LEONARDO DA VINCI
Transfer of Innovation

Leonardo da Vinci programme project

„Development and Approbation of Applied Courses Based on the Transfer of Teaching Innovations in Finance and Management for Further Education of Entrepreneurs and Specialists in Latvia, Lithuania and Bulgaria"

Analysis of the Operation and Financial Condition of the Enterprise

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Analysis of the Operation and Financial Condition of the Enterprise

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Introduction

Motivation for Developing the Course

Research by the members of the project consortium Employers' Confederation of Latvia and Bulgarian Chamber of Commerce and Industry indicated the need for further education courses.
Financial and operation analysis is the main tool to obtain information about all aspects of the enterprise, evaluate its competitive position and understand its strengths and weaknesses.

Innovative Content of the Course

The course is developed to include the following innovative content:

- Developed and emphasized teaching of international financial management;
- Financial documentation considered in the course is compatible with international financial reporting standards, which is important for entrepreneurs for easier access to financial markets and cooperation with international partners;
- New techniques of applied business management and applied financial planning.

Innovative Teaching Methods of the Course

The course is developed to utilise the following innovative teaching methods:

- Availability on the electronic platform with interactive learning and interactive evaluation methods;
- Active use of case studies and participant centered learning;
- Availability in modular form;
- Utilising two forms of learning - self-study and tutorial consultations;
- Availability in several languages simultaneously.

Target Audience for the Course

The target audience are: entrepreneurs, finance and management specialists from Latvia, Lithuania and Bulgaria and, in the longer term, similar groups in any other European country.
The course assumes little prior applied knowledge in the area of financial and operation analysis.
The course is intended for 32 academic hours (2 credit points).

Course Objectives

In the area of qualitative analysis, after completing the course, the audience should be able to:
1. Determine performance efficiency of the enterprise for the reporting period and against set goals;

2. Establish the potential areas for the activities of an enterprise for the current period and in the perspective by considering alternative uses of resources.

Course Objectives II

In the area of quantitative analysis, after completing the course, the audience should be able to:
1. Assess the efficiency of utilisation of the financial resources by performing analysis of the financial results of the enterprise;
2. Prepare a forecast of the possible financial results, based on the existing business performance results and alternatives for the use of resources;
3. Design the activities for improvement of the financial position and further efficiency improvement of the use of financial resources.
The idea is for entrepreneurs to use the course as a template for the financial analysis of their own company.

Description of Course Sections

1. Theoretical aspects of the enterprise external environment and competitiveness analysis;
2. Theoretical aspects of enterprise performance analysis;
3. Applying financial statements as the basis of information for analysis;
4. Applying financial analysis measures;
5. Case Study: Evaluation of the Financial Position of Enterprise N - A real company in the construction industry.

1. Analysis of External Environment and Competitiveness

This section covers:

- Portfolio analysis - a way to evaluate the competitiveness of an enterprise (the position of its product line) in comparison with the situation in the market.
- Role of competitiveness and methods of measurement – the focus is on M. Porter's Five Forces model.
- Corporate SWOT analysis - the assessment of both external and internal environment that allows to identify the enterprise strengths and weaknesses, opportunities and threats existing in the external environment.

2. Analysis of Enterprise Performance

This section provides broad theoretical knowledge, establishes terminology, principles and classification.
This section covers:
I Concept, principles and forms of enterprise performance analysis. This part covers requirements for enterprise performance analysis and different kinds of analysis that can be performed.
I Users of enterprise performance analysis - here various interest groups are discovered (e.g. owners, government, employees, etc.) as well as the reasons why they may be interested in analysing the company.
The section on analysis of enterprise performance also includes:

- Quantitative and qualitative measures for achievement of the goals of enterprise owners - this part discusses quantitative measures to measure the success of the enterprise - e.g. market share, earnings before interest and taxes, customer satisfation, etc. This section provides questionnaires for audience to apply to their own situations;
- Role of analysis in the activities of an enterprise – stresses financial analysis as the link between financial accounts and decision making.
- Techniques and methods of analysis - discusses horizontal, vertical analysis and the use of financial ratios.

3. Applying Financial Statements for Enterprise Analysis

This section emphasizes the role of financial reports as the basis for financial analysis. Balance sheet and P/L statement are emphasized in particular.
This section covers:

- Role of financial statements in financial analysis and their founding principles - this part covers such concepts as: the accruals principle and the going concern principle. The main

qualitative requirements to financial statements - reliability, comparability, etc. are also discussed;

- Description of the main balance sheet items - this section focuses on how to construct the balance sheet. The emphasis here is on flexibility for the purposes of analysis. Questions are posed to the course users.

Example: Analysis of the Balance Sheet

Questions to be considered:

- What is the reason for changes in total assets?
- What is the structure of assets?
- Has the asset structure changed?
- What is the composition of long-term investments?
- Are there any unused or inefficiently used assets?
- What is the proportion between equity and debt?

In this way, target audience can immediately think of their own companies and situations as material is being delivered to them.

This section also covers:

- Description of the main P/L statement items - as in discussion on the balance sheet audience is encouraged to consider questions regarding profit, turnover, revenues and costs of their company.
- Role of financial analysis in financial planning - this part distinguishes by time three kinds of financial planning:
- Day-to-day financial estimates;
- Medium-term financial planning;
- Long-term financial planning;

4. Applying Financial Analysis Measures

This section covers:

- Description of financial ratios - considers the measures used in calculating ratios (e.g. assets, turnover, equity) and proposes comparisons with:
  - industry average figures;
  - same ratios for the previous years;
  - figures of competitor enterprises;
- Liquidity measures - two viewpoints on liquidity – viewing enterprise as about to be liquidated or as going concern;
- Describes disadvantages of liquidity measures;
- Quick ratio;
- Absolute liquidity ratio.

- Solvency measures - this part consider measures such as ownership ratio, debt ratio, interest cover, etc.;
- Activity measures - multiple measures are considered in this part e.g. current asset turnover, stock turnover. The distinction between operating cycle and cash cycle is discussed;
- Profitability measures - various definitions of profitability.
- Trading profitability (return from sales), profitability of investing (return on investment) and financial profitability (return on capital employed) are considered.

4. Financial Performance Ratios

Primary ratio - Return on net assets
Secondary ratios:

- Profit margin;
- Asset turnover;

Third level ratios -

- Measures for control over revenues and costs
  - gross profit / amount of sales;
  - variable costs / amount of sales ...
- Use of assets: fixed assets / amount of sales.

Financial performance measures

- Liquidity Current ratio;
- Quick ratio;
- Stock, debtors',
- Creditors' turnover
- Collection periods, etc.
- Solvency, Interest cover.

Investment ratios

- Return on shareholders' equity profit after tax and interest / total equity;
- Earnings per share profit after interest and tax / number of shares;
- Price / earnings ratio;
- Investment ratios are more common in practice for larger;
- companies, where users of financial analysis could be large investment institutions e.g. pension funds.

5. The Objectives of the Case Study - Evaluation of the Financial Position of Enterprise N

Using the case study allows the target audience to immediately apply the concepts covered previously in implementing financial analysis for the Enterprise N.
Case study can stimulate questions from the audience and discussions about the material.
Information is provided on the hypothetical Enterprise N – the balance sheet and other accounting documents.

The Structure of the Case Study

- Horizontal analysis of the balance sheet and income statement of Enterprise N;
- Horizontal analysis is the analysis of dynamics;
- Liquidity ratio analysis of Enterprise N - calculates liquidity coefficients on a quarterly basis and describes possible problems for the company, e.g. suboptimal terms of settlement with suppliers;
- Activity ratio analysis of Enterprise N - analyses turnover ratios on a quarterly basis, with a special focus on accounts receivable and accounts payable.
- Profitability ratio analysis of Enterprise N – discusses profitability of sales, projects, operation, and margin on a quarterly basis - outlines potential problems and ways to address them;
- Working capital management in Enterprise N - details and calculations regarding:
    - Description of Working Capital;
    - Work in progress;
    - Accounts receivable;
    - Stock;
    - Cash resources.

Evaluation Methods

Every chapter of the course contains opportunities to test the knowledge of the audience, which are in the form of questions and more involved problems.
Sample questions can be focused on the material e.g.
Name what are the financial measures that the enterprise management, the owners, the lenders are interested in?
or on the enterprise itself:
Using the examples above, compose the SWOT matrix for your enterprise. What decisions can be taken for improvement of the situation?

6. Exercises and Solutions

The exercises cover among other concepts:

- Drawing up a balance sheet based on the known financial transactions;
- Correcting items on the income statement;
- Classifying business transactions;
- Preparing cash flow statements;
- Estimating cash flow from operating activities;
- Calculating all financial ratios.

- Discussing what factors are beyond the changes in the return on capital employed;
- Discussing the differences between financial performance of two companies and the factors behind it.

Summary of the Course and Evaluation Methods

The course provides the target audience with a broad knowledge on the financial and operation analysis of an entreprise.
The focus is on practical application of knowledge – entrepreneurs and finance specialists using the course and questions of the course to assess the situation in their own company.
The course can be combined with other further professional education courses developed with in the project.

1. Theoretical aspects of the enterprise external environment and competitiveness analysis

1.1. Portfolio analysis
1.2. Role of competitiveness and methods of measurement
1.3. Corporate SWOT analysis

1.1. Portfolio analysis

Nowadays when there is a strong impact of the external environment on operations of enterprises and with the economic, social and political changes affecting their activities both in a positive and negative way, enterprise performance analysis, effective action and decision-taking is necessary for an enterprise to avoid insolvency.

Analysis of the external environment is carried out in the following areas:

- Survey of the price dynamics for goods and services
- Tax rates and rates of interest on bank loan and deposits, the rate of stock issued
- Competition in the goods and financial markets.

Enterprise performance analysis plays an important role in enterprise management. The objective of analysis, on the one hand, is to determine the efficiency of performance of an enterprise for the reporting period and against set goals, and, on the other hand, to establish the potential areas for the activities of an enterprise for the current period and in the perspective by considering the necessary material, financial and labour resources. Therefore targeted analysis has to be carried out in order to find out such opportunities and reserves of an enterprise that would ensure optimal use of the existing resources.

Analysis of enterprise performance is not solely one of the management functions, but also a way of thinking for which a certain database is required. Furthermore the quality of analysis depends on the overall enterprise level of financial accounting and the quality of reporting, and the extent to which the figures included therein are true and fair.

The actual position of an enterprise in relation to the environment in which it operates is reflected in the portfolio analysis and the basic strategy the enterprise has chosen for its concept.

Portfolio analysis shows the competitiveness of an enterprise (the position of its production) in comparison with the situation in the market.

Table 1.1 Portfolio Analysis (Portfolio Matrix)

	High (with relative competitive advantages)	**Medium**	**Low**
High (with relatively attractive industry of operation)	**1**	**3**	**6**
Medium	**2**	**5**	**8**
Low	**4**	**7**	**9**

The numbers in the individual squares have the following meaning:

- (1) Enterprise has a very good competitive position compared to the competitors, it is operating in a highly attractive industry of operation with high growth
- (9) Enterprise is in a poor state of competitiveness, it is operating in a non-attractive industry of operation, in a shrinking market (market entering stagnation)
- (2) Enterprise has a very good competitive position compared to the competitors, it is operating in a partly attractive industry of operation
- (4) Enterprise is competitive, while the industry of operation is not particularly attractive
- (6) The industry of operation is attractive, however, the enterprise is not competitive compared to its competitors
- (5) The industry of operation is partly attractive, while the enterprise has a medium degree of competitiveness over competitors
- (3) The industry of operation is highly attractive, while the enterprise has a medium degree of competitiveness over its competitors
- (7) The industry of operation is not particularly attractive, and the enterprise has a medium competitiveness over its competitors
- (8) The industry of operation is partly attractive, however, the enterprise is not competitive compared to its competitors

An enterprise undergoes several market development stages within the industry which is generally called the industry life cycle, and the stages are as follows:

- Introduction
- Growth
- Maturity
- Decline.

An enterprise must try to analyse how and when changes are taking place in the market, how the strength of the forces involved change and how to oppose the threats.

Within the stage of introduction the market is at the beginning of development, its growth is slow and there is still little awareness of the products. The market is being introduced thanks to the innovation, new products and investment. The cost of a product is relatively high at the beginning which, on its turn, increases the price. Distribution may be limited as the sales channels are not yet completely established, the barriers for entering into the industry are relatively high. In this stage the market research is not yet been fully done and the organisation has not yet learned how it functions; the market barriers, however, are still low and would allow a new enterprise or product to enter.

Management objective is to create its organisational and operating structure by assuming that an unoccupied, competitive niche has been found in the market and to seek survival. The manager must have faith in success, preparedness to risk, operational capability, organisational capacity, understanding of the technologies, the market, marketing etc.

Within the stage of growth the demand for the product increases, the industry consumers recognise the product; they turn more demanding and start asking for discounts. New market segments and new areas for application of product appear. Competition is not yet very high at the beginning of this stage, the rapidly growing demand and the market share obtained increases the sales revenue of an enterprise. Marketing research is important

in order to make sure that the choice of a product is logical and substantiated and to search for the potential buyers.

This is exactly the period when many firms go bankrupt. This is due to non-professionalism of managers, inaccurate estimates and lack of working capital. If these problems are overcome and if the transition to the next stage is successful, usually the transformation of the inner management principles takes place from single management of a complex to its differentiation. This requires to devote more attention and at a more professional level to planning, forecasting, risk assessment (not only intuitive, but also analytical), long-term financial solutions, increasing the value for the owner investment.

Development slows down during the stage of maturity, the market is considerably saturated and competitiveness is determined by the lowest price. An enterprise must reduce prices, search for business partners to stay in the market.

Consumers have become even more demanding and therefore the quality of service becomes of more importance as well as the amount of sales to consumers needs to be increased.

There are strong market leaders who set market barriers for the newcomers. At the same time the weakest enterprises are leaving the market.

During this stage active personnel management procedures are to be carried out, first of all, training, as it is often the case that the other resources, the employee potential, has been exhausted.

An enterprise must stop purchasing products that do not bring the expected profit, by thus reducing the costs and focusing the attention and assets entirely on competitive products. An enterprise may carry out takeovers of the weaker competitors, bringing the highest benefit to the enterprise, and, besides, this can take place and at considerably low price.

Three notional categories of maturity may be attributable to this period in an enterprise (early, intermediary and late). The deepest concern in the work of the managers is associated with overcoming the first signs of stagnation and the excessive red-tape of the internal management processes.

Within the stage of decline the demand for the product is falling due to formation of an excessive capacity surplus in the industry, and the competition is being increased. This may be also affected by the external factors of the *micro* environment to the analysis of which larger attention must be devoted.

An enterprise in its attempt to utilise the surplus capacities aims at reducing the prices which, on its turn, may cause price competition to occur. There is a dilemma now for an enterprise to consider – to leave the market or to continue operating in the same industry.

As soon as competitiveness in the market is lost, inner conflicts arise, the financial indicators get worse. The struggle for survival becomes the main issue. However, the only way out for an enterprise at this moment is the readiness of the management and its capability to achieve the realisation of new ideas.

Portfolio analysis shows in a simple way the position in the competition and the attractiveness of the industry. If there are several product groups in an enterprise, individual portfolio analysis has to be performed for each product group.

Based on the portfolio analysis conclusions may be drawn about the basic strategies chosen, for example, in case with concerns the risks can be leveraged by taking into consideration its range of products and services.

In order to achieve sales of products in a saturated market, all risks of a concern must be leveraged by the range of products, and the different squares of the portfolio matrix must be worked on.

In the majority of situations the philosophy for leveraging the risks under the portfolio analysis for production investors is associated with risk as the distribution of the enterprise forces and resources leads to a diminished competitive position in the market.

Portfolio analysis is thus a good means to clarify the position, while it is not suitable for drawing the conclusions to obtain the right basic strategy.

The basic underlying strategy appropriate for an enterprise is derived from finding out its actual state of affairs as it is displayed by the portfolio analysis.

The basic strategy is derived from the combination of the factors of the performance results and the analysis of the potential of an enterprise, generally from adaptation of the enterprise performance results. So, for example, absolute believers in portfolio matrix would say that from position 1 (see Table 2.1) in the square on the left (highly attractive industry, large competitive advantage) automatically followed a market strategy of a typical market leader.

A typical market strategy of a market leader would presuppose that it would further strengthen its absolute and relative positions in the market and that it would invest more than the proportional share into this particular market segment. However, this strategy must not be adopted as the only one which is correct. An enterprise can find a fully applicable strategy without increased competition activities in order to stay a leader in the market. Even in a growing market with a relatively high competitive advantage it can be satisfied with the number two in certain circumstances.

Provided a higher return on the capital invested and provided free cash resources the transactions can be further optimised, instead of expanding or diversifying them.

The question of which is the correct strategy – expansion of the market share or optimisation without expanding the market share, can’t be solved by portfolio analysis alone.

Orthodox followers of the portfolio matrix believe that item 4 of Table 2.1 presupposes that an enterprise, provided that the competitive position is good, but the market is not attractive, should no more expand its activities, but only receive the return on the capital invested. The correct strategy, which is derived from the potential analysis may turn out to be quite different, i.e., an enterprise located in square 4 by applying additional effort in strengthening its position in the market could become a monopoly. In the case of a monopoly a completely different pricing policy may be applied.

In other words, one must be very careful in using the portfolio matrix as an automatically correct means for selection of the basic and market strategy as this may lead to errors and expose the enterprise to future risks.

As a means of finding out of the present and past positions the portfolio matrix is a didactic and easy visual aid. For the selection and evaluation of the future basic strategy the potential analysis is more suitable than the portfolio analysis.

An enterprise analyst can create the full picture and the concept of an enterprise by combining the results derived from the portfolio matrix (present, past), potential analysis (future), the basic strategy chosen and the present and past financial and management accounting. If such combinations have not been looked at in such a context, an enterprise case analysis is erroneous.

1.2. Role of competitiveness and methods of measurement

Competitiveness is an economically effective force tended at reducing costs and improving quality in the struggle for attracting the potential and retaining the existing customers.

Competitiveness is a conditional, dynamic concept which is directly dependent on specific circumstances formed in any particular market (market structure, accessibility, type of goods, sales conditions and terms of payment). In some cases it is fully sufficient to offer beneficial terms of payment in order to achieve large-scale distribution.

In the general meaning competitiveness is the ability to surpass others in the attainment of the targets set in the course of strengthening one's position in internal and external market.

Competitiveness is a comparative and relative measurement of the qualities of goods/services. If there were no competitors in the market to whose products the consumer could compare the goods/services of a specific enterprise there would be no point talking about the competitiveness of this enterprise.

Competitiveness is an aggregate indicator combining the characteristics of both the business subject and the product made or the service provided.

Successful competitiveness in the market is determined mainly by the potential of an enterprise. The enterprise potential is the real or possible ability to carry out targeted activities. The enterprise potential may be subdivided into four categories as follows:

Basic potential provides the possibility to an enterprise to achieve its main trading objectives, produce economical value and gain profit. The basic potential is related to its competitive advantage. Retaining and growth of this potential gives stable market position.

Hidden potential – assets without obvious advantages in one moment of time, while in the perspective they can be transformed into basic assets. Potential of the enterprise employees and the experience accumulated in a certain area of activity is considered as hidden potential.

There is also the so-called *cost ineffective potential*. Ineffective potential means utilisation of resources without bringing any profit to the enterprise.

Cross-potential is characterised by the assets at the disposal of an enterprise that ensure an effective us of the other types of potential, i.e., well-functioning sales or financial systems.

Competitiveness of goods or services is one of the main components for successful functioning of an enterprise in the market.

Competitiveness of goods/services would often be a combination of the price and the prime cost ensuring success of the particular goods/services in comparison with other suppliers or providers of homogenous goods or services.

Competitiveness of an enterprise reflecting its differences with the competing enterprises is applicable in a long-term.

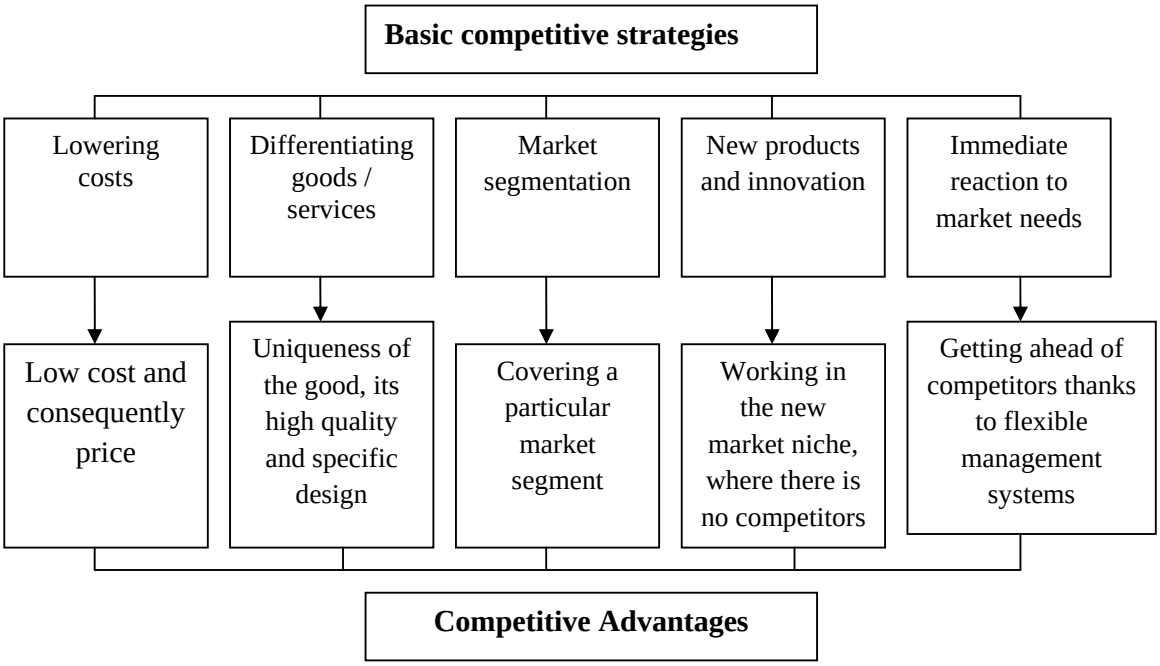

Figure 1.1 Basic competitive strategies and competitive advantages

Competition theory and practice shows that an enterprise should not necessarily be better than the others in absolutely everything and in all markets - it should though strive to be a leader at least in one aspect and in one market. For small enterprises acquisition of such leadership role may be related to a small market. The most important thing is to acquire a competitive advantage which can be achieved with the help of innovation.

Any enterprise wishing to acquire continuous competitive success must possess innovative philosophy and activities. This comprises the development strategy and action policy for innovative activities, specifies the vision and the mission of innovations, provides with the description of the main goals, assessment of the potential impacting factors as well as the resources and measures required for implementation of the programme.

Competitiveness of a product or a service is one of the main components of success of an enterprise while the competitiveness of the enterprise itself, however, is the most significant factor from the point of view of both marketing and financial aspects.

Methods of marketing analysis

The process of globalisation cannot be stopped; the necessity for globalisation is dictated by the need of survival. Based on this there is an increased competition in the world market, consolidation of competition, i.e., mergers of enterprises operating in the same industry, takes place. Under such competition conditions it is not sufficient to merely

respond to the changes. Enterprises must actively impact the environment and with the help of marketing tools attempt to change the specifications by themselves by creating new needs and respectively by offering the goods (services) that would meet those needs. In order to successfully resolve the problems and to operate in a strategically correct manner the industry in which an enterprise operates must be taken into account due to the fact that each industry can be characterised by its own specific features, with its own response to the changes in economic activities.

It is always possible to analyse products and services as it is possible to compete both by improved quality products and lower prices and by a more effective customer service.

M. Porter's Five Forces Model

The developer of the contemporary theory on competition Michael Porter underlines in his books that competitiveness may be increased by two means:

1. Lower costs – in the meaning of cheaper labour organisation and shorter work performance terms than those of competitors starting with the development of goods through to sales to end consumers
2. Specialisation.

Analysis of competitiveness of an enterprise should be started by researching the structure of the industry by using the Five Forces Model designed by M. Porter for this purpose (see the figure below).

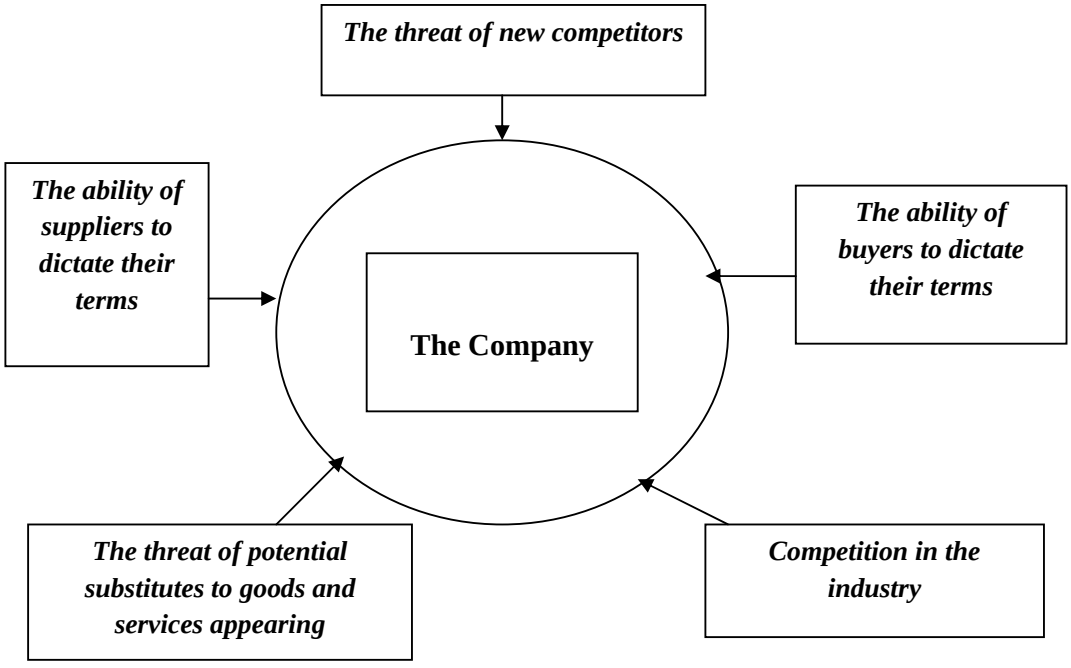

Figure 1.2 Five forces that influence competition in an industry

Having analysed competition M. Poter highlighted five factors influencing the inner attractiveness of market from the point of view of long-term profit-making by

companies. Each of these factors carries along potential threats, if not taken into consideration or if there is no information collected on a regular basis.

Intensity of competition in the industry is highest when:

- The industry does not have a single established leader
- Large number of competitors in the industry
- Fixed costs are high in the industry
- Little possibility for product differentiation
- High industry exit barriers
- Industry growth is declining.

Buyer power is aimed at obtaining lower prices, better quality and better service. This is expressed best of all when:

- Buyers are knowledgeable
- Buyers purchase the industry products in large quantities
- Substitutes of the enterprise products are available to buyers
- Buyers are concentrated and are aware of their power
- The industry output is not differentiated
- Buyers can enter the industry themselves as producers.

Supplier power is aimed at increasing the prices for their own products and introduction of more beneficial terms of delivery. This is expressed best of all when:

- Suppliers' production is vital to an enterprise
- Suppliers can afford to make losses in search of other buyers
- Suppliers are concentrated and enjoy the monopoly status in the industry
- Suppliers can enter the industry themselves as producers.

Threat of entry is expressed as a possible market share and price reduction. This threat depends on the barriers to entry which are composed of the following:

- Capital requirements
- Possibilities of cost reduction
- Product differentiation
- Development of the product and firm brand identity
- Cost of attracting the customers
- Access to distribution channels
- Access to inputs (raw materials)
- Legislation and government policy
- Measures for protection of industry enterprises.

Threat of substitutes is aimed at reducing the industry cost-effectiveness by decreasing the number of buyers and prices of goods. This may be expressed in the following way:

- Buyers may instead of a certain product choose another, a different one
- The new product may cause the existing product to become unnecessary and unworthy in the eyes of the buyer
- A new product can meet several needs of the customers.

In business the enterprise which compared to other enterprises possesses more accurate information on how and whose needs are being met is more competitive. It is not sufficient to just be aware of what kind of services an enterprise is offering, what kind of

goods it is manufacturing, as goods and services contribute to business only if there is a demand for them in order to meet the desires and needs of the people. There is no competitiveness and there is no business without the demand.

1.3. Corporate SWOT analysis

SWOT analysis is the assessment of both external and internal environment that allows to identify the enterprise strengths and weaknesses, opportunities and threats existing in the external environment as well as its competitiveness. In order to measure competitiveness of an enterprise several factors have to be taken into account.

1. How strong is the competitiveness of an enterprise?
2. Would the enterprise competitiveness be increasing or declining, if it continues to realise the current strategy?
3. What is the position of an enterprise compared to its main competitors taking into account the main factor of industry development?
4. What is defining the competitive advantage of an enterprise?
5. What are the capabilities of an enterprise to defend its position in the industry, the industry competition factors taken into account?

It is important to identify the internal and external environment factors of an enterprise. Potential strengths and weaknesses of an enterprise as well as the potential threats and opportunities existing in the external environment have been outlined in the Table *Internal environment factors*.

Internal environment factors

Strengths of an enterprise	**Weaknesses of an enterprise**
Has an important variety of competencies	Enterprise is made weak by the pressure from competitors
Possesses a large market share	Competitors are taking over the initiative
Has a different market strategy	Sales revenue increase is below the industry level
Increase in the number of consumers and customer loyalty	Shortage of financial resources
Good market monitoring	Reputation of a loser in the eyes of customers
Participant to a strong strategic group	Hesitating to improve the products
Participant to a fast growing market segments	Participant to a strategic group which has lost the initiative
Products are strongly differentiated	Weak market gaining potential
Cost advantages	Costs are higher than those of competitors
Profit above the industry average level	Market share too small
Best innovations and technology in the industry	Inability to oppose the external threats
Active and enterprising managers	Poor product quality
Capacity to use the opportunities	Lack of experience in the industry

External environment factors

External opportunities	**External threats**
Opportunities to expand to new markets	Appearance of lower price competitors in the market
Adjustment of products to new customer needs	Appearance of substitute products in the market
Integration along or against the stream	Slow-down in the market increase
Access to attractive foreign markets	Threat posed by foreign markets and currencies
Carelessness of competitors	Price regulation is introduced
Opportunity to extend production to the market demand level	Increasing influence from suppliers and buyers
Introduction of new technologies	Changes in the taste and needs of buyers

According to the information provided in the table it is necessary to compare an enterprise to its main rivals in the respective industry by assessing its strengths and weaknesses and the changes within the framework of the strategy being implemented. It is useful to perform this comparison by taking into consideration the following measures: quality of services, customer service, customer satisfaction, financial position, plant and equipment, basic skills, qualification and loyalty of personnel.

The interrelation between the external and internal environment and the enterprise strengths and weaknesses is illustrated in a SWOT matrix which proposes the following four different strategies:

1. *Strengths and opportunities strategy* (SO) – to establish strategies that based on the inner strengths is using the external opportunities that have occurred.
2. *Weaknesses and opportunities strategy* (WO) - to establish strategies which use the external opportunities to overcome the inner weaknesses.
3. *Strengths and threats strategy* (ST) – to establish strategies which are using the inner strengths in order to avoid the external threats.
4. *Weaknesses and threats strategy* (WT) – to establish strategies which minimise the inner weaknesses and allow avoiding the threats.

By defining the respective strategy an enterprise acknowledges its place and possibilities of development in the market which allows increasing its competitiveness.

Notional example 1 SWOT analysis matrix for an enterprise operating in the customs warehousing business

Every company which is operating in the customs warehousing business environment like N, AS, possesses both strengths and weaknesses which in the perspective need to be leveraged with the external opportunities and threats. The situation with companies in Latvia cannot be well predicted due to the often changing external environment in the country.

Strengths	Weaknesses
▫ Convenient warehouses and infrastructure for logistics services ▫ Convenient place in Riga, close transit roads ▫ Personnel is loyal to the company goals, interested in gaining maximum revenue ▫ Elasticity of prices and discounts ▫ Good cooperation with transport, insurance and other firms ▫ Stable financial situation ▫ Membership in Customs Brokers Association and Latvian Road Carriers Association	▫ High maintenance costs ▫ No railway access branch, operations with containers difficult ▫ Unclear mission and company marketing strategy ▫ Shortage of certified specialists in logistics for development of new projects ▫ Lack of quality assurance system controls
Opportunities	**Threats**
▫ In the result of the fast growing Latvian economy the customs and transit business is rapidly developing ▫ There is a possibility of cooperating with the European forwarding companies and of ensuring a stable volume of cargo flow ▫ Possibility to increase the portfolio of corporate services ▫ Opportunities to acquire new markets in Russian and the EU ▫ Use of brand and core business development	▫ Possible entering of the market by international companies ▫ European partners searching for cheaper business partners ▫ Ongoing changes in the SRS regulations ▫ Adoption of EU regulations on environmentally clean means of transport, storage of goods, packing etc. ▫ Raising of salaries and other expenditure

Notional example 2 SWOT analysis matrix of Enterprise A (mantelpiece business)

	1. Product competitiveness	2. Innovations (products, technologies)	3. Qualified managers	4. Loyal buyers	5. High costs	6. Poor marketing	production facility	8. Dissatisfied personnel	1 SWOT matrix
Opportunities	8.1.	8.2.	8.3.	8.4.	8.5.	8.6.	8.7.	8.8.	8. New markets are emerging
	7.1.	7.2.	7.3.	7.4.	7.5.	7.6.	7.7.	7.8.	7. New needs arising
	6.1.	6.2.	6.3.	6.4.	6.5.	6.6.	6.7.	6.8.	6. Economic stabilisation
	5.1.	5.2.	5.3.	5.4.	5.5.	5.6.	5.7.	5.8.	5. Extension of post-sales servicing
Threats	4.1.	4.2.	4.3.	4.4.	4.5.	4.6.	4.7.	4.8.	4. Shortage of resources
	3.1.	3.2.	3.3.	3.4.	3.5.	3.6.	3.7.	3.8.	3. New competitors
	2.1.	2.2.	2.3.	2.4.	2.5.	2.6.	2.7.	2.8.	2. Higher requirements for quality
	1.1.	1.2.	1.3.	1.4.	1.5.	1.6.	1.7.	1.8.	1. Unfavourable legislation
	Strengths				Weaknesses				

Strengths and opportunities

8.1. The products offered are high quality, diverse and competitive. Possibilities for increasing the sales in the regions of Latvia are being sought however the market capacity in the mantelpiece industry in Latvia is not high in relation to the number of competitors.

7.1. Lately there is an increased demand seen for good quality, attractive design, but relatively inexpensive mantelpieces. The rise in prices could be taking place on the account of advertising expenses.

6.1. The goods are competitive, without doubt, however, the enterprise economic stability is medium level; the enterprise is multi-functional and comprises several production units. The enterprise stability of competitors is probably higher, as operating in a more narrow industry is easier.

5.1. Presently the work is carried on extension of the post-sales servicing activity - there will be different kinds of service offered after expiry of the service guarantee period, contacts with customers will be maintained. Currently the closest competitors in this aspect are approximately at the same level – free guarantee service, effective post-guarantee maintenance.

7.2. The new products conform to the market needs; they are cheaper, but of good quality (mantelpieces, fireplaces).

6.2. The new products, after being exposed in an exhibition, in the lounge and in the information press, have aroused interest in customers and the demand is gradually

building up. By increasing the sales amount of these goods it is possible to raise the enterprise profit level.

5.2. Post-sales servicing is analogous for all groups of goods (dependent on the specification of the goods or orders).

7.3. Enterprise has hired experienced managers who know the specifics of the industry, the technologies involved and the qualities of the products, respond to the new needs emerging - the demand for quality, effectiveness and low prices. The drawbacks of competitors are quickly detected and used to their benefit.

5.3. Unit managers perform the necessary arrangements for post-sales servicing; there is a capacity for improvement.

7.4. Enterprise possesses a range of loyal customers – end users, enterprises, architects and designers who are willing to give any assessments. After the spring exhibition the lounge has been visited by potential customers who had arrived upon recommendation of designers. Cooperation with the industry specialists is necessary.

6.4. Loyal buyers are the foundation of the economic stability of the enterprise. Activities of the firm are based on the following principle: each job that is well done will bring in five extra orders, while each unsatisfied customer will take away ten potential customers.

5.4. The loyal buyers, basically the regular customers and those who have placed particularly large orders, receive invitations for the festivities or the events organised or supported by Enterprise A (e.g., festivities with fireworks), they receive greetings (it is planned to send also birthday greetings), on some occasions gifts are being presented.

Strengths and threats

4.1. The goods are highly competitive, but a shortage of cash assets can be seen in the enterprise which, on its turn, slows down the sales stimulation activities, production technology upgrading and further employee incentives etc.

3.1. Irrespective of the wide range of products, their high quality, competitive pricing etc. advantages guaranteed by the enterprise for its customers, the initially attractive state of the market has enabled the development of competition which makes the amount of sales for each individual enterprise to decline. The high competition level is the main obstructive factor of the external environment, as the offer has grown much faster than the demand.

1.1. Unfavourable legislation in the country, particularly the taxation system, minimises the enterprise profit, enables the development of the underground economy in the industry. Competition law has been enforced formally and there is a high corruption level in the industry.

4.2. Due to the lack of resources upgrading of technologies is slow.

3.2. In the situation of sharp rivalry enterprises particularly follow the actions of and try to take over good practice from each other.

4.3. For the purpose of raising qualification the enterprise executives must periodically attend theory courses to learn new information on general business administration, specifics of the industry etc. No resources are being allocated for such objectives. At

times the work of managers is impeded due to the lack of resources as a result of which both the customers and the enterprise reputation suffer.

3.3 One of the strengths of the enterprise is the experience accumulated in many years, professionalism, a knowledgeable and gifted team; there have been, however, internal conflicts as a result of which employees have left for the competitor enterprises, while others have established their own firms in the mantelpiece industry. This is a major weakness, as enterprises so founded are well aware of the advantages and shortages of Enterprise A, and following their past experience are capable of posing serious threats in the future.

4.4. Due to the lack of resources on some occasions deliveries are delayed and therefore also the terms of contracts. Customer loyalty may be cut back due to these and similar reasons.

3.4. There is a share of customers who remain faithful to the firm regardless of new competitors appearing in the market. They trust the brand of Enterprise A. However, the new competitors always take a certain market share including the potentially loyal customer to Enterprise A.

Weaknesses and opportunities

7.5. The share of customers with the highest purchasing power recently shows interest in the mantelpieces designed in the ultra-modern style irrespective of their high cost.

6.5. The amount of profit from large scale (expensive mantelpieces, zero cycle construction orders etc.), expensive orders is high and strengthens the enterprise.

5.5. Particular care is devoted to the post-sales servicing of the high-costing orders.

7.6. The situation in the market, the high competition forces to seek new ways for raising the efficiency of performance. This can be achieved by improved marketing activities.

6.6. Improving the goods promotion campaigns and stimulation of sales can foster the enterprise.

5.6. There is a necessity for establishment of a complex marketing scheme for extension of the post-sales servicing activities.

7.7. The production facility of the enterprise is relatively small as a result of which it is not possible to introduce certain technologies, although the choice of models of the ready goods is wide from the range of goods offered by foreign manufacturers, and in the production facility individual orders are being processed by using manual labour.

5.7. There are guarantee service and upgrading works performed at the production facility.

7.8. The market conditions and competition is a pre-condition for emerging of new needs. For the employees this means the performance of additional duties which causes the employees to become nervous at times.

6.8. An economically stronger enterprise would be an excellent award for the efforts of the executive team.

Weaknesses and threats

4.5. The enterprise daily faces a regular problem of high costs and lack of resources.

3.5. New competitors emerging increase the costs of the enterprise, because it is now necessary to spend more on retaining of its market share.

2.5. New solutions are sought and found for production of high quality and low-cost output, however, in the majority of cases high quality in terms of materials, design, performance and service is related with high costs as a result of which the price of the goods turns out to be too high for the specific customer. By reducing the price the rate of profit falls and in order to be able to afford it the amount of goods sold has to be increased.

4.6. Marketing effectiveness is impeded by the lack of resources. It is necessary to invest cash in raising the qualification, increasing the scope of goods promotion campaigns, intangible assets etc.

3.6. Emerging of new competitors, their advertising etc. activities make the enterprise to develop more effective measures of marketing for retaining of the existing share in the market and keeping of the profit on the same level (increasing).

4.7. The enterprise lacks resources for extension and upgrading of the production facility.

3.7. The new competitor Enterprise K has a larger and more up-to-date facility.

4.8. Due to the shortage of resources delays in disbursement of salaries occur causing dissatisfaction among the employees.

3.8. There have been occasions when the competitors entice the employees of Enterprise A to work for them by offering more opportunities for growth, larger and permanent income.

Test your knowledge:

1) In what areas the assessment of the external environment can be done?
2) Name and shortly describe the phases of an industry life cycle.
3) Describe the market strategy of a typical market leader.
4) What is enterprise competitiveness?
5) Name and shortly describe the basic strategies of competition and competitive advantages.
6) Describe M. Porter's Five Forces Model.
7) Describe the competitiveness of your enterprise by answering the following questions:
    7.1. How strong is the competitiveness of your enterprise?
    7.2. Would your enterprise competitiveness be increasing or declining, if it continues to realise the current strategy?
    7.3. What is the position of your enterprise compared to its main competitors taking into account the main factor of industry development?
    7.4. What is defining the competitive advantage of your enterprise?
    7.5. What are the capabilities of your enterprise to defend its position in the industry, the industry competition factors taken into account?
8) Name at least five potential strengths of an enterprise.
9) Name at least five potential weaknesses of an enterprise.
10) Name at least five external opportunities that an enterprise may use.
11) Name at least five external threats that may obstruct the activities of an enterprise.
12) By using the samples, compose the SWOT matrix for your enterprise. What decisions can be taken for improvement of the situation?

2. Theoretical aspects of enterprise performance analysis

2.1. Concept, principles and forms of enterprise performance analysis
2.2. Users of enterprise performance analysis
2.3. Quantitative and qualitative measures for achievement of the goals of enterprise owners
2.4. Role of analysis in the activities of an enterprise
2.5. Techniques and methods of analysis

2.1. Concept, principles and forms of enterprise performance analysis

Term ‘analysis’ is derived from the Greek language which translates as ‘divide, split’. Any division allows for an insight into the inner parts of the object of study and to find out the meaning of each component. Analysis is in the wider meaning understood as the ability to cognise the subject and the phenomena of the external environment, based on the division of a single item into its component parts and their examination in its entirety.

Enterprise management is the process of implementation of the management functions. It is related with performance of numerous business transactions altogether comprising the business operations of the enterprise. Business performance analysis is carried out before the adoption of important decisions; it is used to justify management decisions and actions, and serves as a scientific substantiation in enterprise management, as well as ensures the objectivity and effectiveness of the decisions taken.

Managers cannot rely solely on their intuition. Management decisions and action must be substantiated with accurate estimates and comprehensive economic analysis.

Business performance analysis should always provide answers to the following questions:

- What happened?
- Why did it happen?
- What and how should be done in the future?

The answer to the first two questions only provide with the statement of facts. The third question is the most significant one. To provide the answer to this question is exactly the purpose of the enterprise performance analysis.

Management decisions and the consequences of their execution depend on enterprise performance analysis. Enterprise performance analysis should correspond to pre-set requirements (principles) and it should be as follows:

- *Objective and definite* – based on clear, strongly tested measures
- *Complex and systematic*, i.e., every measure must be studied in combination with other related and analogue measures;
- *Perspective* – all measures must be set for the perspective in order to be able to forecast what impact would be exerted on them by introducing novelties in technology, machinery, labour organisation of the enterprise as well as in the application of experience;
- *Operative and timely* requiring constant and daily control over enterprise activities, fast processing of data and implementation of the necessary measures;

- *Specific* – the results obtained from the analysis should transform in real activities for the improvement of all areas of enterprise activities*;*
- *Scientifically grounded*;
- *Practically applicable and usable;*
- *Effective*.

This is the only approach to the enterprise performance analysis that can make it effective and necessary for improvement of company activities.

There is a certain information base required in order to perform analysis. Its quality depends on the overall enterprise financial accounting and the quality of reporting, and the extent to which the figures included therein are true and fair.

Each group of its users have their own interests in the enterprise, as well as their own object and target, for example, the main target for the enterprise owners is the dividends, therefore, the object of financial performance for them is the enterprise operating results, while the target for the suppliers is the payment for the goods, therefore, they are interested in the solvency status of an enterprise.

The following data are used for analysis:

- accounting records, statistical reports;
- budgeted and standard materials (consumption standards of materials, estimates, payroll rates);
- contracts, orders, minutes of production meetings;
- individual studies of those performing the analysis, stock-take information.

Business activities of an enterprise in a wider sense are comprised of several sub-systems (operational, financial, investment etc.) Analysis may be aimed at one of the above mentioned sub-systems of business activities. In this respect analysis is further divided into the following:

- *economic analysis;*
- *financial analysis;*
- *marketing analysis* is used to research how the external environment is functioning. Measures in the raw materials market and the ready goods sales market, competitiveness of an enterprise, formation of the pricing policy, development of the strategy for marketing, enterprise SWOT analysis is being researched and analysed;
- *investment analysis*, which is used for the development of the investing operations programme and the assessment of its efficiency as well as for justifying of the optimal investment option;
- *social analysis* used for the assessment of further development opportunities in the social field. Studies the opportunities for improving the terms of employment, employee motivation incentives, increasing the efficiency of enterprise functioning;
- *institutional analysis*, which is used when assessing the political and organisatorial conditions affecting the activities of an enterprise. Here the legislative framework, the enterprise relations with the local government, business partners and competitors are studied Strategic policy in the area of business cooperation that influences the improvement of efficient functioning of an enterprise is being developed.

Economic analysis is the structural process of the research, as well as the assessment of exposure to changes in external and internal factors as well as to the impact of management.

There are the two following types of economic analysis distinguished.

- ✓ *Macroeconomic analysis,* which investigates the economic phenomena and processes across the world and within the economy of one state
- ✓ *Microeconomic analysis* which investigates the same processes and phenomena at the level of individual business entities. The last one is exactly what is called business performance analysis.

The complex enterprise business performance economic analysis occupies the central place in the enterprise management system. Management decisions are developed and justified based on this analysis. No organisational or operational decision may be executed until its economic usefulness is proven. Management decisions and actions must be based on direct estimates as well as on thorough and extensive economic analysis.

Financial analysis is a component part of business analysis. Bringing the financial aspects in the forefront of a business entity performance as well as the increase in significance of the financial role is a characteristic trend across the world. Therefore the priority of an analysis grounded in the enterprise financial model is growing.

The financial analysis of an enterprise may be performed not only by enterprise managers, but also by the existing and potential investors, banks, suppliers, and, therefore, it is possible to distinguish between the internal and external financial analysis according to the subject of analysis.

Financial analysis can be defined as follows: accumulation, transformation and application of financial information for the purpose of:

- evaluation of the current and perspective financial position of an enterprise;
- evaluation of the possible and targeted speed of development of an enterprise from the point of view of the financial provision;
- clarifying the available sources of finance and assessment of their possibilities of mobilisation and usefulness;
- forecasting the status of an enterprise in the goods and capital markets.

Financial analysis is based on the assessment of the financial statements.

The *goals* of financial analysis are as follows:

- to establish the financial position of an enterprise and to identify the possibilities to improve the existing financial management methods, and to improve the financial status of an enterprise; financial analysis of an enterprise allows to establish and to measure by quantitative means the correlation between the enterprise performance final results and the resources used (material, financial, human etc. resources) that it uses in order to realise its current activities and enterprise development;
- to obtain the largest possible number of key measures that would allow for the most complete assessment of changes in the enterprise financial position, profit and loss account, structure of assets and liabilities;

- to early establish and prevent weaknesses in the financial and operating activities of an enterprise as well as to find the possibilities for improvement of the financial position.

Upon the arrangement of the financial analysis of an enterprise business activities a firm should carry out the following procedures:

- select the methods for performance of analysis;
- identify the factors influencing the enterprise performance results;
- establish the trends of development of an enterprise by comparing the results of the financial analysis with the preceding period;
- develop an action plan for strengthening of the financial position upon completion of the analysis.

The *objectives* to be achieved upon performance of the financial analysis are as follows:

- assess the efficiency of utilisation of the financial resources by performing analysis of the financial results of the enterprise business activities;
- prepare a forecast of the possible financial results, based on the existing business performance results and alternative options for use of the resources;
- design the activities for improvement of the financial position and further efficiency improvement of the use of financial resources.

2.2. Users of enterprise performance analysis

In free market economy the enterprise itself is an object of research by the environment that it operates in. Subjects of analysis are the users of information who are interested in the enterprise activities. In Table 1 the summary of the most significant groups of subjects of analysis, their input and the objects of financial analysis are shown.

Subjects of analysis are enterprise owners, investors (banks, stock exchanges), the management, employees, customers, suppliers and also the government (tax authority). The different groups of interest provide different input in the activities of an enterprise and they are each differently interested in the enterprise performance results. Each group has its own object of financial analysis.

Table 2.1 Groups interested in the financial analysis of an enterprise

Group of interest	Input by the group in the enterprise activities	Interests (claims)	Object of analysis
Owners	Equity capital	Dividends	Financial results from operations
Investors, stock holders	Debt capital	Interest on capital invested	Borrowing capacity
Enterprise management	Management skills, knowledge of business	Remuneration fee for the work, optional fee in % of profit gained	Entire enterprise operations
Employees	Work	Salaries, social guarantees	Financial results from enterprise operations
Suppliers	Provision of continuous production process	Payment for the goods delivered	Enterprise solvency
Customers	Distribution of the goods/services	Price for the goods/services	Financial results from enterprise operations
Government	Public services	Tax payments Statistical data	Financial results from enterprise operations

Financial analysis is necessary to a wide range of users as follows:

- *internal users* – company shareholders and management. Internal financial analysis is being performed by the enterprise management with the objective of planning and control of the use of financial resources for attainment of the enterprise goals, to plan and to provide the availability of the necessary financial resources and to control the financial position of the enterprise;
- *for external users* – individuals or institutions that are not related to the enterprise, and are, however, interested in the analysis of the financial status of the company business activities, for example, banks.

For the description of the groups of interest the following can be pointed out:

- *Enterprise management* – individuals to whom the owners have entrusted the assets of the enterprise and their management. Full information on the financial position of an enterprise and the operating results: for the current period, for the previous periods. Enterprise management performs assessment of the following information:
  1) enterprise operating results;
  2) the trends of changes in resources and the origin of resources;
  3) future development forecasts.
- *Enterprise owners* (stock owners or holders of the shares). They perform assessment of the following information: what is the efficiency of performance of the executive functions. Their object of interest is as follows:

1) profitability of the enterprise and the potential amount of dividends they might receive for their capital invested;

2) amount of profit that would provide dividends to them in the long-term from the profit account; enterprise owners use the following data in analysis and assessment:

- net income (retained earnings for the period reported);
- dividends on preference shares;
- dividend payout ratio;
- reinvestment ratio;
- dividend yield;
- debt ratios.

- *Transaction (business) partners:*

1) Suppliers, they are interested in the following: if an enterprise is solvent and if it is capable of making the payments in a timely manner for the goods supplied, and how big would be the risk of executing the supply contracts;

2) buyers (consumers) are interested in the following: if the order would be completed on time and in an appropriate quality; transaction partners use the following data for the analysis:

- liquidity ratios;
- solvency ratio;
- cost-effectiveness of sales;
- turnover ratios.

- *Creditors* – physical or legal entities that have purchased debentures of the enterprise or issued loans for a pre-defined % rate. Creditors must be convinced that the enterprise will be able to pay the interest and to repay the debt on the due date. Creditors analyse and assess the following:

1) profitability of enterprise;
2) amount of profit before interest and tax payments;
3) the cash flow statement.

- *Government tax authority* Provides economic benefit by controlling and auditing the tax payment procedures in the enterprise;
- *Employees of the enterprise* – they are interested in the following: whether the financial status of the enterprise is strong, whether the enterprise is growing (career opportunities, retaining the jobs and the amount of salary are dependent on this factor);
- *Financial analysts and advisors* – individuals providing financial services to others; *Securities brokers* – they study the financial statements of enterprises and provide consultation to their clients regarding the purchase of enterprise securities; *Credit agencies* – provide consultations to potential loan issuers as well as the business partners on solvency and liquidity of the enterprise;
- *Insurance companies* are assessing the potential degree of risk upon provision of insurance services, evaluate the property status, the trends of solvency indicators and the prospects of future development;

- *Trade unions* They are using the financial statements to arrange meetings with the enterprise management on the improvement of the terms of employment contracts for the staff:
  - raising of salaries;
  - reduction of working hours;
  - improvement of healthcare;
- *State Statistics Authority* – collects and summarise the following information:
  - on the country in general;
  - by industry;
  - by region.

Table 2.2 provides information on financial analysis results that the main information users are interested in.

Table 2.2 Financial results by areas of activity and groups of users

Management	**Owners**	**Lenders**
1	2	3
Operating efficiency 1. Profitability (according to profit in balance sheet) 2. Profitability (according to net profit) 3. Analysis of operating costs, profit cover for fixed costs, operating leverage	**Return** 1. Rate of return on equity 2. Rate of return on shareholders' funds 3. Earnings per share 4. Increase in the market value of one share 5. Total profit due to shareholders	**Liquidity** 1. Overall liquidity ratios 2. Absolute liquidity ratios 3. Cash flow characteristics
Resource management 1. Asset turnover 2. Working capital turnover: structure of stock and debtors, including also creditors 3. Efficiency of the use of human resources	**Distribution of profit** 1. Dividend per share 2. Amount of dividend 3. Dividend cover	**Financial gearing** 1. Debt ratios 2. Debt capitalisation 3. Gearing ratios
Return 1. Return on assets (asset profitability)	**Market indicators** 1. Market price per share 2. Relation between the market price per share book value per share 3. Trends of changes in the share prices	**Debt servicing** 1. Interest cover 2. Debt cover

2.3. Quantitative and qualitative measures for achievement of enterprise owner goals

The following *quantitative* measurement criteria for achievement of shareholders' goals can be named (based on the example of a mobile telecommunications operator):

- *Trading (up to 12 measures):*
  - Market share
  - Amount of customers
  - Amount of sales
  - Customers leaving
  - Amount and duration of calls per one customer
  - Price per one minute of calling
  - Average amount of the customer monthly bill
  - Others
- *Financial (up to 14 measures):*
  - Revenue from operations
  - Operating expense
  - EBITDA or OIBDA;[1]
  - operating income EBIT;
  - Net income;
  - Marginal data (profit, costs);
  - Balance sheet data;
  - Rates of return on capital invested;
  - Others
- *Customer servicing indicators (up to 10 measures);*
  - Customer service quality indicators;
  - Customer satisfaction indicators;
  - Others
- *Technical support, IT (up to 16 measures):*
  - Communications network quality indicators;
  - Amount of base stations;
  - Transportation network indicators;
  - New products;
  - IT and billing systems;
  - Others
- *Human resources (up to 12 measures):*
  - Amount and structure of personnel;
  - Amount and structure of remuneration and other expenses;
  - Operating indicators of personnel;
  - Others

Qualitative measures for attainment of goals:

Questionnaire 1 Enterprise products and services

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1 Earning Before Interest, Tax, Depreciation and Amortization; Operating Income Before Depreciation and Amortization

1. Are the enterprise transactions (services) different from those offered by others?
2. Would the enterprise competitors be able to offer homogenous products in the future or are the products unique?
3. How is the demand for the enterprise transactions (products) changing? Do the products meet the requirements of the customers?
4. Are there any customer complaints about the quality of products and services?
5. Is the range of products offered changing over time?
6. Are all of the types of enterprise products cost-effective?
7. Does enterprise constantly act on improvement of existing and offering new products?

Questionnaire 2 Customers and markets

1. Do the scope of enterprise transactions (services) and the base of customers increase?
2. Are the enterprise marketing services implementing the specifically targeted measures for establishment of a beneficial customer base and markets?
3. Are all enterprise customers and markets using transactions and services profitable?
4. Is there a register of returns from customers in the enterprise?
5. Is the enterprise attracting new clients (entering into new markets) for extension of the scope of its transactions (services) and increasing of its return?
6. Is the enterprise dependent on a range of specific customers?
7. What are the trends of the enterprise policy in respect of active transactions (products)? Is return from active transactions declining/remaining same/increasing?
8. What is the percentage of 'bad' customers and their debts from total asset portfolio?

Questionnaire 3 Competitors

1. Is the enterprise aware of what kind of transactions is offered by its competitors?
2. Does the enterprise offer exactly the same range of transactions as its competitors?
3. Is the enterprise monitoring on a regular basis the development trends in its own area of business as a whole and in the area of services provided?
4. What is the increase in assets compared to competitors?
5. Does enterprise have its own pricing policy or are prices defined only by competition?
6. What advantages does the enterprise have regarding the products offered in comparison to its competitors?
7. Are new competitors appearing in the area of the services provided?
8. Is it easy for competitors 'to entice' the enterprise customers to their side?

Questionnaire 4 Distribution of products and services (active transactions)

1. Is the market being researched and analysed and does the enterprise apply the information obtained in the improvement of its transactions?
2. Is there a policy for distribution of services (including of active transactions) established in the enterprise?
3. Is the marketing management information summarised and analysed on a regular basis for increasing of the return on services offered?

4. Are the employees providing the services to the customers capable of resolving their problems in a professional manner and offering of the most beneficial option for both the customer and the enterprise?
5. Are there any procedures existing in the enterprise that would describe the mechanism and terms for the provision of services? Are these complied with?
6. Are there any calculations of the prime cost of the services being done and are the modifications recorded on a regular basis?
7. Is any control performed on compliance of services provided with the procedures during the entire course of the process, for example, repayment of loans on time?
8. Does the enterprise introduce state-of-the-art technologies in the execution of its transactions (creation of information databases, improvement of the speed of service provision, reducing of risks etc.)?

Questionnaire 5 Personnel, facilities and organisation

1. Is it necessary for the enterprise to further invest in facilities and technologies?
2. Do the employees possess the necessary qualification appropriate for their job responsibilities and do they regularly raise their qualification?
3. Are personnel aware of the current enterprise financial results and long-term plans?
4. Is the remuneration of the employees competitive?
5. Do employees have a positive attitude towards their work and the enterprise?
6. Are the rights and powers clearly explained to every enterprise employee?
7. Is it possible for anybody else to perform the responsibilities of an employee during his/her absence? (Is the problem of replacement resolved?)
8. Is the enterprise management regularly getting the necessary information regarding the current situation in the enterprise and its problems?
9. Is there any emergency plan developed in the enterprise if the situation leads to the loss of assets (mainly the loss of customers, the leading specialists leaving the enterprise, changes in financial markets)?

Questionnaire 6 Accounting records, financial planning and control

1. Does the enterprise have any effective and modern accounting records system?
2. Does the accounting system provide with the possibility to obtain operating data on the status of assets, the option for collecting statistical data?
3. Does the enterprise follow the due fulfilment of liabilities by the customers (transaction terms)?
4. Are the documents on enterprise transactions performed processed, recorded and filed and is the information quickly available?
5. Is the budget developed for individual enterprise departments and employees binding and can it be adjusted dependent on the situation changes?
6. Is the enterprise following the trends of the financial position by applying the financial performance analysis?
7. Does the enterprise have its own long-term financing plan?
8. Does the enterprise review on a regular basis and adjust its financial strategy regarding its transactions (services)?

The result of high quality analysis, i.e., the evaluation checklist, is summarised in a single table allowing for a highlight of the existing problems.

Table 2.2 Summary scores of the points of the questionnaires (example)

Ref. no	Title of questionnaire	Total evaluation of the sheet			
		At risk	Unstable	Acceptable	Good
1	Enterprise products and services (active transactions)			X	
2	Customers and markets			X	
3	Competitors		X		
4	Distribution of products and services (transactions)			X	
5	Personnel, facilities and organisation		X		
6	Accounting records, financial planning and control			X	

The drawback of this system of measures in practice is that there is no one single quantitative measurement defined that would allow finding out how would each of the measures considered here would affect the attainment of goals in general.

2.4. Role of analysis in the activities of an enterprise

Enterprise performance analysis uses information that describes the following:

- *the economic potential of an enterprise* (size of the enterprise) – this information is used for comparison of the scope of enterprise operations with other enterprises and for ranking the enterprise in the local and international level. Such data are summarised and published in newspapers, statistical bulletins, yearbooks and in other similar publications. Analysis of the economic potential of an enterprise uses the following: enterprise assets, annual turnover, number of employees, enterprise equity, amount and value of the goods produced, amount of investment and distribution;
- *business operations of an enterprise* - several measures can be used here in various combinations. Among those are the following can be mentioned: revenues, their structure, costs, their structure, sources of enterprise assets etc.;
- efficiency of business operations – measures used to find out the efficiency are correlated to the profit gained. These measures may be both absolute and conditional: profit (operating profit, net profit), profitability (in relation to turnover, assets, liabilities);
- *financial status* – the measures describe the extent to which the enterprise depends on its sources of financing: equity structure, liquidity ratio, solvency;

- competitiveness – the capacity of an enterprise to compete in a certain goods market is in direct correlation with the competitiveness of the goods in question and the economic methods of the enterprise operations, which, on its turn, affects the results of competition. The objective is to clarify those factors that influence the attitude of customers towards the enterprise and its output in the market, as well as the changes in the enterprise market share within a particular market. The following belongs to this set of measures: market share of the enterprise, quality of goods.

Business performance analysis is an indispensable pre-condition for planning. In order to perform substantiated planning of enterprise business activities it is necessary to analyse in detail the implementation of the plan for the preceding period of operation. Analysis not only offers the possibility of researching the success of activities of a certain enterprise, but also to compare them to other same industry enterprises. This helps to prepare optimal plans by ensuring high rates of operational growth.

In order for the business activities to be efficient, entrepreneurs must be able to identify what and in what amounts should be produced, what is the capital requirement and how to provide for it. Therefore, the extent of the production costs of the output must be specified in order for the enterprise to gain sufficient profit; not only the strengths, but also the weaknesses of an enterprise must be assessed, that after having received more attention, would ensure larger efficiency of enterprise operations. The systematic layout of business performance analysis is displayed in Figure 1.

Enterprise performance analysis is the connecting link between accounting and decision-taking. During the process of analysis the information is being analytically processed – the existing results are compared to the results of the previous years as well as with the forecasted. The enterprise results are likewise being compared to business performance analysis of competitors as well as with the industry average results. The impact of the various factors on the resulting values is being established; there are inaccuracies, errors, unused opportunities and prospects disclosed.

With the help of analysis problems are identified, their causes are established, the development is being projected and the possibilities for their prevention are being discovered. Management decisions are developed and substantiated based on the results analysis.

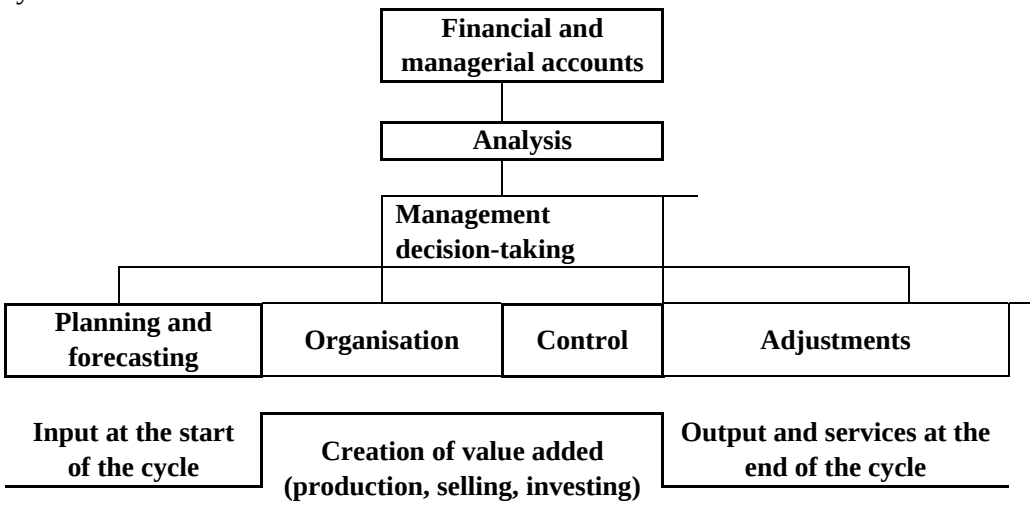

Figure 2.1 Role of analysis in the activities of an enterprise

Performance analysis is at the forefront of decision-making and action; it helps to substantiate the basis for it and guarantees the effectiveness. Through the analysis the search for the options of use of the most economical resources, the possibilities for reduction of the prime cost of output as well as the increase in profit and profitability is implemented. The economy of the enterprise is made stronger; the efficiency of production rises as a result.

Business performance analysis is therefore a significant element in the operational management system. The role of analysis in operational management is growing every year, and this can be explained with the fact that, due to the increase in the prices and the deficit of raw materials, increasing of both internal and external competition, the necessity for constant improvement of operating efficiency exists. The transition to a free market economy is likewise contributing to the self-sustainability of an enterprises and an increased responsibility of the managers for the decisions taken.

Planning comprises the processing and assessment of the information acquired, definition of the objectives, development and adoption of decisions in order to select the most suitable tools for effective provision of further activities under certain circumstances.

However, a pre-condition of a successful planning is the establishment of a correct forecast of the financial position. In the situation of developing market relations, when often there is complete information missing on the demand for the services, when it is impossible to predict not only the activities of the competitors, but also those of business partners, when it is required to take decisions ensuring not only development, but also survival of an enterprise, management abilities and knowledge of the forecasting methods is of utmost importance.

Development of the enterprise plans is basically the decision-taking ensuring operational development within the planning period. Besides, the enterprise performance results for the previous years are taken into account, the trends of economic development of the enterprise are studied, and additional operational reserves are being discovered.

Business performance analysis of an enterprise is an instrument of forecasting of the future performance results by reviewing of past trends. The ability to predict the course of activities, to see now the signs of the future - this is one of the functions of analysis. Correctly made forecasts must enable a higher level of planning and facilitate decision-making.

Business performance analysis of an enterprise does not only serve as the substantiation of an economic plan, but it is also the means of control over its execution. Planning begins and ends with the analysis of enterprise performance results. The control function over the fulfilment of plans is not weakened, on the contrary – it is being made stronger in market economy conditions, because in the circumstances of uncertainty and change of the external environment it is necessary to systematically adjust the enterprise data. The continuously changing external environment requires an ongoing process of planning.

Just like accounting is subdivided into financial and managerial accounting, also the enterprise business performance analysis can be split in two following groups:

- *external analysis* usually comprising the financial accounting statements;
- *internal analysis*, which comprises the management accounting reports.

The specific features of the external financial analysis are as follows:

- many subjects of analysis and users of information on enterprise performance;
- diversity of interests of the subjects and objects of analysis;
- orientation of analysis solely on reports of public enterprises;
- maximum publicity of the results.

The main content of external financial analysis that is performed by the enterprise partners according to the publicly available financial reports is made up of the following:

- analysis of the absolute profit measures;
- distribution of profit and raising of other sources of capital;
- analysis of the relative measures of profitability;
- analysis of the enterprise financial status, financial stability, balance sheet liquidity data, enterprise solvency;
- analysis of efficiency of use of the equity and debt capital;
- economic diagnostics of the enterprise financial status;
- position of the enterprise resources for the reporting period;
- financial stability and solvency status of the enterprise at the reporting date;
- rate of capital use and profitability of enterprise operations in the period reported;
- changes in the financial status of the enterprise in the reporting period and its dynamics in the preceding years;
- enterprise relationship with the shareholders.

External financial analysis is carried out by using published financial reports with the purpose of identifying the options for investing assets in a project with the highest return, to control the estimated tax amounts, to check the financial stability of a business partner. External financial analysis is solely derived from the public accounting reports. Limited information is used in this type of analysis which does not provide with a comprehensive insight about the operations of an enterprise.

Persons and institutions both related directly and indirectly to the enterprise can be interested in external analysis of an enterprise:

- enterprise co-owners and shareholders (interested in prospects for development, raising of profitability and profit);
- enterprise creditors (degree of risk);
- potential investors (profitability of investment);
- suppliers (financial status of an enterprise);
- inspectors and auditors;
- government tax authority;
- trade unions;
- press;
- competitors etc.

Internal financial analysis is being performed by the enterprise management with the objective of planning and control of the use of financial resources for attainment of the enterprise goals, to plan and to provide the availability of the necessary financial resources

and to control the financial position of the enterprise. In performance of the internal financial analysis more detailed additional information is being used apart from the financial statements - on technical preparation works for production, costs and standards, stock position, accounts receivable and payable, for example. It is possible to include a more detailed analysis on account of management accounting information in the model of enterprise internal analysis and to perform a complex assessment of enterprise performance efficiency.

Internal analysis is *confidential information* carried out to develop a certain programme for the enterprise, for example, marketing, operational programmes. This information is available for the executive team only and therefore the decisions necessary for establishment of further actions may be adopted based on this information. Internal analysis of an enterprise is performed according to the following measures:

- gaining of profit from sales of goods;
- prime cost of all enterprise goods manufactured and sold;
- prime cost of individual types of goods;
- price and cost variances from the planned values and the reasons involved;
- individual liability for the expenses in respect of the budget.

In performance of the internal financial analysis more detailed additional information is being used apart from the financial statements - on technical preparation works for production, costs and standards, stock position, accounts receivable and payable, for example.

It is possible to include a more detailed analysis on account of management accounting information in the model of enterprise internal (management) analysis and to perform a complex assessment of enterprise performance efficiency. The issues of financial and management analysis are mutually interrelated in substantiation of business plans, in control of their fulfilment, in development of a marketing scheme, i.e., a market oriented management system for production and sales of goods.

Internal analysis is a detailed economic analysis with the objective of providing the enterprise managers with the analytical information required for adoption of management decisions.

2.5. Techniques and methods of analysis

Depending on the objective of analysis proper techniques or methods for performance of analysis should be selected.

Key element of each scientific method in the scientific personnel involved. Presently it is practically impossible to distinguish between any techniques and methods and to establish that they belong to this branch of science and not to another - currently there is a merger of different scientific instruments taking place. In financial analysis, the same as in management, various methods can be applied which have been initially developed within the framework of one or the other branch of the economic science.

Different methods and techniques of classification may be highlighted in the financial performance analysis of any subject of economy. All types of classification are based on different specific features. One of the most informative features is the breakdown of techniques and methods by their degree of formation, i.e., whether it is

possible to describe to some extent the particular method with the help of any formalised procedures, for example, mathematical. Following this logics, all analytical methods may be subdivided into formalised and non-formalised methods.

Non-formalised methods are based on the description of logical procedures without the use of strict analytical correlations. An important role in the application of these methods is played by the experience and intuition of the analyst. Formalised methods (sometimes they are also formulated as mathematical methods) are based on pre-set strict correlations and rules.

In the majority of cases in the enterprise financial performance analysis as well as in the express analysis non-formalised methods are applied first of all, and, besides, the classical methods of economic analysis are applied.

As it has been stated there are several objectives in the analysis of financial status:

- identification of financial status;
- disclosing of the changes in the financial status in certain time and place;
- discovering of the main factors for changes of the financial status;
- forecast of the most important trends of the financial status.

Financial analysis is performed with the help of different types of models. The models allow for creation of structures and identification of the connection between the basic measures.

Three main types of models can be mentioned:

1) Descriptive models are models of a descriptive type and these are the basic models for assessment of the financial position of an enterprise. Descriptive models comprise the following: establishment of the reporting balance sheet system, preparation of financial statements of different analytical types, the vertical and the horizontal analysis of the financial statements, the system of analytical ratios, disclosures to the statements. All these models are based on the use of accounting information.

Several methods can be applied for business performance analysis:

Interpretation of statements – absolute figures included in the statements are being studied. This gives an introduction into the enterprise property status, its short-term or long-term investments in assets, the sources of formation of equity and the debt capital, as well as the relationship with its creditors and debtors. By using the statement interpretation method a number of limitations should be taken into account:

- the balance sheet reflects the status of the enterprise assets and liabilities on a certain date, but does not provide the answer for why such a status has been established;
- interpretation of the balance sheet data is possible only by linking them with the turnover or the sales amount data; any conclusions, regarding how large or small the amounts of each of the balance sheet items are, can be made only after comparing them to the respective amounts of turnover;
- it is possible to calculate different ratios from the balance sheet data, but in order to make their assessment, the comparable industry average data are required.

Interpretation of financial statements has to be performed in a certain order:

- review of the balance sheet items, the respective disclosures and their conformity;
- clarification of the most 'critical' items (losses, overdue liabilities, high level of debtors from total assets, high percentage of liabilities compared to the level of debtors);
- checking compliance between the balance sheet and income statement (according to the amounts of retained earnings, building up of reserves);
- review of the income statement items and their comparison with the disclosures.

- *Vertical and horizontal financial analysis*

The main functions of the enterprise assets are as follows: provision and extension of the enterprise business operations and securing the fulfilment of the enterprise liabilities. The amount and structure of enterprise assets are influenced by several factors:

- Enterprise size, area of operations and its goals;
- Technologies applied;
- Efficiency considerations;
- Marketing considerations;
- Type of sales organisation.

The position of the enterprise capital is reflected in the accounting statement of the enterprise - its balance sheet. The capital structure and composition of an enterprise is changing, they are affected by the business transactions performed.

By analysing the position, the structure and the changes of the enterprise capital, the horizontal and the vertical balance sheet analysis is used.

- ***Vertical analysis***

The vertical balance sheet analysis shows the resources of the enterprise and the changes in the structure of its sources in percentage by taking the total balance sheet amount as the base which is equal to 100 %.

The vertical or structural analysis allows analysing the changes in the structure of the object of research over a certain period as well as in comparison with the budget. The purpose of vertical analysis is as follows:

- Gives a notion of the accounting statements – in the form of relative values that characterise the balance sheet and the structure of the profit and loss account;
- Allows to assess the fairness and correctness of the enterprise annual report;
- Points out the 'problematic' areas in the operations of an enterprise and enables the preparation of a further action plan.

In other words, *vertical analysis* is the percentage of some financial statement items from the total assets or liabilities, respectively, and other total indicators, as well as the structural changes of some balance sheet and income statement items. Analysis is expressed in the form of ratios. According to this method an object is assumed to be 100 %, and from this the relation between some sections and the total amount of the object is determined by thus making up the structure of the object. In performance of the balance sheet vertical analysis all balance sheet items are expressed in percentages against the total amount of the balance sheet, while in performing the income

statement vertical analysis all items are expressed against the amount of revenues and costs.

- *Horizontal analysis* – the relative and absolute changes in various items of the statements compared to the preceding period or any other base periods are identified. By using this method it is possible to analyse both indicators during the change period and the variance of the indicators compared to the base period. The method of dynamics shows the trends of changes in the indicators under review and gives the possibility in the course of analysis to study the influence of different factors on the changes in the given indicators and to determine their value. Horizontal analysis is based on the *golden rules of the balance sheet.* The balance sheet golden rules are not mandatory; these are recommendations on how to do the financing of assets.

  Three golden rules of the balance sheet exist:

  1. *Equity – long-term investments = deviation* (2.1)

  This means that it is desirable to cover long-term investments by equity (equity is held by an enterprise for an unlimited period of time).

  2. *(Equity + long-term liabilities – long-term investments = deviation* (2.2)

  Long-term investments should be covered by equity and long-term liabilities, because the long-term liabilities are due in one year and more.

  3. *Short-term liabilities – Working capital = deviation* (2.3)

This means that working capital should be covered by short-term liabilities.

The basic idea of the horizontal or dynamic analysis method is to compare the values of the indicators under review with the values of the same indicators in the preceding period (the base period) or with the values included in the budget.

Horizontal analysis:

- Gives an idea of the enterprise rate of growth, the proportion between the growth rates of the enterprise income and expenditure;
- Allows to clarify the trends of development of the enterprise and their cyclical nature, the influence of internal and external factors on enterprise performance results;
- Allows to asses the efficiency of growth in the turnover of an enterprise in relation to its financial status.

The dynamic or horizontal analysis shows the trends of changes in the indicators under review and gives the possibility in the course of analysis to study the influence of different factors on the changes in the given indicators and to determine their value. This type of analysis can be carried out as certain changes in some balance sheet items in absolute and relative figures (percentages) when the indicators of the reporting period are compared to the previous period or any other base indicators. Changes are analysed with the help of the dynamics index or in percent.

Horizontal variances of the financial indicators are expressed as follows:

Dynamics index (DI) = Reporting period indicator/base period indicator (2.4)

Deviation % = (DI) 100-100%, or* (2.5)

*Deviation % = (value analysed - base indicator)/base indicator*100* (2.6)

- *Financial ratio method* – calculation of the reporting data ratios, identification of the correlations between the indicators. The system of analytical ratios is one of the leading elements of the financial status analysis used by different groups of users: managers, analysts, shareholders, investors, creditors etc. Tens of such indicators are known and for practical reasons they are subdivided in several groups. Most often five groups of indicators are highlighted in areas of financial analysis below.

  Calculation and analysis of financial ratios – financial ratios are obtained by using the methods for calculation of the indicators and the results are analysed. The calculated ratios can be compared to:
  - certain standards;
  - indicators from previous periods;
  - financial indicators of competitors;
  - industry average figures.

Financial ratio analysis is a systematic comparison of relations by using the information of the financial statements with the purpose of identification of the logical developments in the enterprise and description of the enterprise financial position. In the ratio or indicator analysis significant correlations between two components of the financial statements are being determined. Basically a ratio is a figure obtained in the result of arithmetic operations from two financial statement figures, and therefore it is possible to calculate a lot of different ratios. However, only a very small number of ratios imply significant information about the financial status of an enterprise. Financial analysis is using ratios in practice to determine the enterprise financial status.

Financial analysis uses ratios in practice that can be subdivided into the following groups:

- liquidity ratios;
- profitability ratios;
- solvency ratios;
- asset use efficiency ratios;
- investment ratios.

Each ratio when calculated separately does not give any information about an enterprise. Only a set of ratios and their changes over time as well as the comparison with the industry average ratios provides valuable information about the financial status of an enterprise. The purpose of the ratio analysis is to calculate the most important ratios and to determine the dynamics of their changes during the period analysed.

Financial ratios show the financial proportions between various statement items. The calculation of the financial ratios alone does not provide sufficient information about the financial position of an enterprise. In order to analyse the enterprise financial status by using the results obtained from the ratio analysis, it is necessary to compare the calculated ratios with a certain base. The following can serve as bases for comparison:

- Generally accepted parameters;
- Industry average figures;
- Analogue indicators from previous periods;
- Indicators from competitor enterprises;
- Any other indicators form analysis estimates.

There are advantages and disadvantages in using every base of comparison:

- Only for a few ratios any standards or generally accepted measures exist; Besides, the variance of the enterprise indicators from generally accepted standards can be associated with the specifics of the industry, the specifics of development of business environment or its seasonal character;
- Often it is not possible to obtain fair information about the industry average indicators; It is only possible to obtain data about some average data of enterprises that can serve as benchmark data;
- Comparison of the enterprise ratios with the own indicators only allows to identify the area of development of the enterprise itself and doesn't provide any information about the ranking of the enterprise within the industry and to compare to its competitors;
- Only published data can be obtained about the competitor enterprise that may not be detailed enough in order to form the basis for comparison of indicators;
- The indicators of any other enterprise analysed include specific enterprise data affecting also these indicators.

Three different techniques exist for the comparison of financial indicators:

- comparison with the ideal level (rule-of-thumb measures);
- comparison to previous periods;
- comparison to the industry level.

Comparison with a benchmark – the calculated indicators (ratios) are compared to the ideal (desirable) level of these indicators. For example, it is recognised that the acceptable level of the quick ratio could be from 1 to 2, similar benchmarks have been recommended also for other ratios. This technique, however, should not be idealised, as there are no two absolutely identical enterprises and each enterprise has its own specifics which needs to be taken into account when doing evaluation of financial data. So, for example, a high quick ratio can be the result of unfavourable crediting policy (insubstantially high amounts of customer debts), too old or obsolete stock etc. In another enterprise this liquidity indicator could be considerably lower however if such a situation is the result of a rational credit policy, the liquidity ratio of an enterprise may as well be high. Therefore, when using the technique of comparison, it has to be done carefully.

Comparison with the previous periods gives the opportunity to conclude whether the indicators have improved or declined. Such comparison can likewise be useful when forecasting the enterprise development trends. As the rate of development can vary in the course of time, forecasting should be done prudently. One of the drawbacks of this technique is also the fact that not always the level of the previous periods is easily comparable. For example, return on equity has increased in the enterprise over one year from 4% to 6%; this cannot be admitted to be a big achievement as even the 6% return is not sufficiently high.

Comparison to the industry level enables to establish the relation of the indicators of the analysed enterprise to the indicators of another enterprise operating in the same industry. For example, return on equity in other enterprises of the same industry is 25% on average therefore the level of this indicator (in the analysed enterprise) of 6% is considerably lower than in the industry on average. The industry level ratios can be used to evaluate their dynamics.

By using comparison with the industry level the following *limitations* need to be taken into account:

- Even if two enterprises are homogenous, they may be incomparable. Let us assume that we are comparing two information technology enterprises. The main area of operations for one of these enterprises could be the installation of the check-out systems for supermarkets and hypermarkets, i.e., the enterprise installs specialised point-of-sale systems. The other enterprise, on its turn, is offering specialised supermarket accounting software. And in the result the business operations of the two at the first glance similar enterprises are not comparable.
- The large enterprises often operate in several industries, i.e., they form conglomerates. In some separate industries the indicators usually differ, i.e., they have different returns, level of risk etc. indicators. In such cases the financial statements of enterprises are not mutually comparable.
- Figures of enterprise financial statements may be incomparable also due to different accounting, stock evaluation methods, fixed asset depreciation estimates, overhead apportionment etc. methods. However, it is admitted that the most secure criterion for assessment of business performance is the comparison with the industry level.
- *Tendency (trend) analysis* – establishment of the change dynamics of in indicators. Trend analysis – comparison of every position of the statement with the previous periods and identification of their trend. Trend is established as the basic tendency in the dynamics of the indicator without occasional impacting factors and the peculiarities of individual periods. With the help of trend the meaningfulness of the indicators in the future is created, respectively, the forecast analysis is performed.
- *Factor analysis* – shows the influence of individual factors on the operations of the enterprise. The individual enterprise performance measures are interrelated and affect each other. Economic indicators are most often expressed as a mathematical correlation of certain factors (differences, sums, multiplication, and division). Dependent on the degree of the factors they are subdivided in the main and less significant factors. The main factors should be given more attention in analysis.
  Therefore the analysis of factors is the analysis of the impact of certain factors (causes) on the total resulting indicator, when performing this analysis with the help of the preset or statistic technique.
- *Comparative analysis* – comparing the performance of two enterprises or the performance of two structural units of the same enterprise. Comparison can be also based on calculation of different economic indicators and comparative assessment in dynamics. Comparison allows evaluating the performance results of an enterprise, to establish the actual variances from the budgeted figures, figures from

the previous periods or the industry average results. This method allows for identification of the causes for such variances and to discover any reserves.

- *Balance sheet method* allows comparing mutually interrelated indicators in order to determine and to measure how they affect each other. By using this method one must take into account that the amounts of the mutually related indicators must be equal.
- *Graphical method* is a good instrument for visual illustration of various processes and tendencies as well as for the processing of the results of analysis. With graphical presentation of the results of analysis the indicators can be easily demonstrated and compared.
- *Economic mathematical methods* are often used for identification of the best option by taking business-related decisions in specific circumstances.
- *Standard and predicative simulation. Standard simulation models.* These types of models allow comparing the actual outcome of enterprise performance with prospective or expected results that are calculated in line with the budget. Standard models basically are used in internal financial analysis, in which standards for each cost item are assessed as well as the actual data variances from these standards. To some extent analysis is based on the use of models with strictly determined factors. *Predicative models* These models are forecasts by character. These are used in projection of the enterprise revenue and financial status.

Test your knowledge:

1) Name and describe the principles of enterprise performance analysis.
2) What sources of information are used in the enterprise performance analysis?
3) What are the objectives of financial analysis?
4) Name the users of the enterprise performance analysis results, their input in the operations of an enterprise and their claims from the performance results.
5) Name what are the financial measures that the enterprise management, the owners, the lenders are interested in?
6) Name and describe at least five quantitative and qualitative measures for attainment of shareholders' goals of an enterprise?
7) During performance of the qualitative analysis of your enterprise prepare the questionnaires according to example given above.
8) What decisions can be taken for improvement of the situation?
9) Substantiate, why the internal analysis of enterprise performance contains confidential information?
10) Name and describe the methods of enterprise performance analysis.
11) What are the horizontal variances of financial indicators?
12) Into what groups can the ratios used in practical financial analysis be subdivided?
13) What techniques for comparing of financial results that can be used in enterprise performance analysis? Which of them can be most easily used by the enterprise analysts?

3. Financial statements as the basis of information for analysis

3.1. Role of financial statements in financial analysis and the principles of their establishment
3.2. Description of the main balance sheet items
3.3. Description of the main income statement items
3.4. Role of financial analysis in financial planning

3.1. Role of financial statements in financial analysis and the principles of their establishment

The objects of the enterprise financial analysis are the company business performance results that are studied in their dynamics and in correlation with several measures of business performance results. The sources of the enterprise business performance results are the financial statements and the internal financial reports of an enterprise.

Complete information about the enterprise performance results is obtained while performing the analysis of financial statements. The main statements used in financial analysis are the company balance sheet and income statement.

Objective of the financial statements is to provide with the following information:

- About the financial status of an enterprise;
- About the performance results;
- About changes in the financial position in order for this information to be useful for a wide range of financial statement users for business decision-taking.

The statements provide with full information that could be necessary for a wide range of financial statement users for adoption of business decisions as they generally illustrate the financial aspects of past events.

In order for the information included in the statements to be useful it must conform to the following underlying assumptions (basic principles):

- *The accruals principle* Pursuant to this principle the effect of any transactions and other events are recognised at the moment of occurring (not at the moment of when cash or its equivalents are received or paid), and they are posted in the accounts and disclosed in the reports in the periods they refer to. This includes information not only about events in the past, but also about any future liabilities to pay cash for the resources that imply future cash receipts.
- *Going concern principle* Financial statements are prepared by assuming that an enterprise is a going concern and will continue its business in the foreseeable future. Thus it is assumed that the enterprise does neither have the intention to, nor is required to put into liquidation or to make drastic cutbacks to the scale of its operations.

Qualitative characteristics are those features which determine the usefulness of the information provided in the financial statements to its users. The main qualitative features are as follows:

- *Understandability* One of the most characteristic features of the information presented in the financial statements is its understandability. Therefore it is assumed that the users of financial reports have a good business, economy and accounting knowledge together with the willingness to study this information with due care.
- *Relevance* In order for the information to be useful it should correspond to the needs of decision-taking by users. Information is relevant if it influences the adoption of business decisions as follows: provides the assessment of the past, present or future events, or either confirms or corrects the previous assessments made of these events. In order for the information to have the forecasting value it should not always be strongly expressed as a forecast. However, the layout of providing the information about past transactions and other events influences the usefulness of reports on issues of forecasting. Information is relevant if avoidance or alteration of this information might affect the business decisions taken by the users of financial statements which they have adopted based on this statement.
- *Reliability* Information must be reliable to be useful. Information is reliable if it is free from material error and bias. It must represent faithfully the transactions and other events that it should or is reasonably expected to represent. Representation according to substance: transactions should be represented not only according to its legal form, but also according to its substance and economic reality. Completeness – information must be complete to be reliable.
- *Comparability* Users must be provided with the possibility to compare an enterprise's financial statements through time to identify the trends of its financial status and performance results. This means that the evaluation and presentation of the financial effects of like transactions and events should be carried out consistently within the enterprise.

Constraints to information relevance and reliability are as follows:

- *Timeliness* Information may become irrelevant if there is a delay in reporting it. In order to report information on a timely basis it is often necessary to provide it before all aspects of the transaction or any other event are known, thus compromising reliability of information. In order to find a balance between relevance and the provision of reliable information, the overriding consideration is how best to satisfy the economic decision-making needs of the users.
- *Balance between benefits and costs* The benefits derived from any information must exceed the costs of presenting this information.

3.2. Description of the main balance sheet items

Balance sheet is a report prepared on the basis of the books of accounting reflecting the financial position of the business at a particular moment. Balance sheet has two component parts:

- The figures disclosed under assets show the amounts and the types the resources possessed by an enterprise are classified;

- Sources of the enterprise resources presented as assets are disclosed under the liabilities (where they have originated from).

Balance sheet assets

The basis for sub-classification of assets into individual items is the degree of liquidity of these assets (the ability to transform the assets into cash). This is exactly the property according to which the assets are classified into two main groups:

- non-current or long-term assets (investments);
- current or short-term assets.

Current or short-term assets are assets that are used, consumed or sold within one reporting period).

Current assets are assets whose value is transferred to goods for sale within one operating cycle.

For the purposes of decision-making it is important to distinguish among the following groups of current asset items:

- cash assets;
- short-term financial investments;
- accounts receivable;
- inventory of goods and production reserves.

Table 3.1 shows the composition of the enterprise current assets broken down by the degree of risk of capital investment.

Table 3.1

Composition of current assets by the degree of risk of capital investment

Group of current assets	Balance sheet items
1. Current assets with a minimum degree of risk	1.1 Cash: in till, on account, on foreign currency account 1.2. Short-term financial investments
2. Current assets with a low degree of risk	2.1. Accounts receivable, excluding doubtful debts 2.2. Production reserves, excluding obsolete stock 2.3. Stock of goods for sale, excluding unsaleable goods
3. Current assets with a medium degree of risk	3.1. Low value inventory (after depreciation) 3.2. Work in progress 3.3 Prepaid expenses
4. Current assets with a high degree of risk	4.1. Doubtful debtors 4.2. Obsolete production reserves 4.3. Goods for sale, for which there is no demand

Cash assets are made up of cash in till or cash on the enterprise current account in bank. These are the most liquid part of the current assets; these assets may be used for execution of current payments, salary payments, production development etc. needs. For this purpose usually there are certain cash reserves established in an enterprise.

Short-term finance or investments or readily realisable securities are essentially short-term investments with a high degree of liquidity into which the temporarily spare cash assets of an enterprise are invested. Most often such securities can be government bonds which in the case of necessity may be transformed into cash assets. These

investments are done for the period of time only when the cash assets are not needed for the current needs of an enterprise.

Accounts receivable are the unpaid invoices issued by an enterprise for the goods sold (services provided). Accounts receivable are short-term debts with the repayment period less than a year. These debts arise upon selling goods to customers on credit (on debt) with a certain period of payment, for example, 1-3 months upon delivery of goods.

Accounts receivable are shown on the balance sheet according to actual sales value of the goods, i.e., based on their amount of cash. In the annual report the net accounts receivable amount is disclosed as the difference between the actual amount of accounts payable and any provisions for doubtful debts disclosed on the liabilities side of the balance sheet.

Production reserves are tangible assets intended for sale in the course of a regular trading cycle or for use in the process of goods production and further sales of these goods. These items are usually called the materials of goods and are composed of raw materials, packing materials, semi-finished goods and components usually purchased from the suppliers.

Production reserves are a less liquid group of the current assets however it is very important to include them in the analysis. Inventories may constitute a significant percentage not only from the current, but also from the total enterprise assets. This could be an evidence of difficulties that the enterprise is facing regarding the sales of goods, which has been caused, on its turn, by insufficient market research and quality of products.

Deviations of the amount of inventories from the optimum level may incur losses in the enterprise activities as the inventory storage costs are rising, liquid assets are taken out of circulation, the threat of impairment of the stock value is occurring.

Fixed assets are assets acquired for continuing use by the enterprise including land, buildings, constructions, plant and machinery, equipment and transport vehicles. In the course of operation these assets (excluding land) wear out causing the need to gradually write off their value or amortise them. Due to the above fixed assets in the balance sheet are reflected at to their net book value, i.e., the original value is reduced by an amount of depreciation.

Fixed assets are a group of assets:

- for which depreciation is calculated;
- that are intended for use in the enterprise for a period of above one year;
- that have a limited period of service;
- that are used by an enterprise for production and sales of goods and provision of services or for lease.

Depreciation is the distribution of the depreciable value of a fixed asset over the pre-estimated term of the transaction (for example, 2, 5 or 10 years). Depreciation calculated for a reporting period reduces the profit for the year reported.

Long-term financial investments are amounts of spare cash given at the disposal of other enterprises for more than one year with a view of earning regular income in the form of interest on loans or credit facilities, or else in the form of dividends from investments in the shares of other enterprises. Along with short-term financial investments this item reflects the enterprise performance in the financial markets.

Intangible assets are enterprise assets that do not have a physical existence, but are required in the performance of the enterprise business activities. Patents, licences, copyright, trademarks, expenditure for research, goodwill of the enterprise belong to this group of assets.

The cost of intangible assets is gradually written off against expenses.

Balance sheet liabilities

Balance sheet liabilities illustrate the sources of financing of the enterprise resources by the significance of their role and the term of repayment. An individual liability item corresponds to each source of the asset financing. Classification of the liabilities items may be different and depend on the principles used in the classification. For example, by dividing the items by the principle of their origin and by the principle of the enterprise capital ownership, there are two groups of liabilities distinguished:

- equity capital;
- debt capital.

Classifying the items by principle of the length of use, capital can be divided as follows:

- capital for short-term use;
- capital for long-term use.

Capital for short-term use includes the short-term debts of an enterprise, while the capital for long-term use includes long-term debt capital, share capital, the reserve capital etc.

Enterprise debt capital. In the course of its business activities every enterprise is widely using debt capital which is reflected in the liabilities as a short-term or a long-term liability.

The repayment term of short-term debts does not exceed one year. For repayment of short-term debts either the appropriate current assets are used or new short-term liabilities are made.

The following liabilities items reflect short-term debts:

- short-term bank loans;
- bills of exchange which are payable by the enterprise;
- trade accounts payable;
- customer advances or prepayments;
- taxation payable;
- dividends payable to owners;
- salaries payable to employees etc.

Short-term bank loans or credit facilities are credit liabilities undertaken by the enterprise for one year upon receipt of a bank credit on certain conditions (interest rate, credit repayment terms etc.). Bills of exchange payable is a bill of exchange debt to be covered within a specified term within the reporting period.

Trade accounts payable are the unpaid invoices issued by vendors that have to be paid for within the financial year pursuant to the terms of delivery contracts.

Customer advances or prepayments are cash assets received by an enterprise from its customers for the goods in the form of payment in advance, if provided for in the purchase-sales contract or the current laws and regulations.

Taxation payable is the estimated, yet unpaid tax amounts (tax liabilities, for example, the social insurance tax, individual income tax estimated from the salaries of employees etc.).

Dividends payable are the accrued dividends on the capital invested to the shareholders that are not paid yet due to various reasons (shortage of free cash etc.).

Salaries payable are the salaries, premium etc. payments that have not yet been disbursed by an enterprise to its employees.

Long-term liabilities are liabilities which are not repayable within the year of taxation and the term of repayment would be more than one year.

Long-term liabilities are as follows:

- long-term bank loans;
- other long-term loans and credit facilities.

Long-term bank loans and credit facilities are liabilities incurred upon borrowing of capital from a lender – the creditor, for a longer period of time (above one year) and paying interest on the credit borrowed in accordance with the loan or credit agreement.

Other long-term liabilities can incur from debts of an enterprise or liabilities under leasing contracts for equipment or buildings etc.

Equity capital as balance sheet liability element consists of the following main items:

- equity capital (share capital);
- reserve capital;
- retained earnings for the reporting year;
- retained earnings from previous periods.

Equity capital or stock capital, or share capital is the capital invested by the owners made up of investments by the participants or shareholders, the amount of which is stipulated in the enterprise articles of association. Share capital is disclosed in the balance sheet at the nominal value of shares.

Investments by the enterprise participants can be in the form of both cash investments and property investments, for example, by investing production equipment items or entire production facilities.

Additional capital is the increase in the book value of the share capital occurring as a result of a new share issue. Assets acquired by an enterprise as a result of shares' sale are the additional capital of an enterprise. Besides, the equity capital may be increased also on the account of the proceeds from the issue (share premium) acquired on the account of the difference between the nominal value and the actual sales value of the shares.

A source of the enterprise additional capital can be also disposal of a share of enterprise assets at prices exceeding their book value or at a price below the book value.

Retained earnings are a component part of the capital of an enterprise which has been accumulated from the net income of the previous years after the deduction of dividends to shareholders or owners. Retained earnings may appear in the balance sheet liabilities as the retained earnings from previous years, the reserve capital or net income for the reporting year (income as per the balance sheet less tax).

The items of retained earnings reflect the increase in the capital invested.

Reserve capital is disclosed in the enterprise with the purpose of providing for contingent losses. The amount of this capital shows what share of property will be used to cover for the liabilities of an enterprise in case of its dissolution.

In the balance sheets of some enterprises different other purpose funds may be created. Special regulation must be developed for the use of these funds.

Retained earnings may be distinguished in the balance sheet as a separate item or credited to the net profit item. In any case retained earnings is the share of profit that was not paid out in dividends to the owners, but has been used for the financing of the enterprise business activities by investing it for the share capital, securities etc. needs.

Table 3.2 Possible order of balance sheet analysis

Item	Questions to be considered
Assets	What is the total amount of assets? What are the changes in the total amounts of assets compared to the preceding period? What is the reason for changes in total assets? What is the structure of assets – the long-term investments and the short-term assets? Have any changes taken place in the structure of the assets compared to the preceding period? What is the reason for changes in the asset structure?
Long-term investments	What is the composition of long-term investments? (intangible and tangible assets)? Are there any long-term assets unused or inefficiently used in business (for example, obsolete or worn out fixed assets)? Are there any changes in the structure of long-term investments compared to the preceding period?
Working cap.	What is the content and structure of current assets? Are all current assets liquid assets? What are the changes in the structure and amount of current assets compared to the preceding period?
Liabilities	What is the structure of liabilities – the relation between equity capital and debt capital? Are there any changes in the structure of liabilities compared to the preceding period? What has changed? What is the reason for these changes?
Equity capital	Are there any changes in the structure and amount of equity capital compared to the previous period? What is the reason for these changes?
Debt capital	What is the debt capital structure – long-term and short-term liabilities? Are there any changes in the long-term and the short-term debt capital? What has changed? What is the reason for these changes?

In enterprise business analysis various balance sheet layouts are used – the vertical and the horizontal layout, for example. The layouts are easily convertible between each other.

Horizontal balance sheet layout equation:

Long-term investments + Current Assets = Capital + Long-term Debts + Short-term Debts

Vertical balance sheet layout equation:

Long-term investments + Current Assets – Short-term Debts – Long-term liabilities[2]= Capital

Long-term Investments + Current Assets – Short-term Debts = Capital + Long-term Debts

Current Assets – Short-term Liabilities = Net Current Assets (Working Capital)

Example Preparation of enterprise balance sheet according to vertical and horizontal layouts

The following enterprise data are available as of December 31 (in thousands of CU)

Position item	**Amount (thous. CU)**
Plant and machinery	25
Trade accounts payable	18
Bank overdraft	26
Stock of goods	45
Buildings and constructions	72
Long-term bank loan	51
Trade accounts receivable	48
Equity	117,5
Cash in till	1,5
Transport vehicles	15
Furniture and computers	9
Profit for the year reported	3 000

Solution Balance sheet according to the vertical layout:

[2] Long-term investments + Current Assets – Short-term Liabilities – Long-term Liabilities = Net Assets

Position item	**Amount (thous. CU)**
Long-term investments	
Buildings and constructions	72
Plant and machinery	25
Transport vehicles	15
Furniture and computers	9
Total long-term investments	121
Working capital	
Stock of goods	45
Trade accounts receivable	48
Cash in till	1,5
Total current assets	94,5
Short-term liabilities	
Trade accounts payable	(18)
Bank overdraft	(26)
Total short-term liabilities	(44)
Long-term liabilities	
Long-term bank loan	(51)
Total long-term liabilities	(51)
Net assets	120,5
Capital	
Equity	117,5
Profit for the year reported	3 000
Total capital	120,5

Balance sheet according to the horizontal layout:

Assets	**Amount**	**Liabilities**	**Amount**
Long-term investments		*Capital*	
Buildings and constructions	72	Equity	117,5
Plant and machinery	25	Profit for the year reported	3
Transport vehicles	15	*Total capital*	*120,5*
Furniture and computers	9	*Long-term liabilities*	
Total long-term investments	*121*	Long-term bank loan	51
Working capital		*Total long-term liabilities*	*51*
Stock of goods	45	*Short-term liabilities*	
Trade accounts receivable	48	Trade accounts payable	18
Cash in till	1,5	Bank overdraft	26
Total current assets	*94,5*	*Total short-term liabilities*	*44*
Total assets	215,5	Total liabilities	215,5

3.3. Description of the main income statement items

The financial result of the enterprise business activities, i.e., profit or loss gained for the reporting period is reflected in the income statement. This estimate is usually prepared in a vertical layout with the starting point being the net turnover form sales of products, while the

final point is the net income or loss of the reporting period. This statement shows the taxable share of profit and the items that either increase or reduce this share of profit.

For financial decision-making a clear and accurate breakdown of revenue and expenditure is required as well as the analysis of the effect of the enterprise internal factors on the efficiency of business performance of the enterprise.

Clear and accurate classification of revenue and expense is the basis for assessment of the enterprise performance result. Besides, such classification is also required for the following:

- identification of source for the main share of income/profit in the period reported;
- segregation of the prime cost of production and non-production expenses including the separation of the management and sales expenses;
- identification of the fixed and variable costs for the purposes of analysis.

Net turnover is the revenue form sales of goods and services less VAT and excise tax amounts as well as the discounts given to customers that are calculated based on the sales revenue and the value of the goods returned.

Production costs of goods sold includes the following elements: materials, salaries of production personnel, other direct, as well as indirect costs involved in production.

Gross profit is the excess of net turnover over the production cost of the goods sold. This figure allows analysing the efficiency of the enterprise production activities.

Cost of sales includes the costs of advertising, packing, consignment and carriage, insurance and other costs.

Administrative costs include rent payments, costs of equipment maintenance and repairs, administration personnel salaries, business trip expenses, telephone and telegraph etc. expenses.

At this stage the difference obtained at this stage of calculation of the financial outcome is called operating profit or loss.

Enterprise operating profit or loss shows the effect of the general, administrative and selling costs on the financial outcome of an enterprise.

Profit from financial operations is the net of income and expenses form the financial transactions performed by an enterprise. This figure is necessary to split the area of the operating performance from such sources of income as the receipt of interest or dividends from the capital invested in other enterprises, from currency transactions etc. sources.

Profit before tax is the object of taxation by the income tax.

Extraordinary charges and credits are miscellaneous amounts that unrelated with normal day-to-day activities of an enterprise, for example, losses due to *force majeure* conditions etc.

Net profit is the share of the enterprise profit left at the disposal of the enterprise after deduction of the income tax. In conditions of a free market economy this is the main measure of enterprise performance. This is exactly the figure that is kept in the scope of attention of the enterprise managers, shareholder and financial markets. Existence of the enterprise, the number of jobs for the employees and the payment of dividends depend on the dynamics of this figure.

Enterprise net profit is distributed according to annual meeting of shareholders decision.

The elements of undistributed profit are as follows:

- net profit gained during the year reported;
- undistributed profit at the beginning of the year;
- total distributable amount of profit;
- dividends payable to shareholders (participants);
- undistributed profit at the end of the year.

Estimates of the balance sheet items and financial performance measures are closely related with other financial statements as increase (decrease) in profit compared to the preceding period and transfer of profit to equity affects the enterprise development and financial position.

Table 3.3 Possible order of income statement analysis

Item	Questions to be considered
Profit	Is the outcome of the enterprise performance profit or loss?
	What is the distribution of profit?
Turnover	What is the turnover of an enterprise?
	What is the increase/decrease in the enterprise turnover?
	What factors influence the changes in the turnover of an enterprise?
Revenues	What is the revenue structure of an enterprise (the percentage by the type of production or services from the turnover)?
Costs	What is the structure of costs (percentage of cost from the total amount of costs or from the turnover)?
	What is the amount of costs compared to the previous period?
	What is cost increase/decrease against turnover increase/decrease?

Example Preparation of the income statement

The following information is available for the period ended 31.12.200X.

	Amount
Road transport operating and maintenance costs	1200
Rent payments received from tenants	2000
Closing stock (as of 31st of December)	3000
Rent payments paid for the period to 31st of December	5000
Trucks	6300
Annual depreciation of trucks	1500
Lighting and heating costs	900
Telephone and postal services	450
Sales and distribution	97400
Purchases of goods	68350
Insurance costs	750
Accounts receivable	1000
Interest on bank loan payable for the period to 31st of December	620
Bank loan	150000
Balance of cash assets	4780
Salaries to employees and social payments	10400
Opening stock as at 1st of January	4000

Prepare the income statement for the year ended on 31st of December

Income statement for the year ended on 31st of December

Sales (Turnover)	97400
Less Prime cost of goods sold:	
Opening stock as at 1st of January	*4000*
Add Purchases of goods	*68350*
Less Closing stock (as of 31st of December)	*(3000)*
	(69350)
Gross profit	*28050*
Rent payments received from tenants	2000
Salaries to employees and social payments	(10400)
Rent payments paid for the period to 31st of December	(5000)
Lighting and heating costs	(900)
Telephone and postal services	(450)
Insurance costs	(750)
Road transport operating and maintenance costs	(1200)
Interest on bank loan payable for the period to 31st of December	(620)
Annual depreciation of trucks	(1500)
Profit	*9230*

3.4. Role of financial analysis in financial planning

Financial analysis helps to plan, to understand the areas of development and what should be improved in the operations of an enterprise.

Financial planning is a process during which the basis for mutually interrelated investing and financing decisions is being prepared.

There are three techniques of financial planning distinguished in practice:

- *Day-to-day financial estimates* These estimates are performed for a 30-day period. The objective of these estimates is to control the enterprise liquidity and to effectively use the short-term financial assets. For this purpose cash receipts and disbursements are being put under control.
- *Medium-term financial planning* Usually this planning period runs from 3 to 12 months. The objective of this sort of planning is to ensure liquidity and the turnover of free cash assets in an enterprise.
- *Long-term financial planning* The objective of this planning is to establish the capital and financial requirements by taking the relation between the production capacities for equity and debt capital into account.

Considering the issues of financial planning there are five main objectives distinguished:

- Identification of the amount of capital requirement for an enterprise;
- Analysis of the enterprise property or composition of capital and their changes with the purpose of ensuring an optimum structure of capital and property by type, scope, terms;
- Ensuring constant solvency of an enterprise;
- Reducing of the amount of financing tasks;
- Most beneficial use of spare assets.

For any enterprise the central financial planning problem is to ensure the enterprise liquidity, because insolvency of an enterprise would imply destruction.

In order to resolve the liquidity issues in a timely manner and to plan its finances accurately the flow of payouts must be planned. The two following issues are of importance here:

- How to find out the amount of capital required;
- How to finance this amount of capital.

Preparing the plans for financing allows to determine the amount of capital required in view of the following factors:

- Enterprise competency;
- Tax legislation in respect of the enterprise financing from profit or with the capital raised from outside;
- The relation between profit and the debt capital raised;
- Financing tasks in various options to select the optimal method of financing.

Wrong financial planning in an enterprise, violation of the conditions for financing may cause the crisis in the enterprise performance and bankruptcy.

The goal of preparing the financing plan is to define the types and amounts of financing required for the fulfilment of the enterprise operating programme.

The main objectives of the financing plan are as follows:

- To identify more efficient ways of capital investment;

- To provide the financial resources required for the enterprise operating, investment and financial areas of activity;
- To provide for the fulfilment of the economic interests of the shareholders and other investors;
- To establish rational financial relations with the budget, the banks, the suppliers and the customers.

A carefully designed budget in an enterprise fulfils several functions:

- Transforms the areas of activity into controllable figures;
- Optimises the use of limited resources;
- Sets clear goals for every employee;
- Simulates the possible variances and their effects;
- Simulates the potential ways of resolving problems;
- Serves as the reference point for assessment of any success achieved;
- Serves as a control mechanism of decisions taken;
- Provides the possibility to systematically respond to changes.

A budget is an insight in the forthcoming period of an enterprise and its quality depends on the assumptions underlying the preparation of a budget. Therefore the quality of the assumptions plays a decisive role in preparation of a balanced and real budget. There should be several information groups at the basis of the budget preparation process:

- Enterprise development goals and strategy;
- Performance analysis results from previous periods;
- Market development trends, including the development trends in the customer, competitor, supplier markets;
- Forecast regarding the market development, developments in the base of suppliers, activities of the existing competitors, appearance of new competitors, development of financial market and changes in consumption.

Budget is developed based on the forecasts for development and the previous period analysis. The most essential correlations of the main factors must be reflected in the budget as follows:

- Expected sales volume and market capacity This is the primary step in preparing a budget. It is important here to compare the results from the preceding year and to forecast what could be the turnover for the year planned. During this stage the profitability of sales should be forecast, particularly the profitability of gross profit, as this measure will be key in determining whether an enterprise will be able to cover for the costs planned that are to be forecasted in the following steps, and what is required for the enterprise to develop and to simply sustain its operations;
- The budget for the sales and distribution activity or marketing;
- Human resources budget;
- Administration maintenance costs (business trips, office maintenance costs);
- Logistics budget;
- Fixed asset depreciation plan and renovation budget.

All department and structural unit budgets are balanced in the overall enterprise budget and a single enterprise budget is thus created.

A budget summarises all revenues and expenses of an enterprise and shows the amount of the expected profit.

The cash flow forecast plays a very important role. This has to be projected after the budget is prepared as the amount of turnover that the enterprise plans to achieve is already available. The amount of turnover is necessary for planning of the incoming cash flow. The asset turnover ratios can be of assistance here. As it is well known, cash and turnover is not the same thing. Therefore, when projecting cash inflows it is highly important to most accurately plan the collection of accounts receivable. The policy for collection of debtors' debts in an enterprise is not insignificant here, however, as the enterprise upon planning of cash flows often takes historical data for the previous year into account, the debtor's turnover ratio has to be estimated for an enterprise - this would allow determine the period closing balance figure of accounts receivable. After the figures for the period opening and closing debtors balance and the turnover have become known cash inflows from sales for the period can be estimated by mathematical methods. One should also bear in mind that the balances of the accounts receivable include VAT amounts, while the turnover doesn't and therefore certain adjustments need to be made in calculations of the cash inflows.

While planning the outflow of cash all enterprise creditors are split into suppliers directly selling their products, goods necessary for the provision of the enterprise business activities, and into suppliers delivering their services required to maintain its business activities. Therefore it becomes more understandable which creditors should be paid by the enterprise in the current or in another month. For example, the situation with the creditors providing services becomes clear - this outflow of cash can be planned based on historical data from the previous year, as the services received each month are the same, and, therefore, an enterprise can expect that it has to pay monthly for rent, electricity, transport, advertisement, loan interest as well as tax, salaries etc. The situation with the suppliers of goods is more complex. If the range of goods sold by an enterprise is very wide and it is not possible to project, who and how much needs to be paid, because it depends on how well and which brands of goods will sell better, then the turnover ratios can assist again.

The first thing that needs to be done, when planning payments to suppliers of goods, is to plan the balances to be purchased and the amounts that would be available for sale. According to the budget prepared an enterprise already knows how much has been planned for production profitability in the enterprise and, therefore, it is also known, what is the amount of the prime cost from the turnover. The prime cost of goods is exactly the value of goods sold in every particular month. With the prime cost of goods sold known and taking the historical data for the previous year as the basis, the stock turnover ratio is also available; it can be estimated how much stock will remain at the end of the month which will be the reference point in planning the cash flow fro the following month. Therefore, if the monthly opening stock balances, the amounts to be sold and the amounts remaining are available, it can be mathematically estimated what will be the amount of goods to be purchased. Stock data are required to plan the movement of the accounts payable to the goods suppliers. There is an assumption made that creditors need to be paid as much as it is sold. This presupposes that the figure of the cost of goods sold is available, and, if we accept this assumption, then it is only necessary to multiply this cost of goods with the rate of VAT, and the amount of payment to creditors for each particular month is

obtained. However, as an enterprise does not receive cash immediately after sales of goods and first of all it pays to the creditors providing services, and it is in a situation when there is only as much cash as it is left over, an enterprise may be in a situation when it delays, is overdue with the payments to its suppliers. However, when planning the cash flow, an enterprise is in the position to monitor, how much it would need to pay and how much it can afford to pay, and thus the monthly closing accounts payable balances become available. Upon completion of projecting its cash flows an enterprise is also in the position to tell, what is the monthly opening and closing cash balance. Having all these balances, an enterprise is in a position to make its balance sheet forecast.

Developing of the financing plan is completed by preparing the balance sheet forecast.

The balance sheet shows the following:

- Financial liabilities of an enterprise and the projected sources of finance;
- Prospective financial complications;
- The possibility to estimate the specific values of the necessary financial measures for each particular period of planning.

After calculating its financial measures an enterprise can see, what needs to be improved in order for the plan to be fulfilled, as the financial planning of an enterprise may be too optimistic, and, therefore, in order to be fulfilled it may be necessary to improve the debt collection policy or to introduce better terms in the transactions with creditors, to extend the terms of payment, or, for example, if according to the estimated figures liquidity is too low, perhaps, additional financing should be sought. Thus financial analysis allows for projecting, assists in understanding the course of activities and the improvements needed in an enterprise.

Test your knowledge:

1) What is the objective of preparing the financial statements of an enterprise?
2) Name the principles underlying the preparation of the financial statements?
3) Describe the composition of current assets by the degree of the risk of capital investment. What current assets does your enterprise possess?
4) Analyse the balance sheet data of your enterprise by using the recommendations listed in Table 3.2.
5) Analyse the income statement data of your enterprise by using the recommendations listed in Table 3.3.
6) Describe the significance of financial analysis in planning of enterprise business activities.

Resolve the following exercises:

Exercise 1

Group the following BS items into assets or liabilities:

- production equipment
- transport vehicles
- equity

- debts of an enterprise for the goods
- deferred income
- bank loan
- buildings and constructions
- cash on bank account
- stock in warehouse
- cash in till of an enterprise
- profit
- trade accounts receivable (customer debts);
- prepaid expense.

Exercise 2

Draw up a balance sheet:

- equity – 36,000
- equipment – 18,500
- stock of raw materials – 2,500
- transport vehicles – 6,300
- accounts receivable – 2,650
- stock of goods – 3,500
- cash on bank account – 3,550
- accounts payable - ?

Exercise 3

Are the following statements true or false?

Assets on the balance sheet of an enterprise provide with the following information:

- asset condition in an enterprise;
- position of accounts payable;
- net turnover of an enterprise;
- sources of enterprise assets;
- amount of current assets;
- size of equity;
- enterprise costs.

Liabilities on the balance sheet of an enterprise provide with the following information:

- on taxes outstanding;
- revenue earned by the enterprise;
- profit made by the enterprise;
- investments made by the enterprise in securities;
- trade accounts receivable;
- long-term investments made by the enterprise.

4. Financial analysis measures (ratios)

4.1. Description of financial ratios
4.2. Liquidity measures
4.3. Solvency measures
4.4. Activity measures
4.5. Profitability measures

4.1. Description of financial ratios

Financial ratio analysis shows the financial proportions between various statement items. The advantage of the financial ratios is that they can be easily calculated. The concept of this method is expressed in calculation of the respective ratio and its comparison to a certain basis, for example:

- generally accepted measures;
- industry average figures;
- analogue figures of the previous years:
- figures of competitor enterprises;
- any other measures form the estimates of an analysis.

It is believed that, if the actual value of financial ratios is worse than that of the reference values, it is an indicator of the most vulnerable areas in the enterprise performance that require additional analysis to be performed. Further analysis may not necessarily confirm the previously made negative assessment. In some cases some ratio values do not conform to a generally accepted standard due to some specific, particular circumstances or enterprise policies.

Ratios are important for to the management of an enterprise due to the fact that according to these ratios shareholders and creditors may draw their conclusions about the state of the business activities of an enterprise. Therefore, upon passing of any decision managers need to assess the effect of this decision on the most significant financial ratios. The direct appraisal is based on the underlying main performance measures. Direct appraisal of the profit and loss account, appraisal of the balance sheet and studying of different prime data lies at the basis of the direct appraisal.

For example, the assessment of profit and loss consists of the following:

- assessment of turnover;
- assessment of gross profit;
- assessment of net profit.

Thus *the turnover of an enterprise* is the enterprise revenue from sales of production or goods. In assessment of the turnover of an enterprise the data of previous years need to be compared with the projected data (if established). There are several reasons for variances between these data. Both price changes and sales volume and structural changes need to be considered here.

Changes in gross profit occur due to both the differences in the turnover (sales) and the costs of sales and distribution and production. Changes in turnover were already discussed, but changes in the costs of sales and distribution and production may also be

caused by two factors: the amount of stock of goods for sale and the prices for purchases and raw materials and irrational management in enterprise etc. reasons.

For the assessment of net profit both the absolute and the relative measures must be compared to the accounting data from the previous years and the current data.

Ratios are a highly powerful instrument of the enterprise analysis if:

- Ratios are calculated on a regular basis and their trends and changes can be monitored
- Ratios estimated for one enterprise can be compared to the industry average figures
- Ratios have been prepared by taking their correlations and interrelationships into consideration.

Dependent on specific objectives several financial measures or their combinations are used that altogether provide with an assessment of business performance.

- *Measures describing the economic potential of an enterprise:*
  - assets;
  - turnover;
  - number of employees.

These measures are used for comparison of the enterprise scope of activities with those of other enterprises operating in both local and the international markets.

Other measures may be used for a more detailed research of the economic potential of an enterprise:

- *Enterprise equity* – indicating the production capacities of the an enterprise (buildings, constructions, equipment) for own needs as well as the capacities intended for leasing out to other enterprises. This may include also assets intended for repairs and replacement of production equipment items.
- *Amount and value of production output* of the enterprise in general with a breakdown by types of production. This indicator allows to establish the share and the place of an enterprise in the total industrial production in the country together with the production structure of the enterprise under consideration.
- *Distribution of the production facilities and sales facilities* in the country and abroad, their size, the nature of output that is being produced and sold.
- *Description of infrastructure* – amount of own assets (transport vehicles, warehouses, technical support centres etc.), own base of raw materials and sources of energy.
- *Amount and distribution of direct capital investments* within an enterprise, within the country and abroad.

- *Measures describing the business performance of an enterprise:*
  - Total expenditure measures – including expenditure for market study, research and development, administration expenses and expenses for delivery of goods;
  - Revenue measures – net profit, depreciation deductions, disposal on sale of assets, direct financing, share issue, increase in debt.

- Measures for use of assets – payout of dividends, organisational expenses, capital investments and intangible asset investments, repayment of short-term debts, purchase of readily realisable securities, increase of cash assets.

- *Measures describing the efficiency of business performance of an enterprise:*

Profit – the key measure of efficiency of the enterprise business performance. It is expressed in absolute figures (gross and net profit). In the course of analysis either an increase or a decrease in profit is being identified. This is expressed relative figures (profitability). In relation to the sources of capital, to the different asset elements:

- The relationship between profit and net turnover describes the degree of the trading profitability of an enterprise. By comparing this variable with variables from the previous period the changes in both the prices and in the amounts of sales have to be taken into account.
- The relationship between profit and assets demonstrates the profitability of use of the working and the equity capital. The relationship between profit and equity capital shows the efficiency of use of the equity capital in financing of the enterprise. Changes in this measure affect the listing of the enterprise shares in the stock exchange.
- The relationship between profit and the equity capital describes the rate of utilisation of the long-term investment capital.
- The relationship between profit and the debt capital.

- *Measures describing the financial position and solvency of an enterprise.*

Describe the extent of dependence on the sources of financing. These measures focus on the following areas:

- The capital structure (equity capital, income from issue of shares, retained earnings). Increase in the equity capital on account of profit evidences the improvement in the financial independency of an enterprise;
- The relationship between equity and the total amount of assets evidences the dependence on external sources of financing. The higher this ratio is, the more independent is the enterprise.
- The relationship between total assets and equity.

- *Measures describing the competitiveness of an enterprise*
  - The relationship between gross profit and net turnover in comparison with the previous period (if the ratio goes up, competitiveness is maintained, but if the value goes down - also competitiveness decreases)
  - The relationship between net turnover and the value of stock – shows whether there has been a decrease in demand for the goods or whether the amount of stock has increased
  - The relationship of net turnover and the amount of debtors' debts reflect what share of the output has been sold to customers on credit.

4.2. Liquidity measures

Liquidity of current assets means their ability to convert into cash, and the degree of liquidity is determined by the length of the period during which such conversion can

happen. The shorter this period is the more liquid is each given element of assets. Liquidity measures is the capacity of an enterprise to execute any payments and debt settlements with creditors on a due date and in a certain amount. Liquidity is the key issue in the financial performance of an enterprise. The objective of the enterprise performance is to ensure a constant, sufficient amount of the means of payment.

Liquidity can be discussed from two points of view:

- From the point of view of dissolution of an enterprise, i.e., it should be specified what means of payment would be there at the disposal of an enterprise that could be allocated to meet the liabilities if an enterprise should undergo the process of dissolution due to insolvency or insufficient profitability. In order to find an answer to this question the following information is required: on revenues that an enterprise could acquire in the case of potential dissolution from the disposal of its property; the amount of preferential claims; the amount of a secured loan. Such information cannot be found in the financial statements. This means that in the process of the annual report analysis liquidity in this aspect is not discussed. Liquidity is discussed in this way when the crediting arrangements are being established.
- From the aspect of the enterprise as a going concern; the probability that an enterprise could become insolvent and could be forced into liquidation should be assessed. However, as the information found in the financial statements is based on the going concern principle, while analysing the balance sheet liquidity may be discussed only from this perspective. Information regarding liquidity is crucial as insolvency causes the threat of winding up the operations of an enterprise. Businessmen and analysts are interested in the future liquidity figures and not those of the past. The anticipated liquidity figures cannot be found out merely according to the data of accounting reports, but the data from the finance planning must be extensively used. A profitable enterprise is usually also solvent as it has access to sufficient credit resources.

There are several *disadvantages* of the liquidity measures:

- they are static – presented ratios are calculated based on the balance sheet data which describe the property status as of a certain date, therefore, to assess the changes in the ratio it is recommended to view them in dynamics or compare with the ratio level of other similar enterprises;
- they provide little information for the forecasting of future revenues and expenses, however, this is exactly the main current solvency task;
- incomplete accounting for enterprise liabilities (if there is a choice to present a loan in the balance sheet with or without the interest).
- Classification of assets depends on changes in the economic conditions. It is not fixed, but varying (unstable deliveries and high inflation).
- Peculiarities of the areas of enterprise activities and the working capital.

This ratio can be increased in two ways:

- By increasing the amount of individual items of current assets;
- By reducing the amount of short-term liabilities.

Usually it is believed that the higher the liquidity ratio, the higher the liquidity of an enterprise. However, not always, as the calculation method of this ratio has a few drawbacks:

- Let us assume upon calculation of the ratio that all current assets are liquid. This assumption may be unrealistic, especially in respect of inventories;
- The ratios may be increased as a result of unfavourable processes;
- Liquidity ratios may on some occasions be transferred into the opposite – the liquidation ratio. Only in the case of liquidation an enterprise sells a large amount of stock in order to repay its short-term liabilities;
- This ratio reflects a static situation – the status as of a certain date. Turnover of assets is not taken into consideration in the calculation.

Due to these reasons when making analysis of the enterprise liquidity a variety of factors need to be considered by drawing conclusions from the liquidity ratios calculated. For example, the specifics of the enterprise operations must be taken into account. In production or construction enterprises there will be a considerable excess of the percentage of stock over cash assets than in enterprises operating in trade. The application of the debtors' collection policy also needs to be taken into account. If there is a short debt collection period, the balance sheet will reflect a small amount of debt, while a long period of collection may be reflected in the balance sheet as a considerable amount of debtors' debts. It has to be noted also what is the structure of stock and accounts receivable in an enterprise. Neither the non-liquid stock, nor bad debtors for which an adjustment has not been made do reflect the true financial position of an enterprise. Also the relationship between short-term and long-term assets from the total enterprise property, the relationship between unrealisable and readily realisable assets from total assets, the relationship between current assets and short-term liabilities (the dynamics of the cover ratios), the dynamics and the reasons for changes in own working capital, the rate of own working capital in the structure of current assets has to be taken into consideration too.

According to the degree of liquidity current assets may be sub-classified into three groups, they each differ by composition of current assets accepted as a cover for the repayment of short-term liabilities:

- *highly liquid assets* which are readily realisable (cash assets).

These are liquid assets that are at the disposal of an enterprise (customers' debts, liquid securities listed on the stock exchange);

- l*ess liquid assets* at the disposal of an enterprise (stock of materials for goods: goods, work in progress, stock of raw materials);
- *non-liquid assets* (doubtful debtors' debts, semi-finished goods, prepaid expenses).

Enterprise cash in till and on the bank account are believed to be the most liquid assets among current assets. Liquidity ratios associated with these assets are called the *overall liquidity ratio (current ratio)* and it is expressed as the ratio between current assets and current liabilities.

Overall *Current assets*

$$liquidity\ (current)\ ratio = \frac{}{Current\ liabilities} \quad (4.1.)$$

Current liabilities are debts with the repayment term not exceeding one year. Current liabilities are made up of such items of balance sheet liabilities like bank loans, bills of exchange payable, trade accounts payable, customers' advances, taxation payable, salaries payable etc.

Current or short-term assets are assets that are used, consumed or sold within a single reporting period. These include cash assets, short-term financial investments, accounts receivable and stock of raw materials for production of goods.

The absolute or overall liquidity ratio (current ratio) describes the capacity of an enterprise to repay its short-term debts. The higher this ratio is the higher the paying capacity (solvency) of an enterprise estimated. Changes in this ratio must be looked at in a dynamic perspective. In accordance with the generally accepted international standards it is believed that this ratio must be within the limits of 1 and 2 (sometimes 3). The lower limit is preset as 1, because the amount of current assets in any enterprise must be at least as high as to be able to meet its current liabilities, otherwise the enterprise may face difficulties in settlement of its short-term debts. The excess of current assets over current debts of above two or three times also is not desirable as this may be a proof or an irrational capital structure – the enterprise has invested too much in the current asset items or has insufficiently used its short-term loans.

The overall liquidity ratio (current ratio) can be raised in two ways: either by increasing the value of some current asset items or reducing the value of its short-term debts.

If stock and prepaid expenses are deducted from the current assets, it is possible to calculate *the quick ratio* which is expressed by dividing the liquid assets by current liabilities:

$$Quick\ ratio = \frac{Current\ assets - (Stock + Prepaid\ expenses)}{Current\ liabilities} \quad (4.2)$$

There can be other formulas found in the sources of reference according to which the quick ratio is calculated, although the mathematical outcome remains the same:

$$Quick\ ratio = \frac{Cash + Short\text{-}term\ securities + accounts\ receivable}{Current\ liabilities} \quad (4.3.)$$

This ratio shows the asset capital involved in the enterprise operations which is estimated as the difference between the amounts of current assets and current liabilities

(any increase in the capital shows the improvement of the company financial status, or just on the contrary – worsening of the situation). This ratio also describes the share of current liabilities that can be repaid not only in cash, but also from expected earnings from any works performed, goods dispatched and services provided.

The reference level of the ratio is 1, because then an enterprise is in a real position of meeting its current liabilities, it can fully settle its debts with the creditors without stopping its operations. Overly high quick ratio is not a sign of good business performance either as this would mean that there is too much cash accumulated in till and on the bank accounts. Too low level of the ratio could be related to the fact that there is either too much stock in the enterprise or that there are difficulties in selling this stock.

In the majority of cases the most secure assessment of liquidity is by the amount of cash assets at the disposal of an enterprise. This value is called the *absolute liquidity ratio* and estimated as the relationship between cash and current liabilities:

$$\textit{Absolute liquidity ratio} = \frac{\textit{Cash in till and at bank}}{\textit{Current liabilities}} \qquad (4.4.)$$

If there are any short-term securities at the disposal of an enterprise, these should also be added to the amount of cash assets, because they are either already expressed in terms of cash or are easily convertible into cash. In this case the absolute liquidity ratio is calculated by the following equation:

$$\textit{Absolute liquidity ratio} = \frac{\textit{Cash + Short-term securities}}{\textit{Current liabilities}} \qquad (4.5.)$$

The higher the amount of current assets is the larger the probability or repayment of the short-term debts from the existing assets. It is clear though that their amount will depend on the area of operations of an enterprise. It is generally accepted that, if the relation between current assets and current liabilities is lower than 2:1, an enterprise is not in a position of meeting its liabilities in due time and amount. An excess of current assets over current liabilities several times indicates a considerable amount of spare resources either created from its own assets or by insufficiently using its short-term credits (bank loans and trade credits). Form the point of view of efficiency of performance in accumulation of stock the allocation of assts for financing of debtors is considered to be an unprofessional use of assets.

By analysing liquidity of an enterprise large attention needs to be devoted to identification of *Net current assets* or the *Current capital (Working capital)*.

$$\text{Net current assets} = \text{Current assets} - \text{Current liabilities} \qquad (4.6)$$

Net current assets are required for the maintenance of financial stability of an enterprise, because the excess of current assets over current liabilities evidences that an enterprise is not only in a position of meeting its short-term debts, but it also has the financial resources available for expansion of business in the future.

Net current assets that are at the disposal of an enterprise can convince creditors in favour of lending the resources to the enterprise. Net current assets provide a significant financial freedom for an enterprise in a situation of an increased rate of turnover of current assets, impairment or loss of the value of assets.

Optimal amount of the *working capital* depends on several factors:

- area of operations of an enterprise;
- size of an enterprise – the scope of production or sales;
- the terms of the enterprise crediting;
- speed of stock turnover;
- debtors collection period.

4.3. Solvency measures

Solvency is one of the most significant criteria in assessment of the financial position of an enterprise. It describes the situation when an enterprise has sufficient cash assets to settle at a short notice their open transactions with creditors, while the potential creditors after the assessment of these measures want to find out to what extent the enterprise is dependent on the capital borrowed or to what extent can it rely on its own capital. These measures are especially important for assessment of the capacity to borrow of an enterprise. If the amount of liabilities is excessive an enterprise could be in danger of insolvency.

The main features of insolvency are thus as follows:

- Sufficient amount of cash on the current bank account and in till;
- Due repayment of creditors debts.

It has to be noted that the recommendable amounts should not be taken literally. There are situations when the share of equity from the total may be less than a half, however, the enterprise will still maintain high financial stability. This, first of all, is true in respect of enterprises with the operations related to a high asset turnover, permanent demand for the goods for sale, well managed contacts with customers and sellers, the low level of fixed costs (for example, trade and brokerage entities).

This group of measures describes the asset structure. They are designed to:

- establish and describe the relationship of liabilities against the equity or the total amount of assets;
- assess the ability of an enterprise to increase its amount of debt;
- assist in the assessment of the ability of a firm to meet its debts on due date.

The measures of this group reflect the ability of an enterprise to repay its long-term and short-term liabilities. These measures are especially important for existing and also for potential creditors as they show to what extent the revenue of an enterprise cover the interest and other fixed payments, as well as whether in the case of enterprise liquidation there are sufficient assets to repay its debts. Shareholders are interested in this measure, because the accrued interest is considered to be an expense that increases the liabilities of an enterprise. If the amount of loans and, therefore, also the amount of interest payable is excessive, the enterprise may face the bankruptcy procedure.

Financial position of an enterprise is often dependent on how optimal the relation is between the shareholders' equity and the capital borrowed. Development of an appropriate financing strategy helps enterprises to increase the efficiency of their operations.

Consequently, measures of the capital structure are applied in financial analysis. These measures describe the level of protecting the interests of creditors and investors, allow identifying the relations with the shareholders' equity or the total amount of assets, evaluation of the ability of an enterprise to increase the amount of liabilities and the ability of an enterprise to pay for its debts when they fall due. The capital structure or solvency ratios are especially significant to creditors in order to assess the borrowing capacity of the enterprise.

Percentage of shareholders' equity from total capital structure is described by *ownership ratio* or *financial independence ratio* and it can be expressed as the ratio between the interests of the owners and those of the creditors. The ratio is calculated as follows:

$$\textit{Ownership ratio} = \frac{\textit{Equity capital}}{\textit{Total assets}} \qquad (4.7.)$$

Capital is the assets required for the business operations of an enterprise that are reflected in the liabilities of the balance sheet.

The ownership ratio describes the financial stability. It is considered in the practice of the western world that this ratio should be sufficiently high, that is a feature of a strong structure of the financial assets of an enterprise. Creditors prefer such a structure upon taking their decisions for issuing of a loan to the enterprise. If the percentage of loan assets is not high, there is a leverage provided against losses during the periods of diminished operating activity as well as for receipt of a loan. It is assumed that the ratio should be approximately at the level of 60% both from the point of view of creditors and investors. If the ratio is sufficiently high, issuance of a loan to an enterprise may be considered.

Low level of this ratio indicates that there should be a high amount of % payable on the loans, and the enterprise may lose possibilities of receiving further loans; this means that the amount of liabilities should be decreased or else it is necessary to receive an additional long-term loan in order to repay the short-term debts for which the repayment date is approaching.

One of the most often used measures in this group is the *percentage of the capital borrowed in the balance sheet (the debt ratio)*; this is defined as the relationship between total debts and total assets.

$$\textit{Percentage of debt in the balance sheet (Debt ratio)} = \frac{\textit{Total liabilities}}{\textit{Total assets}} \qquad (4.8.)$$

The percentage of debts in the balance sheet describes the financial dependence of an enterprise on external loans. The higher it is, the more the enterprise is in debt, and the more risky is the situation that may lead to bankruptcy.

At the normal level this ratio should not exceed 40%. Creditors usually want to see lower debt ratios, because it is more certain that they would without any obstructions receive the amounts lent. Higher debt ratio means that high interest rate is paid on the loans, and the terms of crediting will be strict or an enterprise may even lose the chance to receive a loan.

Risk plays the main role in assessment of the level of liabilities. Most often there are two types of risk that the enterprises may face:

- business risk associated with normal level of activities in the operating conditions;
- financial risk arising from the method by which the enterprise assets are financed.

The underlying principle is as follows: if the business risk is high, neither the financial risk should be undertaken.

The size of the level of liabilities depends also on the state legislation regarding issuing of loans, the interest rate as well as the peculiarities of an enterprise, the area of business etc. conditions.

The financial independence of an enterprise is also described by a measure called the *independence ratio* which is also called the *financial leverage (gearing)* which is calculated by dividing the liabilities of an enterprise by its equity:

$$\textit{Financial leverage (gearing)} = \frac{\textit{Liabilities}}{\textit{Equity capital}} \qquad (4.9.)$$

Ratio shows, what the amount of borrowed capital payable per one lat of equity capital is. Dynamic increase in this ratio may evidence the ability of the enterprise to expand its operations on the account of raising the debt capital. At the same time it may be an indicator of a growing financial dependence on borrowed capital.

Experts believe that if the level of this ratio has reached 1, the financial stability of an enterprise is under the threat, however, there is no one single solution regarding the critical limit of this ratio. This ratio depends on the type of business activities and the rate of turnover of current assets. If the turnover of current assets is high, the critical limit of this ratio may considerably exceed 1 without seriously affecting the financial autonomy of an enterprise.

Creditors usually select the lower level of this measure. High level of dependence from external debt may considerably impair the conditions of an enterprise in circumstances when the rate of sales of goods is decreasing, because the expenses for payment of interest on loans are believed to be relatively fixed, i.e., the expenses which in other similar conditions would not decrease proportionally with the reduction in the sales volume of goods.

Evaluation of this measure depends on the following positions:

- the level of the ratio in other industries;
- what the possibilities are for an enterprise to receive further loans;
- stability of business performance.

There is an approach in some books on economy that are devoted to various concerns about the balance sheet analysis, according to which the relationship between the share of equity capital and the break-even point of sales.

The concept of this approach lies in the assumption that nobody except the owners of an enterprise should be obliged to provide any capital required for performance of business activities during the period when the amount of sales does not cover all of the expenses according to the prime cost of the products as it has been established. Therefore, the higher the break-even amount, the larger equity capital must be made available. This directly proportional correlation is expressed in the following equation:

$$\frac{\textit{Theoretical amount of equity capital}}{\textit{Total liabilities}} = \frac{\textit{Break-even amount of sales}}{\textit{Amount of sales for the period}} \qquad (4.10.)$$

$$\textit{Theoretical amount of equity capital} = \frac{\textit{Break-even amount of sales} * \textit{Total liabilities}}{\textit{Amount of sales for the period}} \qquad (4.11.)$$

Consequently, if the size of equity capital reflected in the balance sheet is lower than the theoretical amount, it can be concluded that the share of representation of equity capital in the relationship between income and expenses is low, but the structure of capital is risky for creditors.

We expect that the estimate of the safe share of equity capital in the composition of liabilities according to the method shown will be useful for assessment of the financial stability for both the enterprise and its business partners.

The ability of an enterprise to pay the interest out of its profit without touching the equity capital is represented by the measure called the *interest cover*:

$$\textit{Interest cover} = \frac{\textit{Profit before \% and tax}}{\textit{Amount of interest payable}} \qquad (4.12.)$$

This ratio should be well above 1; then it would mean that an enterprise is capable of paying for all interest out of its profit as well as that there are still spare resources left. If the ratio is 1, it means that an enterprise can only pay interest out of its profit, but then it would not have any profit left and there would be no need to pay the income tax. There would be no net profit and the owners would not receive any dividends. If it is below 1, an enterprise has been operating at a loss, subsequently there is no profit, from which any interest payable should be covered and additional assets for payment of interest should be sought.

4. 4. Activity measures

The measures in this group show what is the rate of utilisation of its assets for production of goods (provision of services) for sale and, consequently, to make profit. These ratios bear a significant role, because they demonstrate, how quickly assets can be converted into cash. If the rate of asset turnover increases, it would mean that the production potential of an enterprise also increases. Activity measures also allow to assess whether investments into enterprise assets are not too large or too small. If the investments are too large, it may happen, that the resources are tied up in such assets that it would be more beneficial to use them for other purposes. If the investments are too small, an enterprise may turn out to be incapable of serving its customers or to produce goods at the appropriate level.

The rate of asset turnover may be calculated for all assets of an enterprise or for some of its elements.

The most important measures in this group are as follows:

- Working capital turnover ratio;
- Stock turnover ratio;
- Long-term investment turnover ratio;
- Total asset turnover ratio;
- Capital turnover ratio;
- Accounts receivable turnover ratio;
- Accounts payable turnover ratio.

Special attention in analysis of the enterprise sources of financing structure should be devoted to the type of its layout in the assets. For enterprises with high percentage of real estate assets a larger share for own resources should be created (in order for long-term finance to cover long-term investments). Long-term assets should be created on the account of long-term investments: own and borrowed. If there are no long-term loan assets at the disposal of an enterprise, then fixed assets and other long-term investments are made by of own resources. Also, if there is a large amount of unrealisable assets within the current assets, an enterprise must cover them from its equity capital.

The turnover period of current assets directly affects the balance sheet structure. Enterprises with high rates of turnover may afford a larger amount of borrowed resources and it would not affect their solvency, because it is easier to provide for the inflow of cash assets and to pay for the debts. Relationship between the length of the trading cycle of production and the term of repayment of creditors' debts is very important. The longer the period is, in which the trading cycle of production is serviced by creditors' capital, the smaller the share of equity capital of an enterprise involved. Another aspect affecting the relationship between owned and borrowed resources is the cost structure of an enterprise. There are variable costs in the cost structure of every enterprise the amount of which depends on the scope of its business operations, as well as fixed costs the amount of which in a certain stage are not dependent or are little dependent on the scope of operations. Latter includes depreciation, rent and lease payments, salaries payable to the administrative

personnel etc. The higher the fixed costs in the structure of the prime cost of the products are, the higher the risk of insolvency should revenues fall due to some reason. Therefore, for enterprises with a considerable share of fixed costs in the total amount of costs, the amount of equity capital should be higher.

Current asset turnover ratio:

$$\textit{Current asset turnover ratio} = \frac{\textit{Net turnover}}{\textit{Current assets (or the average balance sheet value)}} \quad (4.13.)$$

Stock turnover ratio shows the rate at which the stock of an enterprise is converted into cash, thus the number of turning over the assets invested in production stock in one year. The higher the stock turnover rate, the faster the realisation of stock, which means that in the case of necessity the debts can be paid for in a shorter span of time.

This ratio is calculated by dividing the production costs of goods sold by the annual average amount of production stock:

$$\textit{Stock turnover ratio} = \frac{\textit{Cost of sales}}{\textit{Average stock}} \quad (4.14.)$$

The figures used here are taken from the income statement. The most useful would be to apply the figure for the input of goods (cost of goods according to purchase prices), because the net turnover is the cost of goods in sales prices. The figures for these estimates are taken from both the income statement and from the balance sheet.

A low level of this ratio means that there are too many assets invested in stock and that there is some capital frozen which does not bring any income, besides, the costs and the risk of storage is increasing. On the other hand, the higher the stock turnover ratio, the less there are assets tied up in stock being the liquid part of the current assets, the stronger is the financial position of an enterprise. Raising of the stock turnover level and reduction of the amount of stock is key if the amount of borrowed capital is high in an enterprise. It is useful to make the level of stock consistent with the amount of sales so, that it is sufficient for meeting the needs of production or those of the customers.

This ratio can be also expressed in a number of days and you may learn from it, how many days it takes to sell or to replenish the stock of production:

$$\textit{Number of stock days} = \frac{\textit{Number of days in the period (360 or 365)}}{\textit{Stock turnover ratio}} \quad (4.15.)$$

Long-term investment turnover ratio describes what the rate of use of the long-term assets is by which the enterprise assets are being financed. This is estimated by dividing the net turnover by the amount of long-term investments:

$$\textit{Long-term investment turnover ratio} = \frac{\textit{Net turnover}}{\textit{Long-term investments}} \qquad (4.16.)$$

A common feature of all long-term investments is such that these investments have been made in cash.

Low long-term investment turnover ratio means that there is too much capital invested in long-term investments or that too much assets are invested compared to the amount and sales of goods produced. Therefore, in order to increase this level, it would be necessary to sell a share of fixed assets or else to lease it out thus gaining income that could be used more efficiently, for example, for payment of debts or expansion of business, or for another purpose.

Total asset turnover ratio demonstrates, how efficient is the use of assets for building up of the net turnover, i.e., what is the number of full turnover cycles, which creates a sufficient effect in the form of profit or how many currency units were returned per each asset currency unit invested in assets. This is estimated by dividing the net turnover with the total amount of assets:

$$\textit{Total asset turnover ratio} = \frac{\textit{Net turnover}}{\textit{Total assets}} \qquad (4.17.)$$

If this measure is too low, it would mean that the investment has been too excessive or that the scope of production has been reduced, or that the turnover has declined.

In order to increase this variable an enterprise would be recommended to dispose of a part of its fixed assets as well as a part of its production stock in order to use the assets acquired for repayment of its short-term liabilities. In order to increase the turnover of assets in an enterprise customers are offered rebates (discounts) in exchange for reduced payment terms. For example, if the payment term of 30 days is agreed in the contract, however, should the customer pay in 10 days time, it would receive this discount. This way a faster inflow of cash in an enterprise is promoted.

Due to the fact that the amount of total assets agrees with the amount of capital, the asset turnover ratio may be as well called *capital turnover ratio*. This measure is significant for enterprise owners. It is calculated the same way, by using capital instead of assets:

$$\textit{Capital turnover ratio} = \frac{\textit{Net turnover}}{\textit{Capital}} \qquad (4.18.)$$

From the point of view of capital turnover the same ratio describes also, how efficient is the use of capital for building up of its net turnover and shows the amount of revenue earned per one lat invested.

The *debtors' turnover ratio* shows, how many times on average during the year the amount of accounts receivable have been converted into cash. This ratio is calculated by dividing the value of goods sold (turnover) by the average amount of accounts receivable:

$$\textit{Accounts receivable turnover ratio} = \frac{\textit{Net turnover}}{\textit{Average amount of accounts receivable}} \qquad (4.19.)$$

Accounts receivable are the enterprise's outstanding invoices for the goods sold. Accounts receivable are short-term debts with the repayment period less than a year.

There is no base for comparison for this ratio except the average industry figures. It is recommendable to compare it with the creditors' turnover ratio by thus identifying, what terms are applied in an enterprise for debtors and what are the terms offered by the creditors.

This ratio may be also expressed in days in order to arrive at the number of days necessary for conversion of the amount of accounts receivable into cash.

The *debtors' turnover period* is estimated by dividing the number of days in a year by the debtors' turnover ratio as follows:

$$\textit{Accounts receivable turnover period (in days)} = \frac{\text{Number of days in a year}}{\textit{Accounts receivable turnover ratio}} \qquad (4.20.)$$

Accounts payable are also included in the scope of turnover ratios, although this item is not viewed as a component part of current assets, but rather a source of financing.

The *accounts payable turnover ratio* defines, how many times of accounts payable turnover is necessary for an enterprise to pay for its short-term liabilities or to pay for its invoices.

This ratio is estimated by dividing the cost of goods sold by the average annual amount of accounts payable (debts):

$$\textit{Accounts payable turnover ratio} = \frac{\textit{Cost of goods sold}}{\textit{Average amount of accounts payable}} \qquad (4.21.)$$

Just like the debtors' payment period may be calculated in days the same can be also done for the turnover of accounts payable by comparing the two later on.

The *creditors' turnover period* is estimated by dividing the number of days in a year by the creditors' turnover ratio as follows:

$$\textit{Accounts payable turnover period in days} = \frac{\text{Number of days in a year}}{\text{Accounts payable turnover ratio}}$$

(4.22.)

Operating cycle and cash cycle

Current assets constitute the liquid share of assets and the main characteristic traits of those assets are their high turnover rate. The functional role of current assets in the operating process is vastly different from that of fixed assets. Current assets provide ongoing operating activities and constitute the main component part in the flow of business transactions: purchases of the production stock increase the amount of short-term liabilities; the stock of goods for sale is increasing in the operating process; sales of goods provide with an increase of the available cash assets and an increase of accounts receivable. This operating cycle repeats itself many times and finally materialises in the flow of cash expenses and income.

The operating cycle is comprised of the time period, in which the payment for raw materials and components is collected, and the time period, in which the cash from sales of goods arrive in an enterprise.

$$\textit{Operating cycle} = \textit{Stock turnover period} + \textit{Debtors' payment period} \quad (4.23.)$$

The length of the cycle depends on the following values:

- debtors' payment period;
- the period in which consumables and raw materials kept in the warehouse;
- duration of the technological cycle of operations;
- period of storage of goods for sale in a warehouse;
- payment term of trade accounts payable.

Cash cycle **–** period of time within which an enterprise invests its cash assets in stock and accounts payable.

$$\textit{Cash cycle} = \textit{Operating cycle} - \textit{Accounts payable turnover period} \quad (4.24.)$$

The shorter the cash cycle, the more efficient is the use of current assts. Cash cycle can be shortened as follows:

- by increasing the rate of stock turnover;
- by extending the creditors' payment periods;
- by reducing the debtors' collection periods;
- by way of optimisation of the technological cycle of operations.

The length of the cash cycle is one of the efficiency measures for the use of current assets. The shorter the cash cycle, the more efficient is the management of current assts.

The operating cycle can be shortened on account of the technological process and the debtors' payment period, while the cash cycle can be shortened on account of both the abovementioned factors and by reducing the rate of the turnover of trade creditors.

4.5. Profitability measures

Profitability is the return from business activities in percent reflecting how well an enterprise is doing in terms of gaining profit, and it allows to objectively evaluate the business operations of an enterprise. In some sources of reference the term of profitability is defined in different ways:

Profitability may be defined in various ways, for example:

- return from business operations in percent;
- the capacity to generate enough profit to retain the capital invested and to raise new capital;
- measure of efficiency of enterprise operations describing the relationship between the amount of profit and another value, which is interrelated with the respective amount of profit;
- interest proceeds from the capital invested in an enterprise;
- relationship between profit mass and investment.

The main reference source for profit evaluation and analysis is the income statement. There is a range of ratios used in the analysis by considering their dynamics over several accounting periods. An enterprise is considered to be unprofitable if it does not make any profit. If profit is < 0, profitability is also < 0.

Profitability measures illustrate the relationship between net turnover and net income in comparison with the assets of an enterprise. These are usually expressed in percent. The higher the level of this interest is, the higher the efficiency of an enterprise. If the level of these measures is low, an enterprise faces difficulties of development; if these problems are not corrected in due time, an enterprise can expect an operating crisis.

The primary measure of profitability is profit. In a very simple sense profitability is determined by dividing the profit of an enterprise by its total or equity capital.

In the course of profitability analysis usually the amount of capital or property employed or net turnover is assumed as the values affecting the amount of profit.

The level of profitability depends on the specifics of the enterprise operations, the structure of turnover and other factors. There are no absolutes criteria used in evaluation of the level of profitability. Its increase, however, (over the previous periods) is being valued positively. Continuously low levels of profitability or negative profitability are a proof of a failure in business. If this failure is not corrected an enterprise may face bankruptcy.

Enterprise management is interested in increased levels of profitability, as one of its targets is to gain maximum profit and to provide benefits to the owners and the shareholders.

Profitability is described and assessed by three aspects:

- *Trading profitability (return from sales)* – demonstrates how much profit has been gained in an enterprise per one unit of net turnover.

- *Profitability of investing (return on investment)* – how efficiently the assets have been used in profit-making.
- *Financial profitability (return on capital employed)* - how much profit has been made by the enterprise owners per one unit of capital invested.

The group of trading profitability measures includes the following ratios:

- Profitability of sales;
- Profitability of operating activities;
- Gross profit margin.

Within the group of the *trading profitability* measures the return on sales ratio is used most commonly. Profitability from sales is the relation between the financial amount figure and the volume figure, or - how much profit is gained per each unit of net turnover. Besides, this ratio reflects the profit made as a result of both sales of goods and services and the costs and revenues which are not directly attributable to production of goods or provision of services (miscellaneous extraordinary revenues, taxation payable, transactions with securities and others). It is calculated as follows:

$$\text{Trading profitability} = \frac{\text{Profit or loss in the reporting period}}{\text{Net turnover}} \cdot 100\,\% \qquad (4.25.)$$

Net profit is the share of the enterprise profit remaining at the disposal of an enterprise after tax, while net turnover is revenue from sales of goods and services after tax, which is estimated based on the sales turnover and value of goods returned.

Ratio between profit and the amount of turnover generally describes whether the competitiveness of an enterprise has changed compared to the previous year. If this value has increased compared to the preceding period, this would indicate that an enterprise has improved its competitiveness.

Profitability of sales can be increased by reducing the costs, increasing the price per unit of goods or by speeding up the rate of increase in the amount of goods sold compared to the rate of cost increases. For example, costs may be reduced by using cheaper raw materials and components, by automating the production and increasing labour productivity etc.

It is also necessary to calculate the profitability which is unaffected by the tax rates, any interest paid and received etc., but that are only affected by the operating results in an enterprise, its pricing policy etc. Therefore, the *profitability of operating activities* is used in the financial analysis. This measure is used to identify the efficiency of operations and sales in earning the income and it describes the operating efficiency of an enterprise.

$$\text{Profitability of operating activities} = \frac{\text{Earnings before interest and taxes}}{\text{Net turnover}} \cdot 100\,\% \qquad (4.26.)$$

Enterprise managers are always interested in the achievement of a higher profitability of operating activities as this measure reflects the efficiency of the goods production and sales operations in making the profit.

One of the measures in analysis of the business financial activities is the *gross profit margin*. According to the dynamics of gross profit conclusions can be made about the reasons for the changes. The changes may be due to the following: increase in net turnover as well as the increase or decrease in operating costs.

Gross profit is the excess of net turnover over the production cost of the goods sold. It is calculated as follows:

$$\text{Gross profit margin} = \frac{\text{Gross profit}}{\text{Net turnover}} \cdot 100\,\% \qquad (4.27.)$$

An increase or a decrease in the gross profit is influenced by two factors: changes in net turnover and changes in the production cost of goods sold. On the other hand, the changes in these two factors are interrelated with the scope of production, price per unit of output and prime cost per unit of output.

Economic or rates of return on assets are the most commonly used profitability measures and they are calculated in relation to total assets. Return of assets is usually calculated according to the following formula:

$$\text{Return on assets} = \frac{\text{Earnings before interest and tax}}{\text{Average value of assets}} \cdot 100\,\% \qquad (4.28.)$$

Return of assets is applied to assess, how efficiently an enterprise has employed its resources (assets) in generation of its income. This measure illustrates the competitiveness of an enterprise. The level of competitiveness is determined by comparing the assets of any given enterprise with the industry average figure.

The level of this value depends on the specifics of the industry in which an enterprise operates. The rate of return on assets is considerably higher (compared to the industry average figure) in enterprises operating in businesses where there is a wide use of manual labour, while in businesses involving high levels of capital it is low.

Return on assets can be increased by raising the sales price. This is, however, a difficult task in a free market conditions. Only those enterprises that dictate the prices in the market can afford raising its sales prices and, thus increase their return on assets. Also enterprises dealing in manufacturing of some unique products can afford to increase their sales prices after which the demand is not dependent on the price as the product itself is more important than the price. Problems may occur for some enterprises due to an increase in the price per unit of goods, because then the net turnover will decline and an enterprise can become uncompetitive.

The most commonly used *measures of financial profitability* are the return on total capital and return on equity capital.

Return on total capital shows what the amount of profit could be if all of the capital employed would be equity capital. However, because it cannot be detected, what share of profit has been gained by disbursement of the debt capital, only the interest payable on use of external capital can be seen. It is estimated according to the following formula:

$$\text{Return on total capital} = \frac{\text{Annual profit} + \text{Interest paid}}{\text{Total capital}} \cdot 100\,\% \qquad (4.29.)$$

The average value of the total capital is used as the value for denominator. This is because the profit has been made over the entire reporting period, while the total capital is shown as of the final day of the period. This means, that within the period an enterprise may as well have acquired or lost some capital. Thus the profit/loss figure for the reporting

period is made up of a capital of varying sizes which has accumulated over many years. By using the average value of the total capital we may compensate for this inconsistency.

The higher the share of the equity capital in the total, the higher is the financial stability of an enterprise.

Therefore, the next measure of financial profitability is the *return on equity (ROE)*. This measure allows to identify the efficiency of use of the capital which has been invested by the enterprise owners. This ratio is calculated as follows:

$$\text{Return on own equity} = \frac{\text{Annual profit}}{\text{Own equity}} \cdot 100\,\% \qquad (4.30.)$$

From the owners' perspective this is the most important measure of return. Any increase in this ratio evidences an increase in the efficiency of employment of all forms of equity. This gives the opportunity to raise the level of dividend payout, to provide more assets for investment. It should be noted that such a statement is only grounded if the share of equity in the financing of the assets is constant or increasing.

The values of return on capital employed and return on equity are different. This is related to the use of the debt capital for which an enterprise should pay interest and the more the enterprise uses the borrowed capital, the larger is the amount of interest payable.

In Table 4.1 a summary of the above discussed as well as other financial analysis ratios (investment ratios). These ratios are used in performance of the express analysis.

Table 4.1

Financial performance ratios

Primary ratio	*Return on net assets:* Profit or income before interest and tax / net assets*
Secondary ratios	*Profit margin:* - profit or income before interest and tax / amount of sales; *Asset turnover:* - amount of sales / net assets
Third level ratios	*Control over revenues and costs:* - gross profit / amount of sales; - variable costs / amount of sales; - fixed costs / amount of sales; *Use of assets:* - fixed assets / amount of sales; - working capital / amount of sales.
Financial performance measures Liquidity	*Current ratio:* - current assets / current liabilities; *Quick ratio* or the '*acid test ratio*': cash plus accounts receivable / current liabilities.

Stock, debtors', creditors' turnover	*Stock turnover:* - amount of sales / stock *Debtors' debts collection period:* - accounts receivable / amount of sales * 365; *Creditors' debts payment period: :* - accounts payable / purchases or cost of sales * 365
Solvency	*Ratio of capital provided or the capital gearing ratio:* - long-term debt / capital employed[3]; *Interest cover:* - profit before interest and tax / interest
Investment ratios *Return on shareholders' equity*	- profit after tax and interest / total amount of shareholders' equity**
Earnings per share	- profit after interest and tax / number of ordinary shares in issue.
Price / earnings ratio (*P/E*)***	- the price per share which depends on the daily transactions with shares / earnings that are due for one share and remain constant over the entire financial year.
Net profit margin *Dividend margin*	- dividends par one share / market price of one share
Dividend cover	- profit per share / dividend per share

* net assets are long-term investments plus current assets minus current liabilities;
** total amount of shareholders' equity is the share capital plus all retained earnings and reserves.
*** P/E is the acronym used in English for 'price/earnings ratio'.

Example Data interpretation for Company M

Board of Directors of a limited liability company after analysing the financial position for the three preceding years were concerned that it was impossible to maintain the existing level of sales without obtaining any external loan capita. It is required to analyse the financial activities of the company for the above stated period by using the industry average figures as well as to study the movement of assets and provide an assessment of the company's position.
The industry average measures have remained constant for the preceding three years and are as follows:

Net profit / Net assets	20 %
Net profit / Amount of sales	6 %
Amount of sales / Net assets	3.3 times
Gross profit / Amount of sales	20%

[3] Capital employed = Shareholders' equity + Reserves + Long-term liabilities

Current ratio	2.5 times
'Acid test ratio'	1.1 times
Stock turnover *	6 times
Accounts receivable collection period *	32 days
Accounts payable payment period*	25 days
Capital provision (capital gearing)*	10 %
Debts / Total assets	50 %

* based on the data in the balance sheet as of the end of period.

Table 4.2
Income statements for the period ended 31 December (thous. CU)

		Year 1		Year 2		Year 3
Amount of sales		13260		13772		14280
Less: Cost of sales		10608		11016		11424
Gross profit		2656		2756		2856
Less: Costs						
Selling	404		480		490	
Administrative	800		905		1055	
Distribution	414		414		450	
Depreciation	408	2026	512	2311	612	2607
Profit before tax		630		445		249
Tax		150		101		45
Profit after tax		480		344		204

Table 4.3
Balance sheet statements as of 31 December (thous. CU)

		Year 1		Year 2		Year 3
Assets used:						
Fixed assets:						
Land and buildings		244		652		612
Plant and equipment		756		592		512
Other fixed assets		144		40		32
	A	1144		1284		1156
Current assets:						
Stock and work in progress		1532		2552		4132
Accounts receivable		1224		1388		1940
Cash at bank and in till		308		144		104
		3064		4084		6176
Less: current liabilities						

Accounts payable and deferred payments		732		1060		1920
Bank loan				512		1428
		732		1572		3348
Net current assets	*B*	2332		2512		2828
Net assets	*A + B*	3476		3796		3984
Less: debt capital		228		204		188
		3248		3592		3796
Capital and reserves						
Share capital		1836		1836		1836
Reserves		1412		1756		1960
Shareholders' equity		3248		3592		3796

Table 4.4

Company M: cash flow statements (thous. CU) and interpretation of data

	Notes	Year	
		1/2	2/3
Sources of assets:			
Profit after tax			
Add: Depreciation			
Total cash flow from fixed assets			
Employment of assets:			
Net fixed asset costs	*A*		
Net increase in working capital	*B*		
Loans repaid			
Decrease in net liquid assets	*C*		
Notes:			
A. Net balance sheet value from the previous year			
Less: Depreciation for the current year			
Net balance sheet value for the current year			
Net fixed asset costs			
B. Increase/decrease in working capital			
Stock and work in progress			
Accounts receivable			
Accounts payable and deferred payments			
C. Increase/decrease in net assets and liquid assets			
Balances of cash at bank and in till			
Bank loan			

Table 4.5
Company M: ratio analysis and interpretation of data

	Notes	**Year 1**	**Year 2**	**Year 3**	**Average industry figure**
Rates of return:					
Net profit / Net assets	A	18,1%	11,7%	6,3%	20%
Net profit / Amount of sales	B	4,8%	3,2%	1,7%	6%
Amount of sales / Net assets	C	3,8	3,6	3,6	3.3 times
Gross profit / Amount of sales	D	20%	20%	20%	20%
Liquidity ratios:					
Current	E	4,2	2,6	1,8	2.5 times
Quick	F	2,1	1	0,6	1.1 times
Activity ratios:					
Stock turnover	G	8,7	5,4	3,5	6 times
Accounts receivable collection period					
	H	34	37	50	32 days
Accounts payable payment period					
	I	25	35	61	25 days
Capital ratios:					
Gearing	J	6,6%	5,4%	4,7%	10%
Total debts / Total assets	K	22,8%	33,1%	48,2%	50%

Table 4.6 Ratio calculation

Ratio	**Notes**	**Year 1**	**Year 2**	**Year 3**
Net profit / Net assets	A			
Net profit / Amount of sales	B			
Amount of sales / Net assets	C			
Gross profit / Amount of sales	D			
Current				
ratio	E			
Quick				
ratio	F			
Stock turnover	G			
Accounts receivable collection				
period	H			
Accounts payable collection				
period	I			
Gearing	J			
Total debts / Total assets	K			

1 Performance indicators

1. Return is unstable: within 4 years no obvious trends have been established.
2. Except for Year 2, the net profit margin remains as a two-digit figure, although in the management of revenue and expense the values evidences difficulties in the company of maintaining the required gross profit margin. This can be explained by the inability to raise the sales prices proportionate with the increases in the costs of materials and/or labour.
3. The feeling arises that the fixed costs are being well-controlled as their portion form the amount of sales decreases year by year. It would be useful to assess their consistency with the estimated values.
4. Although the asset turnover is not very high it increases constantly. This is a good sign as the company has invested further amounts of money in assets, especially in Year 4.

2. Liquidity

1. Working capital has been increasing annually parallel to the increase in the sales amount, although its value required for sustaining the return from one lat of sales has decreased year by year. This can be seen from the relation between the working capital and the amount of sales.
2. Current and quick ratios have fallen over the 4 year period. This evidences an insignificant worsening of the company position in this matter. However, this should not cause any concern as the two ratios are still above the normal requirement – 2: 1 for the current ratio and 1: 1 for the quick ratio.
3. The situation with stock turnover has improved slightly over the last year, however, the current figure for the last 4 months is not yet satisfying.
4. In order to be able to substantiate the accounts receivable collection the information on real events must be obtained (terms of repayment) in conformity with which the company would issue credit, because there is a notion that the situation with the debt collection has worsened in the last three years. If the agreed terms for giving the credit constitute a 30 day period the analysis shows that the customers extend them 4 times at least. In the result bad debts may occur if this policy is not reviewed on a regular basis.
5. It seems that the creditors of the company are very patient, although it would be useful again to clarify the terms of purchasing. The increase in the creditors' debts in Year 4 is not a very alarming indicator.
6. Complete self-financing of investments in fixed assets is a good thing, as the additional cash is mainly coming from the shareholders with the add-on of the deductions for depreciation.

Sources of assets and their use

1. For the 3 preceding years the liquidity of the enterprise has considerably declined and as a result the bank loan has been considerably increased.
2. The basic reason of the decrease in liquidity was the requirement to increase the working capital by more than Ls 1 mln within two years.

3. Replenishment of cash from inner resources was performed mainly based on the depreciation deductions – it was impossible to use the annually decreasing profit for this purpose.
4. The total amount of investment in fixed assets for two years – Ls 568 thous. (326 thous. + 242 thous.) is almost equal to the amount of deductions for depreciation - Ls 562 thous. for this period (Ls 256 thous. + Ls 306 thous.). Such an outcome illustrates that the investments in this area are practically not increasing and gives rise to a question – whether the company policy in the area of investment is still remaining competitive.
5. The company is neither attempting to increase its share capital nor raise any long-term loans, even in spite of the fact that net investment in fixed assets reached an amount of Ls 568 thous. over the last 2 years. Thus a pressure on cash was exerted that is necessary for the working capital needs and the bank loan reached the amount of Ls 714 thous. as a result.

Test your knowledge:

1) Describe the financial analysis ratios according to the following characteristics:

- economic potential of the enterprise;
- business operations of the enterprise;
- operating efficiency of the enterprise;
- the financial status and solvency;
- competitiveness of the enterprise.

2) Name the factors affecting gross profit of an enterprise.
3) Describe the meaning of a primary ratio. What are net assets? Why in the analysis of return from business operations of an enterprise net assets are used?
4) What ratio is called the ‘Acid test ratio’?
5) Describe the investment ratios.
6) How would the increase in the number of shares influence the ‘Earnings per share’ ratio?
7) Make the performance analysis of your enterprise according to the example provided under ‘Interpretation of Company M data’.

5. Evaluation of the financial position of Enterprise N

5.1. Horizontal analysis of the balance sheet and income statement of Enterprise N
5.2. Liquidity ratio analysis of Enterprise N
5.3. Activity ratio analysis of Enterprise N
5.4. Profitability ratio analysis of Enterprise N
5.5. Working capital management in Enterprise N
5.5.1. Description of working capital
5.5.2. Work in progress
5.5.3. Accounts receivable
5.5.4. Stock
5.5.5. Cash resources

This section will look at the financial status of Enterprise N and its working capital management over the last two years, which is explained by the fact that often the major financial problems in enterprises are caused due to shortage of current assets.

Not only the enterprise annual or interim balance sheet and income statements regularly submitted to the commercial bank are used in the analysis, but also the income statements by each quarter that are provided for the enterprise management, as well as the analytical information on accounts receivable, accounts payable and the turnover will be used.

5.1. Horizontal analysis of the balance sheet and income statement of Enterprise N

Prior to the review of the key measures of financial analysis the horizontal balance sheet analysis has to be performed in order to have a view of their changes by period (see the balance sheet of Enterprise N 1. in Table 1 in the annex).

By looking at the balance sheet statements of Enterprise N for the period from 31/12/2XX7 to 31/12/2XX9, it can be found that the main items having the highest percentage from and importance in the preparation of the balance sheet and providing with the necessary information in the result of analysis are as follows:

Assets	Liabilities
fixed assets and inventory	retained earnings from previous periods
total long-term investments	retained earnings for the period reported
work in progress	total equity capital
accounts receivable	accounts payable
cash and securities	total debts
total current assets	total for the balance sheet
total for the balance sheet	

This is why for these items the horizontal balance sheet comparison will be performed by analysing their changes by period both in absolute figures, i.e., in monetary units (see Table 2 ‘Horizontal analysis of the balance sheet of Enterprise N (in CU) from 31/12/2XX7 to 31/12/2XX9’ in the annex), and in relative figures, i.e., in percent (see Table 3 ‘Horizontal analysis of the main balance sheet items of Enterprise N in percent from 31/12/2XX7 to 31/12/2XX9’).

In the horizontal analysis of the main balance sheet items such positions as intangible assets, stock, prepaid expenses, shareholders' or share capital have not been included as the values of these positions do not constitute a material amount in the balance sheet.

The balance sheet item 'Land, buildings, constructions and long-term plants' on its turn, has not been included in the horizontal balance sheet analysis as its value does not change considerably over the entire period under review. This value is only reducing by the amount of fixed asset depreciation. Due to the same reason the item of the balance sheet 'Short-term loans' has not been included in the analysis.

The balance sheet item 'Long-term loans' has not been included in this analysis either as there are almost no changes taking place except in the very first period under review. The reason for this is that the enterprise had purchased cars for own needs on leasing. This is also reflected in the enterprise balance sheet as at the end of period ended 31/03/2XX8, when long-term loans have increased by about five and a half thousand CU, there is an increase in the fixed asset and inventory value seen by almost eleven and a half thousand CU.

It can be sensed from Table 2.1 that the total amount of enterprise assets increases until 31/03/2XX9 except the end of 2XX8, after which there can be again an increase in total assets viewed in the first quarter of 2XX9, while from March of 2XX9 till the end of September a decrease in the total amount of assets can be observed. This is due to the two large unsuccessfully implemented projects of the enterprise as the profitability level of these projects was below the projected level of profitability. The problem of cost-effectiveness will be discussed later when the profitability policy of the enterprise will be analysed. The amount of equity capital in the enterprise has decreased rapidly starting with March, 2XX9, as the enterprise has been operating at a loss. On the other hand, the enterprise became aware of its financial position in May, 2XX9, adopted the decision for cost optimisation for further projects, and any changes in this respect can be felt already starting from September, 2XX9.

From the data in Table 2.2 it can be seen that the total asset value of the enterprise increases until 31/03/2XX9 except at the end of 2XX8, when the decrease in this value is mainly due to the rapid fall in the amount of work in progress.

Attention should be also paid to accounts receivable and accounts payable of the enterprise. Almost in the entire period under review until the middle of 2XX9 these two balance sheet items have a tendency to increase. There is a decrease in the accounts receivable starting with 31/03/2XX9 as extra work has been input in accounts receivable which has brought in some results. This will be discussed in more detail in the section on current asset management including the management of accounts receivable. Debts to creditors, on their turn, have also decreased, starting with 30/06/2XX9.

Relative changes in the asset values are shown in Table 2.3 in the annex. There is a tendency to increase in the total value of assets compared to the preceding period, while the total amount of assets reduces starting from 31/03/2XX9 as the profit of the enterprise has declined by 1035% in the period following 31/03/2XX9, the enterprise was actually operating at a loss of more than 150 thousand CU at the moment.

In order to obtain a full picture of the enterprise performing the horizontal balance sheet analysis is not sufficient. It is also required to perform the horizontal analysis of the

income statement as by having a look at the net turnover of the enterprise in Table 4 (see the annex) 'Income statement of the Enterprise N for the period from 31/12/2XX7 to 31/12/2XX9' the explanation for the trend of increase in the total assets can be found, as the increase in net turnover until the third quarter of 2XX8 is boosting; the decrease in the net turnover for the last quarter is due to the seasonal character of turnover in the construction business. The fact that starting with the end of March, 2XX9, the rates of increase in net turnover of the enterprise are rising is also explained by the seasonal changes.

In Table 5 (see the annex) it can be seen that in the second quarters of the year the net turnover of the enterprise is less than the cost of goods sold as during this period the enterprise is investing money in projects which it not necessarily gets back in the following month, therefore, during these periods the enterprise is working at a loss.

Although the average quarterly net turnover is 282,7 thousand CU, it can be seen that in the first quarter of 2XX9 the amount of net turnover is only slightly below the average, being higher during the rest of the year, but more importantly the turnover of the enterprise is more levelled than that in year 2XX8.

5.2. Liquidity ratio analysis of Enterprise N

Overall liquidity

In estimating this measure the overall liquidity calculation formula 4.1 must be applied. In order to arrive at the overall liquidity value information about the total amount of the enterprise current assets and short-term assets should be available (see the data in Table 1 of the annex).

Table 5.1

Estimation of the Enterprise N overall liquidity for the period from 31/12/2XX7 to 31/12/2XX9 (in CU)

	Dec., 2XX7	**March 2XX8**	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Total current assets	167 806	210 557	241 778	343 779	318 301	476 754	386 462	296 149	304 415
Current liabilities	192 442	217 224	315 697	296 244	327 454	470 252	545 623	477 655	418 595
Overall liquidity	**0,87**	**0,97**	**0,77**	**1,16**	**0,97**	**1,01**	**0,71**	**0,62**	**0,73**

It can be seen according to Table 5.1 that the overall liquidity in the period under review is below standard as it is recommended that the overall liquidity ratio is within the limits from 1 to 2 (3 on some occasions). The value of liquidity has only been slightly above the critical limit of 1 at the end of September 2XX8 (1.16) and in March, 2XX9, - 1.01.

This means that the enterprise is having problems with paying its suppliers in due time. By knowing that a major supplier has authorised a credit line to the enterprise with the limit of 40,000 CU available for one year with the option of extending it for one more

year after the expiry of the term, it is possible to exclude these 40,000 CU from the current debts as they are not due in the short-term, and therefore the real amount of current debts due in a short time to the creditors is by 40,000 CU less. This could improve the overall liquidity measures to some extent. Therefore, in Table 5.2 there is a new overall liquidity value arrived at with the 40,000 CU being deducted from the amount of short-term debts. In calculation of the quick ratio the 40,000 CU will also be deducted from the amount of current debts.

Table 5.2

Adjusted estimate of the Enterprise N overall liquidity for the period from 31/12/2XX7 to 31/12/2XX9 (in CU)

	Dec., 2XX7	**March, 2XX8**	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March, 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Total current assets	167806	210557	241778	343779	318301	476754	386462	296149	304415
Adjusted short-term debts	152 442	177 224	275 697	256 244	287 454	430 252	505 623	437 655	378 595
Overall liquidity	**1,10**	**1,19**	**0,88**	**1,34**	**1,11**	**1,11**	**0,76**	**0,68**	**0,80**

After reducing the amount of short-term debt by the credit line of 40,000 CU the overall liquidity is slightly improved (see Table 5.2). Now liquidity is almost always above the critical level of 1 by the end of March, 2XX9, while afterwards it is below the critical level of 1. Theoretically, this enterprise should have undergone the bankruptcy procedure in the middle of year 2XX9 already, however, in view of the fact that this enterprise is operating in the construction industry where suppliers await their invoices to be paid for one year even, the enterprise is still in business. If the debt to suppliers is too high and has not been paid for a considerable amount of time, the suppliers cease supplying materials to the enterprise until they receive at least a partial payment for the debt. There are construction materials stores that have set the maximum credit limit which can be reached without having to face any sanctions. As it was noted before the largest materials supplier had issued the maximum debt or credit limit of 40,000 CU to Enterprise N, because in consideration of the amount of construction materials purchased by Enterprise N from the largest materials supplier, this is beneficial for the creditor.

Quick liquidity ratio

In the estimation of this measure the formula for calculation of the quick ratio 4.2 or 4.3 is applied. In order to calculate the quick ratio, it is necessary to know the total amount of company's current assets, stock, prepaid expenses and the amount of short-term debts.

Table 5.3

Estimate of the Enterprise N quick liquidity ratio for the period from 31/12/2XX7 to 31/12/2XX9 (in CU)

	Dec.,	**March,**	**June,**	**Sept.,**	**Dec.,**	**March,**	**June,**	**Sept.,**	**Dec.,**

	2XX7	**2XX8**	**2XX8**	**2XX8**	**2XX8**	**2XX9**	**2XX9**	**2XX9**	**2XX9**
Total current assets	167806	210557	241778	343779	318301	476754	386462	296149	304415
Stock	203	347	1491	653	1036	666	3057	4416	1005
Prepaid expenses	1761	1869	1932	2228	2479	2743	3016	3686	2866
Adjusted short-term debts	152442	177224	275697	256244	287454	430252	505623	437655	378595
Quick liquidity ratio	**1,09**	**1,18**	**0,86**	**1,33**	**1,10**	**1,10**	**0,75**	**0,66**	**0,79**

By looking at Table 5.3, where the dynamics of the quick ratio values are displayed for the period between 31/12/2XX7 and 13/12/2XX9 and comparing it with the overall liquidity dynamics shown in Table 5.2, it is clear that the overall liquidity is almost as high as the quick ratio as the amount of stock and prepaid expenses from total assets is insignificant. It can be said that the total assets of the enterprise are liquid assets, because the quick ratio is the relationship of liquid assets and the short-term liabilities. Of course, it is a general statement, as any judgement concerning the real level of liquidity can be made only upon the analysis of accounts receivable, because there is a possibility that bad debts constitute a large percentage of accounts receivable. Accounts receivable will be analysed later.

The analysis carried out allows to draw the conclusion that both the overall liquidity and the quick ratio of the enterprise has been too low starting with March, 2XX9, which means that the enterprise is facing problems with paying off their creditors' debts.

Another important measure of assessment of the liquidity status is the *current capital or working capital*, which is estimated as the difference between the amount of current assets and short-term debts (see 4.6. formula 4.6) As it has been stated before the short-term debts were adjusted by 40,000 CU in the amount of the credit line issued. The amount of current capital or working capital is calculated in Table 5.4.

Table 5.4

Estimation of the working capital for the period from 31/12/2XX7 to 31/12/2XX9 (in CU)

	Dec., 2XX7	**March , 2XX8**	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March , 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Working capital	167806	210557	241778	343779	318301	476754	386462	296149	304415
Adjusted short-term debts	152442	177224	275697	256244	287454	430252	505623	437655	378595
Working capital	**15364**	**33333**	**-33919**	**87535**	**30847**	**46502**	**-119161**	**-141506**	**-74180**
Changes in working	-	**17969**	**-67252**	**121454**	**-56688**	**15655**	**-165663**	**-22345**	**67326**

capital									

By analysing Table 5.4 it can be found that the amount of current assets of the enterprise is too small to sustain a sufficient working capital. According to the most recent data further 75 thous. CU would be required for the working capital of the enterprise to be sufficient. Besides, by looking at the dynamics of the working capital one can project that the enterprise could be short for the 2X10 summer period even with the 75 thous. CU. Another solution for increasing of the working capital would be a more efficient use of the existing current assets. The possibilities for a more efficient use of the current assets at the disposal of the enterprise will be looked at in further sections under the topic of current asset management in the enterprise.

5.3. Activity ratio analysis of Enterprise N

Current asset turnover ratio

For the estimation of this value the current asset turnover ratio formula 4.13 is used. In order to estimate the current asset turnover ratio, it is necessary to know the net turnover figure for the enterprise together with the average amount of current assets for the period under consideration.

The average amount of current assets is arrived at by adding the period opening and the closing value of current assets and dividing the amount by two. As it is impossible to obtain data on the average value of current assts as of 31/12/2XX7, the current asset turnover ratio for this period end will not be estimated. Noting that the period under consideration is a quarter, but not a year, the algorithm for calculation of the current asset turnover ratio must be corrected a little bit, because the total value of net turnover increases each quarter, while the amount of current assets does not have the trend of going up each quarter by the amount of increase in each preceding quarter on average. Therefore, in order to estimate the current asset turnover ratio for the first quarter, i.e., as of the end of March, the net turnover amount has to be multiplied by 4. In order to arrive at the value of this ratio at the end of June, net turnover has to be multiplied by 2, and in order to calculate the same ratio at the end of September, the net turnover amount has to be divided by 3 and multiplied by 4. However, to make the same estimate as of the end year, no adjustment has to be made to net turnover.

By looking at Table 5.5 ‘Estimate of the current asset turnover ratio for the period from 31/03/2XX8 to 31/12/2XX9 in Enterprise N’ it can be noticed that within one year on average the current assets are turned over at least 3 times. There is an exception in the period from the beginning of 2XX9 until the middle of 2XX9 when the current asset turnover ratio was below 2.5. The improvement in the current asset turnover ratio during the two last quarters of 2XX9 is not due to an increase in the net turnover figure, but rather due to a decrease in current assets that may not be positively evaluated as there is a need for additional working capital for enhancement of the enterprise liquidity.

Table 5.5.

Estimate of the Enterprise N current asset turnover ratio for the period from 31/03/2XX8 to 31/12/2XX9 (in CU)

	March, 2XX8	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March, 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Net turnover	150046	347023	723868	1074 683	243435	533788	846876	1166 073
Adjusted net turnover	600184	694046	965157	1074 683	973740	1067576	1129168	1166 073
Total current assets	210557	241778	343779	318301	476754	386462	296149	304415
Average value of working capital	189182	226168	292779	331040	397528	431608	341306	300282
Current asset turnover ratio	**3,17**	**3,07**	**3,30**	**3,25**	**2,45**	**2,47**	**3,31**	**3,88**

Total asset turnover ratio

For the estimation of this value the total asset turnover ratio formula 4.17 is used.

As it was mentioned before the total asset turnover ratio demonstrates, how efficient is the use of assets for building up of the net turnover, i.e., what is the number of full turnover cycles, which creates a sufficient effect in the form of profit or how many currency units were returned per each asset currency unit invested in assets.

In order to calculate the total asset turnover ratio the company net turnover figure and the average value of assets in the period under consideration must be found out. As the average value of assets cannot be estimated for the period until 31/12/2XX7, the total asset turnover ratio will be calculated for the period from 31/03/2XX8 to 31/12/2XX9. Considering that the period under review is a quarter, and not a year, the algorithm for calculation of the total asset turnover ratio must be slightly corrected, because the total value of net turnover increases each quarter, while the amount of total assets does not have the trend of going up each quarter by the amount of increase in each preceding quarter on average. Therefore, in order to estimate the asset turnover ratio for the first quarter, i.e., as of the end of March, the net turnover amount has to be multiplied by 4. In order to arrive at the value of this ratio at the end of June, net turnover has to be multiplied by 2, and in order to calculate the same ratio at the end of September, the net turnover amount has to be divided by 3 and multiplied by 4. However, to make the same estimate as of the end year, no adjustment has to be made to the net turnover figure (see Table 5.6).

Table 5.6.

Estimate of the Enterprise N total asset turnover ratio for the period from 31/03/2XX8 to 31/12/2XX9 (in CU)

	March, 2XX8	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March, 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Net turnover	150 046	347 023	723 868	1074683	243 435	533 788	846 876	1 166 073
Total assets	254 055	284 701	388 756	371 040	530 034	490 516	396 127	428 651
Average value of total assets	227045	269378	336729	379898	450537	510275	443322	412389
Adjusted net turnover	600184	694046	965157	1074683	973740	1067576	1129168	1 166 073
Total asset	**2,64**	**2,58**	**2,87**	**2,83**	**2,16**	**2,09**	**2,55**	**2,83**

turnover ratio								

By looking at Table 5.6 it can be seen that just like for the current asset ratio the total asset turnover ratio is higher particularly in the second half of the year, because the net turnover of the enterprise is higher at that time. All assets of the enterprise are turned over at least two times during a year.

Rate of turnover of accounts receivable

For the purposes of assessing this ratio the formula for calculation of the rate of turnover of accounts receivable 4.19 is used. In order to estimate the rate of turnover of accounts receivable the average amount of debtors' debts as well as the figure of net turnover must be known for each period, which must be adjusted, for example, the net turnover figure for Quarter 1 has to be multiplied by 4, the net turnover figure for Quarter 2 – by 2, the net turnover figure for Quarter 3 has to be divided by 3 and multiplied by 4, while no adjustment has to be made to the net turnover figure of Quarter 4.

To find out the number of days for turning over the accounts receivable, the number of days in a year must be divided by the rate of turnover of accounts receivable (see Table 5.7).

Table 5.7

Estimate of the Enterprise N rate of turnover of accounts receivable for the period from 31/03/2XX8 to 31/12/2XX9 (in CU)

	March, 2XX8	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March, 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Net turnover	150 046	347 023	723 868	1074683	243 435	533 788	846 876	1166073
Adjusted net turnover	600184	694046	965157	1074683	973740	1067576	1129168	1166073
Accounts receivable	99 150	111 292	167 202	207 862	289 186	219 634	195 662	170 200
Average value of accounts receivable	97921	105221	139247	187532	248524	254410	207648	182931
Rate of turnover of accounts receivable	**6,13**	**6,60**	**6,93**	**5,73**	**3,92**	**4,20**	**5,44**	**6,37**
Length of turnover of accounts receivable in days	**60**	**55**	**53**	**64**	**93**	**87**	**67**	**57**

When looking at Table 5.7 'Estimate of the Enterprise N rate of turnover of accounts receivable for the period from 31/03/2XX8 to 31/12/2XX9' it can be noticed that there is a considerable decrease in the rate of turnover of accounts receivable during the period when the net turnover figure of the enterprise is among the lowest. The reason for this is that overdue debtors' debts constitute one third of the total amount of accounts receivable, the delay exceeding 120 days and their collection has become problematic. During the period, when the turnover of the enterprise is decreasing, the amount of accounts payable decreases too. The smaller the amount of accounts receivable, the higher is the percentage of the difficult debtors' debts from the total accounts receivable.

Accounts receivable will be discussed in more detail under the management of accounts receivable section.

It is also necessary to consider the rate of turnover of accounts payable and to compare it then with the rate of turnover of accounts receivable.

Rate of turnover of accounts payable

For the purposes of assessing this ratio the formula for calculation of the rate of turnover of accounts payable 4.21 is used. In order to estimate the rate of turnover of accounts payable the average amount of creditors' debts as well as the figure of net turnover must be known for each period, which must be adjusted, for example, the net turnover figure for Quarter 1 has to be multiplied by 4, the net turnover figure for Quarter 2 – by 2, the net turnover figure for Quarter 3 has to be divided by 3 and multiplied by 4, while no adjustment has to be made to the net turnover figure of Quarter 4. To find out the number of days for turning over the accounts payable amount, the number of days of one year must be divided by the rate of turnover of accounts payable (see Table 5.8).

Table 5.8

Estimate of the Enterprise N rate of turnover of accounts payable for the period from 31/03/2XX8 to 31/12/2XX9 (in CU)

	March, 2XX8	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March, 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Net turnover	150046	347023	723868	1074683	243435	533788	846876	1166073
Adjusted net turnover	600184	694046	965157	1074683	973740	1067576	1129168	1166073
Accounts payable	217224	315697	296244	327454	470252	545623	477655	418595
Average value of accounts receivable	204833	266461	305971	311849	398853	507938	511639	448125
Rate of turnover of accounts payable	2,93	2,60	3,15	3,45	2,44	2,10	2,21	2,60
Turnover of accounts payable in days	**125**	**140**	**116**	**106**	**150**	**174**	**165**	**140**

When looking at Table 5.8 'Estimate of the Enterprise N rate of turnover of accounts payable for the period from 31/03/2XX8 to 31/12/2XX9' it can be noticed that the slowest rate of turnover of accounts payable is attributable to those periods in which the most active operations take place in the enterprise, because during that time the amount of creditors' debts is going up, while the amount of cash does not change considerably from that.

Comparing the turnover data of accounts receivable and accounts payable during the period of time from 31/12/2XX7 till 31/12/2XX9, it can be seen accounts receivable in

the enterprise are turned over two times faster than the turnover of accounts payable. As it has been previously stated, the turnover of accounts payable particularly declines during the most active period of enterprise operations, i.e., during the period from the end of March till the end of September. In the middle of 2XX9 the turnover of accounts receivable was slower than in other periods, therefore, the enterprise management was offered to use the services offered by the factoring companies which the enterprise management took up.

The efficiency of implementing the factoring services can be felt, as starting with the middle of 2XX9 the turnover period of accounts receivable was reduced from 87 days to 57 days (at the end of 2XX9). The effect brought in by use of the factoring services is felt also in the rate of turnover of accounts payable, because likewise from the middle of 2XX9 the period of turnover of accounts payable has been reduced from 174 days to 140 days by the end of 2XX9.

5.4. Profitability ratio analysis of Enterprise N

Profitability of sales

For the estimation of this financial performance measure the sales profitability formula 4.25 is used. In order to arrive at profitability of sales, it is necessary to know the profit and the net turnover figures for the period reported (see Table 5.9).

Table 5.9

Estimation of the Enterprise N profitability of sales for the period from 31/12/2XX7 to 31/12/2XX9 (in CU)

	Dec., 2XX7	**March , 2XX8**	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March , 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Net turnover	788677	150046	347023	723868	1074683	243435	533788	846876	1166073
Net profit or loss for the reporting period	16938	23501	-43876	78517	31222	16121	-150795	-175178	-96020
Profitability of sales	**2,15**	**15,66**	**-12,64**	**10,85**	**2,91**	**6,62**	**-28,25**	**-20,69**	**-8,23**

By looking at Table 5.9 ‘Estimation of profitability of sales for the period from 31/12/2XX7 to 31/12/2XX9’ it can be sensed that the profitability of the enterprise is highly varied by different time periods. This is related with the profitability levels of the projects implemented in the enterprise. In one occasion 123 thous. CU were required for implementing of a project, although the contractual value did not exceed 120 thous. CU. This means that the project has been realised at a loss of 3 thous. CU, although an income of 30 thous was planned. CU have been planned. Considering that the gross profit of this project had to be sufficient for the enterprise to be able to cover its monthly debts, such as the warehouse and office rent, salaries of the administration, monthly leasing payments, a loss was incurred instead. Profitability of the projects implemented in 2XX9 by each month is displayed in Table 5.10 ‘Profitability of projects implemented by Enterprise N in 2XX9 by month’.

Table 5.10.

Profitability of projects implemented by Enterprise N in 2XX9 by month

	Jan.	Feb.	March	May	June	Aug.	Sep.	Oct.	Dec.	Total
Number of projects implemented	2	3	4	2	3	3	5	1	1	**24**
Revenues	71787	58701	66762	32712	187364	51285	92653	12599	2737	**576601**
Expenses	59384	56352	54171	25690	164870	34483	56296	7737	896	**459877**
Profitability, in percent	**17,3**	**4,0**	**18,9**	**21,5**	**12,0**	**32,8**	**39,2**	**38,6**	**67,3**	**20,2**

In the row of Table 5.10 ‘Number of projects implemented’ the number of projects completed in each particular month by the statement of delivery-acceptance is specified.

The next row ‘Revenue’ provides the amounts of invoices issued during in the course of project implementation. A summary of project implementation costs are provided in the row ‘Expenses’, and the final row ‘Profitability, %’ gives the profitability of implementation of these projects. Note, that those months in which there wasn’t a single project completed by the statement of delivery-acceptance have not been included in Table 5.10.

According to the data of Table 5.10 it can be seen that the profitability of the projects implemented during the first half of 2XX9 is considerably lower than that in the other half of 2XX9. By value projects of a larger scale in the second half of 2XX9 were completed only in August and September, unlike the first half of 2XX9 when larger projects have been completed in four out of six months. The overall profitability of projects completed in 2XX9 was 20.2%, although there is a requirement for the enterprise to carry out projects with profitability of 26% at minimum.

At the end of March, 2XX9, the enterprise management decided that it is necessary to increase the profitability of the projects and to set the desirable level of profitability at 26%. After the adoption of this decision the personnel preparing the estimates for future projects for which the bids were being prepared added the requirement of at least 26% of profit.

Profitability from operations

For the estimation of this profitability the formula for calculation of profitability from operations 4.26 is used. In order to assess profitability of the enterprise from its operations it is necessary to know the enterprise profit before interest and tax as well as the net turnover figure of the enterprise (see Table 5.11).

Table 5.11.

Estimation of the Enterprise N profitability of operations for the period from 31/12/2XX7 to 31/12/2XX9 (in CU)

	Dec., 2XX7	**March, 2XX8**	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March, 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Net turnover	788677	150046	347023	723868	1074683	243435	533788	846876	1166073
Profit or loss before extraordinary items and tax	18 233	23 501	-43876	78 518	33 059	16 336	-150 581	-174963	-95 806
Operating profitability, in percent	**2,3**	**15,7**	**-12,6**	**10,8**	**3,1**	**6,7**	**-28,2**	**-20,7**	**-8,2**

Operating profitability is distinguished from the profitability of sales by the fact that the operating profitability is arrived at from the profit before tax figure, while the profitability of sales – from the profit after tax figure. As in 2XX8 the enterprise was working with a small profit, the total amount of tax does not largely affect the operating profitability value. As it has been stated before, the enterprise has been operating at a loss starting from the end of March, 2XX9, although this loss has been gradually decreasing.

Gross profit margin

For the estimation of this type of profitability the formula for calculation of profitability 4.27 is used. I n order to arrive at the gross profit margin, it is necessary to know the gross profit figure as well as the net turnover of the enterprise (see Table 5.12).

Table 5.12.

Estimation of the gross profit margin for the period from 31/12/2XX7 to 31/12/2XX9 (in CU)

	Dec., 2XX7	**March, 2XX8**	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March, 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Net turnover	788677	150046	347023	723868	1074683	243435	533788	846876	1166073
Gross profit or loss	47244	32055	-21671	113489	88213	28774	-119150	-122232	-10636
Gross profit margin, in percent	**6,0**	**21,4**	**-6,2**	**15,7**	**8,2**	**11,8**	**-22,3**	**-14,4**	**-0,9**

By looking at Table 5.13 ‘Estimate of the gross profit margin by quarter for the period from 31/03/2XX8 to 31/12/2XX9’ it can be seen that the dynamics of the gross profit margin figures is the same as for sales or operating profitability.

Table 5.13.

Estimation of the gross profit margin by quarter for the period from 31/03/2XX8 to 31/12/2XX9 (in CU)

	March, 2XX8	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March, 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Net turnover by quarter	150 046	196 977	376 845	350 815	264 220	290 353	313 088	319 197
Gross profit or loss by quarter	32 055	-53 726	135 160	-25 276	49 560	-147 925	-3 082	111 596
Gross profit margin by quarter, in percent	**21,4**	**-27,3**	**35,9**	**-7,2**	**18,8**	**-50,9**	**-1,0**	**35,0**

Having summarised full information regarding the profitability of the enterprise conclusion may be drawn that the minimum level of profitability has not been set until 2XX9, at which the enterprise would implement its projects, because until then for each project a bid has been prepared for the building contractor. Building contractors collects the bids from several sub-contractors and afterwards it announces the lowest price to two to three potential sub-contractors, the idea behind being that should any of these sub-contractors offer an even lower price the one offering the lowest price would get the contract. Thus the potential sub-contractors are lowering each other's prices. As a result the contractor is getting the lowest possible bid, while sub-contractors are getting projects with low profitability rates. Now there has been the minimum profitability level set for the enterprise which recently causes the profitability of the enterprise to improve.

From the point of view of business competition as the main driving force makes each enterprise to supersede the other one, to acquire the recognition of consumers and to achieve faster implementation of the project offered and possibly at a higher price.

The management of the enterprise needs to work more on the marketing issues and the quality of the works to be performed, to establish permanent relationship with the building contractors as a result of which it is possible to win the projects and to raise the level of profitability of the enterprise.

By assessing the financial position of Enterprise N the following can be concluded:

- the main concern in the enterprise is the profitability level of projects for implementation that has been particularly low in 2XX9;
- due to low profitability levels liquidity of the enterprise is low starting with the second quarter of 2XX9;
- speaking about the turnover of assets and the working capital it can be mentioned that the turnover is improving. If the enterprise is able to raise additional resources for ensuring regular liquidity levels, then the turnover of total assets and current assets will be also increased;

- the turnover of accounts payable is too low, because creditors have to wait more than 140 days for the payment of one invoice on average, which in terms of months is almost five months and is yet too much;
- by assessing the liquidity of the enterprise it should be noted that in 2XX9 the enterprise liquidity in the second quarter is low, and according to all theories on liquidity the enterprise should have gone bankrupt already. This is why the enterprise must start urgently looking for additional resources for it to be able to improve its liquidity and the overall activity as a result;
- further on the enterprise must pay larger attention to the implementation of the planned profitability level of its projects. If the projects are being implemented at their planned level of profitability and if the enterprise finds resources for the improvement of its profit, then it is possible for the enterprise to operate at a constant profit already in 2X10. For the improvement of profitability and the financial position of the enterprise it is required to implement projects with small periods of execution, for example, 2 months, because in this way the turnover of the enterprise current assets will be accelerated.

5.5. Working capital management in Enterprise N

5.5.1. Description of working capital

Current assets of the enterprise and their amount are displayed in Table 5.14 'Current assets of Enterprise N from 31/12/2XX7 to 31/12/2XX9'.

Table 5.14.

Current assets of Enterprise N from 31/12/2XX7 to 31/12/2XX9

	Dec., 2XX7	**March , 2XX8**	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March , 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Stock	203	347	1491	653	1036	666	3057	4416	1005
Work in progress	45293	70244	82132	138182	85539	172087	146674	79623	108428
Accounts receivable	89011	88518	101614	154316	201877	280583	213256	188399	163233
Advances for purchases	7680	10632	9678	12886	5985	8603	6378	7263	6967
Short-term loans		30000	32000	25500	18000	11500	11500	11500	13000
Prepaid expenses	1761	1869	1932	2228	2479	2743	3016	3686	2866
Cash and securities	23858	8947	12931	10014	3385	572	2581	1262	8916
Total current assets	**167806**	**210557**	**241778**	**343779**	**318301**	**476754**	**386462**	**296149**	**304415**

It can be noticed from Table 5.14 that there has been a tendency of growing for the current assets before the end of March, 2XX9, while the amount of current assets has been reduced starting with the second quarter of 2XX9. In order to have a full picture about

those current asset items influencing the changes in the current assets, the analysis of changes in the current asset items by period has been carried out in absolute figures (see Table 5.15) and in percent (see Table 5.16).

Table 5.15. Changes in the items of current assets of the Enterprise N in the period from 31/03/2XX8 to 31/12/2XX9 (in CU)

	March, 2XX8	**June 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March , 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Changes in the amount of stock	144	1144	-838	383	-370	2391	1359	-3411
Changes in work in progress	24951	11888	56050	-52643	86548	-25413	-67051	28805
Changes in accounts receivable	-493	13096	52702	47561	78706	-67327	-24857	-25166
Changes in advances for purchases	2952	-954	3208	-6901	2618	-2225	885	-296
Changes in short-term loans	30000	2000	-6500	-7500	-6500	0	0	1500
Changes in prepaid expenses	108	63	296	251	264	273	670	-820
Changes in cash items	-14911	3984	-2917	-6629	-2813	2009	-1319	7654
Changes in current assets	**42751**	**31221**	**102001**	**-25478**	**158453**	**-90292**	**-90313**	**8266**

Table 5.16. Changes in the items of current assets of Enterprise N in percent in the period from 31/03/2XX8 to 31/12/2XX9 (in CU)

	March, 2XX8	**June 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March, 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Changes in the amount of stock, %	41,5	76,7	-128,3	37,0	-55,6	78,2	30,8	-339,4
Changes in work in progress, %	35,5	14,5	40,6	-61,5	50,3	-17,3	-84,2	26,6
Changes in accounts receivable, %	-0,6	12,9	34,2	23,6	28,1	-31,6	-13,2	-15,4
Changes in advances for purchases, %	27,8	-9,9	24,9	-115,3	30,4	-34,9	12,2	-4,2
Changes in short-term loans, %	100,0	6,3	-25,5	-41,7	-56,5	0,0	0,0	11,5
Changes in prepaid expenses, %	5,8	3,3	13,3	10,1	9,6	9,1	18,2	-28,6
Changes in cash items, %	-166,7	30,8	-29,1	-195,8	-491,8	77,8	-104,5	85,8
Changes in current assets, %	**20,3**	**12,9**	**29,7**	**-8,0**	**33,2**	**-23,4**	**-30,5**	**2,7**

The amount of current assets has been reduced in Quarter 2 and 3 of 2XX9. This can be explained by the lowest profitability figures of the enterprise during the same period.

In order to see the percentage of changes in the current asset items from the total amount of change in the current assets, Table 5.17 has been designed.

Table 5.17.

Percentage of changes in the current asset items in the total amount of change in current assets in Enterprise N

	March, 2XX8	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March, 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Changes in stock, %	0,3	3,7	-0,8	1,5	-0,2	2,6	1,5	-41,3
Changes in work in progress, %	58,4	38,1	55,0	-206,6	54,6	-28,1	-74,2	348,5
Changes in accounts receivable, %	-1,2	41,9	51,7	186,7	49,7	-74,6	-27,5	-304,5
Changes in advances for purchases, %	6,9	-3,1	3,1	-27,1	1,7	-2,5	1,0	-3,6
Changes in short-term loans, %	70,2	6,4	-6,4	-29,4	-4,1	-0,0	-0,0	18,1
Changes in prepaid expenses, %	0,3	0,2	0,3	1,0	0,2	0,3	0,7	-9,9
Changes in cash items, %	-34,9	12,8	-2,9	-26,0	-1,8	2,2	-1,5	92,6
Changes in current assets, %	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**

By viewing the Tables 5.16 and 5.17 it can be seen that ‘Work in progress’ and ‘Accounts receivable’ are the most significant items of current assets, as the values of these items are the highest in the current assets as well as changes in these items are considerable.

The enterprise has issued a short-tem loan to the owners which constitute 13 thous. CU as at 31/12/2XX9. This may not be considered a correct decision of the management as there have been serious liquidity concerns in the enterprise at that time. The management of the enterprise are also its owners. The overall assessment of the decreasing value of this balance sheet item from the second half of 2XX8 is positive, because if the working capital is held by the owners of the enterprise, they are suspended instead of being invested for the improvement of the enterprise operations.

The amount of the current asset item of ‘Cash’ does not play a significant role at the date of financial report taking into account that the enterprise has a large debt to its suppliers.

Under the current asset item ‘Advances for purchases’ usually include prepayments for the ventilation, conditioning or heating equipment that need to be ordered in advance. These systems are highly specific in nature and are therefore being ordered straight from the factory, i.e., directly from the manufacturer. The lead time between ordering and delivery of this equipment is at least four weeks, therefore it can be stated that the cash assets are being suspended in the form of an advance payment for the equipment

for four weeks at least and possibly even longer as the delivery time depends on the specification and size of the equipment.

5.5.2. Work in progress

Materials already purchased and used for the implementation of projects, however, due to some reason not included in the amount of the finished works for payment are posted to this item of current assets. Costs for the services outsourced are also included in work in progress. For example, in order to install a ventilation system the services offered by other firms are required. Information on work in progress is summarised in Table 5.18 'Work in progress of Enterprise N for the period from 31/03/2XX8 to 31/12/2XX9'.

Table 5.18.

Work in progress of Enterprise N from 31/03/2XX8 to 31/12/2XX9

	March, 2XX8	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March, 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Work in progress	**70244**	**82132**	**138182**	**85539**	**172087**	**146674**	**79623**	**108428**
Changes in work in progress by period	24951	11888	56050	-52643	86548	-25413	-67051	28805
Changes in work in progress by period, %	35,5	14,5	40,6	-61,5	50,3	-17,3	-84,2	26,6

According to the data of Table 5.18 it is seen that the changes in work in progress are highly uneven. There are two factors affecting the changes in the amount of work in progress:

1) costs of the project being implemented,

2) duration of completion of the project being implemented.

The amount of work in progress increases in the period from 31/12/2XX7 to 30/09/2XX8. This is associated with the rapid growth in the net turnover of the enterprise as new projects have arisen for which the investment of current assets was necessary. The rapid growth in work in progress as of 30/09/2XX8 accounts for fact that there were a couple of projects outstanding which were not completed in September.

Therefore, the amount of work in progress fell by almost 53 thous. CU as of 31/12/2XX8. The amount of work in progress raised again by 86 thous. CU as of 31/03/2XX9, because during Quarter 1 of 2XX9 the implementation of the most significant project with the contractual value of 424.8 thous. CU was commenced. In addition to this amount the implementation of several projects was started with the completion term of 2 to 4 months. Due to this an increase in the amount of work in progress has been seen on account of these projects. In the following two quarters the enterprise was mainly into the execution of the existing projects and new projects only arose starting from September, 2XX9. Upon completion of the outstanding projects the amount of work in progress decreased.

The increase in work in progress during the final quarter of 2XX9 is related to the commencement of new projects and continuation of the other projects.

It can be concluded that the changes in current assets of the enterprise are closely related to the changes having taken place in work in progress, which, on their turn, are related to the cash assets invested in the projects which have neither been transformed into accounts payable, nor in cash.

The suggestion for the enterprise management would be as follows: larger control needs to be exerted over a more timely conversion of the resources invested directly into the units of construction into accounts receivable or in cash, as well as the statements of delivery-acceptance for the projects need to be signed as soon as possible.

5.5.3. Accounts receivable

Upon analysing the composition of current assets it was found that the largest items of current assets are 'Work in progress' and 'Accounts receivable' according to both their value and the scope of changes. Information on accounts receivable has been summarised in Table 5.19 'Accounts receivable of Enterprise N from 31/03/2XX8 to 31/12/2XX9'.

Table 5.19.

Accounts receivable of Enterprise N from 31/03/2XX8 to 31/12/2XX9

	March, 2XX8	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March, 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Accounts receivable	**88518**	**101614**	**154316**	**201877**	**280583**	**213256**	**188399**	**163233**
Changes in accounts receivable by period	-493	13096	52702	47561	78706	-67327	-24857	-25166
Changes in accounts receivable by period, %	-0,6	12,9	34,2	23,6	28,1	-31,6	-13,2	-15,4

By looking at the Table 5.19 it can be noticed that the amount of the enterprise accounts receivable increased starting with the middle of 2XX8 till the end of March, 2XX9. Till the middle of 2XX8 the enterprise was not paying much attention to the management of accounts receivable, however, in the middle of 2XX8 there were a few of debtors which did not pay for the works performed, resulting in an increased the amount of accounts receivable. Beside these debtors the enterprise was affected by some debtors having filed for bankruptcy which increased the amount of accounts receivable even more.

In October of 2XX9 the enterprise employed an employee whose main task was the control of accounts receivable, some time passed, however, for the employee to understand in detail the processes going on in the building industry and in the meantime the amount of accounts receivable increased.

During the second quarter of 2XX9 the enterprise management was advised to implement any large projects involving large periods of payment with the use of services of the factoring companies, which was done in April 2XX9. From the perspective of the

accounts receivable management this project was successfully completed, therefore, the management took a decision to use the services of the factoring companies in the implementation of any further major projects, in the result of which the amount of accounts receivable decreased by 117 thousand CU in the period from March, 2XX9, by end of 2XX9.

In the use of the services of the factoring companies in project implementation the enterprise not only increased the rate of turnover of accounts receivable, but also limited the risk of bad debts.

Payment for the use of factoring services is made up of three component parts:

1. A fee for signing of the factoring contract. This amount includes the review of the factoring offer and the development of the contract. The factoring contract fee for Enterprise N was within the limits of 100 and 200 CU. If in the course of time the need arises to add other customers to the factoring agreement a further amount of 20 to 50 CU per every change to the contract must be paid.
2. Commission fee on any amounts collected from the debtor and transferred to the enterprise. The amount of the commission fee is from 0.15% to 0.20% from the amount transferred.
3. Interest on use of the factoring company's amount of cash advance. The interest rate on use of the amount of cash in advance is specified by agreement.

In making use of the situation when commercial banks, leasing companies and factoring companies are competing among themselves and try to get as many customers as possible there is an opportunity to go to one factoring company with the offer of another factoring company by obtaining the most beneficial terms and prices for factoring services.

Apart from the factoring contract which is a one-off payment upon signing of the contract, the use of the factoring services in realisation of a project with the contractual value of 100 thousand CU on the condition that the building contractors have two months available for the payment of the works performed, then the costs of the factoring services are about 1% of the contract amount or about 1,000 CU. By taking into account the benefits offered by the use of services of the factoring companies, the costs of the factoring services are acceptable.

Accounts receivable analysis

Management of accounts receivable includes the accounts receivable analysis. In order to perform the accounts receivable analysis, it is necessary to find out the following values:

- percentage of accounts receivable from total current assets;
- the average debtors' debt collection period;
- the average 'age' of debts overdue.

Percentage of accounts receivable from total current assets

In order to arrive at the figure of percentage of accounts receivable from total current assets information is needed on the amount of current assets and accounts

receivable. All this information is summarised in Table 5.20 ‘Percentage of the Enterprise N accounts receivable from total current assets from 31/12/2XX7 to 31/12/2XX9’.

Table 5.20.

Percentage of the Enterprise N accounts receivable in total current assets from 31/12/2XX7 to 31/12/2XX9

	Dec., 2XX7	**March, 2XX8**	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March, 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Working capital	167806	210557	241778	343779	318301	476754	386462	296149	304415
Accounts receivable	89011	88518	101614	154316	201877	280583	213256	188399	163233
Percentage of accounts receivable from total current assets	53,0	42,0	42,0	44,9	63,4	58,9	55,2	63,6	53,6

According to the data of Table 5.20 it can be seen that mostly in 2XX8 the percentage of accounts receivable from total current assets was below 50%, while in 2XX9 this figure was higher than 50% by even exceeding the limit of 60% at times. It is not possible to unambiguously state whether such a large percentage of accounts receivable from total current assets is positive or negative. This can be only certain upon performing the analysis of the 'undisciplined' accounts receivable. If payments with a long overdue period constitute a large share of accounts receivable, then the percentage of accounts receivable from total current assets this high should be assessed negatively, because then in such a way the current assets at the disposal of the enterprise have been frozen.

If, on the contrary, the amount of accounts receivable is largely made up of accounts receivable for which the term of debt repayment is not yet due or if the overdue periods are considerably small, then the percentage of accounts receivable this high should be evaluated as being consistent with the enterprise accounts receivable management policy. Therefore, in Table 5.21 the composition of accounts receivable by terms of repayment is displayed, while in Table 5.22 the composition of accounts receivable in percent is given for the period from 31/12/2XX8 to 31/12/2XX9.

Table 5.21.

Composition of the Enterprise N accounts receivable in the period from 13/12/2XX8 to 31/12/2XX9

	Dec., 2XX8	**March, 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Accounts receivable	201877	280583	213256	188399	163233
Accounts payable, which are not yet due	80573	153064	61347	36976	51813
Accounts receivable overdue for up to 30 days	11742	15312	19614	16903	11541
Accounts receivable overdue for up to 120 days	26898	28707	42096	16870	9218
Accounts receivable overdue for more than 120 days	82664	83500	90199	117650	90661

Table 5.22.

Composition of the Enterprise N accounts receivable in percent in the period from 13/12/2XX8 to 31/12/2XX9

	Dec., 2XX8	**March, 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Accounts receivable	100,0	100,0	100,0	100,0	100,0
Accounts payable, which are not yet due	39,9	54,5	28,8	19,6	31,8
Accounts receivable overdue for up to 30 days	5,8	5,5	9,2	9,0	7,1
Accounts receivable overdue for up to 120 days	13,4	10,2	19,7	9,0	5,6
Accounts receivable overdue for more than 120 days	40,9	29,8	42,3	62,4	55,5

It can be seen according to Tables 5.21 and 5.22 that the largest amount of accounts receivable in the period from the end of 2XX8 to the end of March, 2XX9, is made up of the direct accounts receivable, for which the term is not yet due, because at that time a major project has been implemented by the enterprise and there were no particular problems with the payment for the works performed. After the most active part in the implementation of this project was over, the amount of those accounts receivable which were not yet due, reduced by one half, while the amount of those accounts receivable overdue for more than 120 days was gradually increased. This amount is mainly consists of the most recent project realisation invoices for the works performed as the building contractors did not pay in due time. When the invoices are not paid by debtors, they acquire the current assets of another enterprise at their disposal, which they use for their own needs until the court decision is passed. The period of time before a court ruling is presented may reach more than a year, therefore, some debtors, unfortunately, choose not to pay for the final works performed, to use the current assets of another enterprise for more than one year and when there is a strong probability that the court ruling could be presented in a short time, try to agree on a settlement.

It is on account of a settlement that in Quarter 4 of 2XX9 the amount of accounts receivable overdue for more than 120 days was reduced. It can be seen from Tables 5.21 and 5.22 that the percentage of accounts receivable from total current assets has been reduced from 40.9 to 29.8 percent, and this is not, however, on the account of the decrease in accounts receivable overdue for more than 120 days, but on the account of an increase in the total amount of accounts receivable, because the total amount of accounts receivable has increased by almost 80 thousand CU as of March, 2XX9.

Upon analysing the composition of accounts receivable it can be concluded that such a high percentage of accounts receivable from total assets is not positive, because 40 to 60 percent on average from total accounts receivable are made up particularly of doubtful debts, in which more than 90 thous. CU are suspended. A recommendation should be given to the enterprise to develop a set of criteria, on what conditions and after what period of time overdue for payment of a debtor’s debt the enterprise must prepare all the documents necessary for submission to the court.

Average debtors' debt collection period

The next measure to be used in the management of accounts receivable is the average debt collection period, which is estimated and analysed together with the accounts receivable collection period in section 5.3 'Activity ratio analysis of Enterprise N'.

Average 'age' of overdue accounts receivable

This ratio is calculated as follows: in order to arrive at the average age of accounts receivable, information on the average age of the debtors' debts and the turnover of the enterprise for one day. All this information is summarised in Table 5.23 'Average age of overdue accounts receivable of Enterprise N in the period from 31/03/2XX8 to 31/12/2XX9'.

Table 5.23.

Average age of overdue accounts receivable of Enterprise N from 31/03/2XX8 to 31/12/2XX9

	March, 2XX8	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March, 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Accounts receivable	88518	101614	154316	201877	280583	213256	188399	163233
Average amount of accounts receivable	97921	105221	139247	187532	248524	254410	207648	182931
Net turnover by quarter	150046	196977	376845	350815	264220	290353	313088	319197
Turnover for one day	1667	2189	4187	3898	2936	3226	3479	3547
Average age of debtors' debts (in days)	**59**	**48**	**33**	**48**	**85**	**79**	**60**	**52**

It can be seen in Table 5.23 that the age of overdue accounts receivable of the enterprise has a tendency to decrease starting from Quarter 2 of 2XX9, because at the end of March, 2XX9, the average age of overdue debts was 85 days, while at the end of December, 2XX9, the average age was only 52 days, which is anyway higher than the average age in 2XX8 as almost all year through in 2XX8 the average age of debtors' debts has been below 50 days. Of course, it was mentioned already before that this is on the account of an increase in the amount of bad debts as well as due to the fact that the delays are growing day by day.

Trade credit policy of the enterprise

The policy on trade credit or the term of payment for the goods or services plays a significant role in the management of accounts receivable. By theory the development of such a policy includes the following steps:

- clarification of the financial possibilities of enterprise for sales of goods on credit;
- the maximum amount to be channelled into accounts receivable is established;
- the list of goods available for sales on credit is prepared;

- sales limits for specific groups or series of goods are established;
- the terms for collection of debtors' debts are developed;
- a system of contractual penalties used in cases of delays in payment is established.

From the practical point of view Enterprise N does not have any financial possibilities for selling of goods on credit. However, this possibility can be found on the account of the trade credit or post-payment of the suppliers. In this case the suppliers of goods are forced to instead of waiting for the payment due for the goods according to the pro-forma invoices wait rather for any payments received by Enterprise N from the building contractors for the works performed in which the materials of the suppliers have been input. Starting from Quarter 2 of 2XX9 this situation is improving due to the use of the services from the factoring companies in the course of project realisation.

By taking into account the order and specifics prevailing in the construction industry, when the policy on trade credit or payment for goods and services is drafted, there is no need for the following three steps in the development of the said policy:

- the maximum amount to be channelled into accounts receivable is established;
- the list of goods available for sales on credit is prepared;
- sales limits for specific groups or series of goods are established, due to the terms of payment for the projects being established by the building contractors.

Irrespective of the fact that the building contractors impose the terms of payment Enterprise N should develop a system of collection of debtors' debts together with a system of applicable fines that can be imposed by the enterprise in cases of delays in payments.

There is a procedure introduced in Enterprise N for collection of debtors' debts:

1) On the date of payment of a debtor's debt there is a call made to the accounting department of the debtor in question during which it is being clarified whether the debtor has transferred the payment or not. If yes, it is requested to send the payment order by fax, but if the amount due has not been transferred yet, the reason is found out as well as the date when it expects to pay for the debt overdue.
2) If the reason for the failure to pay the debt is substantiated, the promised date of payment is awaited.
3) If the reason for the failure to pay is not satisfactory to the enterprise, a reminder is issued with the request to pay the debt within the next days.
4) If the debt is not paid for during this time there is another reminder sent with the request to pay for the debts outstanding within the next days.
5) If the invoices are not paid for even within this time there is a claim being sent for the outstanding invoices including the warning that if this debt is not paid for within the five next days the debt will be collected by a court procedure.
6) If the debt is not paid for even within this time a second claim is being sent to the debtor for the outstanding invoices including the warning that if this debt is not paid for within the five next days the debt will be collected by a court. In the second claim the amount of debt is already made up of the principal amount of the debt, i.e., the amount of the invoice outstanding, and the contractual

penalty on violation of the payment terms having accrued as of the date of issuing the claim.

7) If the debt is not paid for also during this period of time, any documents of the case are passed over to a lawyer who is preparing to file the case with the court.

Enterprise N has not until now used the option of offering its customers any *discounts* on early payment of their invoices. Therefore this could be one of the proposals for improving their management of accounts receivable, although the enterprise is not in a position to offer high discounts, due to which it is unlikely that the building contractors would pick up this option also taking into account that they are short of current assets themselves.

It is advisable for the improvement of management of accounts receivable to apply before completion of a project to any agencies operating in the business of trade credit references and to ask for a statement on creditworthiness and credit reliability of the transaction partners by reducing the risk of the amounts of bad debts going up.

5.5.4. Stock

Usually the management of stock plays a great role in large production companies, because stock management is key in ensuring the fulfilment of the programmes, reduction of the prime costs, raising of profit and profitability. Therefore, a timely provision of raw materials and component parts for the needs of the enterprise is highly important. According to the data of Table 5.24 'Stock and percentage of stock from total current assets of Enterprise N in the period from 03/12/2XX8 to 31/12/2XX9' it can be seen that the percentage of stock from total current assets is insignificant, the same as their changes.

Table 5.24.

Stock and percentage of stock from total current assets of Enterprise N in the period from 03/12/2XX8 to 31/12/2XX9

	March 2XX8	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March , 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Stock	**347**	**1491**	**653**	**1036**	**666**	**3057**	**4416**	**1005**
Changes in stock by period	144	1144	-838	383	-370	2391	1359	-3411
Total current assets	210557	241778	343779	318301	476754	386462	296149	304415
Percentage of stock from total current assets	**0,2**	**0,6**	**0,2**	**0,3**	**0,1**	**0,8**	**1,5**	**0,3**

By looking at Table 5.24 it can be seen that the highest percentage of stock from current assets is 1.5% from the total current assets, while the lowest is 0.1% from the total current assets. This is, because the enterprise had been purchasing materials that were directly delivered to the location of realisation or the construction site and only those materials that are no longer necessary after the completion of the project are building-up in the warehouse. Therefore any materials purchased are presented not under the current asset item 'stock', but under the item 'work in progress'. The project commences with the design and the technical specification of the project sent by the building contactor, in which all the materials required for the project implementation are stated. Next the project implementation estimate is being established, in which the reference prices for materials

like tin pipes, insulation materials are searched in the directories and any discount is deducted from the reference price specified in the directory offered by the supplier of those materials. In cases of more specific equipment provided for in the project and having no standard offers in the directories, the suppliers of these items of equipment are being sent a request to give the price quotation for a specific item of goods. The price offered is included in the project estimate. When the estimate of all costs involved in the execution of the project is approved on behalf of the building contractor, the project supervisor once again checks the offers of the prices and prepares the required budget for the realisation of the project within the limits of which the project will be implemented. In the course of project execution standard materials are purchased from the suppliers of materials with which the respective contracts are signed on sales of materials with the specific discounts by mentioning also the terms of payment in the contracts. The specific materials, on their turn, are being purchased based on the price offer given by the suppliers of those materials. When in the course of project execution the respective materials are needed the construction supervisor prepares the list of materials required, which is then passed over to the supplies manager of the enterprise, who takes care of delivering them directly to the site and on time. It can be said that the enterprise is using the 'just-in-time' concept for provision of the materials and therefore no large stock of materials is building up in the warehouse.

5.5.5. Cash resources

Cash assets have the highest degree of mobility among all current assets. 5.25. It can be noticed in Table 5.25 ‘Cash assets and their percentage from total current assets in the period from 03/12/2XX8 to 31/12/2XX9’ that the amount of cash assets is varying, because the amount of cash available depends on when the debtors have paid their debts. If it is the same day or one day before the end of the financial period, this amount of money has not been probably transferred to the creditors yet.

Table 5.25.

Cash assets and their percentage from total current assets of Enterprise N in the period from 03/12/2XX8 to 31/12/2XX9

	March, 2XX8	**June, 2XX8**	**Sept., 2XX8**	**Dec., 2XX8**	**March, 2XX9**	**June, 2XX9**	**Sept., 2XX9**	**Dec., 2XX9**
Cash resources	**8947**	**12931**	**10014**	**3385**	**572**	**2581**	**1262**	**8916**
Changes in cash assets by period	-14911	3984	-2917	-6629	-2813	2009	-1319	7654
Current assets	210557	241778	343779	318301	476754	386462	296149	304415
Percentage of cash assets from total current assets	4,2	5,3	2,9	1,1	0,1	0,7	0,4	2,9

It can be concluded from Table 5.25 that the amount of cash assets at the disposal of the enterprise decreased considerably during the period from the end of December,

2XX8, till the end of September, 2XX9. The amount of accounts payable of the enterprise rose in 2XX9 particularly being the main reason for the decrease in cash assets. The fact that the enterprise has had major problems with the payment of creditors' debts in 2XX9 can be seen according to the figure of the percentage of cash assets from total current assets, because this figure for 2XX8 was within the limits of 2.9 to 4.9 percent, while starting from the end of December of 2XX8 the percentage of the cash assets from total current assets was from 0.1 to 1.1%. The end of September of 2XX9 is an exception, when the percentage of cash from total current assets reached 2.9%, which is rather due to the enterprise receiving a cash amount on 29/09/2XX9, which the enterprise had not yet managed to transfer to the creditors than due to any decrease in the amount of accounts payable.

The management of cash resources usually includes the following steps:

- establishing the minimum requirement of cash assets;
- ensuring the efficiency of the free cash asset utilisation;
- matching the cash receipts with the cash disbursements or planning of the cash flow.

All these cash management activities can be easily performed on the condition that the enterprise has a stable financial position and that the amount of its short-term liabilities is smaller than the amount of current assets. In the situation of Enterprise N an excess of short-term liabilities over current assets has been experienced starting from the end of June, 2XX9. Therefore, the management of the cash resources is at the discretion of the enterprise director, as he is the person in charge to decide which creditors will be paid and in what amounts.

Matching of cash receipts with the cash expenses or the cash flow planning is being performed by the enterprise director based on the projected transfers of debtors' debts.

It is necessary to set certain goals for the improvement of the enterprise cash management, as well as to establish both long-term (from half a year to one year) and short-term (monthly) targets for the achievement of these goals. For example, the improvement of the enterprise profitability could be a long-term goal.

For the sake of improving the cash management it is necessary to add together all the fixed costs required for enterprise operations, including the office and warehouse rent and utility payments, monthly leasing payments, salaries of the administrative personnel, tax payments etc. The enterprise should raise additional assets for adjusting its cash flows on a condition that the profitability of the enterprise is sufficient, as well as it should prepare cash flow statements not only for the forthcoming month, but for the three following months, at least and, if possible, even for half a year and one year.

6. Exercises

Exercise 1.

Opening balance sheet:

Assets	Amount	Liabilities	Amount
Long-term investments		***Capital***	
Buildings and constructions	**145**	**Equity**	**203**
Furniture and computers	**63**	**Total capital**	***203***
Total long-term investments	***208***	**Current liabilities**	
Current assets		**Trade accounts payable**	**23**
Stock of goods	**28**	**Bank account deficit (overdraft)**	**43**
Trade accounts receivable	**33**	**Total short-term liabilities**	***66***
Total current assets	***61***		
Total assets	**269**	**Total liabilities**	**269**

The following operations were executed in one week's time:

1. Goods (purchase value 8 thousand CU) were sold for 11 thousand CU in cash;
2. Goods (purchase value 17 thousand CU) were sold for 23 thousand CU on credit;
3. 18 thousand CU received from trade debtors;
4. Enterprise owners deposited 100 thousand (CU) on the bank account as an increase in equity;
5. Enterprise owners have invested in equity assets in kind – a car worth 10 thousand CU;
6. Goods on credit have been purchased for 14 thousand CU;
7. Trade creditors were paid an amount of 13 thousand CU.

Draw up a balance sheet as at the end of the week.

Solution to Exercise 1

Assets	Amount	Liabilities	Amount
Long-term investments		***Capital***	
Buildings and constructions		**Equity**	
Car		**Profit**	
Furniture and computers		**Total capital**	
Total long-term investments		**Current liabilities**	
Current assets		**Trade accounts payable**	
Stock of goods		**Total short-term liabilities**	
Trade accounts receivable			
Cash resources			
Total current assets			
Total assets		**Total liabilities**	

Exercise 2.

The enterprise prepared its income statement and balance sheet as of 31 December, 2006, however, there were three adjustment postings missing. In the incorrect income statement net profit has been reflected in the amount of 40,00 CU. In the accounting balance sheet the amount of total assets was 120,000 CU, liabilities – 50,000 CU, while the share capital was 70,000 CU.

The following information on the three adjustment postings is available:

1. No provisions for depreciation were posted in the amount of 9,000 CU.
2. Salaries for the two final days in December of 6,000 were not paid and recorded in the accounts. The next disbursement of salaries is planned for January.
3. 30. On 30th of December rent was paid for two months ahead of 10,000 CU. The entire amount was recognised as the rent expense for the reporting year (in the income statement).

Complete the following table for adjustment of the data reflected in the financial statements (any deductible amounts should be put in brackets).

Solution to Exercise 2

Item	**Net profit**	**Total assets**	**Total liabilities**	**Equity capital**
Wrongly recorded balances: amounts not included in the records				
Depreciation				
Salary				
Rent payment				
Adjusted balances				

Exercise 3.

Below individual transactions of Company ‘AAA’ are listed:

1. Ordinary shares were sold at a price above their par value.
2. Debentures have been issued in exchange for cash.
3. Interest has been received on short-term bills of exchange with the redemption term due.
4. Goods have been sold for cash.
5. Purchases of the stock of goods and materials have been made in cash.
6. Equipment has been bought for which it has been paid by a 10% bill of exchange with the redemption period of up to three years.
7. Dividends on ordinary shares have been announced and paid out.
8. 100 shares of Company ‘XYZ’ have been purchased in cash.
9. Land has been sold in cash according to the book value.

10. Debentures have been converted into ordinary shares.

Please, state, to which of the following types of transactions each of the above mentioned transactions belong.

a) operating transaction;
b) investment transaction;
c) financial transaction or
d) investment and financial transaction without the involvement of cash.

Solution to Exercise 3

1. –
2. –
3. –
4. –
5. –
6. –
7. –
8. –
9.-
10. –

Exercise 4. The balance sheet of Corporation 'KLM' is shown below:

Assets	**Year 2003**	**Year 2002**
Cash resources	41,000	31,000
Accounts receivable	80,000	60,000
Prepaid insurance expenses	22,000	17,000
Land	22,000	40,000
Equipment	70,000	60,000
Provision for depreciation	(20,000)	(13,000)
Total assets	**215,000**	**195,000**
Liabilities and shareholders' equity		
Accounts payable	11,000	6,000
Debentures payable	27,000	19,000
Ordinary shares	140,000	115,000
Retained earnings	37,000	55,000
Total liabilities and shareholders' equity	**215,000**	**195,000**

Further information:

1. Net loss constituted 15,000.
2. 2003. Cash dividends in the amount of 3,000 were announced and disbursed in Year 2003.
3. Land was sold for cash. Losses constituted 10,000. This transaction has been the only transaction with land performed in Year 2003.
4. Equipment was sold for 5,000. The original value of equipment was 15,000, accumulated depreciation – 10,000.
5. Debentures in the amount of 12,000 were redeemed during the year.

6. Equipment was bought, for the payment of which ordinary shares were issued. The fair value of the shares at the moment of exchange were 25,000.

Prepare the cash flow statement for the year ended 31st December, 2003, by using the indirect method.

Solution to Exercise 4

	Amount (in CU)
Net loss	
Cash flow from operating activities:	
Depreciation	
Loss on disposal of land	
Increase in accounts receivable	
Increase in prepaid expenses	
Increase in accounts payable	
Net cash flow from operating activities	
Cash flow from investments:	
Cash receipt from disposal of land	
Cash receipt from disposal of equipment	
Cash flow from investments	
Cash flow from financial activities:	
Repayment of liabilities for the debentures	
Dividend payout	
Issue of debentures	
Cash flow from financial activities:	
Total	
Opening cash balance	
Closing cash balance	

Exercise 5.

During the year of reporting there was a net profit of 300,000 disclosed by the enterprise. The value of accumulated depreciation on buildings and equipment was 80,000. Below the opening and closing balances of short-term assets and short-term liabilities for the year are given:

	At the end of the year	**At the beginning of the year**
Cash resources	20,000	15,000

Accounts receivable	19,000	30,000
Stock of goods and materials	50,000	65,000
Prepaid expenses	7,500	5,000
Accounts payable	12,000	16,000
Taxation payable	1,600	1,200

By using the indirect method, estimate the amount of net cash flow from operating activities.

Solution to Exercise 5

	Amount (thous.)
Net profit	
Depreciation	
Decrease in accounts receivable	
Decrease in stock	
Increase in prepaid expenses	
Decrease in accounts payable	
Increase in taxation payable	
Net cash flow from operating activities	

Exercise 6.
Liquidity ratios of Enterprise 'ABC' have become unsatisfactory in the recent period. The most recent balance sheet and income statement are as follows:

Income statement:

	Ls
Turnover	452.000
Production costs:	?
Opening stock balance	
Purchases of stock	331.000
Closing stock balance	220.000
Gross profit	?
Other expenses	132.000
Profit (loss) for the period reported	?

Balance sheet:

Fixed assets	357.000
Current assets	?
Stock	220.000
Accounts receivable	123.000
Capital and reserves	?
Equity	127.000
Retained earnings	158.000

Long-term liabilities	
Loans	120.000
Current liabilities	?
Trade accounts payable	155.000
Short-term loans	140.000

Balance of accounts receivable and accounts payable was maintained equal in the entire year.

1. Estimate the following ratios for Enterprise 'ABC':
   - average stock turnover period;
   - average debt collection period;
   - average term of payment for creditors' debts by assuming a 360 day year.

Solution to Exercise 6

1. **Debt collection period (debtors in days) –** how many days on average it takes for the cash from sales of goods to arrive in the enterprise.

$$\frac{\text{accounts receivable x number of days in the period}}{\text{turnover}}$$

or

$$\frac{\text{(opening accounts receivable + closing accounts receivable)xnumber of days in period}}{\text{2 x turnover}}$$

2. **Stock turnover period (stock in days)** – this measure reflects the number of days on average for which the amount of existing stock is sufficient for the enterprise.

$$\frac{\text{Stock x number of days in the period}}{\text{Production costs}}$$

or

$$\frac{\text{(Opening stock balance + closing stock balance) x number of days in the period}}{\text{2 x production costs}}$$

3. **Debt payment period (accounts payable in days) –** this figure reflects the average number of days it takes for the enterprise to pay for the purchases made and other enterprise expenses.

$$\frac{\text{Accounts payable x number of days in the period}}{\text{Production costs}}$$

or

$$\frac{\text{(Opening accounts payable + closing accounts payable)xnumber of days in the period}}{\text{2 x production costs}}$$

Exercise 7.

'New Star', SIA, has recently prepared its financial statements for the current year.
The directors of the company are concerned that the return (profitability) on the capital employed (ROCE) has fallen from 14% to 12% compared to the preceding year. At their opinion any decrease in ROCE could be due to the following factors:

- increase in gross profit;
- decline in the volume of sales;
- increase in overheads;

- increase in stock;
- repayment of accounts payable at the end of the year;
- increase in the average debt collection period.

Please, analyse all six reasons one by one and state if these reasons could lead to a diminishing ROCE.

Solution to Exercise 7

It is not always easy to predict the impact of each of these changes on ROCE.

- Increase in the gross profit margin could lead to a diminished ROCE in certain conditions. If the increase in the profit margin is because of increased prices which also led to the reduction in sales volume, this could incur a decrease in ROCE. The reduction in the sales volume can lower the net profit amount (a numerator in the ROCE equation), if the corresponding decrease in the overhead value is not achieved.
- Reduction in the sales volume may result in a decrease of ROCE due to the above stated reasons.
- Any increase in the overhead expenses would reduce the net profit amount, which, on its turn, may result in a diminished value of ROCE.
- Increase in stock would raise the amount of capital employed (denominator in the ROCE equation), if any long-term capital is invested in stock. This, on its turn, would lead to a decrease in the value of ROCE.
- Repayment of the loan at the year end would reduce the amount of capital employed, which would increase the ROCE figure on a condition that the loan repayment does not affect the scope of company operations.
- Increase in the debt collection period would result in the increase of the amount of capital employed, if long-term capital is used for the financing of accounts receivable. This increase in the amount of long-term capital would, on its turn, result in a diminished value of ROCE.

Exercise 8.

Two companies are in the retail sales business, but their performance results are different, which is evidenced by the following data:

Financial performance ratio	*Company A*	*Company B*
Return on capital employed (ROCE)	20%	17%
Return on ordinary share financing (ROSF)	30%	18%
Average debt collection period	63 days	21 days
Average debt payment period	50 days	45 days
Gross profit margin	40%	15%
Net profit margin	10%	10%
Average stock turnover period	52 days	25 days

Perform the analysis of these data and describe the differences between these two companies. It is known that in one of them the work with consumers is well organised,

while the other one is offering competitive prices. Which of these advantages are attributable to each company?

Solution to Exercise 8

These ratios illustrate the following:

- the debt collection period for Company A is 63 days, but 21 days only for Company B. Therefore the speed of debt collection of debts from its customers is considerably higher for Company B;
- however, the time it takes for these two companies to pay their debts is approximately equal. Company A pays its creditors within 50 days on average, but Company B – within a 45 day period;
- it is interesting to compare the difference between the settlement periods for accounts payable and accounts receivable in each of the companies. As Company A offers its customers a credit for 63 days on average, while it pays its creditors within 50 days on average, it has to invest larger amounts in its working capital than Company B, which is offering its customers a credit for 21 days only, while itself pays its creditors within a 45 day period;
- gross profit margin for Company A is considerably higher than for Company B, but they both have equal net profit margins. This means that the proportion of overheads from the amount of sales is much higher in Company A than in Company B;
- the stock turnover period for Company A is two times higher than the respective value for Company B. This may be due to the fact that Company A maintains a diverse stock of goods in order to meet the needs of its customers. It is rather Company A which can boost over its well organised work with the customers;
- a longer average settlement period evidences a more relaxed behaviour in terms of debt collection (by allowing to maintain good relationship with the customers), while the high amount of overheads proves that the company is incurring extra costs only to satisfy the needs of its customers;
- the high level of stock in Company A evidences that it is maintaining the stock of a vast range of goods in order to meet the needs of its customers.

The prices of Company B are more competitive. Its gross profit margin is considerably lower than for Company A which evidences a lower gross profit per 1 lat of sales revenue. However, its overheads are comparatively low therefore the net profit margin is the same as for Company A. The fast stock turnover and the short average accounts receivable settlement period is a proof of minimum investment in current assets by the company, which reduces its costs.

Case Study -Crescent Quarries Ltd.

You work as an assistant advisor for a firm of accountants in their business advisory and consultancy service.

One of your clients, Crescent Quarries Ltd, have experienced an increase in turnover but a downturn in their overall financial performance in recent times.

The company is owner-managed by James Musgrave and a small management team. They are members of the Quarrying Trade Association and have recently received the following summary of performance for the sector members for year X4.

Quarrying Trade Association
Performance Indicators – Financial Ratios Year X4

Return on capital employed	24%
Asset turnover	1.6
Net profit before interest and tax as a % of turnover	15.00%
Current ratio	1.5 : 1
Liquidity ratio (acid test)	1.03 : 1
Debtors collection period	60 days
Creditor payment period	70 days
Finished goods stock in days	38 days
Labour costs as % of turnover	18.1%
Operating costs as % of turnover	85.00%
Distribution costs as % of turnover	9.5%
Admin costs as % of turnover	4.5%
Value added per '£' of employee costs	1.95

An extract from the company's financial statements for years ended X3 and X4 showed:

Profit and Loss Account

	Year X3	**Year X4**
	£m	**£m**
Turnover	5.38	6.68
* Operating Costs	4.43	5.82
Operating Profit before Interest and Tax	0.95	0.86
Interest	0.08	0.08
	0.87	0.78
Taxation	0.30	0.27
Profit after Tax	0.57	0.51
Dividends	0.16	0.16
Retained Profit	0.41	0.35
* Includes	**£m**	**£m**
Distribution	0.49	0.61
Administration	0.22	0.27
Operating Costs Comprise:		
Wages, Salaries and other Employee Costs	0.98	1.25
Bought in Materials and Services	3.21	4.32
Depreciation	0.24	0.25
	4.43	5.82

Balance Sheet

	Year X3 £m	Year X4 £m
Fixed Assets	3.77	3.88
Current Assets		
Stocks: Raw Materials	0.12	0.15
Financial Goods	0.43	0.45
Debtors	0.88	1.19
Bank	0.04	0.05
	1.47	1.84
Less Current Liabilities falling due within One Year		
Creditors	0.66	0.82
Taxation	0.30	0.27
Dividends	0.16	0.16
	1.12	1.25
Net Current Assets:	0.35	0.59
Total Assets Less Current Liabilities	4.12	4.47
Less Liabilities falling due after One Year		
Debentures	1.00	1.00
	3.12	3.47
Finance by:		
Capital and Reserves	3.12	3.47

Task

You work as a consultant to Crescent Quarries Ltd and have been asked by James Musgrave to prepare an analysis of the company's business performance for years X3 and X4 with a comparison for year X4 to the trade association benchmarks.

Prepare your answer in the form of a report to the director.

Assignment

Report

To: James Musgrave - Managing Director
Crescent Quarries Ltd

From: ---------- Date: ----------

Terms of Reference

The purpose of this report is to present a financial analysis of the performance of Crescent Quarries Ltd (later referred to as the company) for years ended X3 and X4 and to compare this to the benchmarks for the business sector for Year X4.

- **Analysis**

This comprises measures as:

- Profitability
- Liquidity
- Assets Utilisation
- Productivity

- **Executive Summary**

Over the period under review the company has increased its turnover significantly (24%) in the period under review but there has been a downturn in overall performance in that there has been a reduction in the primary ratio – Return on Capital Employed from 23% to 19% and the analysis that follows, together with the summary conclusion, highlights clearly the areas of concern that have contributed to this adverse performance.

- **Profitability**

Return on Capital Employed

This is also often referred to as return on investment (ROI).
This is the main measure of profitability and considered the primary ratio.
Capital employed is defined as total assets less current liabilities or share capital and reserves plus long term capital.
The return is expressed as:

$$\frac{\text{Profit on Ordinary Activities before Interest and Tax}}{\text{Capital Employed}} \times 100/1$$

It represents the percentage of profit being earned on the total capital employed; and relates profit to capital invested in the business. Capital invested in a corporate entity is only available at a cost – corporate bonds or loan stock finance generate interest payments and finance from shareholders requires either immediate payment of dividends or the expectation of higher dividends in the future.
It is therefore business strategy to maximise the profit per '£' of investment.
From the company accounts we find:

X1	**X2**
0.95:4.12 x 100 = 23.06%	0.86:4.47 x 100 = 19.24%

% Return on capital employed vary widely between business sectors, research suggests the average for this business sector is approximately 21%.

NB: The figures for the company show a breakdown of cost of sales and highlights bought in materials and services, and we will base this measure on that figure:

Year X1	**Year X2**
0.66:3.21x365 days= 75 days	0.82:4.32x365 days= 69 days

Finished Goods Stock in Days

In published accounts we would usually focus on total stocks ie: raw materials, work in progress and finished goods.

In this case the inter-firm comparison figures highlight finished goods and the company accounts show clearly the finished goods figure.

It is expressed as:

$$\frac{\text{Stocks}}{\text{Cost of Sales}} \times 365$$

This is a further measure of working capital management and relates to stock turnover. Controls need to be maintained so that liquidity is not sacrificed.

Year X1	**Year X2**
0.43:4.43 x 365 days=35 days	0.45:5.82 x 365 days= 28 days

NB: Based on total stocks we find:

Year X1	**Year X2**
0.55:4.43 x 365 days=45 days	0.60:5.82 x 365 days= 38 days

A further indication of company liquidity, can be assessed, by adding together stock and debtor days, which indicates how soon stock is converted into cash.

Other Measures of Efficiency

Labour costs, operating costs, distribution and admin costs all measured individually as a % of sales are useful ways of comparing company performance on an inter-firm basis.

Significant differences provide a basis for considering why company profitability may differ from that of competitors.

Labour cost as % of sales

Year X1	**Year X2**
0.98 : 5.38 x 100 = 18.22%	1.25 : 6.68 x 100 = 18.71%

Operating costs as % of sales

Year X1	Year X2
4.43 : 5.38 x 100 = 82.34%	5.82 : 6.68 x 100 = 87.13%

Distribution costs as a % of sales

Year X1	Year X2
0.49 : 5.38 x 100 = 9.11%	0.61 : 6.68 x 100 = 9.13%

Admin costs as a % of sales

Year X1	Year X2
0.22 : 5.38 x 100 = 4.09%	0.27 : 6.68 x 100 = 4.04%

Value Added – A Measure of Productivity

Value added per '£' of employee costs is a true measure of employee productivity. It can also be perceived as a measure of the way in which management have utilised the human capital resource. It considers the company's ability to mobilise its human assets. Value added is defined as: Turnover less all bought in materials and services.

The primary ratio measuring overall may be analysed in more detail by using secondary ratios:

Asset Turnover
Profit margin – net profit before interest and tax as a percentage of sales

These two separate factors or a combination of both, influence the return achieved by the business entity.

The Asset Turnover is a measure of utilisation and management efficiency. It indicates how well the assets of the company have been used to generate sales or how effectively management have utilised the total investment in generating income.

It is expressed as:

$$\frac{\text{Turnover}}{\text{Capital Employed}}$$

Year X1	Year X2
5.38 : 4.12 = 1.31 times	6.68 : 4.47 = 1.49 times

The Profit Margin indicates how much of the total revenue remains to provide for taxation and to pay the providers of capital both interest and dividends.

This return to sales can be directly effected by the management's ability to control costs and determine the most profitable sales mix.

It is expressed as:

$$\frac{\text{Net Profit before Interest and Tax}}{\text{Sales}} \times 100/1$$

Year X1	**Year X2**
0.95 : 5.38 x 100 = 17.66%	0.86 : 6.68 x 100 = 12.87%

It is interesting to note that:

Return on Capital Employed = Asset Turnover x Profit Margin

For example in year X2

19.24% = 1.49 x 12.87%

Management's objective is to increase return on capital and therefore they may focus on one or a combination of these two factors which influence and drive performance.

Measures of liquidity include:

Current Ratio
Liquidity Ratio (Acid Test)

The current ratio is expressed as:

Current Assets : Current Liabilities

If Current Assets exceed Current Liabilities then the ratio will be greater than 1 and indicates that the company has sufficient current assets to cover demands from creditors. However the speed at which stock can be converted into cash flow is such that it is not prudent to regard stock as available to cover creditors, thus a second ratio in terms of liquidity is considered – the quick ratio or acid test.

This is expressed as:

Current Assets – Stocks : Current Liabilities

If this ratio is 1:1 or more, then clearly the company is unlikely to have liquidity problems. If the ratio is less than 1:1 we would need to analyse the structure of current liabilities, to those falling due immediately and those due at a later date.

The level of both the current ratio and acid test vary considerably between business sectors.

Current Ratio:

Year X1	**Year X2**
1.47 : 1.12 = 1.31 :1	1.84 : 1.25 = 1.47 :1

Acid Test:

Year X1	**Year X2**
0.92 : 1.12 = 0.82 :1	1.24 : 1.25 = 0.99 :1

Measures of utilisation or those sometimes referred to as measures of efficiency include:

Debtors collection period
Creditors payment period
Stock turnover or stock days

Debtors Collection Period

This measure of management's efficiency is expressed as:

$$\frac{\text{Debtors}}{\text{Sales}} \times 365 \text{ days}$$

This is an indicator of the effectiveness of the company's Credit Control systems and policy.

Recent research suggests that UK businesses suffer more problems from slow payments than their European counterparts.

Year X1	**Year X2**
0.88 : 5.38 x 365 days = 60 days	1.19 : 6.68 x 365 days = 65 days

Credit Payment Period

The balance between debtor and creditor days is influenced by the working capital cycle. The creditor days is a measure of how much credit, on average, is taken from suppliers. It is expressed as:

$$\frac{\text{Creditors (Trade)}}{\text{Cost of Sales}}$$

This ratio is an aid to assessing company liquidity, as an increase in creditor days is often a sign of inadequate working capital control.

It constitutes the 'pool of wealth' from which the company: pays employees; pays providers of capital, pays government taxation and maintains and expands assets.

Value added:

	Year X1	**Year X2**
	£m	**£m**
Turnover	5.38	6.68
Bought in materials and services	3.21	4.32
Value added	2.17	2.36

Value added per '£' of employee costs:

Year X1	Year X2
2.17 : 0.98 = 2.21	2.36 : 1.25 = 1.89

Crescent Quarries Ltd – Inter-firm Comparison
Summary of Performance

See Notes	Ratio	Year X1	Year X2	Trade Associations Benchmark
1	Return on Capital Employed	23.06%	19.24%	24%
2	Asset Turnover	1.31	1.49	1.60
3	Profit Margin	17.66%	12.87%	15.00%
4	Current Ratio	1.31 : 1	1.47 : 1	1.5 : 1
5	Acid Test	0.82 : 1	0.99 : 1	1.03 : 1
6	Debtors Collection Period	60 days	65 days	60 days
7	Creditors Payment Period	75 days	69 days	70 days
8	Finished Goods Stock in Days	35 days	28 days	38 days
9	Labour Cost % of Sales	18.22%	18.71%	18.1%
10	Operating Cost % of Sales	82.34%	87.13%	85.00%
11	Distribution Costs % of Sales	9.11%	9.13%	9.5%
12	Admin Costs % of Sales	4.09%	4.04%	4.5%
13	Value added per '£' of Employee Costs	2.21	1.89	1.95

Notes:

1 Return on Capital Employed

There has been a significant decline in profitability in Year X2 to a level well below that for the sector as a whole.

The principal reason for this reduction in performance will be highlighted in further comments below.

2 Asset Turnover

The company has increased its volume and utilisation of net assets in Year X2, but is still not generating the volume of turnover in relation to total assets, achieved by its competitors.

3 Profit Margin

The reduction in the primary ratio – the overall return is highlighted here. There has been a significant reduction in the profit margin and further relevant comment on this issue is shown in (10).

Although a greater volume has been achieved, margins have fallen.

4/ Current Ratio
5 Acid Test

Company liquidity is still relatively sound, with the acid test only marginally less than the desired level of 1:1 and also the sector average.

6 Debtors Collection Period

The debtor day period has increased which indicates that tighter controls are required here, as the period is now above the sector average.
If this trend continued upward we would need to be assured that the company is not exposing itself to the possibility of bad debts.
This measure is an important element in the assessment of the management's control of its working capital.

7 Creditor Payment Period

This period is typical of the sector as a whole. There has been a reduction in creditor days as the company has used some of the excess cash generated from operating activities in reducing its reliance on creditors.

8 Finished Goods Stock in Days

The company is not sacrificing liquidity by tying up excess working capital in the form of stocks.
It is holding less than one month's supply in Year X2 and its inventory management show better control than that for the sector as a whole.

9 Labour Costs % of Sales

Labour cost to sales shows a marginal increase in Year X2 but is still at an acceptable level.

10 Operating Costs % of Sales

There has been a significant increase in the relationship of operating costs to sales, which suggest that operating overheads and some other direct costs need tighter control. It may be that the company has an ageing plant and maintenance charges are on an upward trend.
If these assumptions are not the case then there may have been a significant shift in product mix, which can influence product profitability.
An analysis of the above factors needs full consideration so that an indepth assessment of the change in this measure of efficiency can be performed.

11/ Distribution and Admin Cost % of Sales
12

These measures are well in line with the sector average and indicate good sound controls in these areas of cost.

13 Value Added per '£' of Employee Costs

The effectiveness and efficiency of the Human Asset Resource has been offset by the adverse factors highlighted in note (10).

The productivity of labour is some 3% less than the sector average.

Annex. Table 1

Balance Sheet of Enterprise N for the period 31/12/2xx7 – 31/12/2xx9 (CU)

BALANCE SHEET									
	31/12/2xx7	**31/03/2xx8**	**30/06/2xx8**	**30/09/2xx8**	**31/12/2xx8**	**31/03/2xx9**	**30/06/2xx9**	**30/09/2xx9**	**31/12/2xx9**
Assets									
Intangible assets	135	112	1 410	1 241	4 614	4 246	3 885	3 547	3 209
Land, buildings, constructions and long-term plants	15 278	15 077	14 875	15 186	14 985	14 784	14 583	14 382	14 181
Fixed assets and inventory	16 815	28 309	26 638	28 550	33 140	34 250	33 559	32 060	44 728
Total long-term investments	***32 228***	***43 498***	***42 923***	***44 977***	***52 739***	***53 280***	***52 027***	***49 989***	***62 118***
Stock	203	347	1 491	653	1 036	666	3 057	4 416	1 005
Work in progress	45 293	70 244	82 132	138 182	85 539	172 087	146 674	79 623	108 428
Accounts receivable	96 691	99 150	111 292	167 202	207 862	289 186	219 634	195 662	170 200
Short-term loans		30 000	32 000	25 500	18 000	11 500	11 500	11 500	13 000
Prepaid expenses	1 761	1 869	1 932	2 228	2 479	2 743	3 016	3 686	2 866
Cash and securities	23 858	8 947	12 931	10 014	3 385	572	2 581	1 262	8 916
Total current assets	***167 806***	***210 557***	***241 778***	***343 779***	***318 301***	***476 754***	***386 462***	***296 149***	***304 415***
TOTAL ASSETS	***200 034***	***254 055***	***284 701***	***388 756***	***371 040***	***530 034***	***490 516***	***396 127***	***428 651***
Liabilities									
Shareholders' or share capital (equity capital)	2 000	2 000	2 000	2 000	2 000	2 000	2 000	2 000	2 000
Reserves									
Retained earnings of previous p.	-11 753	5 185	5 185	5 185	5 185	36 407	36 407	36 407	36 407
Retained earnings for the reporting year	16 938	23 501	-43 876	78 516	31 222	16 121	-150 795	-175 178	-96 020
Total equity capital	***7 185***	***30 686***	***-36 691***	***85 701***	***38 407***	***54 528***	***-112 388***	***-136 771***	***-57 613***

Long-term loans	407	6 145	5 695	6 811	5 179	5 254	5 254	5 254	5 551
Accounts payable	192 442	217 224	315 697	296 244	327 454	470 252	545 623	477 655	418 595
Total credit liabilities	***192 849***	***223 369***	***321 392***	***303 055***	***332 633***	***475 506***	***550 877***	***482 909***	***424 146***
TOTAL LIABILITIES	***200 034***	***254 055***	***284 701***	***388 756***	***371 040***	***530 034***	***438 489***	***346 138***	***366 533***

Annex. Table 2

Horizontal Analysis of Changes in Main Balance Sheet Items of Enterprise N for the period from 31/12/2xx7 to 31/12/2xx9 (CU)

Changes in the BALANCE SHEET by period (CU)									
	31/12/2xx7	**31/03/2xx8**	**30/06/2xx8**	**30/09/2xx8**	**31/12/2xx8**	**31/03/2xx9**	**30/06/2xx9**	**30/09/2xx9**	**31/12/2xx9**
Assets									
Fixed assets and inventory	-	11 494	-1 671	1 912	4 590	1 110	-691	-1 499	12 668
Total long-term investments	**-**	***11 270***	***-575***	***2 054***	***7 762***	***541***	***-1 253***	***-2 038***	***12 129***
Work in progress	-	24 951	11 888	56 050	-52 643	86 548	-25 413	-67 051	28 805
Accounts receivable	-	2 459	12 142	55 910	40 660	81 324	-69 552	-23 972	-25 462
Cash and securities	-	-14 911	3 984	-2 917	-6 629	-2 813	2 009	-1 319	7 654
Total current assets	**-**	***42 751***	***31 221***	***102 001***	***-25 478***	***158 453***	***-90 292***	***-90 313***	***8 266***
TOTAL ASSETS	**-**	***54 021***	***30 646***	***104 055***	***-17 716***	***158 994***	***-91 545***	***-92 351***	***20 395***
Liabilities									
Retained earnings from previous periods	-	16 938	0	0	0	31 222	0	0	0
Retained earnings for the reporting year	-	6 563	-67 377	122 392	-47 294	-15 101	-166 916	-24 383	79 158
Total equity capital	**-**	***23 501***	***-67 377***	***122 392***	***-47 294***	***16 121***	***-166 916***	***-24 383***	***79 158***
Accounts payable	-	24 782	98 473	-19 453	31 210	142 798	75 371	-67 968	-59 060
Total credit liabilities	**-**	***30 520***	***98 023***	***-18 337***	***29 578***	***142 873***	***75 371***	***-67 968***	***-58 763***
TOTAL LIABILITIES	**-**	***54 021***	***30 646***	***104 055***	***-17 716***	***158 994***	***-91 545***	***-92 351***	***20 395***

Table 3 Horizontal Analysis of Changes in Main Balance Sheet Items of Enterprise N for the period from 31/12/2xx7 to 31/12/2xx9 (in percent)

BALANCE SHEET: changes by period, %									
	31/12/2xx7	**31/03/2xx8**	**30/06/2xx8**	**30/09/2xx8**	**31/12/2xx8**	**31/03/2xx9**	**30/06/2xx9**	**30/09/2xx9**	31/12/2xx9
Assets									
Fixed assets and inventory		68	-6	7	16	3	-2	***-4***	40
Total long-term investments		***35***	***-1***	***5***	***17***	***1***	***-2***	***-4***	***24***
Work in progress		55	17	68	-38	101	-15	-46	36
Accounts receivable		3	12	50	24	39	-24	-11	-13
Cash and securities		-62	45	-23	-66	-83	351	-51	606
Total current assets		***25***	***15***	***42***	***-7***	***50***	***-19***	***-23***	***3***
TOTAL PER BALANCE SHEET		**27**	**12**	**37**	**-5**	**43**	**-17**	**-21**	**6**
Liabilities									
Retained earnings from previous periods		-144	0	0	0	602	0	0	0
Retained earnings for the reporting year		39	-287	-279	-60	-48	-1 035	16	-45
Total equity capital		***327***	***-220***	***-334***	***-55***	***42***	***-306***	***22***	***-58***
Accounts payable		13	45	-6	11	44	16	-12	-12
Total credit liabilities		***16***	***44***	***-6***	***10***	***43***	***16***	***-12***	***-12***
TOTAL PER BALANCE SHEET		**27**	**12**	**37**	**-5**	**43**	**-17**	**-21**	**6**

Annex. Table 4

Income Statement of Enterprise N for the period from 31/12/2xx7 to 31/12/2xx9 (CU)

INCOME STATEMENT									
	31/12/2xx7	31/03/2xx8	30/06/2xx8	30/09/2xx8	31/12/2xx8	31/03/2xx9	30/06/2xx9	30/09/2xx9	31/12/2xx9
Net turnover	**788 677**	**150 046**	**347 023**	**723 868**	**1 074 683**	**243 435**	**533 788**	**846 876**	**1 166 073**
Production cost of sales	741 433	117 991	368 694	610 379	986 470	214 661	652 938	969 108	1 176 709
Gross profit or loss (from the turnover)	**47 244**	**32 055**	**-21 671**	**113 489**	**88 213**	**28 774**	**-119 150**	**-122 232**	**-10 636**
Sales and distribution expenses	1 671	115	195	301	948	321	378	551	1 716
Administration expenses	24 449	7 750	20 099	32 812	49 715	11 442	25 427	40 276	74 372
Other operating expenses (net)	2 057	585	1 665	1 495	3 839	28	4 170	9 286	5 234
Interest and similar expenses (net)	834	104	246	364	652	648	1 456	2 618	3 848
Profit or loss before extraordinary items and tax	**18 233**	**23 501**	**-43 876**	**78 518**	**33 059**	**16 336**	**-150 581**	**-174 963**	**-95 806**
Corporate income tax	1 060				1 612				
Other taxes	235			1	225	214	214	214	214
Net profit or loss for the reporting period	***16 938***	***23 501***	***-43 876***	***78 517***	***31 222***	***16 121***	***-150 795***	***-175 178***	***-96 020***

Annex. Table 5

Changes in the Main Income Statement Items for the period from 31/12/2xx7 to 31/12/2xx9

INCOME STATEMENT									
Broken down by period	**Average increase**	**31/03/2xx8**	**30/06/2xx8**	**30/09/2xx8**	**31/12/2xx8**	**31/03/2xx9**	**30/06/2xx9**	**30/09/2xx9**	**31/12/2xx9**
Net turnover	282 693	150 046	196 977	376 845	350 815	264 220	290 353	313 088	319 197
Production cost of sales	270 397	117 991	250 703	241 685	376 091	214 661	438 278	316 170	207 601
Gross profit or loss (from the turnover)	12 295	32 055	-53 726	135 160	-25 276	49 560	-147 925	-3 082	111 596
Administration expenses	15 511	7 750	12 349	12 713	16 903	11 442	13 985	14 849	34 096
Profit or loss before extraordinary items and tax	-5 245	23 501	-67 377	122 394	-45 459	37 121	-166 916	-24 383	79 157
Net profit or loss for the reporting period	**-5 502**	**23 501**	**-67 377**	**122 393**	**-47 295**	**36 907**	**-166 916**	**-24 383**	79 158

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