

Executive Compensation & Corporate Governance

A study examining compensation in
Switzerland and Germany as well as
trends in corporate governance

Insights 2018



Introduction Insights 2018

How much do the top management bodies – combining board members and executives – cost shareholders? How have pay levels of board members and executives developed over time? What are the main trends in pay structure? How are overall earnings distributed to top management, to personnel and to financial capital providers? How should companies communicate with shareholders, employees, the media and society at large? What are innovative, easy-to-understand reward systems that create incentives for sustainable firm value generation?

To help answer these questions, and to engage PwC clients in a dialogue, every year for over a decade PwC has presented one of the most detailed Swiss studies available on the level and structure of board and executive compensation.

We are delighted to present the twelfth edition of our study “Executive Compensation & Corporate Governance Insights.” This study comprises the years from 2007 to 2017 and investigates the largest 100 listed Swiss companies. Moreover, for more recent years, one part of our study also provides a comparison with the largest 130 listed German companies.

Like last year, we present the outcomes of the study in three short Insights releases. The notes are, however, closely related, and we hope that you will enjoy the breadth of perspective offered when considering them as a whole:

1. **Insights 2018**, part 1, released in September 2018, studies the level and structure of compensation of CEOs, other executives, and chairpersons and other board members in Swiss listed companies, and thus provides valuable insights for board members and executives seeking the right quantum of compensation.
2. **Insights 2018**, part 2, released in October 2018, offers, for the first time, a comparison of the level and development of executive and board pay in Switzerland and Germany.
3. **Insights 2018**, part 3, released in November 2018, presents a new idea for linking equity-based (long-term) compensation with a focus on the achievement of strategic targets. This versatile method can be adjusted to the circumstances of each firm but is sufficiently general to allow straightforward communication to shareholders and other stakeholders.

Our data facilitate a wealth of other analyses. Here we highlight only a few key points, but we are happy to engage with you in a dialogue about aspects of compensation which are of particular interest to you.

We look forward to engaging in dialogue with you.



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Rethinking executive
compensation
in a changing
world

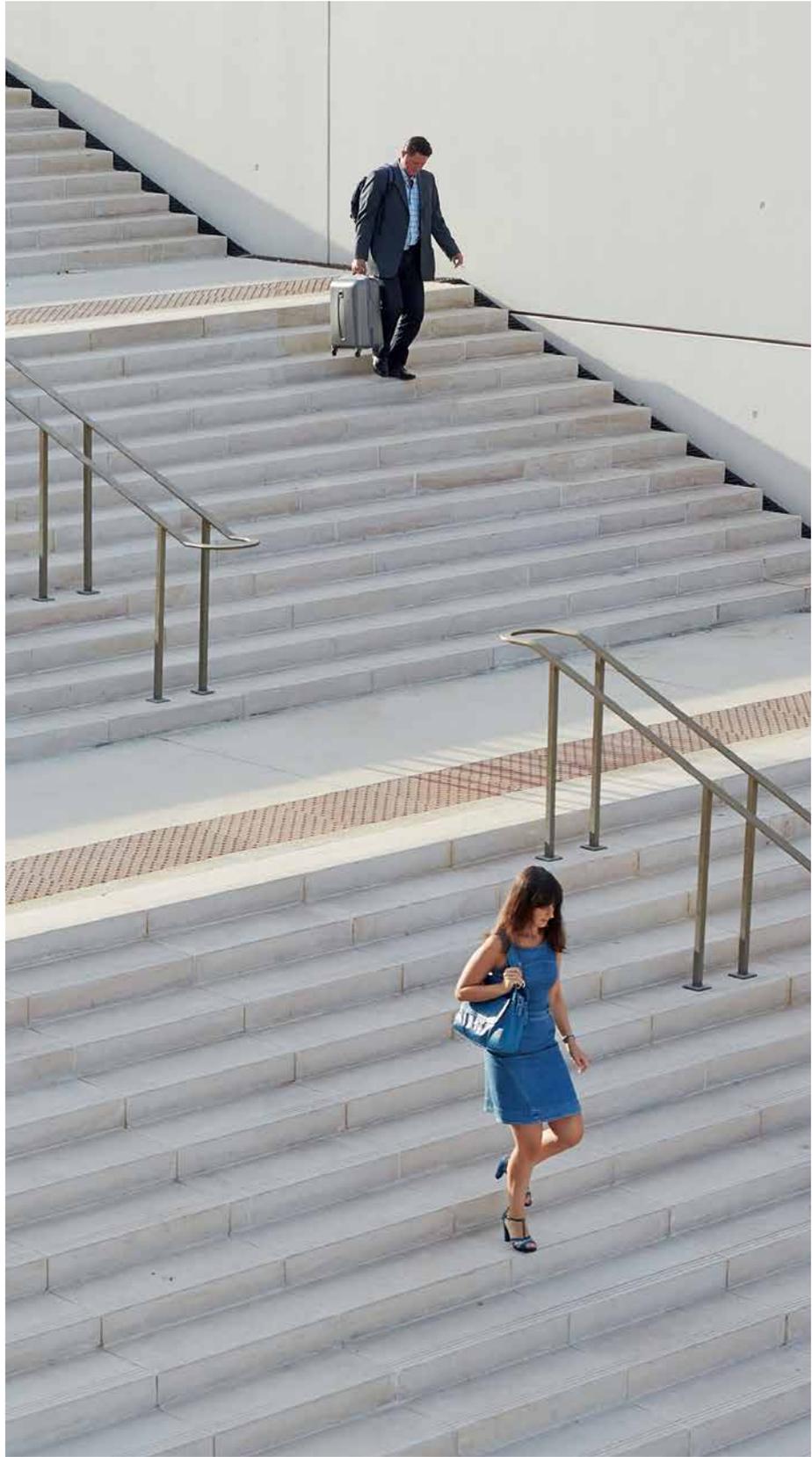


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Introduction, part 1

PwC's **Insights** 2018, part 1, summarises the key highlights for the largest 100 Swiss listed companies regarding the level of compensation of CEOs and other executives, as well as chairpersons and other board members.

The key findings are:

1. Board and executive compensation are economically highly relevant quantities. The total sum of board and executive compensation (together referred to here as **top management bodies compensation**) in the largest 100 companies in 2017 was about CHF 1.6 billion – almost identical to the sum in 2009. There has, however, been a shift among companies. The total sum paid to the SMI top management bodies was CHF 811 million, a drop of 15.4 % since 2009; the aggregate sums to the SMIM and small-cap top management bodies were CHF 416 million and CHF 354 million, respectively, reflecting increases by 16.7 % and 19.1 % relative to 2009.
2. In 2017, the median SMI firm spent CHF 31.8 million on executive compensation, the median SMIM firm CHF 13.2 million and the median small-cap firm CHF 5.2 million. As for board compensation, the totals were, at the median, CHF 4.5 million, CHF 2.0 million and CHF 1.0 million, respectively.
3. The median value of the executive-to-board compensation ratio – the ratio of total compensation of executives divided by total compensation of board members – can indicate the power of executives. In 2017, overall, that ratio was 4.9, the lowest value observed in 11 years, and the first time this ratio has dropped below 5. There is, however, wide variation across companies.
4. Median total CEO compensation in the SMI companies has fallen to its 2009 level, at CHF 5.5 million (–29.5% compared to 2016). Year-on-year, median CEO compensation in the SMIM companies has also fallen (by 7.6 % to CHF 3.3 million) but is still 54.3 % above its 2009 level. Median total CEO compensation has increased by 3.5 % in small-cap firms; at CHF 1.4 million it is now 12.7 % above 2009 levels.
5. In the spirit of Value Added Statements, we have introduced the concept of EBIPT – Earnings Before Interest, Personnel Expenses and Taxes. At the median firm, 1.3 % of EBIPT goes to the top management bodies, 63.9 % to other employees, 5.8 % directly to society in the form of corporate income taxes and 29.0 % to debt- and equity-holders. Talking about “the distribution of the pie” is an important element of value reporting of firms to sustain all stakeholders' involvement in the long run.

Compensation levels in SMI, SMIM, and small-cap companies

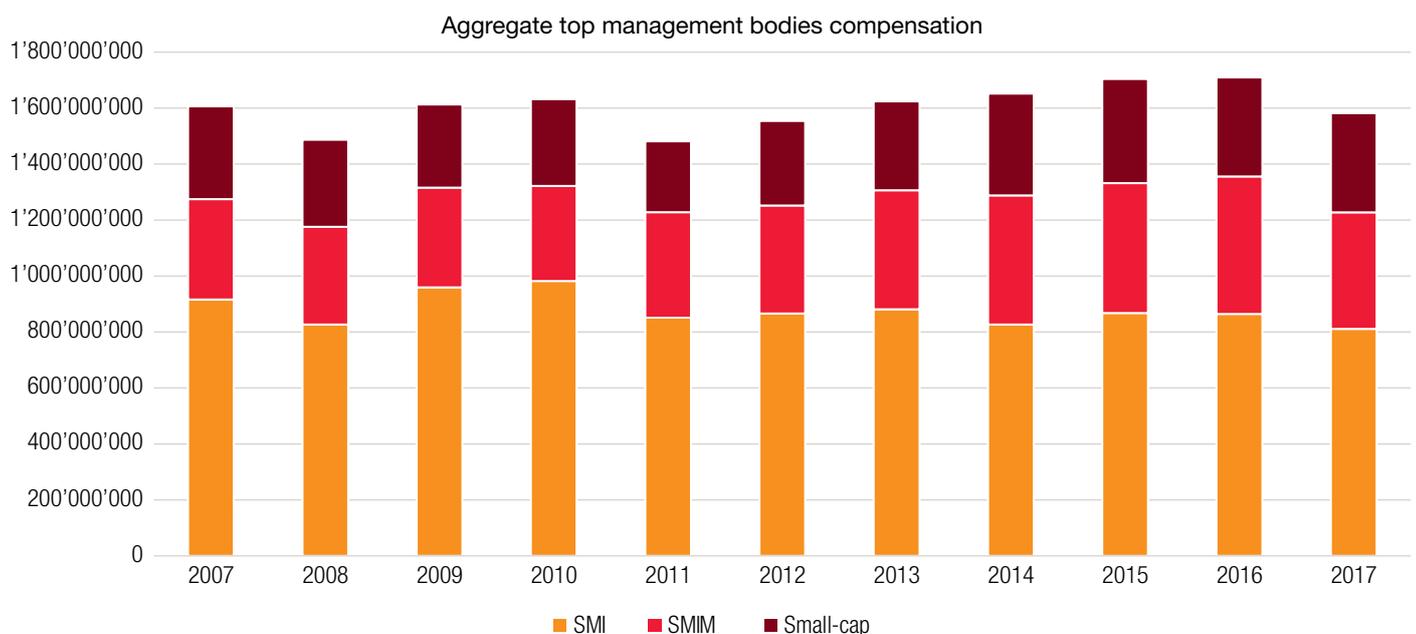
The total sum of board and executive compensation (together referred to here as **aggregate top management bodies compensation**) in the largest 100 companies in 2017 was CHF 1.58 billion – almost identical to the sum in 2009.¹ As **Figure 1** shows, this consists of CHF 1.36 billion total compensation conveyed to executives and CHF 221 million conveyed to board members.² Throughout this report, board members refer to non-executive board members. Executive board members count as executives.

As can be seen, aggregate top management bodies compensation has remained fairly stable over the years, though it was somewhat higher in the years 2014 to 2016. From 2016 to 2017, the aggregate amount fell by 7.5 %, mostly driven by a drop of 8.1 % in aggregate executive pay. The fraction of aggregate top management bodies compensation going to executives is roughly 85 %, with little change overall over time.

Consider next the three size groups that we have traditionally studied in this report: the SMI (essentially the largest 20 listed companies), the SMIM (essentially the next largest 30) and the small-cap (essentially companies ranked 51-100 in size). There has been a notable shift in aggregate top management bodies compensation among these three groups of companies. The total sum paid to the SMI top management bodies has dropped by 15.4 % since 2009 (from CHF 959 million to CHF 811 million), while it has increased by 16.7 % and 19.1 %, respectively, for the SMIM and small-cap top management bodies (from CHF 357 million to CHF 416 million, and from CHF 297 million to CHF 354 million, respectively).

Overall, these numbers suggest that top management bodies compensation is an economically important topic. The total cost of about CHF 1.6 billion is sizable compared, for example, to the total Earnings Before Interest and Taxes (EBIT) of roughly CHF 100 billion that these 100 companies accumulate in a given year (though that number fluctuates considerably over time). As such, it is understandable that shareholders and the public are strongly interested in an effective and well-governed board and executive compensation.

Figure 1: Aggregate top management bodies (board and executive) compensation has remained relatively stable over the last 11 years – but there have been substantial moves across companies



¹ We often refer to 2009 as the base year in this report, even though the figures also report data for the two years 2007 and 2008 for which data are also available. 2009 is the first year after the 2007/08 financial crisis.

² To provide a picture of the total cost to shareholders, these numbers include compensation to leaving executives (contrary to the analysis of pay for individual positions below, which focuses on executives and board members active at the end of the fiscal year, or active for the full year, as indicated).

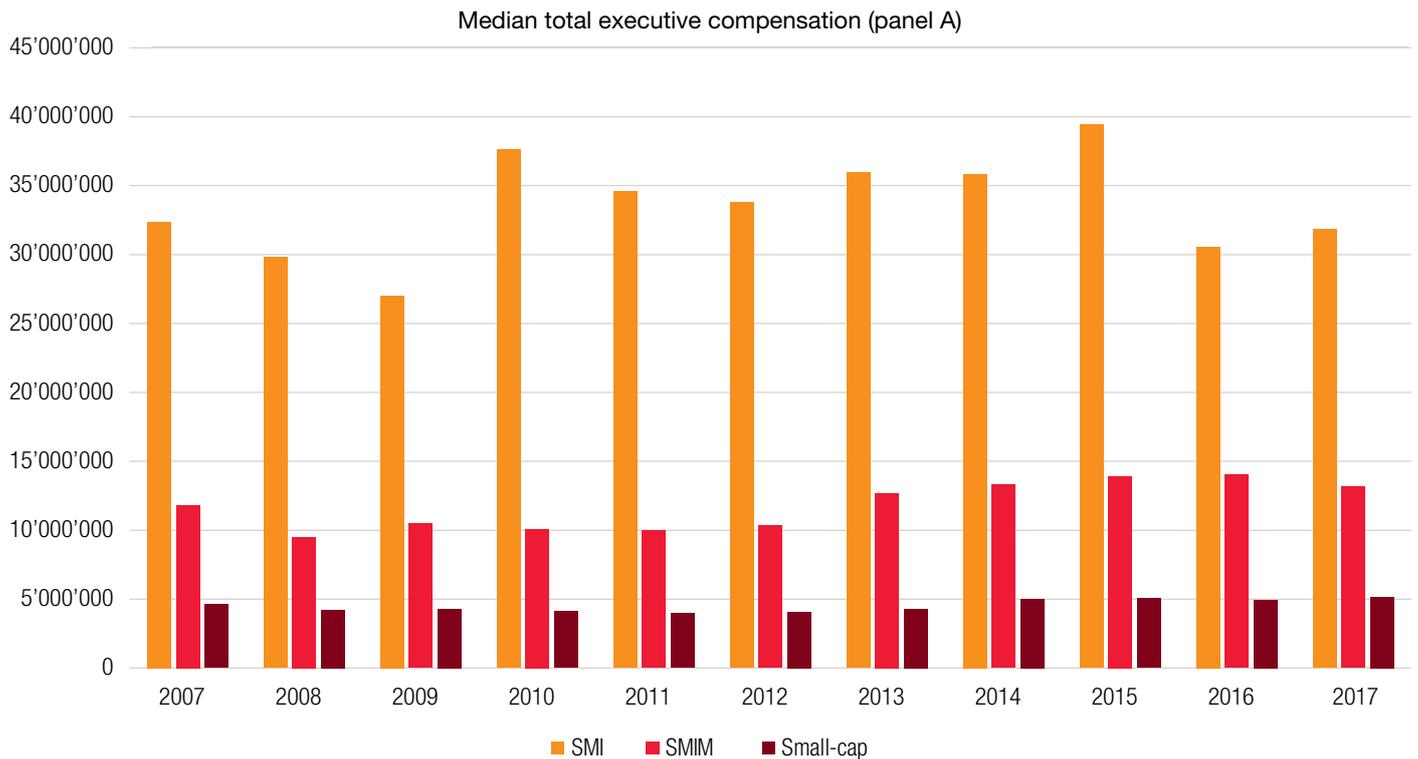
Differences across companies in aggregate top management bodies compensation

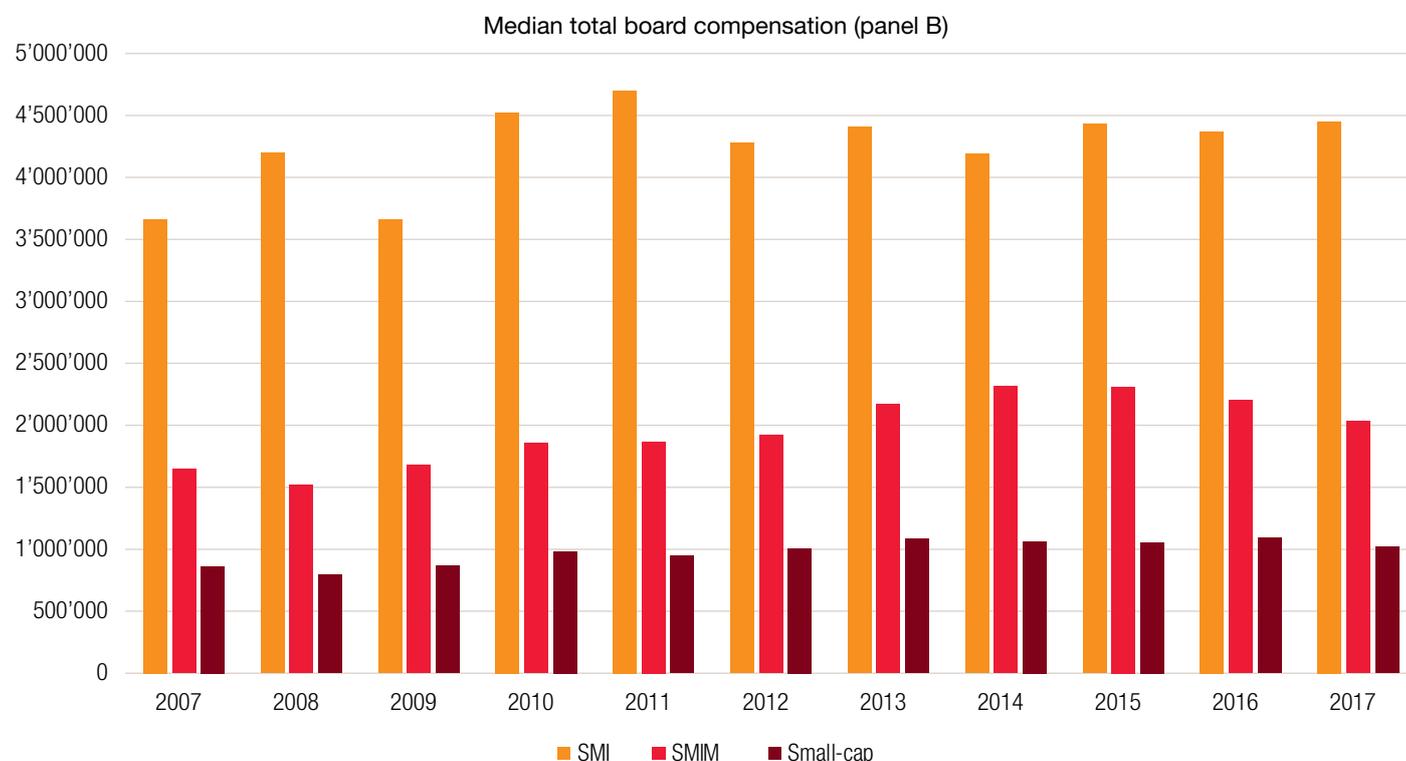
While the analysis in the prior section provided an aggregate view, decision-makers also need to know top management bodies compensation levels of a typical, representative firm. For this analysis, we refer to the median total compensation. Details on other quantiles (such as the 25th or 75th percentiles) are available upon request.

Figure 2 again considers the aggregate compensation conveyed to the two top management bodies, separately for executives (panel A) and for board members (panel B). Median total executive compensation increased from 2009 through

2017 by 17.8%, 25.6% and 20.8% for SMI, SMIM and small-cap companies, respectively. Notably, among SMI firms, the last two years have seen significantly smaller compensation than the years 2010 to 2015. In 2017, the median SMI firm spent CHF 31.8 million on executive compensation, the median SMIM firm CHF 13.2 million and the median small-cap firm CHF 5.2 million. Median total board compensation increased from 2009 to 2017 by 21.6%; 21.3% and 17.8% to CHF 4.5 million, CHF 2.0 million and CHF 1.0 million, respectively, in the three groups.

Figure 2: Median total executive and board compensation has increased since 2009





The figures suggest, not surprisingly, that executive compensation is substantially higher than board compensation at the median firm. (Remember that board compensation here contains non-executive board members only.³) To examine this issue in more detail, we compute, for each company, the sum of pay received by all executives and divide this by the sum of pay received by all board members. We label this the executive-to-board compensation ratio, or the E2B-ratio. Then, we compute the median and other quantiles of the distribution.⁴

Figure 3 shows the results. In 2017, overall, the median E2B-ratio was 4.9, the lowest value observed in 11 years, and the first time this ratio has dropped below 5. In 2009, the ratio was still at 5.3. This general trend is also evident within the three size groups, particularly within SMI and SMIM. For example, whereas in 2009 the median E2B-ratio was 6.6, 6.4 and 4.9 in SMI, SMIM and small-cap companies, in 2017 it was (only) 6.0, 5.0 and 4.7, respectively. It is worth noting that 2017

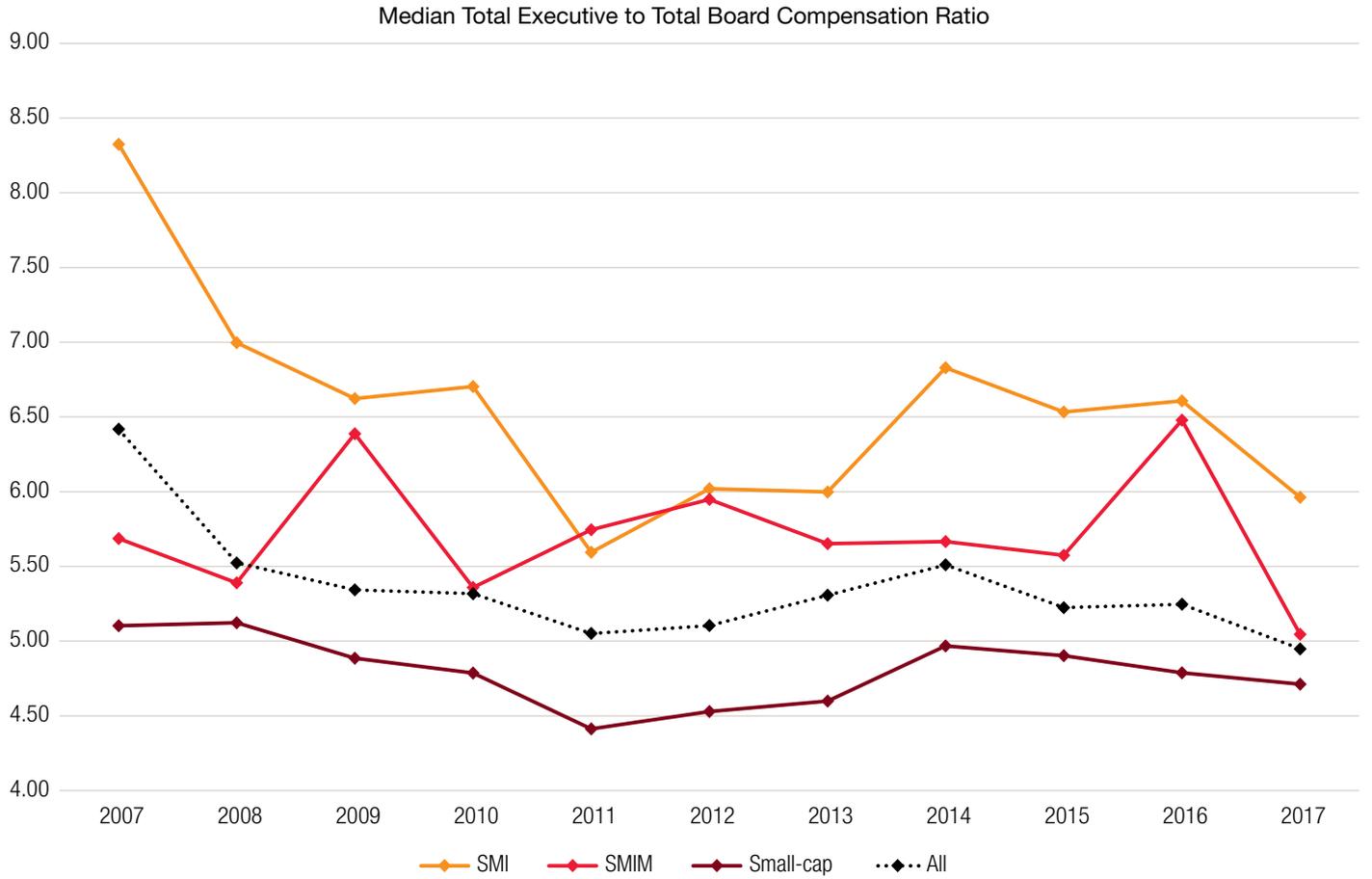
appears to be a bit of an unusual year (a theme that we will revisit in the analysis of CEO compensation below), so we do not predict these low levels will be the new equilibrium. We also note, however, that the outlier values (at the 75th percentile and higher) have decreased (with some fluctuations). In 2009, for example, the third quartile values were 9.6, 8.6 and 8.0 for SMI, SMIM and small-cap companies, respectively; in 2017 they were (only) 7.8, 7.6 and 6.0.

The E2B-ratio indicates the power that executives have relative to the board. While the ratio will be higher among successful firms (given that executive pay responds to performance more than board pay), an excessively high ratio can be problematic. There is no quantitative model or rule what an optimal ratio should be, but we recommend that firms be mindful of the practice they employ so they can explain it coherently to their stakeholders.

³ These results rely on disclosed values. For example, while most companies nowadays make a clear distinction between executive and non-executive roles of board members, they often do not disclose compensation separately. In such cases, we count all compensation towards the role as an executive. Thus, board pay can be understated relative to executive pay in such cases. This limitation notwithstanding, to the extent that this disclosure practice does not systematically vary across the three size groups, the analysis here can at least be considered indicative.

⁴ Note that this median of ratios is different than the result obtained when computing the ratio of the median values.

Figure 3: In recent years, executive compensation relative to board compensation has declined



Differences across companies: CEOs, executives, chairpersons, board members

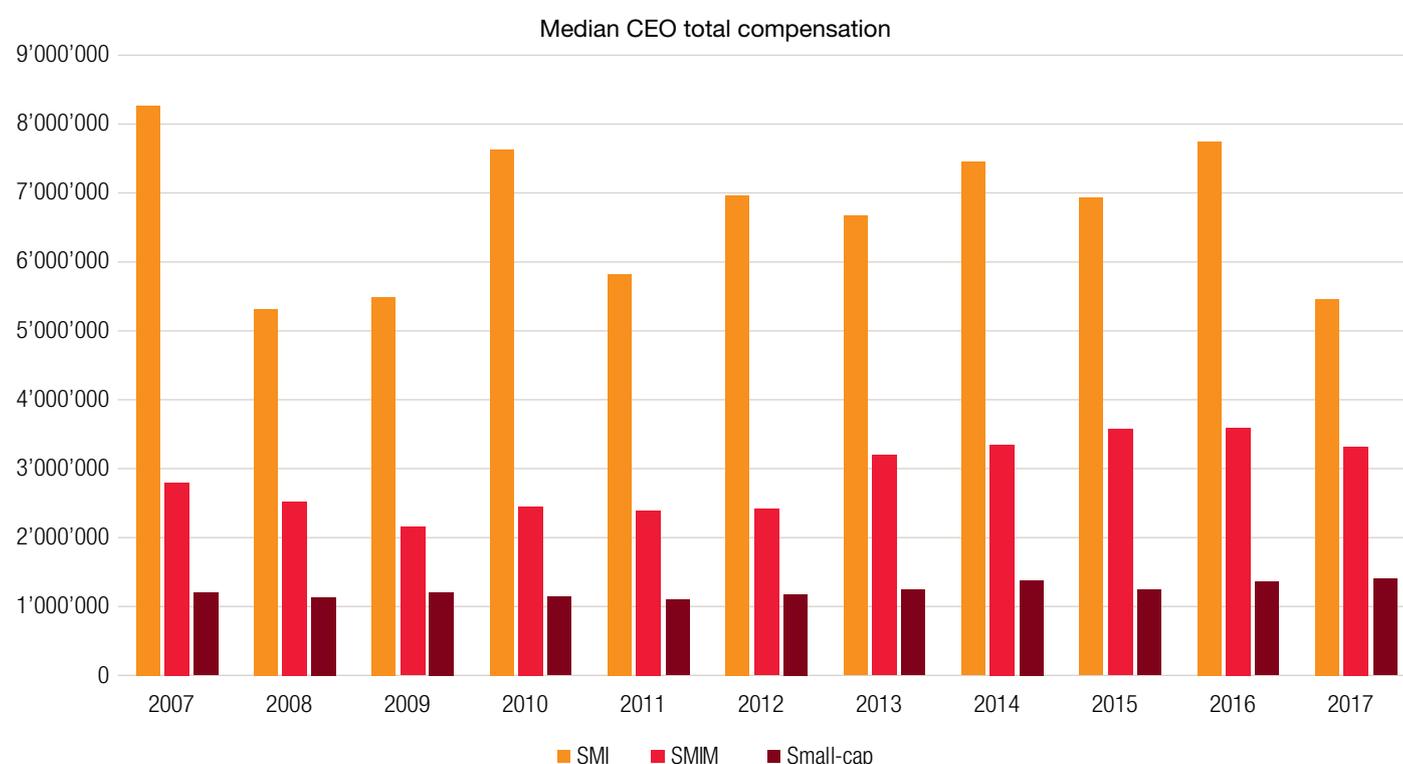
In this section, we drill down further to the compensation received by individuals in different functions. We primarily present results for individuals in office at the end of the year (excluding those who left during the year).⁵

Among SMI companies, median total CEO compensation returned in 2017 to its 2009 level. This striking finding is visible in **Figure 4**: SMI median total CEO compensation dropped by 29.5 % year-on-year, from CHF 7.7 million to CHF 5.5 million. This change is due to a combination of factors. First, changes in compensation at the existing companies; second, CEO changes, all three of which resulted (somewhat unusually) in lower compensation for the incoming CEO; third, changes in the composition of the index (with two companies leaving and two entering); fourth, one company did not disclose a CEO this year. As such, part of the change is a technically driven one, and it will be important to keep a close eye on these developments in future. Interestingly, for other executives,

there has essentially been no change in median compensation among SMI firms since last year. In SMIM and small-cap companies, median CEO compensation is substantially higher than in 2009, at 54.3 % and 12.7 %, respectively. However, SMIM median CEO compensation has fallen as well on a year-on-year basis, by 7.6 % to CHF 3.3 million. In small-cap companies, it has increased by 3.5 % to CHF 1.4 million.

Extremely high CEO compensation levels (above CHF 20 million), prevalent in a few SMI companies in the years 2007-2009, have vanished in recent years. Therefore, average CEO compensation in SMI companies, at CHF 6.8 million, is substantially lower than in 2009, when it was CHF 7.7 million. In SMIM and small-cap companies, average compensation is now CHF 3.3 million and CHF 1.8 million, respectively, up 15.4 % and 20.6 % from 2009. (The detailed statistics are available on request.)

Figure 4: In 2017, median total CEO compensation in SMI companies returned to 2009 levels, but was still substantially higher than in 2009 among SMIM and small-cap companies.

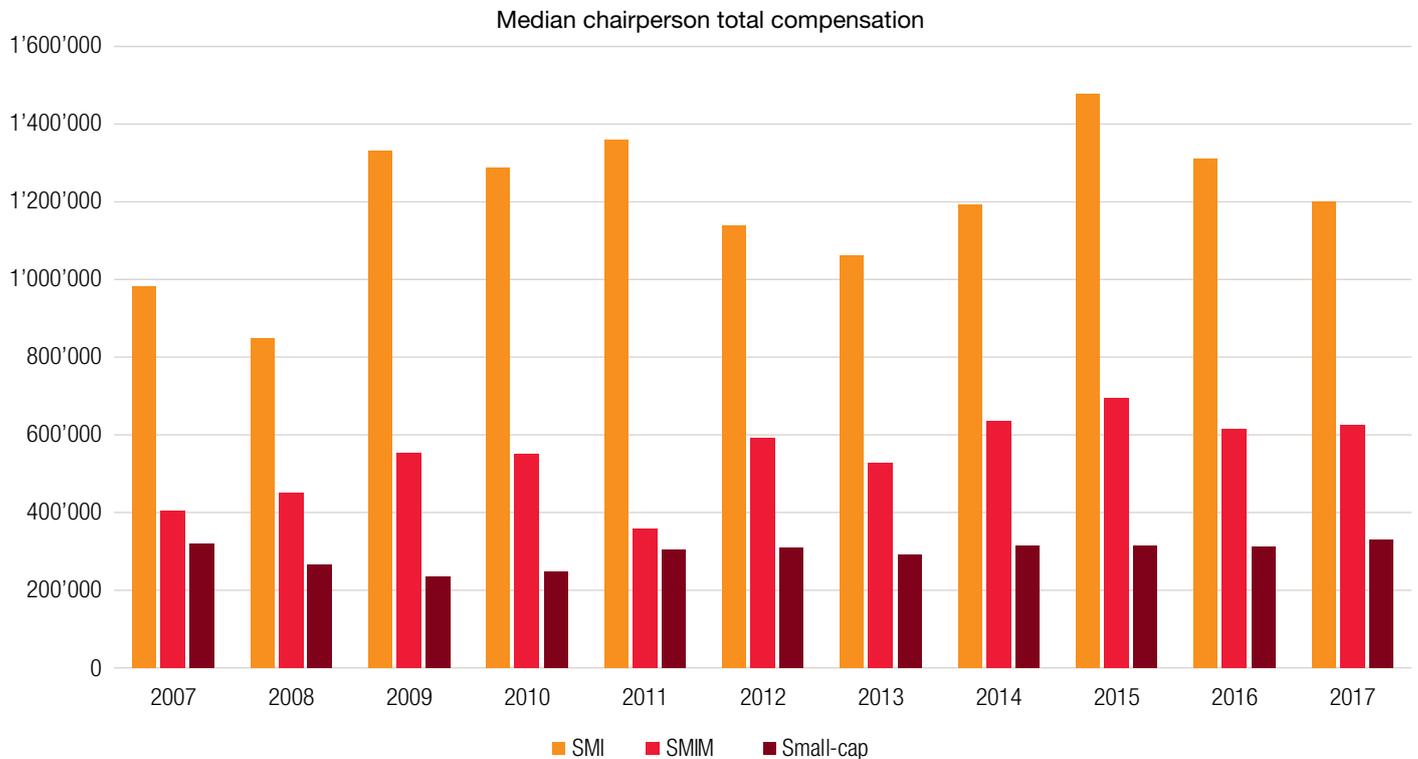


⁵ An alternative approach is to restrict attention to individuals in office for the full year. That approach has the advantage that potentially unrepresentative values (due to short service periods during a year or large initial replacement awards for prior compensation) are not included; it has the disadvantage that the sample is smaller. All results remain largely similar with the alternative approach (details are available on request).

Figure 4 shows that it is still the case that larger companies pay substantially higher total compensation. In prior years, a trend of convergence had seemed to materialise between SMI and SMIM firms, and of divergence between SMIM and small-cap firms. That trend has continued for CEO compensation as far as SMI and SMIM firms are concerned: specifically, in 2009 the median SMI CEO earned 2.55 times more than the median SMIM CEO. By 2017, that number had fallen to a multiple of 1.65. However, other convergence and divergence trends that had seemed clear in prior years now appear to have reversed, at least temporarily. For example, the ratio between the median SMI for other executives and the median SMIM for other executives is now 2.52, even higher than the 2.26 it was in 2009. Similarly, the (seeming, but not monotonic) divergence of SMIM and small-cap pay for CEOs and other executives has not continued for the time being. We still consider this analysis a useful diagnostic of the overall calibration of the quantum of pay.

We have also analysed data for chairpersons and other board members. Briefly, from 2009 to 2017, median **non-executive chairperson compensation** for SMI companies fluctuated slightly around CHF 1.2 million. In 2017 it was almost exactly CHF 1.2 million. In SMIM companies, chairperson compensation has increased by 13.0 % from around CHF 554,000 in 2009 to around CHF 626,000 in 2017. A major increase had taken place before 2009: in 2007, median compensation had been only CHF 403,000. In small-cap firms (the next largest 50 companies), median chairperson compensation increased by 6 % to around CHF 330,000 year-on-year, 40.4 % above the 2009 level. **Figure 5** illustrates these findings.

Figure 5: In SMIM and small-cap firms, chairperson compensation has been increasing since 2009



The remuneration of **other members of boards of directors** who have no executive functions has remained more or less the same since 2007 (and 2009) among SMI companies, and increased for SMIM and small-cap firms. In 2017, a median board member of an SMI company received about

CHF 309,000 (+4.3 % since 2007, +0.5 % since 2009), a median board member of an SMIM company about CHF 209,000 (+23.6 % since 2007, +27.7 % since 2009) and a median board member of a small-cap firm CHF 129,000 (+19.8 % since 2007, +44.5 % since 2009).

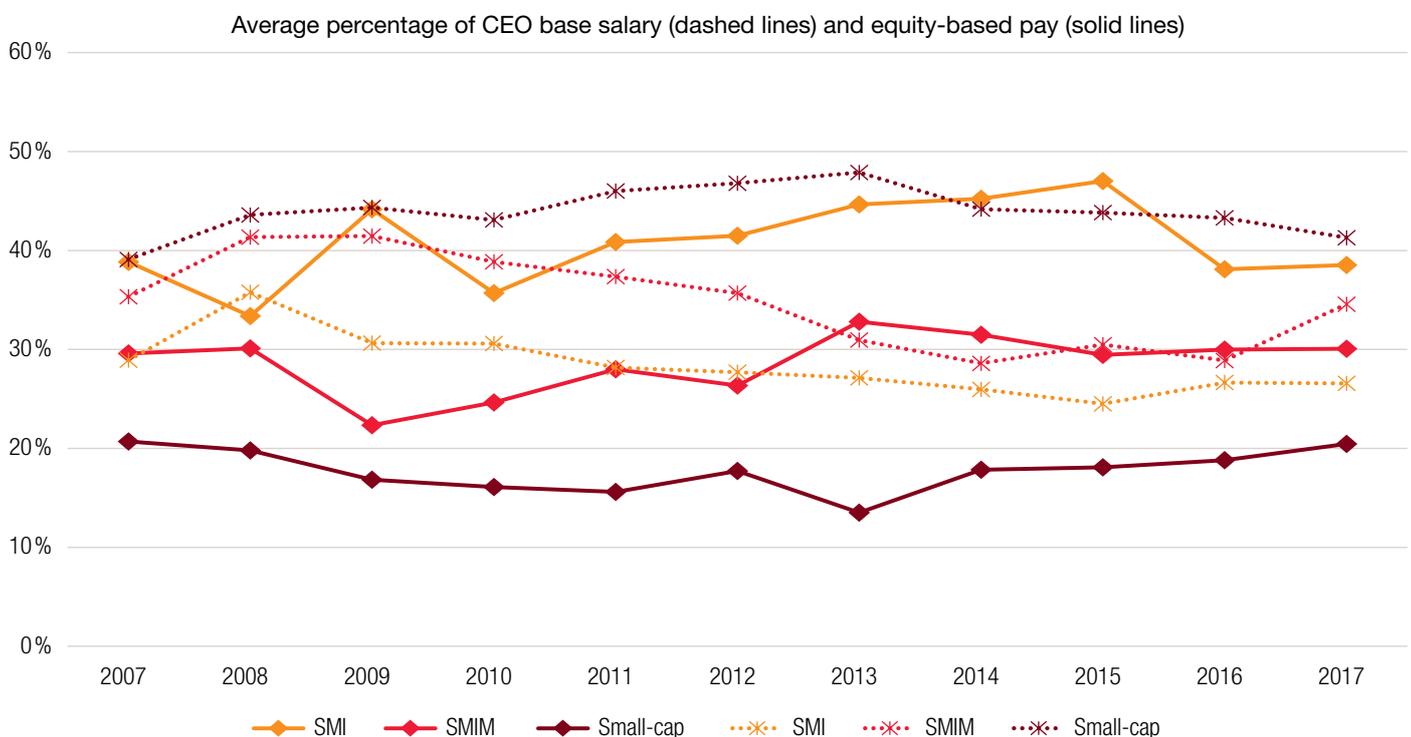
Structure of compensation

Of course, when assessing compensation, a key issue is not only the level of compensation, but also the structure of compensation.

Figure 6 shows the development of pay structure over time. In SMI companies, over the years base salary has rarely accounted for more than 30 % of the total, and the equity-based element never less than 30 % (and often close to, or more than, 40 %). Indeed, the average percentage of equity-based compensation has been increasing steadily from around 36 % in 2010 to 47 % in 2015, although it fell to just below 40 % in 2016 and 2017. As of now, it is not clear whether this is a temporary dip or the beginning of a permanent shift in pay structure.⁶ In SMIM companies, from 2008 to 2012 base salary (around 35–40 %) was a much more important component of compensation than equity-based compensation

(around 25 %). However, these companies, too, have trended towards increasingly using equity-based pay for their CEOs. As a consequence, in 2013 to 2017 equity-based pay and base salary both represented around 30 % of total compensation. In small-cap companies, equity-based compensation is still at a low level, around 20 %, and has not increased noticeably over the study period; however, the decline from 2007 to 2013 has by now completely reversed. Here, as a rule still more than 40 % of total compensation derives from base salary, although this number has now declined for four years in a row. The fact that small-cap CEOs receive a smaller fraction of pay in equity compared to CEOs of SMI and SMIM companies is also because other CEOs have a higher overall level of compensation, and because a big part of this compensation differential reflects variable compensation.

Figure 6: Larger firms convey a higher fraction of CEO compensation in the form of equity than smaller firms



As for executive share ownership, shareholding guidelines are more frequent among large-cap companies than among smaller firms. For example, in 2017 14 out of 20 SMI companies (70 %) had shareholding guidelines for their executives. 8 out of 24 SMIM companies (33 %) had such

guidelines – a two-fold increase relative to 2015. A single small-cap company had guidelines for their executives. For board members, 4 out of the SMI companies and 4 out of the SMIM companies had guidelines in 2017.

⁶ When considering full-year SMI CEOs, the highest point for equity-based compensation, at 48 %, was reached in 2013. Interestingly, a trend away from equity-based compensation has been observed since that time for this group of CEOs. Also, in that sample, 2008 actually saw a larger fraction of pay conveyed in cash than in equity on average. Small-sample effects may be at play here.

To assess the importance of wealth incentives, we compute, for each CEO, the ratio of wealth to base salary. **Figure 7** plots the median of the resulting ratios in the three size groups. In interpreting the results in this section, it is important to keep

in mind that the numbers reported here include all shares reported by the companies as shareholdings; they do not include options.

Figure 7: The wealth lever has increased substantially over time, indicating strong exposure of CEO wealth to shareholder wealth

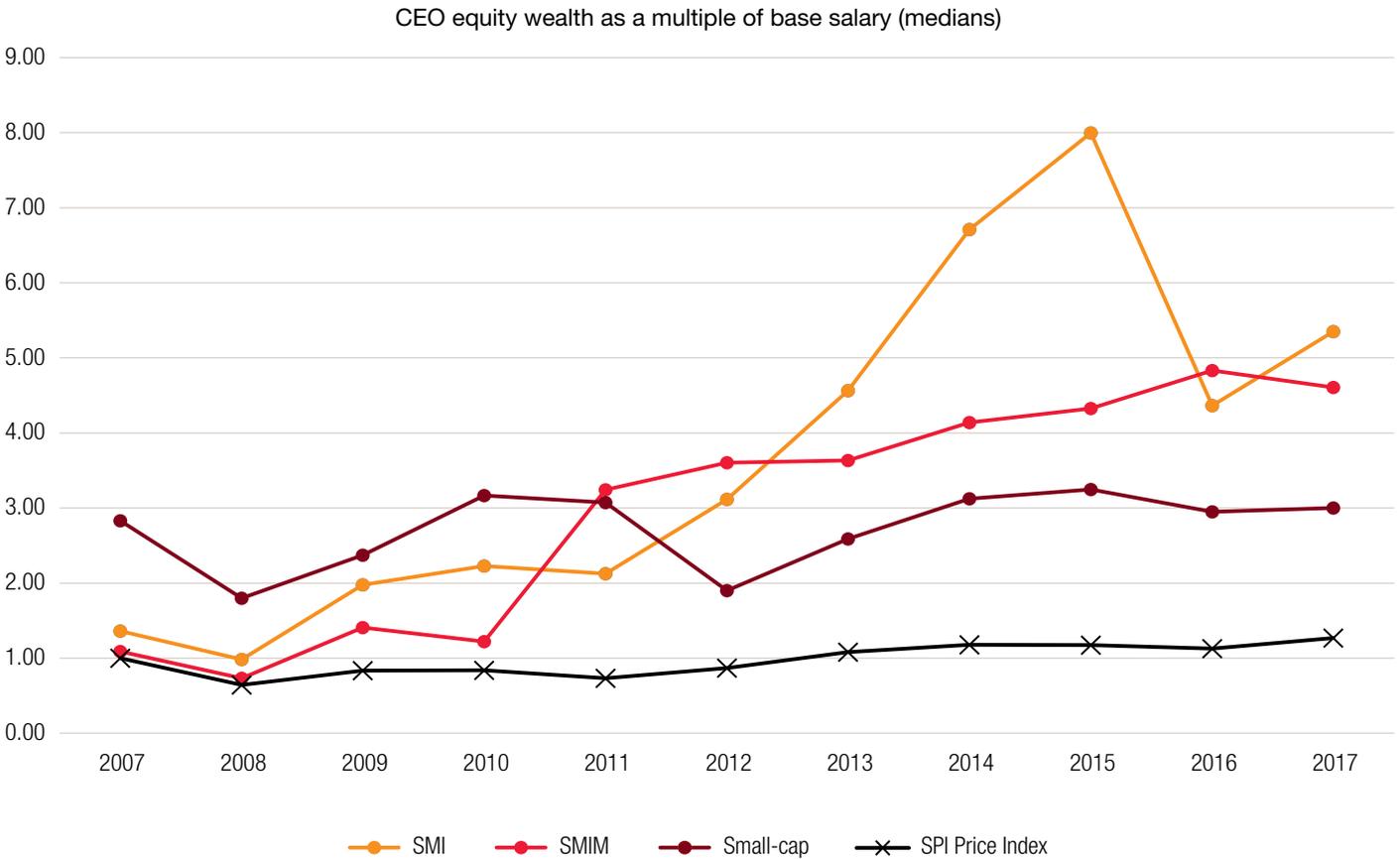


Figure 7 shows that, consistent with international trends, Swiss CEOs of large companies hold increasing multiples of base salary as equity. While in 2009 the median ratio of equity wealth to base salary was around 2 for both SMI and SMIM companies, respectively, this ratio increased to around 5 in 2017. (In 2015, the ratio had been at around 8 for SMI companies, but this result is partially due to the small number of observations, so it should not be overinterpreted.)

Interestingly, in small-cap companies, equity ownership has been relatively stable throughout the sample period. The graph also shows the development of the SPI price index, which is normalised to 1 for the year 2007.⁷ The graph suggests that the general development of the stock market explains relatively little of this overall development for SMI and SMIM companies.

⁷ An alternative approach is to restrict attention to individuals in office for the full year. That approach has the advantage that potentially unrepresentative values (due to short service periods during a year or large initial replacement awards for prior compensation) are not included; it has the disadvantage that the sample is smaller. All results remain largely similar with the alternative approach (details are available on request).

The big-picture view: How firms distribute the pie

In our opinion, when it comes to board and executive compensation, it is important to be detail-oriented and broad-thinking at the same time. Therefore, after having reviewed levels and structure issues of compensation in some detail, in this final section we return to a more aggregate, broad-brush view. We do this because for a corporation to be successful, all of its stakeholders need to be satisfied on a sustainable basis. Thus, not only the providers of capital (debt and equity) need to be able to secure a sufficient return, but also the providers of human capital (employees and managers) as well as society at large (government and citizens, who ultimately provide the company's license to operate). In this section, therefore, we provide an aggregate analysis of how the "pie" – the overall value that is generated by a company's activities in a given year – is distributed among its major stakeholders.

Specifically, we conduct an analysis in the spirit of Value Added Statement that a few Swiss companies provide as part of their extended discussion in the annual report. To measure the size of the "pie" we introduce a new concept, **Earnings Before Interest, Personnel expenses and Taxes, EBIPT**. Thus, EBIPT is EBIT plus personnel expenses. In other words, it is what remains after considering the direct costs of goods sold; sales, general and administrative expenses; and depreciation and amortisation.⁸ Sales themselves can proxy for the value that the company generates for another group of stakeholders, the customers. But here we are interested in how the value that comes from the customers' willingness to pay (minus the costs of production) flows to those who helped produce the goods and services in the first place. We consider four ratios as proxies for the four "slices of the pie":

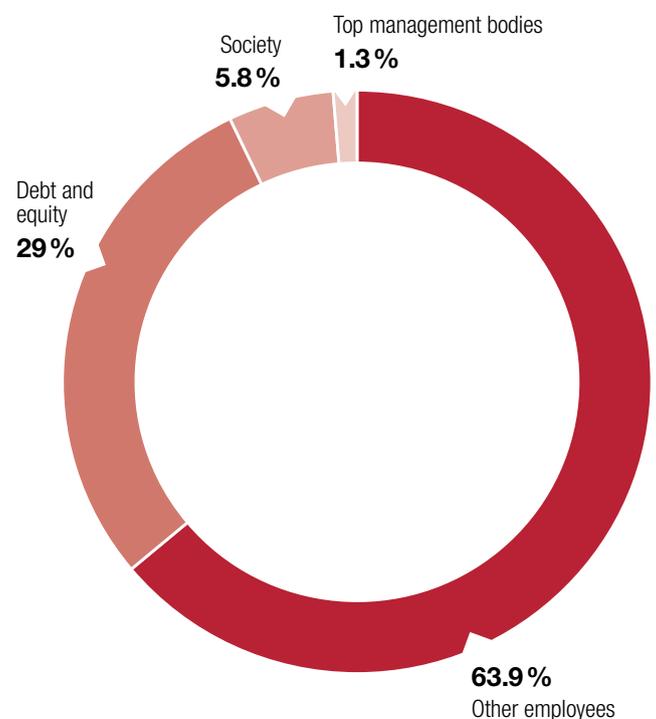
- 1) Society (direct tax revenues): Corporate tax expenses as a fraction of EBIPT show society's direct share of the overall value created.⁹
- 2) Employees: Personnel expenses, minus top management bodies compensation (board and executives), as a fraction of EBIPT, show the general employee share of the overall value created.
- 3) Top management bodies: Top management bodies compensation as a fraction of EBIPT shows the top management bodies' share of the overall value created.
- 4) Debt and equity: Interest payments plus the residual value (whether paid out as dividends or remaining inside the company as retained earnings) that remains after all other claims listed here as a fraction of EBIPT show the capital providers' share of the overall value.

In short, 1) is foundational capital ("society," in some sense "land"), 2) and 3) are human capital ("labor") and 4) is financial capital ("capital" in the narrow sense).

This analysis uses a somewhat smaller sample of around 75 companies per year over the 2007-2017 period. This is because several (even well-known) companies do not disclose total personnel expenses. Also, for some companies, such as real estate companies, the employee count is not meaningful, so we do not include these companies here. For each company included in this analysis, we compute the four above ratios, and we then consider the median values of the ratios.

Figure 8 shows that for the median firm in the last decade, very roughly speaking two-thirds of EBIPT goes to labour, slightly less than 30% goes to capital (debt and equity-holders) and slightly less than 6% goes to society in the form of corporate taxes.

Figure 8: At the median company, two-thirds of earnings before interest, personnel expenses, and taxes go to employees and the top management bodies (board and executives)



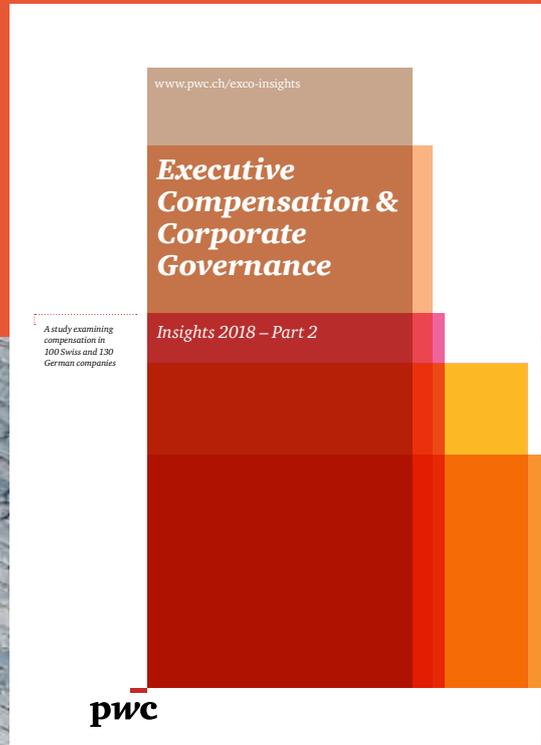
⁸ Management does have some discretion about these quantities.

⁹ This tax ratio is different than the corporate income tax rate that is usually used. The usual corporate income tax rate is calculated as a fraction of pre-tax income (that is, corporate earnings from which personnel expenses have already been deducted). The median corporate tax rate thus calculated is 20% in the sample of positive EBIT firms. That tax ratio does not necessarily go to the Swiss government; Swiss corporations also pay corporate taxes abroad, and the disclosed tax expenses cover the full amount. Conversely, the state also receives other monies, namely, the personal income tax that employees pay. Of course, not all employees of Swiss companies pay taxes in Switzerland, and the number of such employees is not disclosed. Therefore, we cannot estimate the tax revenue for Switzerland from employees.

Summary and outlook

In short, this analysis shows that executive compensation in Switzerland has, in the last 11 years, exhibited elements of both stability and change. The total aggregate amounts of compensation paid to boards and executives combined have hardly changed, but the distribution across firms of different size brackets and within firms (between executives and the board; between different roles) has shifted significantly. The structure of compensation has also undergone some change. It is critical for decision-makers to keep abreast of these developments.

Part 1 has shown the development of Executive Compensation in Switzerland. It is also important to consider the international dimension. Although the legal and governance system of Germany differs markedly from that of Switzerland, the two markets are close enough to merit comparison. Are Swiss board members and executives paid more or less than their German counterparts? Are there structural differences? How has this changed over time? Part 2 of the PwC Insights 2018 provides the answers.



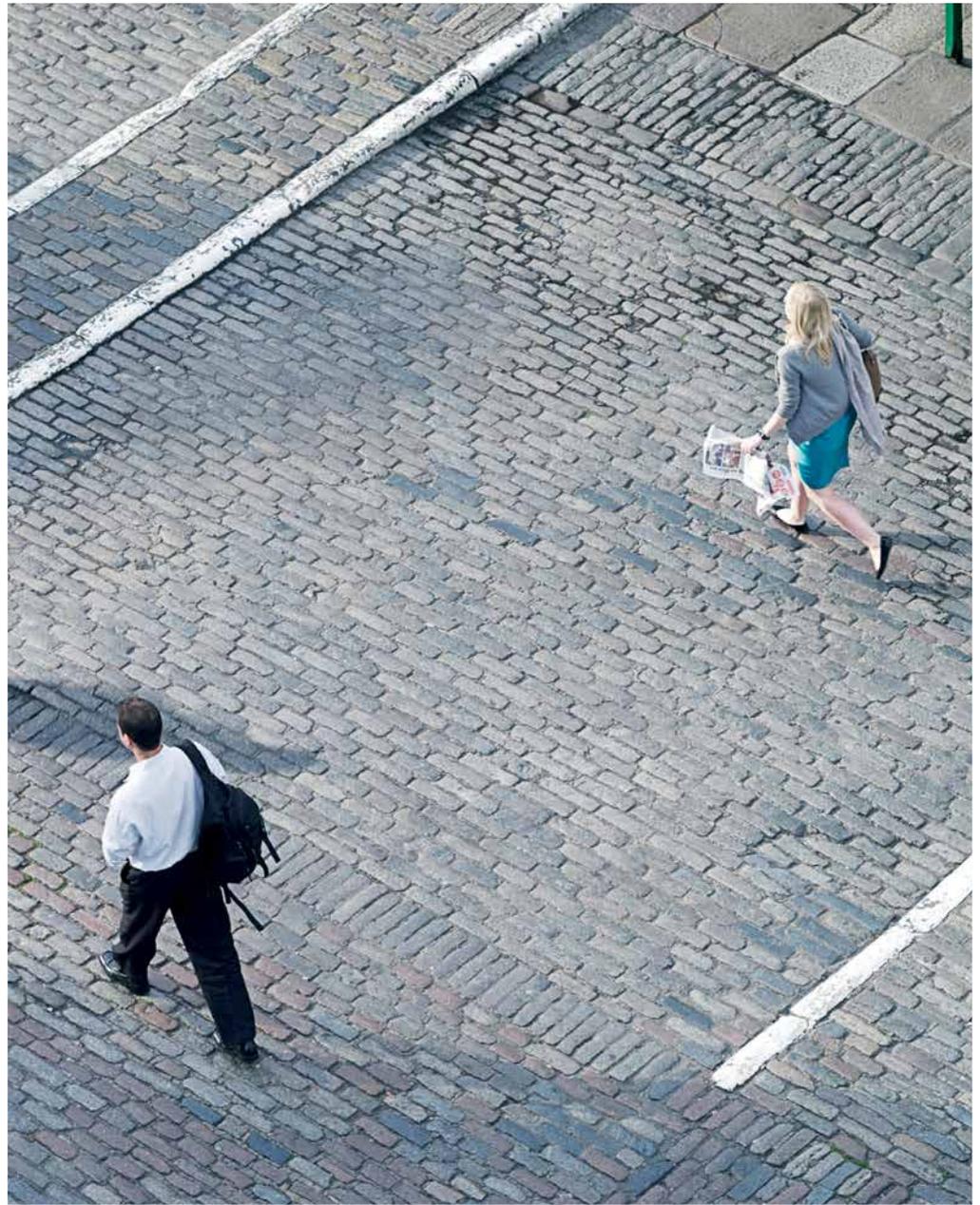


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Introduction, part 2

PwC's **Insights 2018**, part 2, offers a comparison of the level and development of board and executive compensation (together referred to here as **top management bodies compensation**) in Switzerland and Germany. By covering around 100 companies in Switzerland (SMI, SMIM, and small-cap companies) and 130 companies in Germany (DAX, MDAX, and SDAX) for the period 2014-2017, it provides a comprehensive picture of the quantum and structure of pay in these two countries. For simplicity, we also refer to the three company size groups as big, medium, and small companies, respectively.

The key findings are:

1. In both Switzerland and Germany, top management bodies compensation increases strongly with firm size. Moreover, the median top management bodies compensation combined is generally somewhat higher in Switzerland than in Germany. Specifically, in Swiss big, medium, and small companies, the median total top management bodies compensation in 2017 amounted to CHF 36.8 million, CHF 16.0 million, and CHF 6.0 million, respectively, whereas in Germany the numbers were CHF 31.1 million, CHF 10.9 million, and CHF 4.5 million, respectively. These differences across countries have declined somewhat since 2014.
2. The median value of the executive-to-board compensation ratio – the ratio of total compensation of executives divided by total compensation of board members – is substantially higher in Germany than in Switzerland. In 2017, at the median German big, medium, and small firms, the executives as a group received 8.8, 6.6, and 8.2 times as much as the board overall. At the median Swiss firms, these numbers were 6.0, 5.0, and 4.7, respectively. This result accords with expectations, given that the Swiss “Verwaltungsrat” has a more powerful function than the German “Aufsichtsrat”.
3. Individual chairpersons and board members receive higher pay in Switzerland than in Germany. This used to be the case in the early years also for executives, but currently this is no longer true. In 2017, the median Swiss chairperson received approximately three times the compensation of his German counterpart in each of the three size buckets: CHF 1.2 million vs. CHF 361,000; CHF 626,000 vs. CHF 208,000; and CHF 330,000 vs. CHF 111,000. The median SMI CEO received approximately 80 % of his German counterpart (CHF 5.5 million, compared to CHF 6.8 million), and the median CEO of Swiss small-cap firms received 87 % (CHF 1.4 million, compared to CHF 1.6 million). Only CEOs of medium-sized firms received more in Switzerland than in Germany, with CHF 3.3 million compared to CHF 3.0 million. Median other executives received lower pay in all three firm size buckets in Switzerland (99 %, 80 %, and 67 % of their German counterparts). In the prior years, executives in Switzerland tended to receive somewhat higher compensation. It remains to be seen, therefore, if the 2017 outcome will be sustained in future years as well.
4. We also analyse the chairperson premium and the CEO premium. These are largely similar in Switzerland and Germany, except in the largest firms, where the pay premium of chairpersons relative to other board members is much higher in Switzerland than in Germany. Fees for the audit committee chairperson are only modestly higher in Switzerland than in Germany, which is initially somewhat surprising but can ultimately be rationalized in the context of the roles and the compensation of other board members in the two countries.
5. The structure of executive compensation is largely similar in Switzerland and Germany. In both countries, the fraction of variable compensation is higher in larger firms. A striking difference arises, however, when it comes to shareholding guidelines: Whereas these are very common in SMI companies and exist in one-third of SMIM companies, they are still quite rare in DAX and MDAX companies. Among small companies such guidelines are hardly in use in Switzerland and Germany. Overall, the results suggest that companies need effective ways of combining compensation elements that reward steps towards the attainment of strategic goals with long-term, equity-based elements.

The Swiss and the German samples

In this study, we compare board and executive compensation in Switzerland (CH) and Germany (D). This comparison is of interest because the two labour markets are highly integrated. Moreover, although Switzerland has four official languages, two-thirds of the population have German as the first language and many (though certainly not all) of the large companies have their headquarters in the German-speaking part. The governance systems of the two countries differ somewhat (see the separate box). We refer to both the Swiss “Verwaltungsrat” and the German “Aufsichtsrat” as the “board” and the Swiss “Geschäftsleitung” and the German “Vorstand” as “executives” in this study. Indeed, one goal of this study is to see, at least by way of this anecdotal evidence, whether the differences in governance and responsibilities show in compensation practices.

For each of the two countries, we analyse data from three firm size buckets. For the Swiss sample, we use the three size groups we have traditionally employed in the studies over the last decade: The SMI (essentially the largest 20 listed companies), the SMIM (essentially the next largest 30) and the small-cap companies (essentially companies ranked 51-100 in size as measured by equity market capitalization).

For the German sample, we use the DAX (essentially the largest 30 listed companies), the MDAX (essentially the next largest 50), and the SDAX (essentially the next largest 50). In each year the study covers approximately 100 companies in Switzerland and 130 companies in Germany. For simplicity, we refer to the three groups as big, medium, and small companies. **Table 1** illustrates that the median firm in each index is of approximately equal size, although in the medium and small categories, the median Swiss firm is somewhat larger than the median German firm. There are some outliers, and the sorting into indices does not follow a pure size-based rule. Nonetheless, overall, we regard these three groups as sufficiently comparable. We also note that many boards conduct compensation benchmarking relative to the indices used here. We focus on the years 2014-2017 (though for Switzerland data for earlier years are also available). All compensation numbers are in Swiss Francs, using the average interbank CHF/EUR exchange rate for each year. Rounding to two decimals, these exchange rates were: 1.21 (2014), 1.07 (2015), 1.09 (2016), and 1.11 (2017). We generally refer to the median total compensation numbers. Details on other quantiles (such as the 25th or 75th percentiles) are available upon request.

Table 1: Equity market capitalisation (in Million CHF) of the three size groups in each country

Size	Country	Index	Number of firms	Min	Lower quartile	Median	Upper quartile	Max
Big	CH	SMI	20	9,241	16,461	29,373	48,727	260,798
	DE	DAX	30	7,301	22,003	37,512	74,165	124,657
Medium	CH	SMIM	30	2,503	5,412	7,435	9,680	20,700
	DE	MDAX	50	1,981	3,845	6,718	10,144	71,441
Small	CH	CH-SMALLCAP	50	600	1,248	1,833	2,721	6,525
	DE	SDAX	50	544	909	1,347	2,425	6,789

Key points of the Swiss and German corporate governance systems

This box summarises some of the main similarities and differences of Swiss and German corporate governance as regards the role of boards and executives in listed companies.

The Swiss “Verwaltungsrat” has, broadly speaking, greater authority and responsibility, including also strategy-setting, than the German “Aufsichtsrat”, which, primarily, has a supervisory role. Indeed, the one-tier board structure is the default for Swiss listed companies, meaning that in Switzerland the board is responsible for managing the company. However, Swiss corporate law allows for the creation of a two-tier structure, whereby the board delegates part or all transferable responsibilities to one or several board members or a management team. The board still has the non-transferable and irrevocable responsibility for the **overall** management of the company, its strategy, and its financial and risk management. However, the delegation of the **operational** management tasks is possible and a typical setup in listed companies (and many unlisted companies beyond a certain size). In contrast, Germany has a two-tier board structure with strict separation of management (“Vorstand”) and supervision of the company (“Aufsichtsrat”). A further delegation of management tasks by executives is not possible.

The “Verwaltungsrat” and “Aufsichtsrat” have some similar tasks, such as the appointment and dismissal as well as remuneration of the executives (which in Switzerland then requires a binding vote by shareholders), and the responsibility for the audit of the financial statements (which in Switzerland is then approved by shareholders) as well as the selection of an independent external auditor (which in both countries is then elected by shareholders). Nevertheless, fundamental differences in corporate governance are apparent. Swiss board members are elected annually, whereas German board members are typically appointed for a period of five years. Concerning the competence, the Swiss board is responsible for the organisation of the accounting, financial control and financial planning systems and the compilation of the annual report. By contrast, in Germany, these competences are not in the area of responsibility of the “Aufsichtsrat” but of the executives. German law provides for a strict separation of responsibility for the preparation and audit of the financial statements. Thus, the German board, especially the audit committee, has to merely monitor the accounting process, the effectiveness of the internal control system, the risk management system, and the internal accounting control system.

Comparing top management bodies compensation across countries

We begin by asking: How much does the total top management cost shareholders? To answer, we assess the levels and the development of board and executive compensation (together referred to here as **top management bodies compensation**).¹

Table 2 and **Figure 1, Panel A** show that in both Switzerland and Germany, top management bodies compensation is substantially higher in big than in small companies. Moreover, the median top management bodies compensation is generally somewhat higher in Switzerland than in Germany. Specifically, in big, medium, and small companies, the median top management bodies compensation in 2017 amounted to CHF 36.8 million, CHF 16.0 million, and CHF 6.0 million, respectively, in Switzerland, whereas in Germany the numbers were CHF 31.1 million, CHF 10.9 million, and CHF 4.5 million, respectively. This finding also holds on the executive level in each of the three size buckets, and on the board level in the largest two size groups. Only in the small-cap group do we see that median total board compensation in Germany is

somewhat higher than in Switzerland. (The total compensation amounts are a function of the number of people in each of the management bodies. Here, the focus is simply on the total cost for shareholders. We discuss individual position compensation further below.)

How has the ratio of Swiss to German compensation changed over time? To obtain insight into this question, consider **Figure 1, Panel B**. This figure plots nine ratios (three size groups times three functions (board, executives, both combined)). Strikingly, in 8 out of 9 cases, the ratio of median management bodies compensation in Switzerland compared to Germany was lower in 2017 than it was in 2014 (and much lower than it was in 2015). The one exception is median total board compensation in the largest companies, which has increased in Switzerland in the last four years, but fallen in Germany. Note that while the ratio of median total board compensation for small companies was also lower in 2017 compared to 2014, it was below one; therefore, for these companies, the difference between total board compensation

in Switzerland and Germany has increased, not decreased since 2014. Nonetheless, overall, the results imply that median top management bodies compensation in Switzerland and Germany was more similar in 2017 than it was in 2014. Specifically, in 2017 median Swiss executives overall received 1.1-1.4 times the pay of German executives, and median Swiss boards received 0.7-1.6 times the pay of German boards.

Closer examination of Table 2 reveals that the general fall in Swiss-German ratios often derives from changes in both the numerator and the denominator: In many cases, the overall fall in the ratio arose from a fall (or very small growth) in median Swiss compensation and an increase in median German compensation. For example, median total executive compensation in SMI firms was CHF 35.8 million in 2014, which fell to CHF 31.8 million in 2017 (-11.2 %); by contrast, in DAX firms this number rose from CHF 21.8 million in 2014

to CHF 28.7 million in 2017 (+31.6 %). The interim increase of most ratios in 2015 was mostly due to a temporary decline in median compensation in Germany.

Research conducted in Switzerland² suggests that outlier compensation levels have become much less prevalent after the Ordinance against Excessive Compensation – entailing strict binding say-on-pay – came into force in 2014. In Germany in contrast, positive economic development might explain to some extent rising median executive compensation levels. These changes can even affect the median compensation levels and may, therefore, be one reason behind the observed convergence. However, we caution that it is hard to attribute such aggregate changes to single factors. Moreover, the short period does not allow for definitive statements.

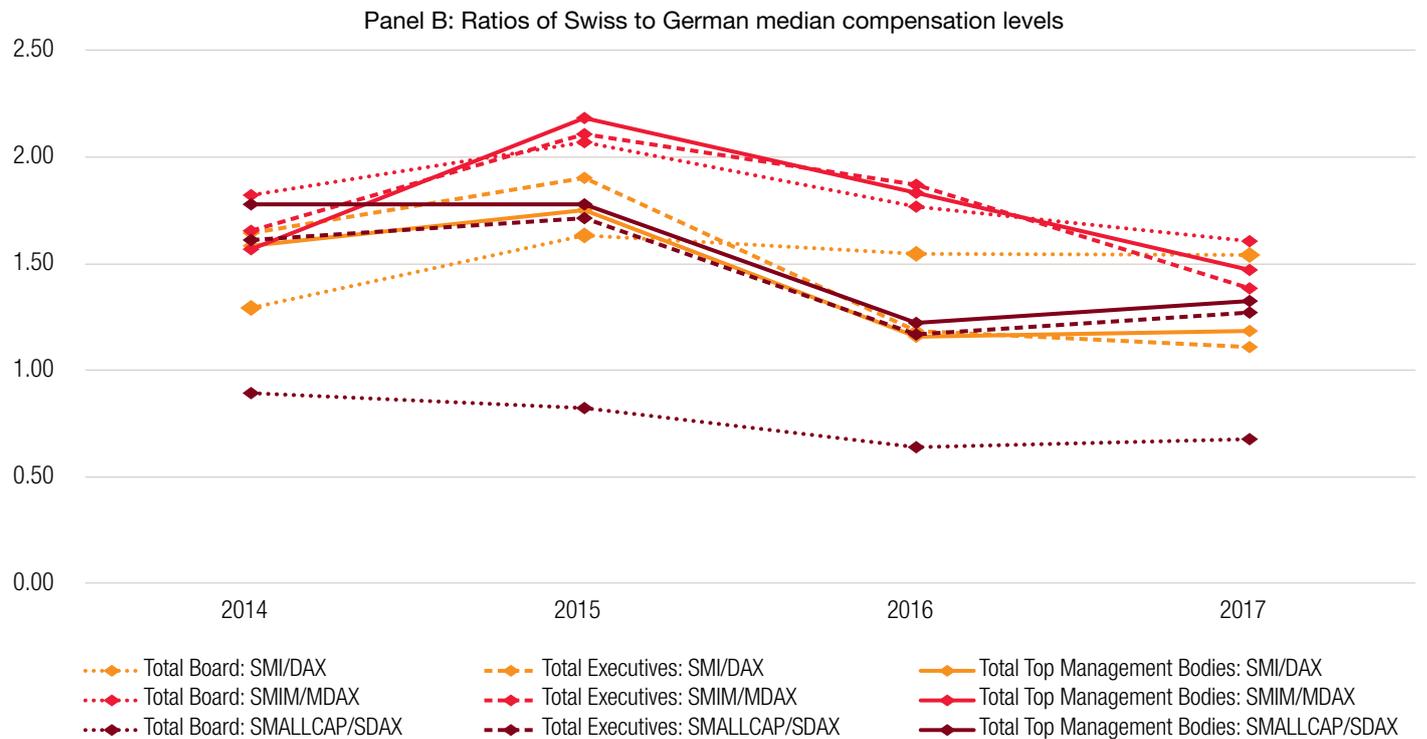
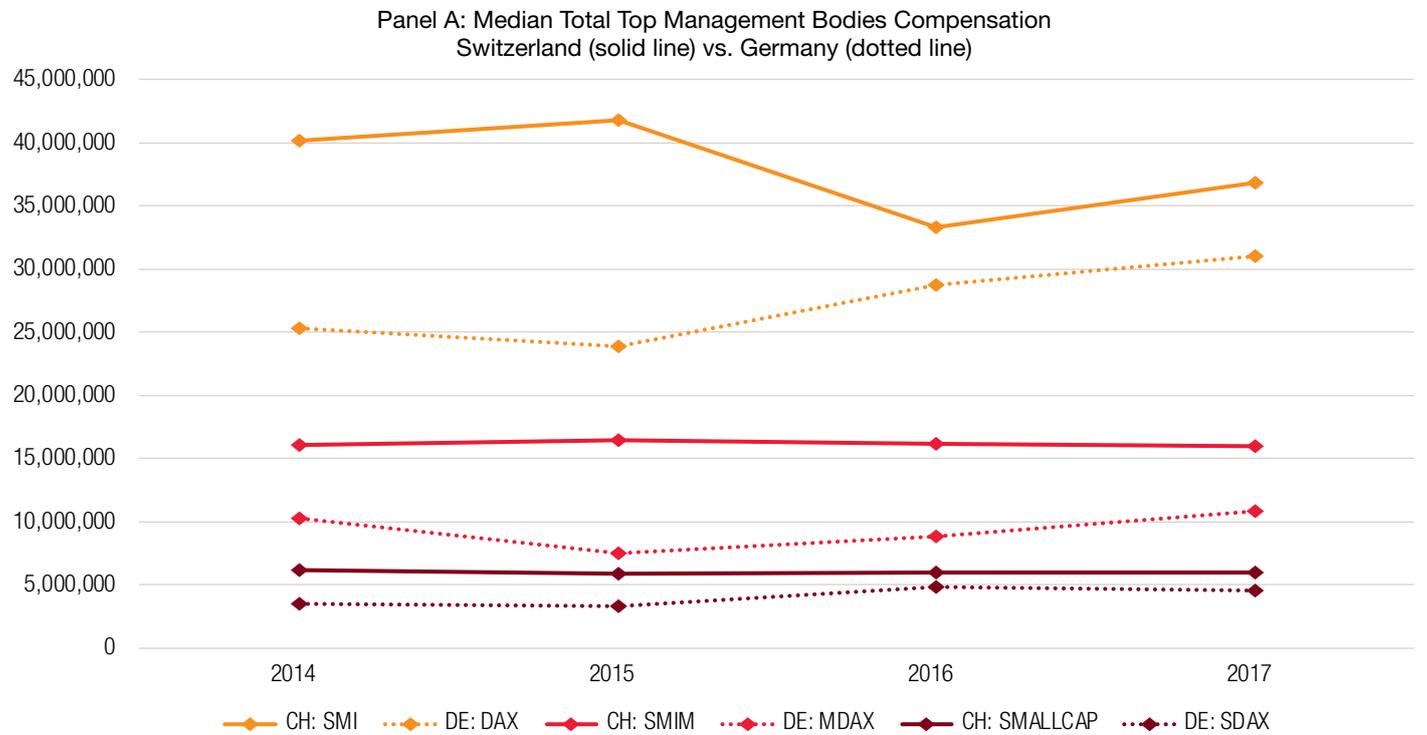
Table 2: Compensation levels for the management bodies in Switzerland and Germany

Management Body	Country	2014	2015	2016	2017
SMI & DAX					
Total Board	CH	4,191,043	4,432,209	4,372,089	4,452,434
	DE	3,246,096	2,710,875	2,824,559	2,888,756
Total Executives	CH	35,831,092	39,441,138	30,558,621	31,816,934
	DE	21,816,880	20,711,100	25,793,414	28,720,524
Total Top Management Bodies	CH	40,186,603	41,819,322	33,301,968	36,786,776
	DE	25,334,446	23,901,024	28,743,697	31,060,442
SMIM & MDAX					
Total Board	CH	2,314,000	2,312,000	2,200,919	2,036,484
	DE	1,269,287	1,115,576	1,243,248	1,267,761
Total Executives	CH	13,310,000	13,938,075	14,039,000	13,165,116
	DE	8,048,369	6,607,631	7,501,148	9,521,255
Total Top Management Bodies	CH	16,060,981	16,407,406	16,166,000	15,968,195
	DE	10,228,823	7,508,846	8,829,728	10,877,807
CH-SMALLCAP & SDAX					
Total Board	CH	691,582	723,890	688,141	699,783
	DE	774,933	881,132	1,079,930	1,038,055
Total Executives	CH	4,994,867	5,054,000	4,952,712	5,183,500
	DE	3,103,823	2,948,891	4,237,522	4,070,792
Total Top Management Bodies	CH	6,210,713	5,854,000	5,957,906	6,021,500
	DE	3,495,339	3,287,616	4,875,225	4,536,894

¹ To provide a picture of the total cost to shareholders, these numbers include compensation to leaving executives (contrary to the analysis of pay for individual positions below, which focuses on executives and board members active at the end of the fiscal year).

² See PwC Executive Compensation & Corporate Governance Insights 2015.

Figure 1: Median top management bodies compensation in Switzerland and Germany is more similar in 2017 than it was in 2014



Comparing management bodies within countries: Boards and executives

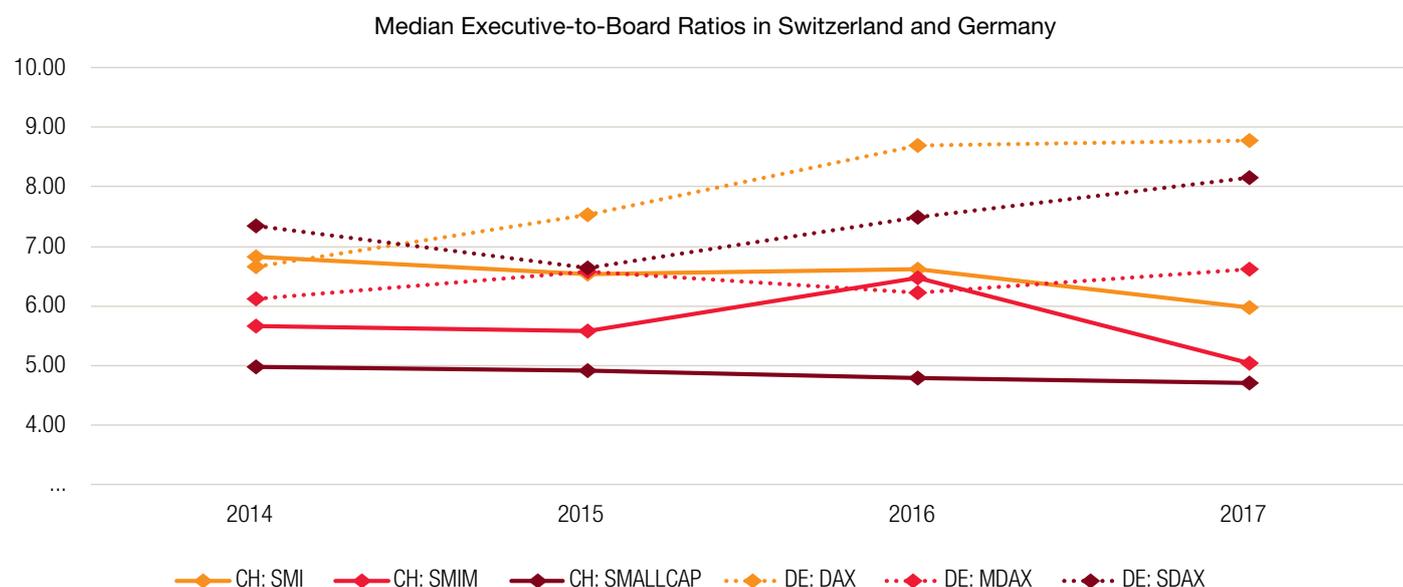
We now turn to the “Executive-to-Board” (E2B) ratio.³ The E2B-ratio can provide some indication of the balance of power between executives and board members. To the extent that compensation reflects responsibilities (and ultimately also power), one would expect the ratio to be higher in Germany than in Switzerland: After all, the Swiss “Verwaltungsrat” has a more powerful function, by law, than the German “Aufsichtsrat”.

Figure 2 provides strong support for this conjecture. Consider the year 2017. At the median German big, medium, and small firms, the executives as a group received 8.8, 6.6, and 8.2 times as much as the board overall. At the median Swiss firms, these numbers were 6.0, 5.0, and 4.7, respectively.

Interestingly, Figure 2 also shows that these ratios were closer together in earlier years and then started diverging. This result is suggested already by Table 2, where an increase in median total executive compensation in Germany occurred, in contrast to a broadly stable median total board compensation.⁴ In short, in recent years, boards in Switzerland appear to have asserted somewhat more power than in earlier years, at least relatively speaking, whereas executives in Germany have been gaining in power relative to their boards, at least as measured by their compensation.

What explains these results? One candidate reason is that executive compensation is, at least to some extent, performance-sensitive. Stronger performance by German executives could, therefore, justify the rise of their compensation relative to German board members. Is this a plausible explanation? Large German stocks have indeed performed better than the Swiss stock market in the time covered by this study. For example, the DAX offered a total return (capital gains plus dividends) of 37.4%, whereas the SMIC (the version of the SMI that includes dividends) offered a total return of 30.1% between 2014 and 2017. However, the SMIMC (the version of the SMIM that includes dividends) outperformed the MDAX (also including dividends) with 77.7% to 58.6%. At least this aggregate perspective, therefore, suggests that only part of the observed trends may be due to stronger overall performance of German executives. Anyways, there may be many, also exogenous reasons for a superior relative stock price performance of some German companies relative to Swiss ones (including, for example, the severe CHF/EUR exchange rate shock in 2015). An alternative, not exclusive interpretation highlights that a high ratio can also indicate agency problems and an ineffective set of checks and balances. As such, the findings may also point to corporate governance currently becoming somewhat stricter towards executive compensation in Switzerland than in Germany. Overall, we recommend that both Swiss and German firms be mindful of the practice they employ so they can explain it coherently to their stakeholders.

Figure 2: Executive-to-Board ratios are higher in Germany than in Switzerland – and the divergence has increased over the last four years



³ These results rely on disclosed values. For example, while most companies in Switzerland nowadays make a clear distinction between executive and non-executive roles of board members, they often do not disclose compensation separately. In such cases, we count all compensation towards the role as an executive. Thus, board pay can be understated relative to executive pay in such cases. This limitation notwithstanding, to the extent that this disclosure practice does not systematically vary across the three size groups, the analysis here can at least be considered indicative.

⁴ Note, however, that Figure 2 does not show the ratio of the medians of Table 2, but the median of the ratio of executive-to-board compensation.

Comparing individual compensation: Board members and executives

In this section, we drill down further to the compensation received by individuals in different functions. We present results for individuals active at the end of the year (excluding those who left during the year).⁵ In what follows, we refer to the Swiss-German board pay ratio as the ratio of median total compensation of Swiss chairpersons (or board members) to that of German chairpersons (or board members); and to the Swiss-German executive pay ratio as the ratio of median total compensation of Swiss CEOs (or other executives) to that of German CEOs (or other executives).

Figure 3, Panel A and **Table 3** show that in 2017, the median Swiss chairperson received approximately three times the compensation of his German counterpart, in each of the three size buckets: CHF 1.2 million vs. CHF 361,000; CHF 626,000 vs. CHF 208,000; and CHF 330,000 vs. CHF 111,000, respectively. While there was a bit of an increase in median chairperson compensation in SMI in 2015 and SDAX in 2016, compensation of chairpersons has overall remained constant. For regular board members, the Swiss-German board pay ratio is about 2 for the all three size buckets: CHF 310,000 vs. CHF 164,000; CHF 209,000 vs. CHF 98,000; and CHF 129,000 vs. CHF 56,000, respectively. It is interesting to interpret these results in light of the ratios of median total board compensation shown in Figure 1. For example, in that figure we had seen that the median board of an SMI company receives about 1.5 times more in aggregate than the median DAX board. This finding is consistent with the individual-level compensation presented in this section because Swiss boards generally are somewhat smaller than German boards: In 2017, the median (average) Swiss board in the three size groups had 11 (11.7), 8.5 (8.3), and 7 (7) members. By contrast, the numbers for Germany were 18 (16), 12 (13), and 6 (8). German boards in large and medium firms are naturally bigger than in Switzerland: According to the “Drittelbeteiligungsgesetz”, one third of the board of companies with more than 500 employees need to be employee delegates, and according to the “Mitbestimmungsgesetz”, in companies with more than 2000 employees, 50% of the board need to be employee delegates. This explains why higher individual board compensation in Switzerland does not lead to higher total board compensation to the same extent.

Consider now the executive pay ratios, derived from median total compensation of individual executives. Figure 3, Panel B presents a perhaps surprising result: In 2017, Swiss CEOs in large and small firms received, at the median, lower pay than their German counterparts. Other executives were paid less in all three size groups in Switzerland. Specifically, the median SMI CEO received total compensation of CHF 5.5 million, whereas the median DAX CEO received CHF 6.8 million; the median other SMI executive received a bit less than CHF 3.6 million in Switzerland, and a bit more than CHF 3.6 million in Germany. Similarly, the CEO and median other executive of Swiss small-cap firms received CHF 1.4 million and CHF 700,000, compared to CHF 1.6 million and CHF 1 million of their respective German counterparts, respectively. CEOs of medium-sized firms did better in Switzerland than in Germany, with CHF 3.3 million compared to CHF 3.0 million, but other executives at these firms earned more in Germany (CHF 1.8 million) than in Switzerland (CHF 1.4 million). Panel B of Figure 3 illustrates these results.

Two further comments are in order here. First, four years ago, the median SMI CEO had still earned 14% more than the median DAX CEO; today, it is 20% less. As such, the striking 2017 results are due to the growth of executive compensation in Germany, and the stability or decrease in executive compensation in Switzerland since 2014. But even absent these more recent developments, the Swiss-German executive pay ratio has never been nearly as big as the board pay ratio. Second, the fact that in 2017, the median total executive compensation was higher in Switzerland than in Germany (see Table 2) even though median individual executive compensation tended to be higher in Germany, can again be explained by the size of the respective groups. In 2017, the median (average) Swiss executive board in the three size groups had 11 (10.8), 7.4 (7.7), and 5 (5.7) members. By contrast, the numbers for Germany were 7 (7), 4 (4), and 3 (3).

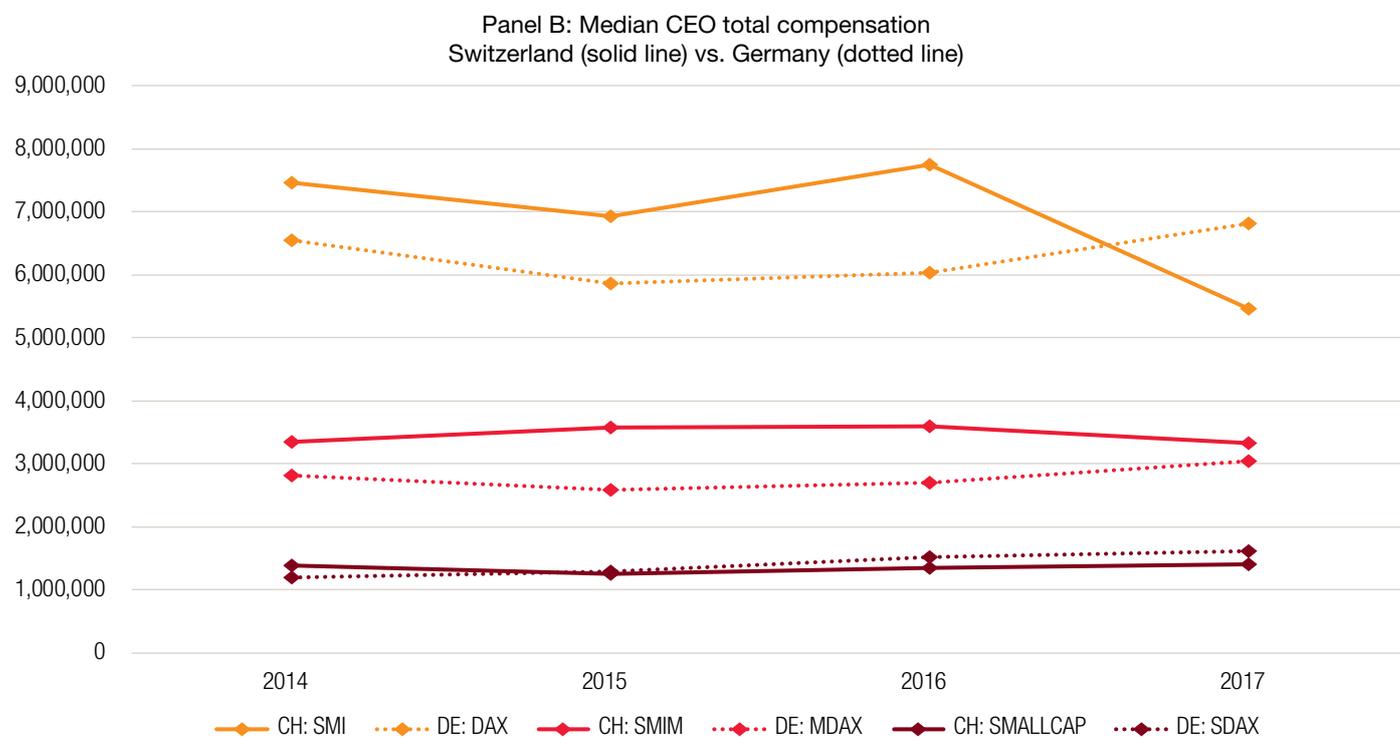
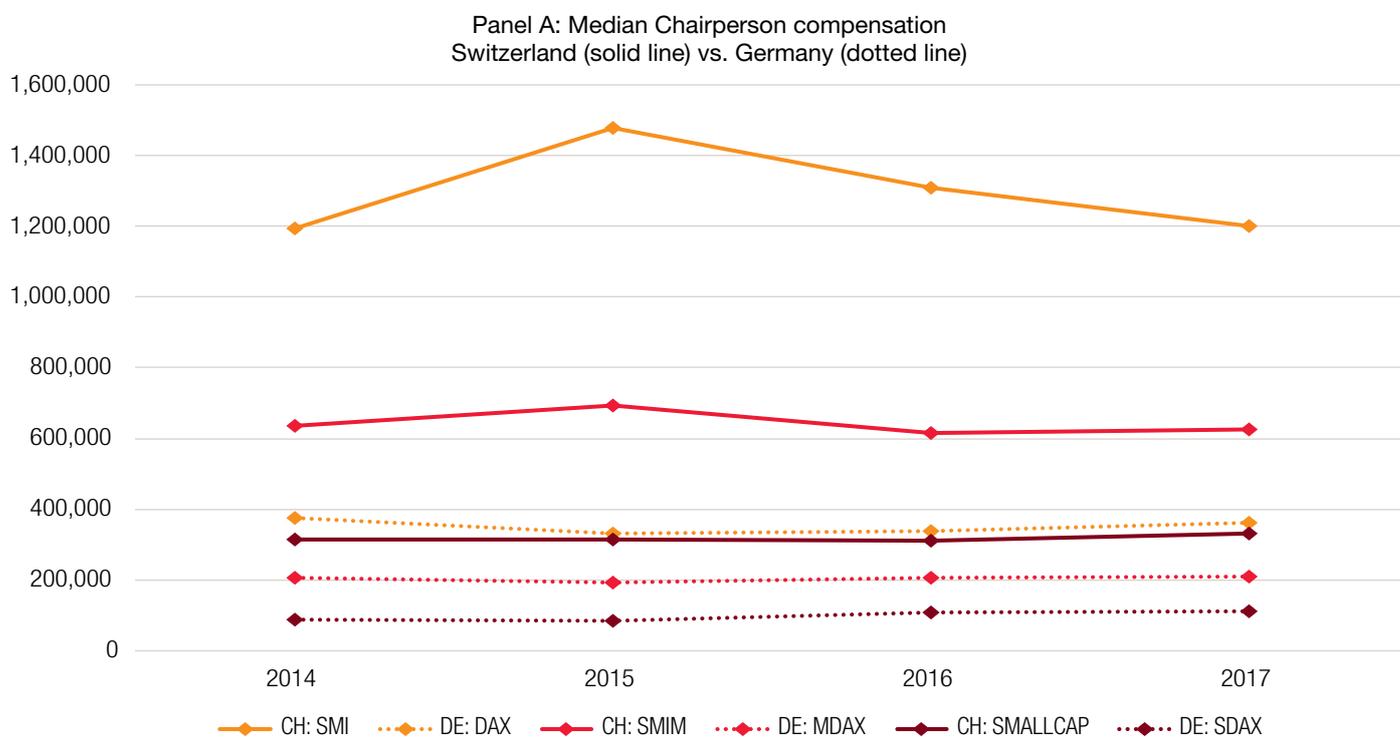
⁵ An alternative approach is to restrict attention to individuals active for the full year. That approach has the advantage that potentially unrepresentative values (due to short service periods during a year or large initial replacement awards for prior compensation) are not included; it has the disadvantage that the sample is smaller. All results remain largely similar with the alternative approach (details are available on request).

Table 3: Relatively stable chairperson compensation, more dynamics in CEO compensation

Median Pay	Country	2014	2015	2016	2017
SMI & DAX					
Chairperson	CH	1,193,238	1,479,125	1,310,469	1,200,494
	DE	374,531	332,184	338,473	361,260
Other Board Members	CH	307,620	309,668	300,150	309,903
	DE	170,516	134,100	151,022	163,865
CEO	CH	7,453,575	6,932,919	7,746,511	5,464,441
	DE	6,543,183	5,861,483	6,030,587	6,812,065
Other Executives	CH	3,371,294	3,619,228	3,549,962	3,565,279
	DE	3,521,183	3,048,933	3,194,244	3,614,824
SMIM & MDAX					
Chairperson	CH	635,399	694,470	615,000	626,142
	DE	204,058	190,658	206,936	208,419
Other Board Members	CH	208,120	223,000	212,000	209,496
	DE	97,252	83,646	93,225	97,596
CEO	CH	3,345,444	3,573,124	3,592,500	3,320,000
	DE	2,819,154	2,588,042	2,692,380	3,039,031
Other Executives	CH	1,799,667	1,589,838	1,659,868	1,413,000
	DE	1,640,964	1,451,942	1,555,013	1,755,335
CH-SMALLCAP & SDAX					
Chairperson	CH	314,625	313,367	311,176	329,938
	DE	86,239	85,449	109,009	111,157
Other Board Members	CH	121,000	120,400	125,900	129,341
	DE	50,529	46,783	54,068	55,877
CEO	CH	1,376,291	1,242,829	1,354,204	1,401,109
	DE	1,191,551	1,291,351	1,514,135	1,611,776
Other Executives	CH	691,582	723,890	688,141	699,783
	DE	774,933	881,132	1,079,930	1,038,055

Ratios of CH to DE Median Pay	Country	2014	2015	2016	2017
SMI & DAX					
Chairperson	CH/DE	3.19	4.45	3.87	3.32
Other Board Members	CH/DE	1.80	2.31	1.99	1.89
CEO	CH/DE	1.14	1.18	1.28	0.80
Other Executives	CH/DE	0.96	1.19	1.11	0.99
SMIM & MDAX					
Chairperson	CH/DE	3.11	3.64	2.97	3.00
Other Board Members	CH/DE	2.14	2.67	2.27	2.15
CEO	CH/DE	1.19	1.38	1.33	1.09
Other Executives	CH/DE	1.10	1.09	1.07	0.80
CH-SMALLCAP & SDAX					
Chairperson	CH/DE	3.65	3.67	2.85	2.97
Other Board Members	CH/DE	2.39	2.57	2.33	2.31
CEO	CH/DE	1.16	0.96	0.89	0.87
Other Executives	CH/DE	0.89	0.82	0.64	0.67

Figure 3: Relatively stable chairperson compensation, more dynamics in CEO compensation



The chairperson and CEO premiums

Table 4 looks at how the agenda-setting and decision-making power inside a management body translates into pay. That is, for each company, we compute the ratio of the compensation of the chairperson of the board relative to the average compensation of the other board members; and the compensation of the CEO relative to the average compensation of the other executives.⁶ We then report the medians of this “chairperson/CEO-to-other” (C2O) ratio in each of the size groups.

The analysis shows that the chairperson premium, that is, the difference between the compensation of the chairperson and other board members, is particularly pronounced in SMI companies, at 3.81, relative to 2.22 in DAX companies. In the other firms, the C2O ratio is somewhat, though not much higher in Switzerland than in Germany. Overall, there is some modest evidence suggesting that Swiss chairpersons and CEOs are more powerful than their German counterparts (or more able to convince the board and shareholders that their position entails more responsibility or requires more skills and, therefore, higher compensation).

Table 4: Chairs of top management bodies receive a somewhat higher median premium (ratio of compensation relative to average non-chairs) in Switzerland than in Germany

Median of "C2O" Ratios	Country	2014	2015	2016	2017
SMI & DAX					
Chairperson vs. Other board members	CH	3.74	4.35	4.33	3.81
	DE	2.37	2.27	2.28	2.22
CEO vs. Other executives	CH	2.33	1.96	2.42	2.04
	DE	1.92	1.79	1.89	1.86
SMIM & MDAX					
Chairperson vs. Other board members	CH	2.14	2.09	2.39	2.48
	DE	2.29	2.21	2.06	2.16
CEO vs. Other executives	CH	1.96	2.23	2.00	1.97
	DE	1.68	1.65	1.56	1.69
CH-SMALLCAP & SDAX					
Chairperson vs. Other board members	CH	2.51	2.50	2.41	2.53
	DE	1.96	1.96	1.98	2.03
CEO vs. Other executives	CH	1.82	1.78	1.87	1.87
	DE	1.53	1.59	1.51	1.40

⁶ The academic literature has particularly worried about the CEO pay slice. However, also chairperson compensation can provide an indication of a skewed power balance.

Audit committees

The audit committee plays a very important role in corporate governance. Accurate accounting is essential both internally and externally: Internally, accounting numbers drive strategic and operational decisions, and they are often relevant for contractual compensation outcomes. Externally, investors need to be able to rely on reporting to allocate funds most efficiently. But accounting is not only important; it is also fraught with difficult choices and potential conflicts of interest. For example, whether and how to allow for certain discretionary accruals can be vexing. When questions regarding the legitimacy and correctness of accounting arise, this can be highly problematic for the reputation of a company. In both Switzerland and Germany, the executives – especially the CFO – will be in the focus of attention initially. In Switzerland in addition the board’s responsibility, in particular the audit committee’s responsibility will also move quickly into focus. By contrast, in Germany, the accounting committee is merely responsible for monitoring the accounting process and the auditing of the financial statements, besides other tasks (see also „Key points of the Swiss and German corporate governance systems”). Competent and critical external auditors, of course, also play an important role, but in general, they cannot substitute for a strong audit committee.

Inside the audit committee, naturally, the chairperson plays the most important role. Therefore, in this section, we analyse their compensation. **Table 5** shows that fees for the chairperson are somewhat higher in Switzerland than in Germany: In Swiss large, medium, and small companies, the median fee (that is, the additional amount paid for chairing this committee) was CHF 95,000, CHF 50,000, and CHF 25,000, respectively. In Germany, the numbers were CHF 89,000, CHF 39,000, and CHF 17,000, respectively.⁷ In Switzerland, the median was somewhat, but not much, higher in earlier years whereas in Germany, the median committee fees tended to rise. Overall, the Swiss numbers are higher, but it is noteworthy that the difference is not proportional to the usual pay difference

between Swiss and German boards. Recall from Table 3 that the median regular board member gets paid 89 %, 115 %, and 131 % more in Switzerland than in Germany, depending on the company size group; by contrast, the audit committee chairperson fees are higher only by 7 %, 29 %, and 50 %. This result is initially puzzling, also in light of the fact that at least in principle, the Swiss “Verwaltungsrat” is responsible for the design of the organization of the framework for accounting, financial control, financial planning, and for the preparation of the annual report, both of which do not fall (to the same extent) under the responsibilities of the German “Aufsichtsrat”. It is possible that the relatively low fee for Swiss Audit Committee chairpersons and the relatively higher overall pay level for other board members jointly reflect the collective responsibility of the Swiss board.

Table 5: Median audit committee chairperson compensation is slightly higher in Switzerland than in Germany

Median audit committee chairperson	Fee 2017	Total compensation 2017
SMI & DAX		
CH	95,000	400,000
DE	88,926	214,505
SMIM & MDAX		
CH	50,000	187,500
DE	38,905	127,647
CH-SMALLCAP & SDAX		
CH	25,000	129,800
DE	16,674	73,919

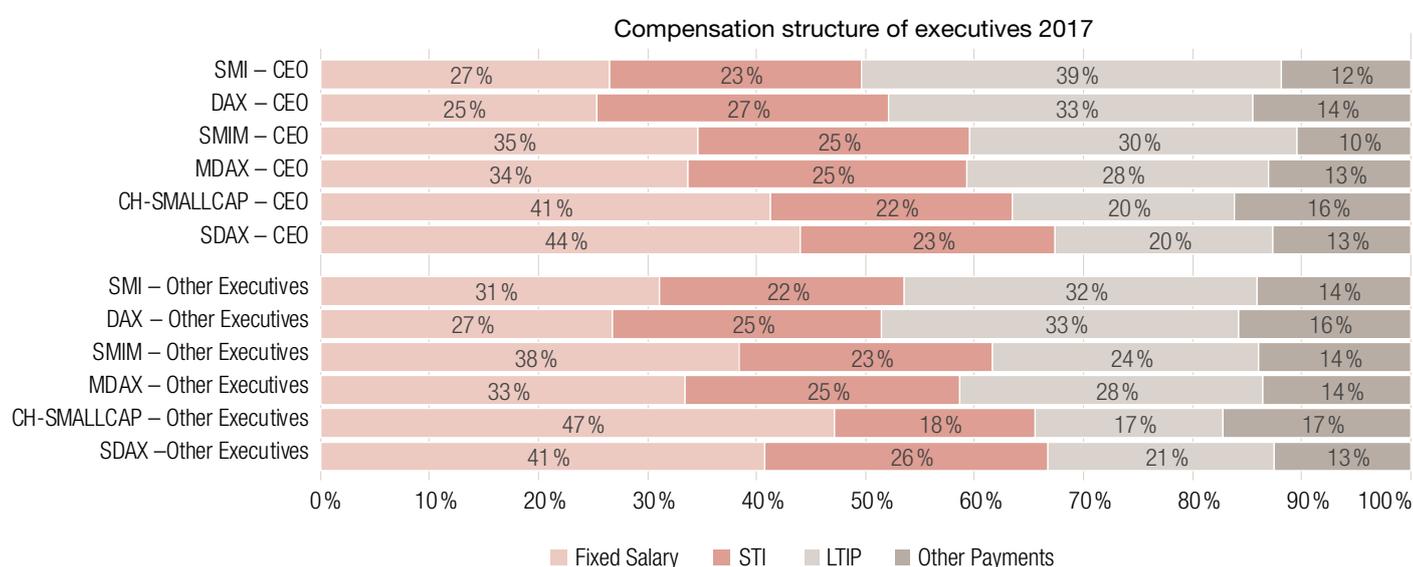
⁷ Of course, when denominated in Euros, the numbers are round in Germany as well, namely, EUR 80,000, EUR 35,000, and EUR 15,000, respectively.

Structure of executive compensation and incentives

Finally, we compare the structure of compensation and in particular the alignment with shareholder value embedded in the compensation principles. **Figure 4** considers the average CEO and other executive compensation structures in 2017. Straightforward results arise. First, overall the compensation structures are quite similar in Switzerland and

Germany. Second, larger companies provide more variable compensation. Whereas in small companies, base salary plus other compensation makes up around 60%, in large companies, that fraction is about 40%. Third, Swiss CEOs tend to receive a larger fraction as long-term oriented compensation, but for other executives, the ratios are similar in Switzerland and Germany.

Figure 4: The executive compensation structure is similar in Switzerland and Germany



To ensure alignment with shareholder interests, it is, of course, not enough to merely convey compensation in the form of share-based payments. If long-term incentive plans are ultimately settled in cash, as is typically the case in Germany, the long-term alignment with firm value is unclear. Shareholding guidelines provide a potentially useful complement to the ongoing compensation. Interestingly, such guidelines are still not widely used in Germany at the moment. Table 6 shows that only 27% of DAX companies use such guidelines for their CEOs and other executives, whereas 70% of SMI companies do so. Only 12% of MDAX companies have such guidelines for their CEOs; 33% of SMIM companies have them. Among small-cap companies, such guidelines are, so far, quite rare in both Switzerland and Germany. Typically, companies define the requirements in terms of fractions of base salary (often around 200% for CEOs, and somewhat lower for executives).

About a fifth of the large companies in both Switzerland and Germany have shareholding guidelines also for their board members, and some Swiss medium companies have such guidelines for their non-chair board members. None of the medium or small German companies discloses shareholding guidelines on the board level.

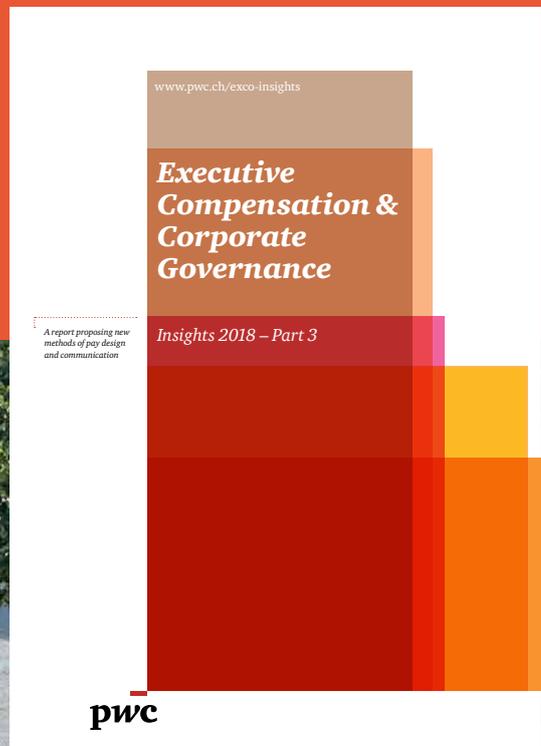
Table 6: CEO Shareholding guidelines are more common in Switzerland than in Germany

	Share of Firms with Shareholding Guidelines 2017	Median Multiple of Base Salary for Shareholding Guidelines 2017
SMI & DAX		
CH	70%	300%
DE	27%	200%
SMIM & MDAX		
CH	33%	200%
DE	12%	200%
CH-SMALLCAP & SDAX		
CH	2%	n.d.
DE	4%	150%

Summary and outlook

Overall, these results show – once again – that common wisdom regarding board and executive compensation needs to be challenged now and then. Some observers have highlighted the higher pay of board members in Switzerland, but the fact that pay levels of executives in the two countries are quite similar has received far less attention. By and large, where differences between Switzerland and Germany exist in the relative levels of board and executive compensation, they can be traced back to differences in the governance systems.

In both Switzerland and in Germany – and in other countries – the design of effective compensation systems is a challenge. To drive this discussion forward, PwC Insights 2018, part 3, presents a new idea for linking equity-based (long-term) compensation with a focus on the achievement of strategic targets. This versatile method can be adjusted to the circumstances of each firm but is sufficiently general to allow straightforward communication to shareholders and other stakeholders.



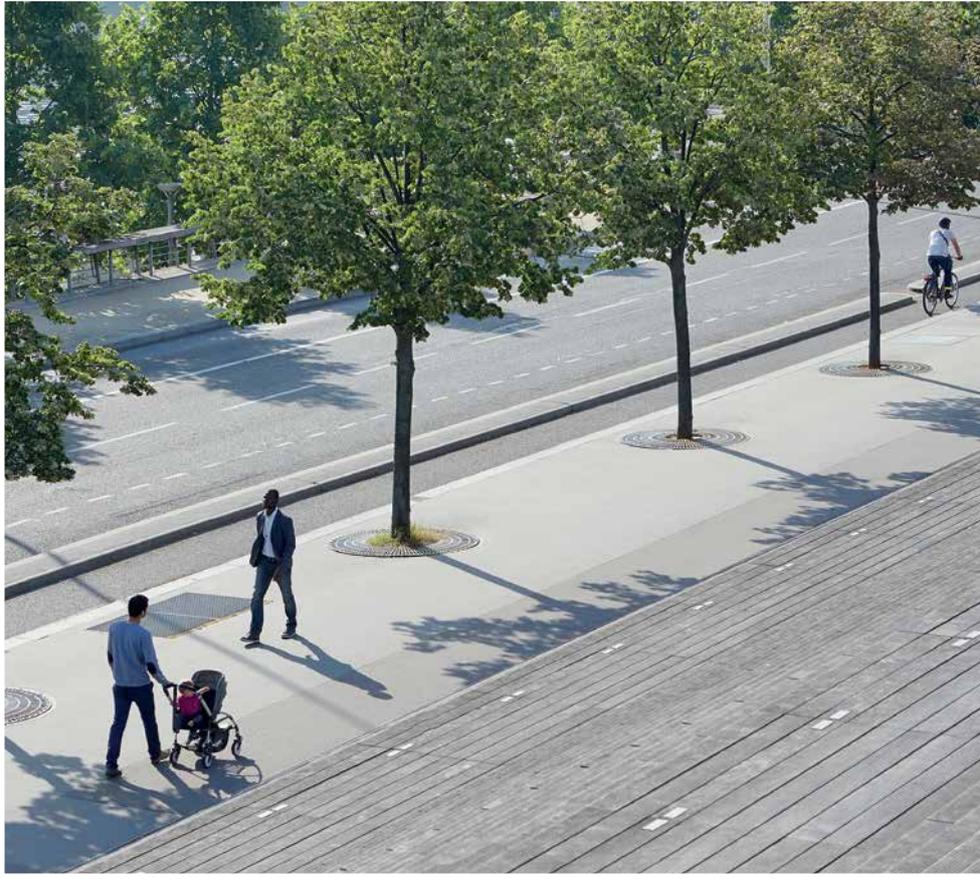


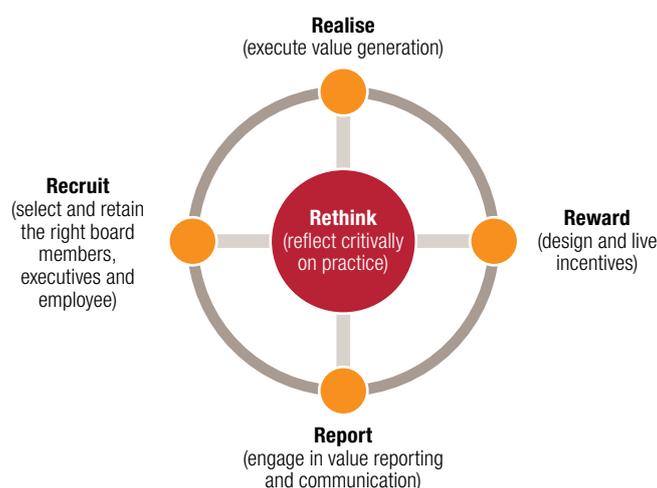
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Introduction, part 3

In the Insights 2017, we introduced the 5 Rs of value generation through effective governance: Recruit (select and retain the right board members, executives and employees), Reward (design and live incentives), Report (engage in value reporting and communication), Realise (execute value generation), and Rethink (reflect critically on practice of all four of the other Rs). As we argued then, an effective board and a value-oriented executive management has a holistic view of all of these matters.

Figure 1: The 5 Rs of value generation through effective governance and compensation design



Of course, among the 5 Rs, “Realise” is a key rubric. Execution and actual delivery of performance remain the core domain of excellent managers. However, without the other elements, something is missing, too. The Insights 2018, therefore, contribute towards strengthening several of these other elements. In particular, the first part of ExCo Insights 2018 summarised the level and structure of compensation of CEOs, other executives, chairpersons, and other board members in

Swiss listed companies. The second part offered, for the first time, a comparison of the level and development of executive and board pay in Switzerland and Germany. Both of these parts thus help board members and executives Rethink the Recruit and Reward elements.

In this third and final part, we focus even more explicitly on the Rethink element. We discuss new methods of pay design and communication, thus contributing in particular to both the Reward and Report components.

The key ideas developed in this part are the following:

1. Discussions around remuneration are typically static, that is, they are restricted to one year at a time. However, when dealing with a dynamic issue such as securing sustainable business performance, a dynamic approach is required.
2. We present a simple strategic stock allocation concept for variable remuneration, referred to as STARS (**S**tock **A**wards for **R**ight **S**trategy). This is a long-term incentive system that takes seriously the need for rewards for strategic goal achievement. Specifically, the core of this system entails, first, the selection and communication of specific annual targets in relation to the organisation’s strategic objectives and, second, using mainly share allocations to recognise the meeting of those targets, with just a relatively small proportion of cash rewards.
3. We also call for explicit analysis and disclosure of changes in the manager’s wealth position with respect to company shares. This provides a holistic view of how material outcomes (“pay”) and performance are linked. In short: Dynamic disclosure drives dynamic decisions.

Of course, reward systems are not one-size-fits-all. The STARS concept can be adapted to a company’s specific situation, but is general enough to be understood and acceptable across all businesses. We look forward to engaging in dialogue with you to understand the specific challenges and needs of your company. Together, we can develop a tailor-made approach for your current situation.

¹ Wagner, A./Wenk, C. (2016), Corporate Governance: Beyond Best Practice, Swiss Finance Institute White Paper. This definition expands on the traditional definition given by Shleifer/Vishny, which focuses exclusively on (financial) capital providers, cf. Shleifer, A./Vishny, R. (1997), A Survey of Corporate Governance, Journal of Finance 52, 737-783.

Corporate governance, company purpose, and shareholder value

A discussion of the design of variable remuneration systems must take account of the basic question of what is the objective of a private company. For this, it is worth taking a broader view of the role of corporate governance. Corporate governance deals with the ways in which suppliers of financial and human capital to corporations assure themselves of getting a return on their investment.¹ This definition considers two suppliers of capital: firstly, the shareholders and creditors (investors – i.e. the “capital providers” in a narrow sense), and secondly, the managers and employees. Members of the first group contribute financial and other material capital; thus, a somewhat wider definition of this group would include (goods) suppliers. The second group supplies human capital. In addition, a third group comprising clients and society in general merits attention. These stakeholders grant the business its “licence to operate”.

The stakeholders of each of these three groups expect a return: the investors in a financial form;² managers and employees in financial and personal form; society in the form of a commensurate level of product and service quality, responsible use of public goods and creation of jobs.³ When the satisfaction of one of these groups is not sustained, that group will sooner or later no longer be willing to support the existence of the organisation.

The different groups of suppliers of capital have conflicting priorities. These are most evident and familiar in respect to the relationship between shareholders and managers. When manager actions are not observable, shareholders may worry that managers embark on activities not fully aligned with shareholder welfare.⁴ The principal-agent model provides ways in which one can conceptualise an efficient (“second-best”) contract between owners and managers to direct managers’ actions to the long-term increase of shareholder value. The optimal contract thus establishes an incentive system.⁵

Although incentive systems may put shareholder value in the foreground, the shareholders must (should) also take account of the other stakeholders. If any of the stakeholder groups is neglected, it is not possible to create maximum value for the shareholders. As such, the old dichotomy of shareholder value vs. stakeholder value is actually not a question of either-or. Rather, the maximisation of shareholder value by means of suitable incentive systems must consider also the well-being of the other stakeholder groups, that is, the return on investment for these other stakeholders to ensure they are willing to carry on in their roles.

While even the theoretical analysis of optimal incentive systems is challenging, the suitable practical implementation is even more difficult. There are distorted incentives, incentives that focus managers on the too short term and incentives that promote excessive levels of risk-taking. Frequently, target setting and measurement represents a major challenge for the board and remuneration committee. Furthermore, the complexity of today’s systems can be difficult for investors and even managers to understand.

As a result, for example, the Government Pension Fund of Norway, one of the most influential investors in the world, has recently called for a radical overhaul of manager pay, arguing that the long-term incentive systems favoured by many companies are flawed and that long-term incentive programmes involving performance criteria should be abolished. Instead, the focus should be on remuneration models that target high levels of long-term ownership.⁶ The system presented in this part 3 of Insights 2018 also postulates participation in shareholder value as a central principle. However, it also recognises the importance of operational targets, linked to strategy, that can be influenced by the management on an ongoing basis and with specific actions. Before delving into the details of this system, in the next section we describe variable remuneration and its location in a dynamic view in more depth.

² We recognise that even capital providers may be “motivated” by non-financial aspects and expect a certain “impact” from their investments.

³ We do not discuss the role of the media, proxy advisors, rating agencies and (remuneration) advisors in detail, but we note that these players can be quite important.

⁴ Jensen, M. C./Meckling, W. H. (1976), Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, *Journal of Financial Economics* 3, 305-360. For an overview of academic work on the principal-agency problem and the resulting theoretical and empirical analysis of executive compensation, see also Gabaix, X./Edmans, A./Jenter, D. (2017), Executive Compensation: A Survey of Theory and Evidence, in Hermalin, B./Weisbach, M.S., ed.: *Handbook of the Economics of Corporate Governance*.

⁵ In this article we consider monetary incentive systems, but emphasise that non-monetary incentives and social norms also play a large role in the overall context of the firm. When setting incentives, indirect performance incentives must also be considered, such as career concerns. See Insights 2017.

⁶ A substantial proportion of total annual CEO remuneration should be provided in shares that are subject to a sales restriction of at least five, preferably ten years. Cf. Norges Bank Investment Management (NBIM), CEO Remuneration Position Paper, 7 April 2017. <https://www.nbim.no/en/responsibility/our-voting-records/position-papers/ceo-remuneration>.

The importance of a multi-period analysis

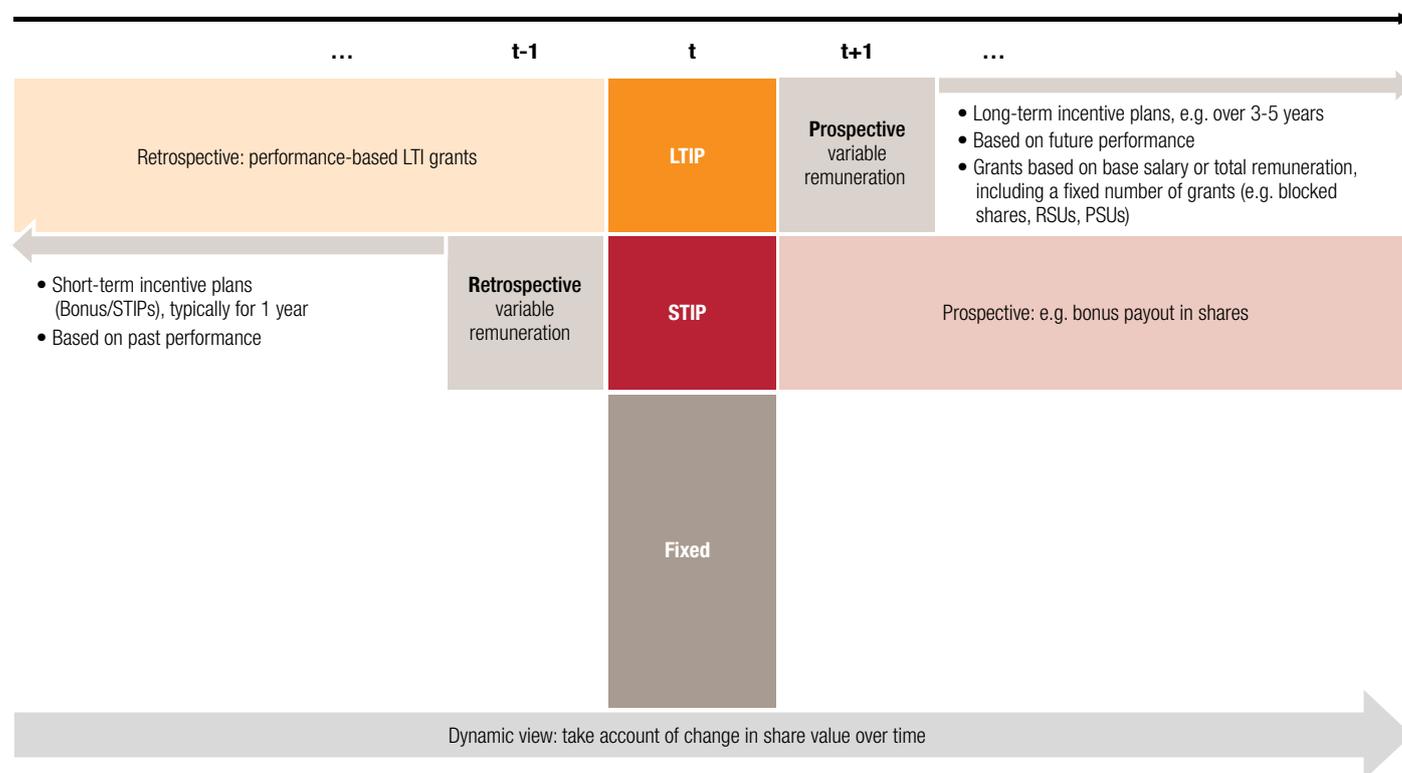
At first glance it appears easy to view variable remuneration as the simple opposite to fixed remuneration, i.e., the base salary or fixed salary components. It is also intuitive that variable compensation should direct managers to act entrepreneurially and allow them to participate in the commercial success of the company. However, despite this fundamentally simple concept, there is often confusion of meaning. Instead of speaking about variable remuneration in general, it can be helpful to distinguish between “remuneration dependent on past performance” (retrospective variable remuneration) and “remuneration dependent on future performance” (prospective variable remuneration). Figure 2 illustrates this point.

At any given time, a manager receives (in addition to a fixed salary and other fixed amounts) both remuneration payments that depend on past performance and elements that serve as an incentive for future performance. The key element of a dynamic analysis is that the “reward” paid out in a given year is the result of incentives from the previous year(s).

It is common to differentiate between short-term and long-term incentive plans (STIPs and LTIPs). Specifically, these are often understood as single-year or multiple-year plans. However, this distinction is misleading or at least limited since even the single-year plans are generally aligned with the value of the company and therefore include a long-term view. In addition, the LTI grant (not only the ultimate payout) may also depend on the achievement of certain performance criteria.

The typical method of disclosing remuneration amounts in Switzerland adds an additional layer of complexity. For example, in relation to LTIPs, it is common to disclose only grant values (in contrast to other countries such as Germany, where the actual amounts paid out are published as well). While a few companies in Switzerland do report payouts from previous LTIPs, they remain the exceptions. In the case of annual bonus payments (STIPs), due to the time frame for the target setting, the bonus scheme is not disclosed at grant but only with the paid amount.⁷

Figure 2: Retrospective and prospective variable remuneration



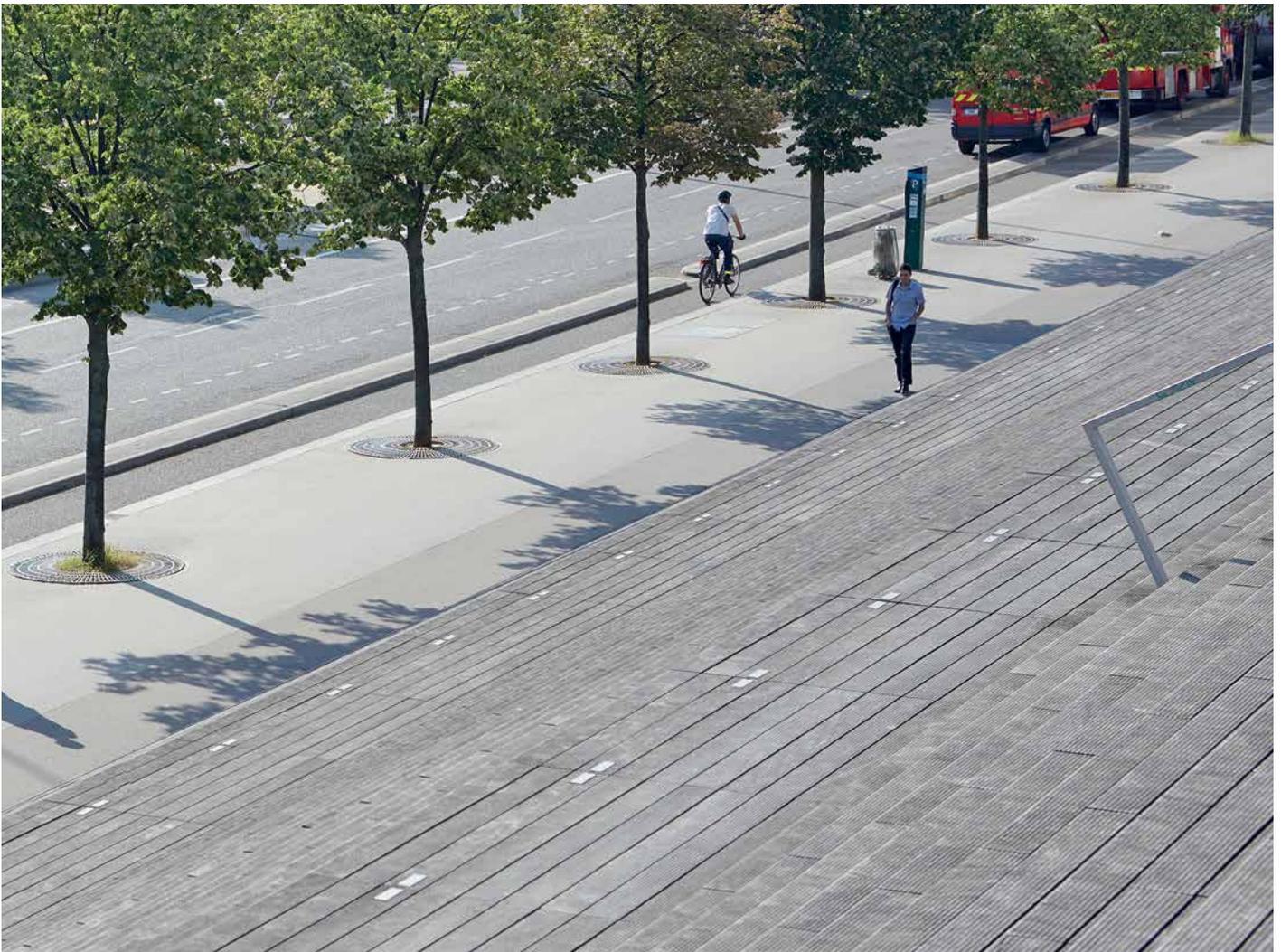
⁷ Consider a company where the financial year equals the calendar year. The targets for year t are set in the October of year t-1, for example. The disbursement takes place in February of the year t+1. According to the accrual principle, the remuneration report for year t, which is published in March (for example) of year t+1, shows the (possibly estimated) disbursement made in February t+1 and not the expected value defined in October t-1.

The form in which the bonus is delivered also plays a role. Where previously bonuses were paid exclusively in cash, nowadays managers receive part (or all) of the payment in (blocked) shares (i.e. shares subject to a sales restriction). This blurs the lines between short-term and long-term incentive plans. Payment in the form of shares is normally motivated by the right idea – alignment with long-term corporate value. However, there is frequently a “fire and forget” attitude, which means that the change in value of share allocations is no longer tracked once the allocation is made. In contrast, the central point of the system we present below is a completely dynamic analysis. This also takes account of the change in value of previously allocated shares in evaluating the overall alignment with long-term corporate value.

A share programme in which a CEO receives a fixed amount in shares (or a fixed number of shares) independent of performance in a specific year does not count as variable remuneration dependent on past performance. The share

allocation and therefore the remuneration may be fixed, but the value that can be realised from this share allocation in the future fluctuates. This means that such a plan also creates an incentive effect relating to the changes in the manager’s equity position (wealth lever).

These observations lead us to draw the conclusion that neither the board, nor executives, nor the shareholders, nor any other stakeholders can obtain a sufficiently accurate picture of the incentivisation and alignment of management with sustainable company value growth if only annual measures (grant values for LTIPs and paid values for STIPs) are disclosed. A comprehensive evaluation of the variable remuneration requires a multi-year approach and reference to the company strategy. Companies seeking to take the lead in value generation also need to be in the lead in value reporting.



Strategic variable remuneration

Long-term shareholder value as a key metric – without forgetting operational targets

Our proposal assumes that the long-term equity value can be used as an indicator of long-term value added. All information pertaining to value is reflected in the share price (or in the value of equity in the case of unlisted companies⁸) – maybe not immediately, but still within a reasonable period.⁹ At the same time, it seems important under a “pay for strategy” approach to remunerate management for achieving strategic and/or operational targets that are in line with the company strategy. In this way, distortions of specific business decisions (or remuneration decisions) possibly caused by longer-lasting, purely market-driven flawed stock market valuations of the business can be mitigated.¹⁰

Traditional models: RSUs and PSUs

Two traditional and currently popular vehicles for share-based remuneration are Restricted Stock Units (RSUs) and Performance Stock Units (PSUs). RSUs consist of the right to be allocated shares in the future if the employee remains in a continued employment with the company (service condition) over a period of multiple years. The plan posits that when all the information is reflected in the share price (in a timely manner), managers will choose value-increasing strategies and actions. Thus, managers are not incentivised to make specific strategic decisions and actions. From the perspective of the board, this is a hands-off remuneration instrument. (RSUs are sometimes also seen as a tool to foster retention. In practice, this effect is limited; when another company wishes to hire a manager away, they will often just compensate him/her for lapsing prior stock units.)

By contrast, PSUs (also referred to simply as Performance Shares) require, in addition to the service condition, that the manager meets the defined targets over a specific performance period. Only then units may vest and shares will be allocated. The performance criteria often comprise total shareholder return or earnings per share measured over a period of 3-4 years. These are targets that are either very close to the bottom line, or which reflect the actual (shareholders’) equity position.¹¹ (See the discussion in the call-out box regarding whether targets should be absolute or relative.) While in the case of RSUs, each unit gives the right to be allocated one share at vesting, PSUs have normally an additional lever increasing the factor to 2 or even 2.5 shares per unit if targets are exceeded. Conversely, if minimum targets are not met, zero shares will be allocated. In terms of the payout profile, PSUs turn out to be similar to stock options: In the best case, managers participate disproportionately in the increase of the share price; and as is the case with an option, there is the risk that the manager never receives any payout from their rights if the threshold is not met. The board must undertake a comprehensive critical analysis to decide whether such a leveraged instrument is in line with the company strategy and remuneration policy.

⁸ The share price is obviously easy to obtain directly only for listed companies. However, it is possible and useful to calculate the value of equity of unlisted companies in the scope of an ongoing, comprehensive value management process. Of course, in such a case the question of market efficiency arises only in the event of an actual transaction.

⁹ There is no scope to enter into a detailed discussion of fundamental questions of market efficiency here.

¹⁰ The extent to which progress towards the strategic and operational targets and expected cash flow is reflected in the market price varies from one company to the next (even if the Swiss stock market, for example, appears to be particularly efficient (in terms of information)). This relates, among other factors, to the transparency of a company’s communications. Active value reporting allows the business to clearly reveal its strategy, identifying relevant drivers of value and reporting with verifiable KPIs on progress in realisation of the strategy. Naturally, in the case of poor performance, managers on the whole have an incentive to be less clear in reporting. It is up to the board to ensure that value is reported consistently. In the long term it pays (including in terms of lower cost of capital) to foster investor trust by means of consistent, reliable (financial) value reporting.

¹¹ Global Equity Insights 2017, Global Equity Organization (GEO), https://www.equity-insights.org/reports/Global_Equity_Insights_2017.pdf.

The problem of relative performance evaluation

Should performance be evaluated in relative or absolute terms? The simple school of thought is that internal performance should not be assessed in isolation, but in comparison to a suitable reference group or market index. Companies in a similar industry are subject to similar external influences, such as stock market performance or country-specific developments (e.g. exchange rates), which should be filtered out when evaluating performance. This relative performance evaluation (RPE) corresponds to the intuitive understanding which says that managers should not be penalised (or rewarded) for factors outside their control.

However, RPE has fundamental weaknesses. First, there is the risk of opportunistic management behaviour in selecting companies for comparison, or the lack of a robust reference group. Second, for outsiders it is difficult to understand when a manager is paid a high bonus just because their company has done better with performance of -10% than the benchmark companies with performance of -20%, for example. It is not easy to communicate the fact that the system is rewarding the comparably good performance.

Third, the use of a remuneration model in which the level of the variable part results from the ranking within the group can also produce undesired side effects. For example, it may result in a willingness among employees to take excessive risk if the system is calibrated in a way that there is no (or just little) reward to plan participants if the company does not achieve a minimum ranking (e.g., no vesting if the company does not surpass at least the median of the group).

The incentive setting of the model also hits its limits where the individual is able to hedge the impact. Consider an example where the variable remuneration of a bank's CEO is linked to the share price performance compared with an industry index. In economic terms, this corresponds to a long position (buyer position) on the performance of the manager's own bank and a short position (seller position) on the performance of the index. If the CEO goes long on the index, he/she can easily hedge against the risk resulting from the index. The plan rules may forbid such explicit hedging, but it cannot realistically be completely excluded (particularly as the CEO would simply have to buy a sufficient number of correlated products, rather than the index itself, in order to obtain a similar hedge).

RPE, therefore, has its difficulties. It is not only ineffective in some circumstances, but can also be counterproductive. A board needs to weigh the benefits against the risks and side effects before introducing RPE.

STARS

Basic principle

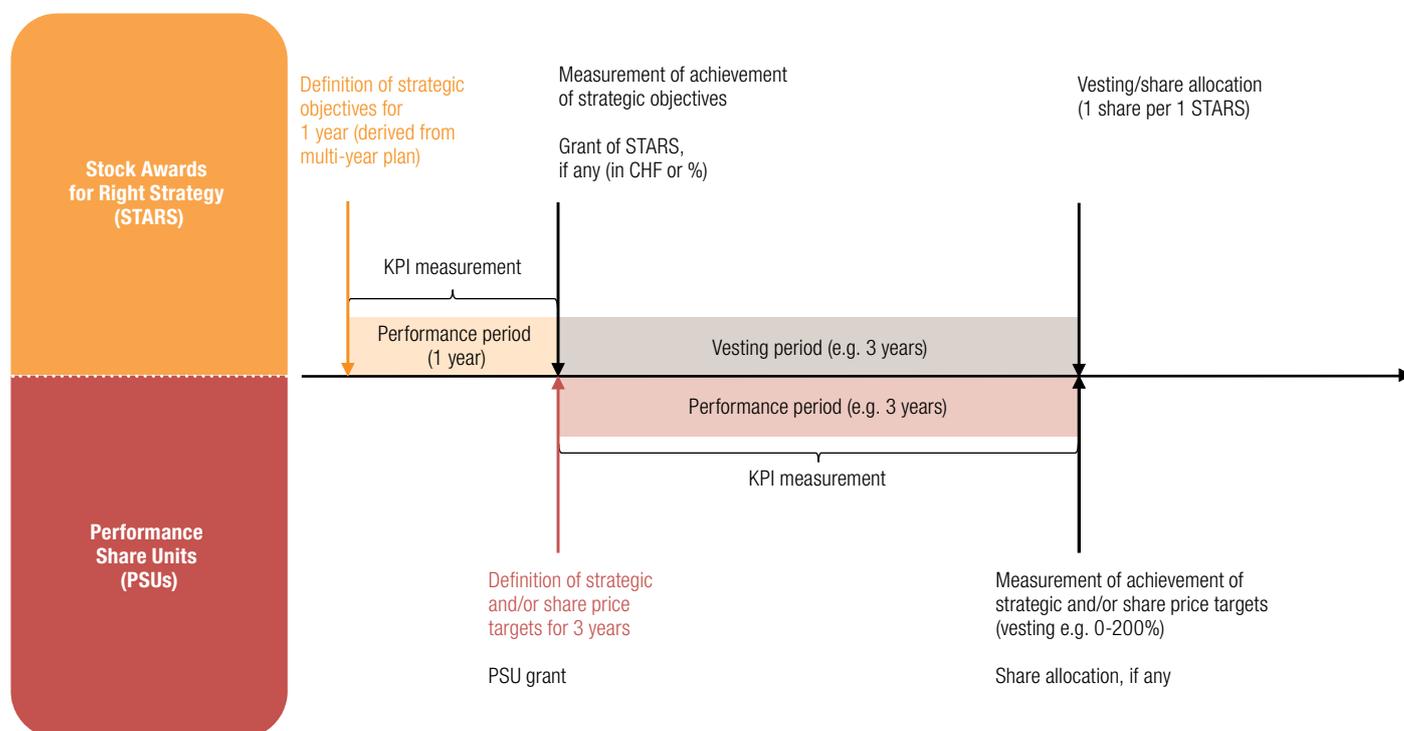
Our **Stock Awards for Right Strategy (STARS)** proposal uses shares to reward past target achievements that are strategically relevant.¹² Figure 3 illustrates the typical process over time. There is nothing particularly new in giving a bonus in the form of shares. However, the key points about the system presented here are, first, the specific alignment of remuneration targets with the company’s strategic objectives and, second, the consideration of the changes of the manager’s equity over time (wealth lever). These two points are discussed in detail below.

The board runs the ship

STARS are a hands-on instrument for the board. They put the board’s role of leading the company into the future in the spotlight.¹³ The strategic objectives that underpin STARS must be tailored to the company’s specific business model. The specific set of performance indicators that best documents

the achievement of strategic (interim) objectives must depend on the company’s individual situation. STARS do not dictate best practice for the targets. For example, a board may come to the conclusion that digitalisation is a key topic for the company. This could result in corresponding, specific one-year targets being defined. Ultimately, this aspect will also feed into cash flow and then into the share price. However, a board must be able to specify a clear strategic vision of the company with corresponding strategic objectives, even if these are not rewarded by the stock market in the short or even medium term. This requires a (sometimes tricky) balancing act: The board and the management must not remove themselves completely from the needs of the shareholders. Nevertheless, it seems to us essential, especially in view of the increasingly short-term perspective of the financial markets, that courageous boards pursue the strategic objectives for their companies and underpin as well as reinforce these with suitable remuneration systems.

Figure 3: Contrasting STARS and PSUs



¹² Whether achieving a target of X% in a specific year results in a multiple of a number of shares or a multiple of a specific amount in shares is generally a matter of taste. A disadvantage of defining the amount in CHF is that if the share price happens to be low, a higher number of STARS will be granted and a higher number of shares may vest.

¹³ We are here discussing this incentive system in the Swiss context, where the board plays an important role in setting the direction of the company. In two-tier systems like Germany, where the board plays mostly a supervisory role, it would be the executive board which would take on some of these tasks.

Dynamic disclosure drives dynamic decisions

When STARS are used consistently over time, managers may build up substantial share positions over the years. Owing to the wealth impact on the managers' shares (or shares to be allocated in the future), the management perceives changes in business development in terms of the change in the equity value of the company. Especially when managers hold substantial share positions, these value fluctuations can be significant. It is, therefore, essential that these changes in equity value are also reflected in the remuneration discussion.¹⁴ Alongside the resulting signalling effect to the outside world, there is also a need to communicate the wealth impact internally. It is common to provide employees with an annual overview of their overall remuneration. However, generally in practice today the change in the value of equity-based compensation is not taken into account or discussed. Such a complete overview would, however, be useful both for the managers as well as for the board and remuneration committee.¹⁵

Share ownership guidelines

Figure 3 suggests that STARS are earned over a period of 3 years (for example) after grant. This means that the share allocation occurs only at the end of the (vesting) period in the case of an active employment relationship. This makes sense in view of the desired long-term orientation of the managers. However, it is also possible to allocate blocked or unblocked shares immediately to the management as long as they are required to build up and hold a defined number or defined value in shares of their own company. Such requirements (known as share ownership guidelines) are today increasingly common among large companies. They are less widespread among medium-sized businesses and still very rare for small ones (see Insights 2018 parts 1 and 2).

¹⁴ A similar proposal is made in The Purposeful Company, Executive Remuneration Report, February 2017, Big Innovation Centre, http://biginnovationcentre.com/media/uploads/pdf/TPC_ExecutiveRemunerationReport_26Feb.pdf. In particular, see p. 45: "Disclosure regulations should, therefore, be reformed, better to show the link between pay and performance, taking account of previously granted equity. To effect this, as well as disclosing the single figure of pay, the company should show the wealth impact: the pre-tax change in value over the reporting year of previously granted vested and unvested equity awards. The absolute £ value of the total shareholder return over the year should also be disclosed. These items should be disclosed for the last ten years alongside the current requirement to disclose the single figure and vesting history."

¹⁵ Following previous good performance, a manager has more "skin in the game". Where the manager previously received more, a drop in operational performance subsequently results not only in lower "flow" compensation, but also in greater loss in wealth. A board must therefore also keep an eye on any undesirable risk incentives that may arise once managers perceive themselves to be in the loss domain.

Summary

Simplicity is a virtue for compensation systems. Managers prefer simpler incentive systems; by contrast, they heavily discount the value of complex systems. At the same time, incentive systems should explicitly incorporate the often neglected dynamic component in disclosure and discussion of outcomes. The STARS model presented in this part 3 of Insights 2018 achieves both of these aims.

We have analysed the system in isolation from possible influencing factors in specific situations. In concluding, we mention a few of these. First, there are situations in which an excessive focus on equity is not suitable. Highly indebted companies may do well to use “inside debt”, i.e. to incentivise managers to take account of the position of creditors directly (and not only indirectly via the value of equity).¹⁶ Second, regulatory frameworks can also limit the design opportunities, which is particularly applicable in the case of financial-sector companies. Third, this article sets aside tax-law aspects.¹⁷ Despite these limitations, it is useful to consider the “blue-sky system” to understand the extent to which a current given system deviates from it and whether this is desirable.

A rational and long-term focused remuneration system is a necessary, rather than a sufficient condition for value-generating corporate governance. The board and executives together must take a holistic view that tightly links the design of the remuneration system, the composition of the board and the executive, shareholder engagement, and value reporting.

¹⁶ Cf. Edmans, A./Qi, L. (2011), Inside Debt, *Review of Finance* 15, 75-102 and Chesney, M./Stromberg, J./Wagner, A. (2018), Managerial Incentives to take Asset Risk, Swiss Finance Institute Research Paper, which discuss the incentive impact of stocks in highly indebted companies.

¹⁷ In Switzerland tax is levied at the time of the actual share allocation. If the shares are subject to a sales restriction, a tax deduction on the share value can be obtained.



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