

Werner Gleißner

The Management Board and its Risk Manager

A dream team in the fight against the financial crisis

Leseprobe

Presented by



Obere Gärten 18

70771 Leinfelden-Echterdingen

Tel.: 0711 / 79 73 58 30

www.futurevalue.de

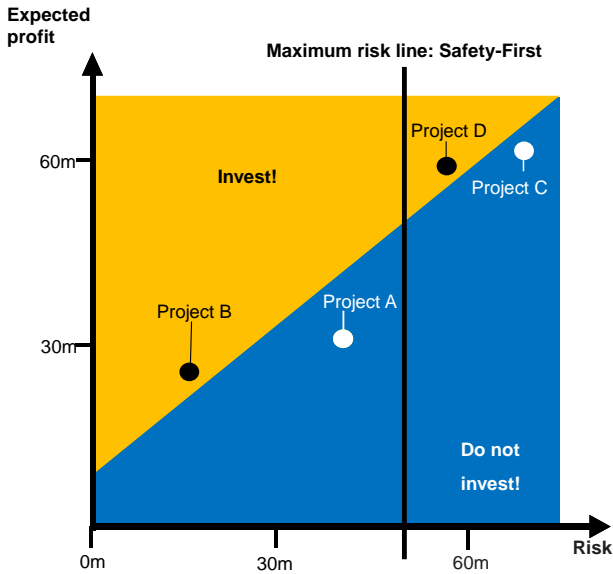


Introduction: Risk management – the basics

Environment and role

Companies have always concerned themselves with avoiding risks to the company as a going concern. The need to systematically identify, evaluate and manage risks has increased in recent years. One reason for this is that the level of risk in many areas has vastly increased. This is reflected in the speed of change of technological processes, the dependency on few customers, or the emergence of entirely new risk categories (for example, potential new competitors from abroad as a result of an increasingly globalised world). Further to this, as a result of the Control and Transparency Act (Kontroll- und Transparenzgesetz - KonTraG) enacted in 1998 and its “radiating effect” on small and medium-sized companies, it may be assumed that the failure to implement a risk management system – also in corporations – can result in managing directors being held personally liable. Finally, as a result of Basel II and Basel III, both regular and savings banks are required to be more cautious when it comes to risk. The impact of risks that have occurred (for example, the loss of a major client or an unexpected increase in material costs) have become apparent in the annual accounts and the key financial figures derived from them (for example, equity capital quota or overall return). As these figures define the conditions for loans and interest in the typical company rating process, risks can have a considerable impact on company financing. For instance, a coincidental combination of several risks can quickly give rise to a situation in which the financing of a company is no longer secured because of an unsatisfactory rating. This can also happen despite a company demonstrating strong performance over the long-term. This issue is particularly likely to be present where companies have reduced risk capacity (especially capital), regardless of the existence of other factors that indicate excellent potential for success.

On the whole, these recent developments call for thorough engagement with the issue of risk management. Guidelines must be put in place to appropriately tackle potential risks to the company as a going concern and, when it comes to major company decisions (for example, investments), expected profits must be weighed against related risks.



Profitability and risk could also be used, e.g. return vs. cost of capital both in%

Figure 1: Profit-Risk Profile

Such a risk management process must be integrated into work processes and organisational structure, which will lead to what is known as a “risk management system” being established.

Risk management involves much more than (what practically goes without saying) adhering to statutory obligations (for example, labor and environmental law), taking out insurance, and creating emergency plans. Risk management is essentially a comprehensive process of identifying, assessing, aggregating, monitoring and the target-based management of all risks which could result in deviation from defined company goals.

Identifying risk

The first phase of risk management involves a systematic and structured identification of potential risks that focuses on the essentials. Analyzing work processes, workshops, benchmarks or checklists can be used to identify risks.

In practice, the following ways of identifying risk have proven to be especially useful:

(1) Strategy and strategic risks

Companies must be very clear when it comes to their success potentials (such as core competencies, internal strengths and competitive advantages as perceived by customers) within the framework of strategic company planning. By systemically studying their most important success potentials and the potential threats to which they are exposed, companies can identify the most important strategic risks.

(2) Controlling, operational planning and budgeting

Particular assumptions are made when it comes to controlling, company planning or budgeting (for example, the economic situation, exchange rates and success in marketing activities). All uncertain planning assumptions represent a potential risk, as they can lead to deviations from plans.

(3) Risk workshops (risk assessment) for performance risks

Certain types of risk are best determined through critical discussions in a workshop. Risks relating to performance (operational risks), legal and political risks, as well as those relating to support processes (for example, IT) fall under this category. For operational risks relating to the value chain, work processes (including the principle interfaces) could, for example, be described and then analyzed step-by-step to see which risks could cause a deviation from the planned process sequence.

<i>Risk</i>	<i>Field</i>	<i>Impact</i>	<i>Action to be taken</i>	<i>Relevance</i>
<i>New competitor</i>	<i>S/M</i>	<i>T/SP</i>	<i>Further strengthen sales</i>	4
<i>Volume of sales</i>	<i>P</i>	<i>T</i>	<i>Warning and forecasting system for turnover</i>	4
<i>Interest rate changes</i>	<i>F</i>	<i>FI</i>	<i>Interest rate agreement</i>	3
<i>Staff costs</i>	<i>M</i>	<i>FC</i>	<i>Company covers it</i>	3
<i>Damage to machinery</i>	<i>P</i>	<i>T</i>	<i>Redundant design</i>	3
<i>Sales price fluctuation</i>	<i>M</i>	<i>T</i>	<i>Company covers it</i>	3
<i>Dependency on Company ABC</i>	<i>M</i>	<i>T</i>	<i>Contract structure, strengthen sales</i>	2
Pricing errors	P	T/FC	Organisational measures	2
Liability losses to customers	P	ER	Optimise insurance coverage	2
Growth-related EC deficiencies	S	SP	Reinvest profits	2
Takeover Company ABC	F	FI	Due diligence	2
Lack of competence in country A	S	SP	Sell business division	2
Problems with motivation in sales	G	SP/T	Increase performance-based remuneration	1

Risk fields: S = strategic M = market F = finance market		Impact: SP = success potentials T = turnover V = variable costs	
P = performance G = corporate governance L = legal/societal/political		FC = fixed costs FI = finance + investment res. ER = extraordinary results	

Figure 2: Risk inventory

Significant risks are then summarized in a risk inventory, a type of risk “hit list”. In order to prioritize risks, as a first step, an initial evaluation of the risk can be carried out with the use of a “relevance scale”. An example of an appropriate relevance scale (see figure 2) here would be from 1 (insignificant) to 5 (risk to the company as a going concern).

Quantifying risk

By quantifying risk, the risk is next assessed using an appropriate (mathematical) distribution function. Risks are often quantified according to probability of occurrence and potential extent of harm, which corresponds to what is known as a “binomial distribution” (digital distribution). Certain risks, such as deviations in maintenance costs or interest charges, may reach varying levels of risk with different probability and would be better described using other distribution functions (for example, triangular distribution with minimum value, highest probability value and maximum value or normal distribution with expected value and standard deviation).

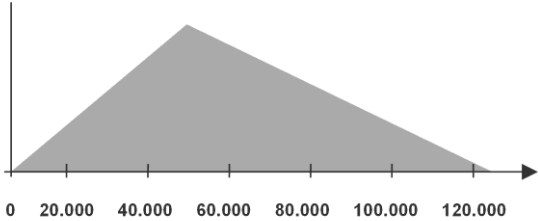


Figure 3: Triangular distribution

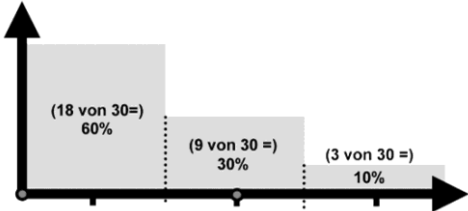


Figure 4: Binomial distribution/ Distribution scenario

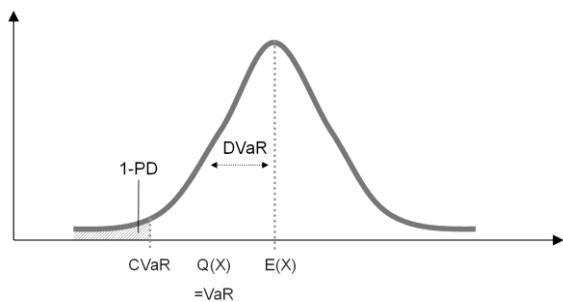


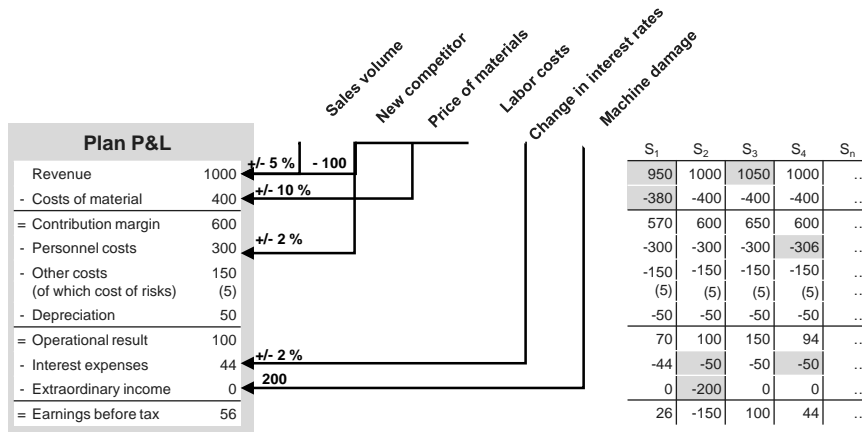
Figure 5: Normal distribution

When assessing risks, it is possible to look back to the actual impact of risk (losses) that occurred in order to benchmark values from the industry or self-created (realistic) damage scenarios. These scenarios should then be described in detail and illustrated in terms of potential quantitative effects on company results.

In order to compare all forms of risk with each other in terms of significance, a consistent risk measure (such as value at risk) is useful. There must be a realistic maximum loss that cannot be exceeded, where probability within a particular planning period has already been defined. This can be interpreted as need for capital.

Determination of total level of risk and need for capital

A risk inventory only allows a company to derive which risks in and of themselves present a threat to a company as a going concern. To determine the extent of the total level of risk (and therefore the extent of the threat to the company as a going concern resulting from a combination of all forms of risk), what is known as a “risk aggregation” is needed. Risk aggregation enables analysis of the combination effect of multiple individual forms of risk. Risk aggregation involves putting the assessed forms of risk in the context of company planning and demonstrating which form of risk threatens deviations at certain points in planning (success planning). With the help of a risk simulation process, a large number of potential future risk-related scenarios can be identified and analyzed. Conclusions may be drawn about total level of risk, planning security and a realistic frequency range e.g. company results (“Monte Carlo simulation”). From the risk-related frequency range that is determined, conclusions can immediately be drawn about the level of potential risk-related losses. As a result, it is possible to deduce the need for capital and liquidity to safeguard against risk which, in turn, allows conclusions to be made on an appropriate rating. This allows key risk figures to be determined, for example capital coverage which shows the relationship between available capital and need for capital.



Risk simulation shows possible deviations and the capital requirement to cover possible losses!

Figure 6: Integration of Risks within Plan P&L (Source: Gleißner, W. (2015): Controlling und Risikoanalyse bei der Vorbereitung von Top-Management-Entscheidungen, in: Controller Magazin, Juli/August 2015, Heft 4, pp. 4-12)

Risk management, risk monitoring and risk reporting

Based on research on the comparative significance of individual risks and total level of threat which, for example, is expressed by capital coverage, action is required when it comes to developing a targeted risk management system. The aim of risk management strategies can range from avoiding risk, to limiting damage or reducing the probability of occurrence. Transferring risks to a third party is especially important in risk management, particularly when it comes to the important special case of insuring against the impacts of identified risks.

As causes of potential risk are constantly changing, it is essential that significant risks are monitored on an ongoing basis, both to make economic sense and to operate in line with the Control and Transparency Act (Kontroll- und Transparenzgesetz). In accordance with the Control and Transparency Act (Kontroll- und Transparenzgesetz), responsibility for monitoring significant potential risks must be documented in a clear and structured fashion, including information on the extent of monitoring conducted and the cycle of monitoring. Furthermore, management must formulate a risk policy that establishes the basic requirements for dealing with risk. Limits must be set and a reporting channel for risks must be defined and also documented here. Existing management systems should cover as many of the basic tasks relating to risk management as possible. Therefore, for example, through the systematic collection of uncertain planning assumptions (risks) in planning, budgeting and controlling, a risk management system can effectively be built and integrated.

Management bears overall responsibility for risk management. However, it is normal that essential tasks, especially the coordination of all risk management processes, are passed onto a risk manager. The risk manager is also responsible for compiling all information pertaining to potential risks in a risk report.

To be conducted efficiently, risk management is normally supported by an appropriate IT solution. Software should support the checklist-based risk identification, enable quantitative evaluation and aggregation (using simulation) and store essential organisational instructions relating to risks. Additional important software functions include supporting company planning, forecasting risk-related

vulnerability to crises and company rating. Risk assessment is then conducted through simply entering a relevance ranking which can be complemented through detailed quantifying.

Risk management in preparation for decision-making as a success potential and an important element of value-oriented management

Risk management skills are key to success when an unexpected development occurs in the company environment. When it comes to avoiding crises, risk management skills secure ratings and financing, and help to evaluate investment options or projects in terms of risk. On the whole, risk management supports the central company task of using sound judgement when weighing expected income and potential risks with regards important decisions (“evaluation”). It is crucial that risk analysis is conducted when preparing to take company decisions, and it shows how the level of potential risk to the company would change if one course of action were chosen over another (“what-would-happen-if analysis”).

In contrast to traditional valuations based on a “capital market perspective” the capital cost rate can directly be derived from the earnings risk (risk analysis and risk aggregation) rather than from historical fluctuations of stock returns (as usually expressed in the CAPM beta factor).¹ This form of assumed capitalisation interest rate (discount interest rate k), which is often simplified as a constant, can be derived from the standard deviation of earnings $\sigma_{earnings}$ as a risk measurement specifically, for example. Risk measurement is the outcome of the risk analysis and risk aggregation.²

The expected value for earnings E^e and the following equation for the risk-adjusted capitalisation rate are based on the risk-free interest rate r_f :³

Formula 1

$$k = \frac{1 + r_f}{1 - \lambda \cdot \frac{\sigma_{earnings}}{E^e} \cdot d} - 1 = \frac{1 + r_f}{1 - \lambda \cdot V \cdot d} - 1$$

The variation coefficient V is the ratio of earnings risk $\sigma_{earnings}$ to expected earnings E^e which both depend on opportunities and risks. It is a key figure for planning security and earnings risk.

The value λ shows the excess return per unit of risk.

Formula 2

$$\lambda = \frac{\text{market risk premium}}{\sigma_{r_m}} = \frac{r_m^e - r_f}{\sigma_{r_m}}$$

¹ Compare with Gleißner: Risikoanalyse und Replikation für Unternehmensbewertung und wertorientierte Unternehmenssteuerung, in: WiSt 7/11, pp. 345–352 und Gleißner: Kapitalmarktorientierte Unternehmensbewertung: Erkenntnisse der empirischen Kapitalmarktforschung und alternative Bewertungsmethoden, in: Corporate Finance, 4/2014, pp. 151–167 sowie Dorfleitner, G./Gleißner, W. (2018): Valuing streams of risky cashflows with risk-value models, in: Journal of Risk, Vol. 20, No. 3 (February 2018), pp. 1-27.

² Compare with Gleißner: Grundlagen des Risikomanagements (Basic Principles of Risk Management), 3rd edition, Vahlen Munich, 2016 (forthcoming).

³ Compare with Gleißner: Risikoanalyse und Replikation für Unternehmensbewertung und wertorientierte Unternehmenssteuerung, in: WiSt 7/11, pp. 345–352.

This depends on the yield expected from the market index r_m^e , its standard deviation σ_{r_m} and the risk-free base interest rate r_f . It expresses the return-risk profile of alternative investments: to evaluate means to compare.

As owners do not necessarily bear all the risks of the company $\sigma_{earnings}$, the risk diversification factor (d) also needs to be considered.⁴ This indicates the proportion of risk borne by the owners in formula 1 and is therefore relevant for the deduction.

It is necessary to compare the risk-return-profile of different strategies, projects or investments. The value is a performance measure that express the risk-return-profile.

Risk management is an essential component for company leadership that aims to be strategically far-reaching, as well as focused on risks and values. When preparing to make decisions, a sound strategy, operational planning built on this strategy, and even an analysis of opportunities and threats (potential risks) are essential.⁵ When it comes to “real” value-oriented management to be defined as today’s “capital market-oriented” management system, decision-making calculations (for example, through the capital cost rate) capture the return risk, such as volatility in cash flow (and not fluctuations in historical earnings per share). Additionally, considering the importance that rating and finance restrictions took on during the recent economic crisis, evaluating one course of action over another is also essential with respect to future ratings, also for possible risk-related stress scenarios (“stress test”).

On the whole, many unused opportunities exist for further developing management tools with the aim of improving company decisions as well as offering a better foundation on which to base decisions. However, numerous barriers exist to implementing these tools in practice as this book explains through a fictional conversation between the management board and a risk manager.

⁴ It is often assumed that the correlation between results and the return from market portfolio is just as high as the correlation between company stock and market portfolio.

⁵ See the new “Principles of Proper Planning” in Gleißner, W./Presber, R. (2010): Die Grundsätze ordnungsgemäßer Planung - GOP 2.1 des BDU: Nutzen für die betriebswirtschaftliche Steuerung, in: Controller Magazin, Ausgabe 6, November/Dezember 2010, pp. 82 - 86.

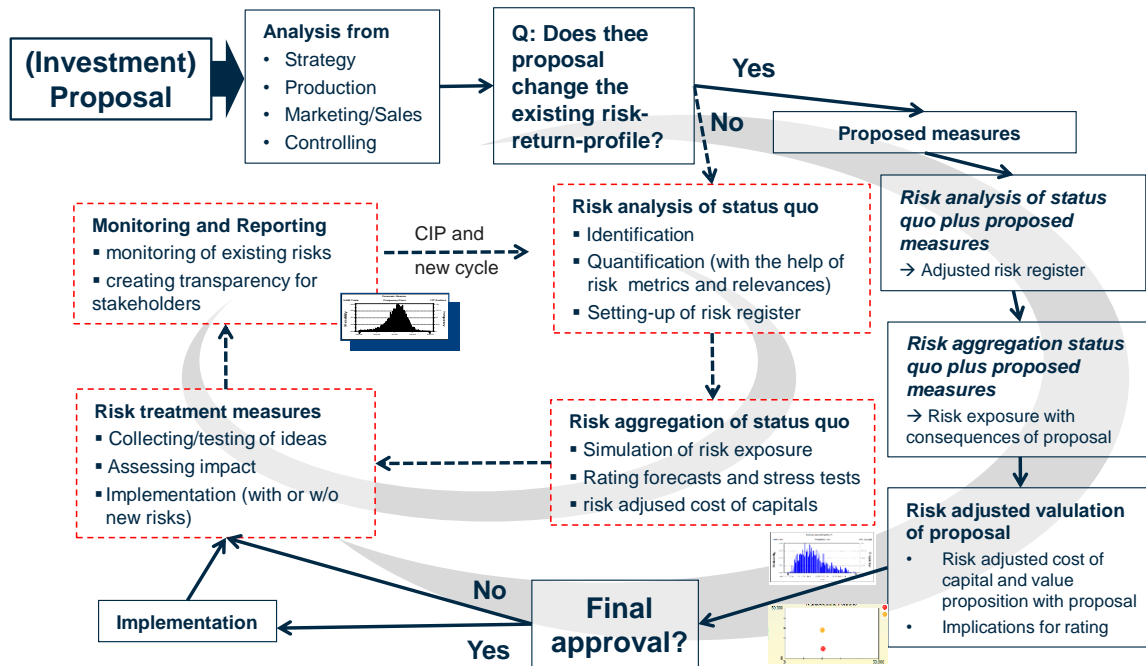


Figure 7: Traditional Risk Management Cycle vs. Decision-Driven Risk Management Cycle: Risk Analysis as Part of Every Decision (Source: Gleißner, W. (2015): Controlling und Risikoanalyse bei der Vorbereitung von Top-Management-Entscheidungen, in: Controller Magazin, Juli/August 2015, Heft 4, pp. 4-12)

Prologue

The following (fictional) account features extracts from conversations held in the offices of the CFO (F) of Stettener Metallwaren AG between 2007 and 2009. The company boasts a stock exchange listing and an investment grade rating; naturally, it has a risk management system in place that has been checked by an auditor. However, in the run-up to the looming economic and financial crisis, the newly hired risk manager (R) has arrived and brought some new ideas with him ...

Chief Financial Officer (F) and Risk Manager (R) in conversation

July 2007

F: Hello, Mr Riskaware! I'm very pleased to meet the new Head of Group Risk Management face-to-face. Our Head of Internal Auditing, your line manager, tells me that you have thoroughly learned the ropes here in the last 6 months.

R: Thank you. I have very much been looking forward to our first face-to-face meeting and particularly to having the chance to explain my ideas on developing a **risk management system** for our company in more detail.

F: Excellent, excellent. Your boss, our auditor, has summarised the most important points for me. As you know, at the moment we are facing many key strategic decisions regarding our expansion and the planned investment in Russia. The management board is currently discussing this and preparing a presentation for the supervisory board. Considering the importance and urgency of these issues, I would really like to postpone our conversation about risk management a little. Perhaps it would be best to arrange an appointment before our board meeting in February, where we discuss risk and risk management on a rotational basis...

A contemporary risk management system is demand and decision oriented. A risk management system is based on analysing which company decisions (at what points) require risk-related information in order to balance expected gains with potential risks. Essential risk-related information is then prepared in an appropriate way, e.g. in the form of a risk-related need for capital (for capital structuring decisions) or a discounting interest rate that is risk adequate (for investment decisions).

Still in June 2008, 3 days after the financial analyst conference

F: It's great that you could drop by at such short notice. We need to talk about our risk management. I was at the recent press conference and mentioned potential deviations in our results and possible problems with our activities in Russia. The equity analysts at the press conference asked me about risk management.

R: And? That's like winning the jackpot in the lottery.

F: Please don't be so sarcastic. Back to the issue at hand, I explained that we are going to fall 20% short on previously communicated results. I explained that this was because investments and costs in Russia have been higher than originally planned. And furthermore, we have lost market share in other countries not by any fault of our own, due to exchange rate changes.

A financial analyst then actually asked me why I had not mentioned the reasons for these deviations anywhere in the last annual report and the risk report in particular.

R: As you know, this risk report was compiled by my predecessor. You wanted a “copy and paste job” without too many alterations. At that time, we only conducted risk assessment analyses every 6 months, in which we asked management to fill out a questionnaire evaluating potential losses and probability of occurrence with respect to a predefined list of potential risks.

On many occasions, I have said that, with this type of risk inventory, many significant risks are not and would not be recognised. For this reason, a proper detailed risk analysis that includes quantifying and aggregation of all significant risks has never been conducted. One thing that is absolutely certain is that quantitative risk-related information for this and similar projects do not automatically get transmitted to central risk management. Moreover, nobody has taken real responsibility for the economic **exchange rate risk** which relates to us losing our competitive standing when it comes to prices that are dependent on exchange-rate developments. The treasury only really looks after transaction and translation currency risks, and stated in the risk report that no exchange-rate risks existed because of exchange rate hedging. The economic exchange-rate risk relating to changes in our competitive standing has been simply overlooked.

F: That is extremely embarrassing. I get the feeling that financial analysts are also starting to understand that, most recently, risks have been the cause of possible deviations.

Risk analysis is understood as a summary of the identification and quantification of risks.

R: That would be a great step forward. As a result, external analysts, and as usual our own supervisory board, would have a very simple opportunity to check the quality of our risk management system. The term “**deviation test**”⁶ is used here. You can see the root causes of all deviations from a plan that have occurred and analyse whether the main reasons behind one of these types of deviations from a plan – a related risk – were mentioned in advance. No deviation from plan occurs without an underlying risk.

The ultimate test of a risk management system is the "deviation test". As deviations from a plan can always be traced back to the impact of risk, that the following is essential: the root cause of any deviation from a plan that has occurred should correspond to a previously known risk.

F: Okay, I understand that in terms of risk management, we should have implemented some of your suggested improvements before it was too late. It looks like it’s essential that if anyone, anywhere in the organisation is aware of potential risks, that such information is automatically passed onto risk management. The risk assessments and written employee questionnaires that we have previously done seem to be of little help here.

R: As I’ve said many times before, to my mind it is essential that by making changes to the existing work processes of management systems such as controlling or quality management, we ensure that any risks recorded there are automatically quantified and sent on to my central risk management system. I’d like to remind you that in planning and budgeting processes, controlling practically stumbles across uncertain planning assumptions. And we have to know the extent of the certainty or uncertainty of our planning. When we run a statistical analysis on a large number of deviations from a plan that have occurred historically, it is even possible to improve our **risk quantification** and better predict the level of planning security.

F: Just yesterday with the Head of Controlling, I spoke about this idea, which you previously mentioned. I have to say, however, that he was not exactly excited about it, although he clearly acknowledged that active collection of uncertain planning assumptions during the planning and budgeting process is in

⁶ Gleißner, W. (2007): Beurteilung des Risikomanagements durch den Aufsichtsrat: nötig und möglich? , in: www.aufsichtsrat.de, 12/2007, pp. 173-175.

fact not a significant extra cost. He claimed, however, that by collecting planning values his controller and the others responsible would reflect on opportunities and threats and could also, with relative ease, look at the whole range – minimal value, probable value and maximum value.

R: And where then is the problem exactly?

F: I believe that controlling is worried that with the integration of planning and risk-related information, your simulation-based risk aggregation process and the information it extracts means you will end up taking over the original tasks of controlling and possibly even building a “super controlling system” which, unlike his way of doing controlling, will achieve transparency over planning security.

R: It is exactly something like this that we need. Controlling and planning need to be linked. In the end it doesn't matter if risk management or controlling takes responsibility for a shared **stochastic planning system**, as it is known. Responsibility for such a system that looks at risks through simulation can, to my mind, also remain with controlling. Risk management would then, as appropriate, deliver risk information and receive the results which are important for us, such as, for example, the aggregated **total level of risk** or need for capital.

I would have no problem with that. I fear that the problem may lie elsewhere.

F: Meaning?

R: I'm afraid that our Head of Controlling, apart from the level of organisation involved, is afraid of such a stochastic planning and controlling system. Mainly because it will achieve total transparency over the level of planning security. And also, possibly, because he simply has no idea about how these things work.

F: What's your opinion then in this regard of how qualified our controlling department is and, in particular, the Head of Controlling's level of qualification?

R: It's not my place to judge the qualification of an employee high up in management.

F: Still, I would be curious to know your professional opinion. Clearly, the level of professional competence and training of our staff is important to the overall success of the company. So, I'd like to ask you again to give me an honest opinion of our Controller's level of qualification.

R: Okay then. From my own discussions with controlling I have to admit that the level of training seems to be quite lacking, particularly in it comes to mathematical processes and simulation techniques. When I mention probability distribution, I see quizzical looks on many faces. I imagine nowadays that almost every business administration student has worked with simulation software such as **Crystal Ball or @Risk** at least once. It seems that in our controlling department, in contrast to other companies, nobody has any useful practical experience. Furthermore, there seems to be an aversion to all things new that they don't understand thoroughly, and there is very little motivation to learn about these new things and change something. To my mind, our Head of Controlling is not mathematically minded even when it comes to basic arithmetic. He is pretty clueless, and ...

F: Okay, well that's going too far. You can't presume to make such a judgement of your superiors.

R: But...apologies...I only wanted to say that resistance to new methods normally stems from people not really understanding them and possibly fearing that they will lose influence and respect as a result of new processes. It's much easier to say “That won't work”, than “I don't understand how that works.”

F: Okay. However, I don't believe it will be possible to carry out the right tasks for building company risk management competence and, if I have correctly understood, expanding our controlling system if controlling is against it.

R: But...

F: We don't need to talk about that at the moment, however. We can talk about that when we have a bit more time. There are two crucial issues that I want to talk with you about now.

R: Of course. What issues are they, then?

F: It became clear at the financial analyst conference that we need to improve our risk report. Can you give me some solid recommendations on how to do this in the next annual report please?

R: Certainly. We need to become familiar with the guidelines set out in the **Standards for Auditing 340** and the German financial reporting standards.⁷ Initially, we need to address and outline at least what we already have in risk management. Currently, to be honest, readers learn pretty much next to nothing about the performance of our risk management system and our risk situation. The one consolation is that the risk reports of many other companies listed on the stock exchange are not much better.⁸ In the future, we have to at the very least guarantee that we don't just discover plan-deviating risks retrospectively, but identify them in advance by carrying out systematic **risk identification**. Nobody is expecting us to make, for example, predictions about the dollar exchange rate. We have to, however, demonstrate the effects that unexpected changes in the dollar exchange rate can have.

F: I've been saying that for a long time! Luckily we have at least quantified the most significant risks in terms of level of harm and probability of occurrence.

R: And, we also have to move away from describing all potential risks in a meaningless way using the level of harm and probability of occurrence.

How would we describe potential risks relating to exchange rates, the price of raw material, or the economy in that way? The dollar exchange rate will absolutely change. We just don't know by how much, in which direction and what implications it will have. Here, we should at least show that we can also describe risks using a **normal distribution**, which is typical with potential risk relating to exchange rates and prices of raw materials. Or, also that we can use the frequently mentioned **triangular distribution**, which means quantifying risks based on minimal value, probable value and maximum value. That way, we can at least demonstrate that we use methods for quantifying risk that make sense. We should potentially add quantitative information to certain parts, so that the reader gets at least a rough overview of how big the risks are that potentially affect our company – and possible, unforeseen deviations from plans.

F: It will certainly be easy to present the information in that way in the next annual report.

R: Yes, of course it will be easy to present it this way. We have to, however, ensure that we actually use the appropriate methods. Otherwise, what we show will of course be an incorrect representation.

⁷ DRS 20 (German financial reporting standards 20) is relevant today.

⁸ Berger, T./Gleißner, W. (2007): Risikosituation und Stand des Risikomanagements aus Sicht der Geschäftsberichterstattung, in: ZCG Zeitschrift für Corporate Governance, Heft 2.07, April 2007, pp. 62-68 und Kajüter, P. (2004): Die Regulierung des Risikomanagements im internationalen Vergleich, in: ZfCM, Sonderheft Heft 3/2004, pp. 40-53, Gleißner, W./Berger, T./Rinne, M./Schmidt, M. (2005): Risikoberichterstattung und Risikoprofile von HDAX-Unternehmen 2000 bis 2003, in: Finanz Betrieb 5/2005, pp. 343-353, Crasselt, N./Pellens, B./Schmidt, A. (2010): Zusammenhang zwischen Wert- und Risikomanagement – Ergebnisse aus einer empirischen Untersuchung, in: Controlling, 22. Jg. (2010), pp. 405-410 und Angermüller, N. O./Gleißner, W. (2011): Verbindung von Controlling und Risikomanagement: Eine empirische Studie der Gegebenheiten bei H-DAX Unternehmen, in: Controlling, 6/2011, pp. 308 - 316.

F: Oh? Certainly!

R: On top of that, I would think about at least supplementing it with a statement on the aggregated overall risk position, possibly expressed through the risk-related **need for capital**. This is the only way it is possible to estimate the actual risk to the company as a going concern through possible aggregated risk impacts and to fulfil the requirements of the Standards for Auditing 340.⁹ And this is the only way we will find out if combinations of individual potential risks could pose a threat.

16

Chief Financial Officer (F) and Risk Manager in conversation 51

And the saying also goes for risk management: “If you can’t measure it, you can’t manage it.”

Even if we still don’t have a perfect, regularly used **risk aggregation model**, we can guarantee it relatively easily. A friend told me that, by using an existing standard simulation tool in a one-day workshop, he has managed to, in a sort of fast-track process, establish an initial estimation of overall risk position and need for capital as well as a rating prognosis for several listed corporations. In the annual report we can state that we use a simulation process here and that, through the use of this risk aggregation process, we have concluded that the aggregated overall risk position is sufficiently safeguarded by our equity capital, which is our risk-bearing capacity. Later we can start building on our controlling system and develop stronger company specific processes that can be implemented, and regularly display the current aggregated risk position, for example for quarterly reporting, to the supervisory board.

F: That sounds good. It’s great that such a practical solution exists here. But, you’ve just mentioned another problem. At the financial analyst conference we spoke about, Dr. A, the head of our supervisory board, was present. Directly after the conference he told me that considering what, for him, was a clear shortcoming in our risk management system, he would like regular and detailed reports to go to the supervisory board. How should I relay this to the supervisory board? I would be very interested to know if your idea matches with my concept.

R: Well, now, as we should have been doing all along, we should make a risk inventory. It should list all our top potential risks and ensure that, for the future, all significant potential risks are included in the list. As mentioned, it is also very easy for a supervisory board to check if we have taken account of all significant potential risks based on deviations from a plan that have occurred.¹⁰

F: Yes, in theory it’s easy...However in practice, with our supervisory board? ... I would forget about the last comment.

R: On top of that, the supervisory board will of course need at least one comment about the aggregated total level of risk to be able to perform their supervisory function. That’s the only way that they are able to see if our aggregated total level of risk can be covered by the ability to deal with risk, available equity capital and liquidity. That is also the only way they can see the ultimate level of risk to the

⁹ As implementation of the Control and Transparency Act (Kontroll- und Transparenzgesetz (KonTraG)) and in particular § 91.2 of the Stock Corporations Act (Aktiengesetz (AktG)): “Risk analysis involves assessing the consequences of known risks in relation to probability of occurrence and quantitative effects. Estimating whether individual risks considered in isolation are seen as being of reduced importance can combine to pose a risk to the company as a going concern when put together or through accumulation over time.”

¹⁰ Cf. Gleißner, W. (2007): Beurteilung des Risikomanagements durch den Aufsichtsrat: nötig und möglich? , in: www.aufsichtsrat.de, 12/2007, pp. 173-175.

company as a going concern. If the aggregated level of risk exceeds the potential to cover risk, the supervisory board has to decide whether to increase capital. Or, about a set of measures which contributes to reducing risk and therefore the need for capital.

At some stage when we have convinced controlling of the urgency of further developing their tools, the supervisory board should also get realistic ranges in addition to the usual planning values. This gives them an overview of planning security and a realistic level of possible future deviations from plans. It's the only way to ensure that we can at all distinguish between meaningless deviations and significant deviations.

F: ... and after that?

R: Well, because we are also a value-oriented company, at least in terms of the openness of our investor relations department, the supervisory board should then of course know the extent of the capital cost rate appropriate for the risk as required return for our company.

The fundamental reason behind risk management is achieving transparency regarding individual potential risks and the aggregated entire level of risk as well as reducing the level of deviations from plans and as a result improving planning security. This leads to more stable results and cash flow, which reduces the consequence of expected exchange-rate costs, a more stable rating, a lower cost of capital and a reduced possibility that the company will run into a crisis where it cannot finance value-increasing investments.

F: I believe that's all well and good. However, let's be honest. The supervisory board does not have the capability to understand how our risk management system works. Should I tell them about probability distributions and value at risk? About stochastic planning techniques and simulations processes? They would never understand that.

R: That is of course a challenge, but a solvable one. An auditor I know told me once that you should present all key business and economics information in a way that children, lay people and management boards can understand.

F: Excuse me?

R: Sorry, I mean for children, laypeople and supervisory boards.

F: And what does that really mean? How, for example, can you explain about risk-related equity capital?

R: It's not actually that difficult. The supervisory board must understand that, in the end, risks are the cause of deviations from a plan. To check the **overall level of risk**, we take planning as the starting point and simulate the risks associated with a large number of representative potential risk-related future situations in which the company may find itself. As an alternative to a point estimate, you can get a realistic range of future developments or profit and cash flow. And from that you can figure out what deviations from plans and what extent of losses are realistic. Then you know exactly how much capital is needed to cover risk-related losses. And that's it.

It's not necessary to show that the easy-to-understand need for capital incorporates a **value at risk** or also a **conditional value at risk**. We can speak the language that everyone understands. And, of course, when questions arise, certain things can be explained in more detail.

So, for example, it's possible to explain that the need for capital directly depends on the rating goal that the supervisory board has set. As we aim to achieve **BBB rating**, then it's 99.5% sure that the company will survive the next year without being insolvent or in over-indebted. We set the company's

need for capital and liquidity accordingly so that the imaginable risk-related losses can be covered with a 99.5% probability.

Risk measures convert a risk (a probability distribution) into a real number and as a result make it possible to compare and prioritise potential risks. Risk measures known as location-dependent risk measures, like value at risk and conditional value at risk, can be described as "risk-related need for capital". Risk measures known as location-independent risk measures, such as deviation value at risk (relative value at risk) or standard deviation, demonstrate the extent of possible deviations from a plan and can therefore be interpreted as a planning security method.

F: It really does sound easy. I believe when you thoroughly understand everything to do with risk management that you can explain it very easily. I think even our supervisory board would understand these basic principles. But what should we do then, until we have developed all the necessary risk management processes in order to really collect all the significant potential risks when the total level of risk has not yet been calculated? As you know, at the moment we have other priorities here.

R: Well, you understand that I don't really get how other issues always have a greater priority, but ...

F: You should leave strategic priority setting at the company to the board.

R: ... but as a emergency solution we could at least communicate in the annual report, as well as to the supervisory board or the financial analysts, that we are currently putting together a risk aggregation model to further develop our risk management system. From my own experience, even auditors are content for up to years with these types of delay tactics and never really check whether **risk aggregation**, as required by Standard for Auditing 340, is actually carried out. And if it is, which processes are used to carry it out. Apparently, they don't really mind when no information on the aggregated total level of risk exists to compare with the risk coverage potential.

So, I feel it will ultimately be a shame if you absolutely want it, but it's possible to successfully use a delay tactic like this for quite some time.

F: That's fantastic. We will do it that way and will of course over time solve the related areas we need to build on as you have already proposed and convinced me of.

R: For the sake of security I just want to point out once again that if our company actually finds itself in trouble as a result of the effects of potential risks that were known within the company but not analysed by risk management, the management board can face a significant amount of liability.

F: You'll need to explain that to me in more detail.

R: As you know, in the controlling department, for example, when it comes to planning processes and deviation analyses, risks that have occurred are discovered and even partially quantified. These risks are then considered to be known to the company. However, they are not communicated to central risk management, and even if we had a risk aggregation model, this information would not reach us. Therefore we have not fulfilled our corporate duties and basic requirements under the Control and Transparency Act (Kontroll- und Transparenzgesetz (KonTraG)). So, in particular, it is not guaranteed that all significant risks are also known by the management board and supervisory board by way of the appropriate organisational processes.

F: Oh, the auditor never mentioned anything to do with that...

R: It's precisely here that the missing link between controlling and risk management can, in the event of a claim, lead to personal **liability** as a result of the Control and Transparency Act (Kontroll- und Transparenzgesetz (KonTraG)).

F: Oh, then we really have to get on with solving this quickly...

R: Exactly, I've already had some ideas about how to solve this problem without adding a huge amount more bureaucratic work...

F: ... As luck would have it, next week I have a meeting with Mr Soandso, the annoying insurance guy, and will clarify whether this problem is sufficiently covered by our D&O insurance.¹¹

¹¹ Cf. Cyrus, R./Gleißner, W. (2013): Haftungsfälle bei Managemententscheidungen: Maßnahmenpaket zur Vermeidung und Abwehr einer persönlichen Haftung, in: ZRFC Zeitschrift für Risk, Fraud & Compliance, 5/2013, pp. 180 - 186 on the limits of D&O insurance.

Eine Auswahl weiterer Literatur, zu den hier genannten relevanten Methoden, sind folgende **Fachveröffentlichungen:**

- Füser, K./Gleißner, W./Meier, G. (1999): Risikomanagement (KonTraG) – Erfahrungen aus der Praxis, in: Der Betrieb, Heft 15/1999, S. 753 – 758
- Gleißner, W. (2000): Risikopolitik und Strategische Unternehmensführung, in: Der Betrieb, Heft 33/2000, S. 1625-1629
- Gleißner, W. (2001): Identifikation, Messung und Aggregation von Risiken, in: Gleißner, W./Meier, G. (Hrsg.) Wertorientiertes Risikomanagement für Industrie und Handel, Gabler Verlag, 2001, S. 111-137
- Gleißner, W. (2014): Kapitalmarktorientierte Unternehmensbewertung: Erkenntnisse der empirischen Kapitalmarktforschung und alternative Bewertungsmethoden, in: Corporate Finance, 4/2014, S. 151-167
- Gleißner, W. (2015): Der Vorstand und sein Risikomanager. Dreamteam im Kampf gegen die Wirtschaftskrise, UVK Verlag, München
- Gleißner, W. (2015): Controlling und Risikoanalyse bei der Vorbereitung von Top-Management-Entscheidungen – Von der Optimierung der Risikobewältigungsmaßnahmen zur Beurteilung des Ertrag-Risiko-Profiles aller Maßnahmen, in: Controller Magazin, 4/2015, S. 4–12
- Gleißner, W. (2015): Strategische Risiken, in: Gleißner, W./Romeike, F. (Hrsg.): Praxishandbuch Risikomanagement, ESV Berlin, S. 445-455
- Gleißner, W. (2017): Was ist eine „bestandsgefährdende Entwicklung“ i.S. des § 91 Abs. 2 AktG (KonTraG)?, in: Der Betrieb Nr. 47 vom 24.11.17, S. 2749-2754.
- Gleißner, W. (2017): Risikomanagement: Nutzen, Perspektiven und Implikationen für das Versicherungsmanagement, in: VersicherungsPraxis, 1/2017, S. 3-7.
- Gleißner, W. (2017): Risikomanagement, KonTraG und IDW PS 340, in: WPg – Die Wirtschaftsprüfung, 3/2017, S. 158 – 164
- Gleißner, W. (2017): Grundlagen des Risikomanagements, 3. Auflage, Verlag Vahlen, München
- Gleißner, W. (2017): Entscheidungsvorlagen für den Aufsichtsrat: Fallbeispiel Akquisition, in: Der Aufsichtsrat, 4/2017, S. 54 - 57
- Gleißner, W. (2017): Robuste Unternehmen und strategisches Risikomanagement - Ein Blick in die Vergangenheit und Zukunft, in: Risiko Manager, 02/2017, S. 20 – 28
- Gleißner, W. (2018): Prüfung des Risikomanagements – ein Reifegradmodell, in: Der Aufsichtsrat, Heft 2/2018, S. 18 – 21
- Gleißner, W./Füser, K. (2014): Praxishandbuch Rating und Finanzierung, 3. Auflage, Vahlen, München
- Gleißner, W./Kalwait, R. (2010): Integration von Risikomanagement und Controlling – Plädoyer für einen völlig neuen Umgang mit Planungssicherheit im Controlling, in: Controller Magazin, Ausgabe 4, Juli / August 2010, S. 23 – 34 >
- Gleißner, W./Klein, A. (Hrsg.): Risikomanagement und Controlling, 2. Aufl., Haufe-Lexware, München 2017

- Gleißner, W./Leibbrand, F./Kamarás, E./Helm, R./Gerking, H. (2011): Krisenprävention: Stresstests für das Unternehmen? Schwächen von Stresstests, in: RISIKO MANAGER, 18/2011, S. 1/6-15.
- Gleißner, W./Mott, B./Romeike, F. (2015): Die Organisation von Risikomanagementsystemen, in: Gleißner, W; Romeike, F. (Hrsg.): Handbuch Risikomanagement, Erich Schmidt Verlag, Berlin 2015, S. 563-589
- Gleißner, W./Wolfrum, M. (2015): Problemfelder der Risikoquantifizierung, Datenprobleme und Lösungsstrategien, in: Gleißner, W; Romeike, F. (Hrsg.): Handbuch Risikomanagement, Erich Schmidt Verlag, Berlin 2015. S. 247-263.
- Gleißner, W./Wolfrum, M. (2015): Prüfung von Risikomanagement-Systemen, in: Risiko Manager 12/2015, S. 1, 7-12.
- Gleißner, W. / Wolfrum, M. (2017): Risikotragfähigkeit, Risikotoleranz, Risikoappetit und Risikodeckungspotenzial, in: Controller Magazin, Heft 6/2017, S. 77 – 84
- Kamaras, E./Wolfrum, M. (2017): Software für Risikoaggregation: Gängige Lösungen und Fallbeispiel, in: Gleißner, W./Klein, A. (Hrsg): Risikomanagement und Controlling, 2. Aufl., Haufe-Lexware, München, S. 289 – 314
- Risk Management Association e. V. (RMA) (Hrsg.), Erarbeitet von Gleißner, W./Kimpel, R./Kühne, M./Lienhard, F./Nickert, A.-G./Nickert, C. (2018): Managemententscheidungen unter Risiko. Haftung – Recht – Business Judgement Rule (noch nicht erschienen - voraussichtlich im Juni 2018)

Taking the right approach to managing opportunities and threats (risks) is key to company success in an unpredictable future. Unfortunately in many companies, controlling and risk management do not do enough to help the board and management weigh up the expected returns and risks when it comes to making key company decisions. This can result in bad decision-making, such as investments that could have been avoided, or decisions that can lead to a deep company crisis.

As psychological research shows, the reasons for this can range from a lack of expertise, to personal interest and displacement risk.

Against the backdrop of the last financial crisis, a fictional conversation between the management board and a risk manager over a period of 2 years clearly illustrates the opportunities available and the obstacles to implementing value and risk-oriented style company leadership, as well as internal company conflict. In addition to basic knowledge of what are often seen as new methods in controlling, risk management, rating and value-oriented company management, the reader also discovers what they probably know from practice – vanity and self-interest on the part of the protagonists.

In addition to this dialogue, the book offers a business economics methodology introduction to legal requirements, risk management use and methods, as well as ratings and value-oriented company management.

www.uvk.de