

# **Project of Balanced Scorecard implementation in Irisa, co-opt.**

Bc. Michaela Zárubová

---

Master thesis  
2007

 Tomas Bata University in Zlín  
Faculty of Management and Economics

---

**Univerzita Tomáše Bati ve Zlíně**  
**Fakulta managementu a ekonomiky**

Ústav financí a účetnictví  
akademický rok: 2006/2007

**ZADÁNÍ DIPLOMOVÉ PRÁCE**  
(PROJEKTU, UMĚLECKÉHO DÍLA, UMĚLECKÉHO VÝKONU)

Jméno a příjmení: **Bc. Michaela ZÁRUBOVÁ**  
Studijní program: **N 6202 Hospodářská politika a správa**  
Studijní obor: **Finance**

Téma práce: **Project of Balanced Scorecard implementation in IRISA, co-opt.**

Zásady pro vypracování:

**Úvod**

**I. Teoretická část**

- Zpracujte kritickou rešerši literárních pramenů týkajících se problematiky konceptu Balanced Scorecard a jeho implementace.

**II. Praktická část**

- Charakterizujte společnost Irisa a analyzujte její připravenost k implementaci Balanced Scorecard.
- Na základě provedené analýzy zhodnoťte výsledky a navrhněte východiska pro využití přístupů Balanced Scorecard.
- Vypracujte projekt implementace Balanced Scorecard a formulujte závěrečná doporučení vedoucí k úspěšné implementaci Balanced Scorecard ve společnosti.
- Analyzujte rizika projektu.

**Závěr**


Rozsah práce: cca 70 stran  
Rozsah příloh:  
Forma zpracování diplomové práce: tištěná/elektronická

Seznam odborné literatury:


- [1] HORVÁTH & PARTNERS. *Balanced Scorecard v praxi*. Praha: Profess Consulting s.r.o., 2002. ISBN 80-7259-018-9.
- [2] KAPLAN, R. S., NORTON, D. P. *Alignment: How to apply the Balanced Scorecard to corporate strategy*. Harvard Business School Press, 2006. ISBN 159-1396-905.
- [3] KAPLAN, R. S., NORTON, D. P. *Balanced Scorecard: Strategický systém měření výkonnosti podniku*. Praha: Management Press, 2002. 3.vydání. ISBN 80-7261-063-5.
- [4] NIVEN, P. R. *Balanced Scorecard: Maintaining Maximum Performance*. New Jersey: John Wiley & Sons, Inc. Hoboken, 2005. ISBN 0471-68123-7.
- [5] OLVE, N. G., SJOSTRAND, A. *Balanced Scorecard*. Southern Gate Chichester, West Sussex: Capstone Publishing Ltd., 2006. ISBN 184-1127-086.

Vedoucí diplomové práce: **Ing. Daniel Remeš**  
Ústav financí a účetnictví  
Datum zadání diplomové práce: **5. března 2007**  
Termín odevzdání diplomové práce: **4. května 2007**

Ve Zlíně dne 5. března 2007

  
doc. PhDr. Vnislav Nováček, CSc.  
děkan



  
doc. Dr. Ing. Drahomíra Pavelková  
ředitel ústavu

## **ABSTRACT**

The main aim of this master thesis is to propose the Project of Balanced Scorecard implementation in Iriša, co-opt. This modern tool of strategic management has not been used in Iriša, so far. The theory explains some aspects of the performance management and introduces Balanced Scorecard as the new tool of strategic management. Another part focuses on analyses, i.e. PEST, Porter's Five Forces Model, financial analysis and SWOT analysis. The results clear up the contemporary position of Iriša and lead to solutions for BSC utilization before the implementation. Finally, the thesis is composed of the Balanced Scorecard implementation with all its aspects, proposals and recommendations and risks of the project.

Keywords: Balanced Scorecard, strategy, strategy map, performance

## **ABSTRAKT**

Hlavním cílem diplomové práce je navrhnout projekt implementace Balanced Scorecard pro společnost Iriša, výrobní družstvo. Tento moderní nástroj strategického řízení podniku nebyl dosud ve společnosti využíván. Teorie vysvětluje některé aspekty řízení výkonnosti podniku a představuje nový nástroj strategického managementu – Balanced Scorecard. Další část se zaměřuje na výsledky analýz, tj. PEST, Porterův model pěti sil, finanční analýzu a souhrnnou PEST analýzu. Výsledky pomáhají vyjasnit současnou situaci, ve které se Iriša nachází a formulovat východiska pro využití přístupu BSC před tím, než bude zaveden. Závěrečná část je tvořena samotným projektem implementace Balanced Scorecard se všemi jeho aspekty, návrhy a doporučeními a možnými riziky projektu.

Klíčová slova: Balanced Scorecard, strategie, strategická mapa, výkonnost

I would like to thank my supervisor Ing. Daniel Remeš for his professional and valuable advice, information, patience, friendly approach and for the support that made this project such an interesting experience.

Furthermore, I would like to express my thanks to Ing. J.Sehnálek and Ing. D.Smilková from Iriša for their willingness, time, help and cooperation.

# CONTENTS

<b>INTRODUCTION</b> .....	<b>9</b>
<b>I THEORY</b> .....	<b>11</b>
<b>1 PERFORMANCE MEASUREMENTS FOR SUCCESS</b> .....	<b>12</b>
<b>2 THE BALANCED SCORECARD</b> .....	<b>14</b>
2.1 WHY BALANCED SCORECARD AND WHY NOW?.....	17
2.2 BALANCED SCORECARD PERSPECTIVES.....	18
2.2.1 Financial perspective.....	20
2.2.2 Customer perspective.....	20
2.2.3 Internal processes perspective.....	20
2.2.4 Learning and growth perspective.....	21
2.3 VISUALIZING STRATEGIES IN MAPS.....	21
2.3.1 Strategy maps.....	22
2.4 IMPLEMENTING A BALANCED SCORECARD MANAGEMENT PROGRAM.....	24
2.4.1 Launching the Balanced Scorecard program.....	24
2.4.2 The dynamics: Mobilizing the organization.....	25
2.4.3 Building an integrated management system.....	26
2.4.4 Managing the Balanced Scorecard strategic management system.....	27
2.4.5 Summary: Translating strategy into action.....	27
2.5 ADVANTAGES OF THE MODEL.....	30
2.6 CRITIQUE AGAINST THE BSC.....	31
2.7 CONCLUSION TO THE BSC.....	33
<b>II PRACTICAL PART</b> .....	<b>34</b>
<b>3 IRISA, CO-OPT</b> .....	<b>35</b>
<b>4 PEST ANALYSIS</b> .....	<b>38</b>
4.1 POLITICAL ANALYSIS.....	39
4.2 ECONOMIC ANALYSIS.....	40
4.3 SOCIAL ANALYSIS.....	41
4.4 TECHNOLOGICAL ANALYSIS.....	41
<b>5 PORTER'S FIVE FORCES MODEL</b> .....	<b>42</b>
5.1 ENTRANTS.....	43
5.2 SUPPLIERS.....	43
5.3 RIVALRY.....	43
5.4 BUYERS.....	44
5.5 SUBSTITUTES.....	44
<b>6 FINANCIAL ANALYSIS</b> .....	<b>45</b>

6.1	INCOME STATEMENT ANALYSIS .....	45
6.1.1	Assets and liabilities analysis .....	46
6.1.2	Revenues and expenses analysis.....	47
6.2	CASH FLOW ANALYSIS .....	48
6.3	SOLVENCY / LEVERAGE RATIOS .....	49
6.4	LIQUIDITY RATIOS.....	51
6.5	PROFITABILITY RATIOS .....	52
6.6	EQUITY MULTIPLIER.....	53
6.7	ACTIVITY RATIOS.....	54
6.8	SPIDER ANALYSIS.....	55
6.9	OTHER RATIOS .....	57
6.10	ADDITIONAL RATIOS .....	58
6.11	ECONOMIC VALUE ADDED.....	60
6.12	DU-PONT DECOMPOSITION MODEL .....	61
6.13	CONCLUSION TO FINANCIAL ANALYSIS .....	63
<b>7</b>	<b>SWOT ANALYSIS .....</b>	<b>65</b>
<b>8</b>	<b>SOLUTIONS FOR BSC APPROACH UTILIZATION .....</b>	<b>67</b>
<b>9</b>	<b>BALANCED SCORECARD IMPLEMENTATION .....</b>	<b>68</b>
9.1	CONSTITUTION OF ORGANIZATION PRESUMPTIONS FOR THE IMPLEMENTATION ....	68
9.2	CLARIFYING OF STRATEGIES .....	69
9.3	STRATEGY OBJECTIVES AND A STRATEGY MAP .....	70
9.4	MEASURES AND TARGETS .....	72
9.4.1	Financial perspective .....	72
9.4.2	Customer perspective .....	74
9.4.3	Internal processes perspective .....	76
9.4.4	Learning and growth perspective.....	78
9.5	THE ROLL-OUT PROCESS .....	81
9.6	BSC INTEGRATION INTO MANAGEMENT SYSTEM.....	84
9.7	THE BALANCED SCORECARD TIMELINE.....	86
9.8	PROJECT BUDGET .....	87
9.9	CONTRIBUTIONS OF THE BSC PROJECT .....	88
9.10	RISKS OF THE BSC PROJECT.....	89
9.11	PROPOSALS AND RECOMMENDATIONS .....	90
	<b>CONCLUSION.....</b>	<b>91</b>
	<b>BIBLIOGRAPHY .....</b>	<b>92</b>
	<b>LIST OF SYMBOLS AND ABBREVIATIONS .....</b>	<b>94</b>

<b>LIST OF FIGURES .....</b>	<b>96</b>
<b>LIST OF TABLES .....</b>	<b>97</b>
<b>LIST OF APPENDICES.....</b>	<b>98</b>



## INTRODUCTION

Responsibility and trust are watchwords at today's companies. But what is a manager responsible for? For decades we have been talking about "decentralized profit responsibility". We usually measure results in monetary terms. The income statements which we prepare for particular business units and departments are modeled on the income statement of the company.

Is this enough? Is the mission of the various parts of a company simply to create profits and return on investment? In many cases probably not. Wise executives know that their company must develop the capabilities which it will need to prosper in the future. But doing so will produce no profits in the current year, only costs.

Here lies the fundamental reason why companies require a balanced scorecard. The need is even clearer for the many organizations without profit as a goal, including government agencies, internal staff units in industry, and others. We have to do more to describe what we expect of an operation, and how well our expectations are being met.

Perhaps this matter was less urgent before. Both sales and production were primarily focused on the short run. Preparing for the future was something companies did in their development departments and through requirements of centralized authorization for capital expenditures.

Today we no longer consider this approach adequate. Preparing for the future is about investing in competence, cultivation customer relationships, and creating data bases. Much of this work is done elsewhere in the organization than at headquarters. There is a danger that profit targets will clash with long-term decisions.

The BSC has quickly become recognized as an important management tool with the potential to improve organizational performance. Organizations are competing in complex envi-

ronments so that an accurate understanding of their goals and the methods for attaining those goals is vital. The Balanced Scorecard translates an organization's mission and strategy into a comprehensive set of performance measures that provides the framework for a strategic measurement and management system. It retains an emphasis on achieving financial objectives, but also includes the performance drivers of these financial objectives. The BSC enables companies to track financial results while simultaneously monitoring progress in building the capabilities and acquiring the intangible assets they need for future growth.

The aim of this work is to create Balanced Scorecard implementation project for Irisa, co-opt in Vsetín. This modern tool of strategic management has not been used so far but Irisa realizes that one of the most important aims of every company is to hold a market in these difficult market conditions with a contribution of an effective strategic management. The main advantage of BSC method is not only the strategy implementation but also a strategic system formation of efficiency measurement in a company.

The theory explains some aspects of the performance management and introduces new tool of strategic management called Balanced Scorecard. It focuses both on the positive and negative aspects of the BSC.

After that follows a presentation of Irisa, co-opt., the analyses, e.g. PEST, Michael Porter's Five Forces Model, financial analysis and summarizing SWOT analysis. Results of analyses and proposals to BSC utilization in Irisa will clear up the contemporary position of the company before the process of Balanced Scorecard implementation.

Finally, the master thesis is composed of the Balanced Scorecard implementation with all its aspects, final recommendations and risks and contributions of the project.

## **I. THEORY**

## 1 PERFORMANCE MEASUREMENTS FOR SUCCESS

Traditional financial measures – ROI, net profit, sales growth, and market share – fail to capture the true picture of a firm’s value propositions because they focus on the past. They tell the story of what has happened to the organization. They explain the results of past transactions and disregard what the future benefits could be. Traditional financial measures are only part of the information that managers need to successfully guide their organizations through highly competitive marketplaces.

During the 1990s, two Harvard professors and consultants – Kaplan and Norton, devised a tool, the Balanced Scorecard, to rectify the deficiencies in relying primarily on traditional financial measures. A Balanced Scorecard allows better measurement of firm’s capabilities to create long-term value by identifying the key drivers of this value. The drivers are then translated into four categories of measures – customer, internal/operational, innovation/learning, and financial. The financial measures are typically focused on short-term results; while the other three categories are coupled to future oriented activities needed to successfully sustain the enterprise.

Obviously financial health is critical for any business organization – cash in the bank is necessary to pay the bills. However, many managers become nearsighted as a result of this requirement and believe that by making fundamental improvements in their operations, the financial numbers will resolve themselves. This is an utter fallacy. Managers should develop strategic measures that are specifically tied to their firm’s unique strategy. There is not a “one size fits all” Balanced Scorecard. The following is the basic categorization for balanced measures of firm performance. [7]

### I. Financial perspective

Measures that indicate whether the company’s strategy, implementation, and execution are contributing to bottom line improvement.

- Cash flow
- Sales growth

- Market share
- ROE

## **II. Customer perspective**

Customer concerns in four categories.

1. Time-measures time required for company to meet customer's needs.
2. Quality-defect level as sent to customers.
3. Performance-how company's products/services contribute to creating value for its customers.
4. Cost-not just price of goods/services, but what does it "cost" the customer when he finally uses it.

## **III. Internal / Operational perspective**

- Business processes that have the greatest impact on customer satisfaction.
- What competencies are needed to maintain market leadership?

## **IV. Innovation / Learning perspective**

- Ability to innovate, improve, and learn ties directly to company's value.
- Launch new products.
- More value for customers.
- Penetration of new markets.

However, a balanced performance measurement tool is not a collection of disparate financial and non-financial measures. It is more than supplementing traditional financial measures with non-financial measures. It is a process of developing interrelated measures, some leading and some lagging, that uniquely depicts a firm's strategy in attempting to create competitive advantage. [7]

## 2 THE BALANCED SCORECARD

*“When you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind...”*

*William Thompson (Lord Kelvin), 1824-1907 [13]*

Organizations in today's change-filled, highly competitive environment must devote significant time, energy, and human and financial resources to measuring their performance in achieving strategic goals. Most do just that, but despite the substantial effort and related costs, many are dissatisfied with their measurement efforts.

Increasingly, organizations are concluding that while measurement is more crucial than ever, their systems for capturing, monitoring, and sharing performance information are critically flawed. Today's systems in many ways bear a remarkable resemblance to their reporting ancestors. Although the methods of modern business have transformed dramatically over the decades, our systems of measurement have remained firmly mired in the past. [13]

A balanced scorecard is a format for describing the activities of an organization through a number of measures for each of (usually) four perspectives. It assists organizations in overcoming three key issues:

- effective organizational performance measurement,
- the rise of intangible assets, and
- the challenge of implementing strategy.

Some would say that this is just another performance report, combining financial and non-financial metrics. But there is more to the scorecard than immediately meets the eye:

- The scorecard is balanced: the four perspectives aim for a complete description of what you need to know about the business. First, there is a *time dimension* going from bottom to top. Current profitability, etc. may largely be a consequence of what was done last quarter or last year; if new skills are added now it should have consequences for next year's efficiency and finance.
- The scorecard is balanced in another way also: it shows *both internal and external* aspects of the business. It is obvious that a "well-oiled machinery" of internal processes is important in any business, and may not always correlate with external perceptions. On the other hand, customers' views and the contacts that have been established in the market-place are obviously important too. The scorecard shows both.
- Finally, the scorecard is *linked* through cause-and-effect assumptions. Among its most important uses is to reflect on how strong these linkages are, what time delays they involve, and how certain we can be about them in the face of external competition and change.

Since its first appearance, the concept of the BSC has been widely adopted as a new approach to management control both in business and government. A scorecard is an easy-to-understand generic format for describing the ambitions and achievements of an organization. [15]

*The Balanced Scorecard is like the dials in an airplane cockpit: it gives managers complex information at a glance.* [15]

<b>1987</b> <i>Relevance Lost</i> (Book by Kaplan & Johnson)	Critique of financial focus in performance measurement and management accounting.
<b>1992</b> <i>The BSC: Measures that drive performance.</i> (HBR Article)	Balanced and forward-looking view of company 4 measurement perspectives.
<b>1993</b> <i>Putting the BSC to work.</i> (HBR article)	Link measures to strategy Exemplified with Apple, Rockwater, AMD etc.
<b>1996</b> <i>Using the BSC as a strategic management system.</i> (HBR article)  <i>The BSC: Translating strategy into action</i> (Book)	Translate the vision → → Communicate and link → → Business Planning and Goals → → Feedback and Learning. Introduction of generic causal chain
<b>1999</b> <i>The Strategy Focused Organization</i> (Book)	Higher focus on BSC as the center of the management system.
<b>2000</b> <i>Having Trouble with Your Strategy? Then Map It.</i> (HBR article)	Introduction of strategy maps
<b>2003</b> <i>Strategy Maps: Converting Intangible Assets into Tangible Outcomes.</i> (Book)	BSC evolves into strategy maps, with intention of creating a language to discuss strategies. Focus on how to create a strategy, what it is, and how to communicate it.

*Fig.1 Historic overview of BSC development [6]*



## 2.1 Why Balanced Scorecard and why now?

*“The average business executive has spent 10,000 hours in being educated...but only spent 10 hours being trained in creativity.” [12]*

Management guru Peter Drucker once observed that the most common source of mistakes in management decisions is the emphasis on finding the right answer rather than the right question. We are all familiar with the impressive statistics surrounding BSC usage in the organizational world: adopted by approximately 50% of the Fortune 1000, hailed as one of the 75 most influential business ideas of the 20<sup>th</sup> century, embraced by public, private, and nonprofit enterprises alike. Mere adoption of the tool, however, does not guarantee that business results will necessarily begin flowing as rapidly as Niagara Falls.

Any type of change has the potential to feel threatening to those who are affected by it. Change is difficult; therefore, it's essential for you to answer the questions of why the BSC is a necessary step for your organization and why now. As Larry Weinbach, CEO of Uni-sys, points out: [12]

*“Make sure that you recognize not everybody is going to come on board on day one and that it's going to take a lot of face time to ensure that people understand where you want to go and why...The why becomes a big issue because, it may seem surprising, but a lot of people may not understand why you want to make the strategic change, even if the company is not doing well. [11]*

The rationale for change may be glaringly apparent to you, but chances are you have far greater access to strategic information than most of your employees, the very group who will ultimately be charged with the responsibility of living the BSC on a day-to-day basis. To them, the case for change may be unwarranted or simply unknown, and without that knowledge it will prove exceedingly difficult for you to gain their true commitment to the implementation. [11]

## 2.2 Balanced Scorecard perspectives

The etymology of the word “perspective” is from the Latin *perspectus*, “to look through” or “see clearly”, which is precisely what we aim to do with a Balanced Scorecard: examine the strategy, making it clearer through the lens of different viewpoints. Any strategy, to be effective, must contain descriptions of financial aspirations, markets served, processes to be conquered, and, of course, the people who will steadily and skillfully guide the company to success. An accurate picture of strategy execution, it must be painted in the full palette of perspectives that comprise it; therefore, when developing a Balanced Scorecard, we consider these four:

- FINANCIAL
- CUSTOMER
- INTERNAL PROCESSES
- LEARNING AND GROWTH [13]

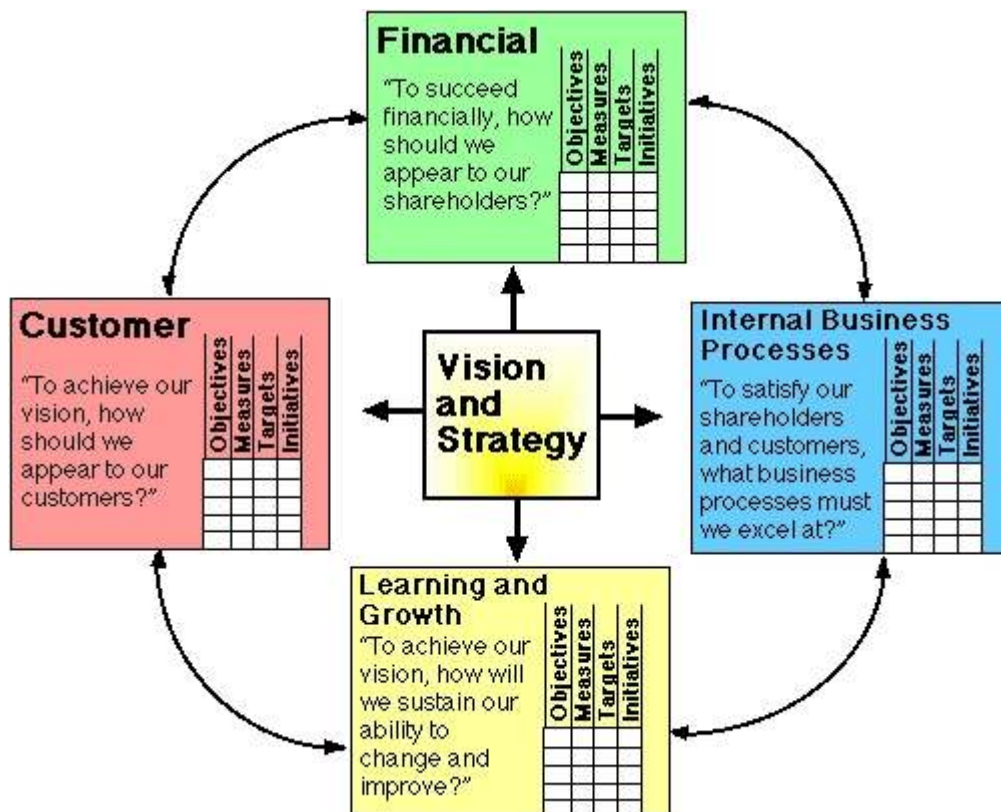


Fig.2 Using the BSC as a Strategic Management System [8]

Within each of the Balanced Scorecard financial, customer, internal processes, and learning and growth perspectives, the firm must define the following:

- **Strategic objectives** – what the strategy is to achieve in that perspective.
- **Measures** – how progress for that particular objective will be measured.
- **Targets** - the target value sought for each measure.
- **Initiatives** – what will be done to facilitate the reaching of the target. [6]

The following sections provide examples of some objectives and measures for the 4 perspectives.

*Tab.1 Building strategy maps [6]*

PERSPECTIVES	Objectives	Measures
<b>Financial</b>	growth profitability cost leadership maximize value at least cost maximize cost savings timely payments under pr. pay maximize productivity	revenue growth return on equity unit cost cost-to-spend ratio purchasing influenced savings delinquent payment penalties ratios
<b>Customer</b>	new products responsive supply to be preferred supplier customer partnerships quality	% of sales from new products on-time delivery share of key accounts number of cooperative efforts quality of product/service
<b>Internal Process</b>	manufacturing excellence increase design productivity reduce product launch delays	cycle time, yield engineering efficiency actual launch date vs. plan
<b>Learning and Growth</b>	manufacturing learning product focus time to market	time to new process maturity % of product representing 80% of sales time compared to that of competitors
	Targets	Initiatives
<b>Financial</b>	20% increase of EVA 15% increase of sales	likes program
<b>Customer</b>	increase new customers to 6 fast product delivery –4weeks increase sales from new products to 10,000,000	focus group program account penetration program quality management customer loyalty
<b>Internal Process</b>	increase investments to 5 mil. increase pro.capacity to 90% higher pers.productivity to 400 higher new technology to5p.a.	Critical opportunity sales support reference sell program pull marketing and image program target marketing program
<b>Learning and Growth</b>	increase incom. orders to 50 decrease staff turnover to 2% increase trainings to 15	selling skills program customer database sales learning system

### 2.2.1 Financial perspective

How do we look to shareholders?

This question is answered by the financial perspective. Financial measures are an important component of the Balanced Scorecard in the for-profit, public, and nonprofit worlds. In the for-profit domain, the measures in this perspective tell us whether our strategy execution – which is detailed through measures chosen in the other perspectives – is leading to improved bottom-line results. In the nonprofit and public sectors, financial measures ensure that we are achieving our results, but doing so in an efficient manner that minimizes cost. We normally encounter classic *lagging* indicators in the Financial perspective. Typical examples include revenue, profitability, and asset utilization.

### 2.2.2 Customer perspective

How do customers see us?

When choosing measures for the Customer perspective of the Scorecard, organizations must answer two critical questions: “Who are our target customers?” and “What is our value proposition in serving them?” Sounds simple enough, but both of these questions offer many challenges to organizations. Most organizations will state that they do in fact have a target customer audience, yet their actions reveal an “all things to all customers” strategy.

### 2.2.3 Internal processes perspective

What must we excel at?

Here we identify the key processes at which the organization must excel in order to continue adding value for customers. Our task in this perspective is to identify those processes and develop the best possible measures with which to track our progress. To satisfy customers, you may have to identify entirely new internal processes rather than focusing your efforts on the incremental improvement of existing activities. Service development and delivery, partnering with the community, and reporting are examples of items that may be represented in this perspective

#### 2.2.4 Learning and growth perspective

Can we continue to improve and create value?

If you expect to achieve ambitious results for internal processes, customers, and financial stakeholders, where are these gains found? The measures in the Learning and Growth perspective of the BSC serve as the enablers of the other three perspectives. In essence they are the foundation on which this entire house of a BSC is built. [12]

### 2.3 Visualizing strategies in maps

When Kaplan and Norton initially conceived the Balanced Scorecard, they were attempting to solve a problem of measurement: How do we acknowledge the importance of financial metrics in decision making and business success while also recognizing the rapid rise of intangible assets and their critical importance to the overall recipe for organizational success? Their answer was the use a balanced set of measures in four distinct, yet related, perspectives: financial, customer, internal processes and employee learning and growth. However, if those measures are leading to dysfunctional behaviours of some kind, that focused rowing could have you headed straight down a course of uncharted and rocky rapids that is sure to turn your cozy assumptions about measurement upside down.

Recognizing this potential hazard, Kaplan and Norton began prefacing the discussions of measures with one of objectives: What exactly were executives attempting to accomplish? Answering this fundamental question made the development of measures that much easier because a context was created for the deliberation. It soon became standard practice to begin a BSC implementation by articulating key objectives derived directly from the organization's strategy.

A successful business unit strategy positions a company in the competitive landscape so that it can capture a significant amount of value. Once this position has been identified, the company can translate this strategy into a strategy map and Balanced Scorecard. [12]

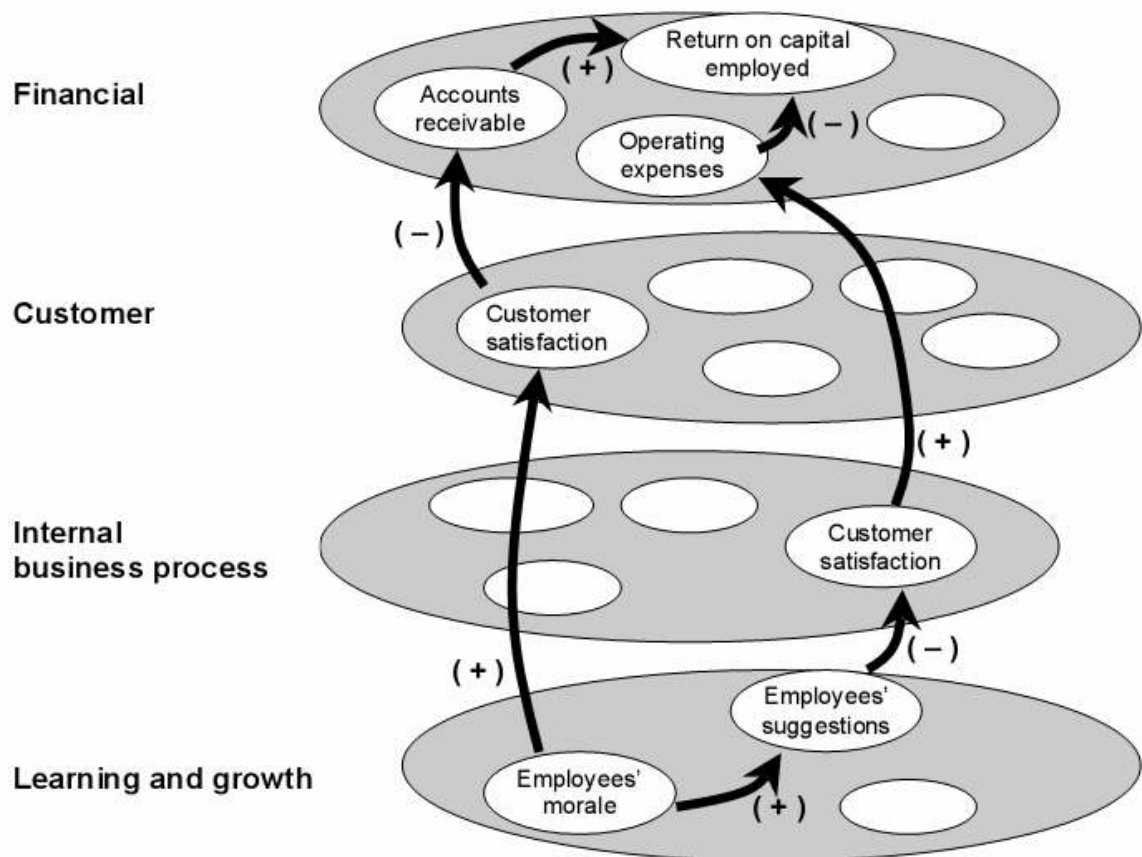


Fig.3 Four perspectives of BSC [6]

### 2.3.1 Strategy maps

Strategy maps fulfil several purposes:

- They enable discussions about cause-effect relationships when facing strategic decisions, and about possible strategic actions.
- They assist in finding and selecting metrics to monitor activities.
- The completed map can be used to communicate strategies and their inherent logic: “Why we believe we will succeed.”

An old saying reminds us that “a picture tells a thousand words”, and so it is with the strategy map. Kaplan and Norton provide a wide range of such maps for many different types of organizations. They also suggest that there are “generic” parts of such maps, such as the customer perspective being closely linked to the “value proposition” chosen by the organization.

A strategy map should answer two related questions:

*How does this organization intend to succeed?*

*How can we recognize whether this organization is succeeding?*

The more dependencies there are, the more careful the corporate level has to be in judging this company separately. One of the main purposes of the maps is to communicate strategies and their inherent logic in the organization. They should document where the chosen strategy is going to take us and over what timescale, what activities will be needed, and also make the long-term success credible. [15]

For an example of a strategy map from Norton and Kaplan see APPENDIX 1.

## 2.4 Implementing a Balanced Scorecard management program

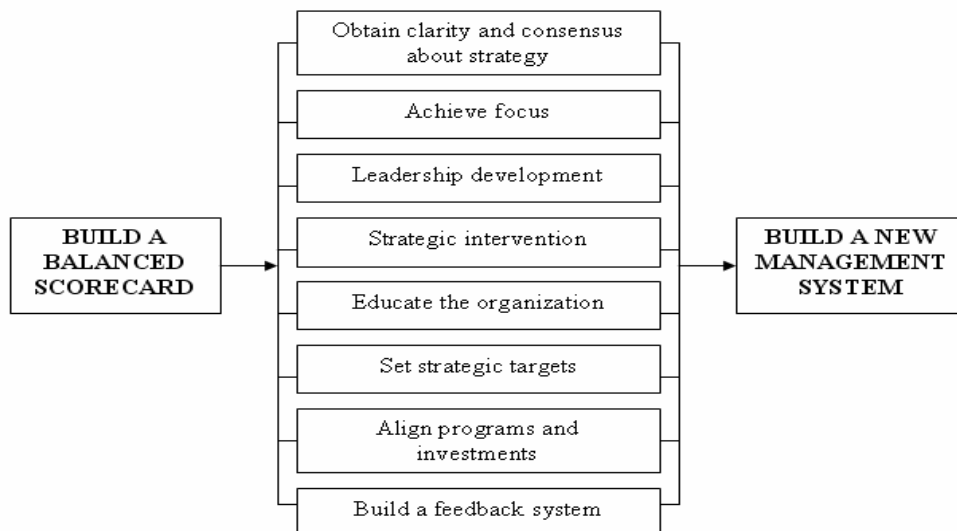
*“I tried to tell my boss that a Balanced Scorecard was about management not measurement.” [6]*

This manager had been asked by his CEO to lead a middle-management task force to develop a Balanced Scorecard for the division. He sensed that this effort was doomed to failure, because the CEO viewed the scorecard as a narrow effort to improve the organization’s performance measurement system, not as a new way to manage the business.

The goal of a scorecard project is not to develop a new set of measures. Measurement – how we describe results and targets – is indeed a powerful motivational and evaluation tool. But the measurement framework in the Balanced Scorecard should be deployed to develop a new management system. [6]

### 2.4.1 Launching the Balanced Scorecard program

Organizations launch scorecards programs for a variety of reasons. For example:



*Fig.4 Launching the BSC program [6]*



Note that none of the reasons above relates solely to improving the measurement system. Each reason is part of a broad, overarching goal – mobilizing the organization to new strategic directions.

#### **2.4.2 The dynamics: Mobilizing the organization**

A management system does not appear instantaneously. Because of its scope, complexity, and impact, a new management system must be phased in over time. This approach is preferable since the CEO has an opportunity to unfreeze the organization from its previous processes and send a message about the new process.

The first few steps in the implementation process

- clarified the company vision and strategy,
- communicated the corporate strategy,
- launched cross-business strategic initiatives, and
- led to each SBU developing its own strategy, consistent with that of the company.

These steps all occurred during the first year. The corporate review process created some unanticipated benefits. As the individual SBUs developed specific strategies, they identified several cross-business issues that were not included in the original corporate scorecard. For example, many of the SBUs realized that they must understand their customers better and needed to solicit feedback on customer satisfaction. The bottom-up strategy formulation at the SBU level, within the context established at the company level, led to an entirely new approach for accomplishing the SBU's strategy. Several such strategic initiatives emerged from the SBUs, and were then incorporated into an updated corporate scorecard.

Immediately upon approval of their scorecards, the SBUs began a monthly review process. The monthly reviews were supplemented with quarterly reviews that focused more heavily on strategic issues.

After two years, the Balanced Scorecard had become integrated into the regular management cycle. The new management measures and processes had facilitated a shift of the entire organizational culture, from an unfocused generalist to a targeted specialist one. [6]

### **2.4.3 Building an integrated management system**

Once a scorecard has been designed and introduced, concerns soon arise if the scorecard is not tied into other management programs, such as budgeting, alignment of strategic initiatives, and setting of personal targets. Without such connections, the effort devoted to developing a Balanced Scorecard may not deliver tangible benefits.

Most companies have a management calendar that identifies the different management processes being used and the schedule for the operation of each process. Typically, the calendar is organized around the budgeting and operational review process. The BSC provides a vehicle to introduce strategic thinking into ongoing management processes, but such a linkage must be made explicit.

The management calendar incorporates four essential features of a strategic management system:

1. Strategy formulation and strategic issue update.
2. Link to personal objectives and rewards.
3. Link to planning, resource allocation, and annual budgets.
4. Feedback and strategic learning.

A link to personal objectives and rewards (especially by managers) is crucial by BSC implementation. As companies attempt to implement new strategies, managers must continually take risks and experiment so that they can learn and grow. Executives must encourage this innovative behaviour by managing the linkage to personal objectives and rewards. Clearly, incentive compensation motivates performance. [6]

#### **2.4.4 Managing the Balanced Scorecard strategic management system**

Introducing a new management system centered on the BSC must overcome the organizational inertia that tends to envelop and absorb virtually any change program. Two types of change agents are required for effective implementation of the new system. First, an organization needs transitional leaders, the managers who facilitate the building of the scorecard and who help embed it as a new management system. Second, the organization needs to designate a manager to operate the strategic management system on an ongoing recurring basis. An additional difficulty of embedding the BSC as a strategic management system is that the responsibilities of both the transitional leaders and the manager of the ongoing system do not fall within traditional organizational boxes. [6]

#### **2.4.5 Summary: Translating strategy into action**

Companies initially adopt the BSC for a variety of reasons (see Figure 4). In general, organizations can achieve these targeted objectives with the development of an initial BSC. But the development of the scorecard and, especially, the process among senior managers to define the objectives, measures, and targets for the scorecard, ultimately reveals an opportunity to use the BSC in a far more pervasive and comprehensive manner than originally intended.

The Balanced Scorecard can be the cornerstone of an organization's management system since it aligns and supports key processes, including: clarify and update strategy, communicate strategy throughout the organization, align departmental and person goals to the strategy, identify and align strategic initiatives, link strategic objectives to long-term targets and annual budgets, align strategic and operational reviews, obtain feedback to learn about and improve strategy.

Further, by integrating the BSC into the management calendar, all management processes can be aligned with and stay focused on implementing the organization's long-term strategy.

Everyone familiar with organizations knows implicitly that myriad control systems influence day-to-day organizations. But there is little systematical understanding of why or how managers use these systems to accomplish their agendas. Executives use the many elements of their management system to orchestrate their agendas. By building the management system around the scorecard framework, they can achieve the ultimate payoff – translating strategy into action. [6]

Another approach to the implementation of the Balanced Scorecard is presented by Horváth & Partners. They introduce this model in five steps.

- To create organization presumptions for the implementation.
- To clarify strategies.
- To make the actual BSC model.
- To cascade the scorecard – roll-out process.
- To make the scorecard useful.

The first part of the process is creating organization presumptions for the implementation. Organization presumptions have two meanings. Firstly, it is necessary to define conceptual rules valid for all SBUs where the BSC is going to be implemented. It means to create perspectives. Secondly, it is important to determine an agreement on what capabilities are needed within the company to actually pursue the strategy, to ensure BSC process management, i.e. project organization, course, information, communication, standardization of used methods and clarifying of critical success factors.

Then, review and clarify strategies. This often requires some facilitated arguments and discussions, so that broad disagreements can be dealt with. Many organizations do not adequately resolve their strategic differences, so people work separately towards different visions. For example, one automaker's strategies for selling cars were split by group: the CEO believed in forming alliances with exotic makers, the sales executive leaned on rebates, and the product group, with limited budgets, soaped up existing economy cars. The

result was an ineffectual, expensive hodgepodge. When one leader with a clear vision worked with others to develop strategies, they were able to transform the culture and organizational structure to produce vehicles that eventually saved the company.

The next step is to create a model for the Balanced Scorecard for an organization unit. This organization unit can be a firm, SBU or an internal department. Based on the BSC structure, there are several steps that create the heart of BSC implementation. They are:

- Strategic goals concretizations.
- Strategic goals connection based on chain of causes and consequences.
- Choice of measures.
- Target value determination.
- Agreement on strategic actions.

The roll-out process is another part in BSC implementation. For larger organizations, a Balanced Scorecard is first installed at the top, where commitment is most vital to success. It is then cascaded throughout the organization, to focus departments' goals with the overall company goals. For single stores or small companies, this step might be unnecessary.

The final step is getting people to use the scorecard as a routine matter – making it part of the culture. This is where most management initiatives go wrong, leading to this sage advice: *If you want something to be a useful tool, make it the only initiative you try this quarter, give it your full attention and don't take any shortcuts. Otherwise, an initiative becomes a fad.*

Once created, the scorecard should become a part of a business' daily life; it should be embedded into company's operations as a standard decision-making tool. The scorecard makes the results of changes measurable, so stores or companies can learn what business models yield the best long-term results – in short, what works and what does not work. If it is updated regularly, the scorecard can give warnings of problems ahead, or signal opportunities. It can (and should) also be used as the focus of continuous improvement. [3]

## 2.5 Advantages of the model

The advantage with the model proposed was to provide management with one single agenda for all different initiatives and elements of the business to be managed. A second advantage was to avoid sub-optimization by managers (knowingly or not) trying to boost specific, often financial, measures (such as product output) while sacrificing other non-financial aspects (such as product quality).

In 1993 September-October issue of Harvard Business Review Kaplan and Norton further elaborated on their idea in *Putting the Balanced Scorecard to Work*. There was little new content in this follow-up article based on four large American companies usage of balanced scorecard, however, they stressed some important issues:

- The balanced scorecard is a top-down way to put the company's strategy and vision into action.
- It is forward-looking, addressing current and future success rather than the traditional, backward looking, financial measurement.
- Integrates internal and external measures, for example by having customer satisfaction measures.
- It provides focus on the few most important aspects of the business.

The article also described a generic process for implementing balanced scorecard, while stating that the content of each company's scorecard need always be based on that company's strategy and vision. Kaplan and Norton stress this direct link from overall vision and mission via strategy and critical success factors down to individual measures. [2]

Other benefits of the BSC:

- Improved cost, cycle time, productivity and mission effectiveness.
- Alignment among mission, vision, strategies, objectives, measures, targets, initiatives.

- Measures provide basis for prioritization of activities and allocation of resources.
- Identification of best practices and benchmarking.
- More efficient and less risky decision making.
- Visibility and accountability.
- Improved estimates based on prior data.[1]

## 2.6 Critique against the BSC

As we have seen, a vast number of companies are using balanced scorecard. There are many advocates for the model, and surprisingly few critics. The critics are mostly arguing for a change in Kaplan and Norton's balanced scorecard model, they almost never seek to reject it totally. Kaplan and Norton seem to have chosen not to answer the criticism, but rather continue their course of development of the framework. Generally, the criticism comes from three angles.

The first kind of criticism focuses on Kaplan and Norton's top-down strategy view based on Porter's positioning strategy school (Mintzberg, 1998). The criticism states that this is a static and outdated view of strategy formulation and that it does not encompass much of the last years of research.

The second type of criticism focuses on the lack of certain perspectives. The most common one is the, already discussed, need of many organizations to add an employee perspective. This reflects how many (often service oriented) organizations want to place their employees in the centre. Another perspective that is often proposed is society and environment, sometimes also called sustainability.

The third type of criticism describes causal relations between the perspectives, organization and learning → business processes → customer → financial, which is claimed to be ge-

neric by Kaplan and Norton (1996). Is this causality inherent in the model really holds? By using an analytical approach, the claimed causal chain does not hold. [2]

Other potential pitfalls:

- Requires sustained senior management commitment and resources.
- Do not assign planning activities to full-time planning staff unless you want “shelf-ware”.
- BSC will become the latest in a parade of faddish trends (if you let it).
- Analysis paralysis (e.g. development of metrics, complex data gathering).
- Lack of buy-in at lower levels in the organization (fear of being measured).
- Too many conflicting concepts / approaches.
- Too many change initiatives going on at once.
- Terminology stupefaction. [1]



## 2.7 Conclusion to the BSC

The BSC has emerged as a proven and effective tool in our quest to capture, describe, and translate intangible assets into real value for all of organization's stakeholders and, in the process, to allow organizations to implement their differentiation strategies successfully. It provides the management system for companies to invest in the long-term – in customers, in employees, in new product development, and in systems – rather than managing the bottom line to pump up short-term earnings.

Developed by R.Kaplan and D.Norton, this deceptively simple methodology translates an organization's strategy into performance objectives, measures, targets, and initiatives in four balanced perspectives. Organizations around the globe have embraced the BSC and reaped swift benefits from its commonsense principles. Such benefits include increased financial returns, greater employee alignment with overall goals, improved collaboration, and an unrelenting focus on strategy, to name just a few. To reap those rewards, however, an organization must possess the tools necessary to craft an effective Balanced Scorecard. [13]

The Balanced Scorecard requires a rigorous process and commitment, but its benefits are worth the costs. Even if you only adopt a few of the elements of the Balanced Scorecard, the research suggests you will have a competitive advantage. Best of all, much of the scorecard is simple common sense: getting agreement on strategy, strengths, and weaknesses; measuring essential business numbers; and focusing not just on financial outcomes, but also on the issues that will affect those outcomes in the future. The Balanced Scorecard, and all its pieces, leverages common sense into a substantial competitive advantage. [3]

## **II. PRACTICAL PART**

### 3 IRISA, CO-OPT.

Name:	Irisa, co-opt.
Official form:	cooperative society
Seat:	Jasenická 697, 755 01 Vsetín
Establishment:	1954
Annual turnover:	400 million of CZK
No. of employees:	455



*Fig.5 Irisa, co-opt. Vsetín [own]*

Irisa was established in 1954 as a Glassmaking folk society. It produced handmade glass Christmas decorations. A cooperative society for disabled people was found in 1969 when a new production program (plastic material processing by injection moulding and vacuum shaping) started. Changes in society and opening of foreign markets after 1989 lead Irisa to great changes in thermoplastic materials' processing. Nowadays, Irisa still fulfils its origin function: disabled people employment. Almost 60% of the employees are handicapped.

At present, Irisa has four production programs:

- Injection moulding program,
- Christmas glass decorations,
- Cardboard production, and
- Tool shop.

The injection moulding and assembly program is the most important one and is the biggest plant of Irisa Vsetín. Modern machines and established system of quality control and environmental management make possible producing technically difficult products and close co-operation with important Czech and foreign companies. Apart from automobile industry products, the company focuses also on home market (food containers, bottle crates, toys). More than 60% of the firm's turnover is created here.

Christmas glass decorations production has a very good position in association Ornex (2<sup>nd</sup> biggest producer in CZ) due to long tradition and modern trends and technologies. Irisa offers wide range of high-quality hand painted traditional or stylish glass decorations. The size and design of the decorations have a distinct, individual appearance characterized by coloured effects, creative expression or being finished off with other decorative material. 95% of the production is exported to the various countries of the world.

Cardboard production started to develop very soon after establishing the cooperative society to pack the Christmas glass decorations. Now Irisa offers different cardboard products according to the customer's needs. Tool shop is equipped with all necessary equipment for difficult-shape mould production. It includes CNC milling machine, electro-erosive machines etc. Process of the mould production is continuously checked and all produced moulds are tested.

Top customers are mentioned in the following table.

*Tab.2 Top customers in Irisa [own]*

<b>Christmas Glass Decorations</b>		<b>Cardboard production</b>	
<b>Ornex</b>	72%	<b>Greiner Packaging</b>	55%
Irisa Injection moulding program	12%	Ellux Glück	14%
Helpline	7%	Austin Detonator	5%
John Toole Designs	3%	Irisa Injection moulding program	5%
Other	6%	R K B	4%
		Other	17%
<b>Injection moulding program</b>		<b>Tool shop</b>	
<b>Sidler GmbH</b>	72%	<b>Müller Weingarten</b>	20%
Sidler Apag	14%	Irisa Injection moulding program	18%
Microstamp	4%	GDX Automotive	14%
Rivoret	3%	Ökologische Kautschuk	12%
Dairy Polná	2%	TgS	9%
Other	5%	Other	27%

On average, 58% of total amount of employees form disabled people. This share has been increasing over the past 5 years. Number of employees has been stagnating. There have been 465 employees on average.

Irisa employs disabled people due to cost advantageousness. Their physical and mental conditions are not so good to target the performance. Irisa provides handicapped people to join the work procedure. It mobilizes their skills and motivation for continuous improvements in process capabilities and quality. According to the § 35 of Income tax law, tax is decreased to a company up to 18,000 CZK / 1 handicapped employee per year. Irisa's EBT in 2006 was 8,873 thousands of CZK. Total tax abatement of all handicapped employees was approximately 5,200 thousands of CZK. Total tax savings were around 2,129 thousands of CZK. Irisa's EAT was the same as EBT, i.e. 8,873 thousands of CZK. Irisa does not plan to employ more handicapped people in future due to lack of suitable work for them but it keeps the contemporary rate.

*Tab.3 Employees in Irisa [own]*

	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
Employees (average)	484	456	450	456	477
Handicapped employee	271	250	250	272	288
%	55.99%	54.82%	55.55%	59.65%	60.38%

Irisa is also aware of the necessity of nature protection. The goal is a continuous improvement of company's environmental profile in the course of development of business activities. Protection of the nature can be an advantage on the market.

## 4 PEST ANALYSIS

A PEST analysis measures the external macro-environment that affects all firms. P.E.S.T. is an acronym for the Political, Economic, Social, and Technological factors of the external macro-environment. Such external factors usually are beyond the firm's control and sometimes present themselves as threats. For this reason, some say that "pest" is an appropriate term for these factors. However, changes in the external environment also create new opportunities and the letters sometimes are rearranged to construct the more optimistic term of STEP analysis.

Many macro-environmental factors are country-specific and a PEST analysis will need to be performed for all countries of interest. The following are examples of some of the factors that might be considered in a PEST analysis.

Key problems:

- **POLITICAL ANALYSIS:** Harmonization with EU standards, Trade regulations, Favored trading partners, EU funds.
- **ECONOMIC ANALYSIS:** Investments, Skill level of workforce, Economic growth rate, Infrastructure quality, Currency.
- **SOCIAL ANALYSIS:** Education, Support of handicapped employees, Attitudes (environmental consciousness).
- **TECHNOLOGICAL ANALYSIS:** New products, Research and development, Recent technological developments, Modernization, Automation.

Tab.4 PEST analysis in Irisa [own]

<b>POLITICAL ANALYSIS</b>	<b>TREND</b>	<b>CONSEQUENCES</b>	<b>URGENCY</b>
Harmonization with EU standards	increase	Cost increase for abidance by rules.	2
Trade regulations	increase	Government spending (specific spending priorities).	2
Favored trading partners	increase	Cost increase for public relations.	3
EU funds	increase	To improve drawing from EU funds to support a firm.	4
<b>ECONOMIC ANALYSIS</b>			
Investments	stagnation	To maintain with industry at high level.	3
Skill level of workforce	increase	Responsibility of quality. Growth of pers. expenses.	3
Economic growth rate, Currency	increase	To continue in growth.	2
Infrastructure quality	stagnation	Cost increase for better infrastructure.	3
<b>SOCIAL ANALYSIS</b>			
Education	stagnation	To support retraining schemes, language courses, ...	3
Support of handicapped employees	increase	Improvement of work environment, new machinery,...	
Attitudes (environment. consciousness)	decrease	To improve environmental consciousness.	3
<b>TECHNOLOGICAL A.</b>			
New products	increase	Great offer expansion for Czech market.	2
Research and development	stagnation	High research costs of new products.	2
Recent technological developments	stagnation	Costs on the newest technologies.	4
Modernization	increase	According to EU regulations.	5
Automation	increase	According to EU regulations.	5

#### 4.1 Political analysis

In 2004, the Czech Republic entered the European Union, which has significantly influenced and continues to influence all aspects of life for Czech companies. It will become an equal member of the EU after receiving all the advantages of membership. The main matter of concern is the free labor market, which is still not completely open to new EU member states. The Czech Republic plays an active part in defining and fulfilling the common foreign and security policies within the EU.

We can still expect increasing trends in political analysis although our legislative laws have been approaching towards EU laws.

Iriska should also increase a drawing from EU funds considering handicapped employees support.

## 4.2 Economic analysis

For several years now, the Czech Republic has been attracting the attention of investors the world over. The reasons for this are easy to see: a strong and growing economy, equitable and stable conditions, a qualified workforce and the low cost of doing business. For that reason, the Czech Republic is showing consistent yearly growth of capital investments and a growing number of multinational, economically mature companies coming here to do business. In all companies is accentuated cost decrease.

The Czech Republic has over the last two decades rapidly raised the country's standard of living, developed its service sector and concentrated on implementing important economic reforms. The country has also laid the groundwork for its continued development, particularly within the European economy. Currently, the Czech Republic ranks among the fastest-developing countries in the region and compensates for the delay that resulted from the historical development.

Rubber and plastic production in the Czech Republic has developed considerably over the past five years. Its position among processing industries has been constantly improving. The main specific aspect of this industry is the fact that, in contrast to most other industries and fields of production, it has hardly been affected by national economic reforms or by global economic cycle phases. Thanks to high investment activity, many reputable companies have brought their businesses here. The manufacture of rubber and plastic products belongs among the most dynamic branches of the manufacturing industry.

Czech taxes are on the EU average. However, the state takes a lot more from income than elsewhere in Europe and less from consumption. Direct taxes from income and profit contribute to the state budget with 68.5%.



### **4.3 Social analysis**

Protection of Czech nature is a necessary component of efforts leading to the preservation the unique character and variety of the Czech Republic. Protection is realized not only with protected areas and national parks but also with reduction of emissions and ecological power supplies. Iriša is aware of the need of environment protection and its goal is to ameliorate environmental profile of all division. Iriša renders this decision to be a market advantage and influence its surroundings.

Due to the fact that plastic industry has been growing rapidly during the past few years, it is necessary to educate employees via retraining schemes. Up today, there has been a great emphasis on quality. Now, employees will be educated and trained in marketing, human resources, information technologies, communication, as well.

Iriša also supports to employ handicapped people. Almost 60% from 450 employees are handicapped people. The firm is aware of work environment improvement and it gives a great amount of money to better it every year.

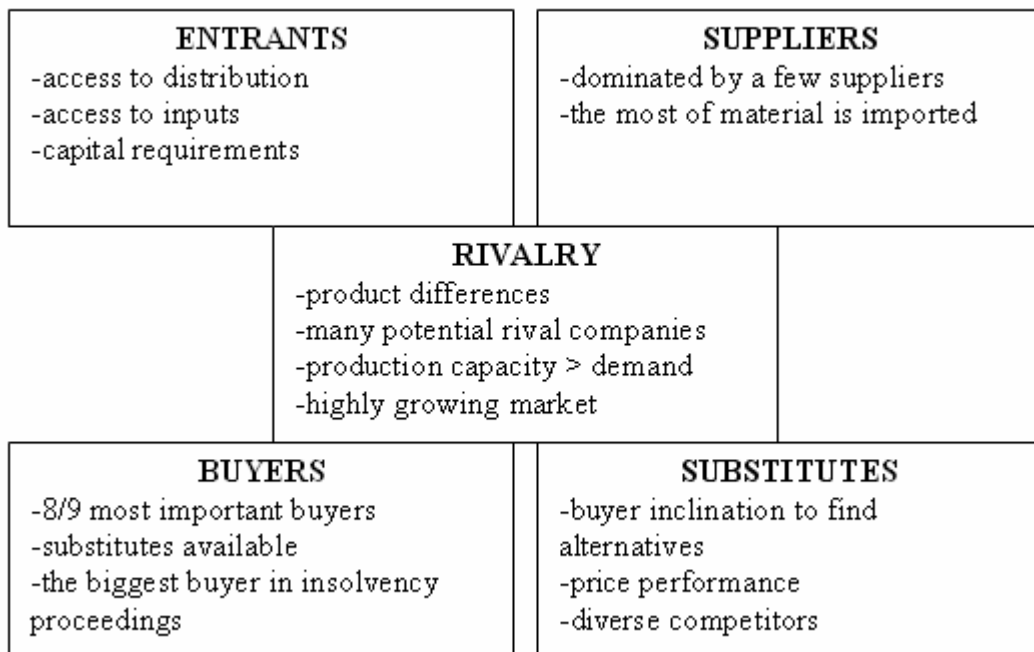
### **4.4 Technological analysis**

This factor influences business significantly. Iriša should buy new and better machinery to be competitive, mainly to injection moulding machines. New technologies purchases go together with the productivity increase and capacity expansion. Iriša should also invest into the new information technology. Employees do not exploit given information effectively. A modern server would simplify and speed up most of operations in Iriša.

## 5 PORTER'S FIVE FORCES MODEL

Understanding the dynamics of competitors within an industry is critical for several reasons. First, it can help to assess the potential opportunities for your venture, particularly important if you are entering this industry as a new player. It can also be a critical step to better differentiate you from others that offer similar products and services.

Michael Porter's Five Forces Model does not present a viable tool to assess an industry. It attempts to realistically assess potential levels of profitability, opportunity and risk based on five key factors within an industry. This model may be used as a tool to better develop a strategic advantage over competing firms within an industry in a competitive and healthy environment. It identifies five forces that determine the long-run profitability of a market or market segment. The five forces are: suppliers, buyers, entry / exit barriers, substitutes and rivalry. The following figure focuses on the 2<sup>nd</sup> division of Irisa (Injection moulding program) because it creates the biggest turnover and it is the main activity of the whole firm.



*Fig.6 Five Forces in Porter's Model in Irisa [own]*

## 5.1 Entrants

It is probable that Irisa will be threatened by new entrants to the market. Every company that possesses injection moulding machinery is a potential rival. But the real threats are already existing rival companies. The rivalry among firms in an industry is quite low – industry is considered to be disciplined.

For customers, it is not relatively easy to change the contemporary suppliers. If the real threat occurs, Irisa would choose from several competitive moves:

- Changing prices – lowering prices to gain a temporary advantage.
- Improving product differentiation – improving features, implementing innovations in the manufacturing process and in the product itself.
- Exploiting relationships with suppliers – set high quality standards and required to meet its demands for product specification and price.

## 5.2 Suppliers

There are 5 major suppliers for Irisa. They are usually big multinational companies with its subsidiaries in the Czech Republic. In case of changing one of the suppliers, there would not occur a serious problem. This force is also influenced by the crude oil price because the most of material is imported.

## 5.3 Rivalry

There are many potential rival companies. They usually prefer the low cost method. If they can set up the production in e.g. Turkey, Ukraine, and so on, they reach the market advantage. Other potential threats are:

- Product differentials – customers are aware of differences in products.
- Product capacity is higher than the actual demand.
- Highly growing market.

## 5.4 Buyers

Irisa has one major buyer – Sidler GmbH from Germany – that purchases a significant proportion of output, almost 80%. About 5% of output purchases its subsidiary in France – Sidler Apag GmbH. Other 5 to 6 buyers are important as well but they possess around 5% of the total purchase. Irisa should focus on buyers' structure. It is not adequate to have one major buyer (80%) because in case of its bankruptcy, Irisa should have dealt with serious problems.

Sidler has been in insolvency proceedings from 01/03/2007. About 800.000 EUR has not been paid to Irisa but it is expected that till the end of April, Irisa will have got about 30% of this total amount and till the end of the year 2007, Irisa will have received about 90% from the rest (approximately 495.000 EUR from 550.000 EUR). In the future, Irisa counts with Sidler GmbH as its main buyer but it depends on the new management (Flextronic) in Sidler after finishing of insolvency proceedings.

## 5.5 Substitutes

The treat of substitutes impacts price-based competition. New technologies contribute to competition though substitute products and services. A buyer inclination to find alternatives is another threat of substitutes. This force is not so big because substitutes can use new materials similar to plastic goods that have been produced so far. There is no great pressure on products due to this fact.

## 6 FINANCIAL ANALYSIS

For the financial analysis were provided financial reports (Balanced Sheet, Profit and Loss Statement, Cash-flow Statement) from 2002 to 2006.

Financial analysis can assist in looking deep within quarterly or annual financial statements to determine how well or poorly any enterprise or business has performed over the time periods in question and explains financial circumstances. The main goal is to shed light on the true financial condition of a company so realistic valuations can be determined for investment, lending, or merger and acquisition purposes.

Firstly, this financial analysis contains the income statement analysis (assets and liabilities and revenues and expenses analysis) with trends during the past few years. After that, it is completed by analyses of ratios (solvency / leverage, liquidity, profitability, activity, others and additional – such as Altman Z-Score and Index IN). The conclusion consists of total summary, financial position of the company and recommendations.

### 6.1 Income statement analysis

To an enterprising investor, income statement analysis reveals much more than company's earnings. It provides important insights into how effectively management is controlling expenses, the amount of interest income and expense, and the taxes paid. Investors can use income statement analysis to calculate financial ratios that will reveal the rate of return the business is earning on the shareholders' retained earnings and assets; they can also compare a company's profits to its competitors by examining various profit margins such as the gross profit margin, operating profit margin, and net profit margin.

The basic information about the structure of assets and liabilities and revenues and expenses in Irisa are mentioned in APPENDIX 2 and 3.

### 6.1.1 Assets and liabilities analysis

As we can see from the tables mentioned in APPENDIX 2, assets and liabilities in Iriša, co-opt. have risen by 6% on average during the past 5 years. The total increase of assets / liabilities is by 25% (2006/2002). Every year the increase was around 5 %, except the large growth in 2005 where the rake off was around 17% and the slight decrease in 2003 (3%).

The major part of assets consists of fixed assets, mainly of tangible fixed assets (around 57% on average). It is visible that every year there has been a slight decline by 4% p.a. It is interesting that in years 2002 – 2005 there was a predominance of fixed assets over current assets. In 2006 the situation turned. Indispensable is also inventory with its 20% share on total assets / liabilities every year. Current assets increase was caused by revenues and financial assets growth. The main part of total liabilities is constituted by equity (around 60% p.a.), mainly reserve funds (47% on average). These have been decreasing year by year. Bank loans and financial accommodations formed quite a small part of total liabilities in 2002, 2003 and 2004 (about 14% p.a.) but in 2005 and 2006 formed about 25% that is the average level of the same companies in industry. We can consider the company as a profitable one because there has been a slight growth of equity every year with the maintenance of registered capital. This has decreased a bit due to salaried shares of leaving members from Iriša.

In comparison with a branch of industry, the situation is quite similar. The last year 2006 is formed only by three quarters because the analyses have not been available till the thesis handover deadline. We can see the great increase of total assets and liabilities (it almost doubled from 2002 to 2006). The major part of total assets is formed by fixed assets (about 53% on average). The major part of total liabilities consists of equity (around 56% per year). An important part is formed by bank loans and financial accommodations (around 17% of total liabilities).

### 6.1.2 Revenues and expenses analysis

Revenues (see APPENDIX 3) in Irisa rose from 182,291 thousands CZK in 2002 to 372,978 thousands CZK in 2006, i.e.104%. On the other hand, expenses also increased from 191,906 thousands CZK in 2002 to 364,105 thousands CZK in 2006, i.e.89%. The biggest growth we can see in 2005, approximately 89% by revenues and 88% by expenses. This increase was formed mainly by the growth of production and production consumption. The major part of total revenues consists of production, especially of revenues from own products and services (around 87% p.a.) The main part of expenses forms production consumption (about 50% p.a.) and personnel expenses (about 26% every year). The positive news is that proportion of personnel expenses was reduced dramatically in 2005 (from 48% in 2004 to 26% in 2005). But it still does not reach the percentage from industry where the personnel expenses share are running at 10%.

The stature of revenues and liabilities in industry is a little bit different from Irisa. Irisa has had faster growth. Revenues have risen from 90,319 millions CZK in 2002 to 117,316 millions CZK in 2006, i.e.30%. Expenses have risen as well, from 85,190 millions in 2002 to 110,134, i.e.29%. In comparison with Irisa where the increase of revenues was nearly 105% and of expenses 90%, the increase in industry has not been so immense. The biggest part of revenues is formed by production (about 80% p.a.) and the biggest part of expenses consists of production consumption (around 66%).

*Tab.5 Profit / loss analysis in Irisa [own]*

<i>Irisa</i>					
(in thousands of CZK)	2002	2003	2004	2005	2006
Operating profit / loss	-4,166	6,726	7,425	10,193	14,341
Profit / loss from fin. operations	-5,859	-4,525	-4,226	-5,097	-5,468
<b>Operating profit/loss ordin.activit</b>	<b>-10,025</b>	<b>2,201</b>	<b>3,199</b>	<b>5,096</b>	<b>8,873</b>
Operating profit/loss extraordin.act.	410	0	0	0	0
<b>Profit/loss of current acc.period</b>	<b>-9,615</b>	<b>2,201</b>	<b>3,199</b>	<b>5,096</b>	<b>8,873</b>
Profit / loss before tax	-9,615	2,201	3,199	5,096	8,873

*Tab.6 Profit / loss analysis in industry [own]*

<i>Industry</i>					*I.-III.Q
(in millions of CZK)	2002	2003	2004	2005	2006*
Profit/loss before tax	5,129	7,618	8,721	7,338	7,182
Tax	1,742	2,434	2,545	2,025	1,880
<b>Profit/loss of current acc.period</b>	<b>3,387</b>	<b>5,184</b>	<b>6,176</b>	<b>5,313</b>	<b>5,302</b>

From the monitored years, Irisa was in loss only in 2002 where the loss reached minus 9,615 thousands CZK. From 2003 we can see the increase every year (by 60% every year). Profit was achieved mainly due to the increase of production. Irisa employs handicapped people so that is why it does not pay any taxes and profit / loss before tax is the same like profit / loss of current accounting period.

Companies in industry have reached profit in every monitored year so far. The increase has been by 14% every year on average.

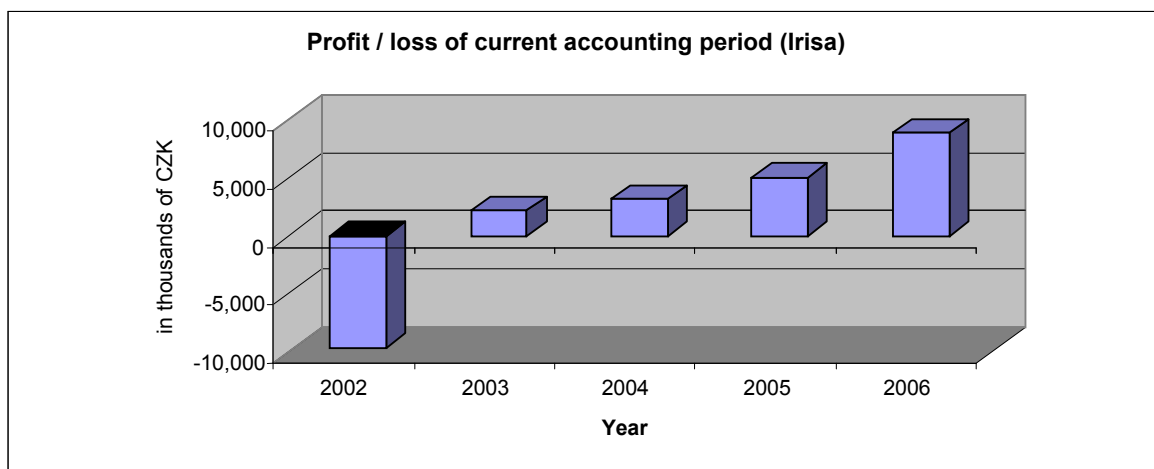


Fig.7 Profit / loss of current accounting period in Irisa [own]

## 6.2 Cash flow analysis

Cash flow analysis studies cycles of business cash inflows and outflows, with the purpose of maintaining an adequate cash flow for business and to provide the basis for cash flow management.

Tab.7 Cash flow analysis [own]

<i>Irisa</i>					
(in thousands of CZK)	2002	2003	2004	2005	2006
Balance of cash at the beginning of report. period	187	358	1,973	2,507	1,511
Net cash flow from running activities	3,732	5,081	7,233	6,334	16,029
Net cash flow from investing activities	-3,348	-3,576	-6,796	-6,944	-9,691
Net cash flow from financing activities	-213	110	97	-386	490
<b>Net increase / decrease in cash on hand</b>	<b>171</b>	<b>1,615</b>	<b>534</b>	<b>-996</b>	<b>6,828</b>
Balance of cash at the end of reporting period	358	1,973	2,507	1,511	8,339



As we can see from the figure above, cash flow is divided into three parts – cash flow from running activities, cash flow from investing activities and cash flow from financing activities. CF from running activities creates inflows (positive outcome) every year and it has been increasing since 2002 and it is positive news. It means that revenues from running activities exceeded expenses from these activities. CF from investing activities creates outflows, i.e. Irisa puts a lot of money into investment. This trend has been rising progressively. Cash flow from financing activities is negative in 2002 and 2005. This means that Irisa pays back the credit.

### 6.3 Solvency / Leverage ratios

A company is said to be highly leveraged if it uses more debt than equity, including stock and retained earnings. Debt has a lower cost because creditors take less risk; they know they will get their interest and principal. However, debt can be risky to the firm because if enough profit is not made to cover the interest and principal payments, bankruptcy can occur.

Tab.8 Leverage ratios [own]

<i>Irisa</i>					
	2002	2003	2004	2005	2006
<b>Debt-to-Assets Ratio</b>	34.69%	31.87%	34.40%	43.01%	43.29%
<b>Debt-to-Equity Ratio</b>	0.53	0.47	0.52	0.75	0.76
<b>Times-Covered Ratio</b>	-3.06	0.90	1.81	1.91	3.74
<b>Long-term Total Debt/(Equity +L.t.t.d.)</b>	26.55%	19.65%	16.76%	34.61%	32.86%
<b>Long-term Total Debt / Equity</b>	36.15%	24.46%	20.14%	52.92%	48.95%
<b>Equity / Fixed Assets</b>	0.89	0.98	1.07	1.13	1.19
<b>(Equity+ LT Total Debt)/Fixed As.</b>	1.21	1.22	1.28	1.72	1.77

<i>Industry</i>					*I.-III.Q
	2002	2003	2004	2005	2006
<b>Debt-to-Assets Ratio</b>	40.66%	38.91%	41.61%	42.98%	43.52%
<b>Debt-to-Equity Ratio</b>	0.72	0.66	0.77	0.76	0.78
<b>Times-Covered Ratio</b>	7.66	14.71	11.08	13.49	11.91
<b>Long-term Total Debt/(Equity +L.t.t.d.)</b>	22.49%	21.50%	29.25%	30.17%	32.22%
<b>Long-term Total Debt / Equity</b>	29.02%	27.39%	41.34%	43.20%	47.53%
<b>Equity / Fixed Assets</b>	1.12	1.26	1.19	0.92	0.95
<b>(Equity+ LT Total Debt)/Fixed As.</b>	1.44	1.61	1.69	1.32	1.40

Irisa satisfies the condition that Debt-to-Assets Ratio should range from 30-60%. In all years, Debt-to-Assets Ratio ranges between 31%-44%. During the same period in industry, Debt-to-Assets Ratio ranges in the same recommended zone, i.e. from 38% to 44%. Irisa matches the requirements especially in 2005 and 2006. Debt-to-Assets Ratio is the most direct measure of the extent to which borrowed funds been used to finance company's investments. It should be from 30-60%. Other ratio – Debt-to-Equity Ratio – should not reach over 1. Irisa satisfies also this second condition. Values in industry achieve 0.75 on average every year. Irisa utilizes quite the same amount of long-term other equity like other companies in industry. Debt-to-Equity Ratio indicates the balance between debt and equity in a company's capital structure. This is perhaps the most widely used measure of a company's leverage.

An important condition for a long-term financial stability is the covering of fixed assets by equity. The value should be above 1. Irisa fulfills this condition in 2004, 2005 and 2006. Companies in industry reach the requirements as well, with a slight decrease in 2005. The value of 2006 has not been still final because it is only a three-quarters value. We can predict that the value in 2006 will be above 1 again.

Time-Covered Ratio measures the extent to which a company's gross profit covers its annual interest payments. If the times-covered ratio declines to less than 1, then the company is unable to meet its interest costs. Time-Covered Ratio should range between 3 and 6. The only year when this condition was fulfilled in Irisa was in 2006. Industry, on the other hand, reached the value from 7 to 15. In case of value = 1, the financial health of the company would be in danger. In case of value below 1, the company would not even earn enough to pay interest expenses. We can say that Irisa had problems with creation of high profits to cover potential interests from bank loans in the past. Year 2006 changes the situation into a positive one. Figures are enclosed in APPENDIX 4.

## 6.4 Liquidity ratios

Company's liquidity is a measure of its ability to meet short-term obligations. An asset is deemed liquid if it can be readily converted into cash. Liquid assets are current assets such as cash, marketable securities, accounts receivable, and so on. Two commonly used liquidity ratios are:

Tab.9 Liquidity ratios [own]

<i>Irisa</i>					
	2002	2003	2004	2005	2006
<b>Current ratio</b>	1.06	1.02	1.13	1.36	1.34
<b>Quick ratio</b>	0.41	0.51	0.33	0.67	0.85
<b>Cash ratio</b>	0.01	0.04	0.05	0.02	0.11
<b>Working capital / Current Assets</b>	5.34%	2.37%	11.59%	26.39%	25.44%
<b>Working capital / Assets</b>	1.40%	0.71%	4.33%	12.81%	13.16%

<i>Industry</i>					*I.-III.Q
	2002	2003	2004	2005	2006
<b>Current ratio</b>	1.61	1.75	2.17	1.50	1.71
<b>Quick ratio</b>	1.14	1.28	1.65	1.03	1.17
<b>Cash ratio</b>	0.18	0.16	0.22	0.24	0.17
<b>Working capital / Current Assets</b>	38.00%	42.78%	53.97%	33.46%	41.37%
<b>Working capital / Assets</b>	17.05%	22.19%	28.60%	12.66%	16.53%

Liquidity ratios reach very low values in Irisa. Current ratio measures the extent to which the claims of short-term creditors are covered by assets that can be quickly converted into cash. Most companies should have a ratio of at least 1.5, because failure to meet these commitments can lead to bankruptcy. Industry fulfills this condition but Irisa approaches to this requirement as well. Current ratio in Irisa was the highest in 2005 (1.36) and in industry in 2004 (2.17).

Quick ratio measures a company's ability to pay off the claims of short-term creditors without relying on the sale of its inventories. This is a valuable measure since in practice the sale of inventories is often difficult. Quick ratio should reach at least 1. Industry reached this values without difficulties again – it ranged from 1.03 (2005) to 1.65 (2004). Irisa's best outcome was in 2006 (0.85). We can expect the slight increase in the following years.

Cash ratio indicates a conservative view of liquidity such as when a company has pledged its receivables and its inventory, or the analyst suspect severe liquidity problems with inventory and receivables. It should be from 0.2 to 0.5. In Irisa the values are still very low but we can see the rapid growth (especially in 2005 and 2006) and we can predict to reach cash ratio condition in 2 or 3 years.

Working capital compares current assets to current liabilities, and serves as the liquid reserve available to satisfy contingencies and uncertainties. A high working capital balance is mandated if the entity is unable to borrow on short notice. The ratio (working capital / current assets) indicates the short-term solvency of a business and in determining if a firm can pay its current liabilities when due. Working capital on current assets constitutes around 20% per year in Irisa and about 40% in industry and working capital on assets reached 13% last year that is quite near to values in industry (2006 – 16%). Figures are enclosed in APPENDIX 5.

## 6.5 Profitability ratios

Profit ratios measure the efficiency with which the company uses its resources. The more efficient the company, the greater is its profitability. It is useful to compare a company's profitability against that of its major competitors in its industry. Such a comparison tells whether the company is operating more or less efficiently than its rivals. In addition, the change in a company's profit ratios over time tells whether its performance is improving or declining. A number of different profit ratios can be used, and each of them measures a different aspect of a company's performance.

*Tab.10 Profitability ratios [own]*

<i>Irisa</i>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
<b>Return on Sales</b>	-5.82%	1.33%	1.95%	1.63%	2.68%
<b>Return on Revenues</b>	-5.27%	1.19%	1.73%	1.47%	2.38%
<b>Return on Assets</b>	-6.05%	1.43%	1.99%	2.70%	4.45%
<b>Return on Equity</b>	-9.27%	2.10%	3.03%	4.73%	7.85%
<b>Return on Investment</b>	-8.05%	2.02%	2.97%	4.20%	7.25%

Industry	*I.-III.Q				
	2002	2003	2004	2005	2006
<b>Return on Sales</b>	4.78%	6.68%	5.90%	4.69%	5.54%
<b>Return on Revenues</b>	3.75%	5.34%	4.88%	3.79%	4.52%
<b>Return on Assets</b>	9.48%	12.64%	11.41%	8.20%	7.00%
<b>Return on Equity</b>	11.04%	14.60%	14.89%	10.55%	9.19%
<b>Return on Investment</b>	8.68%	12.24%	10.69%	7.93%	6.71%

As we can see from the tables above, Irisa has been approaching to industry values in all ratios and it has been profitable from 2003. Irisa reached the satisfactory values mainly in 2005 and 2006. Return on Sales ranges from -6% to 3% on average in Irisa. In industry the average value was about 5%, only in 2003 the value rose to 6.68%. The only negative year was 2002 in Irisa and it was caused by negative net income. The highest increase in all ratios can be seen in 2006 in Irisa and in 2003 in industry. From 2003 Irisa has created profit. Return on Assets measures the company's ability to utilize its assets to create profits. In Irisa it reached 2% on average. In industry it reached 9% on average. Return on Equity measures the income earned on the shareholder's investment in the business. The higher the ratio, the better. In Irisa it reached 7.85% in 2006 (the highest value). The highest value in industry was in 2004 when this ratio reached almost 15%. Figures are enclosed in APPENDIX 6.

## 6.6 Equity multiplier

Equity multiplier measures financial leverage. It is calculated as total assets divided by common stockholder's equity.

*Tab.11 Equity multiplier [own]*

<i>Irisa</i>	2002	2003	2004	2005	2006
EBT/EBIT	X	0.47	0.64	0.66	0.79
Assets / Equity	1.53	1.47	1.52	1.75	1.76
<b>Multiplier</b>	<b>X</b>	<b>0.69</b>	<b>0.97</b>	<b>1.16</b>	<b>1.39</b>

Equity multiplier is positive in all monitored years. It is possible to increase other sources because it would have a positive influence on ROE (return on equity). In 2002 EBT and

EBIT are negative, that is why the company should not have increased other debts. Total assets are on average 1.5 times higher than equity. The higher debt we have, the higher the number is. EBT / EBIT is on average 0.80. This number should be always under 1. If a company reaches number 1, it does not pay any interests.

## 6.7 Activity ratios

Activity ratios indicate how effectively a company is managing its assets.

Tab.12 Activity ratios [own]

<i>Irisa</i>					
	2002	2003	2004	2005	2006
<b>Assets Turnover</b>	1.04	1.07	1.02	1.66	1.66
<b>Receivable Turnover</b>	10.54	7.88	10.99	7.16	5.76
<b>Inventory Turnover</b>	6.46	7.11	3.84	6.74	8.84
<b>Payables Turnover</b>	5.37	6.37	4.52	9.50	8.77
<b>Inventory Turnover in Days</b>	56	51	94	53	41
<b>Receivable Turnover in Days</b>	34	46	33	50	62
<b>Payables Turnover in Days</b>	67	57	80	38	41

<i>Industry</i>					*I.-III.Q
	2002	2003	2004	2005	2006
<b>Assets Turnover</b>	1.31	1.29	1.37	1.27	0.93
<b>Receivable Turnover</b>	4.93	3.86	3.91	6.40	3.99
<b>Inventory Turnover</b>	9.86	9.3	10.77	10.52	7.34
<b>Payables Turnover</b>	5.48	5.10	6.57	5.97	4.60
<b>Inventory Turnover in Days</b>	37	39	33	34	49
<b>Receivable Turnover in Days</b>	73	93	92	56	90
<b>Payables Turnover in Days</b>	66	71	55	60	78

Assets turnover should reach value at least 1. In Irisa it increased from 1.04 in 2002 to 1.66 in 2006 (i.e.60%) in Irisa and it decreased from 1.31 in 2002 to 0.93 in 2006 (i.e.29%) in industry, but the value in 2006 in industry is only for 3 quarters so we can expect the stagnation in assets turnover in industry. Other big growth can we see in payables turnover. It increased from 5.37 (2002) to 8.77 (2006) in Irisa, i.e.63%. The worst year was 2004 where the value reached only 4.52. Receivable turnover decreased from 10.54 in 2002 to 5.76 in 2006 and inventory turnover increase from 6.46 in 2002 to 8.84 in 2006.

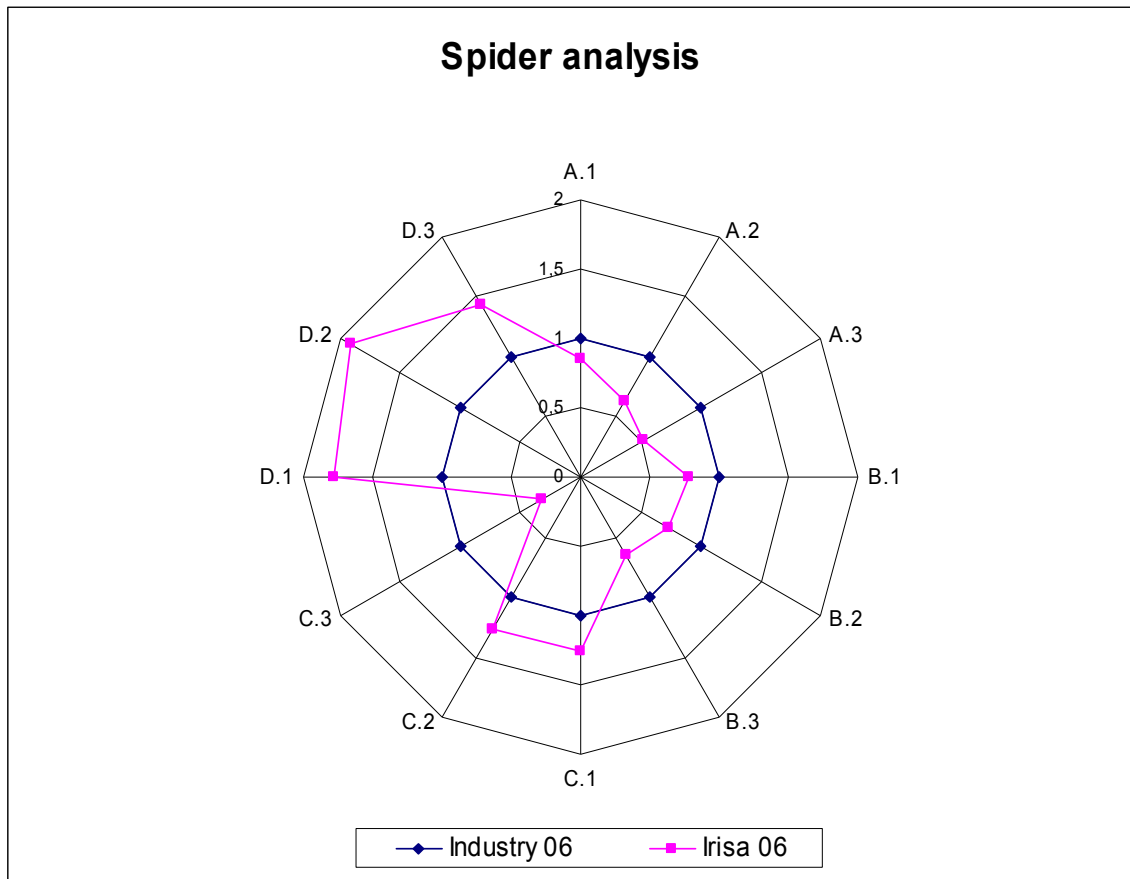
The time in turnovers in days is usually 2 months. Inventory turnover in days decreased significantly from 56 days in 2002 to 41 days in 2006 in Irisa and approached to values in industry where the average inventory turnover has been 38 days. Receivable turnover in days increased up to 82% from 2002 to 2006 and payables turnover in days decreased up to 39%. It is good to mention that Irisa received its receivables in a shorter period than it paid its payables in 2002-2004. This period was on average 1.5 times shorter. In 2005 and 2006 it changed and we cannot consider it as very good news. Irisa paid its payables in a shorter period than received the receivables. It means that Irisa paid its payables 1.4 times faster than received its receivables. Figures are enclosed in APPENDIX 7.

## 6.8 Spider analysis

Spider chart analysis compares a group of 4 basic ratios (leverage, liquidity, profitability and activity). The chart contains ratios both in the company and industry in 2006. An industry line represents 100% and we use it as the basis for Irisa line. It can be said that the further an Irisa line from the centre of the chart is, the better result it reaches.

*Tab.13 Spider analysis [own]*

		<b>Industry 06</b>	<b>Irisa 06</b>
<b>Profitability</b>	A.1 Return on Equity	0.09	0.08
	A.2 Return on Assets	0.07	0.04
	A.3 Return on Revenues	0.05	0.02
<b>Liquidity</b>	B.1 Current Ratio	1.71	1.34
	B.2 Quick Ratio	1.17	0.85
	B.3 Cash Ratio	0.17	0.11
<b>Leverage</b>	C.1 Equity / Fixed assets	0.95	1.19
	C.2(Equity+ LT total debt)/Fixed A.	1.40	1.77
	C.3 Times-Covered Ratio	11.91	3.74
<b>Activity</b>	D.1 Assets Turnover	0.93	1.66
	D.2 Payables Turnover	4.60	8.77
	D.3 Receivable Turnover	3.99	5.76



*Fig.8 Spider analysis [own]*

Irisa reaches better results mainly in activity and leverage ratios. The best valuations can we see in C.1, C.2 and D.1, D.2 and D.3 (Assets Turnover, Payables Turnover and Receivable Turnover). It is evident that Irisa prefers long-term financial stability to productivity. Irisa utilizes its indebtedness to influence positively its ROE (return on equity). On the other hand, the worst results can we see in C.3 (Times-Cover Ratios) that reaches only 31% from 100% in industry. Ratios of profitability have been approaching to industry results in the past few years so we can expect further increase in the next years. Considering activity ratios, Irisa exploits its property more effectively than companies in industry. Industry values are for 3 quarters of 2006 and it can be expected that the value is going to rise.



## 6.9 Other ratios

Tab.14 Other ratios [own]

<i>Irisa</i>					
	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
<b>Value Added / Number of employees</b>	160.8	181.0	182.9	187.0	207.3
<b>Sales / Number of employees</b>	341.4	362.0	364.0	686.9	693.0
<b>Personnel expenses/No. employees</b>	170.9	173.8	180.9	193.1	195.5
<b>Production consumption/Revenues</b>	45.28%	43.83%	39.91%	62.48%	60.21%
<b>Personnel expenses / Revenues</b>	45.38%	42.74%	43.98%	25.33%	25.00%
<b>Depreciations / Revenues</b>	7.98%	6.54%	6.49%	3.25%	2.87%
<b>Interest expenses / Revenues</b>	1.72%	1.32%	0.95%	0.77%	0.64%
<b>Value Added / Revenues</b>	42.70%	44.49%	44.45%	24.53%	26.52%
<b>Personnel expenses/Value Added</b>	106.28%	96.05%	98.92%	103.26%	94.27%
<b>Depreciations / Value Added</b>	18.68%	14.71%	14.59%	13.24%	10.84%
<b>Interest expenses / Value Added</b>	4.04%	2.97%	2.14%	3.14%	2.40%
<b>EBIT / Value Added</b>	-8.31%	5.64%	6.03%	9.11%	11.37%

<i>Industry</i>					
	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
<b>Production consumption/Revenues</b>	60.07%	61.28%	61.44%	62.94%	63.89%
<b>Personnel expenses / Revenues</b>	10.69%	10.60%	9.58%	9.90%	9.80%
<b>Depreciations/Revenues</b>	3.93%	3.90%	3.35%	2.70%	3.36%
<b>Interest expenses / Revenues</b>	0.74%	0.53%	0.62%	0.39%	0.51%
<b>Value Added/Revenues</b>	21.53%	22.67%	21.33%	21.08%	20.40%
<b>Personnel expenses/Value Added</b>	49.63%	46.77%	44.92%	46.94%	48.07%
<b>Depreciations / Value Added</b>	18.24%	17.19%	15.70%	12.80%	16.46%
<b>Interest expenses / Value Added</b>	3.44%	2.36%	2.92%	1.84%	2.52%
<b>EBIT / Value Added</b>	29.82%	37.00%	35.23%	26.63%	32.53%

Generally, value added in Irisa has been growing from 2002. The value in 2002 reached 77,831 thousands of CZK and in 2006 98,898 thousands of CZK. It was a 27% growth. In industry the value in 2002 was 19,444 millions of CZK and in 2006 23,930 millions of CZK. It was a 23% growth.

Value Added / Number of employees ratio has been increasing annually as well as Sales / Number of employees. Personnel expenses / Number of employees have been growing as well but due to the increase in other two ratios, we cannot evaluate this as a negative fact. We can say that employee productivity has been growing continuously. Production consumption on Revenues reached 50% on average every year. In industry this ratio reached around 60%. The biggest difference can we see in Personnel expenses / Revenues ratio. In Irisa it reached 36% on average every year and in industry only 10%. The structure of value

added is quite similar to industry except Personnel expenses / Value Added ratio and EBIT / Value Added ratio. Irisa has almost a double-higher share of personnel expenses than industry. Depreciation / VA is similar to industry (around 15% annually). Interest expenses / VA ratio is quite balanced (around 2.5%). The last ratio EBIT / VA is very low in Irisa (4.7% every year). The first year 2002 was this ratio even negative due to the negative Earnings before interests and taxes. In industry are the values around 32%.

The last five ratios should form 100%. Irisa reaches higher value due to other items that have an influence on value added.

## 6.10 Additional ratios

The most known additional ratios are Altman Z-Score and Index IN01. They measure financial health of the company and a possibility of failure in future.

### 1. Altman Z-Score

The Z-Score model is a quantitative model developed in 1968 by Edward Altman to predict bankruptcy (financial distress) of a business, using a blend of the traditional financial ratios and a statistical method known as multiple discriminant analysis.

The Z-Score is known to be about 90% accurate in forecasting business failure one year into the future and about 80% accurate in forecasting it two years into the future.

<u>Z-Score (values)</u>	<u>Probability of Failure</u>
Less than 1.8	Very high
Greater than 1.81 but less than 2.99	Not sure
Greater than 3.0	Unlikely

*Tab.15 Altman Z-Score [own]*

<i>Irisa</i>	2002	2003	2004	2005	2006
<b>0,717 * Working Capital / Total Assets</b>	0.010	0.007	0.029	0.093	0.093
<b>0,847 * Net profit / Total Assets</b>	-0.051	0.008	0.017	0.025	0.034
<b>3,107 * EBIT / Total Assets</b>	-0.127	0.094	0.096	0.128	0.175
<b>0,420 * Equity / Other sources</b>	0.791	0.898	0.801	0.557	0.550
<b>0,998 * Revenues / Total Assets</b>	1.145	1.203	1.149	1.836	1.868
<b>Z-Score</b>	<b>1.768</b>	<b>2.210</b>	<b>2.091</b>	<b>2.639</b>	<b>2.720</b>
<b>Z-Score for the Czech Republic</b>	<b>1.733</b>	<b>2.137</b>	<b>2.060</b>	<b>2.635</b>	<b>2.701</b>

It is visible that Irisa had great financial problems in 2002 but fortunately since 2003 it has been improving. It can be expected that in 2 or 3 years Irisa will have reached values higher than 3.0 and the probability of failure will be very low. Irisa should increase its liquidity to advance ratios connected with working capital.

## 2. Index IN01

Index IN01 (credibility index) was created by Inka Neumaierová and Ivan Neumaier on Czech companies conditions. It is based on mathematical and statistical models of rating and experience of financial health of companies.

### Index IN01 (values)

### Creation of value

Less than 0.75

Very high probability of bankruptcy

Greater than 0.75 but less than 1.77

Grey zone

Greater than 1.77

Creation of value

Tab.16 Index IN01 [own]

<i>Irisa</i>	2002	2003	2004	2005	2006
<b>0,13 * Total Assets / Other sources</b>	0.375	0.408	0.378	0.302	0.300
<b>0,04 * EBIT / Interest expenses</b>	-0.082	0.076	0.113	0.116	0.190
<b>3,92 * EBIT / Total Assets</b>	-0.160	0.118	0.121	0.161	0.221
<b>0,21 * Revenues / Total Assets</b>	0.241	0.253	0.242	0.386	0.393
<b>0,09 * Current A/(ST payables+SH b.loans)</b>	0.095	0.092	0.102	0.122	0.121
<b>Index IN01</b>	<b>0.469</b>	<b>0.947</b>	<b>0.955</b>	<b>1.088</b>	<b>1.225</b>

Index IN01 follows the progression in Z-Score. In 2002 there was a big possibility of bankruptcy in Irisa but since 2003 the values have improved. Now the company occurs in a grey zone but we can expect the further growth in the following years. The biggest problems are caused by low liquidity.

## 6.11 Economic value added

Economic Value Added (EVA) is the financial measure that comes closer than any other to capturing the true economic profit of an enterprise. EVA also is the performance measure most directly linked to the creation of shareholder wealth over time. It can be calculated as:

$$\text{EVA} = \text{Net Income} - r_e * \text{Equity} \quad (1)$$

$r_e$ ...cost of equity

Cost of equity is going to be calculated according to the most used method in the Czech Republic – Build up model that is used in Ministry of industry. For further information see [www.mpo.cz](http://www.mpo.cz).

*Tab.17 Economic Value Added [own]*

	2002	2003	2004	2005	2006
Risk-free rate	5.10%	4.10%	4.80%	3.53%	3.78%
Share - liquidity risk	4.90%	4.90%	4.92%	4.81%	4.79%
Business risk	10.00%	4.34%	3.17%	0.12%	0.00%
Financial stability risk	8.13%	9.47%	7.90%	0.78%	2.72%
<b>WACC</b>	<b>28.13%</b>	<b>22.81%</b>	<b>20.79%</b>	<b>9.24%</b>	<b>11.29%</b>
<b>Cost of equity</b>	<b>32.63%</b>	<b>26.23%</b>	<b>23.35%</b>	<b>11.55%</b>	<b>14.58%</b>
<i>(in thousands of CZK)</i>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
Net income	-9,615	2,201	3,199	5,096	8,873
Equity	103,731	104,884	105,510	107,714	113,014
<b>EVA</b>	<b>-43,466</b>	<b>-25,314</b>	<b>-21,442</b>	<b>-7,342</b>	<b>-7,609</b>

As we can see from the table above, cost of equity has been decreasing since 2002. The highest cost of equity, as well as WACC (weighted average cost of capital), were in 2002. The value in risk-free rate in 2006 (3.78%) is considered only for three quarters of 2006. Cost of equity is influenced mainly by taxes (that have been decreasing since 2002) and interest expenses (that were 3,144,000 CZK in 2002 and 2,372,000 CZK in 2006). Cost of equity must be always higher or equal to WACC.

The final Economic Value Added was negative from 2002 to 2006. It means that Irisa did not create value for shareholders. The positive news is that the negative value has been decreasing and we can expect the positive EVA in the near future. One of the major problems was the high business risk in 2002 but it decreased significantly to 0% in 2006. Financial stability risk has decreased as well. In 2002 it was 8.13% and in 2006 only 2.72%. This risk contains liquidity ratios (Current ratios) both in Irisa and industry. Share-liquidity risk was on average around 4.864%. This risk is influenced by sum of equity and bank loans which has been around 140,000 thousands of CZK p.a.

According to this Build-up model (Economic model), EVA was not counted from modified accounting data. These could distort the real EVA that could be higher than results achieved above. Appraisal based only on accounting data can be misrepresenting.

## 6.12 Du-Pont Decomposition Model

Du-Pont Model is an expression which breaks ROE (Return on Equity) into three parts:

- Operating efficiency (measured by profit margin),
- Asset use efficiency (measured by asset turnover),
- Financial leverage (measured by equity multiplier).

This analysis allows the analyst to understand where superior (or inferior) return is derived from by comparison with companies in similar industries.

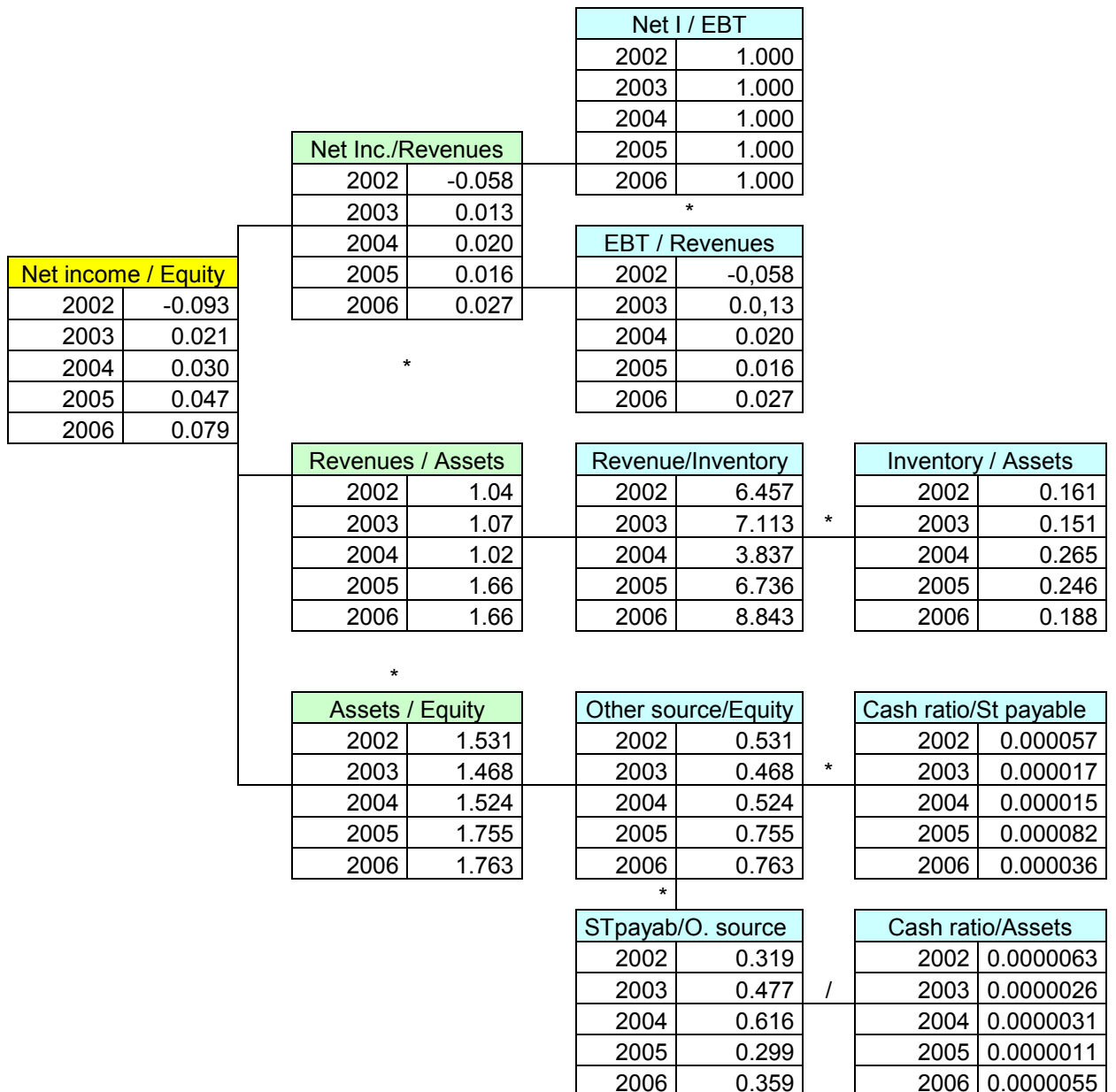


Fig.9 Du-Pont model [own]

ROE (Return on Equity) was influenced by profit margin, assets turnover and equity multiplier. The biggest effect had all ratios. We can see a big increase in profit margin. This increase was caused by the decline of depreciations, personnel expenses, interest expenses and other expenses. The slow growth can we also see in assets turnover. It was positively influenced by inventory turnover. Equity multiplier measures financial leverage. The highest values can we see in the last measured year 2006. The growth can we see in other sources / equity. The growth was 43%. Profit margin (except 2002) was more or less the same. As we can see from the model, Irisa belongs to high leverage industries. These sectors rely on high leverage to generate acceptable ROE.

### 6.13 Conclusion to financial analysis

Financial analysis showed the strengths and weaknesses of Irisa, co-opt. It contains several partial analyses that give the compact view on the financial situation of the company.

In four from five monitored year, Irisa reached profit. Only in 2002 it was in loss. Every year we can see a slight increase by 60% on average. Profit was reached due to the production growth. This fact influenced the profitability ratios a lot. It is visible that the profitability of equity or other sources is higher than interest revenues provided by bank. 60% of employees in Irisa are handicapped people. It does not pay any taxes due to financial support and grants from state. Cash flow analysis showed the big inflows into investment activities.

Concerning solvency / leverage ratios, Irisa reached adequate indebtedness that was firstly at 10% lower than in industry (from 2002 to 2004) but then (in 2005 and 2006) it accomplished industry values. This improvement positively influenced Times-Covered Ratio (mainly in 2006). Irisa does not have problems in profit creation for potential bank loans interests covering.

The biggest problem can be seen in liquidity ratios that measure firm's ability to meet short-term obligations. All ratios reached very low values both in Irisa and industry during the monitored years. We must positively appreciate that the low values have been improving during the monitored years (They all have been approaching to the recommended values of Commerce Department). Nevertheless, low liquidity influenced low values of working capital (mainly in 2002-2004) and ratios connected with working capital and it can endanger financial stability of the company. Irisa should beware of cash flows by way of short-term payment schedules.

The profitability analysis showed satisfactory level in all profitability ratios in Irisa during the past 5 years. The best values were reached mainly in 2005 and 2006. The only low values can we see in Return to Equity. Equity multiplier is related to ROE (return on equity).

It has been positive since 2002. Total assets in Irisa are on average 1.5 times higher than equity.

Irisa managed its assets effectively according to activity ratios only in the past 2 years. All ratios have been improving a bit from 2002 but the biggest improvement has been visible from 2005. Turnovers (inventory, receivable, payables) in days have decreased to satisfactory values similar in industry.

Other ratios focused mainly on employee productivity and value added structure. We can say that according to the growing values, employee productivity has been growing continuously. The only bigger difference is in personnel expenses / VA ratio where Irisa reached double higher values than in industry. It should try to lower personnel expenses to future.

Additional ratios analysis focused on financial health of the company and prediction of possible bankruptcy in future. Z-Score and Index IN01 confirmed that Irisa had some financial problems in 2002 but since that time it has been improving. We can say that Irisa's probability of failure is very low now.

A modern tool of performance measurement presents EVA (economic value added). According to the Build-up model that works with possible risks (risk-free rate, liquidity risk, business risk, financial stability risk and financial structure risk) we can see that EVA have been growing since 2002 but it has not reached positive values. It means that it did not create values for shareholders. One of the major problems was the high share-liquidity risk. On the other hand, EVA was counted only from accounting data that could misrepresent the real value of EVA that could be higher.



## 7 SWOT ANALYSIS

The aim of this SWOT analysis is to identify the key internal (strengths and weaknesses) and external (opportunities and threats) factors that are important to achieving the objective.

*Tab.18 SWOT analysis [own]*

STRENGTHS	WEAKNESSES
Good employee care and education programs.	Inconvenient IT software.
Good customer care.	Productivity.
Tax advantageous for disabled people	High personnel expenses.
Good reputation.	Official form – the cooperative society.
Size of the company.	
Loyalty of employees and customers.	
OPPORTUNITIES	THREATS
Business sector is expanding.	Technical develop. change the market.
The competitors may be slow to adopt new technology.	Competitor intentions change the market.
Penetration possibility to new markets	Dependency on strategic suppliers.

Irisa takes care both of contemporary employees and customers. Employees are trained annually in special training programs and evaluated according to their performance. Customer care is one of the most important elements in every company. The result is loyalty both in employee and customer care. Irisa has had good reputation so far and it regards highly its goodwill. Due to handicapped people employment, Irisa belongs to companies that are advantageous in taxes. The other strength is the size of the company that belongs to important producers in the region.

Among the weaknesses belongs mainly IT software that is not adequate and does not meet the requirements in Irisa. Although the personnel expenses have decreased in the past 5 years, still there is a great percentage (26%) that can be a possible weakness. Official form of Irisa is the cooperative society. On the one side, it helps in decision making without problems with owner. On the other hand, this form blocks entry of new big investor to it.

One of the most important opportunities that can influence Irisa positively could be the expanded sector. If Irisa is quick in adopting new technologies, developing new products and services, it can beat its competitors who would not be so flexible and quick.

In connection with technological development, the market could be changed and there would not be the need of contemporary products. Irisa should react quickly to this possible threat. Other important threat could be dependency on one strategic supplier.

## 8 SOLUTIONS FOR BSC APPROACH UTILIZATION

The main aim of the Balanced Scorecard approach is the increase of performance in Irisa. BSC helps to clarify and facilitates to realize strategies in a company. It combines traditional financial measures with non-financial measures and provides managers with richer and more relevant information about the activities they are managing, increasing the likelihood of organizational objectives being achieved.

After the PEST analysis, Five Forces Model, financial analysis and summary SWOT analysis there are several proposals and solutions for the Balanced Scorecard utilization in Irisa. According to these results is formed strategy that is defined in these following points.

Firstly, Irisa has constantly faced up to one big problem with the major buyer (see the Porter Five Forces Model). Irisa's main customer – Sidler GmbH – created almost 80% of Irisa's revenues. Sidler has been in insolvency proceedings from March 2007. Although it is expected that all payments will have been paid till the end of the year 2007, Irisa should try to reconstruct its buyers' structure. It is not favourable to have only one major buyer that, in case of financial problems, can influence the whole company. The suggestion for resolution can be, apart from others, also the Balanced Scorecard approach.

Secondly, BSC approach can help in developing customer relationships that retain the loyalty of existing customers and enable new customers segments and market areas to be served effectively and efficiently.

Thirdly, it can mobilize employee skills and motivation for continuous improvements in process capabilities, quality and response times.

Finally, it tries to introduce innovative products and services desired by targeted customer segments and produce customized high-quality products and services at low cost and with short lead times.

## 9 BALANCED SCORECARD IMPLEMENTATION

The Balanced Scorecard concept tries to help managers to achieve desired results. Moreover, it helps to increase firm's performance. To construct and implement a Balanced Scorecard, managers should:

- Create organization presumptions for the implementation.
- Articulate the business' s vision and strategy.
- Make the actual BSC model.
- Cascade the scorecard – roll-out process
- Make the scorecard useful.

### 9.1 Constitution of organization presumptions for the implementation

Implementing a strategy begins by educating and involving the people who must execute it and constitution of a team of competent people who will implement the BSC successfully. The team will be formed by management executives who are familiar with a company's strategy and are able to implement it through central command and control. The BSC permits a top-to-bottom alignment. To gain maximum benefit, the executive team should share the vision and strategy with the whole organization. By communicating the strategy and by linking it to personal goals, the scorecard creates a shared understanding and commitment among all organizational participants.

Four Balanced Scorecards are going to be implemented in Irisa – successively in every division. The first BSC to be implemented is going to be in Injection moulding program division (Division 2) because its share is the biggest on the total turnover of Irisa (around 60%). Moreover, it will be implemented there due to big difference in production in other three divisions of Irisa. After the successful implementation in this division, the following balanced scorecards are going to be implemented in other three divisions.

Every team in each division will be created from the general director of Irisa and the executive managers in each division. The team will have 5 to 7 people who will be responsible for the successful implementation. Every month is going to be hold a meeting to ensure regular observation of objective competition.

Before the BSC implementation in Division 2 (Injection moulding program division), the executive team will create the preliminary report that contains:

- Strategy, organization and culture presumption control,
- Assignment of priorities,
- Clarification of resources and project range,
- Project cost calculation and
- Risk estimations. [3]

## 9.2 Clarifying of strategies

The main strategies in Division 2 are:

- To get new customers not only from automotive industry. Electro-technical and consumer goods industries are perspective for future. The main aim is to create the relationship among Irisa and producers in this field and offer the services and goods to them. Hereafter, Division 2 will look for new customers by WLW Internet supplier search engine for the business-to-business sector and will participate on specialized fairs.
- To lower the % share of Sidler (the major customer that creates 80% of share).
- To redevelop the vacuum shaped goods production, mainly for automated electro-technical producers.
- To increase total sales.
- To get ready for e-communication with customers.

### 9.3 Strategy objectives and a strategy map

A strategy map creation follows after clarifying of strategies and objectives clarification. It will enable to discuss relationships between constituent parts of a strategy map. It is a diagram that describes how an organization creates value by connecting strategic objectives in explicit cause-and-effect relationship with each other in the four BSC objectives. Strategy maps are a strategic part of the Balanced Scorecard framework to describe strategies for value creation.

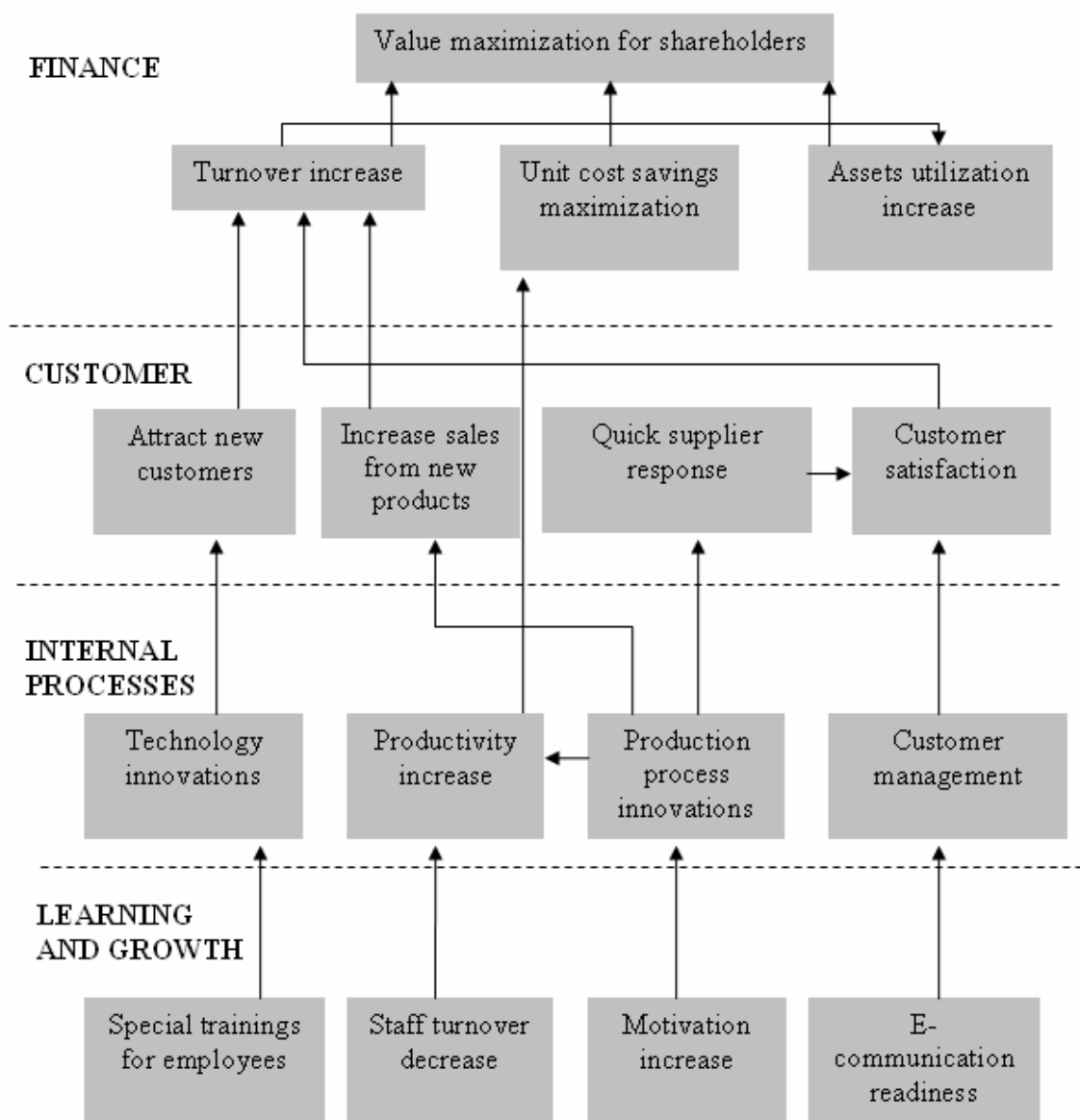


Fig.10 A strategy map in Division 2 in Irisa [own]

Value maximization for shareholders can be influenced by three financial objectives:

- Turnover increase,
- Cost savings maximization,
- Assets utilization increase.

Turnover can be increased by

- attracting of new customers,
- increasing sales from new products, and
- customer satisfaction.

Furthermore, turnover increase influences growth of assets utilization.

New customers can appreciate the new products in the company. This leads to customer satisfaction. To launch new products and reach increasing sales, it is necessary to improve technology innovations, both technologic equipment and new technologies implementation. This implementation needs a qualified staff and in consequence there will be a need of special trainings for employees. To satisfy customers (both new and current), it is necessary to be focused on customer management. One of important tools how to better the contemporary communication with customers is to prepare for e-communication.

Turnover can be increased also by new products launching that is influenced mainly by production process innovations. These have also an impact on productivity increase. Moreover, it will be necessary to improve motivation of employees.

Cost savings maximization can be influenced by

- productivity increase.

Productivity increase is closely influenced by staff turnover decrease. Motivation of employees can rise due to growth of wages and annual remunerations.

## 9.4 Measures and targets

Firstly, it is necessary to set up objectives (about 4 per perspective), measures, current condition and possible targets into future in Division 2. The future target data are going to be monitored for years 2010, 2011 and 2012.

### 9.4.1 Financial perspective

Tab.19 Financial perspective in Division 2 [own]

Objectives	Measures	Current	Targets		
		condition	2010	2011	2012
Value maximization for shareholders	<b>EVA</b> (in thousands of CZK)	-7,609	2,000	5,000	7,000
Turnover increase	<b>Sales</b> (in millions of CZK)	260	350	450	600
Cost savings maximization	<b>Costs decrease</b> % p.a.	5%	6%	7%	8%
Assets utilization increase	<b>Inventory turnover</b> in days	41	40	39	38
	<b>Payables turnover</b> in days	41	36	33	29

Financial objectives represent the long-term goal of the organization. For Division 2, the financial themes of increasing value for shareholders, turnover increase, cost savings maximization and enhancing asset utilization can provide the necessary linkages across all four scorecard perspectives.

The major financial objective is to maximize the value for shareholders. This objective is superior to other objectives and it is influenced both directly and indirectly by other objectives in all perspectives. The measurement of this objective is executed by Economic Value Added (EVA) according to Economic Model. Since 2002 EVA has been rising significantly in Irisa but still it has reached negative values. EVA reached values around - 43,000 thousands of CZK in 2002 and - 7,000 thousands of CZK in 2006. The main aim of Irisa is to reach a positive value till the end of 2012, at least 7,000,000 CZK. The way how to increase EVA is in cost of equity decrease. Cost of equity is influenced by WACC (weighted average cost of capital) that have been falling since 2002 (from 28% in 2002 to 11% in 2006). WACC are influenced mainly by financial stability risk that can be decreased due to



current ratio increase in Iriša. Based on the progress of the last 5 years, we can predict this target to be fulfilled.

Second objective that can influence Division 2 significantly is turnover increase measured by sales. Production rose from 80 (2002) to 260 (2006) millions of CZK. The target for 2012 is to reach 600 millions of CZK of the total revenues.

Other important objective is maximization of unit cost savings measured by cost decrease. Total expenses in Division 2 rose significantly from 2005 to 2006. The target is to lower these expenses at least by 5% every year. For the time being, 5% is the maximal value due to expected wage increase. Costs can be decreased by lowering of production consumption (formed by consumption of material and energy and services). This will contribute to higher profitability and return-on-investment ratios. Moulding injection plant should also try to decrease indirect costs, such as electrical energy consumption. Cost decrease can be fulfilled by high working productivity, as well.

Assets utilization increase measured mainly by Inventory and Payables turnover in days is another objective of Division 2's financial perspective. Inventory turnover in days decreased from 56 days in 2002 to 41 days in 2006 and the target for 2012 is to decline this ratio to 38 days. Division 2 should try to decrease inventories from current 19% on total assets to at least 15% in 2012 (also considering the growth of sales). Payables turnover reached 67 days in 2002 and 41 days in 2006. With this almost 39% decrease (from 2002 to 2006) can we predict that in 2012 this ratio can achieve the value desired, i.e. 29 days. Division 2 should focus on short-term payables that should be decreased by at least 3% (from current 15% of total liabilities - 2006) by the end of 2012.

### 9.4.2 Customer perspective

Tab.20 Customer perspective in Division 2 [own]

Objectives	Measures	Current	Targets		
		condition	2010	2011	2012
Attract new customers	Number of new customer p.a.	3	4	7	8
	Sales from new customers (in thousands of CZK)	5,000	40,000	140,000	280,000
Increase sales from new products	Number of new products p.a.	3	250	270	300
	Sales from new products %	3-10%	12%	17%	20%
Quick supplier response	Time of customer satisfaction (product delivery) in weeks	6	5.5	5	4
Customer satisfaction	Value for money ( 0-10 scale) (0...the worst, 10 the best)	7	8	9	10
	Incidents of defects	3%	2.5%	2%	1.5 %

One of the most important objectives in customer perspective is to attract new customers. This objective is measured by a number of new customers per year. Every year there have entered 2 to 3 new customers on average to Division 2 (to these customers are counted only those ones who created turnover higher than 500,000 CZK), so far. This division would like to increase this share of new customers to at least 8 new customers per year. This would enable a better price influence and policy from side of Division 2 and would prevent and protect it against unexpected situations from customer side (e.g. The problem of Sidler GmbH that have been in insolvency proceedings since March 2007 and still it threatens that the big amount of money will not have been paid till the end of 2007.)

Another important measure that can influence attracting the new customers is sales from new customers. On average, three new customers have reached 5,000 thousands of CZK of sales. According to the planned increase of new customers every year and the total increase in sales, the value of sales from new customers should grow to 280,000 thousands of CZK in 2012.

Second objective in customer perspective is increasing sales from new products. Contemporary number of new products ranges around 3 new products per year. But in 2007 and 2008, there is going to be a great increase due to cooperation with a company Witte. It is expected to produce around 240 new products already in 2007 and 2008. For the future,

Division 2 plans to produce around 275 new products p.a. on average. Sales from new products have ranged from 3 to 10% on average. The plan for 2012 is to reach 20% annual growth in sales from new products.

Time and speed of customer's satisfaction belong to quick supplier response. An average product delivery to customers lasts 6 weeks (except some unexpected exceptions). It is not possible to lower this delivery less than 4 weeks due to the production process and other services connected with production. Nevertheless, Irisa would like to decrease this delivery time up to 4 weeks till 2012.

Customer satisfaction can be measured by Value for money index. Its scale – 0 to 10 - explains how much customers are satisfied with the value of product and with its price. 0 represents the worst value for money, 10 the contrary. Even price-sensitive customers, however, may favor suppliers that offer not low prices, but low costs to acquire and use the product or service of a good quality. Division 2 has reached the very good value for money according to customers so far. Its aim for future is to increase this index at least to 9-10 – to offer an excellent value for money spent on products.

Another important measure of customer satisfaction, that is Division 2 aware of, is the quality of the product measured by incidence of defects. This measure has ranged from 2% to 3% per year so far but this division tries to lower this share (less than 2%) p.a. In spite of these incidents, the products still have a high-quality image. Reliability and long-term function of product are the most desired characteristics of products nowadays, not only in Irisa. Moreover, it is necessary to focus on consistent, continuous and successive checks of important points of production lines to eliminate product defects.

### 9.4.3 Internal processes perspective

Tab.21 Internal processes perspective in Division 2 [own]

Objectives	Measures	Current	Targets		
		condition	2010	2011	2012
Technology innovations	<b>Quality improvement investment</b> in thousands of CZK	6,000 - 7,000 p.a.	8,000 p.a.	9,000 p.a.	10,000 p.a.
Productivity increase	<b>Production capacity utilization</b> %	75%	77.5%	80%	85%
	<b>Personnel productivity</b> (Value Added / employee)	452	500	550	600
Production process innovations	<b>Number of new implemented technologies</b> (per year)	2	3	4	5
Customer management	<b>Internal cooperation level among firm's departments</b> %	15%	20%	30%	50%

In Division 2 technology equipment has been on a satisfactory level so far due to permanent innovations of technological fittings. However, it is still necessary to invest money into technology equipment, mainly to double component injection services, cascade injection of surface mouldings etc. Regarding to price pressures and increasing granulate prices, it is important to equip every compress machine with immediate recycling system of biscuits. Quality improvement investment has ranged from 6 to 7 millions of CZK every year up today and to future it is planned to increase this rate up to 10 millions of CZK p.a. Some other technology equipment plans for the following years include: enlargement of the production area in injection moulding services, enforce the crane track in pressing plant, economize and recycle material, better use of manipulators, etc. Moreover, it is planned to invest money into software and hardware equipment.

Division 2 owns unused production capacities that create extra services costs. Production capacity utilization forms 75% of total capacity (continuous operating from Sunday – 10pm to Friday 10 pm). Reserve is in continuous proceedings, including Saturdays and Sundays. The utilization is greatly dependent on the product range because not every injection form is compatible with every pressing machine. Nevertheless, it is expected that Division 2 will increase the total capacity by 10% into 85% due to renewal of some specialized production programs. Otherwise, this dead space would have to be sold.

Personnel productivity is another measure that can increase productivity in Division 2. It is measured as: Value Added / number of employees. Number of employees in Division 2 rose from 198 in 2002 to 219 in 2006. The biggest value was in 2005 (234 employees). As we can see, in 2006 this personnel productivity reached value 452 but to the future it is planned to reach 600 due to value added increase.

New technology implementation process includes 2 new implemented technologies per year on average. These technologies are usually very expensive, e.g. by two-component injection production it is mainly an investment into metal plating (approximately 15 mil. of CZK per production line). Division 2 would like to higher this number into 5 new technologies p.a. It will be necessary to invest into specialized technologies, such as renewal of vacuum steaming machinery and tampoo-printing. It will be important to think of new closed systems protecting work environment. In connection with environment, Division 2 plans to cancel technologies of steaming machinery purification with lixivium and it tries to verify other machinery not dependent on chemical materials.

The fourth important objective in internal processes perspective is customer management. This can be measured by employee questionnaires among company's departments. These questionnaires represent the level of internal cooperation (customer orientation) among 4 divisions in Iriša. The internal communication in Division 2 reaches approximately 95% but the contemporary level of intra-divisional communication varies only from 10-15% and Division 2 would like to higher this share at least to 30%. To secure the highest response rate of questionnaires, every department (with response rate higher than 85%) will get remuneration per employee.

#### 9.4.4 Learning and growth perspective

Tab.22 Learning and growth perspective in Division 2 [own]

Objectives	Measures	Current	Targets		
		condition	2010	2011	2012
Special trainings for employees	Number of trainings per year	3	4	5	6
	Number of trained employees	20	50	80	100
Staff turnover decrease	Number of leaving employees/ Number of total employees %	10%	9%	8%	7%
Motivation increase	% of remuneration from wage	15%	17.5%	20%	25%
	Wages increase	3%	3.5%	4%	4.5%
E-communication readiness	Number of incoming orders through Internet per day	30	50	60	70

Number of trainings for employees in Division 2 varies from 2-3 every year on average. Every employee takes part in these trainings according to actual work contracts. The number of trainings should increase both for employees and workers to 6 in 2012 to get qualified staff. From approximately 200 workers, only 20 of them participate on specialized trainings, usually not in Iriša but in companies where they learn how to work on some special machinery. The number of trained employees should rise at least to the half of total workers in Division 2 in 2012. Every year there should be some examination to secure the employee development. Up to now, there has been an emphasis on quality trainings (ISO 9001, 14 001, TS 16 949). But Iriša is aware of focusing on other spheres – e.g. technology, marketing, human resources, communication, IT etc.

Another objective is the reduction of staff turnover. The higher rate it is, the worse. Division 2's current condition is moving around 10% but it would like to lower into 7% p.a. in 2012. Employee departing or leaving shows a failure of long-term going business. A company that puts a lot of money into employee education, trainings and responsibility should try to keep this employee and create such conditions where the employee likes to work and can be motivated into professional growth.

Employees should be implied into firm's financial results. They have been motivated by the percentage of remuneration from wage that has been around 15% p.a. If they work well, they receive higher remunerations. If not, the contrary happens. Only 5 chief executives

receive remunerations according to profit / loss of current accounting period. The percentage of remuneration should increase to 20-25% in 2012 to motivate employees and increase their responsibility.

Another measure that influences employee motivation is wages increase. Wages have increased by 3% per annum so far but the management is aware of the necessity of employee motivation and satisfaction in Division 2. The target in 2012 is to increase wages up to 4-5% per annum according to the firm's performance.

For Division 2, a very important objective is the readiness for electronic communication. It has been using so-called EDI communication (two IT systems communicate together directly) for 2 years. This system speeds up the communication among companies and reduces error rate by data write-over-mode. Division 2 utilizes this system with the biggest customers (Sidler, Witte, Visteon) and the number of incoming orders is about 30 per day on average. For future, this division would like to increase this number into 70 per day and also to broaden this system from Irisa's side towards suppliers. The other important aim can be a web presentation.

The following table shows the Balanced Scorecard proposed for Division 2 in Irisa, co-opt.

Tab.23 The Balanced Scorecard in Division 2 in Irisa [own]

Objectives	Measures	Current	Targets		
		condition	2010	2011	2012
Value maximization for shareholders	<b>EVA</b> (in thousands of CZK)	-7,609	2,000	5,000	7,000
Turnover increase	<b>Sales</b> (in millions of CZK)	260	350	450	600
Cost savings maximization	<b>Costs decrease</b> % p.a.	5%	6%	7%	8%
Assets utilization increase	<b>Inventory turnover</b> in days	41	40	39	38
	<b>Payables turnover</b> in days	41	36	33	29
Objectives	Measures	Current	Targets		
		condition	2010	2011	2012
Attract new customers	<b>Number of new customer</b> p.a.	3	4	5	6
	<b>Sales from new customers</b> (in thousands of CZK)	5,000	40,000	140,000	280,000
Increase sales from new products	<b>Number of new products</b> p.a.	3	250	270	300
	<b>Sales from new products</b> %	3-10%	12%	17%	20%
Quick supplier response	<b>Time of customer satisfaction</b> (product delivery) in weeks	6	5.5	5	4
Customer satisfaction	<b>Value for money</b> ( 0-10 scale) (0...the worst, 10 the best)	7	8	9	10
	<b>Incidents of defects</b>	3%	2.5%	2%	1.5 %
Objectives	Measures	Current	Targets		
		condition	2010	2011	2012
Technology innovations	<b>Quality improvement investment</b> in thousands of CZK	6,000 - 7,000 p.a.	8,000 p.a.	9,000 p.a.	10,000 p.a.
Productivity increase	<b>Production capacity utilization</b> %	75%	77.5%	80%	85%
	<b>Personnel productivity</b> (Value Added / employee)	452	500	550	600
Production process innovations	<b>Number of new implemented technologies</b> (per year)	2	3	4	5
Customer management	<b>Internal cooperation level among firm's departments</b> %	15%	20%	25%	30%
Objectives	Measures	Current	Targets		
		condition	2010	2011	2012
Special trainings for employees	<b>Number of trainings</b> per year	3	4	5	6
	<b>Number of trained employees</b>	20	50	80	100
Staff turnover decrease	<b>Number of leaving employees/ Number of total employees</b> %	10%	9%	8%	7%
Motivation increase	<b>% of remuneration from wage</b>	15%	17.5%	20%	25%
	<b>Wages increase</b>	3%	3.5%	4%	4.5%
E-communication readiness	<b>Number of incoming orders through Internet</b> per day	30	50	60	70



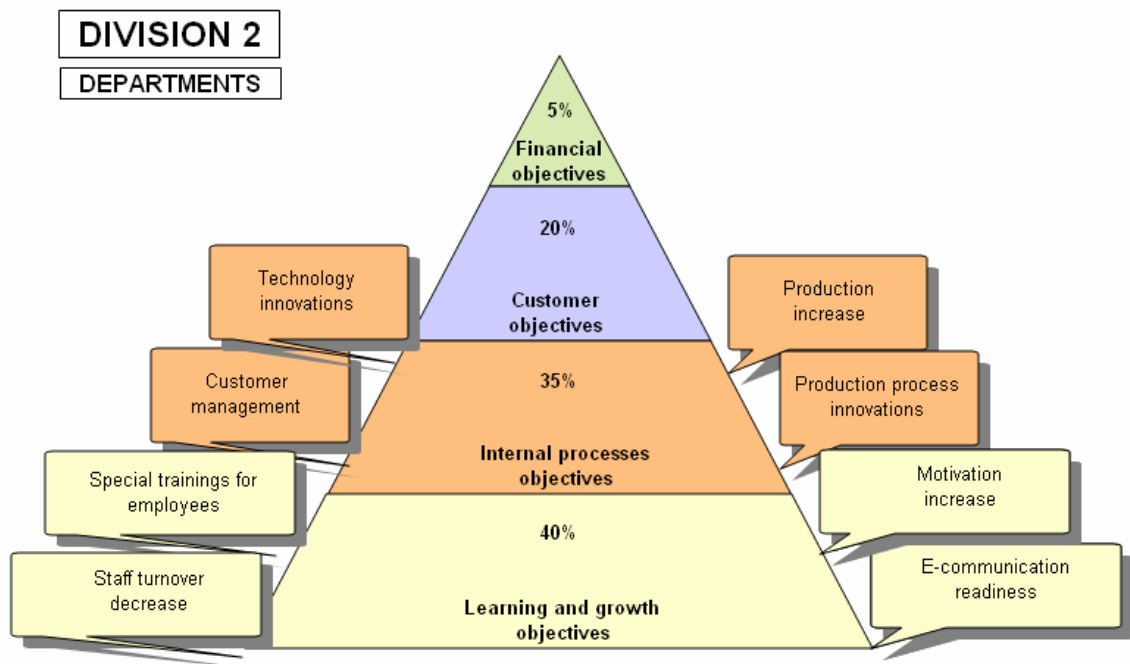
## 9.5 The Roll-out Process

Firstly, it is important to identify the roll-out structure. Factual completion in Irisa will utilize vertical interconnection (i.e. top – down connection). By vertical alignment, it is necessary to make sure that all downstream units are moving in the same direction. Firstly, the Roll-out Process will be launched in Division 2 (Moulding injection plant). In Irisa overall, it can be hard to predefine and align all the objectives and measurements of the diverse units because their strategy worlds are not always transparent from the corporate level. Viewpoints must be discussed, compared, and synchronized with the strategic perspectives of other units, and strategy contents (based on strategy maps) must be coordinated before balanced scorecards can be derived and strategic action programs can be conducted in the various organizational units.

In the cascading process, management teams adapt strategic objectives from the corporate strategy map. Not every corporate objective may be relevant to every other organizational unit, and specific strategic priorities in downstream units may lead to additional strategic objectives in their strategy maps that are not directly derived from the top-level map.

In the Roll-out Process, there are many available methods according to specific circumstances and conditions. The most suitable method for Division 2 is the Consequential deduction of objectives. It assumes that individual objectives are created only to particular topics that “can extend”. The objectives (with the help of BSC techniques and questioning) are specified and transferred to perspectives.

As we can see from the figure below, single departments in the Division 2 of Irisa are involved mainly to Learning and growth and Internal processes objectives. They participate in these objectives by 35% and 40% share according to managers’ estimation.



*Fig.11 Objectives in Division 2 [own]*

Chosen method determines the way of the roll-out process. In Division 2 will be created a roll-out process with the following steps:

- Management decision: BSC was recommended to all executives of Irisa as the most important strategy realization tool.
- Implementation guide: creation of Realization handbook.
- Awaken an interest at Irisa's management: discussions and clarifying questions or collecting potential barriers
- Realization of knowledge management concept: knowledge and learning management concept processing.
- Feedback: regularly scheduled meetings with staff and team members; bi-monthly reports to be submitted to directors on the status of the initiatives and adjustments needed.

After the roll-out process creation, it is necessary to harmonize strategic objectives, measures, actions and target values among all departments of Division 2.

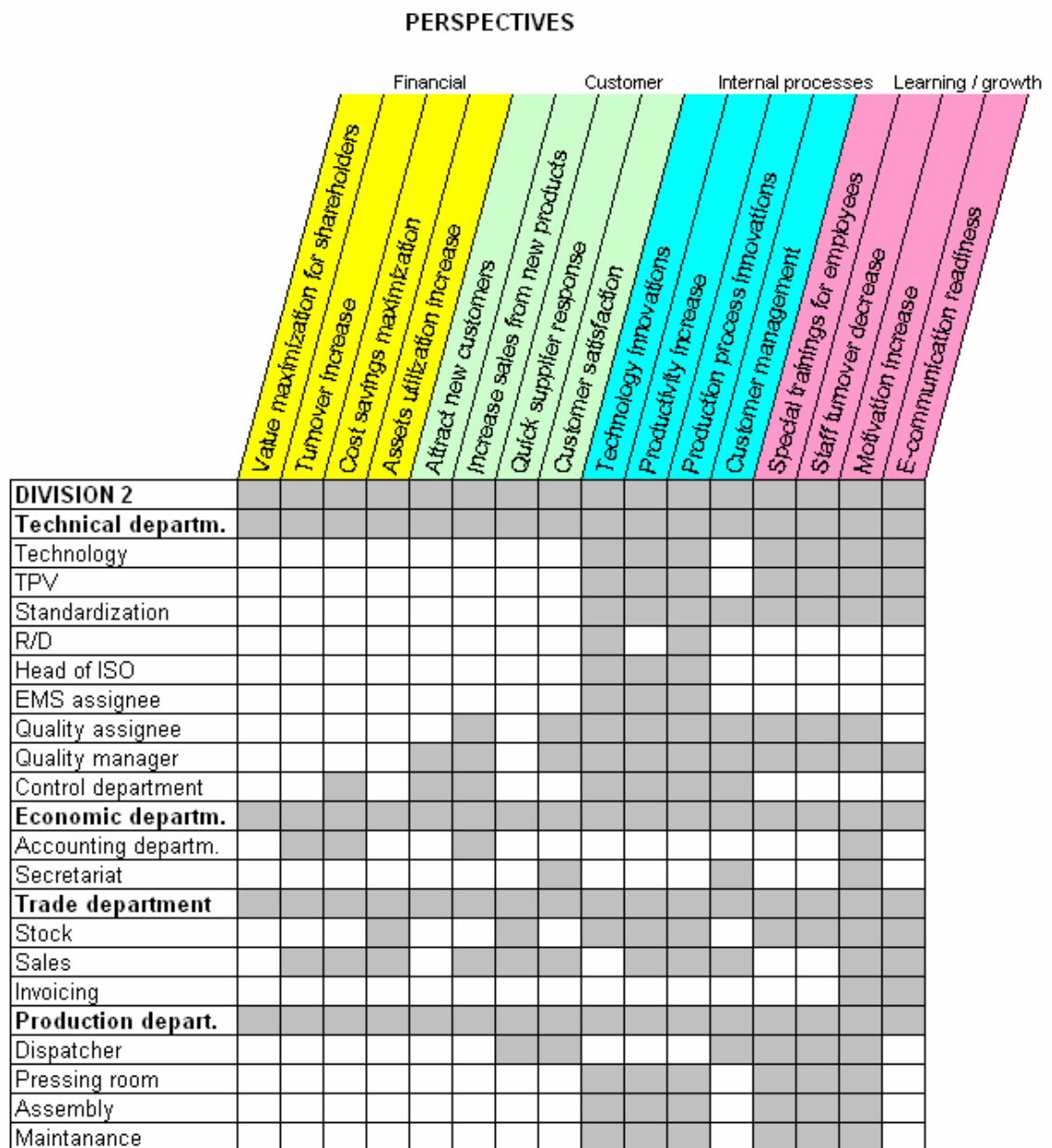


Fig.12 Influence of each department on objectives [own]

The figure above shows influences of each department in Division 2 and its parts on the company's BSC objectives in four perspectives. Each of four major departments is in charge of all objectives. Single parts of departments do not participate on every BSC objective; they focus only on separate partial missions that finally influence the whole structure of Balanced Scorecard strategy map.

## 9.6 BSC integration into management system

Once a scorecard has been designed and introduced in Irisa, it is necessary to tie it into other programs of company (controlling, budgeting and planning, reporting, etc.). Without such connections, the effort devoted to developing a Balanced Scorecard may not deliver tangible benefits.

After the Balanced Scorecard implementation, controlling department will be responsible for relevant data affording into each perspective of the BSC. Moreover, it will be in charge of permanent and continuous monitoring of strategic objectives and if they are achieved correctly. In case of negative deflections appearance, controlling department will create strategic plans to remove these deflections.

Planning department will connect strategic objectives, long-term intentions and budgets with short-term objectives and plans. After this change, financial and non-financial ratios will directly influence operating planning that will enable to intensify the focus on strategic objectives. If the strategy formulation and strategic issues update has been done well, the budgeting process should simply involve translating the first year of a multiyear (3-5 years) plan into an operational budget.

Another important step is to get employees to use the scorecard as a routine matter – making it part of the culture. In Division 2, a Balanced Scorecard will be first installed at the top, where commitment is most vital to success. It is then cascaded throughout the organization, to focus departments' goals with the overall company goals. It will be necessary to accept each objective by employees to increase personal involvement. It will be important to create such a system that will be understood by all employees that will take over its objectives as their own. To spread strategic awareness among employees, the company should develop a multi-pronged communications program. It covers the BSC extensively in the monthly company newsletter, presenting the BSC as a new way of working and thinking – not just another initiative.

Reporting will be in charge of information providing that will be gathered in electronic form and will be available for all employees.

Another essential feature is going to be a link to personal objectives and rewards. Clearly, incentive compensation motivates performance. However, in the early implementation, Irisa should use the BSC to stimulate SBU strategy formulation and review but not shift its formal incentive compensation to scorecard measures. After a year of experience with the scorecard, Irisa can start to link executive incentive compensation to the BSC.

The last but not least is to focus on feedback and strategic learning. This process links monthly operational reviews – where managers compare short-term performance with targets established in the annual budget – and quarterly strategic reviews that examine longer-term trends in scorecard measures to assess whether and how well the strategy is working.

### **Balanced Scorecard software**

Balanced Scorecard software can make it easier to follow up and manage the business. It will allow to build a business model and to create the metrics and reporting needed to boost a company's performance. Software requirements are specific to every company and every project but the main requirements are: user comfort, line connection ability, documentation, simulations by changes, strategic feedback, etc. The most common software tools supporting BSC are: Gentia Software, Cockpit communicator, Dialog strategy BSC, Arcplan – in-Sight, QPR-QPR Scorecard.

## 9.7 The Balanced Scorecard Timeline

This scorecard's timeline for Division 2 will last 12 months. It supports the Balanced Scorecard project management.

The beginning of BSC implementation is going to start on 1 July 2007 and finish on 30 June 2008. The main stages of BSC implementation timeline are:

- Project plan 1 month
- BSC creation 6 months
- Roll-out process 3 months
- Integration into management system 1.5 month
- Software support 6 months

Month	1	2	3	4	5	6	7	8	9	10	11	12
Activity												
<b>Project plan</b>												
Project team assignment												
Special trainings												
Budgeting												
<b>BSC creation</b>												
Strategy clarification												
Strategic objectives determination												
Strategy map creation												
Strategy measures												
Current condition analysis												
Target values setting												
Proposal of strategic actions												
<b>Roll-out process</b>												
Measurement program architecture												
Build implementation plan												
<b>Integration into management system</b>												
BSC proposal												
BSC approval												
Plan realization												
<b>Software support</b>												

Fig.13 The BSC timeline [own]

## 9.8 Project budget

Expected costs for Balanced Scorecard Implementation in Division 2 are estimated up to 2,000,000 CZK, including the software. The specialized BSC software must be of a very high quality due to four divisions in Irisa and their different subject of business. This sum of money includes the software, BSC implementation from the specialized consultant company and personnel expenses (i.e. wages). The specialized consultant company is in charge of both implementation of BSC in a company and trainings of employees. The most known consulting companies dealing with the BSC implementation are: MIS AG, Point Consulting or Controller-Institut.

The basic costs for BSC implementation are:

▪ BSC software	1,200,000
▪ BSC implementation from a specialized consultant company	500,000
▪ Personnel expenses	<u>300,000</u>
	2,000,000

The second, less expensive and alternative version can include the following costs:

▪ The basic software application (Excel)	100,000
▪ The responsible person for implementation (external)	400,000
▪ Personnel expenses	<u>450,000</u>
	950,000

Without the BSC software, total costs can decrease to approximately 1,000,000 of CZK (50% less). The salary for a responsible person for implementation includes 12 times 25,000 plus health and social insurance. Personnel expenses are higher than in the first version due to narrow cooperation with employees. Contributions of Balanced Scorecard implementation and its effective management utilization in Irisa can be estimated in millions of CZK.

## 9.9 Contributions of the BSC project

There are many important contributions that can bring the implementation of Balanced Scorecard project. The most important are mentioned here:

- It improves the bottom line by reducing process cost and improving productivity and mission effectiveness.
- It helps in strategy realization and communication within the company.
- A performance measurement system such as the BSC allows Irisa to align its strategic activities to the strategic plan. It permits real deployment and implementation of the strategy on a continuous basis. With it, Irisa can get feedback needed to guide the planning efforts. Without it, Irisa is “flying blind”.
- It helps to increase Economic Value Added and Sales due to specialized connections among four perspectives in a strategy map.
- It allows managers to identify best practices in an organization and expand their usage elsewhere.
- The visibility provided by a measurement system supports better and faster budget decisions and control of processes in Irisa. This means it can reduce risk.
- The visibility provides accountability and incentives based on real data. This serves for reinforcement and the motivation that comes from competition.
- Collection of process cost data for many past projects allow to learn how to estimate costs more accurately for future projects.



### 9.10 Risks of the BSC project

BSC project can have key problematic effects on Irisa and their stakeholders in today's changing business environment. BSC concept can negatively influence the survival of firms and hinder much-needed business ecosystem innovation, thereby negatively affecting customer value rejuvenation, shareholders' benefits, and other stakeholders' as well as societal benefits in general.

Four major problem areas in Irisa could be identified as:

- Balanced Scorecard implementation can fail due to lack of interest from the management side.
- Another key problem could be the lack of money necessary for the BSC implementation process.
- BSC concept does not have to be spread to all levels in a company. It can stop at the top management level.
- Bad communication in BSC sharing among employees can be the cause of failure.

## 9.11 Proposals and recommendations

Balanced Scorecard implementation in Irisa can bring several advantages and improvements based on successful working out. The major improvements include:

- Balanced Scorecard concept can try to solve one big problem referred to customers that has Irisa faced up so far. It can change the customer structure in Irisa. One big customer, although it creates 80% of profit, can enforce Irisa's production in case of unexpected situations such as insolvency proceedings of Sidler GmbH. Owing to BSC concept, Irisa can increase the share of new customers. This could enable it a better price influence and policy from Irisa's side.
- Irisa's awareness improvement. Employees would be able to access information about the company easily, to find out the necessary rules and duties that are responsible for to improve their skills and motivation in process capabilities and quality.
- BSC perspectives look at financial resources planning and its evaluation in favour of improvement of assets utilization from a different angle.
- It will help Irisa's vision and mission to come up to expectations.
- It will provide a complete overview of firm's assets, not only focused on the past development (financial perspective) but on the contemporary situation (customer and internal processes perspective) and future prospects (learning and growth perspective).
- It will better the customer relationships, both of existing customer and new ones. It will enable new customer segments and market areas to be served effectively and efficiently.
- According to customers' desires, it will help to introduce innovative products and services of high-quality and at low cost.

Irisa can benefit from the BSC concept in case of full support from chief executive management and connection with other managerial concepts of leadership, i.e. the connection with strategic and operative planning, controlling or integration into reporting system.

## CONCLUSION

The Balanced Scorecard is one of the most successful and enduring management concepts in recent years. In the past few years since Robert Kaplan and David Norton introduced the concept of the Balanced Scorecard, it has attracted much interest as a format for reporting on performance, and increasingly, to support strategic thinking. But it has come a long way since its introduction in 1992. The philosophy was that financial measures were not adequate for managing complex companies.

A Balanced Scorecard provides a means for linking the strategies of different businesses within an organization to the overall corporate vision. It supplements traditional financial measures with criteria that measure performance from a variety of perspectives. But perhaps the most important aspect of a BSC is that it allows organizations to link long-term strategy with short-term actions.

The first part of this master thesis deals with the theory background of the Balanced Scorecard topic and its implementation. The following part describes Irisa and analyses that characterize the readiness of Irisa for BSC implementation. From these analyses are formed solutions for Balanced Scorecard utilization in Irisa.

The Balanced Scorecard implementation can provide managers from Irisa the future competitive success. It helps to translate an organization's mission and strategy into a comprehensive set of performance measures that provides the framework for a strategic measurement and management system. In Irisa, the BSC retains an emphasis on achieving financial objectives, but also includes the performance drivers of these financial objectives. It enables to track financial results while simultaneously monitoring progress in building the capabilities and acquiring the intangible assets they need for future growth.

The final part is concluded by possible contributions and risks of the project and proposals and recommendations to Irisa.

**BIBLIOGRAPHY**

- [1] COOKE, T. *Translating strategy into results with the Balanced Scorecard*. Central Arizona Project, June 29, 2005.
- [2] HALLMAN, P. *The role of causality in the balanced scorecard framework*. Stockholm: Royal Institute of Technology, 2005.
- [3] HORVÁTH & PARTNERS. *Balanced Scorecard v praxi*. Praha: Profess Consulting, s.r.o., 2002. ISBN 80-7259-018-9.
- [4] KAPLAN, R.S., NORTON, D.P. *Alignment: How to apply the Balanced Scorecard to corporate strategy*. Boston: Harvard Business School Press, 2006. ISBN 159-1396-905.
- [5] KAPLAN, R.S., NORTON, D.P. *Balanced Scorecard: Strategický systém měření výkonnosti podniku*. Praha: Management Press, 2002. ISBN 80-7261-063-5.
- [6] KAPLAN, R.S., NORTON, D.P. *The Balanced Scorecard: Translating strategy into action*. Boston: Harvard Business School Publishing Corporation, 1996. ISBN 0-87584-651-3.
- [7] KAPLAN, R.S., NORTON, D.P. *Harvard Business Review on Measures that drive performance*. Boston: Harvard Business School Publishing Corporation, 1992. ISBN 0-69158-748-3.
- [8] KAPLAN, R.S., NORTON, D.P. *Harvard Business Review on Measuring Corporate Performance*. Boston: Harvard Business School Publishing Corporation, 1996. ISBN 0-87584-882-6.
- [9] KAPLAN, R.S., NORTON, D.P. *Strategy focused organization*. Boston: Harvard Business School Publishing Corporation, 2001. ISBN 1-57851-250-6.
- [10] KAPLAN, R.S., NORTON, D.P. *Strategy maps*. Boston: Harvard Business School Publishing Corporation, 2004. ISBN 1-59139-134-2.
- [11] MURRAY, E.J., RICHARDSON, P.R. *Fast Forward: Organizational Change in 100 Days*. New York: Oxford University Press, 2002. ISBN 0-195-15311-1.
- [12] NIVEN, P.R. *Balanced Scorecard Diagnostics. Maintaining maximum performance*. New Jersey: John Wiley & Sons, Inc., 2005. ISBN 0-471-68123-7.

- [13] NIVEN, P.R. *Balanced Scorecard step by step: maximizing performance and maintaining results*. New Jersey: John Wiley & Sons, Inc., 2006. ISBN 0-471-78049-9.
- [14] OLVE, N.G., SJOSTRAND, A. *Balanced Scorecard*. Southern Gate Chichester, West Sussex: Capstone Publishing Ltd., 2006. ISBN 184-1127-086.
- [15] OLVE, N.G., PETRI, C.J., ROY, J., ROY, S. *Making scorecards actionable. Balancing Strategy and Control*. New Jersey: John Wiley & Sons, Inc., 2003. ISBN 0-470-84871-5.
- [16] VOELPEL, S.C., LEIBOLD, M., ECKHOFF, R.A., DAVENPORT, T.H. *The Tyranny of the Balanced Scorecard in the Innovation Economy*. Cambridge: 4<sup>th</sup> International Critical Management Studies Conference, July 4-6, 2005.

### Sources of company

- [17] Balanced Sheet and Profit and loss statement 2002-2006

### Internet sources

- [18] Balanced Scorecard Institute. *Internet web pages*. [online] c.2007. Available from WWW: <<http://www.balancedscorecard.com>>.
- [19] Balanced Scorecard Collaborative. *Internet web pages*. [online] c.2007. Available from WWW: <<http://www.bscol.com>>.
- [20] Balanced Scorecard Method. *Internet web pages*. [online] c.2007. Available from WWW: <<http://www.valuebasedmanagement.net>>.
- [21] Český statistický úřad. *Internet web pages*. [online] c.2007. Available from WWW: <<http://www.czso.cz>>.
- [22] Harvard University. *Internet web pages*. [online] c.2007. Available from WWW: <<http://www.harvard.edu>>.
- [23] Harvard Business School. *Internet web pages*. [online] c.2007. Available from WWW: <<http://www.hbs.edu>>.
- [24] Ministerstvo Průmyslu a Obchodu. *Internet web pages*. [online] c.2007. Available from WWW: <<http://www.mpo.cz>>.
- [25] Iriša, co-opt. *Internet web pages*. [online] c.2007. Available from WWW: <<http://www.irisa.cz>>.

**LIST OF SYMBOLS AND ABBREVIATIONS**

BSC	Balanced Scorecard
CF	Cash flow
CEO	Chief Executive Officer
Co-opt	Cooperative society
CZK	Czech crown
EAT	Earnings after Taxes
EBIT	Earnings before Interest and Taxes
EBT	Earnings before Taxes
e.g.	For example
Etc.	Et cetera, and so on
EUR	Euro
EVA	Economic Value Added
GmbH	Gesellschaft mit beschränkter Handlung, limited, ltd.
IC	Intellectual capital
i.e.	Id est, that is
lab	laboratory
L.t.t.d.	Long-term total debt
LT	Long-term
p.a.	Per annum, per year
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
ROS	Return on Sales
R&D	Research and Development

SBU	Strategic Business Unit
ST	Short-term
VA	Value Added
WACC	Weighted Average Cost of Capital
WLW	Wer liefert was?, Internet supplier search engine

**LIST OF FIGURES**

Figure 1	Historic overview of BSC development	16
Figure 2	Using the BSC as a Strategic Management System	18
Figure 3	Four perspectives of BSC	22
Figure 4	Launching the BSC program	25
Figure 5	Irisa, co-opt. Vsetín	35
Figure 6	Five Forces in Porter's Model in Irisa	42
Figure 7	Profit / loss of current accounting period in Irisa	48
Figure 8	Spider analysis	56
Figure 9	Du-Pont Model	62
Figure 10	A Strategy map in Division 2 in Irisa	70
Figure 11	Objectives in Division 2	82
Figure 12	Influence of each department on objectives	83
Figure 13	The BSC timeline	86



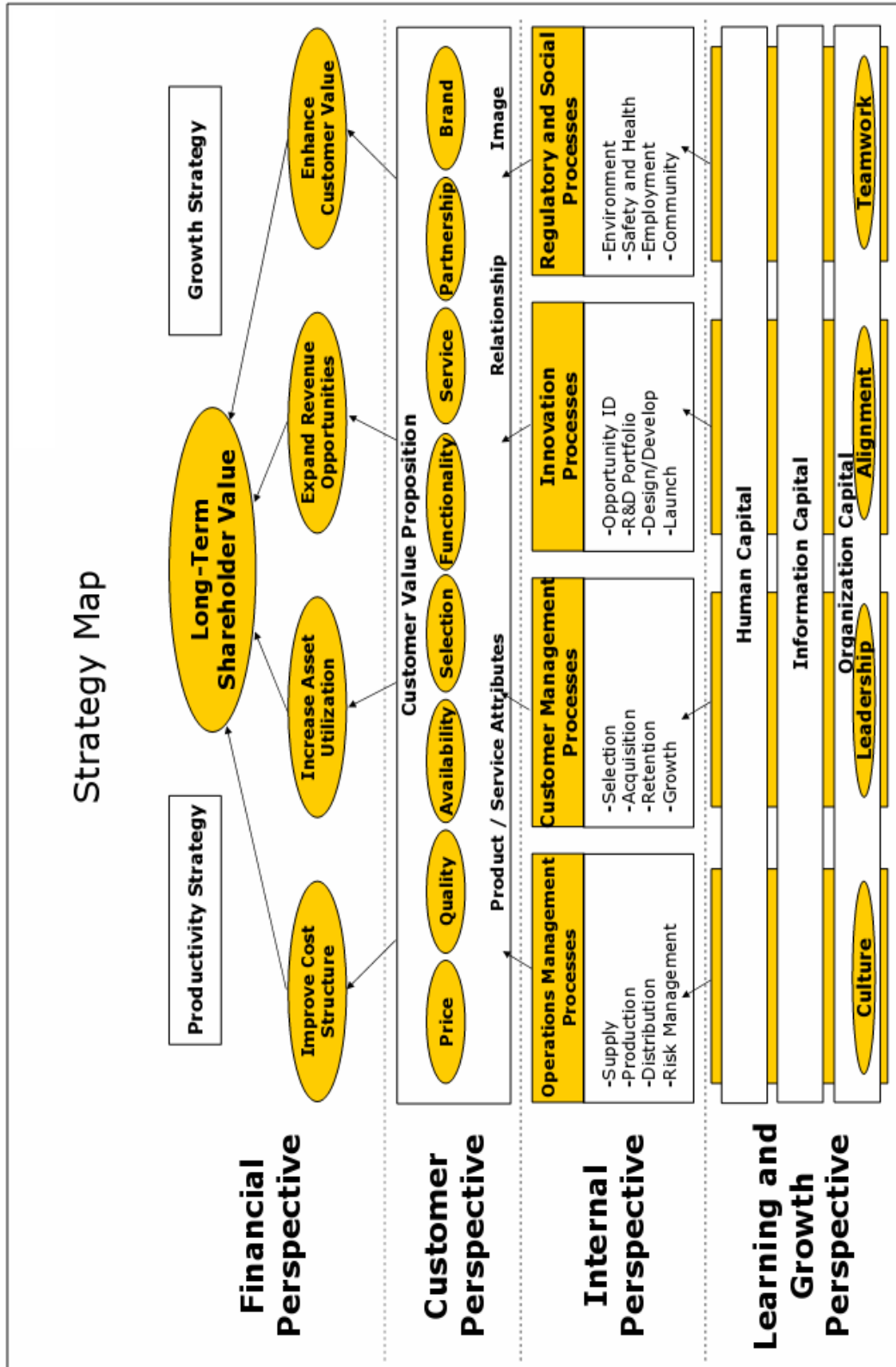
**LIST OF TABLES**

Table 1	Building strategy maps	19
Table 2	Top customers in Irisa	36
Table 3	Employees in Irisa	37
Table 4	PEST analysis in Irisa	39
Table 5	Profit / loss analysis in Irisa	47
Table 6	Profit / loss analysis in industry	47
Table 7	Cash flow analysis	48
Table 8	Leverage ratios	49
Table 9	Liquidity ratios	51
Table 10	Profitability ratios	52
Table 11	Equity multiplier	53
Table 12	Activity ratios	54
Table 13	Spider analysis	55
Table 14	Other ratios	57
Table 15	Altman Z-Score	59
Table 16	Index IN01	59
Table 17	Economic Value Added	60
Table 18	SWOT analysis	65
Table 19	Financial perspective in Division 2	72
Table 20	Customer perspective in Division 2	74
Table 21	Internal processes perspective in Division 2	76
Table 22	Learning and growth perspective in Division 2	78
Table 23	The Balanced Scorecard in Division 2 in Irisa	80

## **LIST OF APPENDICES**

- Appendix 1 Strategy map
- Appendix 2 Assets and liabilities analysis
- Appendix 3 Revenues and expenses analysis
- Appendix 4 Solvency / leverage ratios figures
- Appendix 5 Liquidity ratios figures
- Appendix 6 Profitability ratios figures
- Appendix 7 Activity ratios figures
- Appendix 8 Balanced Sheet 2002-2006
- Appendix 9 Profit / loss statement 2002-2006

# APPENDIX A I: STRATEGY MAP



## APPENDIX A II: ASSETS AND LIABILITIES ANALYSIS

% analysis of assets and liabilities - Iriša, co-opt. (in thousands of CZK)		2002		2003		2004		2005		2006	
<b>TOTAL ASSETS</b>		<b>158 828</b>	<b>100%</b>	<b>153 943</b>	<b>100%</b>	<b>160 832</b>	<b>100%</b>	<b>188 998</b>	<b>100%</b>	<b>199 278</b>	<b>100%</b>
<b>Fixed assets</b>		<b>116 437</b>	<b>73,31%</b>	<b>106 618</b>	<b>69,26%</b>	<b>98 793</b>	<b>61,43%</b>	<b>95 708</b>	<b>50,64%</b>	<b>94 873</b>	<b>47,61%</b>
Intangible fixed assets		8 222	5,18%	7 371	4,79%	6 071	3,77%	3 777	2,00%	2 094	1,05%
Tangible fixed assets		108 153	68,09%	99 237	64,46%	92 712	57,65%	91 921	48,64%	92 789	46,55%
Long-term financial assets		62	0,04%	10	0,01%	10	0,01%	10	0,01%	10	0,01%
<b>Current assets</b>		<b>41 626</b>	<b>26,21%</b>	<b>46 128</b>	<b>29,96%</b>	<b>60 092</b>	<b>37,36%</b>	<b>91 747</b>	<b>48,54%</b>	<b>103 066</b>	<b>51,72%</b>
Inventory		25 588	16,11%	23 209	15,08%	42 688	26,54%	46 500	24,60%	37 384	18,76%
Long-term receivables		0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%
Short-term receivables		15 680	9,87%	20 946	13,61%	14 897	9,26%	43 736	23,14%	57 343	28,78%
Short-term financial assets		358	0,23%	1 973	1,28%	2 507	1,56%	1 511	0,80%	8 339	4,18%
<b>Accruals</b>		<b>765</b>	<b>0,48%</b>	<b>1 197</b>	<b>0,78%</b>	<b>1 947</b>	<b>1,21%</b>	<b>1 543</b>	<b>0,82%</b>	<b>1 339</b>	<b>0,67%</b>
<b>TOTAL LIABILITIES</b>		<b>158 828</b>	<b>100%</b>	<b>153 943</b>	<b>100%</b>	<b>160 832</b>	<b>100%</b>	<b>188 998</b>	<b>100%</b>	<b>199 278</b>	<b>100%</b>
<b>Equity</b>		<b>103 731</b>	<b>65,31%</b>	<b>104 884</b>	<b>68,13%</b>	<b>105 510</b>	<b>65,60%</b>	<b>107 714</b>	<b>56,99%</b>	<b>113 014</b>	<b>56,71%</b>
Registered capital		6 700	4,22%	6 051	3,93%	5 294	3,29%	4 541	2,40%	3 813	1,91%
Capital funds		2 531	1,59%	2 531	1,64%	2 531	1,57%	2 531	1,34%	2 531	1,27%
Reserve funds, statut.res.acc,...		104 115	65,55%	94 101	61,13%	94 486	58,75%	95 546	50,55%	97 797	49,08%
Profit / loss- previous year		0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%
Profit / loss - current year		-9 615	-6,05%	2 201	1,43%	3 199	1,99%	5 096	2,70%	8 873	4,45%
<b>Other sources</b>		<b>55 097</b>	<b>34,69%</b>	<b>49 059</b>	<b>31,87%</b>	<b>55 322</b>	<b>34,40%</b>	<b>81 284</b>	<b>43,01%</b>	<b>86 264</b>	<b>43,29%</b>
Reserves		0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%
Long-term payables		13 192	8,31%	2 522	1,64%	2 192	1,36%	8 698	4,60%	6 761	3,39%
Short-term payables		17 598	11,08%	23 402	15,20%	34 075	21,19%	24 284	12,85%	30 944	15,53%
Bank loans and fin. accommodations		24 307	15,30%	23 135	15,03%	19 055	11,85%	48 302	25,56%	48 559	24,37%
<b>Accruals</b>		<b>0</b>	<b>0,00%</b>	<b>0</b>	<b>0,00%</b>	<b>0</b>	<b>0,00%</b>	<b>0</b>	<b>0,00%</b>	<b>0</b>	<b>0,00%</b>

% analysis of assets and liabilities -industry (in millions of CZK)		2002	2003	2004	2005	2006*	*I.-III. Q.
<b>TOTAL ASSETS</b>		<b>54 078</b>	<b>60 264</b>	<b>76 417</b>	<b>89 515</b>	<b>103 117</b>	<b>100%</b>
<b>Fixed assets</b>		<b>27 409</b>	<b>28 147</b>	<b>34 779</b>	<b>54 604</b>	<b>60 762</b>	<b>58,93%</b>
Intangible+ tangible fixed assets		24 345	25 904	32 533	34 979	38 570	37,40%
Long-term financial assets		3 064	2 243	2 246	19 625	22 193	21,52%
<b>Current assets</b>		<b>24 256</b>	<b>31 268</b>	<b>40 496</b>	<b>33 879</b>	<b>41 199</b>	<b>39,95%</b>
Inventory		7 185	8 349	9 722	10 763	13 027	12,63%
Long-term, short-term receivables		14 371	20 115	26 765	17 689	23 998	23,27%
Short-term financial assets		2 700	2 804	4 009	5 427	4 173	4,05%
<b>Accruals</b>		<b>2 413</b>	<b>849</b>	<b>1 142</b>	<b>1 032</b>	<b>1 156</b>	<b>1,12%</b>
<b>TOTAL LIABILITIES</b>		<b>54 078</b>	<b>60 264</b>	<b>76 417</b>	<b>89 515</b>	<b>103 117</b>	<b>100%</b>
<b>Equity</b>		<b>30 672</b>	<b>35 513</b>	<b>41 490</b>	<b>50 341</b>	<b>57 683</b>	<b>55,94%</b>
<b>Other sources</b>		<b>21 987</b>	<b>23 448</b>	<b>31 799</b>	<b>38 478</b>	<b>44 877</b>	<b>43,52%</b>
Reserves		2 304	1 472	2 104	1 102	1 276	1,24%
Long-term payables		2 142	2 989	3 390	3 355	4 619	4,48%
Short-term payables		10 781	12 248	12 545	15 627	16 185	15,70%
Bank loans and fin. accommodations		6 760	6 739	13 760	18 394	22 797	22,11%
<b>Accruals</b>		<b>1 419</b>	<b>1 302</b>	<b>3 128</b>	<b>696</b>	<b>558</b>	<b>0,78%</b>

*% analysis of assets and liabilities Trends-Irisa*

(in thousands of CZK)	2003/2002	2004/2003	2005/2004	2006/2005
<b>TOTAL ASSETS</b>	<b>-3.08%</b>	<b>4.48%</b>	<b>17.51%</b>	<b>5.44%</b>
<b>Fixed assets</b>	<b>-8.43%</b>	<b>-7.34%</b>	<b>-3.12%</b>	<b>-0.87%</b>
Intangible fixed assets	-10.35%	-17.64%	-37.79%	-44.56%
Tangible fixed assets	-8.24%	-6.58%	-0.85%	0.92%
Long-term financial assets	-83.87%	0.00%	0.00%	0.00%
<b>Current assets</b>	<b>10.82%</b>	<b>30.27%</b>	<b>52.68%</b>	<b>12.34%</b>
Inventory	-9.30%	83.93%	8.93%	-19.60%
Long-term receivables	0.00%	0.00%	0.00%	0.00%
Short-term receivables	33.58%	-28.88%	193.59%	13.11%
Short-term financial assets	451.12%	27.07%	-39.73%	451.89%
<b>Accruals</b>	<b>56.47%</b>	<b>62.66%</b>	<b>-20.75%</b>	<b>-13.22%</b>
<b>TOTAL LIABILITIES</b>	<b>-3.08%</b>	<b>4.48%</b>	<b>17.51%</b>	<b>5.44%</b>
<b>Equity</b>	<b>1.11%</b>	<b>0.60%</b>	<b>2.09%</b>	<b>4.92%</b>
Registered capital	-9.69%	-12.51%	-14.22%	-16.03%
Capital funds	0.00%	0.00%	0.00%	0.00%
Reserve funds, statut.res.acc.,...	-9.62%	0.41%	1.12%	2.36%
Profit / loss- previous year	0.00%	0.00%	0.00%	0.00%
Profit / loss - current year	436.85%	45.34%	59.30%	74.12%
<b>Other sources</b>	<b>-10.96%</b>	<b>12.77%</b>	<b>46.93%</b>	<b>6.13%</b>
Reserves	0.00%	0.00%	0.00%	0.00%
Long-term payables	-80.88%	-13.08%	296.81%	-22.27%
Short-term payables	32.98%	45.61%	-28.73%	27.46%
Bank loans and fin.accommodations	-4.82%	-17.64%	15.49%	0.53%
<b>Accruals</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>

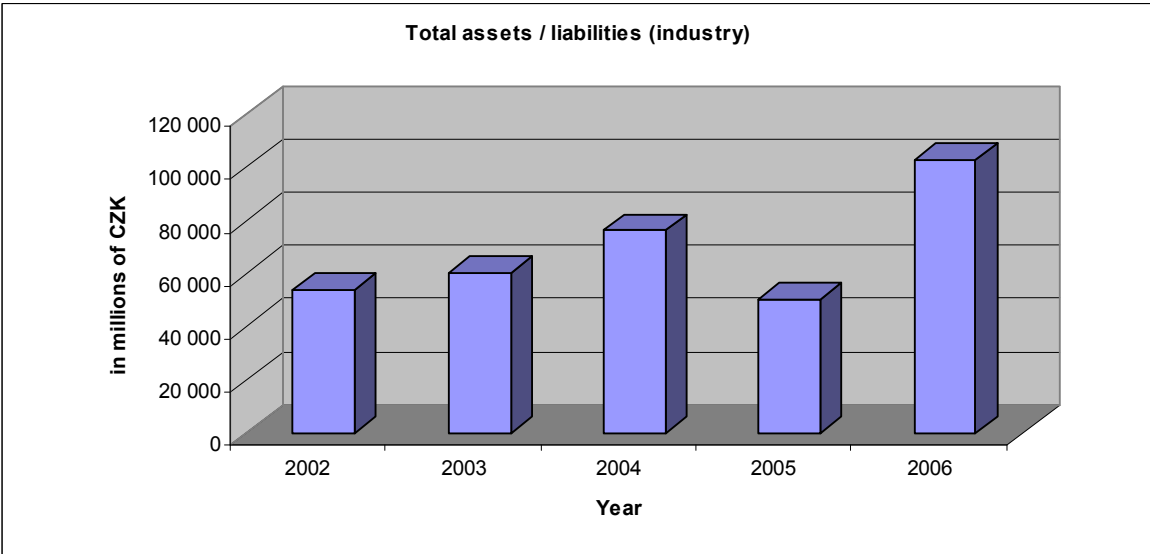
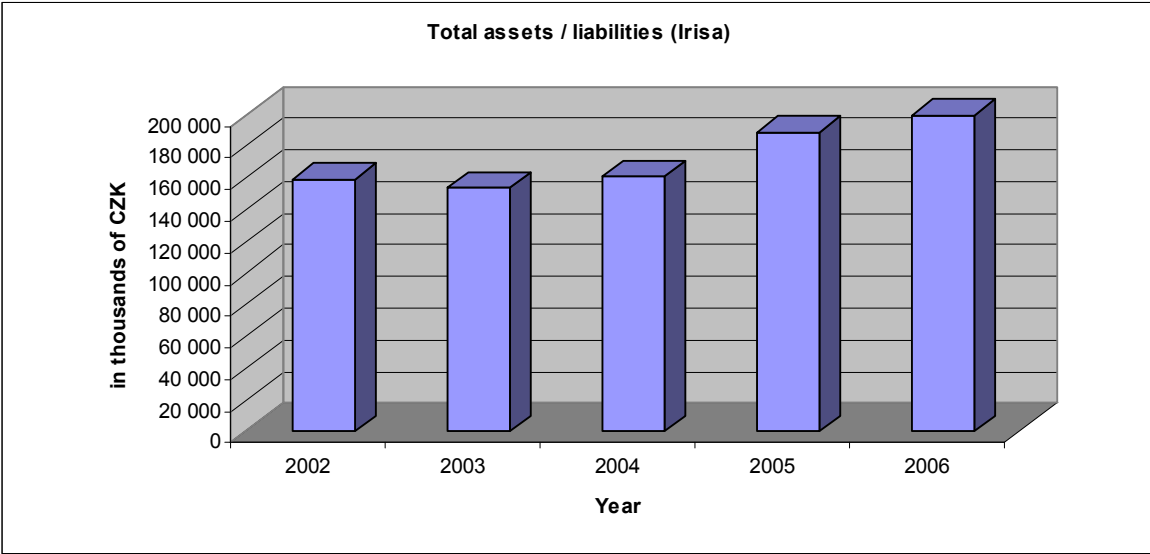
*% analysis of assets and liabilities*

*Trends*

*industry*

*\*I.-III.Q.*

(in millions of CZK)	2003/2002	2004/2003	2005/2004	2006/2005
<b>TOTAL ASSETS</b>	<b>11.44%</b>	<b>26.80%</b>	<b>17.14%</b>	<b>15.20%</b>
<b>Fixed assets</b>	<b>2.69%</b>	<b>23.56%</b>	<b>57.00%</b>	<b>11.28%</b>
Intangible + tangible fixed assets	6.40%	25.59%	7.52%	10.27%
Long-term financial assets	-26.80%	0.13%	773.78%	13.09%
<b>Current assets</b>	<b>28.91%</b>	<b>29.51%</b>	<b>-16.34%</b>	<b>21.61%</b>
Inventory	16.17%	16.45%	10.71%	21.04%
Long-term, short-term receivables	39.97%	33.06%	-33.91%	35.67%
Short-term financial assets	3.85%	42.97%	35.37%	-23.11%
<b>Accruals</b>	<b>-64.82%</b>	<b>34.51%</b>	<b>-9.63%</b>	<b>12.02%</b>
<b>TOTAL LIABILITIES</b>	<b>11.44%</b>	<b>26.80%</b>	<b>17.14%</b>	<b>15.20%</b>
<b>Equity</b>	<b>15.78%</b>	<b>16.83%</b>	<b>21.33%</b>	<b>14.58%</b>
<b>Other sources</b>	<b>6.64%</b>	<b>35.61%</b>	<b>21.00%</b>	<b>16.63%</b>
Reserves	-36.11%	42.93%	-47.62%	15.79%
Long-term payables	39.54%	13.42%	-1.03%	37.68%
Bank loans and fin.accommodations	-0.31%	104.18%	33.68%	23.94%
<b>Accruals</b>	<b>-8.25%</b>	<b>140.25%</b>	<b>-77.75%</b>	<b>-19.83%</b>



## APPENDIX A III: REVENUES AND EXPENSES ANALYSIS

% analysis of revenues and expenses - Iriša, co-opt. (in thousands of CZK)		2002		2003		2004		2005		2006	
Revenues from sold goods	118	0,06%	160	0,09%	189	0,10%	295	0,08%	16 802	4,50%	
Production	160 307	87,94%	163 778	88,29%	156 165	84,35%	302 479	87,00%	321 024	86,07%	
Revenues from disposals of fixed a.	4 253	2,33%	4 566	2,46%	9 943	5,37%	17 711	5,09%	8 384	2,25%	
Other operating revenues	16 318	8,95%	16 326	8,80%	17 863	9,65%	22 491	6,47%	23 653	6,34%	
Interest revenues	19	0,01%	0	0,00%	4	0,00%	9	0,00%	27	0,01%	
Other financial revenues	866	0,48%	661	0,36%	973	0,53%	4 704	1,35%	3 088	0,83%	
Extraordinary revenues	410	0,22%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	
<b>REVENUES</b>	<b>182 291</b>	<b>100%</b>	<b>185 491</b>	<b>100%</b>	<b>185 137</b>	<b>100%</b>	<b>347 689</b>	<b>100%</b>	<b>372 978</b>	<b>100%</b>	
Expenses on sold goods	60	0,03%	106	0,06%	172	0,09%	265	0,08%	14 373	3,95%	
Production consumption	82 534	43,01%	81 303	44,36%	73 883	40,61%	217 230	63,41%	224 555	61,67%	
Personnel expenses	82 720	43,10%	79 271	43,25%	81 414	44,75%	88 062	25,70%	93 236	25,61%	
Taxes and fees	160	0,08%	121	0,07%	92	0,05%	103	0,03%	118	0,03%	
Depreciations of int. and tan. assets	14 538	7,58%	12 136	6,62%	12 009	6,60%	11 294	3,30%	10 722	2,94%	
Net book value of disposed fix. a.	3 646	1,90%	3 547	1,94%	7 547	4,15%	13 043	3,81%	6 614	1,82%	
Change in operating reserves...	-117	-0,06%	-1 058	-0,58%	-1 227	-0,67%	810	0,24%	1 905	0,52%	
Other operating expenses	1 621	0,84%	2 678	1,46%	2 845	1,56%	1 976	0,58%	3 999	1,10%	
Change in fin. reserves, adjustments	-204	-0,11%	-217	-0,12%	0	0,00%	0	0,00%	-200	-0,05%	
Interest expenses	3 144	1,64%	2 452	1,34%	1 763	0,97%	2 675	0,78%	2 372	0,65%	
Other financial expenses	3 804	1,98%	2 951	1,61%	3 440	1,89%	7 135	2,08%	6 411	1,76%	
<b>EXPENSES</b>	<b>191 906</b>	<b>100%</b>	<b>183 290</b>	<b>100%</b>	<b>181 938</b>	<b>100%</b>	<b>342 593</b>	<b>100%</b>	<b>364 105</b>	<b>100%</b>	

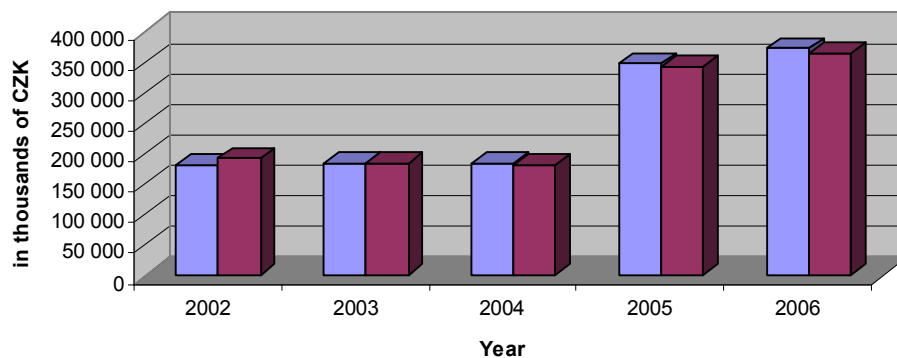


% analysis of revenues and expenses - industry (in millions of CZK)	2002		2003		2004		2005		2006*		*I-III.Q
Revenues from sold goods	7 646	8,47%	8 404	8,66%	13 418	10,60%	13 849	9,87%	11 630	9,91%	
Production	72 647	80,43%	80 170	82,65%	102 292	80,84%	116 241	82,82%	97 596	83,19%	
Other operating revenues	10 026	11,10%	8 421	8,68%	10 858	8,58%	10 265	7,31%	8 090	6,90%	
<b>REVENUES</b>	<b>90 319</b>	<b>100%</b>	<b>96 996</b>	<b>100%</b>	<b>126 538</b>	<b>100%</b>	<b>140 355</b>	<b>100%</b>	<b>117 316</b>	<b>100%</b>	
Expenses on sold goods	6 597	7,74%	7 145	7,99%	10 975	9,32%	12 162	9,14%	10 342	9,39%	
Production consumption	54 252	63,68%	59 442	66,51%	77 746	65,99%	88 335	66,41%	74 954	68,06%	
Interest expenses	669	0,79%	518	0,58%	787	0,67%	544	0,41%	603	0,55%	
Depreciations of int. and tan. assets	3 547	4,16%	3 779	4,23%	4 236	3,60%	3 789	2,85%	3 939	3,58%	
Personnel expenses	9 651	11,33%	10 284	11,51%	12 124	10,29%	13 891	10,44%	11 502	10,44%	
Other expenses	10 474	12,29%	8 210	9,19%	11 948	10,14%	14 296	10,75%	8 794	7,98%	
<b>EXPENSES</b>	<b>85 190</b>	<b>100%</b>	<b>89 378</b>	<b>100%</b>	<b>117 817</b>	<b>100%</b>	<b>133 017</b>	<b>100%</b>	<b>110 134</b>	<b>100%</b>	

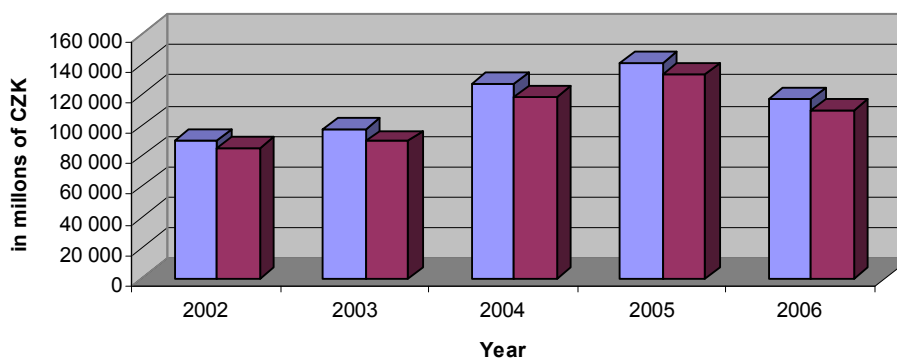
<i>% analysis of revenues and exp.</i>	<i>Trends</i>		<i>Irisa</i>	
(in thousands of CZK)	2003/2002	2004/2003	2005/2004	2006/2005
Revenues from sold goods	35.63%	18.13%	56.08%	55.59%
Production	2.17%	-4.65%	93.69%	6.13%
Revenues from disposals of fixed a.	7.36%	117.76%	78.13%	-52.66%
Other operating revenues	0.05%	9.41%	25.91%	5.17%
Interest revenues	0.00%	0.00%	125%	200%
Other financial revenues	-23.67%	47.20%	383.45%	-34.35%
Extraordinary revenues	0.00%	0.00%	0.00%	0.00%
<b>REVENUES</b>	<b>1.76%</b>	<b>-0.19%</b>	<b>87.80%</b>	<b>7.27%</b>
Expenses on sold goods	76.67%	62.26%	54.07%	53.77%
Production consumption	-1.49%	-9.12%	194.02%	3.37%
Personnel expenses	-4.17%	2.70%	8.17%	5.88%
Taxes and fees	-24.38%	-23.97%	11.96%	14.56%
Depreciations of int.and tan. assets	-16.52%	-1.05%	-5.95%	-5.06%
Net book value of disposed fix.a.	-2.72%	112.77%	72.82%	-49.29%
Change in operating reserves...	804.27%	15.97%	66.01%	135.19%
Other operating expenses	65.21%	6.24%	-30.54%	102.38%
Change in fin.reserves, adjustments	6.37%	0.00%	0.00%	0.00%
Interest expenses	-22.01%	-28.10%	51.73%	-11.33%
Other financial expenses	-22.42%	16.57%	107.41%	-10.15%
<b>EXPENSES</b>	<b>-4.49%</b>	<b>-0.74%</b>	<b>88.30%</b>	<b>6.28%</b>

<i>% analysis of revenues and exp.</i>	<i>Trends</i>		<i>industry</i>	<i>*I.-III.Q</i>
(in millions of CZK)	2003/2002	2004/2003	2005/2004	2006/2005
Revenues from sold goods	9.91%	59.66%	3.21%	-16.02%
Production	10.36%	27.59%	13.64%	-16.04%
Other operating revenues	-16.01%	28.94%	-5.46%	-21.19%
<b>REVENUES</b>	<b>7.39%</b>	<b>30.46%</b>	<b>10.92%</b>	<b>-16.41%</b>
Expenses on sold goods	8.31%	53.60%	10.82%	-14.96%
Production consumption	9.57%	30.79%	13.62%	-15.15%
Interest expenses	-22.57%	51.93%	-30.88%	10.85%
Depreciations of int.and tan. assets	6.54%	12.09%	-10.55%	3.96%
Personnel expenses	6.56%	17.89%	14.57%	-17.20%
Other expenses	-21.62%	45.53%	19.65%	-38.49%
<b>EXPENSES</b>	<b>4.92%</b>	<b>31.82%</b>	<b>12.90%</b>	<b>-17.20%</b>

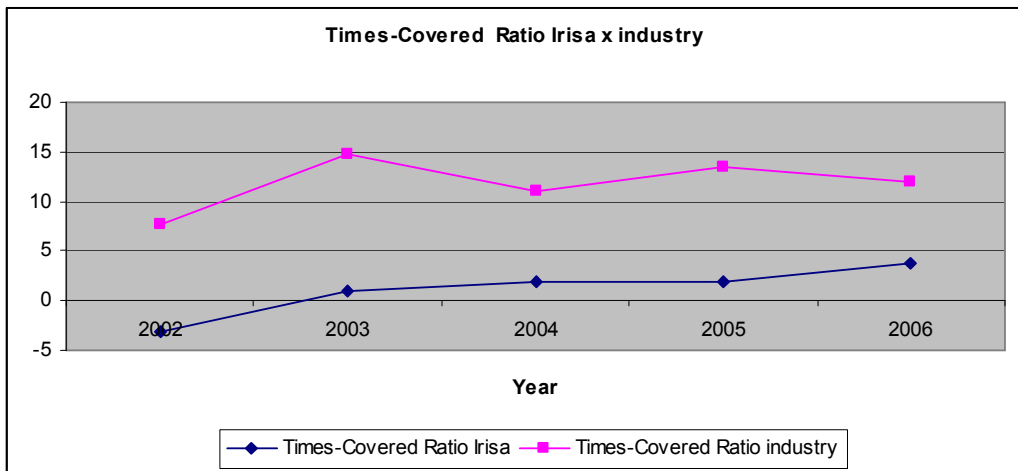
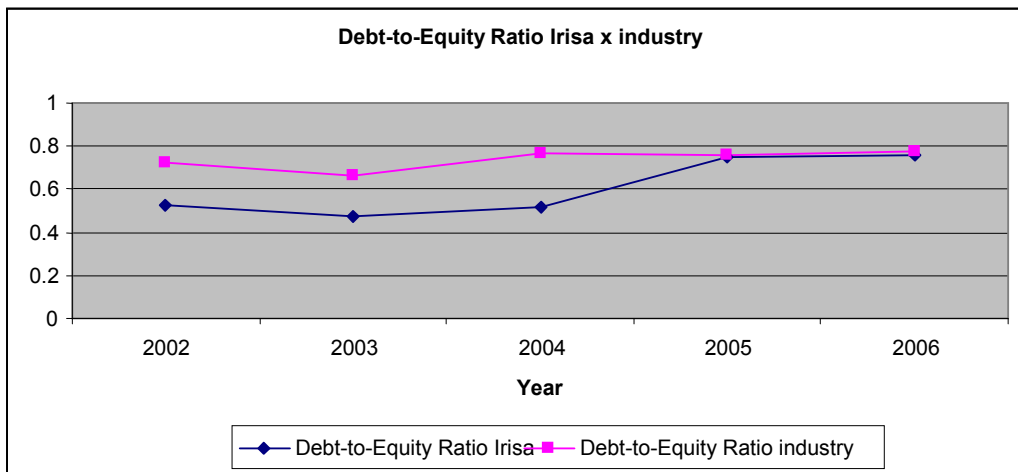
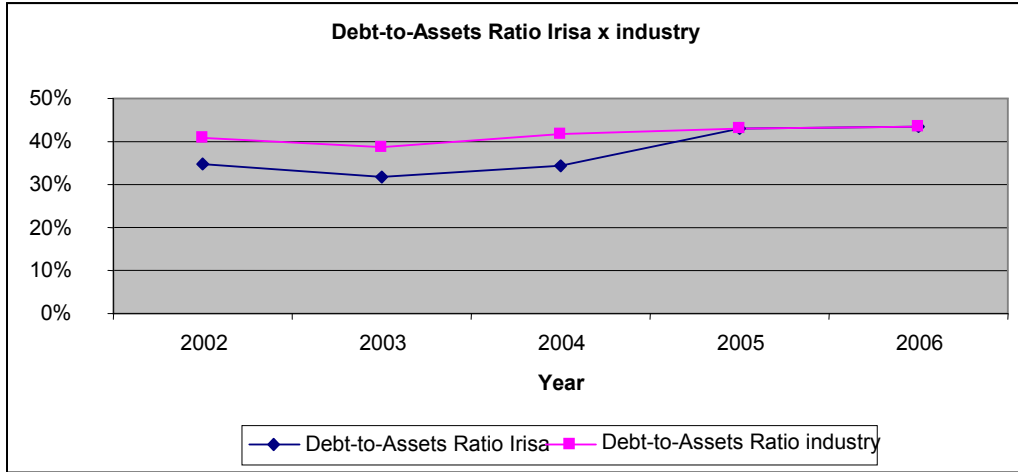
**REVENUES and EXPENSES (Irisa)**



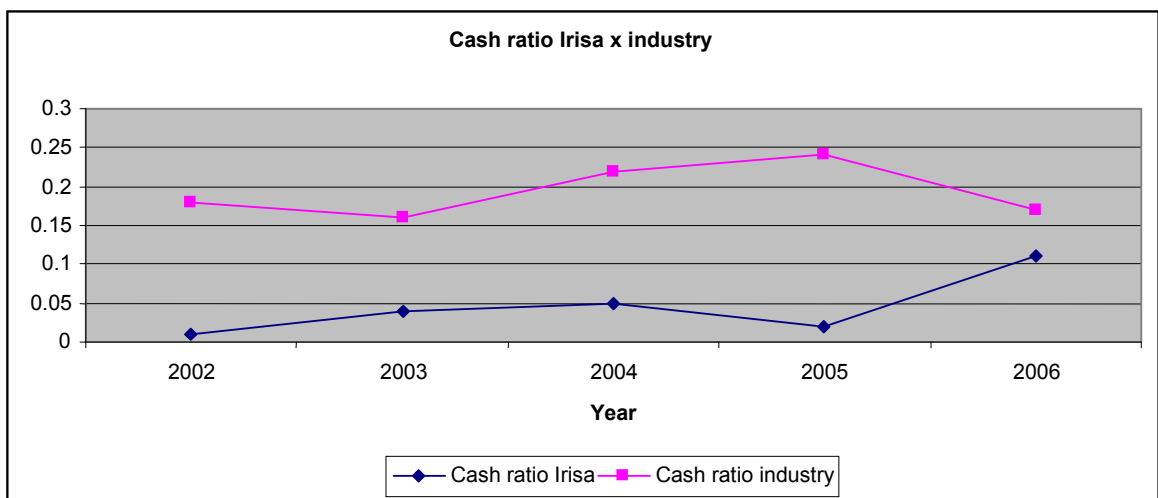
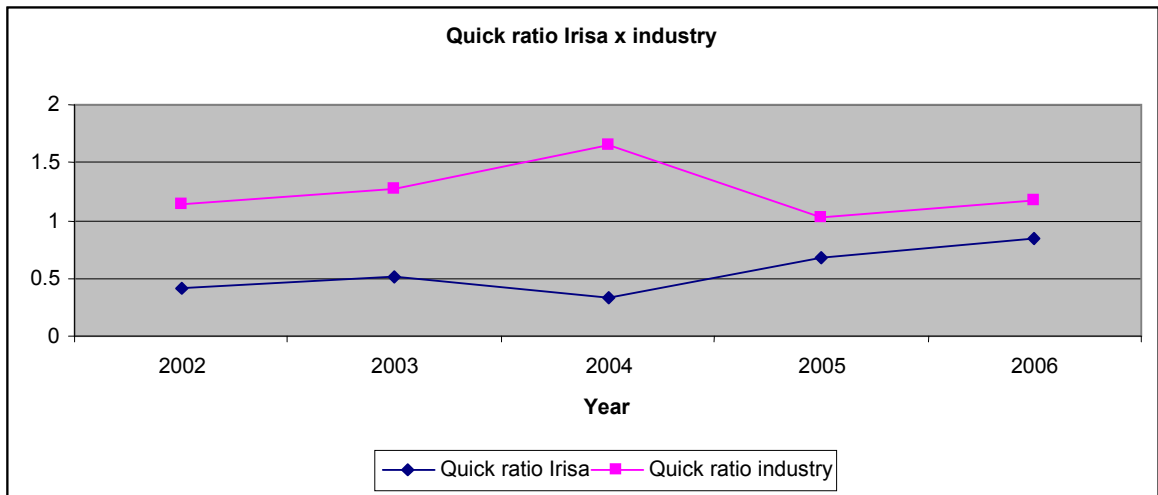
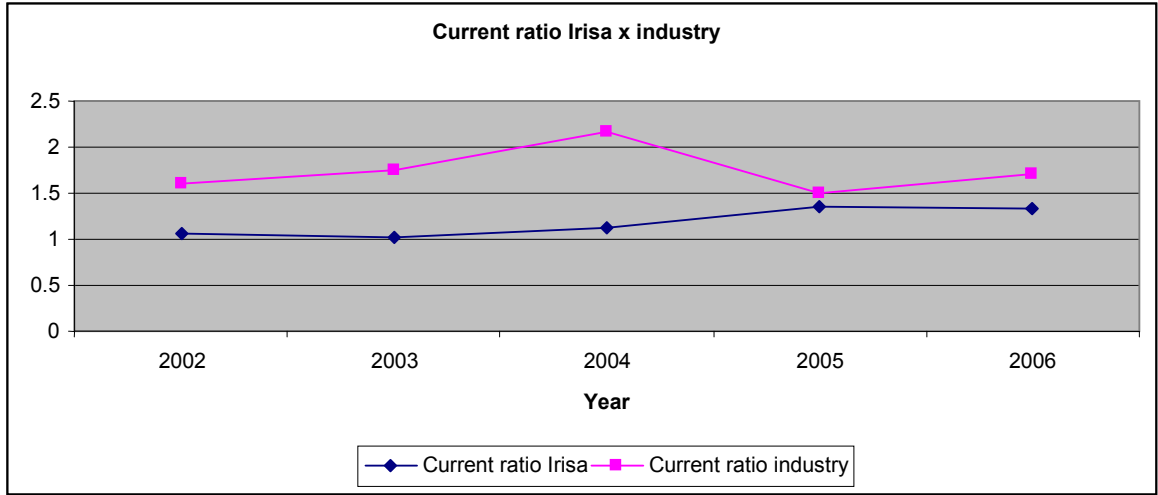
**REVENUES and EXPENSES (industry)**



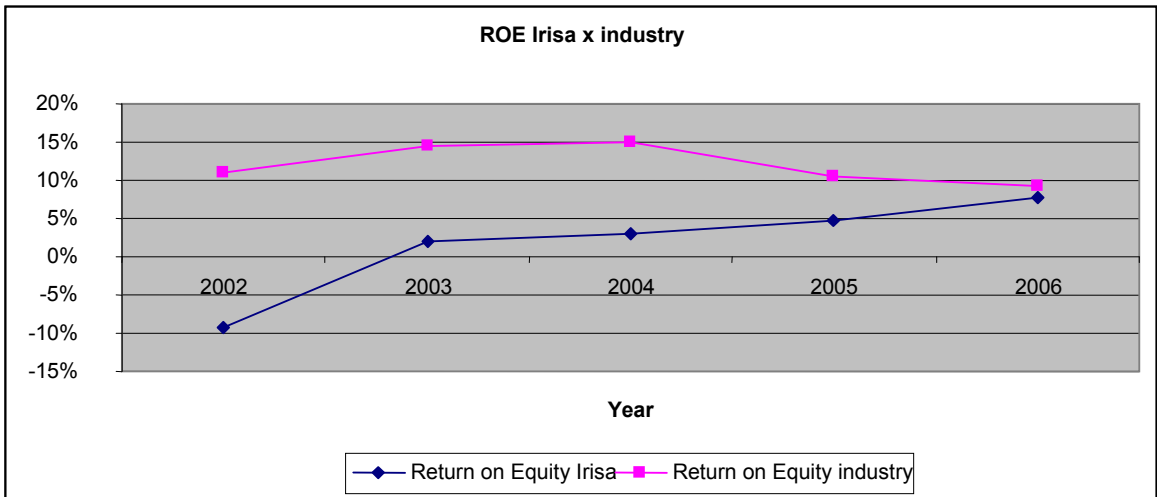
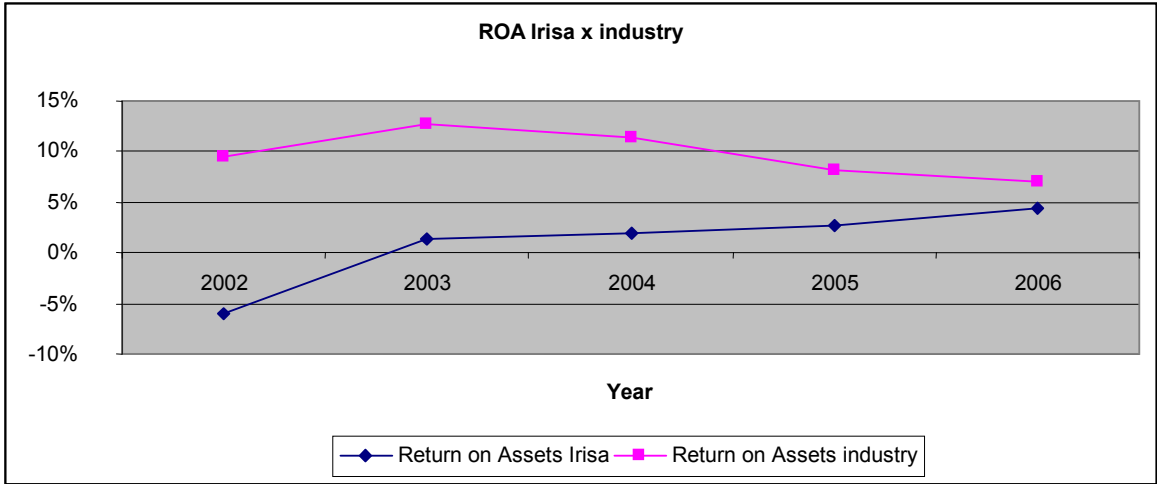
## APPENDIX A IV: SOLVENCY / LEVERAGE RATIOS FIGURES



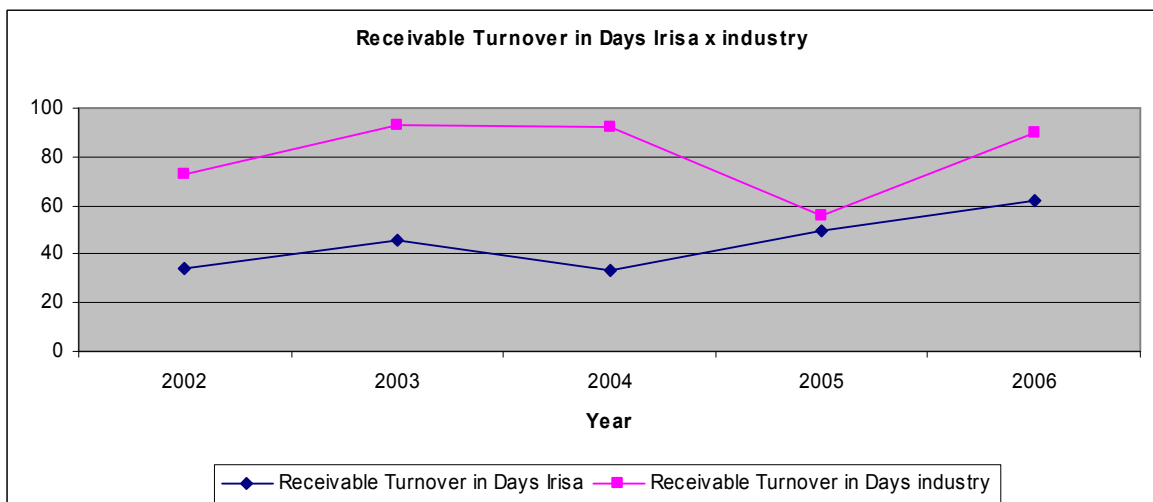
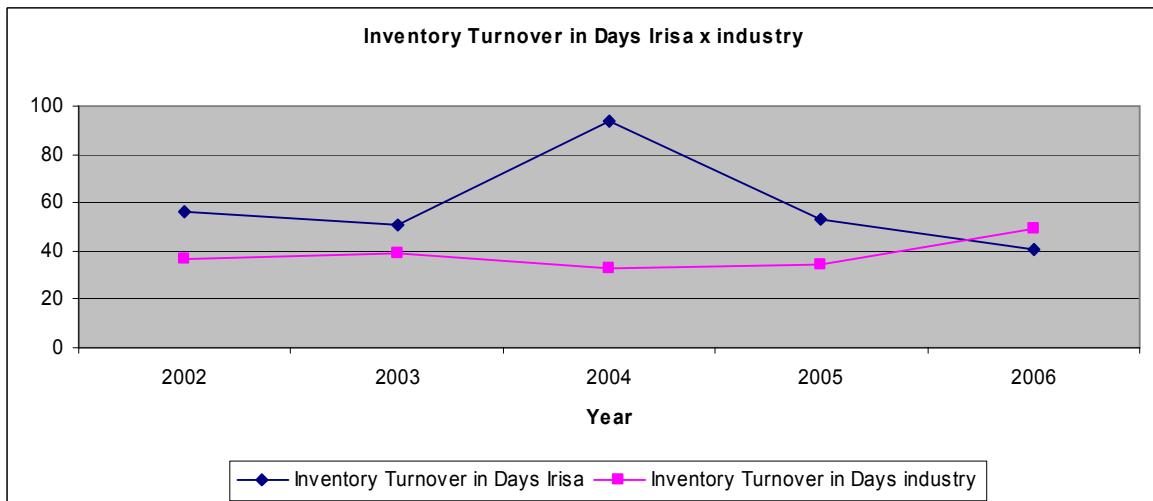
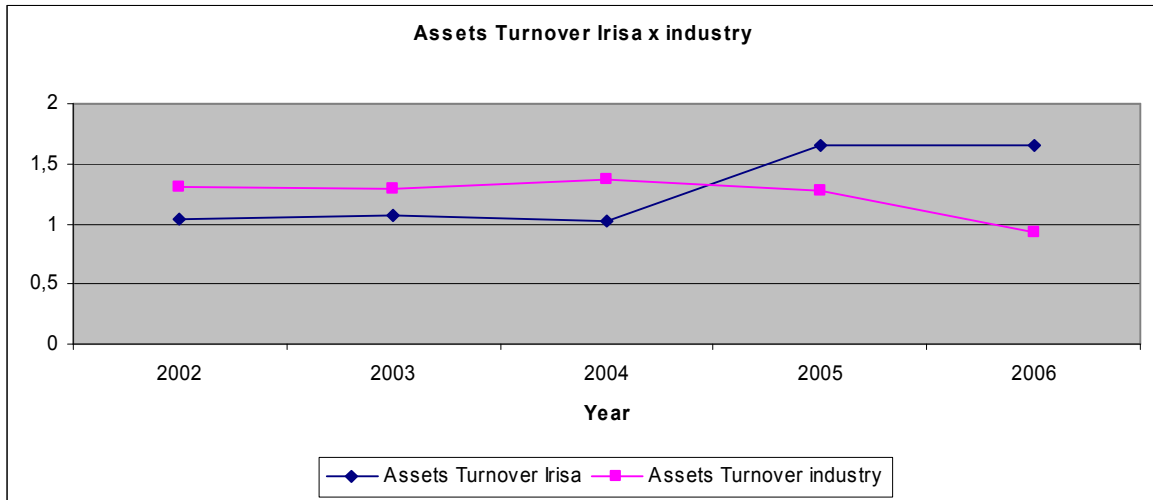
## APPENDIX A V: LIQUIDITY RATIOS FIGURES



## APPENDIX A VI: PROFITABILITY RATIOS FIGURES



## APPENDIX A VII: ACTIVITY RATIOS FIGURES



## APPENDIX A VIII: BALANCED SHEET 2002-2006

### BALANCED SHEET 2002

	ASSETS (in thousands of CZK)	Current accounting period			Prev. p.
		Gross	Adjustment	Net	Net
	<b>TOTAL ASSETS</b>	<b>300,580</b>	<b>-141,752</b>	<b>158,828</b>	<b>179,736</b>
<b>B.</b>	<b>Fixed assets</b>	<b>254,443</b>	<b>-138,006</b>	<b>116,437</b>	<b>127,627</b>
<b>B.I.</b>	<b>Intangible fixed assets</b>	<b>12,098</b>	<b>-3,876</b>	<b>8,222</b>	<b>8,658</b>
B.I.3	Software	11,565	-3,802	7,763	8,512
B.I.4	Valuable rights	425	-13	412	0
B.I.6	Other intangible fixed assets	108	-61	47	146
<b>B.II.</b>	<b>Tangible fixed assets</b>	<b>242,066</b>	<b>-133,913</b>	<b>108,153</b>	<b>118,907</b>
B.II.1	Lands	486	0	486	486
B.II.2	Constructions	98,089	-26,920	71,169	72,980
B.II.3	Equipment	125,904	-95,588	30,316	39,188
B.II.6	Other tangible fixed assets	17,587	-11,405	6,182	6,248
<b>B.III.</b>	<b>Long-term financial assets</b>	<b>279</b>	<b>-217</b>	<b>62</b>	<b>62</b>
<b>C.</b>	<b>Current assets</b>	<b>45,372</b>	<b>-3,746</b>	<b>41,626</b>	<b>50,235</b>
<b>C.I.</b>	<b>Inventory</b>	<b>25,588</b>	<b>0</b>	<b>25,588</b>	<b>27,309</b>
C.I.1	Materials	18,760	0	18,760	17,488
C.I.2	Work in progress and semi-products	3,270	0	3,270	4,282
C.I.3	Finished products	3,550	0	3,550	5,190
<b>C.III.</b>	<b>Short-term receivables</b>	<b>19,226</b>	<b>-3,546</b>	<b>15,680</b>	<b>22,739</b>
C.III.1	Trade receivables	16,148	-3,546	12,602	19,448
C.III.6	Due from state - tax receivable	3,077	0	3,077	3,289
<b>C.IV.</b>	<b>Short-term financial assets</b>	<b>558</b>	<b>-200</b>	<b>358</b>	<b>187</b>
C.IV.1	Cash	340	0	340	137
C.IV.2	Bank accounts	18	0	18	50
C.IV.4	Short-term financial assets acquired	200	-200	0	0
<b>D.I.</b>	<b>Accruals</b>	<b>765</b>	<b>0</b>	<b>765</b>	<b>1,874</b>
	<b>LIABILITIES</b> (in thousands of CZK)	<b>Current period</b>			<b>Previous period</b>
	<b>TOTAL LIABILITIES</b>	<b>158,828</b>			<b>179,736</b>
<b>A.</b>	<b>Equity</b>	<b>103,731</b>			<b>116,749</b>
<b>A.I.</b>	<b>Registered capital</b>	<b>6,700</b>			<b>8,157</b>
A.I.1	Registered capital	6,700			8,157
<b>A.II.</b>	<b>Capital funds</b>	<b>2,531</b>			<b>2,531</b>
<b>A.III.</b>	<b>Reserve funds, statutory r. account</b>	<b>104,115</b>			<b>112,388</b>
A.III.1	Legal reserve fund/indivisible fund	92,579			98,905
A.III.2	Statutory and other funds	11,536			13,483
<b>A.V.</b>	<b>Profit / loss - current year</b>	<b>-9,615</b>			<b>-6,327</b>
<b>B.</b>	<b>Other sources</b>	<b>55,097</b>			<b>62,933</b>
<b>B.I.</b>	<b>Reserves</b>	<b>0</b>			<b>204</b>
<b>B.II.</b>	<b>Long-term payables</b>	<b>13,192</b>			<b>10,002</b>
<b>B.III.</b>	<b>Short-term payables</b>	<b>17,598</b>			<b>19,751</b>
B.III.1	Trade payables	6,933			8,588
B.III.6	Payables to social securities,...	1,421			2,101
B.III.7	Due from state - tax liabilities	939			1,000
B.III.10	Estimated payables	1,636			1,542
B.III.11	Other payables	6,578			6,081
<b>B.IV.</b>	<b>Bank loans and fin. accommodations</b>	<b>24,307</b>			<b>32,976</b>
B.IV.1	Long-term bank loans	2,500			3,500
B.IV.2	Short-term bank loans	21,807			29,476
<b>C.I.</b>	<b>Accruals</b>	<b>0</b>			<b>54</b>



**BALANCED SHEET 2003**

	ASSETS (in thousands of CZK)	Current accounting period			Prev. p.
		Gross	Adjustment	Net	Net
	<b>TOTAL ASSETS</b>	<b>304,871</b>	<b>-150,928</b>	<b>153,943</b>	<b>158,828</b>
<b>B.</b>	<b>Fixed assets</b>	<b>254,858</b>	<b>-148,240</b>	<b>106,618</b>	<b>116,437</b>
<b>B.I.</b>	<b>Intangible fixed assets</b>	<b>12,718</b>	<b>-5,347</b>	<b>7,371</b>	<b>8,222</b>
B.I.3	Software	12,036	-5,236	6,800	7,763
B.I.4	Valuable rights	425	-34	391	412
B.I.6	Other intangible fixed assets	106	-76	30	47
B.I.7	Int. fixed assets under construction	150	0	150	0
<b>B.II.</b>	<b>Tangible fixed assets</b>	<b>242,129</b>	<b>-142,892</b>	<b>99,237</b>	<b>108,153</b>
B.II.1	Lands	486	0	486	486
B.II.2	Constructions	97,949	-29,129	68,820	71,169
B.II.3	Equipment	125,107	-102,346	23,759	30,316
B.II.6	Other tangible fixed assets	17,587	-11,415	6,172	6,182
<b>B.III.</b>	<b>Long-term financial assets</b>	<b>10</b>	<b>0</b>	<b>10</b>	<b>62</b>
<b>C.</b>	<b>Current assets</b>	<b>48,816</b>	<b>-2,688</b>	<b>46,128</b>	<b>41,626</b>
<b>C.I.</b>	<b>Inventory</b>	<b>23,209</b>	<b>0</b>	<b>23,209</b>	<b>25,588</b>
C.I.1	Materials	16,770	0	16,770	18,760
C.I.2	Work in progress and semi-products	3,171	0	3,171	3,270
C.I.3	Finished products	3,188	0	3,188	3,550
C.I.5	Merchandise	47	0	47	8
C.I.6	Advanced payments for inventory	33	0	33	0
<b>C.III.</b>	<b>Short-term receivables</b>	<b>23,434</b>	<b>-2,488</b>	<b>20,946</b>	<b>15,680</b>
C.III.1	Trade receivables	17,235	-2,488	14,747	12,602
C.III.6	Due from state - tax receivable	5,304	0	5,304	3,077
C.III.7	Short-term deposits given	893	0	893	0
C.III.9	Other receivables	2	0	2	1
<b>C.IV.</b>	<b>Short-term financial assets</b>	<b>2,173</b>	<b>-200</b>	<b>1,973</b>	<b>358</b>
C.IV.1	Cash	305	0	305	340
C.IV.2	Bank accounts	1,668	0	1,668	18
<b>D.I.</b>	<b>Accruals</b>	<b>1,197</b>	<b>0</b>	<b>1,197</b>	<b>765</b>
	<b>LIABILITIES (in thousands of CZK)</b>		<b>Current period</b>	<b>Previous period</b>	
	<b>TOTAL LIABILITIES</b>		<b>153,943</b>	<b>158,828</b>	
<b>A.</b>	<b>Equity</b>		<b>104,884</b>	<b>103,731</b>	
<b>A.I.</b>	<b>Registered capital</b>		<b>6,051</b>	<b>6,700</b>	
<b>A.II.</b>	<b>Capital funds</b>		<b>2,531</b>	<b>2,531</b>	
<b>A.III.</b>	<b>Reserve funds, statutory r. account</b>		<b>94,101</b>	<b>104,115</b>	
A.III.1	Legal reserve fund/indivisible fund		82,964	92,579	
A.III.2	Statutory and other funds		11,137	11,536	
<b>A.V.</b>	<b>Profit / loss - current year</b>		<b>2,201</b>	<b>-9,615</b>	
<b>B.</b>	<b>Other sources</b>		<b>49,059</b>	<b>55,097</b>	
<b>B.II.</b>	<b>Long-term payables</b>		<b>2,522</b>	<b>13,192</b>	
<b>B.III.</b>	<b>Short-term payables</b>		<b>23,402</b>	<b>17,598</b>	
B.III.1	Trade payables		4,902	6,933	
B.III.4	Payables from partners,...		199	91	
B.III.6	Payables to social securities,...		1,764	1,421	
B.III.7	Due from state - tax liabilities		740	939	
B.III.8	Short-term deposits received		29	0	
B.III.10	Estimated payables		2,159	1,636	
B.III.11	Other payables		13,609	6,578	
<b>B.IV.</b>	<b>Bank loans and fin. accommodations</b>		<b>23,135</b>	<b>24,307</b>	
B.IV.1	Long-term bank loans		1,500	2,500	
B.IV.2	Short-term bank loans		21,635	21,807	

**BALANCED SHEET 2004**

	ASSETS (in thousands of CZK)	Current accounting period			Prev. p.
		Gross	Adjustment	Net	Net
	<b>TOTAL ASSETS</b>	<b>315,804</b>	<b>-154,972</b>	<b>160,832</b>	<b>153,943</b>
<b>B.</b>	<b>Fixed assets</b>	<b>252,227</b>	<b>-153,434</b>	<b>98,793</b>	<b>106,618</b>
<b>B.I.</b>	<b>Intangible fixed assets</b>	<b>12,922</b>	<b>-6,851</b>	<b>6,071</b>	<b>7,371</b>
B.I.3	Software	12,029	-6,700	5,329	6,800
B.I.4	Valuable rights	425	-56	369	391
B.I.6	Other intangible fixed assets	108	-95	13	30
B.I.7	Int. fixed assets under construction	360	0	360	150
<b>B.II.</b>	<b>Tangible fixed assets</b>	<b>239,295</b>	<b>-146,583</b>	<b>92,712</b>	<b>99,237</b>
B.II.1	Lands	486	0	486	486
B.II.2	Constructions	99,932	-31,545	68,387	68,820
B.II.3	Equipment	123,604	-104,762	18,842	23,759
B.II.6	Other tangible fixed assets	15,117	-10,276	4,841	6,172
B.II.7	Tang. fixed assets under construction	156	0	156	0
<b>B.III.</b>	<b>Long-term financial assets</b>	<b>10</b>	<b>0</b>	<b>10</b>	<b>10</b>
<b>C.</b>	<b>Current assets</b>	<b>61,630</b>	<b>-1,538</b>	<b>60,092</b>	<b>46,128</b>
<b>C.I.</b>	<b>Inventory</b>	<b>42,688</b>	<b>0</b>	<b>42,688</b>	<b>23,209</b>
C.I.1	Materials	37,374	0	37,374	16,770
C.I.2	Work in progress and semi-products	2,829	0	2,829	3,171
C.I.3	Finished products	2,415	0	2,415	3,188
C.I.5	Merchandise	70	0	70	47
C.I.6	Advanced payments for inventory	0	0	0	33
<b>C.III.</b>	<b>Short-term receivables</b>	<b>16,235</b>	<b>-1,338</b>	<b>14,897</b>	<b>20,946</b>
C.III.1	Trade receivables	15,394	-1,338	14,056	14,747
C.III.6	Due from state - tax receivable	45	0	45	5,304
C.III.7	Short-term deposits given	793	0	793	893
C.III.9	Other receivables	3	0	3	2
<b>C.IV.</b>	<b>Short-term financial assets</b>	<b>2,707</b>	<b>-200</b>	<b>2,507</b>	<b>1,973</b>
C.IV.1	Cash	283	0	283	305
C.IV.2	Bank accounts	2,224	0	2,224	1,668
C.IV.4	Short-term fin. assets acquired	200	-200	0	0
<b>D.I.</b>	<b>Accruals</b>	<b>1,947</b>	<b>0</b>	<b>1,947</b>	<b>1,197</b>
	<b>LIABILITIES</b> (in thousands of CZK)	<b>Current period</b>			<b>Previous period</b>
	<b>TOTAL LIABILITIES</b>	<b>160,832</b>			<b>153,943</b>
<b>A.</b>	<b>Equity</b>	<b>105,510</b>			<b>104,884</b>
<b>A.I.</b>	<b>Registered capital</b>	<b>5,294</b>			<b>6,051</b>
<b>A.II.</b>	<b>Capital funds</b>	<b>2,531</b>			<b>2,531</b>
<b>A.III.</b>	<b>Reserve funds, statutory r. account</b>	<b>94,486</b>			<b>94,101</b>
<b>A.V.</b>	<b>Profit / loss - current year</b>	<b>3,199</b>			<b>2,201</b>
<b>B.</b>	<b>Other sources</b>	<b>55,322</b>			<b>49,059</b>
<b>B.II.</b>	<b>Long-term payables</b>	<b>2,192</b>			<b>2,522</b>
<b>B.III.</b>	<b>Short-term payables</b>	<b>34,075</b>			<b>23,402</b>
B.III.1	Trade payables	25,535			4,902
B.III.4	Payables from partners,...	223			199
B.III.6	Payables to social securities,...	1,624			1,764
B.III.7	Due from state - tax liabilities	384			740
B.III.8	Short-term deposits received	51			29
B.III.10	Estimated payables	424			2,159
B.III.11	Other payables	5,834			13,609
<b>B.IV.</b>	<b>Bank loans and fin. accommodations</b>	<b>19,055</b>			<b>23,135</b>
B.IV.1	Long-term bank loans	0			1,500
B.IV.2	Short-term bank loans	19,055			21,635

**BALANCED SHEET 2005**

	ASSETS (in thousands of CZK)	Current accounting period			Prev. p.
		Gross	Adjustment	Net	Net
	<b>TOTAL ASSETS</b>	<b>352,952</b>	<b>-163,954</b>	<b>188,998</b>	<b>160,832</b>
<b>B.</b>	<b>Fixed assets</b>	<b>258,468</b>	<b>-162,760</b>	<b>95,708</b>	<b>98,793</b>
<b>B.I.</b>	<b>Intangible fixed assets</b>	<b>13,358</b>	<b>-9,581</b>	<b>3,777</b>	<b>6,071</b>
B.I.3	Software	12,459	-9,396	3,063	5,329
B.I.4	Valuable rights	791	-77	714	369
B.I.6	Other intangible fixed assets	108	-108	0	13
<b>B.II.</b>	<b>Tangible fixed assets</b>	<b>245,100</b>	<b>-153,179</b>	<b>91,921</b>	<b>92,712</b>
B.II.1	Lands	486	0	486	486
B.II.2	Constructions	100,953	-33,673	67,280	68,387
B.II.3	Equipment	129,057	-108,510	20,547	18,842
B.II.6	Other tangible fixed assets	14,550	-10,996	3,554	4,841
B.II.7	Tang.fixed assets under construction	54	0	54	156
<b>B.III.</b>	<b>Long-term financial assets</b>	<b>10</b>	<b>0</b>	<b>10</b>	<b>10</b>
<b>C.</b>	<b>Current assets</b>	<b>92,941</b>	<b>-1,194</b>	<b>91,747</b>	<b>60,092</b>
<b>C.I.</b>	<b>Inventory</b>	<b>46,500</b>	<b>0</b>	<b>46,500</b>	<b>42,688</b>
C.I.1	Materials	34,670	0	34,670	37,374
C.I.2	Work in progress and semi-products	7,509	0	7,509	2,829
C.I.3	Finished products	4,287	0	4,287	2,415
C.I.5	Merchandise	34	0	34	70
<b>C.III.</b>	<b>Short-term receivables</b>	<b>44,730</b>	<b>-994</b>	<b>43,736</b>	<b>14,897</b>
C.III.1	Trade receivables	38,467	-994	37,473	14,056
C.III.4	Receivables from partners,..	327	0	327	0
C.III.6	Due from state - tax receivable	698	0	698	45
C.III.7	Short-term deposits given	220	0	220	793
C.III.8	Estimated receivable	5,015	0	5,015	0
C.III.9	Other receivables	3	0	3	3
<b>C.IV.</b>	<b>Short-term financial assets</b>	<b>1,711</b>	<b>-200</b>	<b>1,511</b>	<b>2,507</b>
C.IV.1	Cash	219	0	219	283
C.IV.2	Bank accounts	1,292	0	1,292	2,224
C.IV.4	Short-term fin. assets acquired	200	-200	0	0
<b>D.I.</b>	<b>Accruals</b>	<b>1,543</b>	<b>0</b>	<b>1,543</b>	<b>1,947</b>
	<b>LIABILITIES (in thousands of CZK)</b>			<b>Current period</b>	<b>Previous period</b>
	<b>TOTAL LIABILITIES</b>			<b>188,998</b>	<b>160,832</b>
<b>A.</b>	<b>Equity</b>			<b>107,714</b>	<b>105,510</b>
<b>A.I.</b>	<b>Registered capital</b>			<b>4,541</b>	<b>5,294</b>
<b>A.II.</b>	<b>Capital funds</b>			<b>2,531</b>	<b>2,531</b>
<b>A.III.</b>	<b>Reserve funds, statutory r. account</b>			<b>95,546</b>	<b>94,486</b>
<b>A.V.</b>	<b>Profit / loss - current year</b>			<b>5,096</b>	<b>3,199</b>
<b>B.</b>	<b>Other sources</b>			<b>81,284</b>	<b>55,322</b>
<b>B.II.</b>	<b>Long-term payables</b>			<b>8,698</b>	<b>2,192</b>
<b>B.III.</b>	<b>Short-term payables</b>			<b>24,284</b>	<b>34,075</b>
B.III.1	Trade payables			14,658	25,535
B.III.4	Payables from partners,...			342	223
B.III.6	Payables to social securities,...			1,662	1,624
B.III.7	Due from state - tax liabilities			783	384
B.III.8	Short-term deposits received			293	51
B.III.10	Estimated payables			675	424
B.III.11	Other payables			5,871	5,834
<b>B.IV.</b>	<b>Bank loans and fin. accommodations</b>			<b>48,302</b>	<b>19,055</b>
B.IV.1	Long-term bank loans			5,047	0
B.IV.2	Short-term bank loans			43,255	19,055

**BALANCED SHEET 2006**

	ASSETS (in thousands of CZK)	Current accounting period			Prev. p.
		Gross	Adjustment	Net	Net
	<b>TOTAL ASSETS</b>	<b>367,146</b>	<b>-167,868</b>	<b>199,278</b>	<b>188,998</b>
<b>B.</b>	<b>Fixed assets</b>	<b>259,842</b>	<b>-164,969</b>	<b>94,873</b>	<b>95,708</b>
<b>B.I.</b>	<b>Intangible fixed assets</b>	<b>14,101</b>	<b>-12,007</b>	<b>2,094</b>	<b>3,777</b>
B.I.3	Software	12,425	-11,806	619	3,063
B.I.4	Valuable rights	846	-93	753	714
B.I.6	Other intangible fixed assets	108	-108	0	0
<b>B.II.</b>	<b>Tangible fixed assets</b>	<b>245,731</b>	<b>-152,962</b>	<b>92,769</b>	<b>91,921</b>
B.II.1	Lands	486	0	486	486
B.II.2	Constructions	104,323	-35,949	68,374	67,280
B.II.3	Equipment	125,416	-106,017	19,399	20,547
B.II.6	Other tangible fixed assets	14,550	-10,996	3,554	3,554
B.II.7	Tang. fixed assets under construction	564	0	564	54
B.II.8	Advance payments for tang.f.as.	392	0	392	0
<b>B.III.</b>	<b>Long-term financial assets</b>	<b>10</b>	<b>0</b>	<b>10</b>	<b>10</b>
<b>C.</b>	<b>Current assets</b>	<b>105,965</b>	<b>-2,899</b>	<b>103,066</b>	<b>91,747</b>
<b>C.I.</b>	<b>Inventory</b>	<b>39,284</b>	<b>-1,900</b>	<b>37,384</b>	<b>46,500</b>
C.I.1	Materials	30,069	-1,900	28,169	34,670
C.I.2	Work in progress and semi-products	5,193	0	5,193	7,509
C.I.3	Finished products	3,855	0	3,855	4,287
C.I.5	Merchandise	167	0	167	34
<b>C.III.</b>	<b>Short-term receivables</b>	<b>58,342</b>	<b>-999</b>	<b>57,343</b>	<b>43,736</b>
C.III.1	Trade receivables	51,738	-999	50,739	37,473
C.III.4	Receivables from partners,..	426	0	426	327
C.III.6	Due from state - tax receivable	613	0	613	698
C.III.7	Short-term deposits given	339	0	339	220
C.III.8	Estimated receivable	5,224	0	5,224	5,015
C.III.9	Other receivables	2	0	2	3
<b>C.IV.</b>	<b>Short-term financial assets</b>	<b>8,339</b>	<b>0</b>	<b>8,339</b>	<b>1,511</b>
C.IV.1	Cash	269	0	269	219
C.IV.2	Bank accounts	8,070	0	8,070	1,292
<b>D.I.</b>	<b>Accruals</b>	<b>1,339</b>	<b>0</b>	<b>1,339</b>	<b>1,543</b>
	<b>LIABILITIES (in thousands of CZK)</b>			<b>Current period</b>	<b>Previous period</b>
	<b>TOTAL LIABILITIES</b>			<b>199,278</b>	<b>188,998</b>
<b>A.</b>	<b>Equity</b>			<b>113,014</b>	<b>107,714</b>
<b>A.I.</b>	<b>Registered capital</b>			<b>3,813</b>	<b>4,541</b>
<b>A.II.</b>	<b>Capital funds</b>			<b>2,531</b>	<b>2,531</b>
<b>A.III.</b>	<b>Reserve funds, statutory r. account</b>			<b>97,797</b>	<b>95,546</b>
<b>A.V.</b>	<b>Profit / loss - current year</b>			<b>8,873</b>	<b>5,096</b>
<b>B.</b>	<b>Other sources</b>			<b>86,264</b>	<b>81,284</b>
<b>B.II.</b>	<b>Long-term payables</b>			<b>6,761</b>	<b>8,698</b>
<b>B.III.</b>	<b>Short-term payables</b>			<b>30,944</b>	<b>24,284</b>
B.III.1	Trade payables			19,236	14,658
B.III.4	Payables from partners,...			210	342
B.III.6	Payables to social securities,...			1,892	1,662
B.III.7	Due from state - tax liabilities			357	783
B.III.8	Short-term deposits received			279	293
B.III.10	Estimated payables			1,757	675
B.III.11	Other payables			7,213	5,871
<b>B.IV.</b>	<b>Bank loans and fin. accommodations</b>			<b>48,559</b>	<b>48,302</b>
B.IV.1	Long-term bank loans			2,658	5,047
B.IV.2	Short-term bank loans			45,901	43,255

## APPENDIX A IX: PROFIT / LOSS STATEMENT 2002-2006

### PROFIT / LOSS STATEMENT 2002

	Profit / loss account	Current period	Previous period
	(in thousands of CZK)		
I.	Revenues from sold goods	118	162
A.	Expenses on sold goods	60	128
<b>+</b>	<b>Sale margin</b>	<b>58</b>	<b>34</b>
<b>II.</b>	<b>Production</b>	<b>160,307</b>	<b>184,117</b>
II.1	Revenues from own products	160,978	182,545
II.2	Change in inventory of own products	-2,953	-1,158
II.3	Capitalization	2,282	2,730
B.	<b>Production consumption</b>	<b>82,534</b>	<b>91,929</b>
B.1	Consumption of material and energy	73,060	83,455
B.2	Services	9,474	8,484
<b>+</b>	<b>Value Added</b>	<b>77,831</b>	<b>92,222</b>
C.	<b>Personnel expenses</b>	<b>82,720</b>	<b>94,549</b>
C.1	Wages and salaries	60,662	69,140
C.2	Remuneration of board members	60	70
C.3	Social security expenses/health insurance	20,623	23,661
C.4	Other social expenses	1,375	1,678
D.	Taxes and fees	160	150
E.	Depreciations of intangible and tang. assets	14,538	15,019
<b>III.</b>	<b>Revenues from disposals of fixed assets</b>	<b>4,253</b>	<b>3,519</b>
III.2	Revenues from disposals of materials	4,253	3,519
F.	<b>Net book value of disposed fixed assets</b>	<b>3,646</b>	<b>2,572</b>
F.2	Net book value of sold material	3,646	2,572
G.	Change in operating reserves / adjustments	-117	-4
<b>IV.</b>	<b>Other operating revenues</b>	<b>16,318</b>	<b>18,007</b>
H.	Other operating expenses	1,621	1,314
<b>*</b>	<b>Operating profit / loss</b>	<b>-4,166</b>	<b>148</b>
M.	Change in financial reserves / adjustments	-204	122
X.	Interest revenues	19	1
N.	Interest expenses	3,144	3,314
XI.	Other financial revenues	866	417
O.	Other financial expenses	3,804	3,267
<b>*</b>	<b>Profit / loss from financial operations</b>	<b>-5,859</b>	<b>-6,285</b>
Q.	Income tax on ordinary income	0	0
<b>**</b>	<b>Operating profit / loss ordinary activity</b>	<b>-10,025</b>	<b>-6,137</b>
XIII.	Extraordinary revenues	410	0
R.	Extraordinary expenses	0	190
S.	Income tax on extraordinary income	0	0
<b>*</b>	<b>Operating profit / loss extraordinary act.</b>	<b>410</b>	<b>-190</b>
<b>***</b>	<b>Profit / loss of current accounting period</b>	<b>-9,615</b>	<b>-6,327</b>
	<b>Profit / loss before tax</b>	<b>-9,615</b>	<b>-6,327</b>

**PROFIT / LOSS STATEMENT 2003**

	<b>Profit / loss account</b>	<b>Current period</b>	<b>Previous period</b>
	(in thousands of CZK)		
I.	Revenues from sold goods	160	118
A.	Expenses on sold goods	106	60
<b>+</b>	<b>Sale margin</b>	<b>54</b>	<b>58</b>
II.	<b>Production</b>	<b>163,778</b>	<b>160,307</b>
II.1	Revenues from own products	161,145	160,978
II.2	Change in inventory of own products	-166	-2,953
II.3	Capitalization	2,799	2,282
B.	<b>Production consumption</b>	<b>81,303</b>	<b>82,534</b>
B.1	Consumption of material and energy	70,556	73,060
B.2	Services	10,747	9,474
<b>+</b>	<b>Value Added</b>	<b>82,529</b>	<b>77,831</b>
C.	<b>Personnel expenses</b>	<b>79,271</b>	<b>82,720</b>
C.1	Wages and salaries	58,140	60,662
C.2	Remuneration of board members	60	60
C.3	Social security expenses/health insurance	19,810	20,623
C.4	Other social expenses	1,261	1,375
D.	Taxes and fees	121	160
E.	Depreciations of intangible and tang. assets	12,136	14,538
III.	<b>Revenues from disposals of fixed assets</b>	<b>4,566</b>	<b>4,253</b>
III.1	Revenues from disposals of fixed assets	636	0
III.2	Revenues from disposals of materials	3,930	4,253
F.	<b>Net book value of disposed fixed assets</b>	<b>3,547</b>	<b>3,646</b>
F.1	Net book value of disposed fixed assets	130	0
F.2	Net book value of sold material	3,417	3,646
G.	Change in operating reserves / adjustments	-1,058	-117
IV.	<b>Other operating revenues</b>	<b>16,326</b>	<b>16,318</b>
H.	Other operating expenses	2,678	1,621
<b>*</b>	<b>Operating profit / loss</b>	<b>6,726</b>	<b>-4,166</b>
M.	Change in financial reserves / adjustments	-217	-204
X.	Interest revenues	0	19
N.	Interest expenses	2,452	3,144
XI.	<b>Other financial revenues</b>	<b>661</b>	<b>866</b>
O.	Other financial expenses	2,951	3,804
<b>*</b>	<b>Profit / loss from financial operations</b>	<b>-4,525</b>	<b>-5,859</b>
Q.	Income tax on ordinary income	0	0
<b>**</b>	<b>Operating profit / loss ordinary activity</b>	<b>2,201</b>	<b>-10,025</b>
XIII.	<b>Extraordinary revenues</b>	<b>0</b>	<b>410</b>
R.	Extraordinary expenses	0	0
S.	Income tax on extraordinary income	0	0
<b>*</b>	<b>Operating profit / loss extraordinary act.</b>	<b>0</b>	<b>410</b>
<b>***</b>	<b>Profit / loss of current accounting period</b>	<b>2,201</b>	<b>-9,615</b>
	<b>Profit / loss before tax</b>	<b>2,201</b>	<b>-9,615</b>

**PROFIT / LOSS STATEMENT 2004**

	<b>Profit / loss account</b>	<b>Current period</b>	<b>Previous period</b>
	(in thousands of CZK)		
I.	Revenues from sold goods	189	160
A.	Expenses on sold goods	172	106
<b>+</b>	<b>Sale margin</b>	<b>17</b>	<b>54</b>
<b>II.</b>	<b>Production</b>	<b>156,165</b>	<b>163,778</b>
II.1	Revenues from own products	155,026	161,145
II.2	Change in inventory of own products	-882	-166
II.3	Capitalization	2,021	2,799
B.	<b>Production consumption</b>	<b>73,883</b>	<b>81,303</b>
B.1	Consumption of material and energy	61,766	70,556
B.2	Services	12,117	10,747
<b>+</b>	<b>Value Added</b>	<b>82,299</b>	<b>82,529</b>
C.	<b>Personnel expenses</b>	<b>81,414</b>	<b>79,271</b>
C.1	Wages and salaries	59,790	58,140
C.2	Remuneration of board members	60	60
C.3	Social security expenses/health insurance	19,833	19,810
C.4	Other social expenses	1,731	1,261
D.	Taxes and fees	92	121
E.	Depreciations of intangible and tang. assets	12,009	12,136
<b>III.</b>	<b>Revenues from disposals of fixed assets</b>	<b>9,943</b>	<b>4,566</b>
III.1	Revenues from disposals of fixed assets	1,181	636
III.2	Revenues from disposals of materials	8,762	3,930
F.	<b>Net book value of disposed fixed assets</b>	<b>7,547</b>	<b>3,547</b>
F.1	Net book value of disposed fixed assets	793	130
F.2	Net book value of sold material	6,754	3,417
G.	Change in operating reserves / adjustments	-1,227	-1,058
IV.	Other operating revenues	17,863	16,326
H.	Other operating expenses	2,845	2,678
<b>*</b>	<b>Operating profit / loss</b>	<b>7,425</b>	<b>6,726</b>
M.	Change in financial reserves / adjustments	0	-217
X.	Interest revenues	4	0
N.	Interest expenses	1,763	2,452
XI.	Other financial revenues	973	661
O.	Other financial expenses	3,440	2,951
<b>*</b>	<b>Profit / loss from financial operations</b>	<b>-4,226</b>	<b>-4,525</b>
Q.	Income tax on ordinary income	0	0
<b>**</b>	<b>Operating profit / loss ordinary activity</b>	<b>3,199</b>	<b>2,201</b>
XIII.	Extraordinary revenues	0	0
R.	Extraordinary expenses	0	0
S.	Income tax on extraordinary income	0	0
<b>*</b>	<b>Operating profit / loss extraordinary act.</b>	<b>0</b>	<b>0</b>
<b>***</b>	<b>Profit / loss of current accounting period</b>	<b>3,199</b>	<b>2,201</b>
	<b>Profit / loss before tax</b>	<b>3,199</b>	<b>2,201</b>



**PROFIT / LOSS STATEMENT 2005**

	<b>Profit / loss account</b>	<b>Current period</b>	<b>Previous period</b>
	(in thousands of CZK)		
I.	Revenues from sold goods	295	189
A.	Expenses on sold goods	265	172
<b>+</b>	<b>Sale margin</b>	<b>30</b>	<b>17</b>
<b>II.</b>	<b>Production</b>	<b>302,479</b>	<b>156,165</b>
II.1	Revenues from own products	296,150	155,026
II.2	Change in inventory of own products	5,050	-882
II.3	Capitalization	1,279	2,021
B.	<b>Production consumption</b>	<b>217,230</b>	<b>73,883</b>
B.1	Consumption of material and energy	202,848	61,766
B.2	Services	14,382	12,117
<b>+</b>	<b>Value Added</b>	<b>85,279</b>	<b>82,299</b>
C.	<b>Personnel expenses</b>	<b>88,062</b>	<b>81,414</b>
C.1	Wages and salaries	64,781	59,790
C.2	Remuneration of board members	60	60
C.3	Social security expenses/health insurance	21,774	19,833
C.4	Other social expenses	1,447	1,731
D.	Taxes and fees	103	92
E.	Depreciations of intangible and tang. assets	11,294	12,009
<b>III.</b>	<b>Revenues from disposals of fixed assets</b>	<b>17,711</b>	<b>9,943</b>
III.1	Revenues from disposals of fixed assets	639	1,181
III.2	Revenues from disposals of materials	17,072	8,762
F.	<b>Net book value of disposed fixed assets</b>	<b>13,043</b>	<b>7,547</b>
F.1	Net book value of disposed fixed assets	374	793
F.2	Net book value of sold material	12,669	6,754
G.	Change in operating reserves / adjustments	810	-1,227
<b>IV.</b>	<b>Other operating revenues</b>	<b>22,491</b>	<b>17,863</b>
H.	Other operating expenses	1,976	2,845
<b>*</b>	<b>Operating profit / loss</b>	<b>10,193</b>	<b>7,425</b>
M.	Change in financial reserves / adjustments	0	0
X.	Interest revenues	9	4
N.	Interest expenses	2,675	1,763
XI.	Other financial revenues	4,704	973
O.	Other financial expenses	7,135	3,440
<b>*</b>	<b>Profit / loss from financial operations</b>	<b>-5,097</b>	<b>-4,226</b>
Q.	Income tax on ordinary income	0	0
<b>**</b>	<b>Operating profit / loss ordinary activity</b>	<b>5,096</b>	<b>3,199</b>
XIII.	Extraordinary revenues	0	0
R.	Extraordinary expenses	0	0
S.	Income tax on extraordinary income	0	0
<b>*</b>	<b>Operating profit / loss extraordinary act.</b>	<b>0</b>	<b>0</b>
<b>***</b>	<b>Profit / loss of current accounting period</b>	<b>5,096</b>	<b>3,199</b>
	<b>Profit / loss before tax</b>	<b>5,096</b>	<b>3,199</b>



**PROFIT / LOSS STATEMENT 2006**

	<b>Profit / loss account</b>	<b>Current period</b>	<b>Previous period</b>
	(in thousands of CZK)		
I.	Revenues from sold goods	16,802	295
A.	Expenses on sold goods	14,373	265
<b>+</b>	<b>Sale margin</b>	<b>2,429</b>	<b>30</b>
II.	<b>Production</b>	<b>321,024</b>	<b>302,479</b>
II.1	Revenues from own products	322,383	296,150
II.2	Change in inventory of own products	-2,126	5,050
II.3	Capitalization	767	1,279
B.	<b>Production consumption</b>	<b>224,555</b>	<b>217,230</b>
B.1	Consumption of material and energy	211,992	202,848
B.2	Services	12,563	14,382
<b>+</b>	<b>Value Added</b>	<b>98,898</b>	<b>85,279</b>
C.	<b>Personnel expenses</b>	<b>93,236</b>	<b>88,062</b>
C.1	Wages and salaries	68,602	64,781
C.2	Remuneration of board members	60	60
C.3	Social security expenses/health insurance	22,891	21,774
C.4	Other social expenses	1,683	1,447
D.	Taxes and fees	118	103
E.	Depreciations of intangible and tang. assets	10,722	11,294
III.	<b>Revenues from disposals of fixed assets</b>	<b>8,384</b>	<b>17,711</b>
III.1	Revenues from disposals of fixed assets	196	639
III.2	Revenues from disposals of materials	8,188	17,072
F.	<b>Net book value of disposed fixed assets</b>	<b>6,614</b>	<b>13,043</b>
F.1	Net book value of disposed fixed assets	0	374
F.2	Net book value of sold material	6,614	12,669
G.	Change in operating reserves / adjustments	1,905	810
IV.	<b>Other operating revenues</b>	<b>23,653</b>	<b>22,491</b>
H.	Other operating expenses	3,999	1,976
<b>*</b>	<b>Operating profit / loss</b>	<b>14,341</b>	<b>10,193</b>
M.	Change in financial reserves / adjustments	-200	0
X.	Interest revenues	27	9
N.	Interest expenses	2,372	2,675
XI.	<b>Other financial revenues</b>	<b>3,088</b>	<b>4,704</b>
O.	Other financial expenses	6,411	7,135
<b>*</b>	<b>Profit / loss from financial operations</b>	<b>-5,468</b>	<b>-5,097</b>
Q.	Income tax on ordinary income	0	0
<b>**</b>	<b>Operating profit / loss ordinary activity</b>	<b>8,873</b>	<b>5,096</b>
xiii.	Extraordinary revenues	0	0
R.	Extraordinary expenses	0	0
S.	Income tax on extraordinary income	0	0
<b>*</b>	<b>Operating profit / loss extraordinary act.</b>	<b>0</b>	<b>0</b>
<b>***</b>	<b>Profit / loss of current accounting period</b>	<b>8,873</b>	<b>5,096</b>
	<b>Profit / loss before tax</b>	<b>8,873</b>	<b>5,096</b>