European Polytechnic Institute, Ltd. in Kunovice

Study Branch: Finances and Taxes

# FINANCIAL ANALYSIS OF LUHAČOVICE ELEMENTARY SCHOOL

(Bachelor Thesis)

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**Kunovice, April 2005**

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## Zadání bakalářské práce

Vážený studente, vážená studentko,

   jako téma Vaší bakalářské práce ve studiu oboru Finance a daně Vám zadávám

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### *Finanční analýza ZŠ Luhačovice*

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Osnova:  1. Úvod, charakteristika podniku
2. Finanční analýza z pohledu teorie a nových poznatků
3. Finančně analytická část
4. Zhodnocení finančního zdraví a návrh strategií
5. Výběr a implementace zvolené strategie
6. Vyhodnocení
Bakalářská práce bude zpracována pro:ZŠ Luhačovice

Tento dokument  je součástí Vaší  bakalářské práce.

S pozdravem

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Ing. Oldřich **Kratochvíl**
rektor

Hereby I declare, that I have worked out the work independently under the leadership of Mgr. Bohumila Vihova and in the list of literature I have shown all used literature and special sources.

Kunovice, April 2005

Tomas Minarik

**Abstract**

## An introduction, characteristic of the company

In the general surroundings of all of us there is a success of business in the conditions of a market economy is related on the knowledge of private company and surroundings. This knowledge is taken as a result of collating and also systematical validation of experiences which are obtained from the observed facts. The ability of using this experiences makes possible to gather these facts for the future decisions which will help to lead the company with a prosperious and healthy progress.

In my bachelor work I am going to use collated information for making a financial analisis of the primary school in Luhačovice. The actual condition of the primary school is discovered with a hepl of this financial analisis which at the same time should show the development of the past in the accounting unit. This financial analisis must indicate the reasons of deterioration or improvement of the income, find the right method for funding the assets and the whole system of economy. A financial analisis assays the structure of a corporate assets at the primary school, a quality and an intensity of their using, also a method of their financing, profitability of a primary school, its solvency, liquidity and other facts of its financial life.

This bachelor work is going to be divided for two sections. The first part is the theoretical and the second one is practical. In the theoretical part i will try to approximate the basic idea and the principal of financial analisis. I am going to explain here every single accounting statements and other sources as a basics for the calculation of financial rates. These accounting statements are e.g. a balance sheet, a profit and loss report and a cash flow. After that i will describe in a short the basic methods of financial analisis from which i choose one which i will describe in detail. The practical part will include analyzing this method from the practical side and then the subsequent evaluation. The summary will be writen at the end after closing the whole work.

The main task of financial analisis is the checking of a current financial situation in the company and also the future expectacion. It is the diagnosis of economy in the company which makes possible, if it does in skilled and regularly, to detect

eventual failures of „financial health". The results of this analisis are essential sources of information for the quality leading in the company and for the improving of the decision – making processes.

The basic source of information for the whole financial analisis is the accountancy.

It provides the information written below, which are included in the balance sheet, the profit and loss report and the cash flow:

- about condition and mobility of the assets of the company,
- about sources from which were assets purchased,
- about net assets,
- about the income,
- about the costs and profits.

The financial analisis must not only find out the present financial situation in the company but also the causes of its condition and suggests the possible arrangements which will manage the improvement of a condition.
The financial analisis characterizes the financial health in the company proporcions between the assets, capital, profits, costs, incomes and expenses. The proporcions are expressed by the rate indexes which are related to the profitability and the financial risks.

Business name :    The Primary school Luhačovice
Legal tital :       the contribution s  organization
Address :          Školní 666, 763 26 Luhačovice
IČ :               49 15 66 08

## 2.    The financial analisis from the view of the theory and new knowledge

### 2.1    The main task of the financial analisis

„The main task of the financial analisis is, as far as it is possible to judge complexly the level of present financial situation of the company (financial health), to judge the view of the financial situation in the company in future and prepare bases for improving the economical situation of the company, for ensuring more

prosperity of the company, for the preparation and for the higher quality of decision´s processes.

The reaching of the basic aim in business is depend on the correct operation. The quality operation needs quality information. The results of the financial analisis are one of the groups necessary information for leading the company."[1]

The quality financial operation will not exist without financial analisis. Only the solid and particular verification of reached financial results, the accumulation of causes which influence these results and their systematical valuation in the mutual conections can reveal the real financial situation of the company, the level of its „financial health" and can accord seriál information for the specific determinating as in the financial area of managing company so in the areas factual determination. The financial analisis permits to identify on time manufacturing, delivery or financial depression, to establish the level of the financial health in the company, make the decision processes more quality.

The financial analisis is the enterance for the decision making process which reacts on strong and weak sides of the financial situation. It also looks for the most effective solutions in the area of financial sources and it uses and formulates the financial aims and means for the future period in the financial plan which is also essential ending for each business plan.

Making financial decisions belong to one of the most difficult leading processes. Each decision supposes good knowledge of the economical basic in leading effect with its connections with other leading and also independent dimension, estimation of available information and forecasts, reflicts the risks and suspenses. The human factor is in this determination the carrier of interests for the existation of the company and on the profit. This human factor knows the specific apart from financial conditions for the realization of the business plan. However there exist procedures which are used without any respect for the material contents of enterprise. These procedures apply to the routine processing of the

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[1] viz. Konečný, M. *Finanční analýza a plánování.* Brno: Fakulta podnikatelská VUT, 1999. s. 5.

entering information and preparation for the plan of future discussion and behaviour.[1]

It isn´t nor easy nor fast to achieve for certain the evaluation of financial situation in the company. It requires the ability on the basic of many followed calculations and mathematical analisis to understand very well the real economical processes in the neccesary conections and explain them, to quantify the results in a connection with each possible options of decesions.

For most companies is reliable to use services of external specialists who have experiences with the financial analisis, work with quality software, aren´t connected with this company and its managing in the past. All detailed knowledge of the employees of the company are also very important for the financial analisis. This process is reliable:

1) The company does the financial analisis of the economic activity with its employees and these dates are evaluated regulary and are used for the preparation of decisions.

2) There is a need of objective evaluation in the first signals of the imminent crisis if it is neccesary to require a special company for the cooperation or if it suffices to use its own employees.

3) The companies which are in the financial crisis especially, if it is accompanized by the functional and consumptional problems, they should ask for help of the specialized companies as soon as possible.

## 2.2 The financial health

„The financial health of the company is possible to review on the basic of abilities in the company:
- to hold its own existence,
- to produce effects for the owners in the company in a form of the best incomes.

It discusses the ability to hold the dynamic equilibrium and in a relation of the changing conditions and requirements of ambient environment also in a relation to the final interest groups which participate in function of the company. The existencion of the company can be threaten by the unfavourable financial

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[1] viz. Konečný, M. *Finanční analýza a plánování*. Brno: Fakulta podnikatelská VUT, 1999. s. 5.

transactions. The incomes present the differences between the earning and costs."[1]

The essential condition of the financial health is the perspective of long-term liquidity. Consequently it is important the rate of company´s debts and constatntly deposited shareholder´s capital. The lower this rate is, the less vurnerable the company is in the next years with the temporary weaker results.

The financial health involves in additon to long-term liquidity also sufficient overage of returns on costs, which means sufficient profit which is the earning of owners. The higher is this rate of profit to invested capital the better is it for the financial health of the company.

**The best financial health** establishes the assumptions of gaining external financial sources for other company development. **A good financial health** makes possible the effective development of the company from the internal financial sources. **Favourable financial health** consists in company doesn´t have any financial problems with preservation of the permanent existencion on the achievable level. When is the financial health assessing it isn´t important only the immediate condition but about the situation in a company in next few years, about the development improvement, about the frequency and the size of variation. If between monetary incomes and expenses the tension is incresing and the long-term unfavourable income can manage to the insolvency or over-debits.

The financial distress happens when the problems of the liquidity are so serious that is impossible to deal it without the principal changes in activities of the company and in the means of its funding.

The temporary conditions between the financial health and financial distress:
- the liquidity isn´t threaten, the company is in a loss,
- the company sometimes must get over the difficulty with cash flows, shows the benefit.

## 2.3 Methods of the financial analisis

Methods of the financial analisis can be divided into elementary and higher methods. To the elementary methods of the financial analisis belong:

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[1] viz. Konečný, M. *Finanční analýza a plánování......* s. 58

- The analisis of status (absolute) indexes (the analisis of the trends and percentage analisis)
- The analisis of differential and flow indicatiors (analisis of funds and analisis cash flow, returns, costs, profits)
- The analysis of ratio´s indicatiors (analisis of liquidity, profitability, activity, debts, assets and financial structure, indicatiors of the capital market and analisis indicatiors on the basic of cash flow)
- Analysis of the scheme indicatiors
- Summary indicatiors of economy

The higher methods are following:

- Mathematical-statistical methods
- Non-statistical methods

„The purpose of analisis of the financial condition is mostly to express if it is possible the complex financial situation in the company, which means to intercept all the factors, optionaly beside more detailed analisis valorizes some of factor in the financial situation (analysis of debts, analysis of insolvency etc.)"[1].

## 2.4 Ratio and comparative analysis

The ratio analysis is the commonest implement of the financial analysis and is used very much and misused. The financial rate is possible to gain by dividing any elements or aggregate of items from balance sheet or from profit and loss account by any other items. It doesn´t mean of course that the result takes always to better identification of the financial requirement of the compnay or its economy. The financial analysis should be engaged in those rates which are relevant to the specific financial problems or decisions. The misuse of the financial analysis happens because some financial items attach importance to themselves. One item can be symptom but for the real ending for finding the cause is necessary to make the analysis from more aspects.[2]

The ratio items make possible comparison of certain company with other companies or with sector of average – competitive companies. This comparison is called comparative analysis. The balance sheet and the profit and loss report is

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[1] viz. Grünwald, R., Termer, T., Holečková, J. *Finanční analýza a plánování.* Praha: Vydavatelství Nad zlato, 1993. s. 85

[2] srov. Blaha, Z. S., Jindřichovská, I. *Jak posoudit finanční zdraví firmy.* Praha: Management Press, 1994. s.66

set together in a common rate exept this type of items and all items of the balance sheet will divide by the total assetss and all items of the profit and loss report will divide by the total sales. With this detailes we get ratio items (percent interests) which help us in the inter-company comparison. This style of analysis use to be called „the technique of percentage analysis".[1]

The advantage of ratio analysis is that it reduces the gross details which are different according to the size of companies on the common and also comparative base. It is the most clever way how to compare the actual financial information of the special company back to its historical dates or to the dates of other companies which are smaller or bigger or to the group of other companies (like branch of industry).

## 2.5    The principle of financial analysis

Financial analysis don´t have accurate to all detailes developed rules which would be used in the same way all over the world. There exist only usual principals which are based on the logic of the problem or on the needs established by the most doing works which issue again the frequentest problems searched by the financial analyses. So many systems begin and are used in processing items about economy which are with its quality very good. The differences between predicted value from the allowed information from each principles of analysis are mostly so big that their results can´t compare. This reality brings lots of problems in the real life. The frequent difficulties bring also different assembly of financial statements from which come the grounds for the financial analysis.[2]

Because there exist the most elaborated system of financial analysis in USA and all the financial analysis work according to this systém all around in the EU countries, they use this system as a basic standard principle of the financial analysis recommended in the textbooks of financial management.

The principal of financial analysis involves these steps:

1. the calculation of ratio items for reviewed company,

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[1] srov. Synek, M. a kol. *Nauka o podniku*. 3. vyd. Praha: VŠE v Praze, 1996. s. 54
[2] srov. Hábová, H. *Finanční analýza firmy Elektron Zlín, s. r. o.* (Bakalářská práce). Zlín, VUT Brno. 1999 s.26

2. the comparison of ratio item with branch averages (comparative analysis),

3. the evaluation of the ratio items in time (trend analysis),

4. the evaluation of the relationship between ratio items,

5. the proposal of arrangement.

## 2.6 The way of evaluation the items

It doesn´t have any meaning to ilzolate assessment of the values which are calculated for the specific company to the specific date doesn´t have any practical sence. The potencial analitic ability of items will show only in comparisoning. The original bases for comparison can be follows:

**1. The comparison in time** means comparing the actual value of items with the values of values calculated in the same company in the past. The time comparison is evidently the most frequent mean in analyzing items. The strongest site of comparing items in time is that it is possible to see the possitive and negative trends of development inside of the company and on their basics recognize and create optionally rectify already akcepted managed decisions. The disadvantage in the comparison in „self with itself" is also the fact that the general measure miss.

**2. The comparison in the space** rectify a little bit the dissadvantage above. For the inter-company comparison applies that the factor which limits the comparison can be methodical differences in inventoring account details in different companies

**3. The comparison with the plan** compares real achieved values with the values calculated on the basic of planing entering detailes.

**4. The comparison on the basic of expert´s experiences** is subjedctive matter until certain level. But we should not undervalue it in any occasion. The qualified analysis is not achievable without relatively considerable experiences nor in the comparison in time, between the companies, with or without the plan.

The grafical indication of development of value items is useful and withal easy instrument for the work of analyst in the time comparison. It means to put down the development of values from different items to the same graph. There are well recognized all different ways in developments of values from different items in this

way designed graph. We can gather from the different values of different items for the typical failures of financial „health" in the company.[1]

## 2.7 The grounds and reliability of the analysis

In the conditions of developed market economies dominates the trust between each market entities. This trust is important pricipal of business ethics and major factor of economical stability. The companies press for transparency, make public, or other transmits of information about themself in this kind of environment. If the company is credible then the generosity in the relation to investors, banks and other users is returned in the successful business transactions. This issue bears closely on function of capital market. In the Czech Republic there still dominate too many speculations and the direct connection between the level of market price of share or of bonds, which would predicate about the real company's valueis not completely clear. When we judge the questions of credibility it is neccessary to say that lower rate of credibility in the financial items and also lower rate of comparability of financial analysis's results needn't be only the consequence of making public the fallible numbers in the accounting unit. Important is also the selection of detailes with the best predicate value and on its original required formulation adjustment[2].

## 2.8 The condition of accountancy

The systém in accountancy is not equip with such as instruments which could avoid the subjectiv influence on shown numbers. It applies in single-entry and also in double-entry bookkeeping.

In the work with financial details it is neccessary to remmember following facts:

- The accountancy doesn't have instruments which would ensure single-valued showing of income or single-valued (always the same) posting of accounting cases; In our conditions of transformation of economy grows lower comparability of accounting cases not only from different companies but also in the same company in the time, in the eventuality of frequent legislative transformations.

[1] srov. Hábová, H. *Finanční analýza firmy Elekron Zlín, s.r.o.* (Bakalářská práce). Zlín: VUT Brno, 1999s s. 32
[2] srov. tamtéž. s. 15

- On the other side the accountancy dispose of tool with its help the borders can be established and limited area for subjective interaction of shown financial details (e.g. costs, returns, income, the height of assets, debts, owner´s equity) at the end of reporting period.

Problems, which influenced the predicate value of accounting details, are connected e.g. with this that:

- Evaluation of assets is based on the principle of historical prices in accountancy; in the term of inflation and in the changes of market prices then the accountancy prices don´t respond to the real value of assets,
- The financial statement reprezents results for whole year but don´t give the review about the casual or boom variations, about eventual short-term financial tightness through the year,
- The accountancy don´t catch the effects of non-monetary factors (e.g. the image of company, the qualification of its employees, the position in the market)[1].


## 2.9 The sources of financial information

Entering datas of the financial analysis come from three big sources:

1) Accountancy data of company copied from

- Accounting statements of financial accountancy, supplements to the financial statement,
- Inter-departmental accountacy,
- Annual reports, detailes about condition and development of orders, reports about the company´s strategy, planning calculations, market researches, and other already done analyses,

2) Other datas about the company; copied from

- Company´s statistic (demand, production, sale, employment, etc.), reports from work and earning grounds,
- Internal company´s rules, predictions and news from the leader emplyees, etc.,

3) External datas - datas from economical department in the company, e.g.

- Details of the state statistic of Ministries, other state institucions,

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[1] srov. Černá, A.,Dostál, J.,Sůvová, H. *Finanční analýza.* ..... s.15

- Details from special magazines, stock exchange news, the news about the development of currency relations and interest rates,
- Commentary of managers, predictions of analyst in different institucions,
- Independent evaluations and prognoses of financial advisers, agencies

The selection of information sources is subordinated to the specific purpos of financial analysis and to the chosen method of financial analysis.[1]

The financial accountancy shows the major detailes of quantitative character for the needs of financial analysis. Principals of keeping the accountancy and the structure of accountancy statements must come out to meet the need of gaining the truthest picture of financial situation in the company.

„Except the details which are result from financial accountacy are used for filling some items also details from financial market (e.g. market price of share). Details with the natural character (e.g. the number of employees) are also used as one from many causal items of rate of profit. It is neccessary to know many other qualitative information for the correct evaluation, these information specify concrete conditions of activity of given company."[2]

## 2.10 The accountancy statements

Absolutly preponderatean share of information sources, from which the financial analysis comes down, represent reports of financial accountancy. To the basic accountancy statements belong the balance sheet, the profit and loss statement and maybe also statement about the cash flow. The accountancy statements locate the condition of assets, sources, costs and returns of company. If there are true and correct, they become the important source of information for the analysis of financial condition in the company. These statements of financial accountancy are modified by the Ministry of the exchequer in their form and contents.

The company lent me annual statements from 1999 to 2001 for this work. The balance sheet and the profit and loss statement are enclosed in encl. I. The present statements are very detailed that is why i have changed them to the easier and more tabular form before i started making analysis.

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[1] srov. Konečný, M. *Finanční analýza a plánování*. Brno: Fakulta podnikatelská VUT, 1999. s. 11
[2] viz. Valach, J. *Finanční analýza - nezbytný nástroj finančního řízení podniku*. Dobruška: NAIKA, a. s., prosinec 1995. s. 65

Processes of financing create gradually the capital of the company. The processes of investing fit this capital in every single folder of assets. The process is pojected in accountatncy. The result is in the balance sheet to the date of the financial statement and picks up the condition of company´s assets and liabilities

Althouhg the balance sheet and the profit and loss statement give only entering detailes for the ratio analysis, for which they represent very valuable information, if we look at them as a progression describing the development of the company.


## 2.11 The ratio items

The calculation of ratio items is the basic of financial analysis. After long time of using ratio items as a methodial condition of financial analysis was proposed big amount, in order there are tens of items, from which some of them are different mutually only in small modifications. With the practical using a specific group om items was divided from the generously akcepted items which make possible to create yourself a basic imagination about the financial situacion in the company.

„The items usually pool to the groups and every group belongs to any aspect of financial condition in the company. Normally there are 4 basic groups according to the characteristic (we judge) of the object or reality for which we specialize in. At the same time it must be warn that neither number of grouprs nor their content isn´t standard.“[1]


The first group of items form the profitability ratios, there are different forms of profit ratios (the ratio betweent the profit and the capital) – as generously akcepted the top efficiency indices of company. In this group are often used also immediate analytic items of indicator of profits, it is the rate of profit to returns, which represents profitability distribution and the rate between the profits and costs which represents profitability of costs.

The special group create asset utilization ratios. There are the ratios of relative fixture of capital in every single forms of assets or indexes of speed or turn-round of supplements (materials, unfinished manufacturing, finished products), demands, fixture of tangible fixed assets.

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[1] viz. Grünwald, T., Holečková, J. *Finanční analýza a plánování*......s.14

The second group pools debt ratios which validates the financial structure of the company. It involves many ratios which compare private and foreign sources.

The third group is set together from ratios of liquidity, which is solvency and liquidity ratios. The purpose of these ratios is to express to the potencial ability of company to cover their prompt due debts.

The fourth group contains ratios outgoing from the items of the capital market, if it is the joint-stock company its shares are free negotiable.[1]

The work is unfortunately depleted about comparing the results of a company with results of its competitors or with its branch averages. It is very complicated to find out the competitor which would match. Several strict standards must be fulfiled. That is why i will be comparing the ratios only in the time order.

### 2.11.1    The ratios of rentability

The rentability, the profit margin is the measure of ability to create the new sources in the company, to reach the profit with using of fixed capital. The ratios of rentability show the combined infuence of liquidity, activity and debt on the profit of the company.

„The ratios of rentability have commen the increasing trend. Its size and grow depend on the branch, prices and other factores"[2].

The ratios of rentability measure the success of companies in a comparing the income with other quantities and:
• as the numerator must be used:
-      the income before the taxes and cost interests,
-      the income before the taxes,
-      the income after taxes,
-      the income after taxes  + cost interests,
-      the income before taxes + interests after taxes,
• there can be in denominator:
-      shareholder´s capital
-      gross outpub capital

[1] viz. Grünwald, T., Holečková, J. *Finanční analýza a plánování*......s.14
[2] viz. SEKERKA, B. *Finanční analýza společnosti na bázi účetních výkazů*. 1. vyd. Praha: Profess, 1996. str. 57

- long-term capital
- returns
- costs
- value added etc.

There ratios are used the most in the economical experiences:

| Title | Formula |
|---|---|
| Profitability of returns | RT = ČZ / T |
| Return on Assets – ROA | ROA = EBIT/CA |
| Return on Equity - ROE | ROE = ČZ/VJ |
| Ratio of cost | UN = CN/T |

*Source: private*

The profitability of returns ratio measures the share of net profit on 1 CZK of returns. The ratio expresses the ability of company to transform the supplements to the cash. This ratio should show the increasing trends in the development line.

One of the most important ratios is the *return on Assets ration*. This ratio measures the efficiency or the productive power in the company. This ratio is regarded as the key measurement of profitability because it measures the profit with total assets invested to the business without a view to sources for financing: if it is the private source (share holders, co-partners, fund made by the profit etc.) or foreign (bank loans a other financial accommodate with money either long-term or short-term, business creditors etc.).

The decisive ratio is *ratio of return on Equity*. This ratio measures the effectiveness with which the company uses the capital of holders. The result of the ratio should move above the long-term average of interests of long-term shares at least of some percents. The positive difference between interest of shares and the profitability is called agio for the risk. It is the bonus for owners who endure the risk. If this bonus is long-term negative, the question comes why be in business

with the risk when we can achieve higher profits without risks if we put the money to the bank[1].

### The calculation of the profitability ratio

The profitability ratios measure the net result of business aspiration; they show the combinated inluence of liquidity, activity and debt on the company. The profitability measures how much valorized the company the sources of the capital. Cf. chart:

| Title | Formula |
|---|---|
| Profitability of returns | Net income / returns |
| Return on Assets – ROA | Income before interest and taxes / total assets |
| Return on Equity - ROE | Net income / equity |
| Ratio of cost | Total costs / returns |

Source: private

### 2.12.2    The activity ratios

The activity ratios measure the ability of company to use the deposited money and measure the fixture of each part of capital in every single part of assets or liabilities

The activity ratios measure how efectively the company manages with its assets. If the company has more assets than is needed  neccessery costs happent to the company and that is why the company has lower profit. If the company has less assets it loses the profits which could gain.[2]

These ratios usually show the number of turns of every single factor of sources or assets in some time period (usually it is 1 year) or turmaround time.

The ratios are calculated for single groups of assets: supplies, demands, fixed assets and for the total assets.

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[1] srov. Synek, M. a kol. *Manažerská ekonomika*. 1. vyd. Praha: Grada Publishing, s. r. o. ,1999. s. 59
[2] srov. Synek, M. a kol. *Manažerská ekonomika*. 1. vyd. Praha: Grada Publishing, s. r. o. ,1999. s.55

The acitivity ratios are called in summary the ratios of relativ fixture of capital in different forms of assets. In effect there are the ratios of inversion. The turn of supplement i won't put in a number because the company shows zero supplements at the end of year.

The most used ratios are:

| Titul | Formula |
|---|---|
| Turn of supplements | OZ = T/PZ |
| Time of turn of supplements | DOZ = PZ/T x 360 |
| The time of maturity date of products | DSP = KP/T x 360 |
| The time of maturity date of returns | DSZ = KZ/T x 360 |
| The time of maturity date of returns to employees | DSZZ = ZZ/T x 360 |
| Turn of ruturns | OZ = T/Z |
| Turn of total assets | OCA = T/CA |
| Turn of fixed assets | OSA = T/SA |

Source: private

**The ratio of turn of supplements** sets the number of turns in the reviewed period. The interest is on the increasing of number of turns which usually carries to the increasing of income and to the decreasing of needed capital by the reaching the same profit.

The result is absolut number which shows the number of turns – how many times will change the supplements to other forms of recirculated assets till the sale of finished products and again the purchase of supplements. The interest is on increasing of number of turns.

**The time of turn of supplements** says how long will také one turn, how much time is needed to change the money funds from construction and product's form to change to the money form again. For judgement of this ratio is important the comparation with the same competitive company.

The time of turn of supplements rather the time of existencion of the capital in the form of supplements is definated as a proportion of average condition of supplements and average returns. The aspirtion is in the company to have this ratio as small as possible.

**The time of maturity date of demands** shows the average time of turn of demands which is the time when the company must wait in average before it gets the payments for sold products. The time of maturity date of demands should be as short as possible. If the average time of cashing denmands is longer it means longer need of loan and also higher costs. [3,5]

**The average time of maturity date of returns** expresses a time from creation the return to its settlement. This ratio should reach at least the value of the time of turn of debts.

The ratios of time of maturity date of debts and the ratios of time of maturity date of returns are important for judging the time disharmony from the creation of debt to the date of its cashing and from the creation of return to the time of its cashing. This disharmony directly influences the liquidity of the company.

**The turn of the total assets** measures how effectively the company uses the assets. There is a general rule which says that as higher is the ratio as better for the company. The minimum recommended value of this ratio is 1. But this value can be also influenced by the affiliation with the branch.

**The turn of fixed assets** measures how effectively the company uses its buildings, machines, facilities and other fixed assets. It says how many times will turn the fixed assets over a year. The fixed assets must be in the present values. [3]

### 2.12.3    The debt ratios

The debt ratios measure the size of using loans for financing.

This ratio serves as an indicatior of risk size which the company must endure with the structure of private and foreign sources. However the debt needn´t to be the negative characteristic.

In the healthy and financial stabile company can help to profitability of equity and influace the financial lever to increase the market value of the company. Every company should labour for optimal financial structure, for more suitable rate of private and foreign sources.

Following ratios can be used in the connection with managing the debt:

| Titul | Formula |
|---|---|
| Total debt | CZ = (CZD/CA) x 100 |
| Short-term debt | KZD = (KZ/CA) x 100 |
| Proportion of foreign sources on liabilities | PCZP = (CZD/CP) x 100 |

Source: private

It is possible to judge the financial structure of company on the basic of *total debt ratio* (or ratio of creditor's risk) from long term aspect. It can be used for checking the ability of the company to increase its profits with a use of foreign capital

The development is positive if the result and development of total debt is lower than 50 % (recommended value is between 30 - 60 %, but it depends on branch in which is the company).

There is possible to compare private and foreign capital for review the debt. This relation expresses the *debt ratio*. This ratio is very important e.g. for bank in the case of asking for a new loan (to give the loan or not). For this assessment is very important it time development. If the rate of foreign sources increases or decreases. When the result and development is over 100 % it will be probably very dangerous client for bank. This ratio signals to the bank and other creditors how much of their demands they can lose and it shows the risk of loss to the shareholders in the case of winding-up. Its value is specific in every sector of economy.[1]

I won't do the calculation of debt rate. It is seen from the balance sheet that accumulated and not payed loss from the past put equity to negative values. That is why this loss is several times over increased by the foreign sources.

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[1] srov.Pavelková, D. *Řízení podnikových financí*. 1. vyd. Zlín: VUT v Brně, Fakulta managementu a ekonomiky ve Zlíně, 1999. s. 64

## The calculation of debt ratio

Debt ratios judge the structure of financial source of the company from the point of holding.

| Title | Formula |
|---|---|
| Total debt | (foreign sources / total assets) x 100 |
| Long term debt | (short-term debt / total assets) x 100 |
| The share of foreign sources on liabilities | (foreign sources / total liabilities) x 100 |

Source: private

### 2.12.4    The liquidity ratios

The liquidity (ability to pay, solvency) means ability to pay fluently company's ordinary debts, the company is able to repay its short-term debts on time.

Generally the liquidity presents the speed of possible transformation of arbitrary assets for money. The liquidity is bigger of a certain assets then the time of its transformation to money form is shorter and the loss of the company is lower at this transformation.[1].

Liquidity ratios basically measure what is possible to pay with (numerator) what needs to be paid (denominator). We put to the numerator assets with different time of liquidity according to what rate of certainty we expect form this measuring, i.e. transformation to the money. The liquidest are surely the money in cash or on the bank accounts, the least lequid are fixed assets that is why we don't reflect at them. Basic ratios of liquidity are elicted from circulation assets.[2]

The liquidity can be judged with a help of following ratios:

| Title | Formula |
|---|---|
| Current liquidity | BL = (OA / KZ) |
| Fluent liquidity | PL = (FM + KP) / KZ |
| Prompt liquidity | OL = (FM / KZ) |

Source:private

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[1]srov. SEKERKA, B, *Finanční analýza společnosti na bázi účetních výkazů.* 1. vyd. Praha: Profess, 1996. s. 55

[2]srov.Pavelková, D. *Řízení podnikových financí.* 1. vyd. Zlín: VUT v Brně, Fakulta managementu a ekonomiky ve Zlíně, 1999. s 56

The ratio of *current liquidity* says how many times cover circulating assets th short-term debts. That means how many time is the company allowed to fulfil all of their creditors if the company would change all of its circulating assets to the cash at the moment. This ratio is only very gross rate because its ability to predicate is dependent on the structure of circulating instruments, liquidity of each kind of circulating instruments and also on the type of branch where the company exists. The value of this ratio should acquire values 1,5 - 2,5. It means that the company must transform 40 % of its circulating assets to money to pay all of its short-term debts.

It is often established the value of the ratio of *fluent liquidity* in the tendency to remove from the ratio the influence of the least liquid part of circulating instrument, i.e. supplements. This ratio should be moving in the range from 1 to 1,5. If the rate is smaller than 1 the company must rely on eventual sale of supplements.

The last ratio of liquidity is the ration of *prompt liquidity*. The ratio should acquire values in the range 0,2 - 0,5. High values of ratios attest about effective use of financial instruments. [3]

All introduced ratios evaluate the future liquidity of company derived static and it is neccessary to uunderstand it as reference characteristics. [6]

**The calculation of ratios of liquidity**

The liquidity ratios should answer to us a question how is the company able to fill its shor-term debts. There are usually calculated three ratios: the current liquidity ratio, the fluent liquidity ratio and the prompt liquidity ratio.

| Title | Formula |
|---|---|
| **Current liquidity** | **Circulating assets / short-term debts** |
| **Fluent liquidity** | **(circulating assets - supplements) / short-term debts** |

*Sources: private*

For a standard rate of the fluent liquidity ratio is a number 1. This ratio should describe already realisticaly the condition of liquidity because it is cleaned

about the items of supplements. The company shows the zero condition of supplemtns that is why the fluent liquidity acquires the same values as the current liquidity.

## 2.13 The analysis of systems of items

I will try to introduce you some methods in the part of work which have predicated rate about the financial health of the company from the view of past, present but also the future one. The assesment of economical situation in the company has some disadvantages. It goes especially about the thing that each items have limited ability or they characterize only exact segment in the company. The collection of items are created for the review of the general financial situation. These item can be based on higher number of items or on items which vent to one number.

The professional literature alleges two basic models:
- **bankruptcy models** which answer questions if the company will failured or not and they come out from the real items;
- **credit models** which answer questions if the company is good or bad and there are based on the theoretical knowledge only from some parts and from other parts there are based on pragmatic knowledge gained from making general partial items.

Both of this models are based on the same supposition that the company tent towards certain differences in the development several years before the bancruptcy. This trend is characteristic also for companies in danger of bancruptcy.

### 2.13.1 Altman´s formula of bankruptcy (Z-skóre)

As the title already says, this model use to be called as bankruptcy model. The creator of this model is prof. E. I. Altman who used for its analysis direct statistic method with its help estimated the weights in the linear combination of every separate ratios. He implicates in his model these weights as variable quantity. Its work is leans on long term monitoring of samples of detailes about

companies which get later bankruptcy or prosper in review period. That is why he build a model on his basic which has a purpose to tell apart companies with a big probability of failure (with the credible timing advance of two years) from companies which are not in such a danger. The result of Altman´s research is a formula of credibility sometimes called as Z-skore which was published for the first time in 1968.

$$Z = 1,2x_1 + 1,4x_2 + 3,3x_3 + 0,6x_4 + 1,0x_5$$

Where:

$x_1$= nett operating capital / assets

$x_2$ = accumulated retained income from past / assets

$x_3$ = income before taxes + cost interests / assets

$x_4$ = market value of shares / debts

$x_5$ = returns / assets

The value „Z" is ranging from -4 to + 8 according to the calculations. The higher this value is the bigger is the financial health of company. If is this value „Z" ≥ 2,99 this company is financialy strong and by this companies wasn´t any serious difficulties by the time they exist. But if the index „Z" in between 1,8 and 2,99 the company has certain financial problems (there didn´t exist any statistic evidential forecast). If the value of this index is lower than 1,8 the comapies have serious financial problems (these companies almost sooner or later get bankcruptcy).[3]

The above model can be used in the companies with admited shares on the capital market ($x_4$). In 1983 was published by prof. Altman rewrited index for companies which don´t trade on the capital market from this reason:

$$Z = 0,717x_1 + 0,847x_2 + 3,107x_3 + 0,420x_4 + 0,998x_5$$

Variable quantities are the same as in the basic model with exception:

$x_4$ = basic capital / total debts

Also values of rating are changed from this reason: companies with minimum probability of bankruptcy have Z >2,70, companies liable to bankruptcy have Z < 1,20.

One of the main problems of application of this model to the conditions in the Czech Republic is in small amount of companies which would get bankruptcy. That is why don´t exist satisfactory representativ sample of datas on which basic the function of this model would be checked.

Inka and Ivan Neumaierov had tried to find a certain decision in their artical in their magazine. They had tried to redraw **modificated Altman´s model for the conditions of the Czech Republic** here.

In this artical they have tried to put (into already known Altman´s model) another variable which would affect the problem with liquidity of czech companies:

$$Z_{mod} = 1,2x_1 + 1,4x_2 + 3,7x_3 + 0,6x_4 + 1,0x_5 + 1,0x_6$$

where:     $x_6$ = **debts after maturity date / earnings**

Criteria of rating of financial health index $Z_{mod}$ are the same as original criteria of Altman´s index.

We can have the exception against the new variable in the model because the liquidity ratio validates financial health of the company from short-term view. But the original Altman´s model was designed for validating the financial health from the long-term view. However the professional literature says that from the practical point of view the czech financial analysts use the Altman´s model also for valudation of one accounting period (also from short-term view).[1]

### 2.13.2     index of credibility „IN"

This index is build on the same principal as Altman´s model Z-skóre. Index IN sometimes called as index of credibility uses the ratios from activity, profitability, debts, liquidity. This model was created by Inka and Ivan Neumaier who tried to find the formula which would have the possibility of judging the financial risk of czech companies from the view of world rating´s agencies. IN will be calculated from relation:

$$IN = V1A + V2B + V3C + V4D + V5E + V6F$$

Where:

**A** =assets / foreign capital

**B** = EBIT / cost interests

**C** = EBIT / total assets

**D** = earnings / total assets

**E** = circulating assets / short-term debts

**F** = debts after maturity dates / earnings

**V1** to **V6** = the values of each ratios (the items of values calculated for each branches of economical abilities „OKEČ" represent literature).[1]

Criteria of valudating IN:

- the value IN is higher than 2, it means company with a good financial health
- the value IN is between 1 and 2 represents company with certain financial problems sometimes called as „grey zone"
- the value IN is lower than 1 indicates company with ill finances

The weights of each ratio are shares of significance of ratio the criterial value of ratio. Criterial values are set as weighted mean for every sectors. Index IN is suitable on the other side of Altman's model according to the author's opinions for annual valudation because it is able to use the inputs from czech accounting statements and it can also include the special economical situations in the Czech Republic.

### 2.13.3    The quick test

The quick test belongs to the group of credit models. It was devised by Kralicek in 1990 for a purpose to provide quick information about company with very good evidence value. For used ratios was taken the regard at formation. Ratios, which needn´t go under disturbing influences and must have necessary evidencial ability which is leaned on information basic(balance sheet, profit and loss statement). There was taken only one ratio out of four basic parts of financial analysis (profitability, stability, liquidity and income) from these purposes. „These ratios were selected to guarantee that the analysis will be balanced both financial

stability and returns situation in the company. The quic test works with following ratios:

## 2.14 The equity ratio

$$\text{The equity ratio} = \frac{\text{private capital}}{\text{total assets}}$$

It shows the capital power of company if there exist a lot of debts or not. It also characterizes long-term financial stability and independence of company.

## 2.15 The time of paybacks from Cash Flow

$$\text{Time of paybacks from Cash Flow} = \frac{\text{short - term + long - term debts - financial assets}}{\text{operating cash flow}}$$

It expresses after how long the company is able to pay its debts back.

## ROA – return on assets

$$\text{ROA} = \frac{\text{profit after taxes + cost interests . (1 - tax rate)}}{\text{total assets}}$$

ROA represents summary characteristic of total effectiveness deposited means to business and measures the profit from total assets without any respects for the sources from which are payed.

## Cash flow in % of sales

$$\text{RCF in \% of sales} = \frac{\text{operating cash flow}}{\text{operating returns}}$$

Cash flow in percentages of sales and the ratio ROA analyse the profitability of researched company.

| Ratio | excellent (1) | Very good (2) | good (3) | bad (4) | In dager of insolvency (5) |
|---|---|---|---|---|---|
| Ratio of self-financing | > 30% | >20% | >10% | >0% | Negativní |
| Time of paybacks | < 3 roky | <5 let | < 12 let | <12 let | <30 let |
| ROA | > 15% | >12% | >8% | >0% | Negativní |
| CF in % if sakes | >10% | >8% | >5% | >0% | negativní |

Source: Grünwald, R., Holečková, J.: Finanční analýza a plán...VŠE v Praze, Praha 1996. s. 51

The site valuation is set then that every ratio is classified at first according the result and according the chart. The resulting mark is then as the simple arithmetic average of all marks gained for each ratios. It is recommended to calculate also the average mark for financial stability separate and for return's situation separate too.

## 2.16 The pyramidal systém of ratios (decomposition of ROE ratio – Du Pont equation )

Important and also often used analytic principle are pyramidal systems of ratios which can be filed to the systém of ratios. The basic idea of pyramidal systém is progressive and still decomposting detailed ratio. The definition of the pyramid demonstrates progressive expansition of numbers of sectional ratios to detailed decomposition. There are used two main methods at the decompositioning of each ratio: The first one is **additive method** based on the sum or difference of two or more ratios. The second one is **method multiplikative** based on product or quotient of two or more ratios. The aim of these methods is the best express basic economical relations between every single ratios in the company.

The most famous method of using the ratios in the pyramidal systém is **ROE** which was developed and used in the chemical company **Du Pont de Nomeurs** for the first time.

The left site shows the profit margin. From the bottom site there are added up each costs and by its subtract form sales we can get the nett income. The profit margin is calculated as a quotient between income and sales. If the profit margin is low or it has decreasing trend it is necessary to specialize in analysis of every kind of costs. The right side of the diagram works with balancing details. There are calculated different kinds of assets which are added up and that is how is shown the turnover of total assets.

```
                        ┌─────────────────────────────────────────┐
                        │            Return on equity             │
                        └─────────────────────────────────────────┘
              ┌──────────────────────────┐     ┌──────────────────────────────────┐
              │  Return on assets (ROA)  │     │ Multiplier of shareholders equity =│
              └──────────────────────────┘     │ capital / private capital          │
                                               └──────────────────────────────────┘
              ┌──────────────────────────┐     ┌──────────────────────────────────┐
              │ Profit margin = profit / sales │ │ Turnover of assets = sales / total │
              └──────────────────────────┘     │ assets                             │
                                               └──────────────────────────────────┘
         ┌────────────┐   :   ┌────────┐    ┌────────────┐   :   ┌──────────────┐
         │ Net profit │       │ Sales  │    │ Net sales  │       │ Total assets │
         └────────────┘       └────────┘    └────────────┘       └──────────────┘

         ┌────────────┐   -   ┌────────────┐  ┌────────────────┐  +  ┌──────────────┐
         │ Sales      │       │ Total costs│  │ Current assets │     │ Fixed assets │
         └────────────┘       └────────────┘  └────────────────┘     └──────────────┘

    ┌────────────┐      ┌────────────┐    ┌──────────────┐         ┌──────────┐
    │ Cost for   │      │ Operative  │    │ Supplements  │         │ Demands  │
    │ soled      │──────│ costs      │    └──────────────┘         └──────────┘
    │ products   │      └────────────┘
    └────────────┘                                                    +

    ┌────────────┐  +   ┌────────────┐    ┌──────────────┐         ┌──────────────┐
    │ Cost       │      │ Income tax │    │ Finance      │─────────│ Business     │
    │ interests  │──────│            │    └──────────────┘         │ with shares  │
    └────────────┘      └────────────┘                            └──────────────┘
```

Source: Sedláček J. Účetnictví v rukou manažera. Brno: Computer Press. 1999. s. 85.

The basic idea of this diagram is **Du Pont equation** which is expressed with relation when profit margin is multiplied by turnover of total assets and that is the ratio called return on assets (ROA):

$$ROA = \text{profit margin . turnover of total assets} = \frac{net\ profit}{sales} \cdot \frac{sales}{total\ assets}$$

We can realized here that ROE can be expressed as product of three parts of ratios – net profitability of sales, turnover of total assets and ratio – financial lever is a share between the total assets and private capital (capital equity).

$$ROE = ROA\ .\ \text{multiplier of shareholders equity} = \frac{net\ profit}{assets} \cdot \frac{assets}{equity}$$

„The decompozition of ROE ratio shows us where is perhaps to focus our effort about increasing the profitability. The improvement can be achieved not only by increasing the profitability (profit margin) but also with acceleration of turnover of capital (assets) and more courageous of using the foreign capital, with the transformation of the structure of financial sources. The efect of increasing or decreasing of products prices and sales volume, can be analyzed by searching other ratios in the diagram. It is possible to search possibilities of decreasing of cost items. It is necessary to minimalized receivable risk nad at the same time use the debt as financial lever for increasing the profitability of equity. If the company should start implement new products or transfer the manufacturing to the areas where the margin profit is high enough."[1]

### 2.17 EVA – Economic Value Added

Recently the professional press is more and more interested in the ratio called EVA (Economic Value Added). This ratio is already used longer in the in mature market economy and this ratio happens to be integrated parts of financial managing. This ratio was made out and published by american authors Stem and Steward who the model EVA published as a instrument for managing and valuating companies.

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[1] Grünwald, R., Holečková, J.: Finanční analýza a plánování podniku. VŠE v Praze, Praha 1996. s. 39.

This ratio was also used for the first time of ministry of industry and trade (MPO) in 1997 and also later in other analyses. Assembling the model EVA is very difficult because the evaluating and calculating of economic value added comes out from preliminary statistic datas. MPO supposes that it gives adequate picture about economical productivity in the branch and it can serve as another instrument of evaluating which is used by the analitics.

"It is necessary to see the differences between the profit from accountancy and economical profit. We reach the economical profit in this only when the usual costs are payed but also the capital costs are payed too (especially the costs on equity). If the company shows account profit, it also shows the economical profit when the accound profit is higher than costs on deposited equity."[1]

The ratio EVA is definated as a difference between the return on equity and alternative cost on the private capital multiplied by capacity of private capital.[2]

$$EVA = (ROE - r_e) . VK$$

Where:

**ROE** = return on equity

**VK** = private capital

$r_e$ = costs on private capital

Costs on private capital can calcuate with the e.g. **building model** using MPO for the calculaation of ratio EVA

$$r_e = r_f + r_{LA} + r_{business} + r_{Fin.Str.} + r_{Fin.Stab.}$$

Where:

$r_f$ = safe rate

$r_{LA}$ = function characterizes the size of the company

$r_{business}$ = function characterizes creation of production power

$r_{Fin.Str.}$ = function characterizes dividing of production power

$r_{Fin.Stab.}$ = function characterizes relations between the assets and liabilities

[1] Grünwald, R., Holečková, J.: Finanční analýza a plánování podniku. VŠE v Praze, Praha 1996. s. 98.
[2] tamtéž s. 78

The EVA ratio can be calculated in many ways, e.g. Synek shows this process in a publication - The managed economy: "companies use ratio EVA as the basic measurement of its productivity. They can also use relation coming from the basic formula when they evaluate their investic projects.:"[2]

$$EVA = \sum [EBIT_i .(1-t)-C_i . WACC]$$

Where:

**EBIT** = earning before interest and taxes

**t** = rate of taxable profit (in decimal form)

**C** = long-term invested capital

**WACC** = worth average capital costs

Average costs on capital (WACC) can be calculated from formula:

$$WACC = u.(1-t).\frac{CK}{K} + r_e . \frac{VK}{K}$$

Where:

**u** = costs on foreign capital

**t** = rate of taxable profit (in decimal form)

**CK** = foreign capital

**K** = total capital

**$r_e$** = costs on private capital

**VK** = private capital

"The economic value added ratio can also interpret economical profit including the costs on capital (required return). Every simple conditions were divided to the four groups from this view:

1. companies which make economic value added, their return on equity (ROE) is higher than costs on private capital ($r_e$)
2. company which makes economical value added but its ROE is higher then safe rate
3. companies which have positive profitability of private capital but the profitability is lower than safe interest

4. companies in a loss, their profitability of private capital is lower than 0"[1]

The end of evaluating only from a view of profit can be that we can require for successful companies all first three groups. This would be inaccurate because from the position of economical value added result different conclusions.

We can say according the results from MPO that companies with highly over-average profitability of private capital and the return on assets, over-averaged values of liquidities, low share of private costs on added value, these companies make economical added value."[2]

## 2.18 MVA – Market Value Added

Market value added is again the Stern Stewart & Co ration. We can calculate the market value added if we know the price of equity. The market value added is the differece of the price of equity and the book value of equity:

$$MVA = P - BV$$

Kde:

P = Price of equity

BV = Book Value of equity

**Interpretation of MVA:**

The value for the owner is made if the price of equity is higher than the book value of equity. The market value added is the net present value. We can say that the firm is successful if the market value added is positive.

The market value added shows us the fortune. It tells us what is the profit of the owner if the owner sells the firm and the present value is higher than the book value. It is the difference of the total market value (the number of the shares times quotation of the shares minus market value of the debt) and the invested capital. We assume that the market of the shares is effective. So the quotation reflects all relevant public-available information. We can use market value added especially in condition of the developed capital market.

## 3  Financialy analytic part

### 3.1  Profitability

| Financial ratios | Reality | Reality | Reality | Reality |
|---|---|---|---|---|
| | **31.12.2000** | **31.12.2001** | **31.12.2002** | **31.12.2003** |
| **PROFITABILITY** | 366 day in the period | 365 days in the period | 365 days in the period | 365 days in the period |
| Profit margin on sales | 0,18 | -0,29 | 1,56 | 1,84 |
| Share of value added on sales and operations | 73,30 | 73,95 | 79,28 | 76,58 |
| Rentabilita provozní činnosti | -3,44 | -2,03 | 1,43 | 0,25 |
| Return on assets | 1,48 | -2,29 | 12,08 | 12,53 |
| Return on equity | 4,00 | -5,53 | 24,81 | 31,20 |

Sources: private

The profitability rations measure the final effect which is succceed by the business activity of the certain input to the total capital or to the certain component of the balance sheet or the profit. The basic and the most complex criterion of the profitability is the return on assets which is the effect accrues to the unit of the capital connected to the business activity. The return on equity constitutes the effect reached on 1 CZK of equity and that is the reason why it is so important for the owners. The profit margin on sales measures the profit reached on 1 CZK of the return.

It is evident that the increasing profitability ration means the favourable firm situation.

Profit margin on sales measures the difference of the net profit which accure on 1 CZK of the return. If we compare the value of the branch average (minimum = 0,01; maximum = 4) we conclude the price highness reached of the firm and the production cost highness. The profit margin on sales is net profit (without the cost interest and the taxation) comparate with the sales.

The profit margin on sales of ZŠ Luhačovice evidently shows us that the school oscillates in the middle of the limit. Only the year 2001 brings the negative value because of the loss.

The profitability increases in time because the prices of inputs decrease.

a) The ratio of share of added value on sales and operations measure the share of added value which accure on 1 CZK of sales. The values of this ratio move around 70 % which is above the level according to the limits (bottom limit = 15, top limit = 60).

b) The ratio of profitability of operating abilities is defined as a share of operating income to the total sales. It shows what is the share of operating income on 1 CZK of sales. The values of this ratio move between 2 and 10 in the monitoring sector. The primary school is close by the under bottom limit according to the positive operating income in 2002 and 2003. The income from operating ability was negative in 2000 and 2001 that is why the profitability of operating abilities reached the negative values.

c) Return on assets ratio expresses the total eeffectiveness of the company, its earning power. The return on assets ratio shows all activities without the previous source of financing from three business parts (operting, investment, financial). [1]

The optimum values of this ratio should move in interval 0,01 to 5. In 2000, 2002 and 2003 is ZŠ Luhačovice above the optimal interval which means that it uses over 100% of deposited capital. That means also effective economy with private and foreign capital. This high share happend only because of zero bank loans and helps and on the other side there was increasing of short-term debts which were without interest. Return on assets was negative only in 2001 because the negative income.

d) Return on equity ratio expresses the profitability of the capital which was deposited by partners. This ratio is defined as a share of profit and equity. This rate of profit for one unit of investicion of shareholders is the ratio according to which the investors can find out if their capital is reproducted with intensity of the risk. If the value is permanently lower or the same as profitability of share guaranted by state (e.g. state bonds, treasury notes etc.) then the company is alredy expiring. Rational investor wants to have

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[1] Grünwald, R., Holečková, J.: Finanční analýza a plánování podniku. VŠE v Praze, Praha 1996. s. 18, 19.

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higher rate of evaluation. Return on equity should be higher than the profitability of non-risk alocation of capital on the financial market.[1]

The return on equity ratio achieves the negative value in 2001. It happend because the income for real accounting period was negative so the ratio between the income and return on equity was represented by the minus value. The return on equity of ZŠ Luhačovice reaches the limits in 2000, 2002 and 2003.
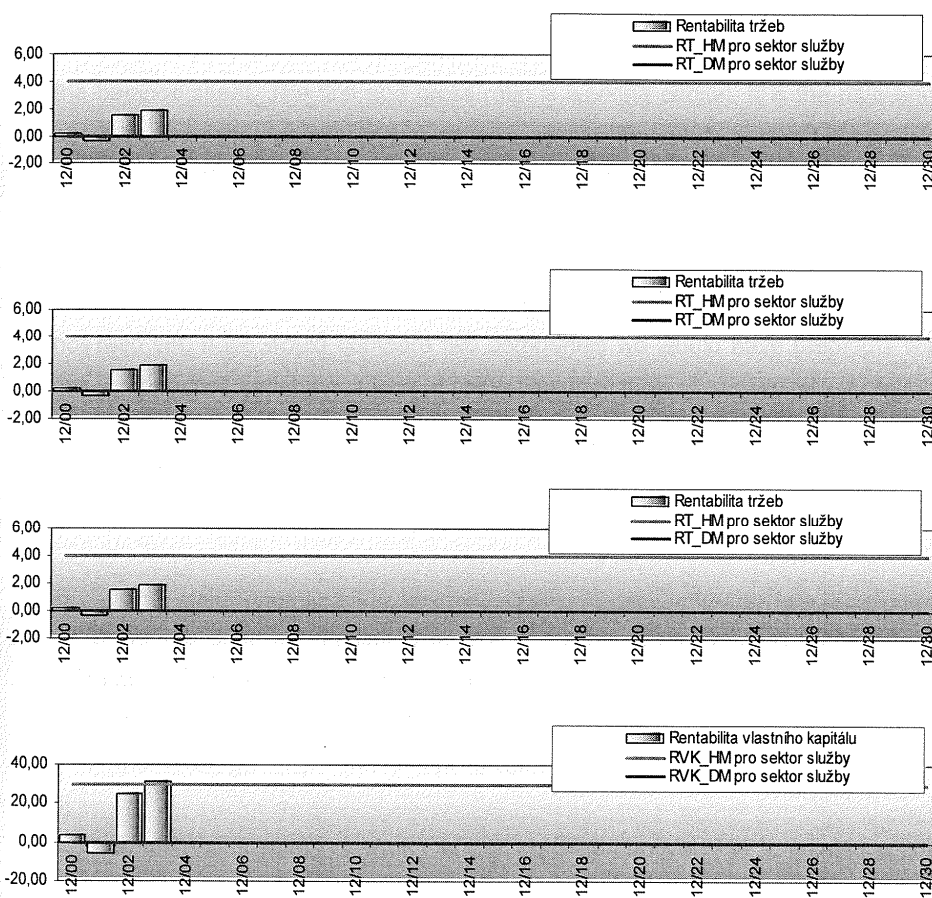
[1] Grünwald, R., Holečková, J.: Finanční analýza a plánování podniku. VŠE v Praze, Praha 1996. str. 22, 23.

## 3.2 Liquidity

| Financial ratios | Reality | Reality | Reality | Reality |
|---|---|---|---|---|
| | 31. 12. 2000 | 31. 12. 2001 | 31. 12. 2002 | 31. 12. 2003 |
| **Liquidity** | | | | |
| Current liquidity | 1,17 | 1,15 | 1,53 | 1,35 |
| Fluent liquidity | 1,13 | 1,11 | 1,48 | 1,32 |
| Prompt liquidity | 1,13 | 1,11 | 1,48 | 1,32 |

*Source: private*

The liquidity ratios show if the company is liquid. It means if it has enough money to pay for its short-term debts. The details, which we use in work, are from the balance sheet. The first and gross ratio is working capital. It is the difference between circulating assets and short-term assets. The work capital tells us how much of circulating assets is funded by long-term sources in the company (equity or long-term debts). The positive work capital gives a certain financial cover to the company for the case that it can´t obtain enough of short-term sources (short-term bank loans or supplier´s loans). The work capital is only an absolut number and not ratio yet. If we would compare two companies we would have problems with this work capital. Lets have a look at some liquidity ratios.

The liquidity ratios measure the ability of company to pay its debts on time. There are usually two ratios[1] or more[2].

a) <u>Current ratio</u> measures the payment ability of the company from short view. There are used all circulating assets in the numerator and all money debts mature in one year in the denominator. It is quit gross ratio of pay ability but for its easy in the practice it is very enlarged. It is sometimes compared with the branch average. The world accept its values from 1,5 to 2,5.

This interval is from 0,9 to 1,1 in our branch. Current ratio is moving a little above the top level in ZŠ Luhačovice. It happens because of the low value of shor-term debts and high value of ciculating assets.

b) <u>Quick ratio, Acid Test</u> measures the payment ability of the company after deducting supplies from circulating assets. The supplies are usually less liquid

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[1] Brigham, E. F.: Fundamentals of Financial Management. The Dryden Press, USA 1989. s. 102
[2] Brealey, R. A., Myers, S. C.: Teorie a praxe firemních financí. Praha, Victoria Publishing 1992. s. 54

than other current assets and it sele is usually uneconomical. That is why this ratio better shows the payment ability. We compare it with the branch average and with the standard ratios 1 – 1,5.

This interval is from 0,5 to 1 in our branch. This ratio is on the top level in ZŠ Luhačovice, this happens because of the low value of short-term debts.

c) The prompt liquidity is sometimes called by some financial analysts as cash share or cash liquidity. This liquidity is measured as a share of cash and negotiable shares to the short-term debts. The value should be 0,5. Wöhe calls this ratio as a liquidity of first grade.[1] This interval is between 0,1 and 0,3 in our observed branch.

The development of this ratio shows that the prompt liquidity is improving in ZŠ Luhačovice all the time. This ratio is even above the top line of the interval in all observed years.
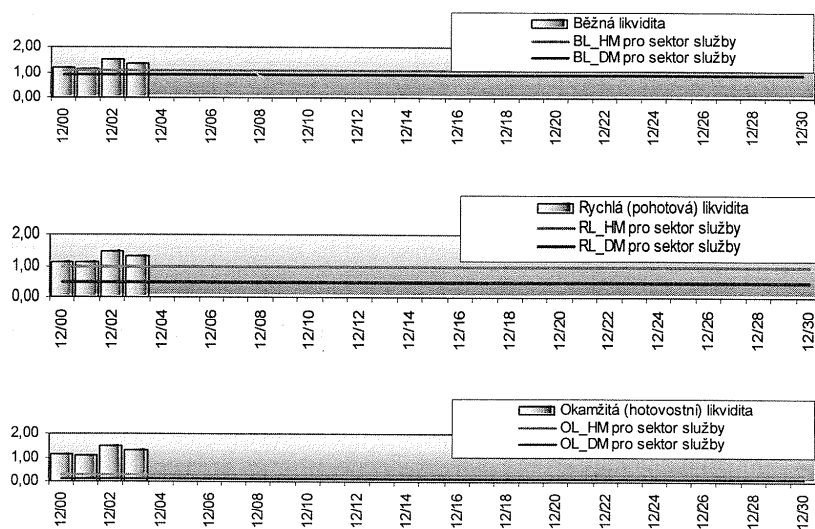
[1] Wöhe, G.: Úvod do podnikového hospodářství. Praha, C. H. Beck 1995. s. 75

## 3.3 Using and turnover

| Financial ratios | Reality | Reality | Reality | Reality |
|---|---|---|---|---|
| | 31.12.2000 | 31.12.2001 | 31.12.2002 | 31.12.2003 |
| **Using and turnover** | | | | |
| Turnover of assets | 8,06 | 7,87 | 7,75 | 6,79 |
| Turnover of fixed assets | 46,69 | 29,03 | 33,87 | 31,49 |
| Turnover of current assets | 9,92 | 11,03 | 10,22 | 8,78 |
| Turnover of equity | 21,86 | 18,96 | 15,92 | 16,92 |
| Turnover of work capital | 74,77 | 92,07 | 31,50 | 35,57 |
| Turnover of supplies | 284,99 | 298,67 | 344,31 | 383,76 |
| Turnover of supplies  (in days) | 1,32 | 1,23 | 1,09 | 0,98 |
| | | | | |
| Maturity date of Doba splatnosti pohledávek (in days) | 0,00 | 0,00 | 0,00 | 0,00 |
| Maturity date of   from businessDoba splatn. pohl. Z obch. styku (in days) | 0,00 | 0,00 | 0,00 | 0,00 |
| Turnover of short-term debts | 13,03 | 14,25 | 16,69 | 12,40 |
| Maturity date of debts(in days) | 28,77 | 25,85 | 22,41 | 30,25 |
| Maturity date of debts from business (in days) | 10,27 | 4,37 | 3,55 | 18,96 |
| Turnover of operating investment (in days) | -335,10 | -329,82 | -298,69 | -492,87 |

*Source: private*

The company should have as much of circulating assets (supplies of raw materials, materials, cash,  pohledávek) as the operation needs. If there is less then the investment assets of the company (buildings, machines, manufacturing furnishing, manufacturing capacity) is not ussed properly which is uneconomical and the total development of the company is braked. If there is more of investment assets then some part of this assets is not used which means unnecessary costs (especially interest costs from fixed capital). One of the task of managing is then to set up the optimum limit of circulating assets. For its optimum amount is taken the amount which satisfy the normal working in the company with its least costs. It doesn´t go about the minimum amount which depends on other technical factors (e.g. the typ of production, the term of one manufacturing cycle, possibilities of suppling,  the  sort  of  not-finished  materials),  but  also  the  requirements  of customers for products supplies, necessity of debts and extraordinary purchases of material and unexpected expenses etc. We can use two ways how to fixed the

amount of circulating assets – the global progress which comes out from duration of turnover cash and amount of everyday costs or the analytic progress according to the partial items of circulating asssets (individual sorts of supplies etc.), we ue different optimal methods (optimum of manufacturing reserves etc). We combinate both of progresses in practice.[1]

a) <u>Sales to assets or total asset turnover ratio</u> studies the effectiveness of company with assets. The intensity of using assets returns in profitability. The company needs lower capacity of assets for reaching the same performance at the better intensity of using assets. The ratio says how many times a year will the sales cover the assets. Except that it characterize the intensity of using assets, it also says about profitability, when it compares the gross income - sales - with assets of the company. This ratio will be quite low (usually lower than 1) by the companies in the structure with high capital requirements e.g. engineering, energetics or chemistry this value will be low - usualy more than one.

The optimum amount is fixed in inverval from 0,8 to 2 in our branch. ZŠ Luhačovice reached overlimited value of turnover assets ratio in comparison with the world trend in every year.

b) <u>Fixed Assets Turnover</u> measure how efectively does the company uses its buildings, equipment, machines and other fixed assets. It says how many times will the fixed assets turn over one year. It is important with the speculting about new investments (its low value with compairing with branch average usualy testify about using the low manufacturing capacity). With the inter-companies compairing is necessary to be careful about the age of fixed assets (very much depreciated fixed assets increase the ratio value) for differences of using methods of depreciacing, can count with present values (reproductives prices of fixed assets). Higgins shows the value 5,1.[2]

[1] Synek, M.: Manažerská ekonomika. Grada Praha, 1999. s. 154
[2] Higgins, R. D.: Analysis for Financial Management. Irwin, Boston 1992. s. 56

The optimum value appropriate to Higgins thought in our observing branch. We can realize that ZŠ Luhačovice reaches above this value in all observing years which is because of the effective using of productive capacity.

c)  Turnover circulating assets ratio measures how effectively the company uses supplies, cash, and cash on bank accounts and other circulating assets. It gives to us how many time will circulating assets turn over one year. This ratio is call also revolution of work capital. It is not so complicated to find out the capital needs for fixed assets than is complicated to find the needs for it financing and the true capital need for circulating assets. This is called working capital management in the west countries literature. It has two basic functions:
    – to determine the optimal amout of every item of circulating assets and follow by it total sum.
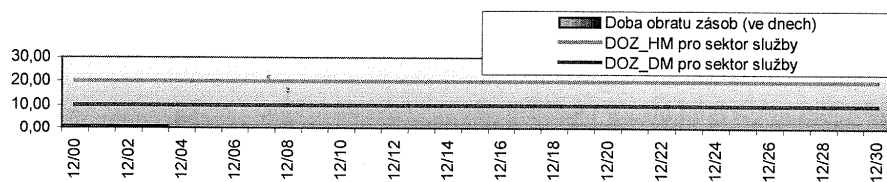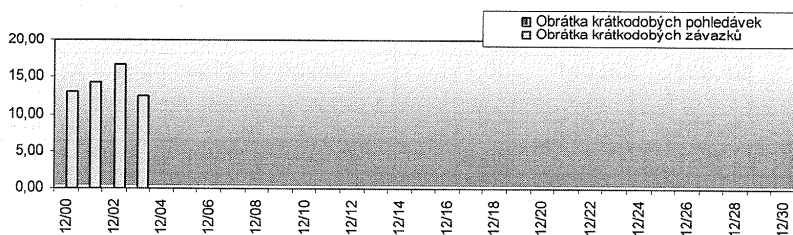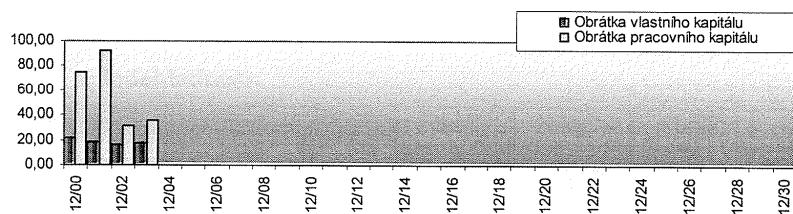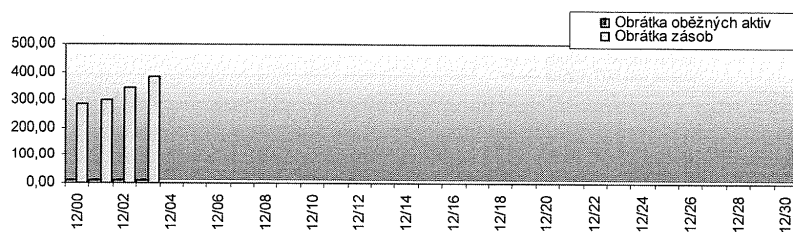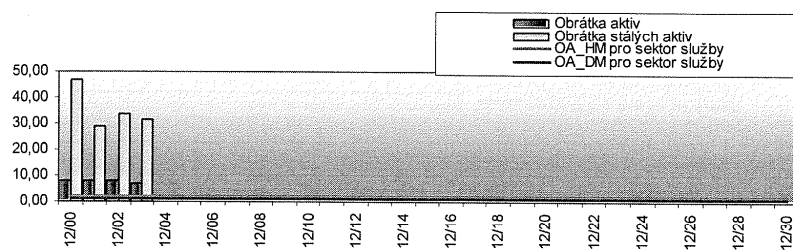    - to determine how to finance the circulating assets.
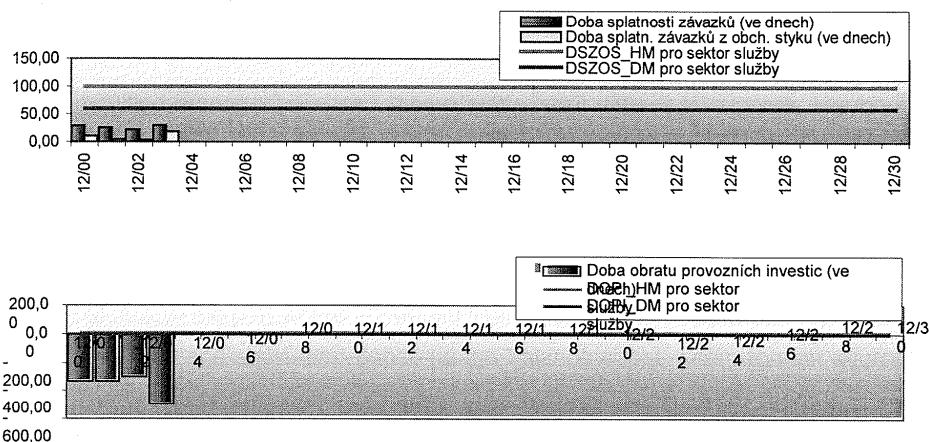    The turnover circulating assets ratio is used for determing the right amound.
    Values, which ZŠ Luhačovice reaches, are moving above the interval for this particular branch.

d)  Turnover equity ratio shows how many time will cover the sales of the company its private capitalfor one year. Ther ratio reaches positive values in all detemined years. His value is too high but that happend because of the changes in the funding financing of foreign capital.

e)  Turnover of supplies ratio and the time turnover supplies says the number of turnover supplies after determing period (usually one year). If we divide 360 by the number of turnovers we get the time turnover supplies in days (very often used in CZ). The interest is on increasing the numbers of turnovers (shortcut of time of turnover) which usually manages to increasing profit or to decreasing the needful capital by reaching the same profit. Because the supplies are usually evaluated in the costs for their inventory it is desirable to have in the numerator insted of sales the costs for sold products. The usage of „average condition of supplements" is specified if there are the monthly items for use, we calculate their average otherwise from their original or final level). We call both of these ratios by common name „speed supplements ratios".

The branch of education systém says that the turnover of supplies should be in interval from 10 to 20. The turnover of supplies ratio is in optimal amount in ZŠ Luhačovice.

f) <u>Turnover of maturity date of debts and the payables turnover</u>. We will be interested in interested in a comparation of maturity date of demands and the payment morale of company to our suppliers. And how long is the time of payment delay which is the time between purchase of material and work and payment for them. This time decreases the term of turnover payables which is the first factor which is setting the capital needs of money for financing the circulating assets. Our brach should have the items in 60 to 100 days. ZŠ Luhačovice is under the bottom level of interval.

Obrátka aktiv
Obrátka stálých aktiv
OA_HM pro sektor služby
OA_DM pro sektor služby



Obrátka oběžných aktiv
Obrátka zásob



Obrátka vlastního kapitálu
Obrátka pracovního kapitálu



Obrátka krátkodobých pohledávek
Obrátka krátkodobých závazků



Doba obratu zásob (ve dnech)
DOZ_HM pro sektor služby
DOZ_DM pro sektor služby

48

Legend:
- Doba splatnosti závazků (ve dnech)
- Doba splatn. závazků z obch. styku (ve dnech)
- DSZOS_HM pro sektor služby
- DSZOS_DM pro sektor služby

150,00
100,00
50,00
0,00

12/00 12/02 12/04 12/06 12/08 12/10 12/12 12/14 12/16 12/18 12/20 12/22 12/24 12/26 12/28 12/30



Legend:
- Doba obratu provozních investic (ve dnech)
- DOPIT_HM pro sektor služby
- DOPIT_DM pro sektor služby

200,00
0,00
-200,00
-400,00
-600,00

## 3.4 Indebtedness

| Financial ratios | Reality | Reality | Reality | Reality |
|---|---|---|---|---|
| | 31.12.2000 | 31.12.2001 | 31.12.2002 | 31.12.2003 |
| **Indebtedness** | | | | |
| Total indebtedness | 63,10 | 58,49 | 51,32 | 59,85 |
| Financial independent | 36,90 | 41,51 | 48,68 | 40,15 |
| Share of foreign capital to private capital | 171,00 | 140,90 | 105,42 | 149,07 |
| Lever ratio | 271,00 | 240,93 | 205,42 | 249,07 |
| Maturity dates of debits (in years) | 6,85 | 13,27 | 3,37 | 3,97 |

Source: private

Indebtedness ratios explore how big part of company´s assets is financed by foreign sources.

Every company is debit to the certain level. The foreign sources help to the company to operate in bigger view and to reach economies of scales. The indebtedness brings also a risk. Indebtedness in the company is for investors as a risk investment more than company without debits. The management of company will try to find the right indebtedness rate which would help him to use the advantages of foreign source and won´t put it in danger. To the set of „talent and qualification" belongs the abilitis of managers to find the right indebtedness rate. They want to change this rate dinamically and effectively according to he

scenarios of macroeconomical situation which is looking for by the shareholders. These manager's abilities are very similar to the talent combinated with creativity and certain eccentricity of artists, scientists, inovators and inventors. The definition of „qualified manager" is – and always was – very difficult to express. Maybe it is because of the quality which has a lot of common with „human capital" and it is difficult to define this factor

a) The total indebtedness ratio comes out from the balance sheet and we caluculate the part where the debits finance the assets. The total debit includes long-term and short-term debits (in the balance sheet – item foreign sources). The creditors give priority to lower indebtedness because for them it is lower risk. The owners of the company want on the other site use the financial lever. The proffesional literature shows the average 48,7 % but it is only for the industry.
For education is this interval between 70 and 90. The value of this item is under the bottom level in all years. It is acceptable according to the structure of services.

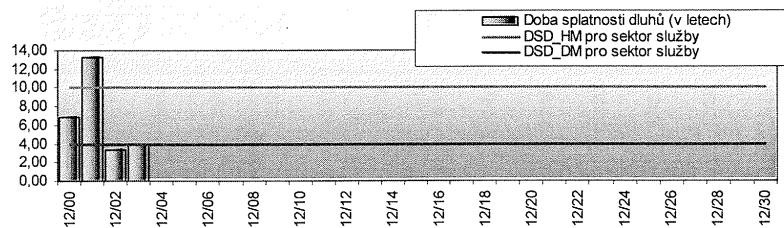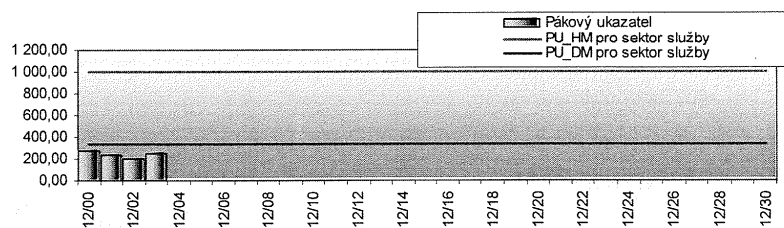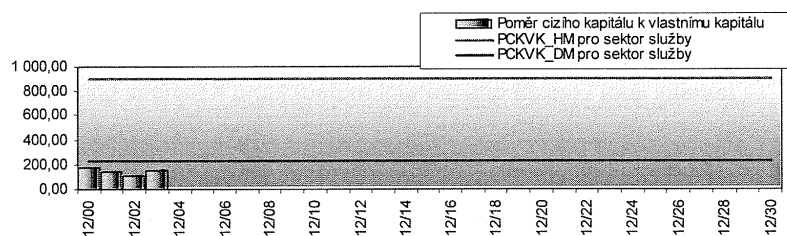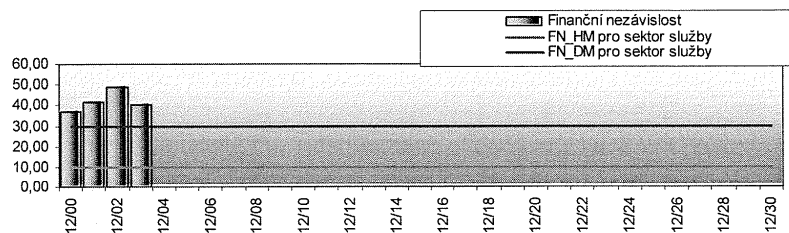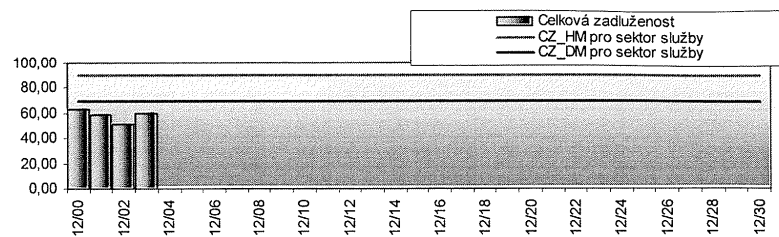b) The ratio of foreign capital to private capital also called as debt equity.
The limit is 233 – 900 in the education branch. According to this limit we can say that ZŠ Luhačovice doesn't use the private capital for financing its abilities. This school also gets over the amount of private capital with its total debts and grants. We can say that ZŠ Luhačovice is almost 100 % in debts which shows to us the total indebtedness ratio. This ratio will be examined in detail later.

c) The financial laverage It is only the using of ratios for monitoring the financial laverage. It means using the financial instruments with the fixed returns for financing certain proportions of fixed assets. The financial laverage happens when we use debt instruments or preferred shares. The using of financial laverage set the company out to the financial risk. It is understandable that using the foreign capital increase the profitability on equity. Incerasing of the profitability on equity is evoked by using the cheaper foreign capital and by tax effect (interests from foreign capital decrease the taxable loading of the company. Because the interest is a partof costs and dercrease the profit from

which must be paid taxes). If this profitability on assets is higher then costs on foreign capital, the rentability of private capital will increase; foreign capital „increase" the profitability of private capital as laver increase the load. We talk about the financial laverage from this purpose.

The laverage ratio is in interval from 333 to 1000. ZŠ Luhačovice reaches ratios under the limit which shows under-indebtedness and low business risk.

d) <u>Time of repaing debts</u> (in years) should be moving in between 4 and 10 years. ZŠ Luhačovice in above the top level in 2001. It was cased by increasing the long-term capital with quite low private capital and quite low condition of assets. After all this ratio will be necessary to judge seriously for setting the optimum strategy.

Celková zadluženost
CZ_HM pro sektor služby
CZ_DM pro sektor služby

Finanční nezávislost
FN_HM pro sektor služby
FN_DM pro sektor služby

Poměr cizího kapitálu k vlastnímu kapitálu
PCKVK_HM pro sektor služby
PCKVK_DM pro sektor služby

Pákový ukazatel
PU_HM pro sektor služby
PU_DM pro sektor služby

Doba splatnosti dluhů (v letech)
DSD_HM pro sektor služby
DSD_DM pro sektor služby

## 3.5 Backing

| Financial ratios | Reality | Reality | Realityt | |
|---|---|---|---|---|
| | 31.12.2000 | 31.12.2001 | 31.12.2002 | 31.12.2003 |
| **Backing** | | | | |
| Interest backing 1 | 0,00 | 0,00 | 0,00 | 0,00 |
| Interest backing 2 | 0,00 | 0,00 | 0,00 | 0,00 |
| Backing fixed assets by the equity | 1,42 | 1,20 | 1,76 | 1,60 |
| Backing fixed assets by the long-term capital | 1,42 | 1,20 | 1,76 | 1,60 |

*Source: private*

When we calculate the indebtedness of company we don´t pay attention to the amount of interests which are necessary to repay. How is company able to back the interests with its imcome says the backing ratio.

1. Backing interst = (profit before taxes + cost interests) / cost interests *or*
2. backing interest = profit (before interest and taxes) / total interest

This intesrest backing inform us about how many times is the profit higher then interests. It is recommeded to back the interests three times and more. There is realy very few companies in the Czech Republic just now, specially in the productive sector, which would reach this recommended value.
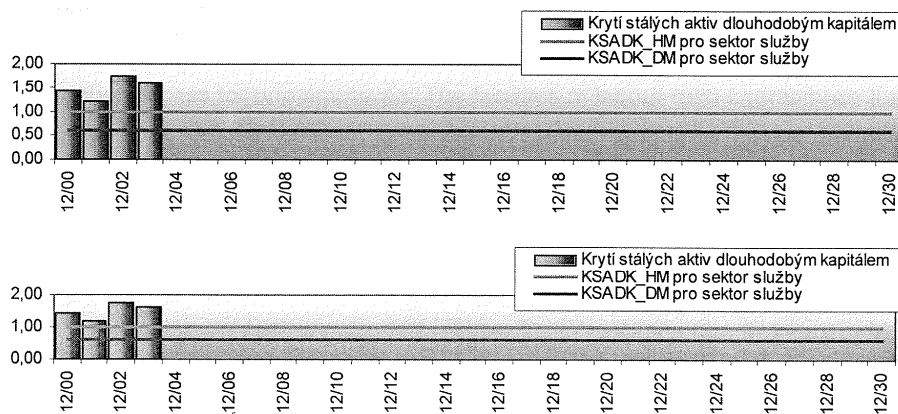
### 3.6 The productivity and facilities of labour

| Financial ratios | Reality | Reality | Reality | Realityt |
|---|---|---|---|---|
| | 31.12.2000 | 31.12.2001 | 31.12.2002 | 31.12.2003 |
| **Productivity and ficilities of labour** | | | | |
| Labour productivity from outputs | 272,61 | 280,60 | 283,94 | 337,02 |
| Labour productivity from sales | 263,06 | 275,81 | 283,58 | 331,63 |
| Labour productivity from added value | 192,82 | 203,98 | 224,81 | 253,95 |
| Profit before taxes for one employee | 0,50 | -0,82 | 4,43 | 6,21 |
| Profit after taxes for one employee | 0,50 | -0,82 | 4,43 | 6,21 |
| Average monthly wage | 11,90 | 12,57 | 13,31 | 15,25 |
| Facilities of labour by fixed assets | 5,84 | 9,67 | 8,38 | 10,70 |
| Facilities of labour by capital | 33,80 | 35,65 | 36,65 | 49,61 |

*Source: private*

„The source of values is the human labour and its productivity. That is why division of labour takes the front place critical factor of productivity. *The hyphotesis of increasing the division of labour is the development of market. It is necessary to pay attention to the need of amount of the capital and urgency to its spread."*
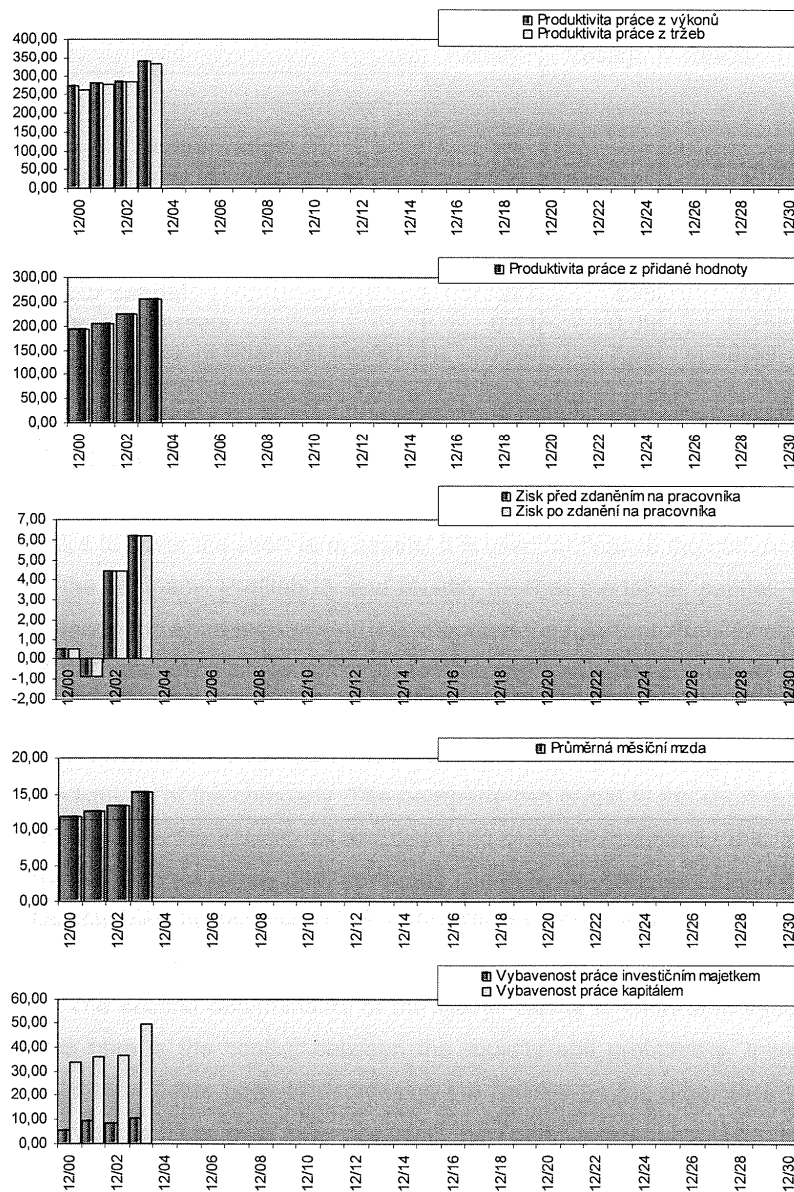(Citation of Adam Smith)

The ratios of labour productivity characterize the outputs in the company, its items which are accrue to one employee. The biggest value has the labour productivity from added value from all of these ratios. This ratio is not depending on the size of productivity consumption but it show the value which was added during the process for one employee. The facilities of labour ratio characterize the labour by the amount of fixed assets and capital, long-term capital for one employee. The ratios of facilitis of labout are depending on technological (also capital) intensiveness of production process, which means the rate of mechanization and automation. If the values are higher also the productivity of labour is higher.

a) <u>The ratio of labour productivity from outputs,</u> is calculated by outputs and the number of employees and it shows us the efficiency on one employee.

This ratio has at ZŠ Luhačovice slowly increasing trend untill 2000 in comperation of the total outputs.

b) The ratio of labour productivity from sales, is calculated as a share of sales and the number of employees. It shows us the efficiency on one employee. The values of this ratio are the same as in the previous ratio at the ZŠ Luhačovice. It means the the increasing trend in the last year shows the increasing of total turnover.

c) The ratio of profit on employee, is calculated as a share of income and the number of employees. It says the increase of labour productivity and increase of turnover in real. Except in 2001 when the value of income was negative and also this ratio had to be negative.

d) The ratio of average monthly wage shows that in every year of period was a small increase of the average monthly wage. That happend because of progressive increase of wages funds from MŠMT.

e) The ratio of facilities of labour by fixed assets and by capital, From the values of these ratio is clear that the increase of total assets of the company happens all the time especially by increase of fixed assets in the form of tangible fixed assets. The increase happens also by the circulating assets but in the less rate than by the fixed assets.

**Produktivita práce z výkonů**
**Produktivita práce z tržeb**

400,00
350,00
300,00
250,00
200,00
150,00
100,00
50,00
0,00

12/00 12/02 12/04 12/06 12/08 12/10 12/12 12/14 12/16 12/18 12/20 12/22 12/24 12/26 12/28 12/30

**Produktivita práce z přidané hodnoty**

300,00
250,00
200,00
150,00
100,00
50,00
0,00

12/00 12/02 12/04 12/06 12/08 12/10 12/12 12/14 12/16 12/18 12/20 12/22 12/24 12/26 12/28 12/30

**Zisk před zdaněním na pracovníka**
**Zisk po zdanění na pracovníka**

7,00
6,00
5,00
4,00
3,00
2,00
1,00
0,00
-1,00
-2,00

12/00 12/02 12/04 12/06 12/08 12/10 12/12 12/14 12/16 12/18 12/20 12/22 12/24 12/26 12/28 12/30

**Průměrná měsíční mzda**

20,00
15,00
10,00
5,00
0,00

12/00 12/02 12/04 12/06 12/08 12/10 12/12 12/14 12/16 12/18 12/20 12/22 12/24 12/26 12/28 12/30

**Vybavenost práce investičním majetkem**
**Vybavenost práce kapitálem**

60,00
50,00
40,00
30,00
20,00
10,00
0,00

12/00 12/02 12/04 12/06 12/08 12/10 12/12 12/14 12/16 12/18 12/20 12/22 12/24 12/26 12/28 12/30

## 3.7 Other ratios

| Financial ratios | Reality | Reality | Reality | Reality |
|---|---|---|---|---|
| | 31.12.2000 | 31.12.2001 | 31.12.2002 | 31.12.2003 |
| **Other ratios** | | | | |
| Current liquidity (more accurate calculation) | 1,13 | 1,11 | 1,48 | 1,32 |
| Payment discipline of the company | 0,00 | 0,00 | 0,00 | 0,00 |
| Payment discipline of purchasers | 0,00 | 0,00 | 0,00 | 0,00 |
| **Labour capital** | **277** | **238** | **712** | **682** |
| Share PK to assets | 0,11 | 0,09 | 0,25 | 0,19 |
| **Atman´s index of financial health** | **7,90** | **7,69** | **8,38** | **7,30** |

Source: private

The labour capital ratio is definied as a difference between the circulating assets and short-term liabilities. It is a part of long-term financial sources which helps to cover the short-term assets. It is used for finance the common abilities in the company. Profitability and liquidity meet at the labour capital. When we manage the short-term assets it is important the future profitability and liquidity of the company. Both actions inflence themselfs against each other.

As more as the **company** has invested in the short-term assets as better is the liquidity of the company. **The company** can invest to the short-term assets for increase the liquidity as are cash and marketable security but this assets have only small return. **The company** can decrease the risk of insolvency (low liquidity) only by decreasing the profitability and vice versa.

The second determinants of the labour capital is short-term liabilities. But also here is the conflict between the liquidity and profitability. Increasing of short-term debts goes to decreasing the liquidity on the other side the short-term debts have lower financial costs than other instruments. The flexibility is definitely the advantage of short-term debts and next advantage is lower costs for financing. Disadvatage is on the other site the reality that the costs are not fixed long-term and can´t be available.

The managing of the labour capital of the company involves simultaneous and togther interfaced decisions about investicions to the short-term assets and about using the short-term debts for its financy. There are two principles of

57

labour capital for its manage: the princip of agreement of maturity dates and the princip of clearance the debts automaticaly. These princips give possibility to the company to keep the liquidity as it is so the company will be able to pay for the debts on time. It is necessary to joint the incoming and outgoing cash flows.

The true is that the short-term assets must be finance by short-term sources and long-term assets by long-term sources. We can divide the circulating assets for permanent and temporary from this view. The permanents are (e.g. certain level of supplies) for more than one year in the company and should be finance by long-term sources. The temporary assets will be erase soon and won´t be renovate any more (e.g. temporary bonds).[1]

Because the value of net labour capital reaches the positive values in all monitoring years at the ZŠ Luhačovice it means that in this case are fixed assets finance by private sources. The positive value of the ratio of net labour capital to assets indicate its financy stability.

## 3.8    The Altman index ratio

Profesor Altman and other economists often use updated model especially in the not-standard ambiences or in the case of smaller or not yet not-established companies in the markets. For example the financial speciallists at investigative departments Moody´s applied Z-Score model on datas from "SCM" database of smaller companies (resp. On items of databases some young markets) and have fine the conclution that actualized model from 1995 has at least on emerging markets and on the same level of the statistic reliability higher predictible abilities than the previous Altman´s model of analysis Z-score or systém Zeta. A lot of investigative and applied works are comparing with Altman´s models. Altman´s models and sofisticated admissions have very important places in the financial literature.

We have done the total financial analysis of the Primary school in Luhačovice. Somebody can interposes that each ratios have only limited predicate ability because the company work as one whole and that is why it

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[1] Jindřichovská, I., Blaha, Z. S.:Podnikové finance.Management Press, Praha 2001. s.218,219.

must be analised as one whole. Special efforts are also in the practice of the financial analysis. That is the reason to arrange certain ratios to the systém where the ratos will have much bigger predicate ability.

There exist a lot of simple pointed systéms to summary the financial evaluation in the theorie and the practice. These systems are based on creating simple or respectable number of every ratio. The pointable evaluating of share ratios will be fixed according to the expertable keys. All single methods are different only from the choice o  using share ratios  and bhe expectaable keys. These simple points  are only suitable to the first a and very close to fixing the financial situation in the company.

Altman´s index of financial health is one of these pointable process. This process uses five selected share ratios and it  was developed in 1968. It is based on the respectable sum of these ratios. Special ratio is fixed to every ratio.  This index shows the share of every single ratios on the total result. The ratios from 1968 were re-valuated  to the ratios which they stilll uebyli ovšem přehodnoceny v roce 1983 to values which they use untill now.

The value of the index moves between – 4 to + 8. As lower is this value, as better the financial health of company. That means if the value is more closer to  – 4, the bankruptca risk is higher.  We will approach the meaning of the value of Altman index.

| < than 2,9 | Financialy strong company |
|---|---|
| From1,2–2,9 | Company with certain fin. Problems where the following development is unsure |
| > than 1,2 | Straight candidates of bankruptcy |

*Source: private*

There exists a rule that as close as the company will be to the bankrpuptcy then the Altaman´s index works as an predictor of financial health  in the company. This index predicts the bankruptcy at minimum two years before.

The easy application of Altaman´s model reaches the above introduced chart which shows us perfect review about used items and concrete values calculated for ZŠ Luhačovice. The Altman´s model only confirmes the results of analysis of shares ratios in the sence of financialy and healthy company. It has been seeen that the financial situation in a comparation with branch interval is on very high level.

## Altmans index of financial health
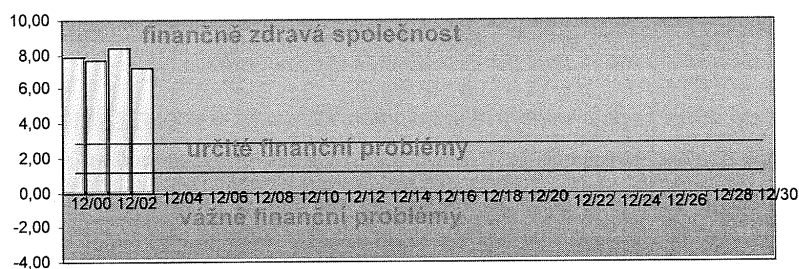


## 4    Estimation of financial health and strategy suggestion

### 4.1    Strategy suggestion

Strategic management, which is associated with management of changes, with radical company sales and with dynamic emergence, is primary control implement of top management. Disestimation of strategy suggestion can later influence company sales. Consistent transform to strategy management enables determination of preference and vacation of operative management. The whatness of strategy management in a company is to create a vision, to determinate purposes, to assign necessary activities and bearers and to create a background to reach that.

The most important strategy fundamentals of company, which follows strategy of costs, should be: exploitage of reductions of amount; radical strategic changes are not welcome; offer of products only with basic features, savings in every places; preference of greater and stable sales volume towards earnings.

The whatness of differentiation strategy is not only espacial character of product compared to competitors. We should offer something, where is a customer ready to pay for that and what a competitor is not able to imitate.

„Focus" strategy are using companies, which not opererate on extensive markets. „Focus" is realized by costs strategy or by differential strategy. This strategy should be used by young starting companies. Small companies can´t compete with costs, because this companies have small production capacities and high unit costs. This is the reason, why small prosperous companies are not using costs strategy.

Stability strategy is typical for companies in mellow stage or with markets or products in mellow stage in aspect of life cycle. The companies, which are using this strategy are trying to section of market or to dfferentiate product. And companies look for efficient improvement of stocks. Stability strategy means something to do. Company, which has profit increase from one of the purposes, can secure this profit by improvement of efficient production or by other functions.

Expansion strategy is used by companies, which have products and markets in phase before ripeness, pertinently in beginning of product living cycle. This strategy lead to changeover in business sphere or to expansion of company methods. This strategy suppose higher investments, of course with higher risk. This can lead to lower efficiency and can cause antimonopoly strains and fast negative ractions of competitors. Companies are using this strategy, because they can represents in changeable branches short-term prosperity, but they can´t be long-term succefully.

Retrenchment strategy can be used when products and markets of company are in falling phase of product living cycle. With this strategy can company canceln production of some products, can leave some markets, can decide to close some factories. In basic activities can company trasmit some employeers, constrict expansion, marketing and so on. For all that can this strategy improve effectiveness of company activities, because cancellation of

specific production release finances, which can be used in other activities of company.

Using a <u>combination strategy</u> is frequent by companies, which are in changing phase of product living cycle and of markets. By great companies with internal manufacturing units, which are not in same level and that don´t have same potencional to expanse. [1]

Combination of strategies can be simultaneus, company is using different strategies for individual units. Or combination can be sequencialy, it means using different strategic alternatives for different future periods. Using this strategy is successful in companies with many commercial units and in the period of massive product living cycle changes.

Financial strategy is a part of company strategy. The basis of strategy creating is lucid vision and company role. It contents visions of top management about future company opportunities. Strategy is an implement to reach visions and it shows a way to approach this visions. Strategy should have assigned purposes, which want the company to reach.

Assignment of financial purposes depends on company vision, which company wish top management to create. Financial purposes should be determinate in two aspects. Quantitative – absolute value and qualitative, relation, which should be reached. Analysis should not be oriented only to determinate company weakness. At this case can happen, which company concentrates only to remove this weakness, more than to expansion of company. Analysis is used to detection of internal and external company trends.

Assignment of visions and purposes is condition to begin of activities – activities to attainment of financial puproses. We can this activities split to periodic, repeated and to random. By random activities we expect concrete effect combined with realization. [2]

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[1] Keřkovský, M., Vykypěl, O.: Strategické řízení. – učební texty VŠ. PC-DIR Brno, 1998. s. 42
[2] Fotr, J.: strategické finanční Plánování. Grada, Praha 2001. s. 62

Financial strategy creation includes starting points (economic trends, branch trends, company trends), financial vision (strategic access, financial potency of company, market value, pivotal sphere of growth), financial purposes (structure of financial resources and requirements, profitability of resources, investment purposes).

We dfferentiate strategic or financial connection. The purpose of strategic connection is to reach the synergic effect, e.g. market rate grown, improvment of final products distribution, grown of management and professional potentiality. The purpose of financial connection is to increase company resources, to sell inconveniently property, to get advanced technology, collective research, higher prefessionalism of assignments, increase of marketability, cover of investments. A fusion is join of two or more companies to keep identity of one of that. Fusion is a combination of two or more companies to create new identity. New company absorbs assets and passive of both companies. Holding is a company, which keeps supervisory quantity of stocks of one or more companies.

When a company purchases other companies using high share of foreign financial resources, than we talk about leverage buyouts – LBOs. Company should expect high risc and some rentability. Speculative purchase is connected with this attributs: Purchased company should have good postion on market, solid history and positive expectation for grow up. Company should have low indetedness and high level of belongings, stable cash flow, which is adeqate to company requirement (payment of interest annuity and creation of working capital. [1]

The target of sale of part of property (apparatuses, divisions, etc.) is to get financial means for other method of production, remove not suitable parts of company, restructuralize company according to strategic purposes.

In some cases get company to situation, that it have no other variant to decide, only to declare bankruptcy. There are three exposures of bankruptcy: low or negativ returnability, technical unsolvency and bankruptcy. Primary reason of bankruptcy are unsuitable management, economic activities, company age (go out of products or technologies).

[1] Vysušil, J.: Plánování není přežitek. Profess, 2000. s. 55

Monitoring of branch is for medium and great companies foregone conclusion. To the branch belongs, structure of branch, phase of product life cycle, situation of demant and supply, input and output and added value, key factors of branch success

Life phases of company are analogous to evolution of individual. Companies go through birth to adolescence to ripeness up to demise (pertinetly to other evolution changeover. We can single phases reduce, but not to miss. The process is influenced by internal and external factors. To know in which phase is the company helps to understand the problems of company and is starting point for solving of symptoms and crisis. The birth of company is followed by pioneer phase. In the phase, where is nothing steady. [1] The phase, where we are looking for course to enforce the company on market. This phase is associated with high use of people and with requirement to increase quantity of them. Grow of company is primary signal, that the pioneer phase is completed and the company pass to the next phase.

Company management bases on exploitation of normalized tools, which are supported by company culture. Third life phase is integration phase, it the phase of maturity. There dominates principle of searching of parity. The parity between changes and safety, elasticity and stability, consistency and tolerance.

This phase has of course also pitfalls: not to find correct vision, appeasement with results, balance through temporary solutions.

Financial vision is an individual question, depended on size of company, financial situation and expectation of management. Overextended company can be satisfied by vision of financial stability, whereas wealthy company is interested in strategic join, strengthen of market position. [2] The companies should know following items: vision of future financial situation and market worth of company, vision of financial opportunities, vision of level and method of financial management and thinking. Ground of this questions is detailed and self-contained

[1] Fotr, J.: Strategické finanční plánování. Grada, Praha 2001. s. 98
[2] Vysušil, J.: Plánování není přežitek. Profess, 2000. s. 68

diagnostics of all three spheres: financial situation, financial opportunities a level of financial management

Every company has own approaches, which depend on historical company development. For great companies this approaches: private profit, costs are status quo, new chances on market are researched. Primary target approach should be permanent costs decreasing. All top managers think, how make things easier and efficiently. For medium companies is characteristic not systematical approach, accepting of high risc, immediate decisions.

Every of both groups have defferent approach to managing the company resources. The second group of companies is hazardously, is ready to take higher risk and require high profit. The first group is cautiously, it probes solvency of new collector, makes market research. Really priority of this group is not rentability, but to survive and support great company. Different approach to risk and rentability is one of the criterion of company financial behaviour.

Company with conservative approach is very carrefuly, in new activities, prefers traditionaly methods, also small investments need to be approach by top management. This company prefers slow and constant progress without great financial turns and changes, it except stable and balanced cash flow, it tries to differentiate risks. People in this companies work to satisfy the superior, in good and peaceful working conditions, it deprecates often to adjudicate and reducing of costs is not important.

The centralization of manage the company is outside idea of the conservative access.[1] The companies don't have the real powers, its plans are given centralized and the directors are more the leaders of the sectors than the members of top leading.

The company with agressive filosofie goes to the actions which are not based on the financies from the begging. It is accustoms and willing to work under the financial stress, with small net labour capital, with high rate of indebtedness. The employees re good paied for their work and responsibility. With not used sources it starts very soon other activities. We can find sectors where are the fast increse of risk and slow increase of paybacks and the fast increase of paybacks doesn't necessaraly mean the the fast increase of the risk.

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[1] Fotr, J.: Strategické finanční plánování. Grada, Praha 2001. s. 48

## 5    Selection and implementation of strategy

## 5.1    Recommendation for improvement of financial situation – implementation of strategy

The strategy proposal for Luhacovice elementary school will be derived from those key negative points revealed by the financial analysis which affect financial situation of the company.

The term of a claim payment and a obligation due date are slightly above norm.

## 5.2    The term of a claim payment

The problem of secondary insolvency is problem not only for ZS Luhacovice on the Czech market. It is national problem of the Czech Republic. Unfortunately, this problem has affected the Czech Republic since its formation. Before we can choose the appropriate strategy, we need to think about the causes.

Basically, thare are two possible kinds of cause. The first one is connected to business ethic in the Czech Republic. This problem concers mostly entrepreneurs, (better said "hustlers") abusing Czech law gaps to maximal postpone the terms of payment of their debts. The aim of this behaviour is obvious - long disposition of a capital which they use to produce another capital.

Another cause, which has been taking background recently, is unsufficient business experiences of our businessmen. They mostly focus only on their main business subject and forget to monitor the financial situations of their businesses. And when a company already has financial troubles, it is usually too late to deal with the situation. In the most cases, the company go bankrupt with high obligations to their business partners.

ZS Luhacovice has created extensive database of their business partners and business contacts. And this exact information, together with another sources information, should be used to protect themself against longing their claim payment terms. In a future, the school should invest money to create a datebes monitoring the partners solvency. This will bring the advantage of cooperation only with well known and evaluated partners. Many of inslovent and unreliable

companies can be found aslo on Internet or in other types of media. This would markedly reduce a risk of long term and uncollectible claims by using cash payment system for such companies. On the other hand, the system should not be used for significant and long-term partners with verified solvency.

It is obvious, which creation of such a databes will require certain investments. The question is, if the school has sufficient funds. But compare to losses due to the unpaid claims the investments seems to be insignificant.

### 5.3 The ten methods of claiming the debts or how to don´t have claims after maturity date

1. In most companies create approx. 20 % customers about 80 % of the total claims. It is necessary to pay attention to these big customers because with them the capacity of sales stays or goes and also the needful finances for the business activities.

2. It is necessary to decrease the time delay from the accept of order to the receive the payment for satisfied the order between the parts of the cycle. It is also necessary to eliminate every possible causes of conflicts or causes which would make to the delay or not-payment. All documents must be ready for the expedition and own consignment must be send as soon as possible. The qualite software equiptment can help here very much and can reduce the delay.

3. It is requested not accept any order at the end of the month. The order can be transfered to the next month and also the payment. It is especially inconvenient at the end of the financial year when can be send invoices for the big deliveries but the payments for them will be delayed. The finances will be missed for extraordernary payments at the beginning of the year (insurances, taxes, etc.).

4. It is also convinient to avoid the partials fulfillments of deliveries and to everything else what gives to the subscriber any excuse for payment delay. It the case when it is technological or business inevitable, it is good to charge a deposite fot it and this will guarantee a partial cover of costs.

5. Good relations with subscribers and timely payments for supplies will influence by liable credit note. It is inconvinient to put by the exposure of competent and accredited complaint and return of appropriate amount of money or to compensate this amount with next claim.

6. It is necessary to pay attention to the delivery letters and its requirements and mostly to the signatures of customers. It is necessary to archive confirmended delivery letters whether alone or with the invoice.

7. It is appropriate to deal personaly with substriptor's employees who are responsible for payments of invoices. The commission should be paid for cash payment not for sales.

8. It is absolutely necessary to evaluate the condition of claims. It is necessary to define the needful amount of day though when should be paid the claims and admited percents of claims after this time. This ideal condition must be compareble to the real condition of the claims development. The work with claims is the only necessary activities which ensure the cashes for business. High level of sales will not ensure the financial stability of the company without timely payments.

9. The employees who are resposible for managing the claims and business loans must be stimulated by propriate system of rewards and bonuses.

10. The company can use any traditional ways for managign or exacting the claims if these ways are in accordance with the valid laws. Not paying the old debts means breaking the contract from substriptors side and according to this it can be given to the proposal of bankruptcy order.

## 5.4 Methods to improve company liquidity

Good managment of funds should follows basic targets: to have in correct time correct amount of money. This target represents:

1. Exact foresight of cash flow, amount of funds and their requirement to appoint when is cash flow deficient or redundant.

2. Planning of short-term loans (e.g. planning of bridge loan in case of new production or when is needed to buy necessary raw material in advance)

3. Suitable investitions planning of margin funds, e.g. short-term termed deposit, purchase of consolidated annuities or purchase of other equity.

4. Choose of expedient control of transfer of funds and control of cash in cashbox

I believe, that this labour will be fecund for ZS Luhacovice.

**Evaluation - Epilogue**

School grade is an important priority of most andvaced states. Every state gives attention of situation in education, because level of single type of schools has influence on economic, cultural and social growth of a country.

Primary purpose of this labour was to explain problems with financing of primary schools, their successive husbandry with fundries. This labour does financial analysis and its evaluation.

ZS Luhacovice expected from this labour description of basic gradations, which came with reform of public government in Czech republic, description of budgetary husbandry of benefit company, accomplisment of financial analys a its evaluation, evaluation of budget of three year in the past and creation of model strategic plan for year 2005. I hope, that I kept original intention.

I create two basic hypothesis:

„Municipalities cultivate primary schools and participate on financing of their investment and maintenance"

„We can predicate, that reform of public government didn´t produced important changes in financing of regional education."

I approve first hypothesis in this labour. Municipalities give to education all expenses to ensure operation including. The municipality has resources to cover investment and operating costs in their budget.

The second hypothesis was refute. The reform of public government relates to educations. The ministry of education has always important functions, primarily control-, distribute- and adjudicate-function.

**SUMMARY**

As the business name indicates, aim of the bachelor study is to carry out a financial analysis of elementary school Luhačovice, limited corporation.

The financial analysis of corporation features important information batch to be necessary to management of a corporation. What, in fact, financial analysis means? Financial analysis is research process and to deduce conclusions from analytical results of financial economy of specific entity during last or future periods incl. to determine its weak and strong aspects, testing of individual financial parameters and to verify their actual testifying capability. Object of financial analysis is to provide a diagnosis of financial economy of corporation by means of special guidelines. Financial analysis represents evaluation of history, present time and prospective future of financial economy of corporation. Its goal is to recognize a financial "health" of corporation, to identify the weakness, which might be to give troubles in the future and to identify the strong aspects on which the corporation may be to construct.

In the first step it was necessary to distinguish elementary school Luhačovice limited corporation as complex both from the point of view of activities and range of products and from the point of view of organization structure and history of corporation, first of all. Further part of the bachelor study dealt with theory of financial analysis. The study responded on questions as what is financial analysis, to whom is necessary and useful, from where information are acquired and about its individual methods. The detailed text related to method of financial analysis by means of ratio coefficient forms the great part of this chapter. The consequential chapter is the heart of whole study. By means of ratio parameters I analyse elementary school Luhačovice limited corporation in the range of profitability, liquidity, coverage, credit, productivity of labour and earning capacity. In conclusion, I furthermore insert the analysis of the corporation by means of Altman´s index of financial "health". I provided the calculation of ratio parameters with elementary school Luhačovice, limited corporation, not only, but I analyse information and data, which I obtained and compared with industrial mean values.

In the next chapter I defined main troubles of TES Bojkovice, limited corporation, which related from executed analysis. As the great problems of the corporation I consider :
- high ratio of obligations after date of payment

From the analysis results that the school should draw their attention to high ratio of obligations after date of payment and high ratio of debts after date of payment which is slightly above the norm

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