurchases than before the crisis, which again led to more cash available for regular dividend payments.

Many researchers tried to find the determinants of dividend policy, but only one other was found that analyzed where companies take the money for rising dividend payments from. Especially, studies on Switzerland were scarce and hence, this thesis might shed some light onto the Swiss market in a way that others do not. In the best case, this work generates a better comprehension of strategic financial decisions of Swiss firms.

In conclusion, the findings suggest that companies see less viable investment opportunities to increase shareholder value, which is why they raise dividends instead. Continuously rising dividend payments might not pose a problem in the short-term. However, for the longer term the momentary trend cannot continue. This suggests that more research of this trend is needed, but not only on a scientific level. Executives as well as shareholders might want to rethink their approach towards dividend payments.

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List of Abbreviations

COGS	Cost of Goods Sold / Cost of Revenue
D&A	Depreciation and Amortization
EBIT	Earnings Before Interest and Taxes
M&M	Miller and Modigliani
OPEX	Operational Expenses
PPE	Property, Plant and Equipment
LT	Long-Term
SME	Small and Medium Enterprises
SPI	Swiss Performance Index
ST	Short-Term

1. Introduction

1.1. Background

Originally, ventures similar to stock companies were founded by several parties and then liquidated after there was no need for its owners anymore. The remaining cash was then divided equally between the former proprietors, in a manner of speaking like dividends. Approximately 400 years ago, the first stock companies were founded in Holland and Great Britain with the intention of ongoing operation and paid the first dividends like they are known today (Frankfurter, G. Wood, B., 1997, p. 16-33). However, since then, the corporate world has evolved in many complex ways, and so has the dividend payout policy.

Hence, dividends are a controversial topic in theoretical and practical economics, especially in the recent 60 years. In the literature there is a vast amount of opinions on the issue of dividend policy. Most famously, Miller and Modigliani's (1961, p. 411-433) dividend irrelevance theory that states that the timing of cash paid out to investors does not affect shareholder value and therefore, the payout policy is not relevant. Conversely, several studies tried to refute M&M's hypothesis arguing that the theory does not consider factors like information asymmetry, agency and transaction costs and taxes. According to those counter-theses, M&M's hypothesis cannot apply to real market conditions because the market is imperfect (Al-Malkawi, H.N., Rafferty, M., Pillai, R., 2010, p. 171-200). In the corporate world, it does not look much different. There are as many approaches to payout-policies as there are enterprises. Not to mention all the shareholders with different preferences, which at times can lead to conflicts of interest.

1.2. Problem

The ongoing discussion and the high media coverage of financial decisions show of how high interest dividends are in nowadays corporate environment. Seemingly, the payout at the end of a fiscal year is critical for many shareholders (Forbes, 2011).

When examining Bloomberg data (Bloomberg, L.P. (2019). Timespan from 1.1.2000 to 31.12.2018. Retrieved on 4. March 2019 from Bloomberg-Database), it shows that since the year 2003 the amount of total dividends paid to shareholders of listed Swiss corporations has risen fourfold to date, while net income only had a significant increase

prior to the last financial crisis in 2008. Except from that rise, it seems as though the net income of Switzerland's listed firms fluctuates around the same level since those tumultuous years, both in absolute and median value.

For that reason, there is mainly one question arising: Where does the money for the continuous growth of dividends come from if there is no increase in net income? A few possibilities might come to mind like a decrease of liquid reserves, fewer investments or additional debt. Nevertheless, these are just assumptions.

1.3. Objective

Thus, the goal of this thesis is to eliminate those conjectures and to unveil the sources of the rising dividends for Swiss firms that are quoted since the year 2000. This study tries to detect where the money for the continuously rising dividend payments derives from based on a quantitative analysis of market data retrieved from Bloomberg. To support the findings, scientific literature is consulted and a connection to the observation is established.

By doing so, this work generates a better comprehension of strategic financial decisions of Switzerland's corporations.

1.4. Limitation

Like abovementioned, the analysis is based solely on Swiss stock market data retrieved from Bloomberg. Financial reports are only marginally included for referential and ancillary purposes. Company data from Swiss firms that are not listed are not part of this study, mainly because access to data is limited. Also, because of their difference in terms of regulation, business model and as a consequence thereof different accounting standard, financial institutions are excluded as well.

Furthermore, firms listed in other countries are not considered. However, to support the findings based on Swiss data, research from other nations related to the topic helps make connections and draw conclusions.

The timeframe is set for 18 years from 2000 to 2017 since data prior to this period is less likely available and fewer enterprises could be analyzed. The same accounts for data after 2018, as financial statements are not available for all entities yet.

1.5. Structure and Methodology

This thesis is divided into five main parts, which are State of Research, Data, Analysis, Results and Conclusion.

The first part (2. State of Research) presents the big picture of the momentary research related to the topic on an international and national scope.

The second part (3. Data) is split into four subchapters. First, the relevant key metrics are defined and described. Second, exact information about the download of the data from Bloomberg and the data itself is given. Third, adjustments and complements to the data set are explained and justified and fourth, a brief description of the methodology used to explore the data is given.

The third part (4. Analysis) encompasses a detailed description of the analysis itself that is based on descriptive statistics and graphs in order to help better understand where the funds for rising dividend payments in Switzerland come from.

In the fourth part (5. Results), the discoveries of the evaluation are displayed and interpreted, discussed and put in context with observations from other researchers.

Finally, in the fifth and last part of this thesis (6. Conclusion), a conclusion is made based on the findings outlined in the results section.

2. State of Research

This chapter summarizes the literature found and the insights gained in connection with this thesis' topic. The first subchapter gives a brief introduction into the history of dividends and its research. The three middle parts describe the pursuit of researchers to answer the questions “how much”, “why” and “how” cash is distributed to shareholders. And the last section puts the studies found in context to this thesis.

2.1. History of dividends

Like already described in the introduction, dividend payments are a very controversial topic and widely discussed among experts in the field. Especially after M&M dividend irrelevance theory (1961, p. 411-433), many researchers have devoted their studies to the topic of dividend payments and payout policies, like examined by Al-Malkawi, Rafferty and Pillai (2010, p. 171-200) in their review nine years ago.

M&M's paper about dividend policy (1961, p. 411-433) states that the timing of the payment of dividends to shareholders does not matter, since the value of a firm is determined by the company's return for the shareholder and not by the dividends itself. The investor should therefore not care about when a payment is made, be it all today or in one hundred years, or be it spread regularly over a certain period of time. This is further approved by the description of Frankfurter and Wood (1997, p. 16-33), who examined the evolution of dividend policy and stated that originally, enterprises were liquidated fully and the money was spread equally to all shareholders at the end of an enterprises lifetime. At a later time in history, all proceeds were paid to shareholders in the year when they were earned, before, finally, dividends at some point seemed to become more of a symbolic act than anything else (Frankfurter, G., Wood, B., 1997, p. 16-33). This symbolic act led to many researchers examine the decision framework of companies underlying the dividend payments. Questions were raised on the “how much”, “why” and “how” dividends are paid and led to a vast amount of studies in the area (Al-Malkawi, H.N., Rafferty, M., Pillai, R., 2010, p 171-200).

2.2. How much dividends firms pay

As for the “how much”, it would seem logical if firms paid dividends whenever there is a profit. Each period, the magnitude of the payment would adapt to the net income after

all investments were made. However, this assumption does not seem to hold in reality. Bergmann (2016, p. 47-56) investigated companies listed on the Australian stock market, finding that dividend payments are rising while there has not been any significant increase in earnings that would explain this trend. The study states that firms are smoothing dividend payments, meaning that the same or only slightly changing amounts of dividends are paid for each consecutive period regardless of the generated income in the respecting period. Especially, dividend payments are barely ever reduced when income is unfavorable. The same was observed by Brav, Graham, Harvey and Michaely (2005, p. 483-527) who questioned 384 financial executives on their handling of dividend payments. Almost all confirmed their reluctance to cutting dividends and their willingness to raise debt in case they would not have enough internal funds available to pay for the dividends. In their study on why firms pay dividends, Denis and Osobov (2008, p. 62-82) revealed evidence confirming the previously mentioned results, but with market data on an aggregate level for six first world countries. They further shed light on which firms the main drivers for this development are. It turned out that companies of a larger size, which are more profitable, were the main cause for this trend. Conversely, smaller and younger businesses seemed more averse to paying regular dividends. Von Eije and Megginson (2008, p. 347-374) even state that more firms are paying no dividends, while at the same time the total value of disbursements further increases.

2.3. Why firms pay dividends

If firms increase dividend payments, there must be a reason for it. Hence, the question for the “why” arises. In the course of this inquiry, many theories could be found, which therefrom not only financial explanations are given. For example, the majority of the previously mentioned 384 managers responsible for payment decisions agree that dividend cuts do have negative effects such as a decrease in share prices (Brav, A., Graham, J.R., Harvey, C.R., Michaely, R., 2005, p. 483-527). This also stems from the fact that they believe to convey information on how the company is doing and that they therefore would rather raise new funds for investment opportunities than changing dividends. Almeida, Fos and Kronlund (2015, p. 168-185) find this to be true by examining earnings per share (EPS) forecasts and the use of cash reserves. Managers repurchase shares instead of investing in investment opportunities, just to reach their EPS-

prognosis. This in turn is in line with a study on dividend smoothing (Javakhadze, D., Ferris, S.P., Sen, N., 2014, p. 200-220), stating that those managerial behaviors are supported by the agency theory and the information asymmetry theory. Additionally, Truong and Heaney (2007, p. 667-687) state that the amounts of dividends paid out seem to be influenced by whether or not the largest shareholder is an insider or if the company is owned mainly by a financial institution. If one of those are the case, Truong and Heaney (2007, p. 667-687) predicate that the total payout is smaller. Also, differences between countries like legal issues do have an impact on payout policy.

When looking at the “why” in a monetary view, the following observations could be made. Truong and Heaney (2007, p. 667-687), who investigated the largest sample of firms of all the studies found on the topic with 8’279 listed companies of 37 countries, noticed that dividend payments are made if firms have a high profitability, the debt is low and if there are less investments that can be made. This is consistent with the findings of the previously mentioned study by Denis and Osobov (2008, p. 62-82). Like Truong and Heaney (2007, p. 667-687) they found that profitability increases the likelihood of regular dividend payments. Also, investments rather tend to be negatively related, meaning that the likelihood of a firm paying dividends is higher the more improbable investment opportunities are. This would in turn endorse the firm life cycle theory of dividends described by Bulan and Subramanian (2011, p. 201-213). According to their article, the optimal dividend payout policy depends on the phase in which the enterprise finds itself in. The earlier in the life cycle the higher the investment opportunities, which again requires the firm to spent cash on investments instead of dividends. The older the company and the further in its life cycle the fewer investments have to be made and the more cash can be distributed to shareholders. The studies by Eije and Megginson (2008, p. 347-374) as well as Leary and Michaely (2011, p. 3197-3249) confirm those findings and again lead to dividend smoothing mentioned before. Early stage companies that are often smaller, show lower dividend yields and generate more volatile earnings do smooth less. More mature firms, so called “cash cows” with a regular income, lower risk and higher profitability, do smooth more. Additionally, Juma’h and Pacheco (2008, p. 23-43) name higher liquidity ratios and higher research and development costs as related to companies paying cash dividends.

2.4. How firms pay dividends

Since the 1980's, share repurchases are increasingly considered as compensation for the shareholder's investment (Bagwell, L., Shoven, J., 1989, p. 129-140) and nowadays are a major part of dividend policy and account for almost as much cash paid out as regular dividends. The main benefit is that shareholders do not anticipate repurchases, whereas dividends are expected to be paid regularly and therefore would not allow managers to adjust the payout according to the result in the respective year (Brav, A., Graham, J.R., Harvey, C.R., Michaely, R., 2005, p. 483-527). Hence, the company gains more flexibility managing its cash.

So, when it comes to the how, most firms can be grouped into three types of dividend payers which are: dividend paying companies that repurchase shares on a regular basis, companies that repurchase shares periodically and companies that repurchase shares on an erratic basis. Therefore, firms which only use the original form of dividend payments are very rare (Skinner, D.J., 2008, 582-609).

2.5. Implications of the literature review

Many researchers have been trying to explain how much, why and how dividends are paid. Most studies focused on the determinants of dividend payout and the policies behind companies' decisions. They have done this mainly by examining large international or smaller domestic samples of advanced markets. Furthermore, the research summarized above often made use of descriptive statistics and statistical models like the Lintner model (Lintner, J., 1956, p. 97-113), as well as qualitative analyses involving interviews. Studies involving the Swiss market were difficult to find and hence, only one on the dividend policy in Switzerland was found. Stacescu's (2008, p. 153-183) article touches on many of the abovementioned observations and is congruent with a large part of the findings, which is why this study is not further described in detail. It seems that the most studies involving first world countries' companies show similar results. Unfortunately, most literature does not answer the question where the money for the continuously rising dividend payments of the last two decades comes from. Only Michelle Bergmann (2016, p. 47-56) might have an answer. Her data of the Australian market indicates a decrease in investing cash flows, which could release funds for dividend payments.

3. Data

This chapter will first define the relevant enterprises and key figures for this study. The second part will then give a brief description of the download of the data needed for the examination. The data's validation is mentioned in a third step and, lastly, a description of how the data set is analyzed is outlined.

3.1. Definition of the relevant enterprises and key figures

3.1.1. Relevant Enterprises

As already mentioned in section 1.4 (Limitation), the timespan of eighteen consecutive years starts in 2000 and ends in 2017. Additionally, for reasons of data availability, only stocks of the Swiss Performance Index (SPI) are being used. The SPI includes all shares on the Swiss market with exception of firms with a free float rate of less than 20% as well as investment companies (SIX Group AG, SPI – Der Index der Schweizer Aktien, 2019). To detect all enterprises quoted on the Swiss stock market, the SIX's website was consulted. Two Excel datafiles were downloaded: one list of the enterprises as of the 13. February 2019 (SIX Group AG, Liste der Unternehmen, 2019) and one of the year end 2000 (SIX Group AG, Einzeltitel: 2000; SPI, 2019). All financial institutions like banks, insurances and financial service providers as well as all foreign stock listed on the Swiss exchange were then deleted. This was done with the help of the Bloomberg terminal which indicates the sectors of each enterprise. In this case, firms assigned to the sector "Financial" were deleted, even if they were partly operational.

The two lists were then matched to obtain one single list of all entities registered from 2000 to 2019. All firms that appeared in only one of the two sets were deleted as well. However, this procedure omits entities that were delisted in 18 and 19. For these two years, delisting notices (SIX Group AG, Delisting decisions (and notices), 2019) were used to complete the list of enterprises. For example, Syngenta AG was delisted in 2018 and, therefore, is not on the list of enterprises dated 13. February 2019. Hence, Syngenta AG had to remain on the list of enterprises relevant for this analysis and was added back. With the described approach 99 enterprises were filtered out which are viewed as a sample (n), representing all non-financial entities on the Swiss stock market as population (N). The catalogue of businesses was later used to extract the data from the Bloomberg Terminal. But before, key figures had to be defined.

3.1.2. Relevant Key Figures

The balance sheet, the income statement and the cash flow statement are the fundamental basis of this analysis and therefore of great importance. For a holistic view of the problem situation, all major financial statement positions are needed (detailed list in the Excel file). The advantage of using Bloomberg data is that for every enterprise examined, the financial statements are structured in the same way. This allows a comparison and also an aggregation of the positions of different firms. All evaluations are solely conducted with figures from the balance sheet, income statement and cash flow statement.

3.2. Download of the data set

After the list of enterprises and the relevant key figures were defined, the data from Bloomberg was downloaded. As a first step, the list of enterprises had to be supplemented with the unique Bloomberg abbreviations, like for example “ABBN SW Equity” for ABB. This would then simplify the second step, which consisted of starting the Bloomberg spreadsheet builder in Microsoft Excel and selecting the securities automatically for a historic data table. In a third step, all desired variables were entered into the input mask. In a fourth step, the timeframe was appointed from the 1.1.2000 to 31.12.2017 with a yearly interval in order to only obtain numbers of the annual accounts. Also, the currency was set to Swiss francs and the axes were transposed so as to receive a table with the variables on the y-axis and the years on the x-axis. In a fifth and last step, the table was generated and the whole data set was copied and reinserted as numbers to circumvent data loss caused by the pre-built Bloomberg-formulas.

3.3. Validation and completion of the data set

After the download, a first glance reveals the incompleteness of the data set. Some values were not available, which has several reasons. First and foremost, there are some firms that finish their financial year in the course of the year. This means that several dates on the x-axis appeared that did not account for the year end. This data was then manually shifted to the column of the 31. December of the concerning year and the redundant columns were deleted. This does not pose a problem since the data is required to analyze the development of the annual figures over a longer period and the exact date of the closure does not matter. After this deletion, there were still fields left with the annotation

“#N/A N/A” for missing data. This stems from the fact that positions like for example “Net Cash Flow from Acquisitions and Divestitures” or “Other Financing Activities” were not introduced by Bloomberg before the year 2009. Also, some firm’s data is unavailable randomly and the cause for this is unknown. All invalid values were then replaced with an empty field so that Excel does not count those as part of the sample examined when analyzing the data. In addition, firms that were missing all variables for one year or more were deleted completely. Some of the remaining 115’907 figures were then cross-checked in the Bloomberg Terminal without finding any inconsistencies.

One detail was not available as download, namely the categorized size of the enterprise (Large, Medium, Small). Hence, the size of enterprises was classified as follows: A revenue of more than 10 billion per year was labeled as a large firm (9 entities). A revenue of 1 billion to less than 10 billion was designated as medium sized company (31 entities) and all firms with less than 1 billion yearly revenues were denoted as small (59 entities). This variable was then added in a separate column in the Excel sheet of the dataset and serves as auxiliary tool for the analysis.

Moreover, the original file displayed the company’s names only in the first of all rows of one company’s variables. However, to allow data analysis of single firms using Excel formulas, the names were added to every row of the respective company.

After all adjustments were made, the dataset is now structured as follows: For each company, there are 68 rows of which each describes a variable. Those 68 variables are ordered in a way that balance sheet figures come first, followed by income and cash flow statements. 99 businesses are relevant for this analysis, which makes it 6’732 rows of data in total. The first three columns of the dataset exhibit the company and variable name and the abbreviation for the variable’s name, respectively. Those are then followed by 18 columns, each signifying one of the examined years, while the last one manually added column complements the dataset with the company’s size category.

Further variable specific changes and adjustments in the data are being addressed in the analysis section itself (4. Analysis).

3.4. Analysis of the data set

To now examine the downloaded data, five more folders were added to the already existent sheet that contains the data, resulting in 1 Excel file with 6 folders. The first

folder serves as the data base for all evaluations conducted. The second folder serves as a tool for comparing the same variables of different enterprises. The sheets three to five present the aggregated data of the balance sheet, the income statement and the cash flow statement. In the sixth folder, all evaluations including graph for the specific variables were made based on the data in sheet one. Like the data set in the first folder, all evaluations in the other sheets were structured in a similar manner with the timeline from the years 2000 to 2017 on the x-axis and the variables of interest on the y-axis. The values associated with the date and variable were then obtained by entering formulas into the respective arrays, which were adapted depending on the output required.

As mentioned before, the analysis is performed exclusively with companies' annual financial statement figures from Bloomberg. The aggregation of the data of all companies is used to provide an apprehension of the situation of the whole market. Every separate statement position is analyzed regarding their trend. The positions are then put in context of the rising dividend payments and it is examined, where the firms of the sample take the money for those payments from. Also, by splitting the data set into groups of enterprises (small, medium and large), a more detailed insight is given. However, this is only complementary and does not help solve the problem situation.

All diagrams and figures were calculated in Microsoft Excel and are attached as a separate file. All numbers in the diagrams and text are in million Swiss francs. If not so, it is otherwise stated.

4. Analysis

This chapter contains an in-depth analysis of the beforehand described downloaded Bloomberg data. First, the income statement is analyzed to better understand the main drivers for the development of the net income. Second, the balance sheet helps better understand the capital structure of the aggregated set of enterprises and third, the cash flow statement is observed to find out about the distribution of cash flows.

4.1. Breakdown of the Income Statement

The income statement does involve non-cash items and thus, does not reflect cash flows from which dividends are paid. For example, expenditures on assets are spread over a long and unknown period of time as depreciation and amortization. This makes it impossible to determine the cash that is available for firms for paying dividends to shareholders in each year. However, examining the income statement allows to detect reasons for profitability or unprofitability of corporations. After all, a company's return determines the payout in the long-run and therefore, the income statement might provide some insights on why the disbursements are increasing at a steady rate.

4.1.1. Revenues

Starting with the sum of the revenue for the whole sample of 99 enterprises, the data shows a minor decrease in turnover after the dotcom crisis hit in the year 2000. In 2004, the revenues started to recover again with a 3% annual growth rate in the beginning, leading up to a maximum growth rate of 13% in 2006 and 2007, respectively. There has been a surge of almost 150 Billion Swiss francs in revenues for the sample set by the time the economy experienced a further shock, namely the financial crisis. The rise in revenues after 2003 is consistent with the surge in dividends described in the introduction, only that the revenues stopped growing after the financial crisis, and from then on, stagnated. The maximum of 483.7 billion in revenues in 2007 was never again exceeded.

4.1.2. Cost of Revenues

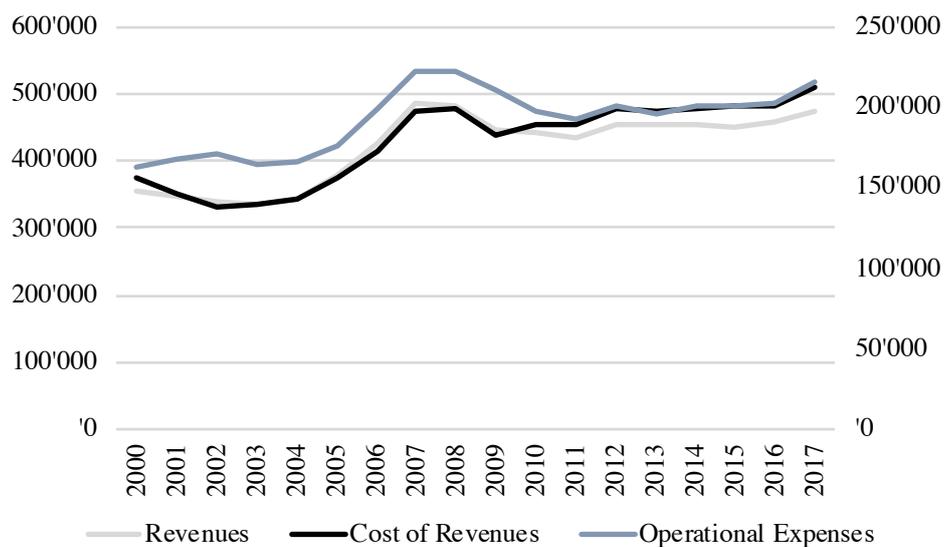
The Bloomberg data for the cost of revenues (COGS) was not complete for all firms between 2000 and 2017. The COGS are only entire for 37 enterprises. When making a cross-check by summing up the revenues of the same 37 firms, the trend looks identical

to the one covering the revenues of 99 enterprises shown in Figure 1. So, it is assumed that this projection works for the COGS as well. It turns out, the costs of goods sold show the same development like the revenues.

4.1.3. Operational Expenses

The operational expenses (OPEX), again, expose a very similar picture (with a full data set of 99 enterprises). There has been a smaller decrease in operational expenses after the crisis in 2000 than there has been in the cost of revenues, but other than that, the overall trend looks the same. Both OPEX and COGS proof to be quite strongly related to the revenue with correlation coefficients of 0.96 and 0.97, respectively. COGS and OPEX are measured with the right scale in Figure 1, the revenues with the left one.

Figure 1: Revenues, COGS and OPEX, n=37-99, Data Source: Bloomberg, L.P. (2019)

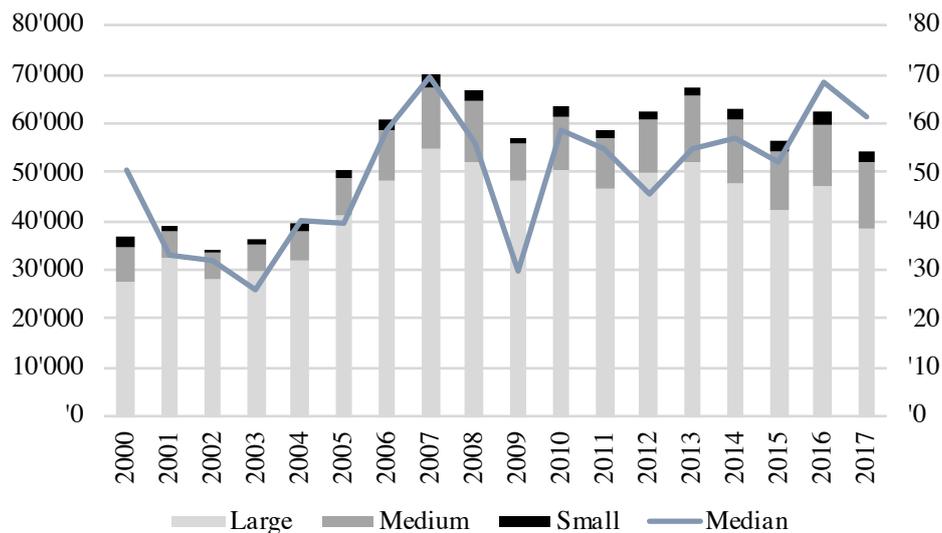


4.1.4. Earnings before Interest and Taxes

Revenues, operational expenses and cost of revenues together result in the EBIT. When looking at the consolidated EBIT of 99 enterprises, a rapid increase before 2007 and a stagnation after that is visible (see Figure 2), which reflects the observations of the previously mentioned variables, except that the fluctuations are more severe. But this is neglectable.

The majority of the earnings derive from the largest nine companies. However, their earnings are slightly decreasing towards the end of the timeframe when at the same time, SME's are able to increase their earnings. This is also seeable for the median which has a little upward trend (right scale).

Figure 2: EBIT, n=99, Data Source: Bloomberg, L.P. (2019)



4.1.5. Net Interest Expense

The net interest expense is composed of the interest income and the interest expense. Only the interest expense data is almost complete with 95 to 99 enterprises for the whole period examined. For later years, Bloomberg can provide data on the income and the net expense for more firms as well, and the trend for the second half of the timespan of the interest expense can be affirmed. This is why it is assumed that the development of the interest income for the whole period looks similar to the one of the expenses and therefore, the data of the interest expenses should adequately represent the overall trend of the net interest expense.

A clear cyclical development is observable. Interest expenditures are highest shortly after an economic turmoil, and lowest when the economy is doing well. This is not necessarily due to the amount of debt (see 4.2.4., Long-Term Liabilities), but rather the result of interest rates decreasing in good times and increasing in bad times.

4.1.6. Income Tax Expense

As one would assume, the level (on average approximately 30% of net income) and development of net income tax adjusts to the net income (see 4.1.10.) and for that reason, displays a similar trend. Yet, the five-year moving average of the tax expenses endorses a slight upswing towards the end of the timescale while on the contrary, net income shows a downturn. This could hint a change in tax policy, caused by a move of a corporation's headquarter from one canton to another or politically within the same state, or maybe some other reason. Though, the effect is insignificant and of no particular concern for this study.

4.1.7. Abnormal and Extraordinary Losses and Gains

A further effect on net income derive from abnormal and net extraordinary losses and gains. Regarding the abnormal losses, the trend is highly rising after the financial crisis, which could be provoked by this same event. But the issue is the unavailability of data in the first couple of years in the period examined. Since data of only 3 enterprises in 2000 up to 74 in 2006 are available, major losses might be omitted and wherefore no solid statement can be made.

As for the net extraordinary losses and gains, some significant proceeds were earned by corporations during and after the crisis. Those are outliers and no trend is observable. However, they do cause an effect on net income especially in 2010 by adding over 26 billion Swiss francs to the financial result. Also, 07 and 08 stand out because of above average extraordinary gains, whereas the result in 02 suffered from an extraordinary loss of almost 10 billion. Those events mainly stem from big corporations like Nestlé (2008 and 2010), Novartis (2007) and Roche (2002).

4.1.8. Minority Interest Expenses

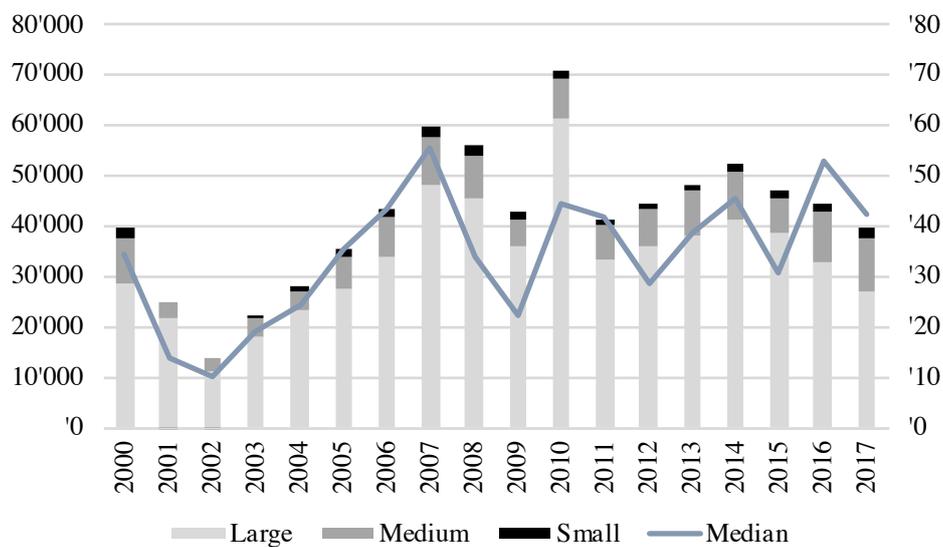
Lastly, another observation made is the sharp uplift of minority interest expenses from 752 million in 2000 to reaching its peak in 2007 with over 3.9 billion. Then, there is just as sharp a downturn until 2011 from when on it languishes until 2017 with values of around 1.1 to 1.4 billion. This development is similar to the one of the balance sheet's minority interest position, where it seems as though non-controlling interest has increased up until 2008 and then dropped and stagnated as well. This of course had the above-

mentioned effect on the money attributable to shareholders without voting rights. The net income's trend, however, is affected by this only marginally.

4.1.9. Net Income

The few positions that were not included in the EBIT had only a minor effect on the trend of the net income. Like for the EBIT, there is a solid increase of net income before the financial crisis. But ever since then, the sum of net income of all entities in the sample fluctuate around 40 to 55 billion Swiss francs with one outlier in 2010. This outlier was caused by a call option that Novartis exercised for 24.5 billion on shares of Alcon, which at that time were in possession of Nestlé (Nestlé S.A., 2011). This event led to a better result of the net income for Nestlé and thus, for the whole sample for just one year. Also, between the dotcom and the financial crisis, extraordinary losses led to a gap in the net income trend.

Figure 3: Net Income, n=99, Data Source: Bloomberg, L.P. (2019)



In conclusion, the higher volatility of the net income versus EBIT descends from more uncertain variables like interest expenses as well as abnormal and extraordinary losses and gains. Minority Interest paid to non-controlling shareholders does affect the net income only marginally. Yet, the reduction of 3.8 billion in 2007 to 1.1 billion ten years later could have freed up some additional income available to common.

Nonetheless, the results indicate a mostly stable income over a longer term. Particularly, important factors like the revenues, operating expenses and costs of goods sold have been very robust over the last ten years. This development was propelled by large as well as small and medium sized firms (the right scale in the diagram refers to the median). The volatility, however, mainly derives from large enterprises.

4.2. Breakdown of the Balance Sheet

The balance sheet helps detect how the sample set's capital structure is built. This is especially interesting in terms of the use of money on the active side of the balance sheet as well as the composition of the money owed to lenders and owners on the passive side. This might help to better understand the cash flows and the constantly increasing amounts of dividends paid to shareholder.

4.2.1. Current Assets

4.2.1.1. Cash, Cash Equivalents and Short-Term Investments

The sample set of 99 Swiss listed stock companies has increased its cash holdings about 24.5 billion Swiss francs from 2000 to 2017. At the same time, the short-term investments were reduced by the amount of 31.7 billion. It appears as if the decrease in short-term investments was mostly counterbalanced by the increase in cash and cash equivalents. Or put differently, the increase in cash and its equivalents derives from the reduction in short-term investments, meaning that over time, more companies decided to hold more liquid current assets like cash. Those two variables are pooled in one position by Bloomberg. A slightly decreasing trend in the overall amounts is observable.

4.2.1.2. Accounts and Notes receivable

Accounts and notes receivable display the same trend like the revenues described in the earlier section. Companies keep the rate of products sold on credit between 15 to 18 percent of sales during the whole period, which is why the development looks alike. Mainly because of the surge before the financial crisis, the positions experiences a total increase of 16.8 billion in 18 years. A decrease in this position would have resulted in more cash inflow, but this is clearly not the case.

4.2.1.3. Inventories

As for the inventories, the trend looks similar to the one of the accounts and notes receivable until 2010, but then, instead of stagnating, shows a growth of about 16.1 billion continuously spread over the last couple of years until 2017. This suggests that more money has been used to bulk up inventories and this would leave less cash available to shareholders.

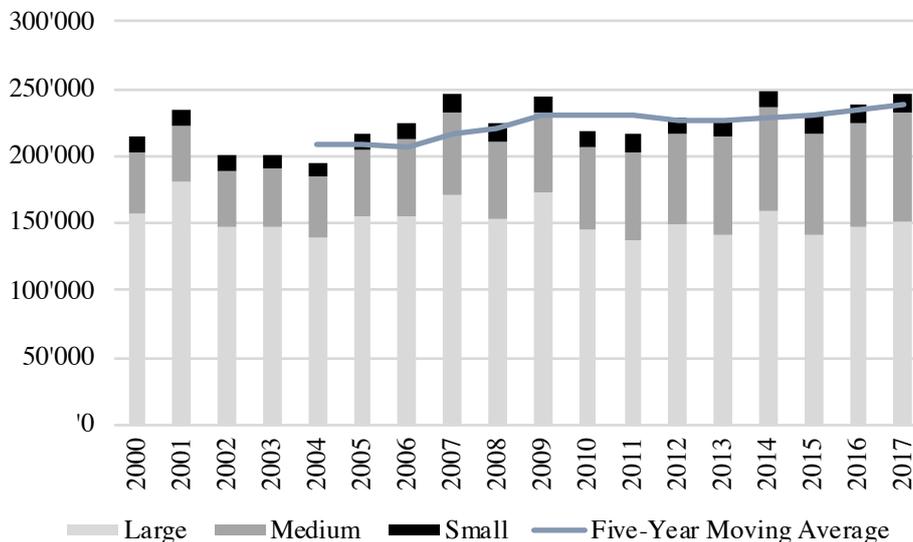
4.2.1.1. Other Short-Term Assets

Among the current assets, the position called other short-term assets is the only variable that is quite volatile and does not indicate a clear trend when looking at the absolute values. The fluctuation is between 17 and 37 billion and at some points varies massively from year to year. However, the five-year moving average indicates a quite stable development for all enterprises in the sample with a little upswing during the financial crisis and towards the end of the investigated period. Those marginal changes in short-term assets do not have an effect on cash flows.

4.2.1.2. Total Current Assets

Overall, the total current assets indicate a minimal upward trending curve, in the graphic below better observable with the five-year moving average. The drivers for this development are the medium sized companies who doubled their current assets over 18 years from around 40 to 80 billion, while large corporations slightly decreased their current assets.

Figure 4: Total Current Assets, n=99, Data Source: Bloomberg, L.P. (2019)



4.2.2. Noncurrent Assets

4.2.2.1. Property, Plant and Equipment

After the dotcom crisis in the year 2000, there has been a decrease in property, plant and equipment (PPE) until 2004. Enterprises began investing again in 2005, starting with an increase of PPE of about 24 billion (up to 248 billion) Swiss francs, which at that time was a rise of 11%. More deinvesting took place in 2008 and 2010 after the second crisis in the examined period, followed by an average growth rate of 3% per year and finally, finding its peak in 2017 with a total invested sum of 351.2 billion (without accumulated depreciation).

4.2.2.2. Long-Term Investments and Receivables

Compared to other variables, the long-term investments and receivables shows a little atypical trend. At the beginning of the period, the position is sloping downwards from 22.5 to 11.7 billion, slightly recovers from 2004 to 2007 and then stagnates until 2012 with the lowest value of beneath 10 billion, when it commences a phase of small but constant growth for the last years of the interval. As opposed to the other positions under the section noncurrent assets, the long-term investments and receivables are a quite small position and have little effect on the total assets.

4.2.2.3. Other Long-Term Assets

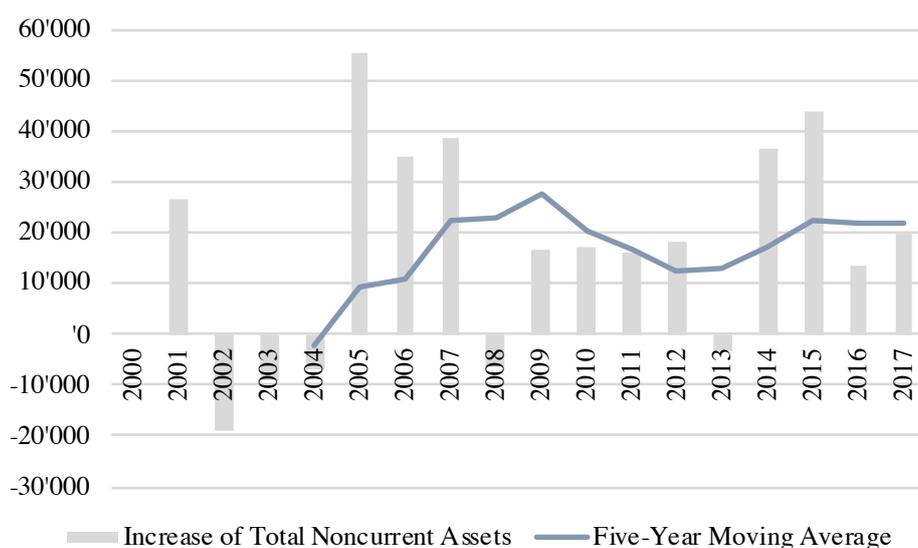
The other long-term assets of the sample set stagnated the first five years of the timespan and then continued with an almost constant growth ending with a value of 273.1 billion in 2017. This is almost three times more than in the year 2000 and accounts for an annual increase in long-term assets of about 11 billion.

4.2.2.4. Total Noncurrent Assets

It is important to see that different variables have different trends during the same timeframe. Not all long-term assets develop the same way. This might be due to trends in investing practices, caused by tax policies or the attractiveness to invest in a particular kind of asset. Also, the reporting standards are changing over time and the previous accounting years do not have to be adjusted to those new standards. This is why the numbers should be looked at with caution, since Bloomberg might not adjust the historic

figures, so that a reliable statements is intricate. In total, the following trend was observed: the noncurrent assets experienced a small decrease prior to the year 2004 and reached its lowest value of 339 billion before a growth period, only intermitted in 2008 and 2013 with a small decline of -1% each. In 2017, a maximum of 639 billion was reached, 300 billion more than thirteen years earlier (the numbers are without accumulated depreciation for PPE). On average, 75% of the total noncurrent assets are attributable to large companies, 25% to the SME's. During the whole course of the examined timespan, the proportions did not change much. In the diagram below it shows that enterprises increased their long-term assets in the years 05 to 07 as well as 14 and 15. In recent years, since the sample set's profitability is stagnating (after the financial crisis in 2007), a five-year moving average indicates a slightly lower investing activity. So, while corporations invested around 43 billion on average between 2005 and 2007 during the economic upswing, they only did invest around 17 billion on average from 2008 to 2017. Even in the years 14 to 17, when the moving average again indicates more investments, the sample set only invested circa 28 billion on average, not reaching the level of the period before the stagnating profitability. The numbers shown in figure 5 do not indicate the exact cash flows of investing activites, but they imply that fewer assets were bought and that this might have freed up some cash for the rising dividends in the first few years after 2007. However, it is not sufficient proof to make a reliable statement yet.

Figure 5: Increase of Total Noncurrent Assets, n=95-99, Data Source: Bloomberg, L.P. (2019)



4.2.3. Current Liabilities

4.2.3.1. Payables, Accruals and Other ST Liabilities

An example of the beforementioned inconsistencies of the data might be the shift that occurred in 2009 from the position of other short-term liabilities to payables and accruals. It seems that 30 billion have been relocated, which lead to a sudden increase of payables and accruals on the one hand, and a sudden decrease of other short-term liabilities on the other hand. The reason for this shift is unknown and is not substantial for this study. The sum of both variables had a significant increase from around 83 billion in 2004 to 127 billion in 2007, from when on it decreased until 2010 to 110 billion. It then surged again to 144 billion in 2017.

The trend is very similar to the one of the cost of revenues. In chapter 4.2.1.2. (Accounts and Notes Receivable) it was mentioned that the companies keep the products sold on credit between 15% and 18% of the revenues. The same holds for the two positions examined in this chapter. They account for around 63% on average of the COGS. This indicates that products and services bought on credit do not increase and therefore, no cash is saved for other use.

4.2.3.2. Short-Term Debt

Short-term debt is differing from year to year and most year-end values fluctuate between 33 and 49 billion. On average, the ST Debt drops marginally. This variable is therefore not of great concern for this study.

4.2.3.3. Total Current Liabilities

The overall trend is mainly driven by the payables and accruals plus other ST liabilities. Including short-term debt, the current liabilities resulted in an average growth of circa 2%, which equals 2.5 billion per year over the whole interval. The steepest increases are observable between 2004 and 2007 (plus 44.5 billion) as well as 2013 to 2017 (plus 15.6 billion). This development is largely congruent with the one of the costs of revenues, which leads to the conclusion, that the current liabilities adjust to business performance and were not used to free up cash for dividend payments. This applies to all kinds of enterprises, whether small or large.

4.2.4. Noncurrent Liabilities

4.2.4.1. Long-Term Debt

The long-term debt decreases from 73.3 billion in 2001 to 55.5 billion in 2004, then more or less stagnates for several years until another major shift occurs in 2009 (see Figure 6). But this, in contrast to the one mentioned in chapter 4.2.3.1. (Payables, Accruals and Other ST Liabilities), is of different nature. Long-term debt spikes up from 63 billion at the end of the financial year of 2008 to 103.8 billion in 2009. This massive 40.7 billion increase is attributable to mainly two of the biggest companies on the Swiss stock market, namely Novartis and Roche. While the former issued bonds in the value of 6.6 billion (Novartis AG, 2010), the latter did borrow a vast amount of 33.2 billion in order to finance the takeover of Genentech in March 2009 (F. Hoffmann-La Roche Ltd, 2010). From then on, the long-term debt again decreased until 2013 when it hits a value of 84.2 billion in debt, after which it started to rise again until 2017 reaching an all-time high of 112.7 billion owed to lenders.

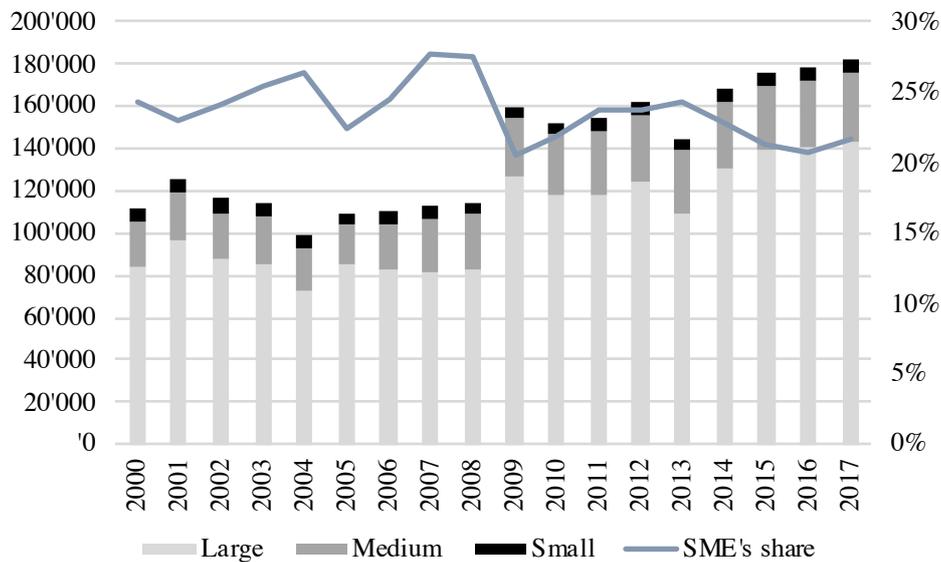
4.2.4.2. Other Long-Term Liabilities

Whereas the position of the LT debt has an erratic development with one large shift in 2009, the other long-term liabilities show a generally upward sloping trend, especially since 2008. This ascent was only halted by two 10 billion drops in 2013 and 2017. Those events are caused by Nestlé and Novartis, but are not further examined, since they do not seem significant for this study.

4.2.4.3. Total Noncurrent Liabilities

The LT debt development translates into the one of the total noncurrent liabilities for the most part. The other LT liabilities, however, do have a smoothing effect on the trend in the second half of the period starting in 2009. After the great rise in debt in 2009 caused by Roche and Novartis, total noncurrent liabilities increased only by 22.9 billion until 2017, which was mainly caused by larger enterprises (see Figure 6, SME's share indicated with the right scale). Also, the increases and decreases seem provoked by extraordinary events, and not by a systematic procedure to raise funds for dividend payments. Further investigation of the debt will follow in chapter 4.3.3.1. (Other Financing Activities and Cash from Debt).

Figure 6: Total Noncurrent Liabilities, n=99, Data Source: Bloomberg, L.P. (2019)



4.2.5. Equity

4.2.5.1. Share Capital, APIC and Treasury Stock

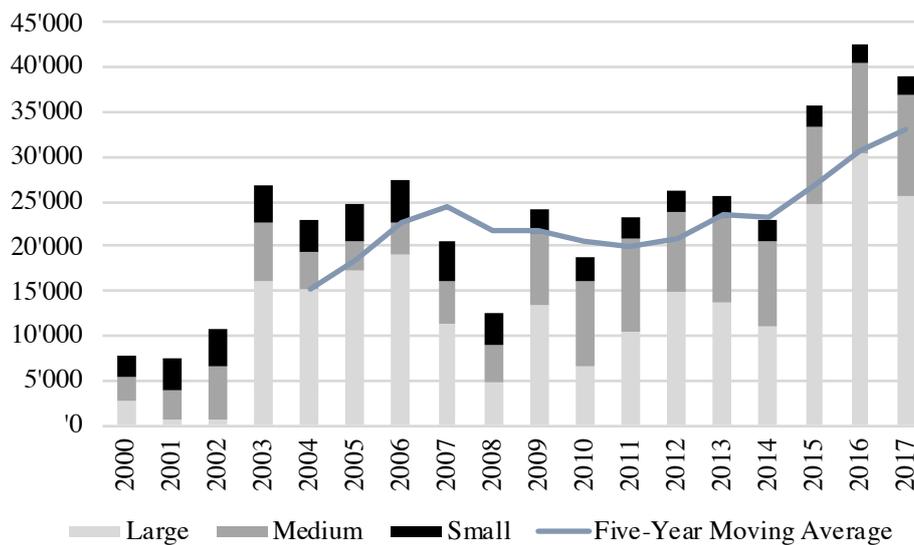
All enterprises examined did not have any preferred dividends or hybrid capital.

The share capital, including additional paid in capital (APIC), has three notable changes in 2003, 2008 and 2015. The rise of 12.3 billion in 03 was largely caused by Holcim, Nestlé and Adecco and the temporary drop in 2008 by Syngenta. However, when crosschecking with the financial report of Syngenta, there is no reduction in capital observable (Syngenta International AG, 2009). So, the short decrease is most likely caused by incomplete Bloomberg data and not by Syngenta reducing capital for just one year. The largest change was the increase of 18.3 billion in 2015 due to the merger of Lafarge S.A. and Holcim Ltd into the LafargeHolcim Ltd (LafargeHolcim Ltd, 2016). Other than for those events, the share capital stayed on a constant level.

After the financial crisis, the treasury stock – which is listed in the balance sheet as a minus position – held by corporations in the sample set did decrease notably. Especially, due to Nestlé’s reduction in treasury shares in 2008, 2011 and 2012. But this decrease does not have a large effect on the trend of the shareholder’s capital. The changes in treasury stock adds a little more volatility, but the overall trend does still represent the capital attributable to shareholders. Since 2003, there have not been any major increases

except from the 2015 Lafarge and Holcim merger. The development of the share capital does therefore not indicate a large funding round by increasing the companies' share capital.

Figure 7: Share Capital and APIC minus Treasury Stock, n=99, Data Source: Bloomberg, L.P. (2019)



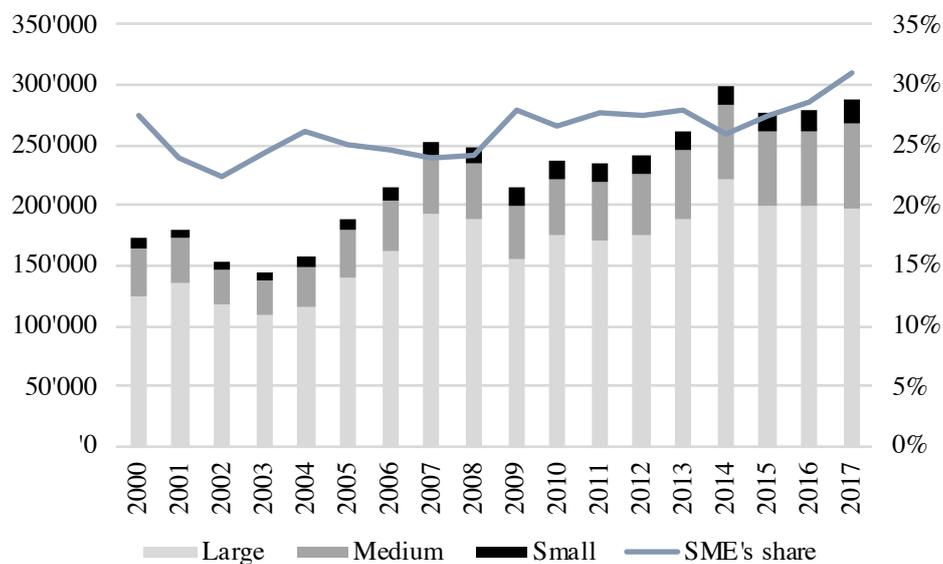
4.2.5.2. Retained Earnings and Other Equity

The position of the retained earnings shows an unnatural surge from 2002 to 2003, caused by a shift from the position of other equity to the retained earnings. The two positions were therefore consolidated. Further, the Bloomberg data of 2008 was distorted by additional 51.2 billion in the Novartis retained earnings. According to Novartis' 2009 financial report, the company's retained earnings did not change significantly from 07 to 08 (Novartis AG, 2010), wherefore the 51.2 billion were subtracted from the sum of the retained earnings and other equity in the data of 2008. Also, because of missing data, the first four years are not fully reliable and have to be looked at with caution.

In a consolidated form, the numbers shown in the diagram below display a short downturn after the dotcom crisis and a strong recovery from 2004 till the next crisis. The drop in 2009 is affected by Roche's abovementioned purchase of Genentech shares (F. Hoffmann-La Roche Ltd, 2010). After those eventful years, the retained earnings and other equity were growing steadily up to a value for the whole sample set of 287.2 billion in 2017, almost doubling since 2003 (plus 142 billion). Over two thirds (100 billion) of

this rise, however, stem from the years prior to the economic turmoil in 07 and 08. This endorses the stagnating net income and rising dividend payments in the second half of the timeframe, resulting in less money remaining in the companies as reserves. What stands out is that larger corporations were less able to increase their retained earnings, whereas SME's enhanced their share of retained earnings and other equity from 25% to over 30% (right scale in the diagram) since 2008.

Figure 8: Retained Earnings and Other Equity, n=17-99, Data Source: Bloomberg, L.P. (2019)



4.2.5.3. Minority Interest

Like the minority interest expenses described in chapter 4.1.8. (Minority Interest Expenses), the minority interest in the balance sheet increased from 2000 (10.2 billion) to 2008 (18.2 billion) and then decreased to 8.1 billion in 2011 from when on it stagnated for the rest of the timeframe. This did should have altered the dividends paid to non-controlling shareholders accordingly. The reduction in minority interest in recent years could have allowed firms to pay less of the net income to non-controlling shareholders and more to regular shareholders.

4.2.5.4. Total Equity

The total equity resembles the retained earnings and other equity since this position is the largest and accounts for the majority of total equity. Therefore, an upward sloping trend

from 174.6 billion before the financial crisis up to 291.4 billion in 2007. Then, a slight decrease to 250.5 billion is observable, after which the slope is upward trending again to 335.6 billion in 2017. Nonetheless, the growth of the total equity after the crisis has never reached the rate of growth of before the crisis. To some extent this is due to the stagnating net income. But the increased payout does have its effects, too.

4.3. Breakdown of the Cash Flow Statement

Ultimately, the cash flow statement should give important insights into the cash flows of the firms on the Swiss stock market and therefore, should help conclude where the money for the rising dividend payments comes from.

4.3.1. Cash from Operating Activities

4.3.1.1. Net Income

Like described in the section 4.1.9. (Net Income), the level of net income did not change significantly since the financial crisis and was fluctuating around 40 to 55 billion Swiss francs in recent years with a single outlier in 2010. This leads to less cash inflows from operating activities, which theoretically, *ceteris paribus*, would prevent companies from increasing dividend payments.

4.3.1.2. Depreciation and Amortization

As for depreciation and amortization, the total amount increased ever since 2004 from 15.7 to 25.7 billion in 2017, 765 million on average annually. Except from some small deflections the trend is upward sloping. For the relevant timespan, the rising depreciation and amortization adds to the net income and has a smoothing effect of the operating cash flow. A rising D&A, however, does further raise questions regarding the development of investments. D&A is put together of many items with different amortization periods. This makes it difficult interpreting the trend. Assuming that the amortization periods are the same for all items and that there have not been any changes in policies altering those periods in recent decades, D&A should stagnate only if the same amount of investments are made each year. Conversely, if investments increase, D&A would increase as well. Intuitively, this suggests that the rising D&A mentioned above is caused by a rise in capital expenditures. When including the CAPEX in this analysis, it is observable that the CAPEX is growing from 2004 to 2008, but then decreases a little and stagnates for the rest of the period. The reason why D&A is still rising after 2008 is the fact that the rising capital expenditure between 04 and 08 have a prolonging effect. So, the first couple of years after the annual investments were increased, D&A will rise. However, assuming that the CAPEX stays at the current level, the development of D&A is soon about to decrease.

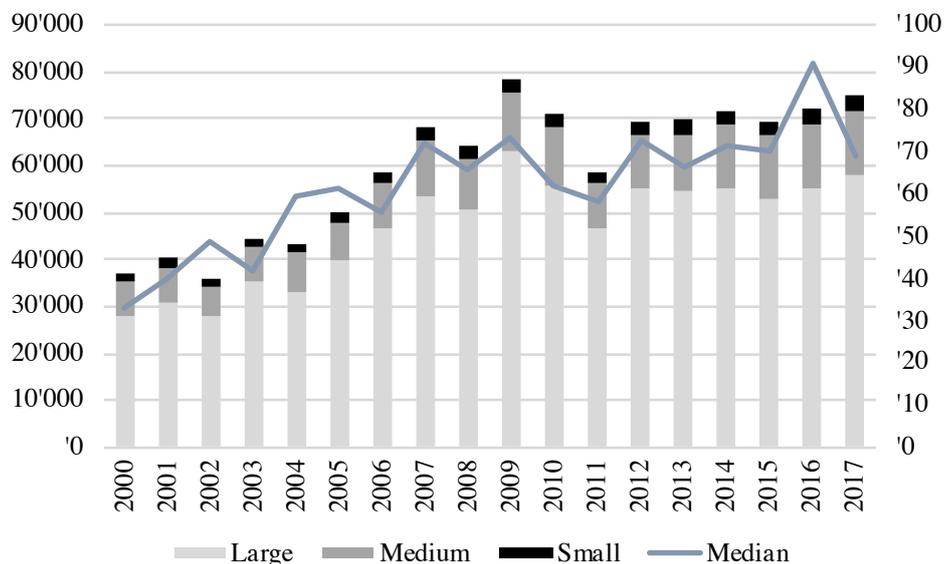
4.3.1.3. Non-Cash Items and Non-Cash Working Capital

Less impact on the operating cash flow originates from changes in non-cash items and non-cash working capital. The numbers show motion primarily around times of economic turmoil. In the second half of the timeframe, the two variables largely outweigh each other and lead to barely any alterations in operating cash flow (-7.2 billion in 9 years).

4.3.1.4. Total Cash Flow from Operating Activities

The cash from operating activities almost doubled from the year 2000 with a cash inflow of 37.2 billion to 2007 with 68.3 billion. Apart from a little volatility during the crisis, the cash flow stagnated at around 70 billion until the end of the examined period. This development is similar to the one of the EBIT and therefore, reflects the revenues minus cost of revenues and operational expenses quite accurately. The observation underscores the previous findings of this study, stating that profitability is stagnating after the financial crisis. Hence, again the question is raised of where the cash for rising dividends comes from.

Figure 9: Cash Flow from Operating Activities, n=96-99, Data Source: Bloomberg, L.P. (2019)



Over the whole period, 78% of the operating cash flows are attributable large firms, while medium sized companies account for 18% and small enterprises for 4%, respectively. Those proportions do not change during the course of the 18 years examined, what is also supported by the median (right scale) which develops similar to the overall trend.

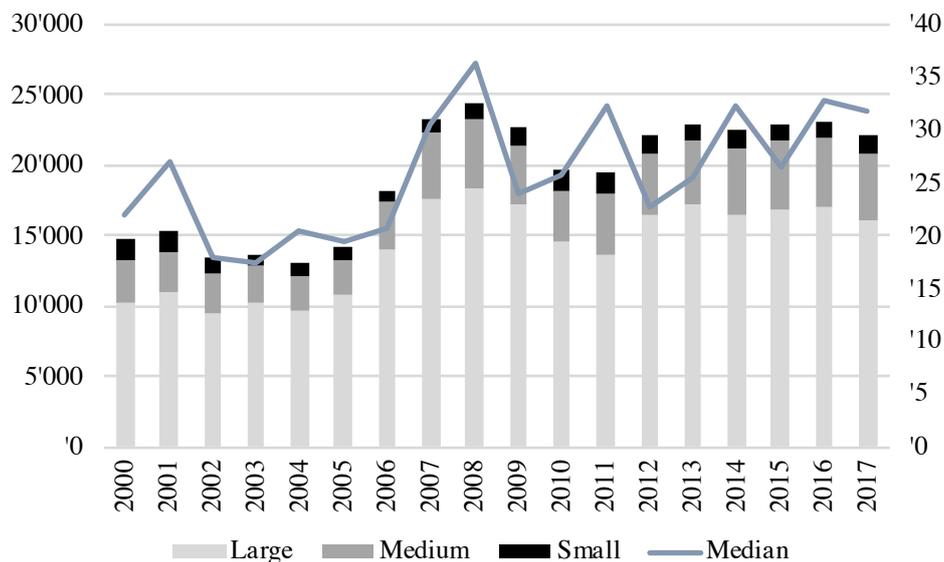
4.3.2. Cash from Investing Activities

4.3.2.1. Fixed and Intangible Assets

The cash outflow measured as change in fixed and intangible assets is reflecting the capital expenditures on property, plant and equipment. Like mentioned before, the CAPEX is reduced slightly after the dotcom-crisis and hitting its low in 2004. From then on, corporations started increasing their expenditures on assets: in 2005 by 9 % and in 06 and 07 even by 29% up to 18.2 billion and 28% up to 23.3 billion, respectively. After a relatively small 5% increase in 2008, the Swiss firms incrementally reduced CAPEX to 19.5 billion in 2011. A rise up to 22.1 billion ensued in 2012. Until the end of the examined period, the yearly expenditures stayed around 22 to 23 billion. As the median indicates, this counts for all enterprises in the sample, regardless of size.

When putting the CAPEX in relation to the revenues, it shows that the capital expenditures account for 4% to 5% of the yearly turnover over the whole period. Companies seem to adapt their CAPEX to the momentary business situation. However, this is not leading to rising amounts of cash available for disbursements to shareholders.

Figure 10: Change in Fixed and Intangible Assets, n=97-99, Data Source: Bloomberg, L.P. (2019)



4.3.2.2. Long-Term Investments

Two variables that largely outweigh each other are the decrease and increase of long-term investments. Over the whole period, the total inflow was 72.9 billion, while the outflow

was 75.3 billion. The net change in long-term investments are leading to a little less than 2.4 billion net cash outflows. This is more or less consistent with the changes in the balance sheet where the position of long-term investments and receivables decreased by 7.8 billion in 18 years. In the long run, the net change of long-term investments is too little to make a significant impact on the cash flow.

4.3.2.3. Other Investing Activities

For the position “Net Change from Acquisition and Divestitures” Bloomberg did not provide any data until 2008. When summing up all other sub-positions from 2000 to 2008 associated with the investing activities, the result is almost equal to the amount in the position of the cash flow from investing activities. Therefore, it is assumed that acquisitions and divestitures were originally included in the position of other investing activities. Both positions were summed up and are – for the sake of simplicity – still called “Other Investing Activities” in this study.

The sums for the single years clearly indicate that after the crisis hit the economy in 2007, there have been lower investments in entities and other assets such as marketable securities. While during the first half of the past two decades the average sum of investments was around 11 billion, in the second half the mean was at around 8 billion. Especially during the booming years from 2005 to 2007, investments in other assets were twice as high with 21 billion on average. This is in clear contrast to the last ten years of the timespan with a mean of around 8 billion per year. Those findings suggest that cash for dividend payments was released through the reduction of investments in acquisitions and other investments.

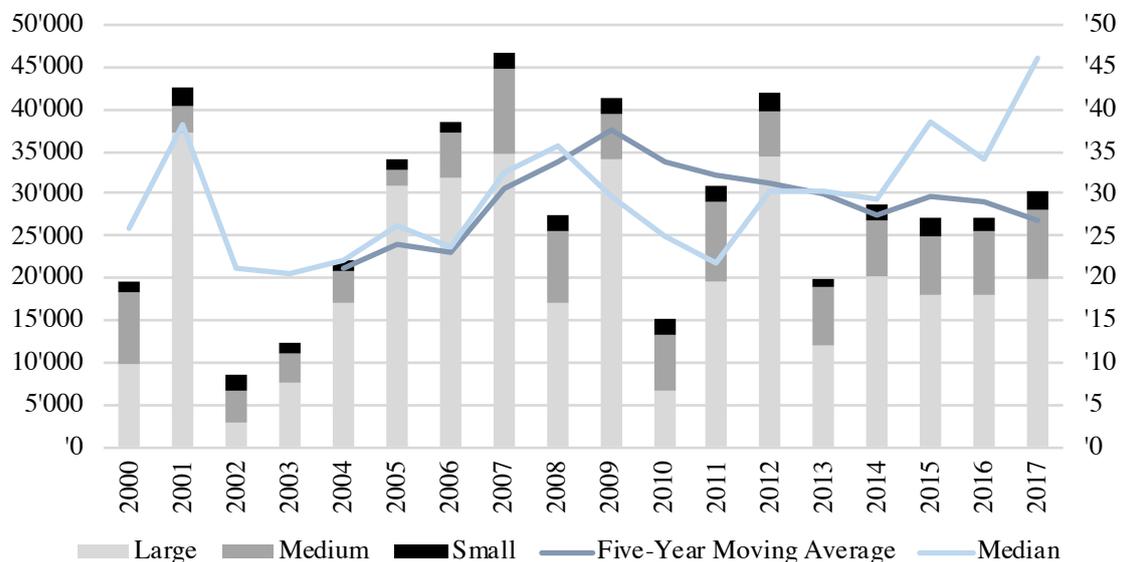
4.3.2.4. Total Cash from Investing Activities

Even though the CAPEX accounts for the majority of cash flows from investing activities, the other investing activities seem to be the driver for the overall development. Using a five-year moving average to receive a better indication of the trend, a steep upswing peaking in 2009 with a cash outflow of 37.5 billion is determined. Thereupon, the curve is continuously declining until the cash from investing activities hits a low in 2017 with 26.7 billion Swiss francs on average for the last five years of the sample set. Those findings indicate that Swiss firms were more restrictive on investments after 2009,

particularly by reducing the money spent on acquisitions and other investments like for example marketable securities. Long-term investments contributed to the volatility, but only with neglectable amounts. And cash outflows related to fixed and intangible assets like property, plant and equipment stabilized at 22 to 23 billion per year.

The nine largest companies of the sample did change their yearly investment activity at a relatively larger scale, which led to more fluctuations as well as less cash outflows. Conversely, SME's did increase their cash spent on investments (see median in figure 11).

Figure 11: Cash from Investing Activities, n=97-99, Data Source: Bloomberg, L.P. (2019)



4.3.3. Cash from Financing Activities

4.3.3.1. Other Financing Activities and Cash from Debt

A similar problem as with the “Net Cash from Acquisitions and Divestitures” from the previous sub-chapter (4.3.2.3. Other Investing Activities) is encountered with the position “Other Financing Activities”. For the years 2000 to 2008 no data is available. However, in this case, when adding up all other positions relevant for the calculation of the cash flow from financing activities, the result is incorrect. For this reason, it is assumed that the data of “Other Financing Activities” is not included in any other position in the regarding section. Therefore, the missing data is substituted by adding the values for each year that are needed to receive the correct sum equaling the cash flow from financing

activities. When looking at those manually calculated numbers for the position of other financing activities, no clear trend is observable. Also, the cash outflows are small compared to the total amount of cash from financing activities. They only account for about 2.2 billion negative cash flow on average.

The same holds for cash from debt (-1 billion per year on average). Both variables look like they are very situational and represent unregular occurring events like the already mentioned takeover of Genentech in 2009 by Roche. The acquisition of Genentech in particular did lead to the two largest deflections through the issuance of bonds and notes on the positive cash flow side, and through the acquisition itself on the negative cash flow side by using retained earnings (F. Hoffmann-La Roche Ltd, 2010). Over the course of the whole period from 2000 to 2017, debt had led to 31.1 billion net cash inflows, whereas 90.3 billion in net cash outflows for other financing activities did reduce the monetary stock. In the second half of the timespan, both positions combined do account for two and a half times as much negative cash flow with 43 billion than in the first half with 16.2 billion. This reduces the cash that is available to shareholders.

4.3.3.2. Dividends Paid and Share Repurchases

Looking at the diagram below, it is obvious that the dividends paid out to shareholders were constantly rising since approximately 2003 (left scale of diagram). There was a minor drop in the year 09 after the financial crisis hit the economy. However, a year later the increase continued until 2017, reaching a peak at a total payout of over 33 billion Swiss francs for all enterprises in the sample examined. This represents a value almost four times as large as in the year 2000. The largest share of the dividends paid stems from the nine enterprises with the highest revenues in the sample. And like the large firms, the median also increases its payments on a regular basis. (right scale of diagram).

As described in the literature review (2. State of Research) the share repurchases are an important part of the payout policy of enterprises (Bagwell, L., Shoven, J., 1989, p. 129-140). While dividends in the amount of almost 350 billion were paid out between 2000 and 2017, share repurchases up to a value of net 110 billion were made. So, 24% of the overall reimbursement to shareholders stem from buybacks.

Figure 12: Dividends Paid, n=93-99, Data Source: Bloomberg, L.P. (2019)

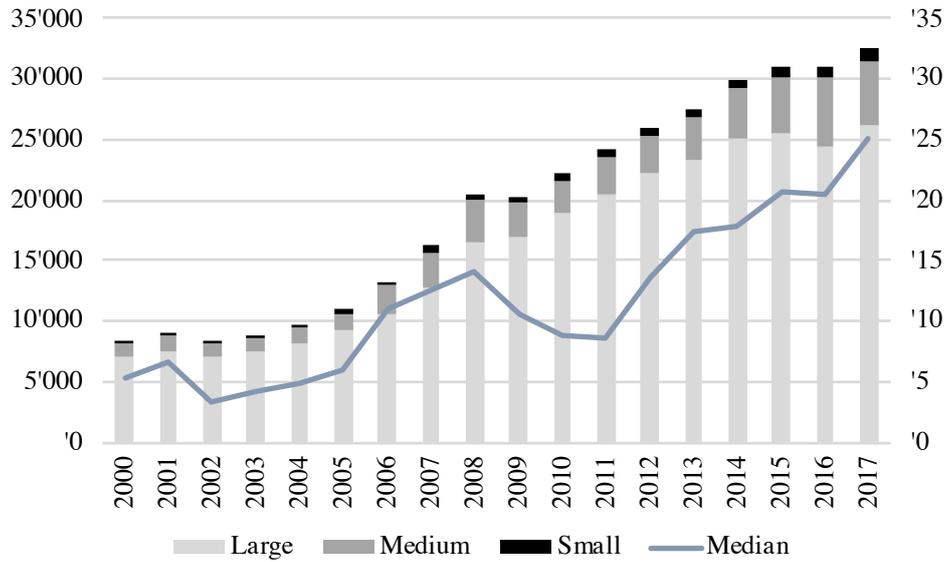
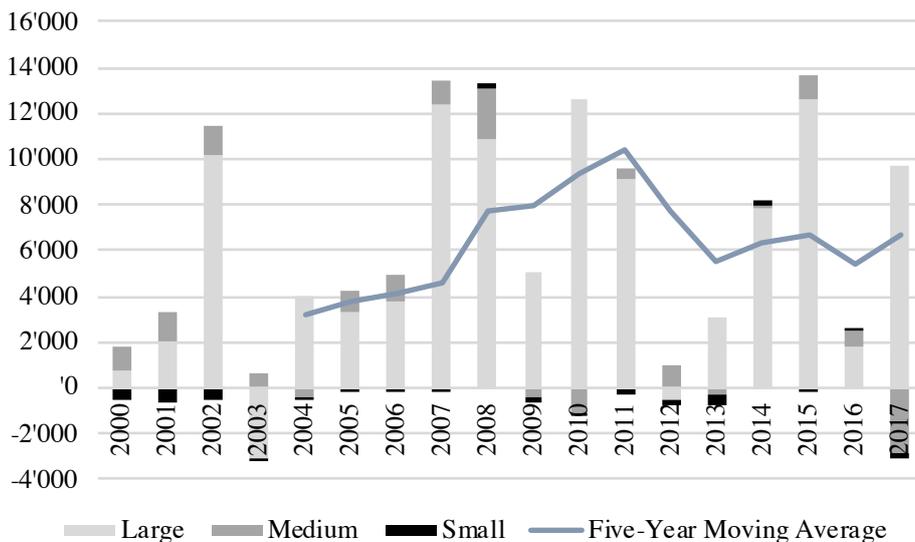


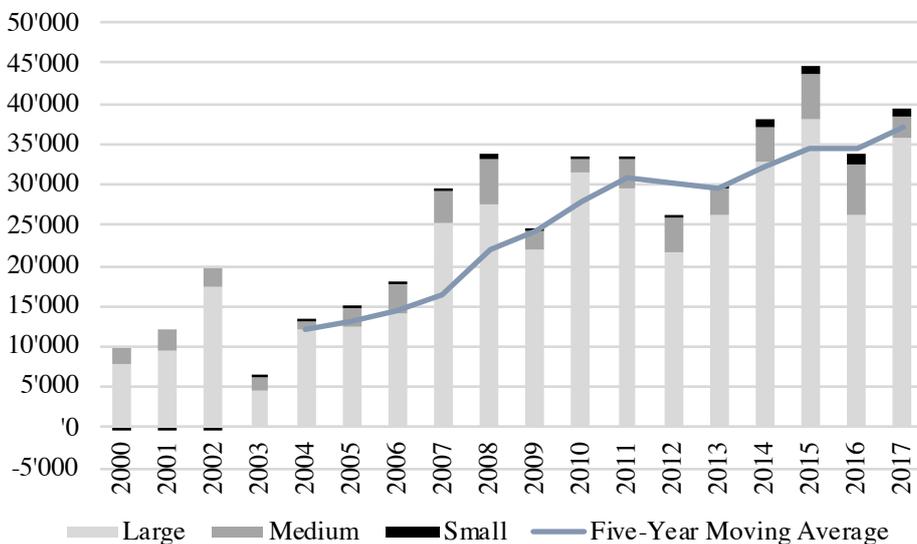
Figure 13 displays the share repurchases for each year in the period. Again, the largest nine companies of the sample claim the majority by buying own shares in the value of over 105 billion. Medium-sized companies did this at an amount of over 8 billion and small enterprises even issued more shares than they bought, resulting in a net cash inflow of 3 billion. Furthermore, the median firm repurchases zero shares.

Figure 13: Share Repurchases, n=90-99, Data Source: Bloomberg, L.P. (2019)



What also stands out is the volatility which is dissimilar to the development of the regular dividends. This is consistent with the findings of Brav, Graham, Harvey and Michaely (2005), who observed that managers use repurchases on an irregular basis, when at the same time, dividends are paid regularly. Using a five-year moving average, the overall trend of the repurchases indicate a rise in the years around the financial crisis and a downturn starting in 2011/12. The development did stabilize in recent years with an average share buyback of around 6 billion per year. When drawing a connection to the income situation, it could suggest that – since profitability is stagnating and dividends are increasing – the buyback on average has been lowered in order to reduce the cash outflow. And indeed, comparing the growth rate of the moving averages of dividends and both dividends and repurchases combined (Figure 14), the average rate of increase is slightly higher for the dividends with 10.1% versus 9.4% for the dividends including repurchases. So, share buybacks do have a slightly inhibiting effect on the growth of total disbursements to shareholders. Nevertheless, the trend is still noticeably upward sloping.

Figure 14: Total Dividends and Repurchases, n=90-99, Data Source: Bloomberg, L.P. (2019)

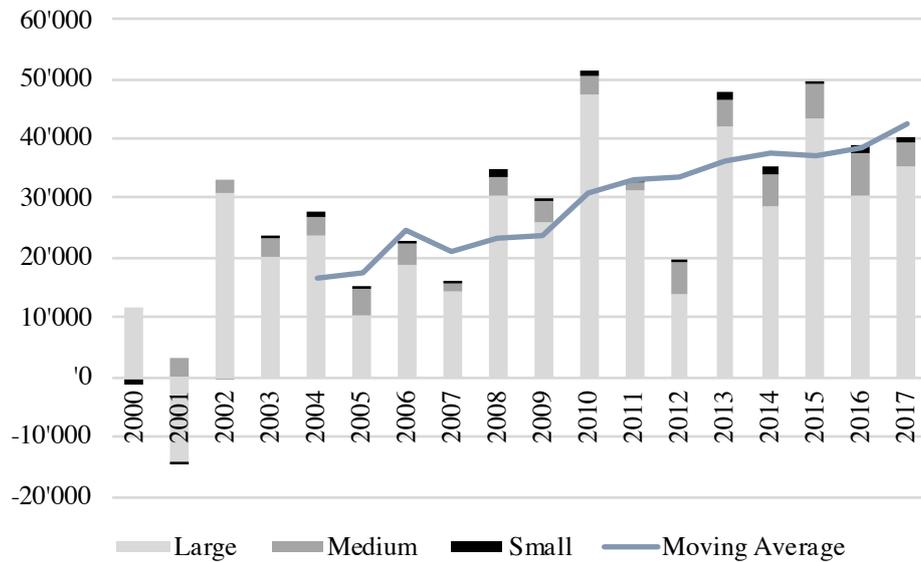


4.3.3.3. Total Cash from Financing Activities

The values for the cash from financing activities vary strongly from year to year, mainly caused by the irregular share repurchases. Nonetheless, using a five-year moving average, there is a distinct trend showing that enterprises on the Swiss stock market do spend

increasing amounts of cash on financing activities. To the largest extent, most outflows stem from regular dividend payments (349.8 billion for 18 years), which again 83% stem from the nine largest enterprises in the sample.

Figure 15: Cash from Financing Activities, n=97-99, Data Source: Bloomberg, L.P. (2019)



4.3.4. Net Changes in Cash

Like mentioned in chapter 4.2.1.1. (Cash, Cash Equivalents and Short-Term Investments), the companies did increase their cash holdings. In some years, there has been a decrease of cash positions, but in most years, firms did raise their cash. Over the whole period, 36.9 billion net cash inflows were generated, indicating that companies in the sample are reluctant to risk their liquidity for dividend payments.

5. Results

This section summarizes the findings of the previous section (4. Analysis) and puts those in context to each other. Further, the findings are interpreted and discussed in consideration of previous research.

5.1. Operating Activities

The revenues minus variables like the costs of revenues, operational expenses and taxes are the main drivers for the development of the net income. Other factors like the net interest expenses, extraordinary losses and gains as well as minority interest did lead to more volatility of the profit, especially in the second period of the examined timeframe. Particularly, the cutback in minority interest on the balance sheet from 2009 to 2017 led to fewer income attributed to non-controlling interest and therefore, did diminish the net income less in the second half of the examined timespan. Yet, the effect on net income's trend was only minor. In turn, the net income was the driving force behind the operating cash flow, even when adding depreciation and amortization as well as other non-cash items and changes in working capital to the net income. Those positions only had a smoothing effect. It shows that firms, prior to 2009, could increase their profitability almost constantly. Whereas after 2009, firms were not able to further grow their earnings. Therefore, cash inflows from operations in the last nine years of the examined period stabilized at a constant level of 70 billion per year. This suggests that companies on the Swiss stock market had to find other sources in order to increase the dividend payments.

5.2. Investing Activities

While current assets like D&A and Inventories had an impact on the operating cash flow, the noncurrent assets do mostly reflect in the cash flow from investing activities. It was examined that after the financial crisis, PPE (without accumulated depreciation) was continuously growing. This is consistent with the changes in fixed and intangible assets, which are on a constant level of 22 to 23 billion per year over the same timespan. However, the CAPEX does not fully reflect the yearly increase of PPE, since not every investment does extend the assets value. The data indicates that around two thirds of the capital expenditures are used for the retention of the assets and do not add to the value of PPE. Nonetheless, both variables suggest that corporations did not save money by

reducing the CAPEX. Furthermore, the position of the long-term investments and receivables on the balance sheet has a languishing trend. Neither year to year changes in the balance sheet nor the cash outflow in the cash flow statement did indicate any impact of relevance for the solution of the thesis question.

Conversely, the other long-term investments did grow threefold from 2005 to 2017 on the balance sheet and indicate a clear upward sloping trend. And to some extent, this is consistent with findings from cash flow from other investing activities (including the position “Net Change from Acquisition and Divestitures”). The numbers of both balance sheet and cash flow statement indicate a similar cash outflow (or change in assets on the balance sheet) from 2000 to 2017. However, the amounts each year differ from each other. Hence, it is assumed that only the other investing activities on the cash flow statement allow a reliable statement.

Without the position of the other investing activities, the total cash flow from investing activities would look quite different. In other words, the cash flow would have a trend like the one of the CAPEX. But, referring to Figure 11 in chapter 4.3.2.4. (Total Cash from Investing Activities), the overall development is a lot more volatile and downward sloping after 2009 when including the other investment activities. From 2010 to 2017, when dividend payment increases were not payable by a rising profitability anymore, the reduction of other investing activities compensated the stagnating operating cash flow. When summing up every year’s additional dividend expenditure exceeding the average of dividend payments made from 2005 to 2009, the total of dividend increases amounts to a sum of 94.4 billion between 2010 and 2017. Contrariwise, the reduction of other investing activities after 2009 led to a total amount of 82.5 billion saved for dividend payments. So, in the period from 2010 to 2017, 10.3 billion per year on average were saved for dividend payments by reducing the money spent on other investments. However, 13% of the dividend increases are still unfinanced.

5.3. Financing Activities

As for the debt positions, the net income expense has a cyclical development, meaning that interest expenditures are highest during the economic turmoil and lowest during peaks. However, this does not lead to any implications for the level of debt. The current liabilities’ trend is similar to the EBIT and therefore adjusts to the business’ performance.

Other than a large increase in 2009 because of the Genentech takeover by Roche, the total noncurrent liabilities showed almost no movement. Yet, from 2014 on, the long-term liabilities did incrementally increase by around 20 billion. However, when the cash flow from debt is included in the analysis, the numbers strongly suggest that there has not been any systematic procedure to raise funds for dividend payments. Particularly, the position in the cash flow statement emphasizes the fact that debt was being raised or repaid on an erratic basis, caused by company specific events.

Lastly, the equity was observed. The share capital, additional paid in capital and treasury stock combined did more or less display a stagnating trend. Major increases in 2002 and 2015 and one decrease in 2008 were company specific events. Nonetheless, the changes in shareholder capital on the balance sheet do not reflect the cash flow from repurchases. Those vary strongly from year to year and a trend is hard to spot. The data supported by a five-year moving average does exhibit an upward trend starting in 2007 when the financial crisis hit the economy (see Figure 13). In 4 out of 5 consecutive years, the repurchases were above 9 billion up to a little more than 13 billion. After 2011, the moving average indicates a downward sloping trend and indeed, the reduction in repurchases freed up additional 9.3 billion for financing the rise of dividend payments between 2010 and 2017. The remaining 11.9 billion in dividends left to finance therewith are further diminished to 2.6 billion. Since the net change in cash is relatively stable and was not being reduced in most years, those remaining 2.6 billion must be spread over different positions in the cash flow statement. Because of the insignificance of the value, further investigation was omitted.

5.4. Discussion

In conclusion, the results of this study clearly indicate that the rise in dividend payments was primarily financed by reducing the expenditures on acquisitions and other investing activities after profitability started stagnating in 2009.

Like mentioned in the second chapter (State of Research), only the study by Michelle Bergmann (2016, p. 47-56) did present a direct answer regarding this thesis' question. Like examined in this work, Bergmann found that companies are decreasing their investing activities in order to fund rising dividend disbursements (in the Australian market). It is to note that the CAPEX was not reduced, which insinuates that companies

try to maintain the already existing property, plant and equipment. Investment opportunities that expand the operation by making acquisitions or other investments not directly related to existing business operations are, however, dropped. This could also suggest that less investment opportunities are available (Truong, T., Heaney, R., 2007, p. 667-687), which in turn steers the focus on the firm life cycle theory, according to which older companies and firms that are further in their life cycle have less viable investments to make (Bulan, L. T., Subramanian, S., 2011, p. 201-213). This could apply to the corporations examined in this thesis, since they are all at least 18 years old. Though, a glance at the median firm in the figure 11 (Cash from Investing Activities) reveals that smaller firms increase their investments towards the end of the examined period, while larger companies do not. Thus, the size of corporations might matter in this case, as observed by Denis and Osobov (2008, p. 62-82). And indeed, the sample data for Swiss corporations does portend that larger firms are the main drivers for the overall development and that smaller businesses in some cases show a little different trend than the aggregated data of all companies. Yet, the differences in company sizes was not specifically observed in this paper and no fully reliable statements can be made in this regard.

In addition, Brav, Graham, Harvey and Michaely (2005, p. 483-527) stated that companies are willing to raise debt in order to continue the dividend payments. However, this cannot be confirmed as the data for Swiss firms does not display a systematic approach to increasing debt positions. Nonetheless, there are occasions when firms raise debt to finance extraordinary investments, like for example in 2009 the Genentech takeover by Roche.

Further, Bergmann (2016, p. 47-56) examined that companies tend to smooth dividends and are reluctant to cut payments. This also holds for the sample of Swiss firms. Even if the income is not growing, dividends are continuously increasing. So, shareholders are reimbursed mainly by regular dividend payments, but also share repurchases do have a quite large impact on total disbursements. By slightly reducing share repurchases, Swiss firms were able to free up some cash flows for increasing regular dividend payments. It does seem that payouts on the Swiss market via repurchases are very situational and adjust to the momentary operational situation of enterprises, which is underlined by the observations of Brav, Graham, Harvey and Michaely (2005, p. 483-527).

6. Conclusion

The goal of this study was to find out where exactly the money for rising dividend payments in Switzerland comes from, if at the same time, the income is stagnating. For this purpose, a sample of 99 Swiss firms that have been listed on the Swiss stock market from the years 2000 to 2017 was examined. The data set was retrieved from Bloomberg and was composed out of the balance sheet, income statement and cash flow statement figures. Every position was then examined in detail in order to obtain a comprehensive understanding of the situation. The results indicate that the listed Swiss companies did decrease their investing activities from 2010 to 2017. Also, to a smaller extent, share repurchases were slightly reduced in the second period of the timeframe. Both measures freed up cash for regular dividend payments and allowed to do that without raising debt or reducing cash positions. Furthermore, the data detects the nine largest firms of the sample as the main driver of this development, but that the median enterprise shows a similar trend.

It regularly occurred that the Bloomberg data was not complete, which prevented fully reliable statements. In addition, because of the long timeframe of 18 years, changes in the data structure might have occurred because of alterations in accounting standards or other causes. Those changes are not visible to the user of the data sets and can therefore lead to wrong interpretations. Also, the sample of companies only represents a small portion of Swiss listed firms and many entities that moved in or out of the stock market are not included. However, when comparing the findings of this study with the ones of other researchers, more often than not, similarities can be found. It seems that listed companies in industrial countries do all behave alike regarding their dividend policy.

The continuously rising dividend payments emphasize their importance for shareholders. And that firms are paying dividends regardless of their current income situation is not necessarily a problem in the short-term. But in a long-term this could pose a threat. Even though the examined Swiss firms did not decrease their cash holdings, this might change at some point in time and endanger the companies' liquidity. Also, what is concerning, important investment opportunities that could grow the business might be missed. A loss of competitiveness could result from that.

Further studies could focus on differences between sectors, age and company size in order to make more specific statements. Also, interviews with managers of Swiss firms on their handling of dividend payments could give insights into the psychology of dividend policy. In particular, managers' opinion about the momentary trend and their future intents in regard to this thesis' problem are interesting. Moreover, potential research could try to find reasons for the stagnating income situation on the Swiss stock market.

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8. Appendix

For the appendix please refer to the separate Excel file.