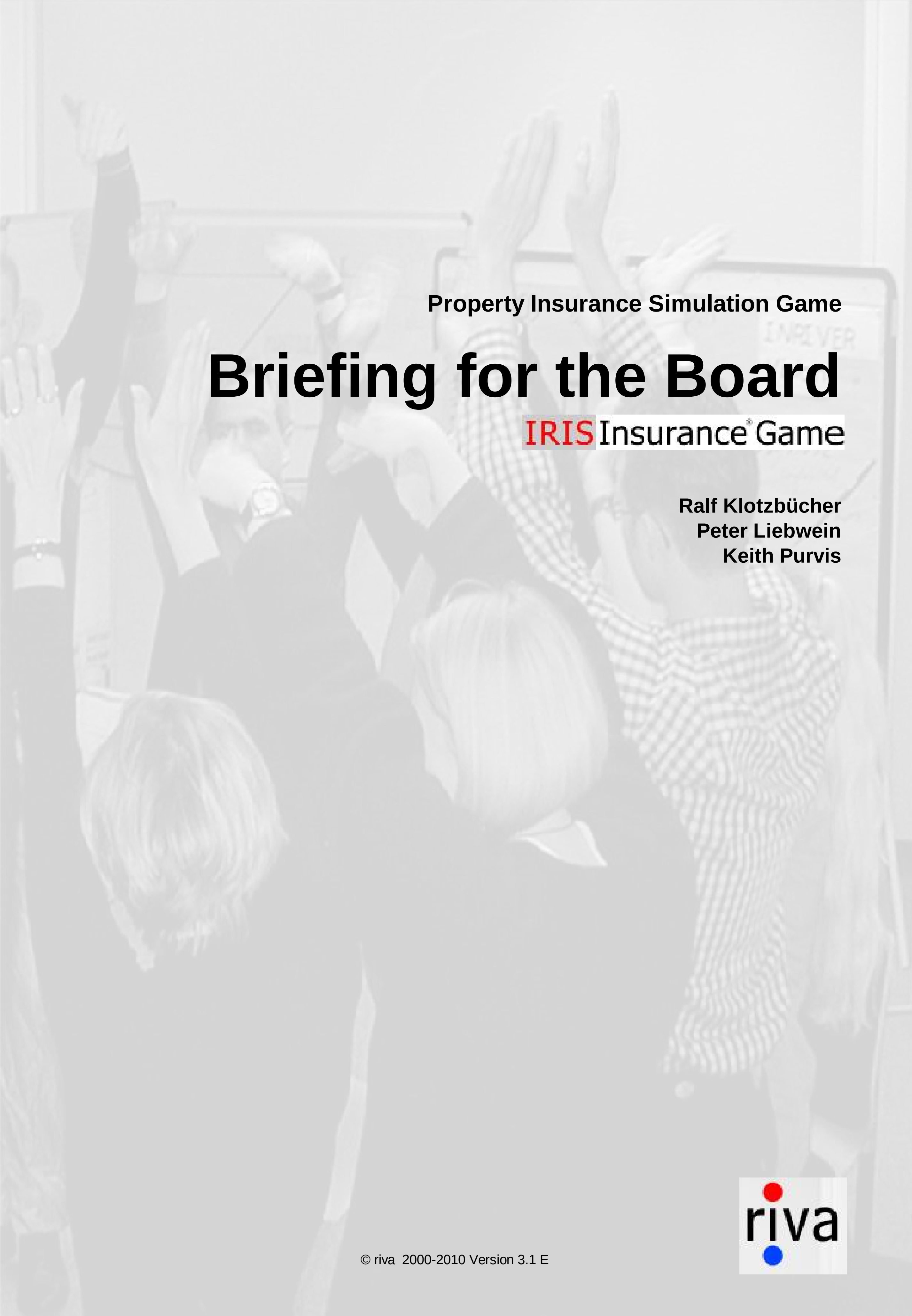

Property Insurance Simulation Game

Briefing for the Board

IRIS Insurance® Game

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riva

Take your Chance
by Keith Purvis

Once upon a time there was a bright young man who joined an insurance company where he hoped to make a career. He wanted to get ahead as quickly as possible and he soon learnt to cope with the challenges of his first task. However, towards the end of his first year with the company he started to become seriously frustrated. He knew he would have to wait at least another year for his next job rotation and it would probably be a sideways move. Furthermore, the middle management was young, and he just could not see his way forward. One warm summer's day after lunch he was sitting in his little office and musing about the problem of his career when somehow a childhood fairy story slipped back into his mind. It seemed to him that someone whispered in his ear, "For your most important desire to be fulfilled, all you need to do is twist the top button of your jacket one half revolution to the left as you make your wish."

"How wonderful that would be," he sighed, and considered his position once again. He was sure he would be a better section chief than his boss if only he got the chance, and at the same time as he thought this he absent-mindedly turned his top button to the left. To his astonishment he found himself behind his boss's desk who he now learnt had been head hunted three years previously. He himself had jumped from his middle twenties to his early thirties.

It took him only six months to realize that this career path was a dead end. That must have been why his previous boss had left the company. He wished now that he were head of the underwriting department, and at the same time he deliberately gave the top button a sharp half turn to the left. He was not altogether surprised when he found himself behind a very grand desk two floors higher in the same building with responsibility for the company's property underwriters.

Within a short space of time he was exceptionally successful, because he was, of course, a very intelligent forty year old. Less than a year later he realized that a seat on the Board was within his grasp. He made his wish as he turned the button on his suit, and found himself taking part in a Board Meeting. "What a pity," he thought as he glanced at his reflection in the gilt framed mirror opposite him, "that my hair is now so thin and that I've put on so much weight."

It was soon clear that he was the most able person on the Board, and it was only six months later that he turned the button to the left as he expressed his desire to be Chairman. Within an instant he was sitting in an elegant office and found himself reaching for his indigestion tablets in the bottom drawer of his Swedish designer desk. Just at that moment his secretary came in and said she had completed the arrangements for his farewell party, would he please check the list of guests once again. With a sharp pang of sadness he suddenly remembered his impending early retirement because of ill health. "Yes, yes, just put it down and I'll read it through," he said as the attractive young woman turned to leave the room.

"Yes, I've had a successful career," he thought as his eyes became moist, "and I've also wished my life away. If only I could turn the button the other way and experience what I've missed." At that point, the telephone rang, and the young man awoke with a start. "My God, have I been asleep?" he thought to himself. He couldn't remember what he had dreamt, but inexplicably he experienced an unfamiliar lightness of heart. His colleagues were surprised to notice how much more amenable he had become, and in the course of time they thought of him as a good team player.

*From that day on he never looked back. Well, perhaps the hero of our story would have never needed to dream his dream if **riva's** Property Insurance Simulation had been available to him. You are more fortunate. Unlike him you can feel the excitement and experience the responsibility of top management without wishing your lives away. Like him, however, you will have to take quite a lot of information on board before starting your new task, which is what this briefing is all about.*

Contents

Overview

Welcome

So how should we begin?
Well, first of all, Congratulations, of course!

You are going to receive a six year contract with an option to renew.

That's quite something, we think you'll agree - a proof of trust on the one hand, and a great challenge on the other. But what else would we expect from high fliers like you?

And now it is your job, together with the other members of the Board, to steer your company in the right direction.

The "Briefing" that follows will give you an overview of your new task. You'll learn everything you need to know about the company, its markets, products and organization. So keep awake and don't play with any buttons, even if your tailor is a wizard. There are no short cuts in this simulation.

By the way, remember that you can refer to this document when you are on the Board. It's a good reference tool that'll keep you on track.

tip *To work through this Briefing refer to the Annual Report and the Market Analysis (Euro TOP5). In what follows reference will be repeatedly made to these documents.*

And naturally you are not on your own: the **riva**-team will give you advice whenever you need it, so please do not hesitate to turn to us if there is anything we can do for you.

Additional handouts will familiarize you with such topics as strategic planning and reinsurance.

The **riva**-Team wishes you much success and lots of fun.

The Company

You are starting to manage a well established insurance company. Your company operates in a market which consists of five **stock companies,** including yours.

Products

Your company offers only non-life insurance products, notably property insurance. One word in passing on underwriting - in this simulation, we shall dwell more on figures and financial data rather than underwriting details. This is not because underwriting is unimportant. On the contrary, it is a crucial ingredient of success, but you are top managers, and, of course, the language of management is money.

These are classified in accordance with the target group:

Products	Target Group
Industrial	Large manufacturing companies
Commercial	Medium sized companies, trade and commerce
Domestic	Private households

Distribution

Like the rest of the market you have an effective sales team (**"agencies"**) that works only for you.

Regions	Type of operation
East **West** **North**	Your sales force always sells the full range of policies in all regions. Agencies should be regarded as small enterprises whose main job consists of advising customers and selling policies. Agencies are the point of entry to the Service Centers of your internal operation.

Operational Management

Your **operational management** consists mainly of four functional areas:

Area	Function
Central Service Center	Customer Service, Account Management, Claims Handling
Reinsurance	Reinsurance Management (inwards and outwards)
Control	Central Control: e.g. interface with Asset Management
Organization	Organization of Distribution IT-Systems

Business Plan

It will, therefore, be an essential task at the beginning of your time on the Board to develop and implement a **"Strategic Plan"** for the coming business years.

- It will be your task to co-ordinate the day to day business with strategic planning in such a way that as many aims as possible are achieved.

- You will learn more about strategic planning when you start your duties on the Board

Decisions

You are, of course, responsible for the day to day business.

From now on you **decide** at the beginning of each Business Year exactly what measures you will take in each of the **functional areas** of marketing, risk management, distribution, reinsurance and internal operations.

e. | This sign shows which **form** to use for your **decisions**. Empty forms are available with this handout.

More Information Needed?

You will find more information about the markets and the functional areas of your company in the two sections entitled **"Information about the Business"** and **"Background Information"**.

tip *Use the index at the end of this document if you want to find a term quickly in the relevant context.*

Information about the Business

Insurance Market

The internal European market has been opened up, the Euro [**€**] has been introduced and promising economics in eastern Europe joined the EU. These changes mean that the market is now larger and deregulated and can develop freely. This also means, of course, that competition has increased.

It is against this background that you have been appointed to the Board. You will have to grasp opportunities and manage risks in order to make your company really modern and market oriented.

Your competitors consist of four other companies of similar size and importance in the market. These companies have also appointed new Boards of Management. They, too, want to tackle new market challenges with fresh ideas and verve.

Direct Insurance

What types of policy does your company sell? First of all, the **products** which other general insurers offer the market.

- All the companies in the market offer the same products – called **”risk categories”**. There are three risk categories, and they are summarized in the table below.
- This means that the conditions and **sums insured** are identical for all companies.
- **Differentiation** in the market is achieved by price, advertising and public relations, distribution, customer service and risk management.

The three types of risk category are summarized below:

Risk category	Description
Industrial	**Product example**: Fire, business interruption
Commercial	**Product example:** Commercial all risk
Domestic	**Product example**: Contents insurance for private households

Your company competes in three European **regions** for market share and premium income:

Market	Description
EAST region	This market is smaller und less developed than those of the other two regions. The market is distinguished by higher than average growth, especially in the areas of commercial and domestic business.
WEST region	The market in the West Region is well developed and is distinguished by steady growth for all risk categories. Consequently, there is tough competition for insurance business.
NORTH region	The North Region is also a sophisticated market, and medium sized companies are traditionally significant players. Because growth rates have slowed down recently market researchers predict that there will be consolidation in the market.

You will have to weigh up the risks and opportunities in all three markets, observing the behavior of both customers and competitors.

Reinsurance

Reinsurance is used to spread risk, and this facilitates the efficient allocation of underwriting capacity in the direct insurance market. The flexibility it thus provides is an important production factor for insurance companies.

The five companies in your market plan in future to be active as reinsurers as well as being involved in the direct insurance market.

This means they will not only seek reinsurance protection (**outwards reinsurance**) but they will also become suppliers of reinsurance capacity (**inwards reinsurance**).

You can find more about **reinsurance** in the section called ”Background Information”.

Money Market

The **money market** plays an increasingly important role for (general) insurance companies. Their investment in securities (**"Assets")** provides them with an additional source of income, apart from that already provided by the underwriting reserves and shareholders' funds.

The investment profits from this source can compensate for negative underwriting results. Asset management is thus a decisive competitive factor that complements underwriting and which requires professional management.

Your company has decided to invest only in **shares** and **bonds**. Other forms of investment, such as property or direct or indirect shareholdings in companies, are of no importance.

Remember that although the volume of your company's investment portfolio is very great, you cannot influence the **market price** of the securities and thus the growth in value of the funds.

You will find details about **asset management** in the section called "Background Information".

Labor Market

The deregulated European market also affects the work force, so that out of national labor markets a global market has developed.

For your company this is a great advantage. A large pool of labor is now available for the recruitment of both internal staff and agency managers.

Bear in mind, however, that employees released by other insurance companies cannot necessarily be recruited by yours.

In looking for new employees you can use the traditional means: job advertisements, internet ads and also headhunters.

Supervisory Authority

Of course your company is subject to insurance supervision. This is purely financial supervision, which is applied on the basis of published figures.

There are basically two indicators that are important in this respect: the solvency margin and restrictions in the composition of the investment portfolio.

Indicator	Description
Solvency margin	To ensure the solvency of insurance companies the supervisory authority makes sure that the ratio of shareholders' funds to premium income is maintained. The solvency margin is thus a **premium based ratio** and it is calculated in the following way: The issued share capital and the free reserves at the beginning of the year are put into the numerator of the fraction. **40%** of the earned premium for own account goes into the denominator of the fraction. The result of this calculation is the solvency margin, and it must be expressed as a percentage. The supervisory authority in your market requires that it should be at least 100%. If the solvency margin falls below 100%, the company is required to work out a solvency plan in co-operation with the supervisory authority. The indicator for the solvency margin is to be found in the **Annual Report** in the section ”Key Figures”.
Investment restrictions	The supervisory authority inspects the structure of the insurance company's investment portfolio. The proportion of shares in the investment portfolio at the end of the year may not exceed **25%**. This restriction should guarantee the value of the investments, even when share prices are volatile. In the **Annual Report** the current structure of the investment portfolio is indicated in the section ”Liquidity and Asset Management”.

Background Information

Preliminary Remarks

The following explanations are intended as detailed information to support your **decisions** regarding the day to day business.

All values in this text are given in prices as at the beginning of your term on the Board. They automatically follow the price index.

Products of the Direct Insurance Market

All insurance companies offer comparable, homogeneous products in the market for three target groups:

Risk categories	Details
Industrial	**Sum insured**: € 2,000,000 **Risk features**: Very volatile claims experience. The expected average loss ratio for a 100%-premium is over 70%. **Large claims** over € 200,000 occur quite frequently.
Commercial	**Sum insured**: € 300,000 **Risk features**: Volatile claims experience. The expected average loss ratio for a 100%-premium is well over 70%. There are few large claims over € 200,000.
Domestic	**Sum insured**: € 50,000 **Risk features**: Moderate claims experience. The expected average loss ratio for a 100%-premium is well over 70%. The majority of claims are under € 25,000. There are no large claims.

Conditions

You only offer your customers **annual policies**. **Premiums** and the **sums insured** are thus agreed for only one year. The **term of each policy** begins in the course of the business year and ends 12 months later in the following business year.

If the policy is not cancelled, it is renewed automatically according to the current conditions for another year. Cancellations are recorded in the market and agency reports as **cancellations**.

All policies contain an **indexation clause**, which automatically adjusts the sums insured to the inflation in value of the risks that are covered.

Reported claims are adjusted on average within 12 months.

Underwriting

The underwriting guidelines determine to a large extent the profitability of a portfolio of risks.

e. Enter your decisions with regard to underwriting in the form **”Risk Management Decisions”**.

Each insurance company will try to keep the ”best” risks in its portfolio judged on price – that is, risks that are more favorable than the average with regard to the frequency and severity of claims.

Decision	Explanation
Underwriting	You report how many [‘000 €] you spend on **underwriting** per accounting period. The greater the expenditure, the more careful the underwriting, and consequently the better the quality of the portfolio of risks.

If no decision is taken with regard to underwriting, the ”quality” of the portfolio of risks remains the same.

Underwriting is carried out by **outsourcing partners** specialized in **risk management services**.

tip *A restrictive underwriting policy together with unchanging acquisition efforts leads to a reduction in the number of newly acquired policies.*

Marketing

You put together the **marketing mix** of your company by a combination of policies that affect the turnover.

Enter your decisions with respect to marketing in the form **"Marketing Decisions"**.

For this purpose you can influence the pricing, advertising and PR and distribution policies. You cannot change the product policy – by differentiating the form of the products, for example.

Market Price and Premiums

The recommended **premium** for your insurance products covers the average expected loss experience as well as sales and management expenses. In a market you are free to decide the extent to which you follow this recommendation with your **market prices**:

Decision	Explanation and Consequences
Price < 100 %	Your rate is lower than recommended. In order to achieve a positive **underwriting result** you will have to lower your internal and sales expenses and/or make lower claims payments than the calculated average claims for that class of business.
Price = 100 %	You offer the recommended premium rate.
Price > 100 %	Your rate is higher than recommended. A higher rate will enable you to cover higher costs and claims, but it will obviously decrease the demand. This means there will be fewer new customers and the cancellation rate might increase.

Market prices can be fixed differently according to **region** and **risk category**. They can be between 80% and 120%.

Price adjustments can be made once a year at the beginning of the business year (on Jan-01) and affect the inforce business as well new policies. Consider the following when fixing prices:

- **New customers** react elastically to price changes. They decide according to price whether they want to take out an insurance policy at all and if yes, with which company. Clearly, price is only one factor in the battle for new customers, but admittedly a pretty important one ...

- The **current customers**, too, who have already taken out policies, react to changes in price, because your company also passes on changes in price at renewal to current customers.
(You can see the effect of this in the cancellation rate.)

- Depending on **price elasticity**, therefore, even a relatively slight change in price can have an appreciable effect.

tip *Price has an immediate effect on the loss ratio given unchanging loss experience. Higher prices reduce the loss ratio, and lower prices force the loss ratio upwards.*

As additional information at the beginning of your term on the Board you will receive a **claims report** with key figures and a breakdown of claims for the last **two** business years.

Decisions	Explanation and Consequences
Run-Off e.	It is your decision not to accept any new business. Please note, that your existing treaties will remain in your portfolio as long as your customers renew the contracts. Please take into account to align your communication expenses and your commissions with this decision.

Advertising and Public Relations

To increase the awareness of your company and its products in the market there is a lot you can do. Advertising is the most important instrument.

Decision	Explanation
Advertising and PR	You report how many ['000 €] you will spend per accounting period for company advertising / PR. The more money spent, the greater the awareness of the products and the company in the market. This **"visibility"** is necessary for the sales organization to be effective. Furthermore, advertising and PR have an effect beyond your insurance company: more potential insurance customers are attracted, and there is a greater chance that the **market potential** will be **better exploited**.

Distribution: Commission Policy

New business commission and renewal commission are the basis of the your **agencies**' remuneration.

The calculation of commission is based on the **direct premiums** during an accounting period. The commission rates can differ according to **region** and **risk category**.

Decision	Details
New business commission	New business commission is the payment to agencies for premiums from new business. The highest commission is paid for the domestic risk category.
Renewal commission	Renewal commission is the payment for premiums from the retained portfolio.

The level of commission has a determining influence on the motivation of the **agencies** and as a consequence on their effectiveness.

tip *The commission level can be used to steer the agency towards inforce or new business, whichever is preferred.*

Agencies

Agencies are currently the only distribution channel for the products.

Agencies sell your company's full product range. Your company has at least one branch office in each region.

Agencies are registered with consecutive definitive **numbers** according to the schema [Region]-[Number]. Once an agency number has been issued, it will not be given a second time – even if the agency has been wound up. Wound up agencies continue to appear in the agency report – of course without business.

e. Enter your decisions about the agencies in the form **"Agency Decisions"**. Use the agency numbers to identify them.

(Request: Please arrange the decisions according to region and number. This speeds up the work for **riva** …)

For all agencies belonging to a region, decisions already made about turnover continue to apply. This means that with the **commission policy** a basis for the payment of the agencies has already been made.

Measures to Improve Effectiveness

Apart from the level of commission, the effectiveness of your agencies depends mainly on the following factors:

Decision	Details
Retainer	You pay a basic wage that does not depend on performance. According to an internal agreement there is a minimum **fixed amount** of 15 ['000 €].
IT equipment	Your company makes hardware and software available to your agencies for counselling and for managing the portfolio. The equipment is leased. Software is not activated.
Info-material	You regularly make information and marke-ting material available to your agencies for counselling and for managing the portfolio.
Training	Quickly changing conditions make ongoing training necessary. For this reason you allow agencies to take part in development and training courses. Training has a long term and cumulative effect. Without training performance deteriorates significantly.

You decide every year how much money [in '000 €] you will invest for these measures. If you do not make a decision, the investment will remain the same.

tip *Training, info-material and IT initiatives have a different effect on each individual agency so that only general observations can be made regarding their commercial effectiveness.*

Setting Up and Replacing Agency Management

You can decide how many agencies you want and who should manage them in each region.

Decision	Details
Setting up new offices	You decide that in addition to the agencies that already exist one or more new agencies should be set up. For the recruitment of the agency manager and related expenses there are **set up costs** in [‘000 €]. The more you invest in setting up new agencies, the greater the probability that you recruit capable personnel. New offices are denoted in the **agency report** with the code [1] and the year of foundation. The set up costs are also given.
Replacing agency management	If you are not satisfied with the performance of individual agencies despite training measures, you can replace the management. As with setting up new agencies, costs are thereby incurred. The person who has managed the agency up to now will be compensated for his portfolio of business in accordance with legal requirements. (For the conditions see below). The advantage of replacement, as opposed to winding up and setting up a new office, is that customers are not aware that anything has changed apart from the person they now deal with. Agencies whose management has been replaced are denoted in the agency report with the code [2] and the year of replacement. The set up costs are also indicated.
Winding up	After an agency has been wound up, it will be removed from the market. The agency manager will be compensated. (For the conditions see below). The portfolios will be automatically released and must be distributed to other agencies in the same region. Wind ups will be reported in the agency report with the code [2] and the year of winding up.

Decisions will be in all cases effective January1st of the year in question.

The agency report always refers to the last year in which a decision was taken with regard to winding up, setting up or replacing the management.

tip *New agencies need some time until they can get a reasonable foothold in the market. One reason for this is the difficulty in cross selling from the portfolio of business.*

Portfolio Transfers

A very refined instrument is portfolio transfer. In return for compensation payments, it is possible to transfer portfolios from one agency to another within a region.

This technique is suitable for setting up and replacing management as well as for very large agencies.

The following rules apply for portfolio transfers:

- Care must be taken that portfolios that have been split or transferred must be allocated to new management.
- If there are not enough free portfolios – that is, when not enough portfolios are available to compensate agencies – positive transfers cannot be considered.
- When more business is withdrawn than distributed, what remains is automatically distributed to all agencies in a region.

The following factors apply to compensation payments:

Risk category	Details
Industrial	1.1 annual commission (calculated from the current renewal commission)
Commercial	1.0 annual commission
Domestic	0.8 annual commission

tip *Try using the distribution of portfolios as a way of motivating your agencies as an alternative to fixed income and commission.*

Operational Management

Operational Management consists of **Administration, Controlling** and **Electronic Data Processing (IT)**.

The main task of operational management is to conduct the business processes for the day to day business efficiently and in a customer oriented way.

Controlling

Controlling has introduced its own unit of measurement to measure the business events that have to be dealt with:

WU	Working Units

The level of the WU is a direct measure of the volume of work that employees and the **IT** system have to deal with in a business year.

WUs are identified for all **core business processes** of the direct and reinsurance business and are classified according to risk category.

Core process	Industrial	Commercial	Domestic
Claims handling (per claim)	33,00	7,80	1,00
New business (per newly acquired treaty)	33,00	7,80	1,00
Cancellation (per policy not renewed)	11,00	2,60	0,30
Portfolio service (per policy in portfolio)	7,70	1,80	0,20
Redistribution of portfolios (per policy)	7,70	1,80	0,20
Inwards XL reinsurance (per claim)	6,60	1,60	0,20
Inwards prop. reinsurance (per claim)	0,77	0,18	0,02

In the **management report** you receive a detailed list of the WUs that have occurred.

The main task in managing the internal operation is to adjust the number of personnel available and the **IT** investments to the WU capacity needed currently and in the future.

Management

In the management section you employ staff as full-time employees. Salaries are according to the tariff:

Item	Explanation
Net salary	**€ 40,000**
Extra costs	**85%** of the net salary (for social security, etc.)
Annual salary increase	Follows the **Price index** (reported in **Annual Report**, "Key figures")
Overtime extra	**25%** (Maximum of **25%** overtime hours can be worked.)

Enter your decisions about the operational management in the form **"Management Decisions"**.

In order to deploy manpower in the administration according to the need, you have the following options:

Decision	Explanation
Appointment in the administration	You can advertise for employees for the administration or you can appoint them. It costs € 5,000 to appoint a new employee.
Dismissals in the administration	You can advertise for employees for the administration or you can dismiss your own employees. According to a company internal agreement no more than **30%** of the employees may be dismissed in any one year. From a **dismissal rate** of **5%** onwards there are **compensation payments** of **120%** of the current annual net tariff salary of an employee.
Organizational development and Training	Organisational Development (OD) and Training affect the capacity of the employees. The effect of this investment is cumulative: **50%** of the effect can be traced back to the current investment, and the rest is the result of earlier OD and Training measures. You can see the effect in the **Management Report** under "Capacity after Training", reported as a percentage. If you do not invest, the performance of the employees deteriorates – the effective capacity decreases. You record the investment in ['000 €] per business year per employee.
Temporary staff	If the capacity of your own employees is not sufficient even after overtime, temporary staff will be hired automatically. A temporary member of staff costs **250%** of the gross wage of a permanent employee.

The employment arrangement is limited to the duration of the capacity problem. You can reckon with enough temporary staff being available on the labor market.

IT **Systems**

The use of information technology is essential for the efficient operation of business processes.

The restructuring of the company three years ago involved getting rid of the computer center and network administration. You obtain service and machines today from an outsourcing partner, which supplies **IT** equipment (hardware and software) to its customers on a leasing basis and takes care of the running and support.

A standard system that can be adjusted to specific system architecture has also been delivered. This takes the form of software that is suitable for the standard business processes and products of a property insurance company.

Details about capacity und costs can be found in the report **"Cost comparison: management"**, which you receive at the beginning of your term on the Board.

The cost for the **IT** system derives from the following components:

Cost element	Explanation
Fixed leasing cost	Fixed leasing costs are incurred for each system that is leased. (You **decide** about the **number** of systems to be used).
Variable costs	Running costs and support
Conversion costs	For the conversion of one type of system to another (including "downgrading") fixed costs incur once: namely, in the year in which the system is ordered.
Installation/ Putting out of operation	If you want to install an additional system or put one out of operation, the costs incur only once. Additional systems of the same type to increase the capacity are made available immediately.
Expenditure for system optimization (Decision)	The optimization of the systems by software modifications to support business processes. Software optimization increases the effective capacity (measured in **WU**) of the systems employed. If you do not make any decision, nothing will be invested in software optimization.
Outsourcing costs	If the working capacity of the leased plant is not sufficient, additional external capacity must be purchased.
Personnel costs	Depending on the efficiency of the system, a variable number of employees in the internal operation will be needed to operate it.

With regard to your investment decisions about **IT**, the following systems are available:

System	Explanation
Mainframe	The employees work at terminals, which are connected to a central computer. The mainframe configuration is suitable for lower pressure of work, and there are few requirements with regard to scalability. Consider the relatively low leasing costs. In comparison to other technologies, relatively more employees are needed to deal with the business events. Furthermore, the variable costs are quite high because the technology is not standardized The scope for optimization by means of software is limited. At the start of your term on the Board, the company has a mainframe computer.
Client/Server	The employees work on standard PCs, which work as clients with a cluster of servers. The client/server configuration is suitable for medium and high pressure of work and for higher requirements with regard to scalability. Significant improvements can he achieved with regard to running costs, and the mainframe could become more efficient. There is considerable room for optimization by adjusting the software. The conversion of the mainframe to client/server technology requires significant investment because of the change of paradigm.
Internet technology	The employees work on PCs that can cope with the Internet and on monitors which work as clients with a cluster of Internet servers. The Internet configuration is suitable for medium and high pressure of work and for higher requirements with regard to scalability. Further improvements could be made with regard to the running costs and the efficiency of the client/server installation. There is considerable room for optimization by adjusting the software. The conversion of the client/server to Internet technology requires a relatively small investment because the technologies are compatible.

You decide when which systems will be used and how many of them (**number of systems**) as well as what adjustments and optimizations will be made to the software.

The **conversion** from one system to another requires a **delivery time** of one year. The costs for the new equipment are borne in the year when the decision is made.

If you only want an additional system of the same type, this can be delivered immediately.

You will find an overview of the costs involved in the **report "Cost Comparison: IT Systems"**.

tip *The agreement of the control group and the IT equipment are crucial for the efficient running of the internal operation. You should take particular care that factors that cause delay (e.g. organizational development and training, delivery times for the plant, the cumulative effects of system optimization) must be balanced. Only then can you estimate how quickly the outlay for investments will be paid back.*

Asset Management

Three years ago the management of your company decided to concentrate on its core business as a general insurer. At that time the management of the **investment portfolio** and the **trading** was outsourced and is now active as a legally independent company in the market.

Index linked **funds** were set up for your company, which are allocated annually according to your strategic decisions.

All other transactions are dealt with by your asset management partner at the end of the year at the prices then prevailing.

The transaction costs charged cover stock exchange expenses and the fund management fee.

It was agreed that interest and dividends would be paid annually at the beginning of the year on the basis of the nominal price and that the customer could decide whether or not to reinvest.

e. Enter your decisions with respect to asset management in the form **"Asset Management Decisions"**.

The smallest volume of transactions is 1,000 units.

The following funds consisting of **bonds** are available:

Bonds	Description	Data
Government Bonds, **Euro**	Index linked special funds Low volatility, slow price increase, constant rate of interest Good security	**0.2%** transaction costs **3.5%** interest p.a.
Government Bonds, **UK**	Index linked special funds Medium volatility, possible price increase, constant rate of interest Middle to high security	**0.3%** transaction costs **4.5%** interest p.a.

The following **share funds** are available:

Funds	Description	Data
Shares TOP 50, **Germany**	Index linked special funds High volatility, great increase in price possible, low dividends Low security with growth potential	**0.4%** transaction costs **2.0%** dividends p.a.
Shares TOP 50, **Euro**	Index linked special funds High volatility, great increase in price possible, low dividends Low security with growth potential	**0.4%** transaction costs **2.2%** dividends p.a.
Shares TOP 500, **USA**	Index linked special funds Very high volatility, great increase in price possible, low dividends Low security with high growth potential	**0.5%** transaction costs **1.8%** dividends p.a. .

Shares are traded in packets of 1,000 units

Bear in mind the following when you plan your investment strategy:

To be sure that you have sufficient **liquidity** to settle your tax debt in the same year, **3%** of the value of the investment portfolio must remain as cash after the orders have been dealt with.

- The investment rules of the **Supervisory Authority** for Insurance require that maximally 25% of the investment portfolio can be in the form of shares.

Your asset management company also supports you in liquidity planning: if your orders cannot be carried out because of the liquidity position or because the investment restrictions of the Supervisory Authority have been breached, the orders will be corrected.

tip *Take note that in order to achieve more liquidity highly speculative shares held will be sold first, and then the bonds. Since this may not fit in with your investment strategy, consider the liquidity issue before placing orders.*

Reinsurance

Reinsurance is important for your company in two ways:

Firstly, you can take part in the market as a purchaser of reinsurance and buy cover from other companies. (**”outwards reinsurance”**), ...

... and secondly, your company can be active in the market as a supplier of reinsurance for other companies. **(”inwards reinsurance”**).

Treaties will be negotiated between direct insurer and reinsurer and signed by both contractual parties.

Enter your decisions with respect to reinsurance in the forms **”Surplus Reinsurance Treaties”** and **”Excess of Loss Reinsurance Treaties”**.

The duration of reinsurance treaties is one year, from Jan-01 until Dec-31 In the following year the terms may be adjusted to the changed conditions as required.

A reinsurance treaty consists of two parts:

Treaty section	Description
General Treaty Conditions	These conditions are the same for all treaties of a particular kind (Surplus or Excess of Loss) for a direct insurer and they apply to all reinsurers. Each direct insurer can have only one version of the General Treaty Conditions.
Treaty Shares	In this section the specific shares for the treaties between direct insurer and reinsurer are recorded.

Cover

The following clause specifies the **claims covered** by the treaty for all reinsurance treaties: ”Covered are all losses occurring during the reinsurance treaty period. The treaty period follows the business year of the reinsured.”

This means for the accounting of the treaties:

- The reinsurer covers the claims that occur in the business year of the direct insurer - here January 1st until December 31st. These are equivalent to the reported claims.
- The **earned premium** serves as the basis of calculation.

- The reinsurer sets up reserves for risks covered. In a simplified procedure the claims reserve is set up on the basis of **40%** of reported claims.

- The reinsurer does not need to set up a premium reserve.

Surplus Reinsurance

In the case of surplus reinsurance the direct insurer and the reinsurer share premiums and claims payments per ceded risk in the same proportion.

General Conditions:

Decision	Description
Line	The basis of calculation of all treaties is the **retention** of the ceding company. This is called a **line**. The maximum liability of the surplus reinsurer can be measured as the number of lines reinsured – that is, multiples of the retention.
Risk sharing (Number of lines)	The relation of the number of lines covered by the reinsurer and the total sum insured gives the *reinsurer's* share on an individual risk. Because all the risks insured for industrial, commercial and domestic business respectively are of the same value in the Simulation, the reinsurer is liable for the payment of this proportion of all claims, and it is paid this percentage share of the original premium by the direct insurer for each of the three classes respectively. The *direct insurer* is liable for the remaining percentage share of the sum insured. Thus it remains liable for the payment of this proportion of all claims, including claims smaller than its retention. It can be seen that a surplus treaty consists of risks, each of which has its individual quota share divided between direct insurer and reinsurer or reinsurers. In the Simulation it is not permissible to have more than three surpluses. Each surplus can be shared by maximally three reinsurers.

Agreements about treaty shares:

Decision	Description
Reinsurer	Number of the reinsurance company
Which surplus?	State which surplus the treaty share belongs to. (1st, 2nd or 3rd)
Cancellation	Will the treaty be renewed or cancelled?
Reinsurer's share	What [%] of the treaty does the reinsurer take over? (The sum of shares in a surplus may not exceed 100%).
Reinsurance commission	Record what [%] of the premiums ceded to the reinsurer is returned to the direct insurer for its sales and management expenses for the share of the risks ceded. Make sure you find out what the expenses of the ceding company actually are. Be cautious in granting more commission than the company has incurred in expenses. Remember that if the reinsurance commission is too generous, the ceding company could make a profit when the reinsurer is suffering a loss.
Profit commission	The reinsurer pays the direct insurer profit commission at the end of the year in which a profit has been made from business ceded. If no profit has been made, there is no profit commission. Any losses will be carried forward to extinction. Calculate the Income and Outgo of the business from the reinsurer's point of view. Subtract the Outgo from the Income. If the result is positive, there is a profit commission, and the reinsurer will share a percentage of this profit with the direct insurer that ceded the risks. Note that profit commission is not payable after the treaty has been cancelled.

tip

Reinsurance Commission is payment for the sales and management expenses of the direct insurer for the risks ceded. It may exceed these costs, however, depending on the quality of the business ceded and the market price for reinsurance.

Excess of Loss Reinsurance

In the case of **Excess of Loss** reinsurance the reinsurer takes a share of the losses of the direct insurer in return for the payment of a premium.

If there is a surplus treaty, the basis for accounting are the claims and premiums after any the surplus treaty has been accounted for.

General conditions:

Decision	Description
Layer **(1st or 2nd layer)**	In the case of excess of loss treaties 2 layers are available, which the direct insurer can cede to maximally 3 reinsurers.
Deductible (Priority; lower limit)	This is part of the **retention** of the direct insurer expressed in ['000 €]. The reinsurer pays for claims exceeding this level.
Limit (Ceiling; upper limit)	Claims level in ['000 €] up to which the reinsurer pays for claims.
	The lower limit of the 2nd layer and the top limit of the 1st layer must not overlap. This is also expressed as: reinsurance cover ['000 €] *xs* lower limit ['000 €], meaning: Reinsurance cover = upper limit – lower limit
Premium	Premium in [%] of the earned original premiums of the direct insurer (all risk categories) after taking any surplus reinsurance into account.
Share reinsured	Share of claims in [%], which are reinsured in this layer. Up to 100% can be reinsured.

Reinsurance conditions:

Decision	Description
Reinsurer	Number of the reinsurance company
Which layer?	Indicate which treaty (1st or 2nd) the share belongs to.
Cancellation	Will the treaty be renewed or cancelled?
Reinsurer's share	What [%] of the treaty (layer) does the reinsurer take? (The total shares must not exceed 100%)

Profit commission usually applies only for proportional reinsurance treaties. Therefore no further reinsurance conditions are necessary.

Accounting Principles

Your company publishes a final account in the form of an **Annual Report**. At the end of every business year you receive an additional annual report that contains additional reports and analyses. These are a confidential documents.

The final account complies with the regulations for property & casualty insurance companies, which have been adjusted in order to conform to European law.

Reports and Analyses

On January 1st each year your controlling departments produces a bundle of reports and evaluations:

Report	Content	Target group
Balance Sheet	Report of the assets and liabilities to Dec-31 of each year. Notes in the appendix provide details of items in the balance sheet.	Board, shareholders, public
Profit & Loss Account (P&L)	Summary of all profits and expenses as well as the success of the accounting period up to Dec-31.	Board, shareholders, public
Liquidity and Asset Management	Summary of the liquidity record over the period covered by the report. Development of the portfolio of securities, report about orders, interest profits and dividends as well as the growth in value of the portfolios.	Board
Claims report	Detailed list of the risks in the portfolio and reported claims in the business year according to risk category (Industrial, Commercial, Domestic). Limitation of claims in the business year. In the first year of your membership of the Board you receive in addition the claims report of the previous year. This gives you an impression of the claims experience to date.	Board In some circumstances copy to reinsurer
Agency report	Detailed list of all agencies that work exclusively with your company. It includes	Board

	their portfolios, cancellations and new business as well as details of *IT* support, information material and training. In addition, the commission, the expenses for advertising and public relations and the pricing policy are given.	
Reinsurance Accounts	A detailed list of the accounts of all reinsurance treaties. First the business reinsured (outwards reinsurance) and secondly the treaties written as inwards reinsurer.	Board
Report of the Internal Operation (Management)	A detailed account of the internal organization of your company. The actual Working Units (WU) per risk category and business process are given in detail. The Management Report is completed with the cost/benefit figures for *IT* and the personnel of the internal organization. Note particularly the degree to which capacity has been used and the expense ratio.	Board

Additional analyses und comparisons are the basis of **benchmarking**:

Analyses	Content	Target group
Comparison of the Balance Sheet	Comparison of the balance sheets of all five companies active in the market	Public
Comparison of the P&L	Comparison of the Profit and Loss Account	Public
Comparison of claims	Comparison of the **claims** and the claims payments per risk category	Public
Comparison of Sales and Marketing	Comparison of the expenses and key figures regarding new business. Also allows comparisons of the **expense structures**.	Public
Market comparison	Comparison of the **market shares** and **cancellations** and premiums per risk category and region for new and renewal business.	Public

Comparison of the operational Management	Comparison of management costs and **used capacity** of the internal organization	Public
Comparison of the costs of the IT Systems	Comparison of the manage-ment costs when the various **IT systems** are used with varying **workloads (WU)** Shows a listing of the costs on changing **IT** systems	Public (Report will only be produced on demand, at least at the beginning)

Simplifications

In order to achieve a comprehensive and useful account those accounting items have been left out that are not affected by your business. Furthermore, in the interest of simplification some consolidated accounts have been used.

The following simplifications have been made:

- The **annual profit** will be transferred completely to the **profit reserve** after payment of the dividend. There is no limit for the setting up of profit reserves. A possible balance sheet loss is made up for out of the profit reserves.

- It was agreed that all companies pay **dividends** of **2%** of the issued shared capital to their shareholders. These dividends are independent of the annual surplus.

- **The investments** must be **activated** with the daily market value on the day that the balance sheet is composed. This means that valuation reserves cannot be built up by means of investments in order to manipulate the result. Increases in share price or falls in share price are thus already effective in the balance sheet or the P&L, and not just when they are realized by being sold.

- You only find **loss reserves** for claims run off. All other kinds of reserves are missing.

- **Loss reserves** and **premium reserves (unearned premiums)** for direct business are calculated as **40%** of the direct premiums. In the following year these items are completely eliminated. **Profits from release of reserves** because of reserves that have been calculated too conservatively – a common way of manipulating the result – thus cannot occur.

- **Actual and reported claims** in a business year will be regarded as one category. Paid claims of a business year are calculated as follows:

  Claims, reported
  \+ **paid claims from the previous year**
  (= release of reserves)
  \- claims not yet settled
  (= increase of reserves)

  = **Claims, paid** in the business year

- The notes in the **Schedule** are limited to:

  - Breakdown of the share and bond portfolios.
  - Change in the **capital of the company**
  - Development of the reserves
  - Breakdown of direct business according to class

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Glossary

Agency Wind Ups	Here: Agencies that do not perform satisfactorily can be dissolved. The portfolios must be distributed among agencies in the same region in return for financial compensation.
Amortization Profits	Amortization profits arise if the expenditure for repaying loans is lower than the amounts reserved for this purpose. Here: Since the loss reserves exactly cover the actual claims amount, there are only interest gains.
Cancellation	Policies not renewed by the customers of the direct insurer. Here: Cancellation within the first policy year is not recorded.
Claims	Incurred claims are claims that have actually occurred. Reported claims are the claims that have been reported to the insurance company. Paid claims are the claims that are settled after investigation. Here: Incurred claims mean the same as reported claims. All reported claims will be paid within twelve months.
Combined Ratio	The sum of the loss ratio, management expense ratio and *sales* expense ratio. If the value is over 100%, this shows that the company produces a negative underwriting result.
Compensation	Payment for the withdrawn portfolios. This is expressed as a percentage of the annual commission classified according to risk category. Here: percentage of the renewal commission
Core Business Processes	Here: Claims handling, dealing with new business, dealing with cancellations, portfolio management, redistribution of agency portfolios, management of inwards reinsurance
Cost of Living Index (Inflation)	Here: Rate of inflation based on the first round (=100)

Expense Ratio

Share of the expenses in % of the earned premiums.

The management expense ratio relates to the internal operations. Commissions from inwards reinsurance reduce the management expenses.

The sales expense ratio (a.k.a. sales expense ratio) relates to the costs of the sales organization: that is, mainly commissions.

Fiscal Year (Business Year)

Accounting periods for the accounting from Jan 1st. until Dec 31st

Here: All decisions are made at Jan 1st for one fiscal year.

e. **IT Equipment**

Here: The **IT** equipment which is available for the sales force. (Notebooks, connectivity, etc.)

e. **IT System**

Here: The **IT** systems are leased data processing units of the internal operation. These units consist of the mainframe, client/server and Internet.

Operational Management

Part of the insurance company's organization that does not include the field force.

Here:

The functional groups reporting directly top management and the administration, such as Cost control, **IT** & Organization, Personnel, …

Service centers for customer service and claims settlement.

Reinsurance management

Investment management

e. **Inwards Reinsurance**

Reinsurance from the point of view of the company that accepts (reinsures) the risks.

e. **Outwards Reinsurance**

Reinsurance business from the point of view of the company that cedes the risks.

Loss Ratio

Key figure used to judge the profitability of an insurance portfolio. The loss ratio [as a percentage of the earned premiums] is the ratio of expenditure on claims to the earned premium multiplied by 100.

Here: The loss ratio is known before the reinsurance account and only relates to the earned or booked premiums of the business underwritten by the company.

Market Potential

The market potential indicates how many risks are potentially insurable.

The market penetration indicates how many risks as a ratio of the market potential are actually covered by an insurance company.

Here: The market potential is coupled to economic growth.

Market Share

Here: The market share is calculated on several different bases: Globally, according to regions and risk categories. The basis of calculation are booked premiums for own account (direct premiums).

Money Market

Free market for investments.

Here: Fixed interest government bonds and units of index linked share funds can be bought. Minimum order size is 1000 units.

New Business

Increase in the number of insurance policies in the course of the business year.

Here: In order to compare the new business, the market share of new business is used. This measures the share of an insurance company by the sum of all new policies taken out for a particular category of risk or for a region. The statistics for new business do not include renewed policies.

New Business Commission

Commission as a percentage of the annual premium, which Sales receives for acquiring new policies.

Here: Abbreviation is “NBC”

Policy

A contract, which a direct insurer agrees with a proposer for insurance about covering risks.

Here: the duration is generally for a year.

Portfolio

or Business in Force

The volume of business written by an insurance company. This is measured either by the number of policies or by the premium volume [premiums or earned premiums]

Here: The portfolio (or business in force) includes the new business written during the current year.

Premium Index

Simplified way of measuring solvency.

Here: The relation of the shareholders’ funds at the beginning of the year to premiums for own account at the year end.

Premiums

Direct premiums: Booked gross premiums of the business acquired by the company itself.

Booked gross premiums (an item in the P&L): direct premiums + premiums as an inwards reinsurer.

Earned premiums = gross premiums limited to the business year by stopping and releasing unearned premiums

Earned premiums for own account (an item in the P&L). Gross premiums after withdrawal of outwards reinsurance and the balances of unearned premiums.

Region	Sales region where the portfolio is protected. Here: East, West, North
Reinsurance Treaty	Here: a contract between a direct insurer (outwards reinsurance) and a reinsurer (inwards reinsurance):The treaty begins on Jan 1st and ends on Dec 31th. The earned premiums are the basis for assessing the premium volume of the direct insurer.
Renewal Commission (RC)	Payment in percentage of the annual premium which Sales receives for policies that have been renewed.
Reserves	Reserves are part of the shareholders' funds. They must be indicated clearly in the balance sheet. A distinction is made between profit reserves and the investment reserve for externally transferred shares of shareholders' funds. Here: Profit reserves come from the balance sheet profit. The profit reserves are reduced when there is a balance sheet loss.
Retainer	Here: Payment to Sales that is independent of production and the portfolio.
Risk Category	A category of risks with the same tariff features. Here: Industrial, Commercial and Domestic
Shareholders' funds	In a manufacturing company the shareholders' funds are used for financing, whereas in the context of insurance their purpose is to provide security against fluctuations in profitability. (See also Solvency). Here: The shareholders' funds consist of the issued share capital (basic capital, shareholders) and the reserves (coming from the balance sheet profit).
Solvency	The solvency measures the degree of own capital (security) of the insurance company using the figures at the end of the year. The solvency margin provides a basic measure – the relationship of untied own capital to the risks retained for own account. The supervisory authority in the country of origin of the insurance company is responsible for monitoring the solvency margin according to the harmonized law of the EU. Here: The solvency of the company is evaluated according to the premium index: 40% of the earned premiums for own account must be covered by shareholders' funds.
Sum Insured (SI)	The maximum level of cover for a risk. Here: Sums insured follow the cost of living index by means of a

clause that adjusts the sum insured accordingly.

e. **Underwriting**	Investment in underwriting with the purpose of preventing risks coming into the portfolio that will produce more claims than calculated. Here: Underwriting expenditure is expressed in ['000 €] per risk category according to business year.
Underwriting Reserves	Liabilities on the balance sheet. Reserves must be set aside for liabilities that have been identified, but where the amounts involved are not yet known. Here: Only loss reserves for claims that have not yet been settled. The level of the reserves corresponds to the level of the liabilities. There are no profits emerging from over-reserving.
Unearned Premiums	Part of the premiums booked during the business year, which represent the income for the policy duration after the balance sheet day. This means that on Dec 31st they have not been earned.
Working Units (WU)	Here: A unit to measure the amount of work involved in business processes

Index

Marketing Decisions

business year | team

		Industry	Commercial	Domestic	
Premium level (relative price)	East region	Run-Off	Run-Off	Run-Off	
	West region	Run-Off	Run-Off	Run-Off	
	North region	Run-Off	Run-Off	Run-Off	figures in [%]
Advertizing and PR	East region				
	West region				
	North region				figures in ['000 €]
Renewal Commission (on written premiums)	East region				
	West region				
	North region				figures in [%]
New Business Commission (on written premiums)	East region				
	West region				
	North region				figures in [%]

No decision means, the value of the previous year continues to apply.

Agency Decisions

business year | team

New Agencies

all values in ['000 €]

per agency

all values in [no. of contracts]

per agency

Region			How many new agencies?	set up costs	retainer fix income	training	IT	info-mat.	start up portfolio Industry	Commercial	Domestic
east	west	north									
east	west	north									
east	west	north									

check region that applies

fields are obligatory.

fields are optional.

Existing Agencies

all values in ['000 €]

per agency

all values in [no. of contracts]

per agency

Region			agency number	retainer	training	IT	info-mat.	change in portfolio (+/-) Industry	Commercial	Domestic
east	west	north								

wind up

replace set up costs:

Region			agency number	retainer	training	IT	info-mat.	Industry	Commercial	Domestic
east	west	north								

wind up

replace set up costs:

Region			agency number	retainer	training	IT	info-mat.	Industry	Commercial	Domestic
east	west	north								

wind up

replace set up costs:

No decision means the value of the previous year continues to apply.

Asset Management Decisions

business year | team

Bonds

all values in ['000 units]

Government bonds Germany (Euro):		+ buy - sell
Government bonds UK:		+ buy - sell

Shares

all values in ['000 units]

Shares Germany:		+ buy - sell
Shares Euro:		+ buy - sell
Shares USA:		+ buy - sell

Management Decisions

business year | team

IT-System

Type of system: Mainframe | Client/Server | Internet — check boxes that apply

Number of systems: [systems]

Investment to optimize: ['000 €]

no decision means no investment

Employees

Employees: + new appointments / - dismissals

Investment in training and organisational development: ['000 €] per employee

no decision means no investment

e. Excess of Loss (XL) Reinsurance Treaties

business year team

General Treaty Conditions

1st layer: ['000 €] lower limit ['000 €] upper limit [%] premium

2nd layer: ['000 €] lower limit ['000 €] upper limit [%] premium

Treaty Shares

1st layer
2nd layer
cancel treaty share

direct insurer:

reinsurer:
share: [%]

signature direct insurer
signature reinsurer

1st layer
2nd layer
cancel treaty share

direct insurer:

reinsurer:
share: [%]

signature direct insurer
signature reinsurer

For more treaty shares, use additional sheet.

e. Surplus Reinsurance Treaties

business year | team

General Treaty Conditions

retention of direct insurer

Surplus line: ['000 €]

liability of reinsurer

1st surplus: [number of lines]

2nd surplus: [number of lines]

3rd surplus: [number of lines]

Treaty Shares

1st surplus
2nd surplus
3rd surplus

cancel treaty share

direct insurer:

reinsurance commission: [%]

profit commission: [%]

reinsurer:

reinsurer's share: [%]

signature direct insurer

signature reinsurer

losses carried forward
no losses carried forward

1st surplus
2nd surplus
3rd surplus

cancel treaty share

direct insurer:

reinsurance commission: [%]

profit commission: [%]

reinsurer:

reinsurer's share: [%]

signature direct insurer

signature reinsurer

losses carried forward
no losses carried forward

For more treaty shares, use additional sheet.

If you do not make a decision about an item, the value of the previous year continues to apply.

Risk-Management Decisions

business year team

	Industry	Commercial	Domestic	
Investment in underwriting ("risk selection")				all values ['000 €]

No decision means no investment