The True Value of Management Incentive Plans

Without statistical simulations no valid and comprehensive view on risk and payoff of management incentives

by Stephan Hostettler*

For years, top managers were rewarded with stock options and consequently tied to the company. This type of instrument is yet considered intransparent, susceptible and often possesses little incentive. This is where statistics can be very helpful: Statistical simulations are indispensable when designing compensation plans. This is the only way that also investors really understand payment profiles and risks concerning managers' salaries.

The difficulty of valuating remuneration packages is nothing new: In fiscal year 2000, Apple's CEO, Steve Jobs received US$ 20 million stock options. The business magazine Fortune valued his stock options at US$ 872 million. In his letter to Fortune, the Apple boss wrote that his stock options are in fact worth zero, with the strike price being US$ 43.59 and the stock price trading at US$ 24. Even one of the most recent examples in Switzerland, Credit Suisse Group's Performance Incentive Plan, reveals the manifold uncertainties as to estimating the "real" value of incentive programs that have a significant risk and leverage. Often, even the beneficiaries are seldom able to state what their package will be worth.

Investors pay attention to long-term incentives

The various management compensation tools possess different leverages, payoff schemes and risks. Thus management members would like to know what their

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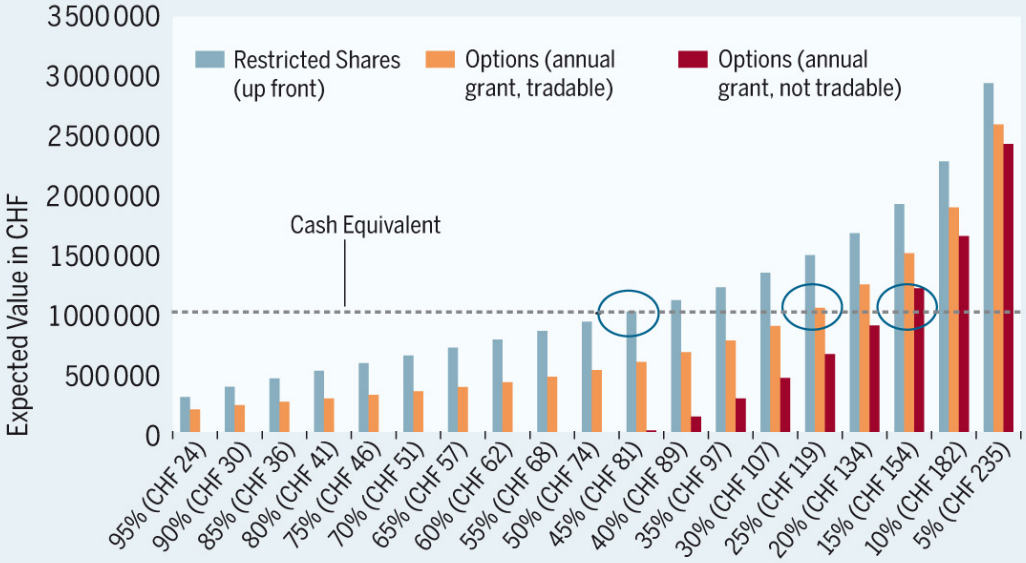
individual remuneration profile looks like. The board of directors wants to find out whether the compensation can be justified internally as well as externally. And finally, shareholders are particularly concerned that the compensation is value-oriented and that in the long-term the company is brought on to a solid track.
The board of directors is on the safe side if it compares different alternatives using statistical simulations before introducing a compensation program. On the basis of normally distributed stock returns and lognormally distributed share prices, thousands of possible variations and their occurrence probability are simulated in accordance with statistic rules. Thus, depending on the interest environment, expected Total Shareholder Return (TSR), stock volatility, dividend yield and share buy-back expectations, share prices can be simulated over a period of up to 10 years and, hence, the compensation package can be calculated on this basis. The result is a so-called payoff profile that charts the realized compensation depending on the probability of occurrence and related share prices (cf. graph).

Statistical Likelihood for Share Price (End of 2010)

(Initial Value: CHF 80 End of 2005)



Parameters for simulated calculation: Initial share price at end of 2005: CHF 80; Expected Total Shareholder Return (TSR): 7.2%; Volatility: 35%; Risk-free rate: 2.2%; Dividend yield: 2.7%; Exercise price: At-The-Money; Option valuation based on Black-Scholes. Normally distributed stock returns; lognormally distributed share price. Grants are at the beginning of the year.

Source: Hostettler & Partner AG NZZ

Illustration of three different models

The example displays three different incentive models. Starting point is that a manager receives a part of his total package in the form of shares or options. It is assumed that CHF 200,000 will be paid annually over five years, i.e. a total of one million CHF. The cash equivalent of the stocks and options is shown in the graph as a dotted line. From the manager's point of view, the value of the realized compensation changes depending on what equity instrument is used. Typical stock options (options, annual grants, non-tradable) as used in the example have a five-year maturity and a three-year vesting period, at the end of which the manager can exercise the options. The manager receives CHF 200,000 annually in the form of options, regardless of the current share price. These options are not tradable, i.e. the intrinsic value and time value of the options is relevant at the time of the grant, however, when exercised only the intrinsic value can be realized. The same options are shown again, but in a tradable variation (options, annual grant, tradable). In this variation the manager can realize the intrinsic value as well as the time value. Not only does this increase the expected value for the manager, but strengthens the incentive during times of weak stock prices performance. The most attractive solution both from the point of view of the manager as well as of the investors is provided by the so called Up-Front Restricted Shares. The five-year total CHF grant is granted at the beginning of the five year period (up-front) in form of say 12,500 restricted shares (one million CHF divided by the share price, in this case CHF 80). The term "restricted" indicates that on one hand one fifth of the shares vest every year and on the other hand the shares remain blocked until the end of the five-year period and cannot be sold.

Restricted Shares possess multiple advantages

The statistical simulation compares the expected values of the three instruments as per end of 2010 with the cash equivalent. This simulation encompasses all shares and options, including those that have not yet vested. When options are traded they have a 25% likelihood of attaining the cash equivalent. Options that

are not traded have an approx. 15-20% likelihood. The more risky the instrument (e.g. indexed options) or in the case of higher share price volatility, the extremer the payoff profile becomes. Compared to the illustrated graph, the bars will rise higher towards the right and will plunge down faster towards the left.
The analysis also shows that replacing the annual option grant by an up-front package of restricted shares significantly influences the risk and the payoff profile. First, the advantage of Restricted Shares is that managers usually better identify with shares than options. Second, such packages are easier to communicate to the shareholders, i.e. the deal is cut for multiple years and provide a better alignment with shareholder interests. Third, they contain significant leverage for management if the company is doing well. Fourth, if stock prices decline, they pose less risk than options and are less likely to induce management to follow a riskier investment and communication strategy.
A very similar example for Up-Front Restricted Shares is the compensation plan for the CEO and delegate of the Board of Directors at Forbo Group: This E. Schneider, who, instead of receiving salary payments in the form of bonuses and options until 2010, decided to take a payout in the form of restricted shares, up-front.
To sum up, it can be deduced that statistical simulations are immensely important for designing and calibrating compensation plans. It is practically impossible for investors, management and other stakeholders to properly understand the dynamics embedded in combinations of options, shares and other influencing variables, without calculating and visualising the risks and payoff profiles. Simulations provide the transparency needed before a value-oriented discussion about management compensation is possible.

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