

The Impact of Profit Measurement on the Financial Reporting and Analysis

Maret Branten

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**THE IMPACT OF PROFIT MEASUREMENT ON
THE FINANCIAL REPORTING AND ANALYSIS**

Thesis for the Degree of Doctor of Philosophy

by

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Alver, J., Branten, M. 2011. Measurement and Analysis of Profitability in Estonian Companies. *Journal of International Scientific Publications: Economy & Business*, 5, 160-174.

Alver, J., Branten, M. 2011. Profitability Analysis in Estonian Business Practice. *Proceedings of the International Academy of Business and Public Administration Discipline*, 298-311.

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ABSTRACT

Title information: Branten, M. The Impact of Profit Measurement on the Financial Reporting and Analysis. Thesis for the Degree of Doctor of Philosophy. Tallinn, 2013. 186 pages, 23 tables, 9 figures, 185 references. In English.

Key words: accounting profit, economic profit, comprehensive income, current cost accounting, capital maintenance, informational school, valuation school, normative school, informational value relevance of profit, IFRSs, US GAAP, EGAP, Estonian enterprises, profitability analysis, system integrated analysis of Income Statement, matrix modelling, overall index of profitability.

The object of research of this thesis is profit.

The aim of the research is to analyse through conceptual prism the current opinions and standpoints in financial accounting as regards the measurement, recognition and reporting of profit, as seen from the perspective of managerial decision-making in order to show how the financial accounting would enable attaining the best results in that respect.

To support the theoretical analysis the thesis presents two empirical surveys carried out by the author.

The first survey shows the impact of financial accounting on profit insofar as profits measured by the rules of various accounting systems may differ: under scrutiny are EGAP and IFRSs vs US GAAP.

The second survey of the author has been performed for the purpose of finding out the activities and attitudes to the analysis of profit and profitability in Estonian companies, which purpose is in keeping with the goal of thesis by providing fundamental matter for formation of the recommendations on methodological guidelines of financial accounting, to conclusively enhance the process of financial reporting and analysis.

The research tasks are:

1. Search for “correct” profit, i.e. endeavour to elucidate, which is the best conceptual approach to profit measurement and the manner of its presentation, holding in view the Estonian business environment: should profit contain, in the first place, the information for stock exchange forecasts to investor, or for formation of stock prices, or rather reflect a change in company net assets and wealth. Respectively, as the final profit of financial accounting shall be preferred the classical bottom line of income statements – net profit, or the innovative comprehensive income, or else they both should be treated on an equal footing. Related to the aforementioned is

the traditional issue of theory of financial accounting, still subject to controversial arguments: is it proper to use for profit measurement *clean surplus or dirty surplus* accounting? Also under investigation herein is the issue of manner of presentation of profit: whether or not, how and to what extent the consumer of information is affected by presentation of profit in financial reports.

2. Under close examination is the range of problems, related to impact of various rules of financial accounting on profit formation. The situation allowing for differences is created by the essential aspect of financial accounting as being option/alternatives based. It is therefore common for various frameworks of financial accounting (in the given case I mean systems of rules of financial accounting of different countries) to allow different accounting and reporting rules, which however yield different outcomes in financial reports of one and the same business entity. Author sets the task to study the possible impacts with regard to profit formation, by comparing the Estonian and the USA practices.

3. To look into how an Estonian company views the profit numbers of financial reporting, i.e. what company is desirous of seeing as information that the profit number(s) should contain, in the first place, and which techniques of analysis are given preference to.

Results of thesis, novelty, and applications. Author of the thesis holds that the comprehensive income, revealing all changes in company capital, except the transactions with owners, is an excellent measure of profit, enabling the consumer to obtain information, to infer the matters he specifically needs. Comprehensive income is oriented to reporting changes in company net assets and to measuring the company wealth. Hence by way of comprehensive income conception the accountants have moved closer to an economic measure of profit.

Upon opinion of author, giving preference to comprehensive income as against classical net profit befits very well the Estonian business environment, where links with stock exchange are weak. The more so, because by reference to earlier securities market-based research the classical net profit is considered being more informative as the stock exchange information, as against the comprehensive income. The advantage of comprehensive income however is the adequate reporting of the company property status, which is of essence both from the standpoint of company management and for all society, allowing to foresee the impending bankruptcy of the company and to forestall the economic crises, in the broader outlines.

As evidenced in the survey carried out by author, the companies do not as yet perceive the need to prefer in profit the aspect of change in net assets (wealth). The issue of capital maintenance is unbeknown to them, which may therefore end up with overestimating the profit and excessive distribution of dividends, jeopardizing thereby sustainability of the company.

Author has made note of the following matters concerning the problems arising in connection with implementing into practice of comprehensive income and calling for solution.

Firstly, outstanding is the question of manner of presentation of comprehensive income in reports, with IASB allowing two variants: 1) to present a regular income statement and besides that the comprehensive income report, beginning with regular profit for the period, added whereto being other comprehensive income elements, or 2) to present one comprehensive income report. Currently in use in Estonia is the first variant, while the author recommends the other, because presentation of comprehensive income as one report will enhance its significance for interpreter. It is particularly for theoretical motivation of unified comprehensive income that the researches of normative profit school serve, relating as they do the financial accounting framework with the economic theory. Whereas thanks to such manner of presentation, it is possible to set apart in one report the most telling component of profit – profit for the period – from its less important component – other comprehensive income.

Pending solution is the question, whether certain profit elements should belong to profit for the period or whether they should belong under other comprehensive income. Here the main problem is the dual nature of the model of comprehensive income, which covers both historical cost accounting and fair value accounting, and the question is how the presentation of comprehensive income should reflect the existence of these two paradigms.

Secondly, there is a long persisting and unresolved question of whether for profit measurement it is necessary to use the *clean surplus* accounting. *Clean surplus* profit includes all changes in capital. Hence the comprehensive income model bases on *clean surplus* association. IASB conceptual framework enables *clean surplus* accounting, as shown by foregoing analysis. In actual fact, both the rules of IASB and Estonian rules display deviations there-from (e.g. IAS 16, IAS 21, IAS 39, ASBG 5, ASBG 6). It needs be noted that the rules concerning profit and comprehensive income have been presented by IASB improperly and inconsistently; when defining them, the principles of double entry have been ignored.

The empirical survey carried out by author about impact on profit formation by different rules of financial accounting provided the following results. First, it appeared that several terms of the given domain have different meanings in the framework of EGAP or IASB, while some important terms relevant to profit are used in IASB and FASB differently (among others for instance *income* means revenue in IASB, while in FASB, conversely it means profit, etc.).

Such situation would need streamlining, otherwise understanding and analysis of texts is seriously hampered.

Regarding comparison of rules of Estonia and the USA in the matters of profit formation, a conclusion suggests itself that whether the profit of a company is larger or smaller under rules of a given country depends on composition of assets of the company, and on whichever of the alternative accounting techniques has been used.

Survey of companies testified to the need for more efficient profit analysis methods. They have been presented by author. Author recommends using for analysis of profit and profitability the system integrated method of analysis, allowing finding the mutual relations of profit components and their impact on final result and calculating the overall profitability index. Method bases on matrix model, linked with theory of indices and chain replacement technique. Advantage of the said method is its unsophisticated applicability in company and more detailed explanation of company profit formation. As well, system integrated analysis method is remarkable due to the fact that it investigates the change of relations and change of proportions of relations between indicators, allowing the early discovery of the disproportions in company's activity.

This thesis is expected to be of interest to everyone in need for interpretation of profit numbers, in particular to entrepreneurs, companies maintaining international connections and international investors. For company managers the results of the thesis can be useful for designing managerial accounting information. Analysis done and proposals advanced are also useful for resolving accounting policy controversies in practice.

1. INTRODUCTION

1.1. Relevance of the Topic

Profit is one of the key elements of information upon which the functioning of a private, free enterprise economy depends. It is hard to overestimate the need for proper measure of the profit, the said economic indicator serving as the basis for making correct management decisions both inside and outside of the company. Profit as an important business indicator and as one possible paradigm of financial accounting theory – the ideal-profit paradigm, which specifies the measurement of performance as the domain of accounting (Riahi-Belkaoui 2004, 464) – has long been the subject of academic discussions and has been adopted in financial accounting practice in various ways.

The research problem could be described as follows:

Profit does not exist as a well-defined economic construct under the real-world conditions in which accounting operates. Given that there is only one bottom line, the fundamental problem of financial accounting theory is how, in case of non-existence of true net profit, to design and implement concepts and standards that best trade off the investor-informing and manager performance-evaluating roles for accounting information (Scott 2009). It is fascinating because the lack of a well-defined concept of net profit means that a great deal of judgement must go into the process of asset valuation and profit measurement (*ibid.*).

It is appropriate at the present time, when the international financial reporting standards are facing a major conceptual overhaul, to look at the question of profit in the new context, analysing the impact of the accounting framework on the formation of profit numbers in general and in the Estonian financial reporting practice.

Since 2004 the International Accounting Standards Board (IASB) has worked on a new Financial Accounting Conceptual Framework. This Conceptual Framework Project aims to update and refine the existing concepts to reflect the changes in markets, business practices and the economic environment that have occurred in the two or more decades since the concepts were first developed. Its overall objective is to create a sound foundation for future accounting standards that are principles-based, internally consistent and internationally converged (Conceptual Framework for Financial Reporting, www.iasb.org, 2010 July). In 2010 the project was paused and restarted in 2012. Now the work on the conceptual framework should focus on the following areas: elements; measurement; reporting entity; presentation and disclosure (Work plan for IFRSs Conceptual Framework, www.iasb.org, 2012 December).

The changes for profit model concern the treatment of comprehensive income. Even though comprehensive income was first required in reporting by the US Financial Accounting Standards Board (FASB) starting from 1997 and permitted by IAS 1, in December 2005, the joint project of the IASB and the FASB declared that a comprehensive income statement, which would replace the current income statement, is the ultimate goal of the performance reporting. IAS 1 was adjusted by requirement for presentation of comprehensive income in the year 2007.

Indicative of complexity of the problem is the fact that discussions called to life by the IASB about presentation of comprehensive income (Presentation of Items of Other Comprehensive Income, proposed amendments to IAS 1, www.iasb.org, 2010) continued till June 2011, when IAS 1 was amended with the requirements on how items of other comprehensive income should be presented. However discussions among practitioners and academicians continue to find the best. Focus of standard setters on investor decision relevance combined with the prominence of the profit number to the investing community make profit one of the most central outputs of the accounting model. Key issues revolve around the content and appropriate display of profit. The main problem is the dual nature of the model of comprehensive income, which covers both historical cost accounting and fair value accounting, and the question is how the presentation of comprehensive income should reflect the existence of these two paradigms (Cauwenberge and Beelde 2007).

Under scrutiny in this thesis are positions and trends for development regarding the profit model having evolved in modern international financial reporting and the Estonian practice of financial reporting, as analysed through the prism of profit treatments of accounting theory and economic theory.

The results of the thesis may serve as some guidelines for analysis and comprehending of profit numbers for all users of financial data, for managers of enterprises for designing managerial accounting information, as well as for resolving accounting policy controversies in practice.

This work has used the term “profit” throughout, being in conformity with the IFRSs. US GAAP uses “income” in the meaning of “profit”, so do some of the authors mentioned herein, the references to whose texts may therefore contain “income” in the meaning of “profit”.

1.2. The Aim and Research Task

1.2.1. Problems in the Domain Investigated

Profit is one of the main traditional measures of the success of the business enterprise. A proper measurement of profit is essential for sound business management. On the one hand, it is important for the internal management purposes: for evaluation of business decisions taken in the past in order to make better decisions for an uncertain future. On the other hand, it is needed by persons or groups outside the enterprise – by wide circle of stakeholders, such as investors, creditors, employees, customers, suppliers and the public at large, to judge the performance of enterprises, make comparisons among different enterprises and predict their future performances. In this connection an important objective for all users of information is to make the distinction between invested capital and profit, while the research in business growth, efficiency, and relative profitability contribute directly to the improvement of business decisions.

Measurement and recognition directly determine the properties of the profit number. An accounting system can be described as a set of rules determining recognition, measurement and display that defines a mapping of a company's financial performance and position into its financial statements (Cauwenberge and Beelde 2007).

In the present research the needs and ways of profit measurement, recognition and presentation are analyzed. The conceptual advantages and limitations of different approaches are considered, as viewed from the position of management decision-making.

The conceptual and procedural rules of accounting determine the data to be collected and the techniques to be applied for calculations. The measurement of profit is a reflection of the assumptions and principles in accounting such as the periodicity assumption, the revenue recognition principle, and the matching principle. Hence, to interpret the accounting data the adoption of these principles should be taken into account.

In addition, the accounting practice has two restrictions set conventionally, which influence the measurement of profit: the historical cost and realization conventions. The function of accounting is to record the business transactions and the recording proceeds under the accounting rules of valuation, timing and classification, where some important features of dynamic economic environment cannot be taken into account. Hence the changes in prices, and gains and losses from holding activities arising there-from are not reflected in the traditional accounting profit. Too, items that contribute to general growth of enterprise but cannot be quantified with any degree of reliability have been discarded in determining profit.

Currently, besides the traditional profit of the period, the concept of comprehensive income has been taken to use; employed in valuation is, besides the historical cost also the fair value method, where the aforementioned changes in prices etc. can be taken into account. Parallel to said innovations in the accounting profit model, new problems have emerged, the discussions over which are topical: for instance whether specific profit elements should belong to the section of profit for the period, or to the section of other comprehensive income or how the subjectivist nature of fair value could be reduced etc.

Besides accounting approach, another basic treatment of profit exists – the *economic concept of profit*. So – the two polar notions are historical cost accounting profit and economic profit.

Economic theory of profit prefers for the measurement of profit the approach, different from accounting. The conceptual base of economists' approach is that profit has to be considered as the change in well-being and the purpose is maximization of profit under specified conditions of market structure, product demand and input costs. Central issue in the measurement of periodic profit is the notion of capital maintenance. The techniques employed by economists are related with expectations about future results of activity of an enterprise, discounted to present time. Discounted cash flow, discounted dividends and discounted abnormal earnings models are of this category (Khodadadi and Emami 2010).

The accounting concept of profit is – as it is reported – retrospective and the economic concept of profit is by definition prospective. Profit measurement deals simultaneously with retrospective and prospective concepts (Jacobs 2004).

Accounting theory deals with the capital maintenance problems in profit measurement process as well, but in practice this approach is used seldom (the other way for calculating of profit - the transaction approach - is common for accounting practice).

For several purposes there have been developed different concepts, based on those two fundamental treatments.

The combinations of capital maintenance concepts and alternative valuation systems allow achieving the goals of economic theory of profit measurement under the framework of accounting, by employing accounting procedures. For example the business profit concept (Edwards and Bell 1961) and realizable profit concept combine the advantages of the approaches of accounting and economic profit.

These attempts to provide a theoretical framework for financial accounting based on economics were motivated by the idea that accounting profit measures might be

interpreted as objectively measurable proxies for the unobservable economic profit concepts established by Fisher (1906) and, in particular, Hicks (1946) (Walker 1997).

As regards the profit, the accounting research has over years been directed at different objectives. Two main points of view are whether to attach importance to profit as the firm's value indicator or to pay attention to the predictable abilities of profit numbers for investment decisions. Basically the researchers break down into three schools: valuation approach, informational approach and true (normative) profit school. In actual fact, the latter also belongs among the proponents of valuation, striving to harmonize the traditional accounting concept of profit with economic thinking.

The abovementioned normative theories were popular in 1960-1970, but they did not reach consensus on the „best” method of profit determination. Belonging here are the abovementioned business profit theory, realizable profit theory etc. Out of fashion in the interim period, they should presently be of interest as a theoretical substantiation of comprehensive income and they will be tackled also in this paper. The IASB current proposals for performance reporting and for categorizing comprehensive income therein have a great resemblance with the business profit and realizable profit models.

Informational theory, starting from dividend discount model, relies only on the hypothesis of market efficiency to assume that all available information regarding future dividends is reflected in share prices. Hence, market data were used as a benchmark against which to judge accounting alternatives. In these studies, the higher the earnings response coefficients, which measure the covariation between an accounting profit number and a market value metric, the more informationally relevant the profit number was supposed to be. Another concern was that, although associations between accounting and market data were investigated, the assumption of market efficiency made association studies useless for valuation purposes (Cauwenberge and Beelde 2007).

Valuation was again presented as important by Ohlson. The Ohlson model is recognized as one of the main theoretical contributions to accounting research. This model provides a direct link between firm value and accounting data (Feltham and Ohlson 1995). The usefulness of Ohlson model in relation to capital market research lies in its contribution to a clearer understanding of the factors affecting the form of the relationship between share prices and accounting data (Clubb 1996). For example EVA valuation model is a well-known application of Ohlson's residual profit equation.

It needs be pointed out that there is ample proof of explicit links between the informational roles of accounting items in valuation and their informational roles in forecasting abnormal earnings (Pope and Wang 2005).

Recent empirical research for comprehensive income value relevance too can be divided as for informational perspective (Chambers *et al.* 2006; O'Hanlon and Pope 1999; Biddle and Choi 2006) or valuation perspective (Brimble and Hodgson 2005; Cahan *et al.* 2000). Broadly defined, empirical comprehensive income research considers statistical relations between market data and different profit measures.

Neither is the current IASB treatment of profit problem-proof. The inconsistencies in definitions and the like contentious issues have lately been highlighted by Barker (Barker 2010) and Nobes (Nobes 2012).

Lying hidden in the accounting theory are the options to create different accounting systems, hence various countries have developed different rules of financial accounting, deriving from cultural, political, economical, legal, financial and other variations. Also embedded within one system are usually alternative possibilities to account and report the indicators. The said differences are to be taken into account when comparing the financial data and passing decisions. The impact of accounting differences on profits has to be analysed. At this juncture it is also necessary to specify the content of terms of financial accounting, which may convey a different meaning in various financial accounting practices, or be vested with a different interpretation.

The term 'profit' may mean different things, not only to economists and accountants or in international context, as described above, but also to a company's various interest groups (owners, managers, accountants etc.), each of which view the profit of a company from a different perspective. Even accountants and financial managers use different terminology and concepts. In general, the term 'profit' stands for the difference between revenue and expenses. It has been emphasised that in a free enterprise economy the measurement of profit is a major consideration (Bray 1949). Profitability measures are essential and very important components of the management control systems of businesses. They must also motivate managers and employees at all levels of an organisation to strive to achieve the organisation's goals. Performance evaluation and rewards are key elements for motivating individuals in an organisation. Profit and profitability measures should also be linked to the objectives of wealth measurement. Thus the attitudes of companies and methods used by them in this field are of great importance not only for companies but for society in general.

1.2.2. The Aim of the Research

Multiplicity of positions and ongoing discussions, when considering profit suggest the need to study that topic in greater detail, in order to cast light on essential points relevant to measuring the profit, as seen from the perspective of managerial decision-making, and in order to show how the financial accounting would enable attaining the best results in that respect.

This work has set the goal to study the profit-related matters from the following angles of view.

First, to clarify the phenomenon of profit systematically: to elucidate the current-day opinions and standpoints in financial accounting as regards the measurement, recognition and reporting of profit and the perspectives for its development with the aim to look at the accounting rules through conceptual prism to give methodological and procedural suggestions for Estonian financial accounting.

Second: to analyse the measurement of profit according to Estonian guidelines, in the context of international financial accounting.

Third, to investigate the usage of profit and profitability indicators in business practices of Estonia to answer the question how the companies interpret the income statements – their own and of the other companies, with the aim to give methodological suggestions for profitability analysis.

1.2.3. The Research Tasks

Firstly, the task has been set to search for the “best” profit, i.e. to compare different profit theories and different profit models in financial accounting practices, with the purpose of finding out which aspects needed in the management process, are put in perspective by a given concept or which deficiencies are evidenced in a given model.

Which way of treatment, from among many options, should be accorded preference to in the present Estonian financial accounting practice: should the profit number carry, in the first place the informational value relevance for predictions perspective or for valuation perspective for stock markets or serve as the measure of change in company’s net assets (wealth). Related to the aforementioned is also the question whether profit should be determined according to the principle of clean surplus accounting or dirty surplus accounting.

Which is the best way for performance reporting, and to what degree the interpretation of the profit number by reader depends on the manner of presentation of the same in the reports?

The second circle of problems is related to the comparison between themselves the measurement of profit in different financial accounting frameworks and possibilities of interpretation them. In this connection it is essential to analyse the differences in financial accounting guidelines of different countries and eventual differences in interpretation of those rules, and the problems depending on the circumstance that financial accounting is choice-based. One cannot underestimate either the need to keep in mind the potentially possible divergent use of terms and notions in different financial accounting practices. Under consideration are Estonian Good Accounting Practice (EGAP), IFRSs and US GAAP.

The third set of problems brought up in this work embraces the usage of profit and profitability indicators in Estonian business companies, with recourses to the survey of the respective topic, carried out at companies, with the goal to present the methods, to which preference is given in Estonian companies when the efficiency of business activities is analysed, and for the wealth measurement purposes. Under consideration are internal and external financial measures based on accounting figures, which are routinely reported by legal business entities. In relation to this, the aim is to provide the companies new ways of analysis which contribute to the wider understanding of profit and to the analysis of factors which have impact on it.

1.3. The Originality of Research and its Practical Merit

The research expounds on opportune and comprehensive conceptual analysis of profit; within that context, the author has scrutinised the trends of development of tackling profit in the current practice of financial accounting.

As the novel approach, the author highlights the need for treatment of accounting profit as the measure of company wealth enabled by implementation of the model of comprehensive income in the practice of financial accounting. Prerequisite for that is application of changes in guidelines, for which in this thesis there are methodological pieces of advice. Subjected to analysis too has been the profit-related conceptual basis in Estonian financial accounting through IFRSs prism, with the outcome testifying to the fact, regardless of all-out efforts to unify the accounting principles, that the Estonian definitions are at variance with the respective IFRSs concepts. The terminological controversies of treatments of IASB and FASB, which make it more difficult to understand the texts in the domain, are also pointed out.

Novel in the domain of empirical analysis are the results concerning the formation of differences in profit measures, as calculated pursuant to EGAP and US GAAP rules. These results are necessary information for Estonian companies, having international connections, and to foreign investors.

Revealing too are the results of research on attitudes and activities of Estonian companies in profit interpretation and analysis. At this juncture the author has recommended using for analysis of income statement, as an innovative device, the method basing on concept of system integrated analysis elaborated by Professor Uno Mereste. This creates the opportunity to explain the phenomenon of profitability through analysing the factors which influence the profitability and pointing out the overall index of profitability.

The results of the thesis are of interest to the Estonian business community, providing as they do guidelines for elucidating the profit as economic indicator and basing on that, adopting adequate business decisions.

The research should also be of interest to organisations concerned with Estonian financial accounting guidelines, as it contains observations on Estonian rules and system of financial accounting concepts in currency, and relevant suggestions.

1.4. Structure of the Work

The thesis has been built up as follows:

Part 1. Introduction. Presented therein are the substantiation for election of the topic, goals and tasks of the research.

Part 2. The Setup of the Research and Methods Used. This part contains the description of research paradigms and research methods used in the thesis.

Part 3. Theoretical Analysis and Background. Contained therein is the multisided treatment of profit. Standpoints of financial accounting practice are considered through prism of financial accounting theory and economic theory profit concepts. Perused are possibilities of attaining, by use of different capital maintenance requirements and rules of valuation within financial accounting framework, the economic profit effect. The author has focussed attention on comprehensive income as a novel financial accounting profit, by now already recognized by the IASB and the FASB – the information contained therein, the conceptual and technical problems etc. arising in connection with the use thereof.

Part 4. Comparative Analysis of Accounting Practices. Subjected to scrutiny in that part, is the impact on profit of different financial accounting rules. The author has presented the qualitative and quantitative analysis of EGAP and IFRSs vs. US

GAAP. The qualitative analysis means in the context of this work, highlighting the differences of those rules, while the quantitative analysis means finding the size of impact of said differences.

Part 5. Assessment of Profitability Measurement Activities and Attitudes in Estonian Companies. This part contains description of the survey carried out by the author and the analysis of results with the goal to finding out the attitudes and activities of Estonian companies when analysing the profit and profitability. Author has recommended using in profit analysis the concept of system integrated analysis to find the overall index of profitability.

2. THE SETUP OF THE RESEARCH AND METHODS USED

The research has been built up with the goal to provide an all-round view on the essence of profit through different theoretical avenues of approach, by demonstrating different financial accounting practices and presenting the author's empirical research, with regard to measurement of profit in various financial accounting practices and the activities and attitudes by Estonian companies to profit and profitability analysis.

Such manner of approach enables fulfilment of the objective of the work – to analyse the contemporary financial accounting practices and their trends of development, keeping in perspective the best ways for measurement of profit, allowing managerial decision making.

2.1. The Research Paradigm

Framework of the research is constituted by two accounting theory paradigms:

- The ideal-profit/deductive paradigm;
- The decision-usefulness/decision-maker/aggregate-market-behaviour paradigm.

Methodological choice with regard to this theoretical basis draws on the fact that such set of theories enables comprehensive study of the profit, enclosing normative, informational and also valuation approaches.

Paradigms are described here on the basis of the components of Ritzer classification: an exemplar or a piece of work that stands as a model for those who work within the paradigm; an image of the subject matter; theories; methods and instruments (Ritzer 1975).

Characteristic for the ideal-profit/deductive paradigm is:

The researchers are in agreement that current price information is more useful than conventional historical-cost information; the theories that emerge from this paradigm present alternatives to the historical-cost accounting system. They hold that current price information is more useful to users in making business decisions. The researchers, whose works can be classified as *exemplars* of that paradigm are for example Edwards and Bell (1961), Canning (1929), Moonitz (1965), Paton (1922), Sprouse and Moonitz (1962). Sometimes Edwards and Bell are referred to as early members of decision-usefulness school (Revsine 1981) – their methodology is a hybrid.

To those who adopt the ideal-profit/deductive paradigm, the basic *subject matter* is: the construction of an accounting theory on the basis of logical and normative reasoning and conceptual rigor; a concept of ideal profit *based on some other method than the historical cost method* (Mac Neal 1939; Alexander 1950).

Five *schools of thought* may be identified: current-purchasing-power accounting (Mason 1971); replacement cost accounting (Edwards and Bell 1961); net-realizable value accounting (Chambers 1966; Sterling 1971); present-value accounting (Solomons 1961); deprivation-value accounting (Baxter 1967). Each of these theories presents alternative methods of asset valuation and profit determination. Their standpoint is that, ideally, profit measured using a single valuation base would meet the needs of all users.

The aforementioned theories are tightly related to economic profit theories in Fisher and Hicks treatment, belonging to neo-classical economics research paradigm.

Characteristics for the decision usefulness /decision-maker /aggregate-market-behaviour paradigm are the following. The relationship between aggregate-market behaviour and accounting variables is based on the *theory of capital-market efficiency* (Fama 1965; Beaver 1981; Fama 1970; Ross 1976). According to this theory, the market for securities is deemed efficient in that: market prices fully reflect all publicly available information and by implication that market prices are unbiased and respond instantaneously to new information. In fact the theories confirming the market behaviour paradigm include: the efficient market model; the efficient market hypothesis; the capital asset pricing model; the arbitrage pricing theory; the equilibrium theory of option pricing.

The exemplars are the works of Gonedes (1972), Gonedes and Dopuch (1974).

The *basic subject matter* is the aggregate-market response to accounting variables. *The methods* are the following: the market model (Sharpe 1963); the beta estimation models (Chen and Lee 1982); the event study methodology; the Ohlson's valuation model; the price-level balance sheet evaluation models; the information content of earnings models; the models of the relation between earnings and return (Easton and Harris 1991).

2.2. Theory Triangulation Method

Profit as a phenomenon is investigated by the method of theory triangulation in Chapter 3 of the thesis.

The accounting and economic theories of profit are the basic polar theories through which the profit models of modern financial accounting practice on international

level and in Estonia are assessed. But how is the financial reporting influenced by the stakeholders' theory (Donaldson and Preston 1995), and how does the activity of different external stakeholders influence the formation of profit? This has been delved into by the thesis.

Attention is drawn in the analysis to positions of different schools within the framework of the accounting theory, attaching importance to different properties of profit: normative, valuation and informational approach, as well as to the results of empirical research about the value relevance of profit numbers with regard to stock exchange and management decisions.

The theoretical and practical problems of profit measurement are elucidated by analysing the concepts, basing on various valuation and capital maintenance options (e.g. business profit, realized profit, realizable profit, and current purchasing power approach). Therefore, under scrutiny are the profit conceptions belonging to the domain of both the accounting theory and economic theory. Profit concepts have been presented by the statements of highly recognized specialists such as Edwards, Bell, Chambers, Sterling, Samuelson, Revsine, Solomons, and Ohlson etc.

Profit concepts of the accounting theory. Profit has occupied a special place in the financial accounting theory. One potential paradigm of the financial accounting theory – the ideal-profit paradigm – specifies the measurement of profit as the domain of accounting.

An important phase in the formation of accounting theory is related with the attempts to provide a theoretical framework for financial accounting based on economics – fundamental measurement approach to accounting, which rests on the idea that accounting profit measures might be interpreted as objectively measurable proxies for the unobservable economic profit concepts established by Fisher (1906) and Hicks (1946). Here the main contribution was given by Solomons (1961) and Edwards and Bell (1961). Adjacent to the direction, handling accounting profit as a practical approximation of the economic profit are conceptions, considering the notion of profit also as a fundamental measure concentrated on the construction of practicable techniques that satisfy users' perceived needs, however irrespective of their properties as fundamental measures of economic profit.

The idea to treat financial accounting profit as a fundamental measure was subjected to criticism by Barton (1974) and Beaver and Demski (1979). Adopted as theoretical base of reference, the neo-classical economics has failed to develop a theory of profit measurement in which there is an endogenous demand for some form of profit measurement (Beaver and Demski, 1979).

A second economics-based approach to financial reporting began to emerge in the late 1960s with the publication of Ball and Brown (1968). Their paper is generally acknowledged as the seminal work that spawned a whole generation of empirical research concerned with modelling the effects of financial reporting on capital markets in general and stock markets in particular (Walker 1997). This research is generally referred to as market-based accounting research.

There arose two new economics-based approaches to financial reporting. On the one hand there was market-based accounting research, which was positive in approach and which sought to test empirical propositions about accounting using real world share price and accounting data. On the other hand, there was an abstract theoretical research based on advanced mathematical economics.

To summarise, during the 1960s and throughout the 1970s many accounting academics advocated neo-classical economics as a theoretical foundation for accounting. Later market-based accounting research, information economics and positive accounting theory were popular. A common feature of these new approaches was a rejection of profit measurement perspectives on financial reporting.

Market-based research has been prevalent from early on, both in respect of theoretical and empirical studies, whereas by reference to the goals of studies they can be distributed into informational approach, handling the research of accounting numbers value relevance with respect to future forecasts and into valuation approach, whose research object is accounting numbers value relevance concerning company valuation.

The works tackling informational approach are: Beaver 1998, Beaver 1968, Lev 1989, Miller and Rock 1985, Kormendi and Lipe 1987, Easton and Zmijewski 1989.

The works tackling valuation approach: Holthausen and Watts 2001, Penman 1992, Penman 2005, Bernard 1995, Lundholm 1995, Lo and Lys 2000. Of keynote importance however are the works by Ohlson (1989, 1990, 1993) and Feltham and Ohlson (1995).

Ohlson and his co-authors reversed the accounting theory to the direction of the fundamental measurement perspective, presented as said above, in works by Edwards and Bell (1961), however already also by Preinreich 1936 and later on by Kay 1976 and Peasnell 1982.

Ohlson's framework is an attempt to combine traditional notions of profit measurement with advances in the economic theory of capital asset pricing. In addition to the improved model specifications it may yield to market-based

research. Ohlson argues that the abandonment of profit measurement theory in the late 1960s was a fundamental error in the development of accounting research in general and in market-based accounting research in particular. Models within the general Feltham/Ohlson tradition have come to be recognised by two key features, i.e. the clean surplus accounting model, and linear information dynamics.

As evidenced from the deliberations presented above, apparently dominating presently in profit research is emphasis on stock market. Seemingly it is the token of the influence of the US where stock exchange plays the key role in economy. The positions of IFRSs have also been affected by US standpoints.

A divergent approach seems to manifest itself in the contribution of the German speaking countries in the development of accounting. The German financial accounting views profit, in the first place, as information to facilitate management and for owners, to assess the performance of the company. Outstanding among researches concerning profit is the dynamic balance sheet theory by Schmalenbach, dating from 1933 (Schmalenbach 1959). The basic feature of Schmalenbach's theory was a strong emphasis on profit determination, mainly for the purpose of efficiency control. The theory described has some similarities with the present concept of comprehensive income as one of supporting the profit's variant of balance sheet. Assets and equities at year-end were for him merely residuals (arising from the flow of expenses and revenues) claiming that their values reflected reality in many sense (Mattessich 2008). Too, Schmalenbach's opinion was that correct profit measurement was irreconcilable with correct stock valuation (*ibid.*) and he accepted various valuation bases for different asset categories.

Table 1 lays out the most important directions in accounting profit research.

Table 1. Profit research in accounting theory

School	Representatives	Opinions
True profit (normative) schools	Solomons 1961 Edwards and Bell 1961 Chambers 1966 Sterling 1970 Revsine 1973	Profit is considered as the fundamental measure for accounting framework where accounting profit measures are objectively measurable proxies for the economic profit concepts. The researchers are in agreement that current price information is more useful than historical-cost information. Profit models: business profit, realizable profit, relized profit, current purchasing power profit.

Market-based research	Ball and Brown 1968 Beaver et al 1968 Miller and Rock 1985	Market data are used as a benchmark against which to judge accounting alternatives: in these „association studies” the higher the earnings response coefficients, which measure the covariation between an accounting profit number and market value metric, the more information relevant the profit number is supposed to be. A motivation is provided to depart from clean surplus accounting.
Informational approach	Kormendi and Lipe 1987 Lev 1989 Easton and Zmijewski 1989 Beaver 1989 O’Hanlon and Pope 1999 Chambers et al 2006 Biddle and Choi 2006	
Valuation approach	Penman 1992 Ohlson 1995 Feltham and Ohlson 1995 Bernard 1995 Lundholm 1995 Lo and Lys 2000 Holthausen and Watts 2001 Penman 2005 Cahan et al. 2000 Brimble and Hodgson 2005	Subjected to scrutiny has been the link between the firm stock market value and accounting data relying on clean surplus accounting.

Source: Compiled by the author

By now, with comprehensive income concept having evolved into financial accounting profit concept, the normative theories alongside with various valuation issues have once again set the agenda. Edwards and Bell’s principles evidence large similarity with comprehensive income model, serving as its theoretical grounds.

Enjoying the key position in accounting researches currently are comprehensive income related market-based empirical studies.

Recent empirical research into comprehensive income value relevance too, can be divided into informational perspective (Chambers *et al.* 2006; O’Hanlon and Pope 1999; Biddle and Choi 2006) or valuation perspective (Brimble and Hodgson 2005; Cahan *et al.* 2000). Broadly defined, empirical comprehensive income research considers statistical relations between market data and different profit measures.

Treatments of profit in economics. The economists have been engaged in elucidation of the essence of profit, and also in problems of measuring the profit, where the positions of theory of economics diverge from those of accounting.

In the most general meaning, profit emerges as a residual – something left over after costs have been paid. The sum of the contractual factor payments when deducted from the revenue product of the firm leaves a surplus (Hasan 2008).

In keeping with the theory of economics, under perfect competition and complete knowledge each factor is paid the value of its marginal product. Total product will be exhausted in wage, rent and interest payments. Planned total product and planned total costs, however, are likely to differ from those actually realized. If expectations are not realized, residuals will arise. These residuals represent an income flow element contained in payments to owners of productive services (Weston 1954). Still begging for an answer is the question of what calls forth the economic situation enabling the rise of profit.

There are multiple opinions among theoreticians on essence of profit and its wellsprings. For instance A. Marshall (1890) holds that the profit is the supply price of entrepreneurship or business power where business power is the supply of the ability to maintain business plus supply of organisational ability of production (Chendroyaperumal 2004). Highlighted as being most important concepts are associating the rise of profit with uncertainty and risk (Knight 1921) or innovation and entrepreneurship and entrepreneur, as well as the theory dating from 1921 (Schumpeter 1934). Schumpeter saw profit as a return to a successful entrepreneur. So, the central figure in Schumpeter's scheme is the entrepreneur. Profit arises from innovation; it is achieved through entrepreneurial activity; the entrepreneur is its recipient. Also subjected to scrutiny has been the role of monopoly in profit formation – i.e. there is a monopoly element in profit.

In actual fact all those avenues of approach accommodate into one system. The theories of Knight and Schumpeter are similar in many respects. Uncertainty and innovation are related. Innovation is a cause of uncertainty, while uncertainty causes innovation. The necessary condition for uncertainty is either incomplete information or a “short-run” stochastic situation. The significance of the uncertainty theory of profit is motivational: uncertainty leads some to take great chances, to innovate, to attempt to monopolize, etc. (Weston 1954). Profit is the reward of uncertainty or risk bearing. Too, the entrepreneur who finds an opportunity where no one before him saw one, and takes advantage of this opportunity, will make profit. Profit is temporary because, as time goes on, others will follow him and erode his profit, but in a dynamic economy there are always new entrepreneurs upsetting the status quo. So, persistent rise of profit testifies to the fact that economic system is in perpetual disequilibrium. It comes about that profit defined

as a surplus of business earnings over contractual payments is a non-functional surplus whose origin lies essentially in progressive dynamic change (Hasan 1983). Sometimes however short-run profits can persist into the long run, when there are barriers to entry for others.

The aforementioned theories can be linked to micro- and macroeconomic models, theory of behaviour etc. Using the terms of economics theory, innovation is the act of changing production functions or utility functions (Schumpeter), being therefore the ultimate source of uncertainty (Weston 1954).

The problem range in theory of economics related to the measuring of profit is also addressed in different ways. Sometimes economists define profit as the difference between revenue and the opportunity costs of all resources used to produce the items sold. Opportunity costs are the alternative returns foregone by using the chosen inputs. That method is often used in the company financial analysis.

The classical economic-theory based position here is manifested in the profit definition by Hicks (1946): Profit is the amount that a person can consume during a period of time and be as well off at the end of that time as he was at the beginning. Viewed as the prerequisite, on the other hand is the goal of production: maximization of profit under specified conditions of market structure, product demand and input costs. The technique used to find the size of profit is discounting all expected future cash flows of the company to the present day, which is not accepted by accounting. The said classical economic-theory approach has prompted the formation of one specific direction of accounting theory – the ideal-profit paradigm, according to which the accounting profit measures might be interpreted as objectively measurable proxies for the unobservable economic profit concepts and serve as the fundamental measure for accounting theory, whereas preference is given to other valuation methods, in the face of a traditional historical-cost model. Such treatment has become topical in connection with comprehensive income model becoming an important accounting profit model, being the theoretical motivation of comprehensive income.

Normative acts of the practice of financial accounting. In this research the accounting practice is handled using standpoints of the framework of IFRSs. IFRSs are a compendium of rules, gaining internationally ever wider recognition. Since 2005 the listed companies in member states of the European Union were required to apply IFRSs in compilation of their consolidated financial statements. Beyond Europe many other countries have adopted IFRSs in full; some have revised their national standards to incorporate the main aspects of IFRSs. In Estonia, beside EGAP, it is allowed to compile financial reports also on the basis of IFRSs rules, the scope whereof being wider than Estonian rules. The positions of the US GAAP, as another very well known legislator, have been presented for comparison, when necessary.

2.3. Comparative Analysis of Normative Frameworks

To add to the plausibility of the theoretical treatment presented in Chapter 3 of the thesis, the impact of financial accounting on profit formation is analysed through the comparative analysis of different financial accounting normative frameworks. This comparative analysis has been laid out in Chapter 4 of the thesis.

The EGAP rules are compared with the US GAAP, and IFRSs are used as the focus of comparison.

A qualitative analysis has been carried out, which meaning within context of this research is the comparison of different rules as impact factors of profit formation and the quantitative analysis, handling the estimate of size of the aforementioned impacts. When creating the model of quantitative analysis, underlying is the outcome of qualitative analysis.

Rules have been compared with regard to the following indicators: the issues of valuation of property, plant, equipment and intangible assets; real estate investments; short time financial investments; inventories; rules of revenue recognition; income taxes. There has been described the impact on profit formation of those indicators, the differences in profits deriving from differences in rules.

In the process of analysis, subjected to comparison have been the following normative acts: the guidelines of EGAP, applicable as from 1 January 2009 and the guidelines of EGAP, applicable as from 1 January 2013, the IFRSs 2011 and the respective US GAAP.

2.4. Questionnaire Survey Method for Company Research

Research has been carried out for the purpose of finding out the activities of Estonian companies in the area of profit and profitability analysis and their attitudes to the same. The said analysis has been presented in Chapter 5 of the thesis.

The companies were submitted a questionnaire, elaborated by the author, with the purpose to find out: Which figures are used from regular income statement? Are some indicators of income statement and balance sheet adjusted, for obtaining necessary information for analysis? Is the capital maintenance issue taken into regard? Is profit as indicator of change in company value valued? Are the profit and the investments made compared, in order to find out the actual growth in wealth? Is the cash-based profit analysed etc.

The questionnaire survey method was applied for data collection with the survey subjects in Estonian companies. The survey questionnaire was distributed to

accountants or finance managers, depending on who is responsible for the analysis in the company.

The questionnaire was composed as follows. Six blocks of questions, altogether 17 statements, were constructed with Likert-type scale answers - interval-scale by Stevens classification (Stevens 1946). For every statement, there were five reply options. Depending on a question, the options were: always, frequently, sometimes, very rarely, never at all or fully agree, agree, rather agree, rather not agree, not agree. Hence, a 5-grade scale was used, where full consent with the statement was rated as '5' and full non-consent was rated as 1. In addition, the questionnaire contained six questions with selected responses, mainly to classify the companies and respondents. The companies surveyed were classified: a) by number of employees: 250 and more and 50–249. b) by area of activity of the company – industry and energy, building and real estate development, trade, service. The types of questions were as follows: two first groups included closed-ended questions plus open-ended question; the remaining were closed-ended questions.

The sample included 117 Estonian businesses from the areas of activity of industry and energy, building and real estate development, trade, service. The distribution of the sample as per number of employees was as follows: 250 and more employees – 41 companies; 50–249 employees – 76 companies. According to areas of activity the companies of the sample distribute as follows: industry and energy – 56 companies; building and real estate development – 17 companies; trade – 35 companies; service – 13 companies. 4 companies have two areas of activity. Sample as per offices held by respondents distributes as follows: finance manager (finance analyst) – 64 people; (chief) accountant – 53 people.

Principles of formation of sample were the following. When perusing the problem, of essence are the enterprises being the site of analyses – notably the larger enterprises. Subjected to scrutiny were the enterprises, having ≥ 50 workers on employ, belonging to the activity areas of industry and energy, building and real estate development, trade, service. The whole population is 535 companies. Included in sample were 100% out of the said companies. The questionnaires were self-completion questionnaires, distributed to respondents of this group by e-mail, while responses were also received by e-mail. Response rate was 22%.

The analysis was carried out: with regard to the whole sample; grouped as per size of the company – large and medium entities; grouped as per position of the respondent – finance managers (-analysts) and accountants; grouped as per activity areas; grouped by users of Format 1 and Format 2.

Subjected to analysis have been arithmetic means, modes and medians. To elucidate the statistical importance of differences in assessments by the said groups, z-tests

have been carried out. To find out the links of interest, the correlation analysis has been used.

2.5 Matrix Modelling Method for System Integrated Analysis of Company Income Statement and Profitability Assessments

In Chapter 5 of this work the author suggests, as a recommendation on her part, using at the company income statement analysis the methodology of the system-integrated analysis, the principles of which were elaborated by U. Mereste in 1980s (Mereste 1984; Mereste 1989; Mereste 1994). U. Mereste applied the said model for analysis of the company's business activities. In 1980s and 1990s, the Estonian companies were also practically involved in system integrated analysis of their business activities. Several PhD dissertations have been defended on specific problems of system integrated analysis: H. Luur (1982), A. Root (1983), R. Volt (1989) and M. Sarap (1989).

By now that method has quite unjustifiably fallen into disuse. Nevertheless, presently the different possibilities of this model are being studied at Tallinn University of Technology by P. Siimann (Siimann 2011) and E. Startseva (Startseva *et. al.* 2012). Professor J. Alver has suggested system-integrated method for financial statement analysis (Alver 1994).

Author of this work recommends using, as an innovation, that method in more specific analysis of financial statements, concretely using it in analysis of the company income statement and profitability. It enables finding the share of different profit components in the aggregate outcome, and finding the overall profitability indicator. To our best knowledge, the said model has not been earlier used in such context. The method is based on matrix model and it is more thoroughly described in Chapter 5.

3. THEORETICAL ANALYSIS AND BACKGROUND

This Chapter provides a review on different options to measure profit and analyses the presently evolved positions in financial accounting practice, leaning on different theoretical conceptions – through theory triangulation and former empirical research. As an outcome of the analysis, the author has given an estimate to current discussion over profit conception in financial accounting practice and recommendations for treatment of profit in the Estonian financial accounting practice.

3.1. Different Meanings of the Term “Profit”

It is expedient to start deliberations on profit with a review on multiplicity of definitions of profit. For instance, different angles of view are entertained by representatives of different professions, countries, in different time periods etc. In the following, some definitions of profit have been presented, as they occur in specialty dictionaries.

Dictionary of Accounting Terms. An improvement in financial position as a result of one or more transactions or as a result of the transactions and events accounted for during an accounting period. Profit on an individual transaction is measured by subtracting from the proceeds of the transaction the expenses incurred to obtain those proceeds. Profit is often considered in terms of particular types of expense that only those expenses are deducted from proceeds to arrive at a figure for profit. For example, the profit on sale of goods may be calculated by deducting from the proceeds of sale only the cost of producing or acquiring the goods and not the costs of selling them or the administrative costs of the enterprise. A profit calculated without deducting all expenses is usually described as a “gross profit” and a profit calculated by deducting all expenses is usually described as a “net profit”. Traditionally, the change in financial position over an accounting period was thought of as the aggregate of the profits and losses made on the individual transactions during the period, using accrual accounting to match revenues and expenses for the period, and ignoring new contributions of capital and distributions to owners. However, this method of measuring change in financial position may not show the change in value of the entity – either the value of its assets or the capacity of the entity to earn revenues – if only the historical costs of assets are considered. Depreciation accounting is used to ensure that the use of fixed assets and the need to replace them are reflected by a charge against revenue in computing profit. Current cost accounting may be used to compute profit after providing for the maintenance of the operating capability of the business of the accounting entity. Various forms of asset revaluation may be used, outside current cost accounting, to give a better measure of the value of the entity to its owners (French 1994).

The Palgrave Macmillan Dictionary of Finance, Investment and Banking. Any excess or surplus remaining after all costs have been subtracted from the revenue or selling price of a good or service or any surplus arising from the disposal of an asset at a price that is favourable compared to its original contract price (Banks 2010).

The Investor's Dictionary. (1) General: the excess of the selling price over all costs and expenses incurred in making a sale. (2) General: monies remaining after a business has paid all its bills. (3) General: a reward to the entrepreneur for the risks assumed by him or her in the establishment, operation, and management of a given enterprise or undertaking. (4) Investments: the difference between the selling price and the purchase price of commodities or securities when the selling price is higher (Rosenberg 1986).

International Accounting Terms. At its most general, the surplus money, after all expenses have been met, generated by a company or enterprise in the course of one accounting period (International Accounting Terms 2006).

Dictionary of International Business Terms. (1) Value used for the purpose of a constructed value in an antidumping duty investigation or review. The profit used is the profit normally earned by a producer, from the country of export, of the same or similar product as that under investigation. (2) The amount remaining after all expenses have been deducted from revenues (Capola and Hartman 1996).

The Wall Street Dictionary. The amount an investment earns or the amount a company earns through its business activities (Shook and Shook 1990).

Renton's Dictionary of Stock Exchange and Investment Terms. Revenue less costs. There are a number of different measures of profit. Trading, gross or operating profit is the difference between the selling price and the cost of goods sold. Selling and administrative expenses are deducted from trading profit to give EBIT (earnings before interest and tax). EBIT less interest gives the pre-tax profit. The word "loss" is used for results which are negative (Renton 2008).

The South African Dictionary of Finance. The residual amount that remains after expenses, including capital maintenance adjustments, have been deducted from income (Wuite 2009).

Instant Business Dictionary. The excess of the selling price over all costs and expenses incurred in making the sale. The reward to the entrepreneur for the risks assumed by him in the establishment, operation and management of a given enterprise or undertaking (Davis 1986).

Merriam-Webster Dictionary. (1) A valuable return: gain. (2) The excess of returns over expenditure in a transaction or series of transactions; especially: the excess of the selling price of goods over their cost. (3) Net income usually for a given period of time. (4) The ratio of profit for a given year to the amount of capital invested or to the value of sales. (5) The compensation accruing to entrepreneurs for the assumption of risk in business enterprise as distinguished from wages or rent. Origin of *profit* – Middle English (from Latin *profectus*), first known use – 14th century (Merriam-Webster Dictionary 2012).

The Essential Accounting Dictionary. A general term that means the amount of earnings or the excess of revenue over expenses (Mooney 2008).

Dictionary of Business Terms and Dictionary of Finance and Investment Terms.

(1) Finance: Positive difference that results from selling products and services for more than the cost of producing these goods. (2) Investment: Difference between selling price and purchase price of commodities or securities when the selling price is higher. (3) Net income – in general: Sum remaining after all expenses have been met or deducted; synonymous with net earnings and with net profit or net loss. (4) Net income – business: Difference between total sales and total costs and expenses. Total costs comprise cost of goods sold including depreciation; total expenses comprise selling, general, and administrative expenses plus income deductions. Net income after taxes is the bottom line. It is out of this figure that dividends are normally paid (Friedman 1987; Downes and Goodman 1987).

Dictionary of Tax Terms. The positive difference that results from selling products and services for more than the cost of producing of goods. Net income – in general: Sum remaining after all expenses have been met or deducted; synonymous with net earnings and with net profit or net loss. Net income – business: Difference between total sales and total costs and expenses. Total costs comprise cost of goods sold including depreciation; total expenses comprise selling, general, and administrative expenses plus income deductions (Crumbley *et al.* 1994).

When generalising the aforementioned definitions of profit, the following points are to be emphasised.

It is claimed in all aforementioned definitions that profit emerges as a residual – something left over after costs have been paid. Often, there are different possibilities marked off to take expenses into account, resulting in profit numbers of different content (gross profit, operating profit, profit before taxes, net profit etc.). Treatments of various domains add different accents, as presented in Table 2. The examples presented in Table 2 show that various areas of business define profit in keeping with their business interests: in case of accounting, transactions and change of financial positions are emphasised; in area of business and finance the

difference between sale or purchase prices or production costs is important; in case of investors and stock exchange it is emphasised that profit is what investment yields through its business activity. Business, investment and stock exchange however also emphasise the essence of profit as a reward for entrepreneurship and risk – profit is a premium to the entrepreneur.

Table 2. Different accents in definitions of profit

Domain	Definition
Accounting	Profit is a difference between income and expense of transactions for the period, whereas in the definition by French, 1994 it is also pointed out that considering the need for capital maintenance would yield a more accurate result for the measure of the value of the entity.
Business	Emphasis is made on profit as a difference between sale and purchase prices or a difference of selling price and all expenses. Noted have been the gist of profit and the source of its generation – namely, profit is the bonus to the entrepreneur for taking risks.
Investment and stock exchange	The amount an investment earns (or a company earns) through its business activities. Revenue less costs. The difference between the selling price and the purchase price of commodities and securities when the selling price is higher. Profit is the bonus to the entrepreneur for taking risks.
Finance and taxation	Positive difference that results from selling products and services for more than the cost of producing of these goods.
International business	Value used for the purpose of a constructed value in an antidumping investigation or review. The profit used is the profit normally earned by a producer, from the country of export, of the same or similar product as that under investigation.

Source: Compiled by the author.

3.2. Analysis of Accounting Practice Concepts of Profit

3.2.1. Introduction

The questions which possibilities lie hidden in nature of the accounting theory for treatment of profit, which trends are topical in actual accounting practice, how the accounting framework affects the profit numbers are pivotal issues, to be taken into consideration, when inferring the implications of that number for passing

crucial management decisions, determining as it does the essence and numerical value of profit as an economic indicator. Recurrent, too often in business practice is a simplified treatment of profit, viewing profit as an aggregate of income/expense, disregarding the background of their formation, rife with incorrect future decisions. There exist differences between accounting theory and practice. In addition to conceptual frameworks and accounting legislation, accounting theory includes concepts, hypotheses, theories and valuation concepts. The latter is especially important in the measuring process. Compared to legislatively regulated practice, which considers pragmatic aspects, the accounting theory offers more possibilities in this regard. So, in the frames of the accounting theory different concepts of profit are conceivable, enabling establishment of different rules in financial accounting practice. Some possible concepts are more thoroughly examined in the third section of this chapter as the proper approximations of economic theory of profit. Both theory and practice are processes, which are constantly developing and shaping each other. The relationship between accounting theory and the standard setting process is shown in Figure 1.

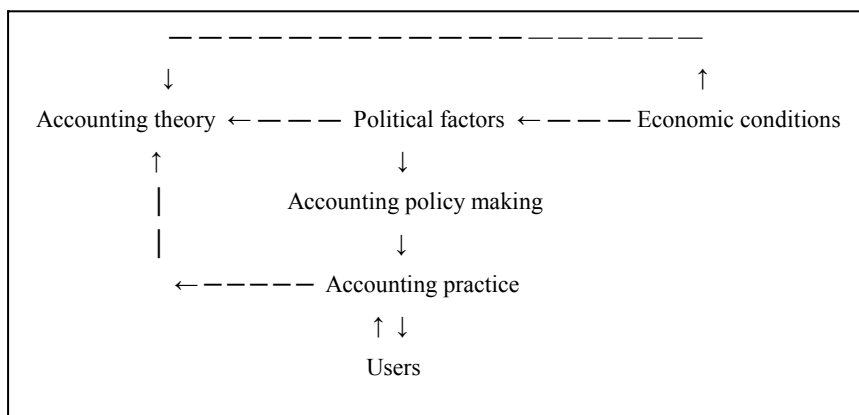


Figure 1. The environment for financial accounting

Source: (Wolk *et al* 2001), modified by the author.

In practice, however, mostly historically shaped approaches dominate, and a revolution is difficult to be accomplished.

Nevertheless, in the past decade impressive changes have occurred and are still taking place in international rules of financial accounting – IFRSs, brought about by dramatically changed business environment, due to globalisation and securitisation, and the company’s activity within it. The planned changes are related to conceptual bases of rules of financial accounting and the manner of presenting the financial reports (Conceptual Framework for Financial Reporting, www.iasb.org, 2010 July). New positions are also in evidence in the treatment of profit (Presentation

of Items of Other Comprehensive Income, proposed amendments to IAS 1, www.iasb.org, 2010), which is under consideration in the context of this research.

The accounting profit in this research is handled under the framework of IFRSs. It also embraces the EGAP. Beside EGAP, it is allowed in Estonia to compile financial reports also on the basis of IFRSs rules, the scope whereof being wider than Estonian rules. The positions of the US GAAP, as another very well known legislator have been presented for comparison, when necessary. More extensively, the comparison EGAP vs US GAAP with respect to profit generation, has been performed in the empirical part of this thesis.

Accounting theory offers various manners of addressing the issue of what (or to whom) can be considered focus of interest of economic activity, and respectively, bearing on what the accounting system has been designed.

Two basic approaches, standing out differently in the ways in which accounting records are kept and financial statements are prepared, are the proprietary theory and the entity theory (Mattessich 2003).

The first – the proprietary theory sees the proprietor group as the centre of interest and the entity as the agent through which the shareholders operate (Coughlan 1965). The primary objective of the proprietary theory is the determination and analysis of the proprietor's net worth (Riahi-Belkaoui 2004, 215). Accordingly, the accounting equation is:

$$\text{Assets} - \text{Liabilities} = \text{Proprietor's Equity}$$

In other words, the proprietor owns the assets and the liabilities. If the liabilities may be considered negative assets, the proprietary theory may be said to be asset centred or balance sheet oriented. Assets are valued and balance sheets are prepared to measure the changes in the wealth (proprietary interest). Revenues and expenses are considered to be increases or decreases respectively in proprietorship that do not result from investments or capital withdrawals by the proprietor.

Thus, net income on debt and corporate income taxes are expenses; dividends are withdrawals of capital (Riahi-Belkaoui 2004, 215).

The net profit concept here represents the profit for shareholders (corporate concept of profit), not for all providers of capital. Profit is arrived at after treating interest and income taxes as expenses. Similarly, terms such as “earnings per share” and “dividend per share” connote a proprietary emphasis (Riahi-Belkaoui 2004, 215). Different opinions are manifested in the question for example whether or not preferential shares must be included in proprietor's equity (Staubus 1959).

In this research, in concordance with proprietary theory, the valuation aspect of profit measurement and the need to reflect the change in wealth in profit figures are stressed. Also concurring with proprietary theory is the Edwards' and Bell's business profit theory (Revsine 1981), holding an important place in the current research. Their theory can be considered the all-time most thorough theoretical work on treatment of profit.

In the entity theory the business entity rather than the proprietor is the centre of accounting interest. The business entity owns the resources and is liable to both the claims of the owners and the claims of the creditors (Riahi-Belkaoui 2004, 216). Accordingly, the accounting equation is:

$$\text{Assets} = \text{Liabilities} + \text{Stockholders' Equity}$$

Assets are rights accruing to the entity; equities represent sources of the assets and consist of liabilities and the stockholders equity. Both the creditors and the stockholders are equity holders, although they have different rights with respect to profit, risk control and liquidation. Thus, profit earned is the property of the entity until it is distributed as dividends to the shareholders. Because the business entity is held responsible for meeting the claims of the equity holders, the entity theory is said to be income centred and income statement oriented. Accountability to the equity holders is accomplished by measuring the operating and financial performances of the firm. Accordingly, profit is an increase in the stockholders' equity after the claims of other equity holders (interests, income taxes) are met. The increase in the stockholders' equity is considered profit to the stockholders only if a dividend is declared. Undistributed profits remain the property of the entity because they represent the corporation's proprietary equity itself (Husband 1954). In actual fact, in keeping with the entity theory, the loan interest and income tax should be considered as distributions of income rather than expenses. As it is, however they still tend to be interpreted as expenses.

The impact of entity theory may be found in some of accounting techniques and terminology used in practice, for example, in giving priority to LIFO over FIFO at appraising the inventory.

It thence transpires that the modern design of financial accounting practices displays the features derived from various base theories.

The needs of modern corporations (with their numerous stockowners, limited liability, transferability of interests and, above all, separation between ownership and management) are better met by the entity theory than its "proprietary" competitor (Mattessich 2003).

As regards the profit, the author of this work however tends to accord preference to the proprietary theory approach, in view of the fact that keen interest to the change in net assets (wealth) is essential both from the standpoint of the company sustainability and more generally from the standpoint of the whole society.

3.2.2. Classical Approach

Under traditional accounting practice the profit is calculated by the way called *transaction approach*, which measures the basic profit-related transactions that occur during a period and summarizes them in an income statement. This approach focuses on the activities that have occurred during a given period and provides information on the elements of profit.

Nearly fifty years ago however there was also the debate between proponents of matching expenses and revenues as the basis of profit measurement and those who thought that profit should be measured by measuring changes in net worth, thus giving conceptual primacy to the balance sheet and changes in it (Solomons 1995). Financial statements and their underlying financial accounting procedures interpret all events in money terms and so have meaning in so far as money itself is meaningful in the context in which information is communicated.

The process of attaching money measurements to accounting events and items is essentially a process of valuation. Valuation enters into accounting measurements in two senses. First, the money standard of measurement is itself unstable through time. Second, the use of money measurements in accounting implies a choice between one of several different valuation basis. Conventionally, financial statements have relied on historical cost measurement. Historical cost as the basis of valuation has evolved historically, its employment is simple. Ijiri 1971 worded his classic defence of historical cost accounting as follows: “Historical cost accounting is readily documented by means of invoices and similar records, and it arises naturally out of the process of recording the physical transactions of the business and controlling the amounts of goods and services under the firm’s ownership” (Sterling 1971). Historical cost excellently completes its role under the stewardship concept of financial reporting. The latter concept focuses on safeguarding assets rather than on presenting measurements useful for decision making. In accordance with stewardship concept the financial statements should provide some safeguards against misuse of assets by management (Glautier and Underdown 1991, 308).

In decision making context the concept of profit should be considered together with the concept of capital. The classic expression of their close relationship has been uttered by Irving Fisher (1919) as follows: “A stock of wealth existing at a

given instant of time is called capital; a flow of benefit from wealth through a given period of time is called income” (Glautier and Underdown 1991, 315).

Here the worth of investments is concerned with firstly the maintaining and increasing of the value of invested capital, secondly the maintaining and increasing of the profit which is derived from the capital. Profit is treated as a residue available for distribution once provision has been made for maintaining the value of capital intact.

For arriving at a measure of profit, it is necessary to maintain the value of capital intact.

Since the ultimate aim of economic activity is the satisfaction of wants, it follows that profit is identified as a surplus which is available for consumption. Classic expression of that opinion has been given by Hicks: “The purpose of profit calculations in practical affairs is to give people an indication of the amount which they can consume without impoverishing themselves.” (Hicks 1946, 172).

So according to *capital maintenance approach* (sometimes referred to as *change in equity approach*) profit is measured by the difference in capital values at two points of time. Whereat capital maintenance can be considered by different ways in accordance with what is considered under the capital to be maintained.

There are different concepts of capital maintenance, among which the “Money amount concept” gives the same measure of profit as the transaction approach (when the basis of valuation is the historical cost). According to this concept, the measurement of periodic profit should ensure that the monetary value of stockholders’ equity is maintained intact. In effect, the profit of the period amounts to the increase in monetary terms in the stockholders’ equity measured between the beginning and the end of the period.

“The investment purchasing power concept” accords with the classical definition of economic profit as being the difference between the opening and closing value of stockholders’ equity, where the assets are defined by their potential earning power, expressed as the present value of all cash flows to be generated in the future.

Capital maintenance approach is usually not used in accounting practice, transaction approach is common.

It can be mentioned, that in the process of profit determination and asset valuation the interdependence between valuation and measurement is apparent. In this sense, the notions of capital and profit are largely dependent on valuation concepts.

3.2.3. The New Approach – the Concept of Comprehensive Income

The problem, that some types of gains and losses are not taken into account as net profit components, but are recorded directly at equity accounts, has been under consideration among accounting specialists for many years. Beresford *et al.* (1996) notes that the current practice of dirty surplus accounting, whereby certain profit items bypass the income statement directly to equity, has made the latter a dumpster for an amorphous and growing mass of potentially important information. Smith and Reither (1996) document the diversity between companies and the lack of clarity in presenting dirty-surplus items. Users who want to locate all income items that are potentially relevant for valuation incur significant costs, in terms of effort and time. It was especially from users' side that the demand for an all-inclusive measure of profit emerged (Cauwenberge 2006).

The *concept of comprehensive income* has been adopted to allow the disclosure of such gains and losses as a part of profit, so that items that bypass the income statement are included under concept of comprehensive income.

Comprehensive income includes all changes in equity during a period except those resulting from investments by owners and distributions to owners (Robinson 1991). Comprehensive income therefore includes net profit and in addition it includes gains and losses that bypass net profit but affect stockholders' equity. These items that bypass the income statement are referred to as *other comprehensive income*. Items that the IFRS treat as other comprehensive income are the following: changes in revaluation surplus (see IAS 16 and IAS 38); actuarial gains and losses on defined benefit plans (see IAS 19); gains and losses arising from translating the financial statements of a foreign operations (see IAS 21); gains and losses from investments in equity instruments measured at fair value through other comprehensive income in accordance with paragraph 5.7.5 of IFRS 9; the effective portion of gains and losses on hedging instruments in a cash flow hedge (see IAS 39); for particular liabilities designated as at fair value through profit or loss, the amount of the change in fair value that is attributable to the change in the liability's credit risk (see IFRS 9) (IASB 2012, IAS 1).

The US accounting practice accepted the concept of comprehensive income in 1997 (FASB, www.fasb.org, Summary of Statement No. 130), the IASB followed in 2005 and Estonian accounting practice did the same in 2009 (Alver 2008). The IASB and the FASB see comprehensive income as the most sensible way for presenting of performance.

At present different ways of reporting comprehensive income are allowed: other comprehensive income elements can be added to the income statement and the comprehensive income reported as the sum of net profit and other comprehensive

income; or a special comprehensive income statement can be prepared, where net profit from income statement, other comprehensive income and comprehensive income as the total are reported.

Discussions over comprehensive income continue between standard setters and theoreticians, even though comprehensive income is already used in practice and despite the high status of the concept of profit. The question is whether traditional profit and other comprehensive income should be presented in a single report, as the IASB proposes, or in separate reports. Thus far both formats have been used. The IASB has also proposed changing the way other comprehensive income is recorded. The new presentation approach proposed by IASB for items of other comprehensive income would see the presentation of a wide range of indicators under other comprehensive income to help users assess the relevance of individual income and expense items presented in other comprehensive income, and assess the possible effects that some other comprehensive income items may have on profit or loss (Presentation of Items of Other Comprehensive Income. Proposed amendments to IAS 1, www.iasb.org, 2010 July).

The ultimate aim of the IASB as well as the FASB is to replace the Income Statement with a report that presents both traditional net profit and other comprehensive income. The goal is to create a *comprehensive income statement* that will categorize and display all components of profit, where the subtotal profit or loss for the period (net profit) would then be based on accrual based historical cost accounting, excluding fair value re-measurements, while the total comprehensive income would include fair value re-measurements. Traditionally, arguments in favour of one profit concept have tended to sway with one's view on the use of the profit number for valuation purposes. IASB proposes to require a *statement of profit or loss and other comprehensive income* containing two distinct sections – profit or loss and items of other comprehensive income (Presentation of Items of Other Comprehensive Income. Proposed amendments to IAS 1, www.iasb.org, 2010 July). In this way the IASB categorization is based on division between historical cost profit and fair value profit.

Obviously, the meaning of the profit or loss subtotal will depend on which categorization scheme applies. Different positions exist as to whether specific profit elements should belong under profit for the period or other comprehensive income. The segregation of net profit and other comprehensive income is not based on a consistent theory but is a result of the application of current and changing accounting standards (Thinggaard 2006). On the one hand, the lack of a theory in the standards and on the other hand, measurement options may bring about a situation when the same value-relevant events lead either to a change in net profit or in other comprehensive income.

Comprehensive income as the final profit total can be expected to increase the prominence of display of fair value income components. Items in the income statement receive higher processing and judging weight just because they are part of an income statement (Lipe 1998).

When comprehensive income is presented as the most prominent income number, the risk is that users might not be able to unscramble the different analytical properties of its components (Tarca 2006).

In reality, the questions of presentation methods for comprehensive income that are currently being discussed are linked with issues of measurement and recognition, as measurement and recognition directly determine the properties of the profit number.

It is just the inability to settle between the historical cost and fair value measurement paradigms that finds its way into present day discussions concerning the income statement (Cauwenberge and Beelde 2007).

3.2.4. The IASB Conceptual Framework for Profit Measurement

Income statement contains information about the performance of an enterprise, in particular its profitability. This information is required in order to assess potential changes in the economic resources that are likely to control the future. Information about variability of performance is important in this respect. Information about performance is useful in predicting the capacity of the enterprise to generate cash flows from its existing resource base. It is also useful in forming judgments about the effectiveness with which the entity might employ additional resources.

As said before, the concepts of capital and capital maintenance are of particular importance in the context of profit measurement. Here the standpoints of IFRS about capital and capital maintenance are referred to and the possible measurement bases as well. The selection of measurement basis and concept of capital maintenance will determine the accounting model used in the preparation of the financial statements (Solomons 1995, 46).

In practice financial statements are most commonly prepared in accordance with an accounting model based on historical cost and the nominal financial (money amount) capital maintenance concept. Actually other models and concepts may be more appropriate in order to meet the objective of providing information that is useful for making economic decisions.

As evidenced in the following, the Conceptual Framework enables different models for measurement of profit.

Besides historical cost, IFRS allow using different measurement bases: *current cost*, where assets are carried at the amount of cash that would have been paid if the same or an equivalent asset was acquired currently; *realizable value* – assets are carried at the amount of cash that could currently be obtained by selling the asset in an orderly disposal; present value – assets are carried at the present discounted value of future net cash inflows that the item is expected to generate in the normal course of business.

Usually historical cost is combined with other measurement bases. For example, inventories are usually carried at the lower of cost and net realizable value, marketable securities may be carried at market value etc (IASB 2011, Framework 4.54-4.56).

Thus, the existing IFRS imposes a range of measurement requirements, including both historical (i.e. transaction-based) cost and a variety of approximations to current economic values for the initial and subsequent reporting of the assets and liabilities that define the entity's financial position and periodic result of operations (Epstein *et al.* 2010).

The most common concept of capital in accounting is a financial concept of capital. Under a financial concept of capital, such as invested money or invested purchasing power, capital is synonymous with the net assets or equity of the entity (IASB 2011, Framework 4.57).

Another treatment, the physical concept of capital, such as operating capability, regards capital as the productive capacity of the entity (IASB 2011, Framework 4.57).

The latter concept can be used to achieve special goals in measurement of profit, but some measurement difficulties may appear in making that concept operational. The concepts of capital maintenance provide the linkage between the concepts of capital and profit.

Under the concept of financial capital maintenance a profit is earned if the financial (or money) amount of the net assets at the end of the period exceeds the financial (or money) amount of net assets at the beginning of the period. Financial capital maintenance can be measured in either nominal monetary units or units of constant purchasing power.

Under the concept of physical capital maintenance a profit is earned if the physical productive capacity of the entity (resources or funds needed to achieve that capacity) at the end of the period exceeds the physical productive capacity at the beginning of the period (IASB 2011, Framework 4.59).

So the concept of capital maintenance is the prerequisite for distinguishing between an entity's return on capital and its return of capital.

Only inflows into assets in excess of amounts needed to maintain capital, may be regarded as profit and therefore as a return on capital. Hence, profit is the residual amount that remains after expenses (including capital maintenance adjustments) have been deducted from income.

The financial capital maintenance concept does not require the use of a particular basis of measurement. Selection of the basis under this concept is dependent on the type of financial capital to be maintained. The physical capital maintenance concept requires the adoption of the current cost basis of measurement (IASB 2011, Framework 4.61).

The principal difference between the two concepts is the treatment of the effects of changes in the prices of assets and liabilities of the enterprise. An enterprise has maintained its capital if it has as much capital at the end of the period as it had at the beginning of the period. Any amount over that required to maintain the capital is profit (IASB 2011, Framework 4.62).

Under the concept of financial capital maintenance where capital is defined in terms of nominal monetary units, profit represents the increase in nominal money capital over the period. Thus, increases in the prices of assets held over the period, conventionally referred to as holding gains are conceptually profits. They may not be recognized as such, however, until the assets are disposed of in an exchange transaction. When the concept of financial capital maintenance is defined in terms of constant purchasing power units, profit represents the increase in invested purchasing power over the period. Thus, only that part of the increase in the prices of assets that exceeds the increase in the general level of prices is regarded as profit. The rest of the increase is treated as a capital maintenance adjustment and, hence, as part of equity (IASB 2011, Framework 4.63).

Under the concept of physical capital maintenance where capital is defined in terms of the physical productive capacity, profit represents the increase in that capital over the period. All price changes affecting the assets and liabilities of the entity are viewed as changes in the measurement of the physical productive capacity of the entity. Hence, they are treated as capital maintenance adjustments that are part of equity and not as profit.

The selection of the measurement bases and concept of capital maintenance will determine the accounting model used in the preparation of the financial statements. Different accounting models exhibit different degrees of relevance and reliability. It thence transpires that the IFRS Framework is applicable to a range of accounting

models, enabling to opt for the best solution concerning measurement of profit in that framework.

The elements of performance presentation, directly related to the measurement of profit are income and expenses.

- *Income* is increases in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases of liabilities that result in increases in equity, other than those relating to contributions from equity participants (IASB 2011, Framework 4.25).
- *Expenses* are decreases in economic benefits during accounting period in the form of outflows or depletions of assets or incurrence of liabilities that result in decreases in equity, other than those relating to distributions to equity participants (IASB 2011, Framework 4.25).

The definition of income encompasses both revenue and gain:

- *Revenue* arises in the course of the ordinary activities of an entity and is referred to by a variety of names including sales, fees, interest, dividends, royalties and rent (IASB 2011, Framework 4.29).
- *Gains* represent other items that meet the definition of income and may or may not arise in the course of the ordinary activities of an entity. Gains represent increases in economic benefits and as such are not different in nature from revenue (IASB 2011, Framework 4.30). Gains include those arising from the disposal of non-current assets; unrealized gains: those arising from the revaluation of marketable securities and those resulting from increases in the carrying amount of long-term assets. In income statement gains are usually displayed separately for the purpose of making economic decisions.

The definition of expenses encompasses losses as well as those expenses that arise in the course of the ordinary activities of the entity.

- *Expenses* that arise in the course of the ordinary activities of the entity include, for example, cost of sales, wages and depreciation (IASB 2011, Framework 4.33).
- *Losses* represent other items that meet the definition of expenses and may or may not arise in the course of the ordinary activities of the entity. Losses represent decreases in economic benefits and as such they are not different in nature from other expenses (IASB 2011, Framework 4.34).

It follows from the definitions presented that in usage are revenues, gains, expenses as well as losses, meaning that within the framework of IFRS,

feasible is *clean surplus accounting*, under which every income and expense item is run through the income statement.

Basis of incorporation of elements in reports is their conformity with regulations of recognition. Under IFRS an element should be recognized if:

- it is probable that any future economic benefit associated with the item will flow to or from the entity; and
- the item has a cost or value that can be measured with reliability (IASB 2011, Framework 4.38).

As follows, inaccuracies have been analysed, contained in Framework as regards treatment of profit.

Framework does not define the profit. The definitions of the elements of profit – income and expenses – are incorrect. The above presented income/expense, have been defined as increase/decrease in assets, although it should be increase/decrease in equity: “income is an increase in equity that results from an increase in net assets”, not “an increase in net assets that results in an increase in equity”. The analogical error is contained in definition of expenses. (The same is true for US GAAP). Incorrect definitions of income and expenses lead to a flawed conceptualisation of profit in IFRS.

These definitions are inconsistent with the double-entry logic on which the Framework is based.

R. Barker (Barker 2010) suggests as a definition: income is an increase in equity that results from an increase in assets or a decrease in liabilities, other than from contributions from equity participants.

If equity is defined to equal assets and liabilities and if income and expenses are changes in equity, then there is no need, in the definition of income or expenses, to refer to either assets or liabilities. The definition can be more accurate: income is an increase in equity, excluding contributions from equity participants (Barker 2010).

This author’s position coincides with that presented by R. Barker – the definitions must consistently abide by double-entry logic.

In addition to the shortcomings in the definitions of profit and income, the revenue definition of IASB is also incorrect (Nobes 2012):

Revenue is not formally defined in the Framework but is said to arise “in the course of the ordinary activities”, which are also not defined (there are no longer

any definitions of “ordinary” or “extraordinary” in IFRS), and is said to include such items as sales to customers. Gains are defined residually as income other than revenue. IAS 18 defines revenue as the gross inflow of economic benefits arising in the course of ordinary activities of an entity when those inflows result in increases in equity, other than increases relating to contributions from equity participants. Here the same mistake has been done as in the case of income: revenue should not be defined as the inflow of benefits (which is a debit) but as the increase in equity (which is a credit). Revenue is a gross concept in IAS 18. In contrast IAS 16 requires net measurements.

Framework’s income and expenses definitions have been based on the notion of clean surplus, because they include all changes in net assets. IFRS explicitly allows dirty surplus items. The result is that profit as reported under IFRS is not equal to income less expenses as defined in the Framework. These problems are more thoroughly considered in section 4 of this Chapter.

At this juncture it is proper to draw attention to the fact that Winston Churchill’s witticism “Americans and British are one people separated by a common language” also translates to the profit.

In what follows, different treatments of two large legislators IASB and FASB in respect of some essential terms concerning profit will be considered because they compromise understanding and analysis of texts on financial accounting.

Term “income”. Definition given by IFRS to the term “income” has been presented above in this chapter. Under treatment by the US GAAP the “income” is what IFRS views as “profit”, i.e. economic outcome for the period. Hence the IFRS “income” encompasses revenues and gains, US GAAP “income” however revenues, gains, expenses and losses, being their aggregate (expenses and losses tagged with minus). Figure 2 characterises the above differences.

<u>IFRS</u>	<u>US GAAP</u>
Income	Revenues
- <u>Expenses</u>	- <u>Expenses</u>
Profit	Income

Figure 2. IFRS and US GAAP “income”

Source: Compiled by the author.

Bottom line of the classic Income Statement is “net profit” according to IFRS, according to US GAAP however it is “net income”. Intermediate components too are respectively “operating profit” – “operating income”; “profit before income taxes” – “income before income taxes”. Surprisingly the US GAAP uses the term “gross profit” (and not “gross income”, as could be expected on the basis of systemic treatment). In case of “comprehensive income” both IFRS and US GAAP specifically employ just the meaning conveyed to it by US GAAP.

Term “*loss*” is used in several meanings both under IFRS and US GAAP, thus also obscuring the matters and making understanding difficult. One of the meanings is defined above in this chapter as “loss”, where “losses like expenses are decreases in economic benefits...”. Essentially close by substance, however not exactly synonymous is the US GAAP definition: “Losses: decreases in equity (net assets) from peripheral or incidental transactions of an entity from all other transactions and other events and circumstances affecting the entity during a period except those that result from expenses or distributions to owners” (Epstein *et. al.* 2009, 78). In its second meaning “loss” is in use by both IFRS and US GAAP to designate a negative economic performance (opposition “profit”(IFRS)/“income”(US GAAP)). “Loss” is actually a generic notion, converted to a term.

The use of the term “*expenses*” is not an overly successful solution either, formulated as follows in IFRS: “The definition of expenses encompasses losses as well as expenses ...”, “expenses” being defined with reference to themselves.

3.2.5. Information Relevance of the Reports for Profit Presentation

Here the author subjects to scrutiny the issues of whether and how the reporting influences the reader’s decisions.

The objective of financial statements is to provide information about the financial position, performance and changes in financial position of an enterprise that is useful to a wide range of users in making business decisions. Hence the needs of a wide circle of stakeholders are held in view. The business decisions that are taken by users of financial statements require an evaluation of the ability of an enterprise to generate cash and cash equivalents and of the timing and certainty of their generation.

This research is concerned with the topic of profit. Immediately linked to profit is the reflection in reporting of the performance. Of essence for financial performance is its reflecting on one side by accrual accounting and on the other side by past cash flows. Subjected to perusal in this research are issues of accrual accounting.

Accrual accounting depicts the effects of transactions and other events and circumstances on a reporting entity's economic resources and claims in the periods in which those effects occur, even if the resulting cash receipts and payments occur in a different period. This is important because information about a reporting entity's economic resources and claims and changes in its economic resources and claims during a period provides a better basis for assessing the entity's past and future performance than information solely about cash receipts and payments during that period.

Information about a reporting entity's financial performance during a period, reflected by changes in its economic resources and claims other than by obtaining additional resources directly from investors and creditors is useful in assessing the entity's past and future ability to generate net cash inflows. That information indicates the extent to which the reporting entity has increased its available economic resources, and thus its capacity for generating net cash inflows through its operations rather than by obtaining additional resources from investors and creditors.

Information about performance may also indicate the extent to which events such as changes in market prices or interest rates have increased or decreased the entity's economic resources and claims, thereby affecting the entity's ability to generate net cash inflows.

Income statement contains information about the performance of an enterprise, in particular its profitability. This information is required in order to assess potential changes in the economic resources that it is likely to control in the future. Information about variability of performance is important in this respect. Information about performance is useful in predicting the capacity of the enterprise to generate cash flows from its existing resource base. It is also useful in forming judgments about the effectiveness with which the entity might employ additional resources.

Hence calling for study is the question which profit model is best keyed to the above goals: what should be the accounting rules of profit components, what should be the report structure and its elements. Surely the report must provide for understandability, relevance, reliability of information and comparability of different time periods.

IFRS rules for the presentation of profit are based on so-called "mixed attribute model".

It thus reflects a mixture of traditional realized income reporting, accompanied by fair value measures applied to unrealized gains and losses meeting certain criteria (e.g., financial instruments are accounted for differently from plant

assets; unrealized gains and losses from the translation of the foreign currency – denominated financial statements of foreign subsidiaries do not flow through the income statement etc.) (Epstein and Jermakowicz 2010).

For a long time the income statement has been based on the *revenue – expense approach*: the income statement presents the *revenues, expenses, gains* and *losses* of an entity during accounting period. By IFRS an entity shall recognize all items of income and expense in a period in profit or loss unless an IFRS requires or permits otherwise (IASB 2011, IAS 1.88). The *net profit* of the accounting period is the sum of these components.

The traditional income statement has been known by many titles. IFRS refer to this statement as the income statement, in many countries it has been referred to as profit and loss account, in US the other names are used, such as the statement of income, statement of earnings, or statement of operations (Epstein and Jermakowicz 2010). This research uses the term *income statement* throughout.

By now, in keeping with IFRS, *comprehensive income* has become the accounting profit conception; it incorporates, together with aforementioned net profit of the period, the *other comprehensive income*.

Now IFRS stipulates the following statements for profit presentation:

- a single statement of comprehensive income, or
- two statements: a statement displaying components profit or loss (classical income statement) and a second statement beginning with profit or loss and displaying components of other comprehensive income (statement of comprehensive income) (IASB 2011, IAS 1.81).

FASB allows, besides the aforementioned variants to present the comprehensive income also through the report of changes in owner's equity, in which case however the comprehensive income cannot be regarded as exposition of performance (Fitzpatrick *et al.* 2010). The question is, to what extent and in what ways the financial statement users are affected by the presentation format for other comprehensive income. Does it make a difference whether components of earnings are presented in one single income statement rather than reporting some income items in the statement of owner's equity?

Reporting comprehensive income in the owner's equity format results in comprehensive income information receiving less weight and being used less often by users when compared to reporting it in one of the two performance-based financial statements (Jordan and Clark 2002). This tends to downplay the importance of other comprehensive income items and focus readers' attention on the traditional

net income figure rather than comprehensive income (McCoy *et al.* 2009). The empirical research of Hirst and Hopkins (1998) and Maines and McDaniel (2000) suggest that comprehensive income displayed in the statement of changes in equity is not as effective in communicating value-relevant information as comprehensive income displayed in the income statement. When other comprehensive income is relegated to less prominent financial statements, its visibility is reduced, which increases the chance that it might be overlooked (Robinson 1991).

Among the standard setters are many opponents, seeking to discard the variant of owner's equity format. With companies however, quite the contrary, apprehensions are rampant lest comprehensive income as exponent of performance should increase its volatility (Smith, Bamber *et al.* 2010).

Since 2010 the IASB has been working under the project for enhancing the content of other comprehensive income entries and manner of their presentation, where an important position is the need in the future, on grounds of clarity to make a difference in other comprehensive income between:

- items that might be reclassified to profit or loss in subsequent periods; and
- items that will not be reclassified subsequently to profit or loss (Presentation of Items of Other Comprehensive Income. Proposed amendments to IAS 1, IASB, www.iasb.org, July 2010).

As the result of discussions, in June 2011 IAS 1 was amended with the requirement, how items of other comprehensive income should be presented. The main change was a requirement for entities to group items presented in other comprehensive income on the basis of whether they are potentially reclassifiable to profit or loss subsequently (reclassification adjustments). The amendments did not address which items are presented in other comprehensive income. (IASB 2012, IAS 1.IN18).

Items of income statement can be classified and grouped by different ways and on the basis of this classification the intermediate components can be calculated, which highlights the formation of net profit and provides information on the nature of profit and the likelihood that such results will continue in the future. The line - the net profit - alone cannot express the economic situation completely. The parts of the income statement will often be more informative for the users in their decision making process than the whole.

On the basis of those data different financial ratios can be calculated, which enable to estimate the economic situation of an enterprise and to provide the comparison of different enterprises and different periods of time.

The standpoints of IFRS for income statement content and format are the following: Income and expenses may be presented in the income statement in different ways so as to provide information that is relevant for economic decision-making. It is common practice to distinguish between those items that arise in the course of the ordinary activities of the entity and those that do not. This distinction is made on the basis that the source of an item is relevant in evaluating the ability of the entity to generate cash in the future. In the contrary case, in evidence are incidental activities, the income obtainable wherefrom need not repeat. Items that arise from the ordinary activities of one entity may be unusual for another (IASB 2011, Framework 4.27). Extraordinary classification, which used to be in use for very exceptional cases and rather caused confusion and manipulations, is no longer permitted; but now unusual items can be segregated for display purposes on a pre-tax basis (Epstein *et al.* 2009). Distinguishing between items of income and expense and combining them in different ways also permits several measures of entity performance to be displayed. These have differing degrees of inclusiveness. For example, the income statement could display gross margin, profit or loss from ordinary activities before and after taxation and profit or loss (IASB 2011, Framework 4.28).

Generally, it is important to separate *profit from usual operating activity* from *non-operating items*, because operations are usually the major means by which revenues and cash are generated, and results from regular continuing operations have usually greater significance than results from nonrecurring activities. Hereby, the object of discussion is the belonging of some items into one or the other category, which different accounting systems may solve dissimilarly. For example operating items are generally defined as recurrent features of business operations and non-operating items are generally considered to be irregular and unpredictable. Actually, many items may be operating in nature, but not necessarily recurring. On the other hand, some non-operating events are recurring in nature (Hendriksen and van Breda 1992, 328). The problems of classification in this field can cause misunderstanding or voluntary manipulation. Classification operating/non-operating does not usually coincide with classification ordinary/incidental.

Expenses can be classified by function or by nature.

Another question is, how many details are to be included in the income statement? On the one hand, the report has to be simple to read and to understand, on the other hand, the results of all activities have to be disclosed. Usually, financial statements that are provided to external users have less detail than internal management reports, which contain more expense categories. Certain basic items have to be always included, but they can be presented in various formats.

Under IFRSs minimum captions in statements are prescribed. They are the following:

revenue; gains and losses arising from the de-recognition of financial assets measured at amortized cost; finance costs; share of the profit or loss of associates and joint ventures accounted for using the equity method; if a financial asset is reclassified so that it is measured at fair value, any gain or loss arising from a difference between the previous carrying amount and its fair value at the reclassification date; tax expense; a single amount comprising the total of: the post-tax profit or loss of discontinued operations and the post-tax gain or loss recognized on the measurement to fair value less costs to sell or on the disposal of the assets or disposal groups constituting the discontinued operation; profit or loss; each component of other comprehensive income classified by nature; share of the other comprehensive income of associates and joint ventures accounted for using the equity method; total comprehensive income (IASB 2011, IAS 1.82).

The revenue and expense conceptions are usually used for representation respectively of inflows and outflows of assets in ordinary activity of the entity. The gain and loss conceptions are used to represent respectively increases and decreases in equity from ordinary or not ordinary activities like disposal of non-current assets or unrealized gains/losses.

Here it has to be mentioned that there exist different approaches, whether certain types of gains and losses should be displayed in the income statement or not:

- *The current operating concept* requires that the income statement should contain only normal operating items and that non operating items should be reported with retained earnings, because the net profit figure should show only regular, recurring earnings. By that concept, irregular gains and losses do not reflect an enterprise's future earning power. Actually, the current operating concept focuses on the measurement of the efficiency of the business enterprise. The term efficiency relates to the effective utilization of the firm's resources in operating the business and earning a profit. In the broad economic sense, it relates to the proper combination of the factors of production and management. An evaluation of relative efficiency, however, requires a comparison with a given standard or ideal (Hendriksen and van Breda 1992, 325).
- Another concept is the *all-inclusive concept*, where the reporting of all gains and losses in the income statement is required, because by this concept any gain or loss experienced by the enterprise contributes to its long – run profitability. The modified all-inclusive concept allows reporting of some types of gains and losses in other financial statements. The concept of *comprehensive income* – is the logical development of the all-inclusive concept, where the comprehensive income contains in addition these gains and losses that usually bypass net profit, but affect stockholders' equity. So comprehensive income includes all changes in equity during a period (except those resulting from investments by owners and distributions to owners).

Advocates of this concept argue that comprehensive income statement provides better measures of firm performance than other summary income measures (Saeedi 2008). In the concept of comprehensive income besides the traditional revenue/expense approach to profit measurement another treatment of profit can be seen: the asset/liability approach (Wolk *et al* 2001, 391). The latter approach considers profit as the change in net assets and it is nowadays recognized as profit concept of financial accounting both by IASB and FASB. The latter is also titled as balance sheet approach. The reasons for preferring the balance sheet approach are, by Johnson and Storey (1982) the following: “Business enterprises are in essence asset processors; hence, assets and changes in them are central to the existence and operations of those enterprises”. The latter is also the position held by the author of this work.

3.2.6 Criticism of Recognition and Measurement Principles of Components of Accounting Profit

Here the problems of *recognition* and *measurement of the traditional components of profit – revenues, expenses, gains and losses* – are analyzed.

Because it is in the realm of recognition and measurement that restrictions are revealed, imposed on profit formation by principles, conventions and methods of financial accounting, which are to be taken into account by consumer of financial data, they have been analysed herein in greater detail.

The classical accounting profit has been influenced mainly by two conventions, established in accounting practice: the historical cost and realization conventions (Edwards and Bell 1961). In what follows, are presented the problems that are essential to highlight, as opined by the author.

Table 3. The restrictions of financial accounting

Accounting principle	Impact for profit measurement
Revenue recognition	Possibility of periodic manipulation with profit - smoothing
Realization principle	It does not enable to take unrealized gains/losses into account
Historical cost	It is not sufficient basis for valuation
Expense matching	Possibility of inaccuracy in matching process and alternative approaches

Source: compiled by the author.

As follows, the restrictions from the Table 3 are analysed more thoroughly.

There are different kinds of revenue, such as sales, fees, interests, dividends, rents etc. Expenses also take many forms, such as cost of goods sold, depreciation, interest, rent, salaries and wages, and taxes. Gains and losses also are of many kinds, resulting from the disposal of non-current assets or unrealized gains/losses. The main problems of recording of those items during an accounting period include problems of valuation, timing and classification.

Profit measurement requires the dealing with subjective factors as well, since there are many alternative methods available for valuing inventories, calculating depreciation, allocating overheads and providing for bad debts.

Revenues. Revenue represents an inflow of assets into the firm in major activity of the firm (as a result of sales of goods or services; revenues from holding activities cannot appear).

IAS 18 gives the following revenue definition: *Revenue* is the gross inflow of economic benefits during the period arising in the course of the ordinary activities of an entity when those inflows result in increases in equity, other than increases relating to contributions from equity participants (IASB 2011, IAS 18.7). Revenue is measured by the fair value of the consideration received or receivable, whereas the amount of revenue arising on a transaction is usually determined by agreement between the enterprise and the buyer or user of the asset (IASB 2011, IAS 18.10). *Fair value* is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (IASB 2012, IAS 18.7). This fair value represents the cash equivalent or the present discounted value of the money claims to be received eventually from the revenue transaction. In many cases, this may be equivalent to the price established in the transaction with the customer. But frequently there exists the necessity to wait the final collection of the revenue. To take into account the time value of money, appropriate allowance has to be made for cash discounts. (When the waiting period is short, the discount may be ignored by pragmatic reasons as an item not material in amount.) In addition, there exists an element of uncertainty: losses from uncollectable accounts can appear, for which appropriate allowance has to be made as well. The treatment of cash discounts and uncollectable accounts is similar: in practice they are recorded as expenses, although they are revenue reductions in nature. Their traditional treatment as expenses does not result in a different amount of reported profit, but they do not have the basic characteristics of expenses.

The above criterion for the measurement of revenue refers to the present value of the money finally to be received as a result of the revenue transaction. From

this criterion, all returns, trade discounts, and other reductions of the billed prices should be deducted from the revenue resulting from the specific transactions.

The problem is the timing of revenue recognition: when the revenue has to be measured and reported. From an economic point of view the value added by productive activity is a continuous process. The product of the enterprise appears gradually as raw materials are assembled and changed in form or processed by the application of labour and capital equipment. The transportation of raw materials to the plant and the finished product to the market are also part of the production process in an economic sense. Value added by the firm is the excess of the exchange value of the firm's products over the value added by the other firms or individuals. Product exchange price, therefore, represents the distributions to all factors of production, including the contribution by the firm itself – the return to the several equity holders. Revenue reporting entails the acknowledgement that the firm has produced economic value and the measurement of that value.

The procedural guide for the reporting of revenues is the realization convention by which realization represents the reporting of revenue when an exchange or severance has occurred. That is, goods or services must have been transferred to a customer and given rise to either the receipt of cash or a claim to cash or other assets (Myers 1959).

In this view, realization cannot take place by the holding of assets or as a result of production process alone.

The recognition of revenue is generally based on the following criteria: economic value must have been added by the firm to its product; the amount of the revenue must be capable of measurement; the measurement must be verifiable and relatively free from bias; related expenses must be capable of being estimated with a fair degree of accuracy (Hendriksen and van Breda 1992, 360). Sometimes the reporting of revenue takes place prior or subsequent to the point of sale, which is caused by different situations in producing and selling processes. The latter cases are generally considered an exception to the realization convention (Wolk *et al.* 2001, 395).

Expenses. The term *expense* is also a flow concept, representing the unfavourable changes in the resources of the enterprise: expenses are the using or consuming of goods and services in the process of obtaining revenues (Hendriksen and van Breda 1992, 368).

IFRSs consider here the expenses that arise in the course of ordinary activities of the enterprise, for example, cost of sales, wages and depreciation. They usually take the form of an outflow or depletion of assets such as cash and cash equivalents, inventory, property, plant and equipment.

Expenses are measured by the valuation of the goods or services used or consumed. Asset reductions not related to the process of providing goods or services to customers are classified as losses. Losses and expenses may both be relevant changes in the computation of profit. Expenses relate to current operations. Losses are defined as those cost expirations not benefiting the revenue producing activities of the enterprise.

The conventional method of measuring expenses is in terms of the historical cost. Historical costs are assumed to be verifiable by accountants, since they represent cash outlays by the enterprise. But they represent the exchange value of the goods and services at the time they were acquired by the enterprise. At the time these goods and services are reported as expenses the historical cost measurement can appear not relevant.

The timing of reporting of expenses is performed in accordance with matching concept: expenses are recognized in the period in which the associated revenue is recognized (Wolk *et al.* 2001, 397).

The historical cost method of valuation distorts the measurement of profit, when the value of money is changing. This distortion results from difference between the historical cost and current cost which is a function of the time gap between the acquisition and the utilization of assets committed to earning periodic revenues. For items such as wages and other current expenses this difference is not important, but for such assets as inventories or fixed assets there may be a substantial difference between the acquisition cost and the current cost when those assets are charged against revenue under the matching concept. Under conditions of rising prices the historical cost may cause that profit is overstated (asset values on the balance sheet, contrarily, are underestimated).

Matching is the process of reporting expenses on the basis of cause-and-effect relationship with reported revenues. Revenue and expense transactions are reported separately: the acquisition of and payment for goods and services do not usually coincide with the sales and collection processes, related to the same product of the enterprise and therefore matching is a necessity. A proper matching is assumed to occur only when a reasonable association is found between the revenues and expenses.

The matching of expenses with revenue is sometimes difficult and in some cases, no matching may be possible. This problem has caused the need to establish, in addition, specific rules and procedures for the timing of expenses, which bases on the division of expenses as direct expenses (product costs) and indirect or period expenses. Direct expenses are reported in the same period as the related revenue. Indirect expenses are reported in the period in which the goods and services are used; or they are reported when a decline in economic value can be measured.

Here it is necessary to take under consideration the standards for determination of the amounts of expenses to be allocated over future years, the cost to be amortized. Some examples of these costs include depreciation, organizational start-up costs, goodwill amortization, bond premium/discount amortization and the inventory method (FIFO, LIFO etc.) used to allocate inventory costs to cost of goods sold. The cost allocations over multiple periods in the existing accounting model, based on historical cost, are arbitrary.

It has to be taken into account that there is no obviously correct way to allocate the costs, because selection of a particular allocation method over alternative methods is meaningless: the superiority of one allocation method over another can be neither verified nor refuted (Wolk *et al* 2001, 398).

The measurement of net profit represents the excess of revenues reported during a period, over the expenses reported during the same period.

While the matching of expenses with revenues in different situations can be complicated, the profit numbers for decision making should have to be considered in the long run: no single period discloses the true effect of the activity.

Gains and losses. According to the IASB view *gains* represent other (not revenues) items that meet the definition of income and may or may not, arise in the course of the ordinary activities of an enterprise (IASB 2011, Framework 4.30-4.31). Gains represent increases in economic benefits and as such are no different in nature from revenue. Gains include, for example, those arising on the disposal of non-current assets. The definition of income also includes unrealized gains; for example, those arising on the revaluation of marketable securities and those resulting from increases in the carrying amount of long term assets. When gains are recognized in the income statement, they are usually displayed separately because knowledge of them is useful for the purpose of making economic decisions. Gains are often reported net of related expenses (IASB 2011, Framework 4.30-4.31): most of the gains result from an exchange, so that a matching of the favourable and unfavourable aspects is required. The measurement of the favourable aspect is similar to the measurement of revenue – by the fair value of the assets received or recognized or by the fair value of debt reduction. The unfavourable aspects should be measured similarly to expenses – by the value of goods and services used or exchanged in the transaction. The timing of the recognition of realized gains is similar to the recognition of revenues.

In some accounting systems the unrealized gains from the fluctuation of prices of liquid securities are taken into account as the increase in stockholders' equity and through the concept of comprehensive income, presently accepted both by IFRS and US GAAP, the impact to profit is reported. Generally, for investments

in marketable securities, the recording of gains and losses arising from material changes in market prices is becoming more acceptable in accounting practice because both verifiability and liquidity are present, even though the change has not been validated by a sale or exchange. So, gains, related to the increases in the market value of securities can under some circumstances be sufficient evidence to recognize a gain.

The arguments of accountants against the recording of unrealized gains and losses are 1) the uncertain and possibly ephemeral nature of the increase in value, 2) the increase in the value does not give rise to liquid resources that can be used for the payment of dividends.

Actually, for profit determination, relative certainty and verifiable measurements are more relevant criteria. The impact of increase in value of other types of unrealized assets on profit should be under consideration as well, because the economic gain or loss is not more real just because for example the securities or land are sold and the proceeds used to require securities or land of the same type. The opportunity to do so, however, may be relevant information regarding the firm, even though the intent is not to sell.

Losses represent other (not expenses) items that meet the definition of expenses and may or may not, arise in the course of the ordinary activities of the enterprise. Losses represent decreases in economic benefits and as such they are no different in nature from other expenses. Losses include, for example, those resulting from disasters such as fire and flood, as well as those arising on the disposal of non-current assets. The definition of expenses also includes unrealized losses, for example, those arising from the effects of increases in the rate of exchange for a foreign currency in respect of the borrowings of an enterprise in that currency. When losses are recognized in the income statement, they are usually displayed separately because knowledge of them is useful for the purpose of making economic decisions. Losses are often reported net of related income (IASB 2011, Framework 4.34-4.35).

In accounting the term loss is used as well to designate excess of expenses over the revenues of a period – the opposite of net profit. Usually losses mean the expiration or write-off of costs not related to revenues of any period. Losses are not recurring or anticipated as necessary in process of producing revenues. The measurement of losses is similar to the measurement of expenses except that any proceeds are offset directly to reflect a net amount. Here, as well, the historical cost in many cases is less appropriate in the measurement of the loss as the current value. The criteria for recognition of losses are similar to the criteria for the recognition of period expenses: losses cannot be matched with revenue, so they should be recorded in the period in which it becomes fairly definite that a given asset will provide less

benefit to the firm than indicated by the recorded valuation. When the decline in value is gradual over several periods it is difficult to determine exactly when the loss occurs. Reporting should occur as soon as it appears quite probable that the asset has lost its usefulness and that this loss of usefulness is not likely to be reversed in the future.

3.2.7 Conclusions

The income statement has to provide its readers with information that enables to evaluate the past performance of the enterprise and to predict the amounts, timing, and uncertainty of future profits and cash flows. This report is used to determine profitability, investment value, and credit worthiness. Income statement has to provide information on the nature of profit as well: information on the various components of profit - revenues, expenses, gains and losses - and highlight the relationships among them.

The profit data in such function have to reflect the real-world situation as adequately as possible, the data of different enterprises and different periods of time have to be comparable.

It has to be pointed out, that the judgements of external users of accounting information have direct effects on the survival of firms. Stockholders and creditors may well wish to decide, and often do decide, that to liquidate a firm is preferable to its continuation.

According to previous analysis, it can be mentioned:

- Actually, it is necessary to observe, that accounting information is greatly influenced by accounting framework (assumptions, principles, procedural rules) and accounting methods employed. Traditional income statement is based on the historical cost model of revenue recognition and expense matching, whereas the rules of allocation of costs have arbitrary nature.
- An interpreter of profit numbers should take a possibility of intentional profit manipulation into account. Such action results, on the one hand, from a wish to present the profit number according to the company's needs or, on the other hand, from the flexibility of current accounting legislation.

While profit is an important item for assessment the performance of an enterprise and unfavourable profit numbers may have impact on the value of the enterprise, the enterprises have the interest to employ the methods of accounting, which enable to show better results in the short run or seek to smooth profit over time so that a more stable earnings stream with less year-to-year variance would lead to

higher firm valuation. Also the interests of a company's management may trigger profit manipulation, because their salaries and bonuses may depend on the profit size. The manipulation of profit numbers can be done by the choice of allocation methods/procedures, by timing of transactions or by classificatory smoothing between operating and non-operating profit.

- An important function of profit reporting could be that it draws attention to the arbitrary nature of the profit number. According to Littleton, "too many people regard the final figure of profit as a fully established, indisputable fact" (Littleton, 1940).

Therefore the short run and long run analysis of profit numbers is necessary. Also, the quality of profit of the enterprise is important to observe. Generally profit is higher quality, if it can be replicated, thus the earnings are the result from operating activities, not from sale of property, for example.

- Despite the shortcomings, mentioned above, the classical accounting profit numbers have been for a long time regarded to have information content for their primary external users – for investors and creditors – for loan-related decision making, for risk assessments and with their effect on security prices, although the latter was not so straight-line as it had been thought before.

As of presently both the IASB and the FASB hold that the profit must reflect all changes in equity during the period, disallowed however by the traditional profit conception oriented to historical cost accounting model. The mentioned changes in equity can be taken into consideration in the comprehensive income conception, envisaging, besides historical cost measurement also the fair value measurement. Hence the comprehensive income is in the making of profit conception of the financial accounting being relevant, pertinent, feasible, and in compliance with requirements of modern economic environment. Comprehensive income is a profit measurement, reflecting changes in company value, allowing taking into consideration the unrealized gains/losses.

Nevertheless, the issue of improving the quality of profit and other accounting numbers is still alive. The directions, more actual now for improving the profit measurement and reporting, are the following.

- Of ultimate import are the problems of reporting of the comprehensive income.
- Also related to the previous are the problems of fair value measurements.
- The role of future events in revenue and expense recognition needs to be more closely examined as well.

3.3 Economic Theory of Profit as the Basis for Current Value Approaches to Profit Measurement

The classical accounting profit and official financial reporting are addressed for the wide circle of stakeholders, basically to pose as adequate stock-exchange information to investor. Hence the main attention has been accorded to the profit's predictable properties (informational aspect). In the following the alternative profit models, belonging to ideal-profit paradigm have been analysed, enabling treatment of profit in the role of exponent of the company value (normative and valuation aspects).

The economists raise the question of the purpose of profit measurement differently from the accounting practice. The profit number functions here as an economic indicator of efficiency and an instrument of management of a business enterprise. Therefore, it is especially important to compare profit and invested capital. It is important to distinguish between enterprise's profit and return of capital. This is the capital maintenance approach to profit measurement. A proper distinction between profit and changes in capital is important, because changes in the capital of the enterprise may affect the future performance of the enterprise and the relationships among the various equity holders. A deficient measurement of profit may lead to excessive payment of dividends, which would impair the future of the enterprise. The concepts of capital are not clearly formulated. Capital can be defined in terms of the current monetary unit or a monetary unit of constant value, in physical terms, in terms of capacity to produce goods and services, or in the terms of the future expectations regarding future flows to stockholders. The capital maintenance concept, which adheres to the first capital concept, and is based on historical cost, gives the same result in profit measurement as the traditional transaction approach. The latter capital maintenance concept is in concordance with the economic profit concept, analysed here.

Table 4. Capital maintenance concepts, measurement bases and consistent profit concepts

	Money amount	Investment purchasing power	Financial capital	Operating capacity	Disposable wealth
Historical cost	Traditional Accounting				
Present value		Economic Profit			
Current purchasing power			GPLA		
Replacement cost				Edwards Bell	
Net realizable value					Chambers Sterling
Current cost accounting				DI	

Source: Glautier and Underdown 1991, 313

Table 4 gives the review of capital maintenance concepts, measurement bases and consistent profit concepts.

The main measurement difficulties in separating capital and profit are connected with changes in prices: on the one hand, with changes in general price level and on the other hand with changes in individual price level especially.

As follows, the definitions and models used by Edwards and Bell in their classical book “The Theory and Measurement of Business Income” (1961) are referred to in order to explain the economic approach to profit measurement. Edwards and Bell’s book has had a considerable impact both on accounting thought and on accounting practice.

Firstly, it attempted to build an accounting system on a rigorous theory of business profit measurement. Secondly, it devised accounting systems which enabled a wide variety of different accounting information to be retrieved, e.g. in its distinctions between operating gains and holding gains, realized profit and realizable profit, and real gains and fictional gains. Thirdly, it emphasised the

fundamental role of individual price changes relative to the subsidiary role of price-level changes (Tippett and Whittington 1988).

Thereby, Edwards and Bell develop profit measurement conception in the framework of accounting procedures and valuation methods, which is the proper objective approximation of subjective economic profit. Three profit concepts have been developed in this framework: business profit, realized profit and realizable profit. These three concepts are analysed here. The most important aspect of these concepts is that they reflect individual price changes and pay attention to the components of profit, which are important from the perspective of business management but are not highlighted in the traditional accounting profit. Edwards' and Bell's conception merits large attention in this connection, being as it is the theoretical substantiation of the present comprehensive income model. Current terminology and later approaches are added to the treatments of Edwards and Bell.

3.3.1. Measurement of Economic Profit

The basis for economic approach is the profit definition by Hicks (1946): Profit is the amount that a person can consume during a period of time and be as well off at the end of that time as he was at the beginning. For an enterprise, this corresponds to the maximum amount of dividends that can be distributed while retaining the same value of net assets as in the beginning of the period. The important aspect of this definition lies in the explicit recognition of the inter-temporal nature of profit: aside from owner-related transactions, profit emerges only after the value of net assets has been maintained for the next period. This is the very definition of *clean surplus accounting* (Cauwenberge and Beelde 2007). On the other hand the economic theory of profit bases by default on the goal of production: maximization of profit under specified conditions of market structure, product demand and input costs. The measurement of profit is defined as the *change in net assets* over a period and the calculation of assets is based on the discount of the present value of expected net cash receipts on assets. More particularly, value of assets can be defined as the present discounted value of the expected cash distributions to stockholders by the firm during the remaining life of the enterprise, including the final amount expected to be paid at liquidation (Hendriksen 1977, 147).

Thus, the measurement of profit is in connection with plans for future periods. Theoretically, it should constitute an optimal choice among alternative options, because the purpose of production is profit maximisation in existing conditions. Therefore, the expected amounts of money constitute the best possible result on the best possible combination of assets. In computing three factors must be estimated: the amount of net cash distributions expected to be paid each year, the number of

years of remaining life and appropriate discount factor. The relationship can be expressed by the following formula:

$$V_0 = \sum_{t=1}^n R_t / (1+i)^t,$$

where

V_0 – the present value of assets at time 0.

R_t – the net cash distribution to stockholders expected in period t.

i – the appropriate discount factor.

n – the number of years of expected life.

Profit can be computed for the first year by the following formula:

$$P_1 = V_1 - V_0 + R_1,$$

where

P_1 – profit.

$$V_1 = \sum_{t=2}^n R_t / (1+i)^t,$$

where

V_1 – the present value of assets at time 1.

The appropriate discount rate in the case of certainty is the opportunity rate that could be earned on a riskless security. In the case of uncertainty the appropriate rate is the subjective required rate for investments of equal risk on the target rate of return.

The expected value of assets is subjective by nature because of the necessity of estimating the possible values and because of the assignment of subjective probability values to these (Hendriksen 1977, 149).

Edwards and Bell define the value of assets of the enterprise, measured by the discounting of expected future net cash flows, as described above, as *subjective value*. The subjective value of the firm's assets represents how well off the firm is in the eyes of its management (Edwards and Bell 1961).

The profit connected to subjective value model is called *subjective profit*. Subjective profit is defined as the interest at the target rate on the subjective value of the firm's

assets at the beginning of the period. It is the amount that could be paid out as dividends in any period without impairing subjective value.

The excess of subjective value over the total market value of individual assets is called *subjective goodwill*.

The attempt to maximize profit involves a choice of that alternative course of action which has the largest subjective goodwill.

Subjective values and subjective profits are subjective by nature and expected subjective profits are not a good tool for decision making, because the comparison with ex post subjective profits, which are new subjective expectations, has no sense.

Market evaluates enterprise value in a more objective way. Therefore, the question of the connection between subjective value and market value should be analyzed. The market value is the value, which the market assigns to the firm. The excess of the market value of a firm as a whole over the market value of its assets is the *objective goodwill*.

The expected market cash flows may be measured by multiplying the number of shares outstanding by the market price of the stock, as determined by exchange markets. The most objective measurement is change in the market value of the assets of the firm. This measurement of changes in market value can be accomplished on an objective basis.

Edwards and Bell show connections between subjective value and market value, and also a possibility to consider the latter measurement option as a necessary approximation of economic profit. This allows for achieving a result close to economic profit concept according to the concepts and procedural rules of accounting theory, when measuring profit. The argumentation is as follows (Edwards and Bell 1961).

If it could be shown that a concept of profit based on the expected change in market value was consistent with a rational profit maximization process and that its *ex post* counterpart revealed errors in expectations that could be reconciled with errors in subjective profit, a symmetrical definition of future and past profit would be achieved that would also meet the accountant's crucial requirement of objectivity. We shall define *expected realizable profit* as the size of the dividend a firm could plan to pay at the end of period without impairing the market value of its assets. Objective goodwill is assumed to be zero. To interpret the firm's plan of operation in these terms requires knowledge of expected market values.

The relationship between realizable and subjective profit can be described in terms of the expected conversion of goodwill into market value. Subjective goodwill, the excess of subjective value over market value, exists because the market does not share the expectations on which the firm is operating. If these subjective expectations are correct however this goodwill will be converted into market value by the end of the plan; market will then recognize the correctness of the subjective expectations by sharing them. To enlarge subjective goodwill enlarges the possibility of greater profit in terms of market values in the future.

The operation of the plan, therefore, can be viewed as having two aspects, in each period, the earning of subjective profit and the conversion of some subjective goodwill into market value, as the firm's managers are already convinced that subjective goodwill represents the increase in their notion of well-being. As the abovementioned shows, realizable profit can be expressed as follows:

$$\text{Realizable profit} = \text{Subjective profit} + \text{Reduction in subjective goodwill.}$$

If the dividends payment is in the amount of realizable profit, the maintenance of market value will be guaranteed. Here the notion of *residual profit* is established.

As the abovementioned argumentation shows, there is a connection between realizable and subjective profit and as the realizable profit may approximately be measured by tools of accounting as the difference in total individual assets value at the beginning and at the end of period. Therefore it is possible to start using the profit measurement that accepts the economists' argumentations and is in framework of the accounting theory principles and procedures.

The following paragraphs analyse profit concepts that are in concordance with the above theory and are based on current value approach to profit measurement.

3.3.2. Current Value Approach to Profit Measurement

A comparison of real capital at two different dates can only be done by comparing the current values at the two dates. The current cost approach changes the basic measurement system to one of current values rather than historical costs.

Current valuation (also called *current cost* or *fair value*) represents an attempt to derive the specific value for a particular point or period in time of assets, liabilities, expenses and revenues. It needs be pointed out that the concept "fair value" currently in use in normative acts is not quite identical with the subsequently used "exit" and "entry" value, because Edwards and Bell have in mind actual

prices in real markets, even if their measurement for accounting purposes has to be approximated in various ways.

The notion of “fair value” involves the idealized notion of equally well-informed market participants. A major reason why entry and exit values often differ markedly in real markets is that participants are not (and know they are not) equally well informed and either price-protect themselves through their bid-ask spreads or incur transaction costs to become better informed (Peasnell and Whittington 2010).

Usually (except in complete and perfect markets) there exist differences between seller and buyer conceptions of current valuation. These two types of current valuation are called *entry* and *exit* values. Both values are examples of opportunity costs and both are certainly relevant in some decision situations, such as capital budgeting. However, in profit measuring the entry values have more sense because of their predictive ability and further in this chapter more attention will be paid to entry values.

Entry value refers to *replacement cost* in markets in which the asset, liability or expense is ordinarily acquired by the enterprise. *Exit* value refers to the *net realizable value* or disposal value of the firm’s assets and liabilities in what has been termed a system of orderly liquidation (Wolk *et al.* 2001, 476).

The measuring of current costs is not easy: here the technical and conceptual problems can appear. There are numerous estimation difficulties in determining current valuations. Direct measurements are preferable to indirect ones because they are more faithful representationally.

For the accounting purposes most items of income and expense are automatically expressed in prices of the current period. Certain items of expense brought forward from past periods and needing current cost measures are depreciation of fixed assets and inventories (Parker and Harcourt 1969, 206). Presently in this connection are material financial assets and liabilities.

Direct measurement for inventories would be accomplished by obtaining the current selling price in the market where goods are normally acquired by the firm – or the current manufacturing cost if the firm usually produces them. There should be no problem for commonly acquired items – for current costs of raw materials, for example. In the case of fixed assets the problem is more complicated. Appropriate second hand valuation is possible only for relatively small proportion of fixed assets. The replacement cost of the majority of fixed assets would need to be indirectly measured by means of appropriate *specific index* adjustment. In current value accounting the specific index measurements of asset values and

expenses are expected to be realistic approximations of the economic values they are intended to portray (Wolk *et al.* 2001, 488). In other words, they are expected to have a high degree of representational faithfulness.

Two aspects of real assets of an enterprise are considered when analyzing the profit concepts: as taking part in *operating activities* and in *holding activities*. The components of profit are respectively *operating profit* and *capital gains* or *cost savings*.

It is important here to pay attention to *purchasing power gains* and *losses*. The results of firm's holding activities must be adjusted for price level changes. For example for the concept of *distributable income* (DI) the rules for the accomplishment are the following. Distributable income is calculated by deducting from revenues the current value (replacement cost) of expenses incurred during the period. Holding gains must be treated as capital adjustments. There is no distinction between monetary and real holding gain. The purchasing power loss on net monetary assets is determined by a *Paasche type of specific index* geared to the firm's mix of real assets (Wolk *et al.* 2001, 491).

The following concepts combine advantages of both – the economic and accounting approaches.

Business profit, realized profit and realizable profit concepts. The business profit concept (Edwards and Bell 1961) uses historical transaction-based registration, but at the end of the accounting period an adjustment is made to reflect current entry prices. The business profit model shares with the economic profit model that it does not await realization to register changes in the value of assets and liabilities. But because records of historical transactions are kept, more information is available than under a pure balance sheet approach, and a distinction between operating income and holding gains is possible. Operating income is the difference between the value of the output and the current entry value of the assets that were used in the process. Holding gains represent the change between balance sheet dates in the entry value of the assets.

The bases of costing are entry values - *replacement costs*, which constitute the most adequate approximation of the market value of an enterprise. Correlation between replacement costs and economic profit was under consideration by Revsine in 1973 as well and he argued like Edwards and Bell that replacement costs for measurement equal or approximate economic profit in special conditions (Samuelson 1980).

Replacement cost is a value current to date and one which in theory can be applied to all assets of the firm. In a replacement-cost accounting model, the non-monetary

assets are periodically adjusted to current cost at the balance sheet date. This adjustment is regarded by some as a “holding gain” includable in profit but by others as an adjustment of capital which is not part of profit (Samuelson 1980). Edwards and Bell argue (1961) that replacement-cost changes represent profit. The preponderance of academic opinion since Edwards and Bell however has favoured the holding gains treatment for all replacement-cost changes (Samuelson 1980). Some authors consider different types of assets differently. For example Sprouse and Moonitz (1962): replacement cost for inventories – holding gains; for plant and equipment – capital adjustments (Sprouse and Moonitz 1962).

Two broad explanations have been given in the academic literature to justify the interpretation of replacement-cost adjustments as holding gains and losses. One view: associated with Edwards and Bell (1961) is that holding gains represent realizable cost savings. The entity is better off, according to this view, if replacement costs have increased from the time an asset was purchased, in the sense that it would cost more to acquire the asset than it actually did (Samuelson 1980). The other explanation is that holding gains represent increases in the expected net receipts from either using or selling the asset in the future. The replacement-cost measure, according to this view, is a surrogate measure for the net realizable value or the discounted present value of expected receipts attainable from use of the asset in the future (Samuelson 1980).

Edwards and Bell lay emphasis on the separation of total profit to reflect the division between operating and holding activities. The main benefit of using replacement costs is that operating profit indicates whether or not the current proceeds from the sale of products are sufficient to cover the current cost of factors of production.

Related to the business profit model is the realizable profit model (Chambers 1966; Sterling 1970). Instead of using replacement costs, realizable profit notion is based on the opportunity cost or money that the enterprise is sacrificing by having the assets in the company. Hence, realizable profit measures how the value of assets has changed using exit prices, rather than entry prices.

The theory of *realizable profit* ignores realization convention and the accounting period is seen to include production and holding of assets, whereby the moments of production are timeless, but the total assets of the enterprise are considered to progress through each production moment. Capital gains result from holding activities alone. Realizable profit can be expressed as follows:

$$\text{Realizable profit} = \text{Realizable operating profit} + \text{Realizable capital gains}$$

Realizable profit is a short-run concept of profit. A positive realizable operating profit (in excess of interest on replacement cost) indicates only that the firm should

be operated in the short run. It does not indicate that the firm's receipts are sufficient to cover its long-run operating cost. The concept has been built on short-term activities and therefore it is employable for taking a limited range of decisions, for example for determination of the reasons to continue the business activity at the same way or for analysing the managerial decisions of subdivisions. Because most managerial decisions address the long-term perspective, Edwards and Bell turn more attention to other conceptions - realized and especially business profit.

Current cost accounting enables to highlight some useful components of profit for decision making.

The nature of these components is following: *operating profit, realizable cost savings, realized cost savings and realized capital gains* (Edwards and Bell 1961).

A – Current operating profit – the excess over a period of the current value of output sold over the current cost of the related inputs. Current operating profit, differently from the realizable operating profit evaluates the firm as a going concern and is more useful in decision making.

B – Realizable cost savings – the increase in the current cost of assets while held by the firm during the fiscal period.

For realizable cost savings it will be necessary to distinguish between those accumulated cost savings which are currently unrealized and those cost savings which have become realizable during the current period. Only the latter can be counted as a profit element of the current period. The amount of cost savings which are unrealized at any moment in time is measured by the excess of the current cost of the firm's assets over their historical cost. To obtain the amount of unrealized cost savings as of the end of a particular period, the amount unrealized at the beginning of the period must be increased by the new realizable cost savings which have arisen during the period and be reduced by those cost savings which have been realized during the period. It is the new realizable cost savings which are a component of business profit. These cost savings can be determined as the excess of the current cost of assets at the end of period or at time of use or sale over their current cost at the beginning of the period or at time of purchase if the assets are acquired in that interval. Cost savings which first became realizable in earlier periods are clearly events of those earlier periods and cannot be counted as a part of the business profit of the current period. If cost savings are recorded as they arise, i.e. as current cost change, the balance sheet will automatically contain current cost.

C – Realized capital gains – the excess of proceeds over (depreciated) historical costs on the irregular sale or disposal of assets. Sale of assets may lead to the

realization of a capital gain. The sale of any fixed asset at a price that differs from its depreciated historical cost gives rise to this kind of realized gain.

D – Realized cost savings – the excess of the current cost over the historical cost of inputs used in producing output sold.

Cost savings are realized through the use of assets in production and sale. If the current cost of assets used up in production and sale exceeds their historic costs, the firm has realized a gain because the assets were originally purchased at a cost below that currently prevailing. While current operating profit is the excess of selling price over current cost, realized cost savings represent the excess of current cost over historical cost for those inputs used in production and sale. Gains realized through use in this way should not be confused with operating profit. While the gains are realized through the use of the assets in the firm’s operations, they do not have their genesis in operating activities but rather in holding activities. Gains through use are realized largely on materials that enter into the cost of goods sold and those asset services whose value is estimated by depreciation charges.

C and *D* are alternatives to *B* as a way of measuring capital gains (or cost savings). The usual accounting matching of historical costs with current values does not permit the proper separation of profit into operating and holding components: 1) Gains realized through use are confused with operating profit; 2) Individual price changes of assets held by the firm are not recorded as they occur. Instead, gains are recorded to the period in which they are realized. As a result balance sheet values are based on historical cost. Using the notation described above, the accounting profit can be characterized as follows:

		Profit elements included		:
		As operating profit	As capital gains (or cost savings)	
Accounting profit	=	$(A + D)$	+	C

Figure 3. Profit elements for accounting profit

Source: (Edwards and Bell 1961, 116)

Because of these limitations the task of evaluating managerial expectations of current events is made unnecessarily difficult.

Capital gains are counted only when realized. This means that some of the events of past periods, notably price changes and the gains or losses associated with them are treated as though they would be events of the current period.

Realized profit. Here the gains realized through use are classified as cost savings rather than as operating profit. Realized profit differs from accounting profit not in total but in its definition of components.

		Profit elements included		:
		As operating profit	As capital gains (or cost savings)	
Realized profit	=	<i>A</i>	+	<i>(C + D)</i>

Figure 4. Profit elements for realized profit.

Source: (Edwards and Bell 1961, 121)

The measurement of realized profit entails the application of the following principles:

- 1) In determination of operating profit, inputs should be deducted from the current value of output at their current cost.
- 2) The difference between the current cost and historical cost of inputs used in production of goods which are sold should be recorded as a realized cost saving.

Such a measurement would have the advantage of drawing a sharp distinction in the records between current operating profit and realized cost savings, which enables in decision making process to distinguish between the profit from operating and holding activities.

Here the realized components of real holding gains are routed through profit. The resulting capital maintenance measure is generally quite similar to that provided under *general price level adjustments (GPLA)* even though the statements are totally different in other respects.

Business profit (also called *Earning Power Income*). The business profit concept is based upon the application of the realization criterion on a production basis and on the use of the realizable principle over time. Current entry values are used as a basis for valuation, but no gains from production are recognized until sale. The goods sold are measured by current values. Here the matching of current (exit values) with current (entry) costs as a means of defining of operating profit is used. An increase in the current cost of assets held represents a cost saving. The cost saving is both realizable and realized.

Here the individual changes in cost must be recorded as they occur. Business profit is defined to include current operating profit (component *A*) and realizable cost savings (component *B*).

		Profit elements included		:
		As operating profit	As capital gains (or cost savings)	
Business profit	=	<i>A</i>	+	<i>B</i>

Figure 5. Profit elements for business profit.

Source: (Edwards and Bell 1961, 121)

Its measurement requires data on the price changes of individual (or small groups of) assets and entails the application of the following principles:

- 1) When price changes increase the value of an asset, realizable cost savings should be recorded. These form the capital gains element of business profit.
- 2) When an asset or asset service is used in production, its current cost should be deducted from the current value of output to determine operating profit.
- 3) The difference between current cost and historical cost of assets or asset services used in production also marks the conversion of what was a realizable gain to a realized gain.

The proponents of the business profit theory recommend this concept as a good predictive device whereas the real holding gains are an indicator to users that real future earnings of the firm in the future are expected to increase. Future income is expected to rise on the presumption that real holding gains indicate an increasing demand for goods and services provided by the particular enterprise. Capital maintenance under business profit is geared to treating total real holding gains arising during the period as elements of profit (these are also referred to as realizable real holding gains).

3.3.3. Current Purchasing Power Approach to Profit Measurement

Besides current value accounting a less complicated system exists for unstable monetary unit and price changes accounting: the *current purchasing power* or *GPLA-concept*. This concept for measurement is of great importance in periods of high inflation because under a historical cost-based system of accounting inflation leads to two basic problems. First, many of the historical numbers appearing on financial statements are not economically relevant because prices have changed since they were incurred. This is the problem of representational faithfulness. Second, since the numbers on financial statements represent dollars expended at different points of time and, in turn, embody different amounts of purchasing power they are simply not additive. Such arithmetic is incorrect, for it involves adding together amounts expressed in different measurement scales.

Predictive value is diminished as a result of using and combining dollars of different purchasing power.

The current purchasing power concept is basically an adjusted historical cost concept: adjustments are made to recorded historical cost values for changes in the purchasing power of money by means of a consumer price index (CPI). Thus here the adoption of new measurement system does not exist.

The methodology of restating historical cost for changes in units of currency is generally easier than measuring current cost. It involves merely obtaining an externally derived index, such as the CPI, and multiplying that index by the historical cost.

Here the adjustments are limited for general price level changes: the historical cost values are corrected into current purchasing power equivalents, using retail price index. The purpose of price level adjustments is to express each item in the financial report in terms of common monetary unit, that is, in the terms of monetary unit of the same purchasing power. The retail price index is assumed to reflect the general movement in price of all goods and services. But the price level corrections alone ignore the impact of individual price changes: capital may be dispersed through changes in individual prices, which for individual enterprise can be different from general price level movements.

For the purpose of current purchasing power accounting it is necessary to distinguish between two classes of items – monetary and non-monetary items. Monetary items are those fixed by contract or by their nature and are expressed in monetary units regardless of changes in the price level. They include monetary assets such as cash, debtors and loans, and exist as money or as claim to specified sums of money. Non-money items are assets and liabilities such as fixed assets, shares and shareholders' equity, which are assumed neither to lose nor to gain in value by reason of inflation or deflation. This is because price changes for these items will tend to compensate for changes in the value of money.

When a current purchasing power income statement is prepared, revenues and expenses are restated to end-of-year prices. The difference between restated revenues and expenses is reported as profit (loss) before purchasing power gain (loss). The purchasing power gain (loss) is then added (deducted) to produce current purchasing power net profit (loss).

As emphasized before, in order to measure the change in the level of prices occurring during a particular time of period, a price index must be constructed. A price index is a weighted average of the current price of goods and services; these averages are related to prices in a base period, and their purpose is to determine how much change has occurred.

Price index may be narrowly constructed to determine the changing level of prices in a particular segment of the economy, or broadly constructed for ascertaining the change in prices for all goods and services of an economy. The first type is called a specific price index and the second a general price index. For both types of indexes, considerable statistical sampling must be done because the number of goods and services involved, as well as the number of transactions occurring, may be very large. Hence sampling error may easily occur. Here the conceptual problem of measurement is also present while different types of indexes exist. The most well-known are Laspeyres-type index and Paasche index. Laspeyres indexes use base-year quantities only, whereas Paasche indexes employ current-year quantities.

3.3.4. Conclusions

The business profit, realized profit and realizable profit models have in common that they advance a dual profit display, and defend a separation between two different profit concepts that is based on economically meaningful criteria. In general, the gains and losses component in these models is viewed as less relevant for management evaluation and prediction purposes. The current comprehensive income reporting project and the proposals for categorizing comprehensive income have a remarkable resemblance with these models.

It needs be pointed out, that Edwards' and Bell's theory adopts a broad social focus that encompasses all economic sectors, not just organized security markets, which is important from the point of view of conclusions of this work, valuating profit rather as the indicator of company management. Indeed, Edwards' and Bell's focus can be viewed as that of "ultimate economic consequences," i. e. whether or not the information signals make it possible to achieve an allocation on the efficient frontier (Revsine 1981).

3.4. Analysis and Summary

Summing up, the discussion about theoretical foundations of profit figures and practical applications of financial accounting boil down to the quest for "true" profit, i.e. to find the measure of profit, most precisely disclosing the company performance, revealing different aspects of company operations in it, and the company's opportunities for the future. There are three important viewpoints to the subject: whether to attach importance to profit as the firm's value indicator (valuation school), or to pay attention to the predictable abilities of profit numbers for investment decisions for stock-markets (informational school) or to see profit as the indicator of change in firm's net assets (normative school).

Economists have generally adopted a wealth maintenance concept of profit. Under this concept, profit is the maximum amount that can be consumed during a period and still leave the enterprise with the same amount of wealth at the end of the period as existed at the beginning (Hicks). Wealth is determined with reference to the current market values (fair values) of the net productive assets. Therefore, the economists' definition of profit would fully incorporate market value changes in the determination of periodic profit.

Accountants, on the other hand, have generally defined profit by reference to specific transactions that give rise to recognizable elements of revenue and expense during a reporting period. These transactions are a subset of economic events that determine economic profit.

As the profit concept of financial accounting, the comprehensive income concept is gaining ever more prominence; it is the common position when handling the profit, as held by two large legislators in the area – the IASB and the FASB. By way of comprehensive income conception the accountants have moved closer to an economic measure of profit. However, because of the realization and recognition concerns from accountants' side, comprehensive income has remained a subset of economic profit.

However, in that connection, the valuation aspect acquires more prominence.

The concept of comprehensive income is more inclusive than the traditional concept of accounting income. Comprehensive income can be included in a statement that covers the change in a firm's net assets for a period from all sources except transactions with owners. It is an all-inclusive term that can be helpful to the user searching for the elusive true income number by (a) providing details highlighting the complicated nature of the number and allowing the users to make their own assessments and (b) by portraying the performance of the firm as a continuum, with transactions and events occurring both regularly and irregularly throughout the company's existence (Riahi-Belkaoui 2004, 189).

It needs be pointed out that the present comprehensive income concept has much similarity with the above analysed business profit and realizable profit models, hence enjoying the benefits of economic profit and different valuation concepts, as regards the measurement of profit within accounting framework.

In what follows the issues have been analysed, which have emerged in connection with implementation in practice of the comprehensive income conception generally and in the Estonian practice.

An old and unresolved issue in accounting has been whether profit should be determined according to the principle of *clean surplus accounting* (Brief and

Peasnell 1996). Clean surplus profit includes all value changes in equity, except those resulting from transactions with owners.

The importance of clean surplus stems from two related sources: 1) its use in the valuation of firms and 2) providing a conceptual link between market and book values (Thinggaard 2006).

The comprehensive (all-inclusive) income concept is based on the *clean surplus relation*

$$BE_t = BE_{t-1} + NP_t - DIV_t,$$

where

BE_t – book value of equity at the end of the period t .

BE_{t-1} – book value of equity at the beginning of the period.

NP_t – net profit.

DIV_t – dividend paid in period t .

The presented formula states that the book value of equity at the end of the period t , BE_t , is equal to the book value of equity at the beginning of the period BE_{t-1} plus net profit NP_t minus the dividend paid in period t , DIV_t .

On the other hand, the equity value of a firm is the net present value of its future dividends

$$V_t = \sum_{t=1}^{\infty} E_t [DIV_{1+t}] \times (1+r)^{-t},$$

where

$E_t [DIV_{1+t}]$ – the expectation operator (dividends) of time t .

r – the risk-adjusted discount rate.

Given clean surplus, firm value can be equally expressed in terms of book values of equity and net profit.

But even under dirty surplus accounting, comprehensive income reconciles all income and expense items, regardless of whether these were booked directly on the equity account or passed through the net profit statement. In other words, a statement of comprehensive income mimics clean surplus profit. To have all gains and losses reported in an organized way in a statement of comprehensive income would enhance the accessibility and comprehensibility of financial statements.

Residual profit (RP) is defined as net profit (*NP*) minus the cost of (equity) capital.
 $RP_t = NP_t - r \times BE_{t-1}$

So, the value of firm can be expressed, using its book value of equity and the net present value of the expected residual (or abnormal) profit numbers (Tsay *et al.* 2008).

For example, residual profit valuation model has been treated by Preinreich 1936, Edwards and Bell 1961 and Peasnell 1982. Residual profit model is based on three assumptions: present value pricing, clean surplus relation and linear information dynamics (Kwon 2001).

The following equation links financial statement amounts to firm valuation and explains the use of book amounts for investment analysis in its own right (Thinggaard 2006).

$$V_t = BE_t + \sum E_t[RP_{t+j}] \times (1+r)^{-j}$$

where

V_t – value of the firm.

$E_t[RP_{t+j}]$ – the expectation operator (residual profit) of time t .

Clean surplus accounting can be as well a good basis for specific accounting methods with respect to the provision of incentives for management to take optimal decisions (Dutta and Reichelstein 2005). Total recognized income and expense link directly to the full balance sheet, whereas any subset of income and expense does not (Thinggaard 2006).

The analytic research identifies all-inclusive profit as being the fundamentally important concept in financial reporting.

From what has been said in the section 3.2.4 of this research, it follows that under the IASB Framework, both revenues and gains are included in income and expenses also include losses. So, in principle, the IASB Framework endorses *clean surplus accounting*, under which every income and expense item is run through the income statement. As a consequence of double-entry accounting, the clean surplus profit number shows the increase in net assets derived from non-owner transactions and is therefore regarded to be a „true“ or „tell it like it is“ measure of profit (Cauwenberge and Beelde 2007). Clean surplus relationship holds from an equity perspective if all gains and losses of a period are included in that period's profit (Isidro *et al.* 2006). Violations of clean surplus relationship (*dirty surplus accounting flows*) arise when some recognized gains and losses are excluded from

net profit. The relative lack of transparency of dirty surplus accounting might limit the usefulness of accounting numbers in performance measurement (FASB 1997). There has also been some concern that dirty surplus accounting may be a source of error in accounting-based valuation models (Isidro *et al.* 2006).

Standard setters have departed from clean surplus accounting on many occasions, allowing certain value changes to bypass the income statement and be booked directly into equity. Actually, comprehensive income is not fully comprehensive. So, in practice many individual IASB standards, especially those involving fair value measurement, have departed from the clean surplus rule, for example IAS 16, Revaluation of Property, Plant and Equipment; IAS 21, Foreign Exchange Gains/Losses on Translation of Net Investment; IAS 39, Unrealized Gains/Losses on Available for Sale Instruments.

Some guidelines of the Estonian Accounting Standards Board 2009 (ASBG) also tolerate deviation from clean surplus accounting and allow presenting changes in value of certain assets directly in equity: especially ASBG 5 and ASBG 6 - for some non-financial assets the revaluation model is permitted (different from fair value model). Under the revaluation model, increases in carrying amount above a cost-base measure are recognised as revaluation surplus in equity, dismissing the profit.

Thus, it can be mentioned, that IASB profit conception is inaccurate. Conceptual Framework defines clean surplus accounting. Different IFRSs standards allow, as said before, dirty surplus model. The result is that profit as reported under IFRSs is not equal to income less expenses as defined in the Framework. The Framework's logic of calculation of profit in the income statement excludes capital maintenance and reclassification adjustments (Barker 2010). IAS 1 gives the definition of total comprehensive income, which does not exist in Framework and is defined as follows: Total comprehensive income is the change in equity during a period resulting from transactions and other events, other than those changes resulting from transactions with owners in their capacity as owners (IASB 2011, IAS 1). Total comprehensive income is effectively clean surplus profit by another name. So, total comprehensive income in IAS 1 is a confused concept that results from the internal inconsistency identified above in IFRSs definitions of income, expenses and profit. Total comprehensive income is not defined in the Framework and therefore lacks conceptual merit.

Comprehensive income enables displaying an entity's total profit on a statement with separate segments for realized and unrealized components of profit. Actually differentiation of realized/unrealized components between profit for the period and other comprehensive income is not presently consistent, either in the IFRSs framework or that of the Estonian rules.

The IASB is proposing a dual approach to profit, where both net profit and comprehensive income are presented, giving the two profit numbers equal standing. So it is very topical now to consider different positions on the question of dual presentation of comprehensive income, and whether performance can be defined in a single concept, and if so whether comprehensive income or net profit should be preferred. Some have said that net profit is a measure of management's performance and comprehensive income is a measure of entity performance (Epstein *et al.* 2009, 76).

The debate between proponents of net profit and comprehensive income emerged out of two different viewpoints, concerning the purpose of the income statement: telling the facts and predictive ability (Brief and Peasnell 1996). Using comprehensive income as the main indicator and not separating it from profit or loss for the period is supported by those who take profit for telling the facts or as an indicator of the change in the company's wealth, as only comprehensive income shows the total increase in the value of net assets. Theories that support comprehensive income include Edwards' and Bell's theory of business profit and the theory of realizable profit both of which treat profit in the same way with the economic profit conception. These theories were examined in detail in the section 3.3 of this paper. On the other hand, those attaching greater importance to predictive ability of profit favour net profit because of its superior analytical properties as compared with comprehensive income. Proponents of net profit are supported by the informational approach in accounting research and surprisingly by Ohlson's valuation approach too. Ohlson looked at the connection between stock-market valuations of companies and their financial indicators (Ohlson assumes that accounting profit follows the clean surplus rule (Pinto 2005)) and found the strongest link was with net profit (Ohlson 1995).

It needs be mentioned that the empirical researches, designed to look into value relevance of different profit numbers, have yielded different results. Empirical studies in the said domain mainly amount to a linear regression analysis oriented to capital markets, scrutinising the strength of a link between different profit numbers (net profit, comprehensive income, various components of other comprehensive income etc.) and share prices or predictive ability for future cash flows – respectively the valuation or informational approach. Researches of different periods and in different countries have come up with different results. For instance the results by Dhaliwal *et al.* (1999), Plenborg (1996), Cheng *et al.* (1993) and O'Hanon and Pope (1999) suggest the stronger link of net profit, as contrasted to comprehensive income. Cahan *et al.* (2000) found that comprehensive income is superior to net profit. Biddle and Choi (2003) find that some other comprehensive income items exhibit greater information content for equity returns than net profit and fully comprehensive income. In contrast, Zülch and Pronobis (2010) found no evidence that comprehensive income or individual components of other

comprehensive income have superior predictive power to net profit. The results of Dastgir and Velashani (2008) empirical research show that comprehensive income is not superior to net profit for evaluating company performance on the basis of stock return and price, but comprehensive income adjustments improve ability of profit for reflecting company performance.

Whether net profit, comprehensive income, economic profit, or some other measure is the appropriate measure of profit is partially dependent upon the perspective of the user doing the measuring.

The issue, finding of the solution to which is contentious to the comprehensive income conception, is elimination of shortcomings concomitant with fair value measurement. Accounting is utilitarian, so the accounting research question is one of developing accounting that handles assets in a way that helps rather than hinders the analyst who wishes to value the firm (Penman 2009). In recent debates fair value measurement has met with serious opposition: higher profit volatility caused by the inclusion of fair value measurements raised the fear for higher risk premiums. The subjective character of certain fair value measurements is also said to corrupt the quality of the profit number. The use of fair value has been perceived as providing an opportunity to smooth profit as well (Dechow *et al.* 2009). It is evident that an interpreter of profit numbers must take a possibility of intentional profit manipulation into account. Such action results, on the one hand, from a wish to present the profit number according to the company's needs or, on the other hand, from the flexibility of current accounting legislation – accounting practice is choice-based.

Alternatively there are positions specifically accentuating the objectivity of fair value as a market-based measure, for reflecting the economic position of the entity, and emphasise the need to employ fair value as the general basis of measurement, i.e. to substitute historical cost accounting rules with fair value accounting rules. Research done by Hirst *et al.* (2004) suggests that more complete measurement of fair value gains and losses in profit can aid analysts as they assess risk and link those assessments to valuation judgements. It is suggested by some authors that valuation models might better be based on numbers that incorporate elements of current value accounting (O'Hanlon 2004). For avoidance of subjective impacts the implementation of fair value needs a strong methodological and procedural basis (Mosso 2010).

As a matter of fact, the IASB has issued a new standard IFRS 13 in May 2011 for more specifically regulating the fair value measurements. The goal was to establish a single source of guidance for all fair value measurements required or permitted by IFRSs in order to reduce complexity and to improve consistency in their application; to clarify the definition of fair value and related guidance in order

to communicate the measurement objective more clearly; to enhance disclosures about fair value measurements to help users of financial statements to assess the valuation techniques and inputs used to develop fair value measurements.

The foregoing analysis of profit conceptions allows the author to draw a conclusion that the novel comprehensive income conception is inherently suitable to the Estonian economical environment, where stock exchange plays a minor role. Hence one should attach value to profit as indicator of company performance. Put to the forefront as the informational value of profit, should be "true" or "tell it like it is", the lesser importance ascribed to its value as basis for predictions at the stock exchange. It provides a comprehensive income model, giving information about changes in company net assets (in wealth). Although in compliance with the position of the IASB and the FASB it is still allowed to use two report forms – net income and comprehensive income, when presenting the profit, it is well motivated regarding the EGAP to establish in Estonia the comprehensive income statement in the form of one report, featuring the period's net profit as subtotal. Such report is informative as regards the changes in the company wealth, while also allowing analysing the company management's activity at achieving the outcomes for the concrete period, because the subtotal net profit will not go amiss anywhere. Comprehensive income as indicator of changes in the company assets is actually very informative, when underlying the investment and crediting decisions. According to the "income statement effect", value changes receive greater attention and weight just because they are included in an income statement. It is the ignoring and miscalculating of the factor of change in company wealth which is sadly causing erroneous estimates, mistaken and misguided economic decisions, appreciably having contributed to the rise of the present crisis situation in the world economy.

The IASB has until now been engaged in how to develop a consistent basis for determining which elements should be presented in other comprehensive income and when reclassification to net income is appropriate. In this respect, it would pay for the Estonian financial accounting framework also to lay down the conceptual basis and to streamline the available guidelines as regards to what income elements must be viewed as belonging to net profit and which are to be considered as constituting other comprehensive income. It would also pay to analyse the existing rules for the purpose of clarifying, when it is expedient to use the cost model, fair value model or revaluation model. It should be pointed out that EGAP 2013 considers clean surplus model more as compared to EGAP 2009: revaluation model is not allowed to be applied in the case of fixed assets; the set of possibilities of alternative valuation models is limited etc.

4. COMPARATIVE ANALYSIS OF ACCOUNTING PRACTICES

4.1. Review of Problems in the Domain

As aforesaid, lying hidden in the accounting theory are the options to create different accounting systems, hence various countries have developed different rules of financial accounting, deriving from cultural, political, economical, legal, financial and other variations. Also embedded within one system are usually alternative possibilities to account and report of the indicators. The said differences are to be taken into account when comparing the financial data and passing decisions. Analysed in this chapter has been the impact of accounting differences on profits. Differences in the accounting practices of countries are of two types. Similar events can be reported in different ways in different countries. For example, different valuation rules may be used for various assets and liabilities. Second, different events may be reported in different countries. Differences in accounting rules or practices can impose significant costs on providers and users of financial statements. The costs include extra preparation or analysis costs. Besides that, indirect costs may arise, because different decisions may be taken if different information is available (Roberts *et al.* 2005, 226).

The sources of differences between accounting systems are:

- differences in the rules of financial accounting and reporting in different countries;
- differences in the ways in which the rules are interpreted or implemented;
- differences in preferred practices.

The first, the most obvious reason why companies from different countries use different accounting methods or report different information is because the rules or regulations call for different treatments. But even where the rules of two countries are identical, they may be interpreted in different ways by companies in the two countries. Namely, with indicators, which are appreciable according to rules of financial accounting, national idiosyncrasies and traditions may play a role at their estimating. A distinction must be made between accounting regulations, or *de jure* issues, and actual practices, or *de facto* issues. Accounting regulations often contain a number of options, where making a choice may also depend on national traditions.

One cannot underestimate either the possible different content of concepts and terms in various financial accounting systems.

Endemic for the present time is the tendency to universally unifying the rules of financial accounting and the year of 2005 can be considered the beginning of

breakthrough of IFRSs, with the EU stock exchanges establishing the requirement to accounting in line with IFRSs (Roberts *et al.* 2008) and presently two large law makers the IASB and the FASB are engaged at tackling the joint projects. Although significant progress is in evidence towards national acceptance of IFRSs, there are nevertheless the differences, impacting on formation of profit, and therefore meriting attention.

This research compares the profit calculated under EGAP rules with the US GAAP profit and IFRSs is used as the focus of comparison. There has been carried out a qualitative analysis, meaning within context of this thesis the comparison of different rules as impact factors of profit formation and the quantitative analysis, handling the estimate of size of the aforementioned impacts. When creating the model of quantitative analysis, underlying is the outcome of qualitative analysis. For accounting systems of various countries such comparative analyses have been made, which is not the case in Estonia, as yet.

The rules of the EGAP underwent the last modification in 2011 and base now on IFRS for SMEs – hence the Estonian rules have been somewhat simplified, taking into consideration the company type dominating in Estonia. New guidelines took effect on 01.01.2013. Comparisons with IFRSs and US GAAP have been made with the Estonian rules applicable until 2013. However, it has also been looked at what the impact has been of the recent change of rules on profit, as contrasted to the earlier rules.

4.2. The Standpoints of the Estonian Good Accounting Practice

4.2.1. Development of Estonian Financial Accounting System

The EGAP is an accounting practice basing on internationally recognised accountancy and reporting principles, the main requirements of which are established by Accounting Act and guidelines of the Estonian Accounting Standards Board complementing the Accounting Act. The Estonian rules are the IFRS simplified copied subset. The conceptual framework of Estonia proper is not in existence. The currently applicable Accounting Act was enacted in 2003. Further on, the said Act and guidelines of the Estonian Accounting Standards Board have been repeatedly amended (2004, 2005, 2008, 2009), with a view to providing compliance with IFRS, which in its turn has also undergone constant development. Starting from 2013, applicable is the new set of guidelines of the Estonian Accounting Standards Board, basing on IFRS for SMEs.

Presented hereinbelow is a short overview of evolution of Estonian current practice of financial accounting.

The Soviet accounting system reigning supreme ca 50 years had a major impact on Estonian accounting practice. That system applied in Estonia was an integral part of the centralized administrative institutional structures for the direction and control of the command economic system (Alver and Alver 2008). Hence stewardship concept of financial reporting was prevailing. There was no need for accounting information as management or stock exchange information, nor was there a need to develop theory. Lack of tradition of analysis has impressed a trace also on the current practice. For instance, no high level peer-reviewed accounting journal has developed, enabling discussion.

The year 1990 marked the beginning of formation of an accounting system, supportive of the market economy. The Regulation of Accounting was adopted by the National Government. This Regulation came into force on January 1, 1991. The years 1991-1994 can be characterized as a mix from the past (several elements of the old Soviet system were in force), present (new methods and new formats of statements were introduced) and future (several new terms of market economy used during that period acquired a real content many years later) (Alver 2005). The second period lasted during the years 1995-2002 (Tikk 2010), starting with the introduction of the first Accounting Act.

The third period started in 2003, when the second Accounting Act, supplemented by a number of guidelines (standards) of the National Accounting Board, came into effect. The declared goal of the Act is to create the legal basis and establish general requirements for organizing accounting and financial reporting pursuant to internationally recognized principles. Guidelines of the National Accounting Board can be characterized as “mini versions” of IFRS.

Characteristic for the present time in the practice of Estonian financial accounting are changes again. IASB adopted in 2009 the simplified set of standards for small and medium sized companies (IFRS for SMEs). Because the predominant majority of Estonian companies belong among small and medium sized companies, in 2011 EASB changed its set of guidelines bringing them in conformity with IFRS for SMEs, with a view to eliminate the excessively complicated instructions. The new guidelines have become effective as from 2013.

4.2.2. Reporting of Profit

As regards the accounting and reporting for profit, the Estonian guidelines follow the IFRSs standards on profit elements. The elements on Estonian income statements are in line with the information required to be presented on the face of the Income statement by IAS 1 (IASB 2011, IAS 1.82).

IFRS does not specify fixed income statement formats. The Estonian Good Accounting Practice lays them down: there is an option to elect one among two income statement schemes. Underlying the difference between the layouts is classification of expenses: in format 1 the expenses are classified by nature, in format 2 by function.

Since 2009, it has also been obligatory to present the comprehensive income statement in Estonia. Comprehensive income statement should be presented as a separate statement by the companies, whose activity gives rise to other comprehensive income entries specified in that statement. Comprehensive income statement has to be submitted after income statement as a separate report.

The concept of comprehensive income, as emphasized before, leads to the posting of unrealized gains/losses into the composition of profit, and increases comparatively to the earlier situation, the role of fair value in valuation of assets and liabilities. This has effect on both profit and equity measurement.

A practice has evolved, that the segregation of total recognised income and expense can be done in a variety ways. For example: ordinary-extraordinary, usual-unusual, frequent-infrequent, recurring-nonrecurring, realised-unrealised, reversible-irreversible, normal-abnormal, operating-non-operating, controllable-non-controllable, core-non-core, continuing-discontinued, operating-holding, distributable-non-distributable (Johnson and Lennard 1998). Most common is the separation of earnings that are non-operating, non-recurring or non-controllable by management (Barker 2004).

The structure of Estonian income statements and the contents of the records have been presented in Tables 5, 6 and 7 (Source: ASBG 2. Requirements for Presentation in the Financial Statements).

Table 5. Income Statement Format 1

Net sales	Revenue earned from the sale of products, goods and services in the accounting period
Other operating revenues	Irregular revenue earned during business activities, incl. gain from the sale of property, plant and equipment, and intangible assets and investment properties, fines and fines for delay received; net gain arising on exchange rate changes on trade receivables and liabilities to suppliers (if the result is loss, it is recognised in the line item "Other operating expenses")
Changes in inventories of finished goods and work-in-progress	Changes in inventories of finished goods and work-in-progress, whereby the decreases of balances are recognised as an expense and the increases of balances as a decrease of expenses ("negative expense").

Work performed by an entity for its own purpose and capitalised	Materials and services that have been used in the production of non-current assets and that have been recognised as an expense under another income statement item are recognised as a decrease in this item (“a negative expense”)
Goods, raw materials and services	The cost of goods, raw materials, and services purchased for operating activities (e.g. production or sales activities)
Other operating expenses	The cost of services and supplies purchased for administrative and other purposes not directly related to operating activities (e.g. the cost of bookkeeping services, consulting expenses, office expenses, advertising expenses, insurance, start-up and research expenses, expenses related to setting up provisions, the expense for the allowance of doubtful receivables, etc.)
Staff costs	
Wages and salaries	Wages and salaries, bonuses, holiday pay and other monetary and non-monetary compensations for the employees calculated during the accounting period
Social security costs	Social security tax calculated on payments listed under the previous item subdivision and unemployment insurance premium paid by an entity.
Pension expenses	The expense calculated on an accrual basis by an entity in conjunction with the paid or future pensions and other post-employment benefits.
Depreciation and impairment of non-current assets	Depreciation charge and expenses arising on the impairment of non-current assets (write-downs and/or write-offs) calculated on property, plant and equipment, and investment properties recognised at cost.
Miscellaneous expenses	Irregular costs incurred during operating activities, incl. loss on the sale of property, plant and equipment, and investment properties, fines and fines for delay, net loss arising on exchange rate changes on trade receivables and liabilities to the suppliers
Operating profit (loss)	
Financial revenues/ expenses	
Financial revenues and expenses from subsidiaries	Gain/loss on the sale of subsidiaries and profit/loss based on the equity method
Financial revenues and expenses from associates	Gain/loss on the sale of associates and profit/loss based on the equity method
Financial revenues and expenses from other long-term financial investments	Gain/loss on other long-term financial investments, incl. profit/loss on the sale of long-term financial investments; interest and dividend income on long-term financial investments; gain/loss on revaluations to fair value
Interest expenses	Interest expenses on loans, bonds, finance lease agreements and other interest bearing borrowings
Foreign exchange gains (losses)	Gain/loss on exchange rate changes of receivables and liabilities (e.g. loans given and received) denoted in foreign currencies and related to financing and investing activities
Other financial income and expenses	Gain/loss on short-term financial investments, incl. on the sale of short-term financial investments; interest and dividend income on short-term financial investments; gain/loss on revaluations to fair value

Total fin. income/ expenses	
Profit (loss) before tax	
Corporate income tax expense	The amount of corporate income tax on dividends (recognised when dividends are declared)
Net profit (loss) for year	
Share of parent company	Profit that belongs to shareholders of the parent company
Share of minority in profit	Profit that belongs to minority shareholders

Table 6. Income statement Format 2

Net sales	Revenue earned from the sale of products, goods and services in the accounting period
Cost of goods sold	The cost of products, goods and services sold during the accounting period as well as production losses and other similar production costs that are not included in the cost of goods sold. The cost of goods sold is calculated using the same principles and amounts as in the case of the net sales.
Gross profit (loss)	
Distribution costs	Costs incurred for the distribution function of an entity (incl. remuneration for the personnel engaged in distribution, depreciation charge of non-current assets relating to distribution, transportation costs made for distribution purposes, advertising costs, etc.)
Administrative expenses	Costs incurred for the administrative function at the entity (incl. pay for administrative personnel and management, depreciation charge of administrative facilities and equipment, major portion of consulting costs, etc.)
Other operating revenue (expenses)	Irregular revenue earned during business activities, incl. profit from the sale of property, plant and equipment, and intangible assets and investment properties, fines and fines for delay received; net profit arising on exchange rate changes on trade receivables and liabilities to suppliers (if the result is a net loss, it is recognised in the line item "Other operating expenses")
Miscellaneous expenses	Irregular costs incurred during operating activities, incl. loss on the sale of property, plant and equipment, and investment properties, fines and fines for delay, net loss arising on exchange rate changes on trade receivables and liabilities to the suppliers (if the result is a net profit, it is recognised under the item "Other operating income")
Operating profit (loss)	
Financial revenues and expenses	
Financial income and expenses from subsidiaries	Gain/loss on the sale of subsidiaries and profit/loss based on the equity method
Financial income and expenses from associates	Gain/loss on the sale of associates and profit/loss on the equity method

Financial income and expenses from other long-term financial investments	Gain/loss on other long-term financial investments, incl. profit/loss on the sale of long-term financial investments; interest and dividend income on long-term financial investments, profit/loss from revaluations to fair value
Interest expenses	Interest expenses on loans, bonds, finance lease agreements and other interest bearing borrowings
Foreign exchange gains (losses)	Gain/loss arising on exchange rate changes of receivables and liabilities (e.g. loans given and received) denoted in foreign currencies and related to financing and investing activities
Other financial income and expenses	Gain/loss on short-term financial investments incl. the sale of short-term financial investments; interest and dividend income from short-term financial investments; profit-loss on revaluations to fair value
Total financial income and expenses	
Profit (loss) before tax	
Corporate income tax expense	Corporate income tax on dividends (recognised when dividends are declared)
Net profit (loss) for year	
Incl. the share of net profit by the shareholders of the parent company	The item is used in the consolidated income statement for the recognition of the share of the group's profit that belongs to the shareholders of the parent company.
The share of net profit by the minority shareholders	The item is used in the consolidated income statement for the recognition of the share of the group's profit that belongs to minority shareholders.

Table 7. Statement of Comprehensive Income

Profit (loss) for the reporting year	From Income statement
Other comprehensive income (loss)	
Book differences in rates of exchange	Differences generated at recalculation of financial indicators of a foreign business unit from accounting currency to reporting currency (ASBG 1 clause 89)
Revaluation of financial assets	Gains and losses generated from revaluation of certain financial assets reported in fair value (e.g. long-term investments into shares and bonds, not to be resold in the nearest time) (ASBG 3 clause 20(b))
(Title of other gain or loss)	Other gains and losses, the reporting whereof the guidelines of the Estonian Accounting Standards Board do not regulate, which however are reported in comprehensive profit report subject to IFRS (e.g. the effective part of profits and losses generated at revaluation of cash flow risk diversification instruments subject to standard IAS 39)
Other comprehensive income (loss) for the year	
Comprehensive income (loss) for the reporting year	Profit (loss) + other comprehensive income (loss)

Share of parent company owners in comprehensive income (loss)	
Share of minority owners in comprehensive income (loss)	

Source: ASBG 2. Requirements for Presentation in the Financial Statements.

The analysis of elements follows.

Reporting of operating profit. As emphasized before, it is important to make distinction between operating and non-operating profit. Both Estonian income statement formats have operating profit sections. Operating profit as the result of subtraction of operating expenses from operating revenues is reported. The disclosure of operating profit may assist in comparing different companies and assessing operating efficiency. In addition, Format 2 enables to highlight the amount of gross profit (cost of goods sold is subtracted from net sales), which is useful for evaluating performance of an enterprise and assessing future earnings. The amount of net sales revenue is the number, which represents the regular revenues of the enterprise.

Profit from ordinary activities. Common for income statements are the sections of *financial income* and *expenses* and both formats of Estonian income statements include the sections, where financial revenues and expenses are presented. It needs be pointed out that in the financial section of income statement, the present format, differently from the previous one, requires the recording of income and expenses on the same record. This can complicate the analysis.

The result of *ordinary activities* (operating activities plus finance and investing activities) is an important intermediate component of income statement. In some accounting systems it is called *profit from normal operations*. Disclosing profit from ordinary activities should highlight the difference between *regular* and *irregular* or *incidental activities*. This information should enable users to recognize that irregular activities are unlikely to continue at the same level.

Actually, the conjunction of ordinary activities with regular activities is not perfect, because the records of *Other operating income* and *Miscellaneous operating expenses* contain irregular elements connected with operations.

Reporting of irregular items. The questions related with the reporting of irregular items require more attention, because here the problem, what should be included in net profit, comes to the fore.

There are different opinions among accounting academics and practitioners in this question, as said before, on whether the *current operating performance concept* and the *all-inclusive concept* exist.

The first direction suggests that irregular gains and losses and corrections of revenues and expenses of prior years should not be included in computing net profit, but should be directly added to retained earnings, because the net profit figure should show only the regular, recurring earnings. The other approach – the all-inclusive concept – suggests that irregular items should be included in net profit, because any gain or loss experienced by the enterprise contributes to its long-run profitability.

Here the classification problems appear too, which different accounting systems can treat differently, of whether some elements of profit should be reported in normal operating section or separately.

Estonian accounting system has employed the *modified all-inclusive approach*, where some types of irregular items are allowed, under certain conditions, to be recorded on balance sheet items (for example revaluation gains).

Presently IFRSs and also the EGAP, in its embrace, have reached an opinion that less confusion and manipulation is created by the situation, when both regular and irregular items report all ordinary activity. In Estonian reports the irregular items belong to the composition of entries „Other revenues“ or „Miscellaneous expenses“, without making use of extraordinary entries.

In international financial reporting practice the systems, where some types of irregular gains or losses are not reported on the income statement, but are taken directly to owners' equity account, can be frequently met. The classification of questionable items can be different in different accounting systems and, as a result, the treatment of those items as the components of profit instead of as the part of retained earnings and otherwise causes the misunderstanding of profit numbers.

For example, the US accounting system classification of irregular elements is different from IFRS. US profit reports contain the following categories of irregular elements, reported after section of normal operations: discontinued operations, extraordinary items, unusual gains and losses, changes in accounting principles. The classification concepts are constantly developing and changes in legislation take place.

Other comprehensive income. The records of other comprehensive income have been contemplated for presentation of such incomes/expenses, which have not been accounted in profit in case of traditional period profit (net profit) however they are reported as changes in owners' equity. According to EGAP, reported among other comprehensive income are unrealized gains/losses from revaluation of financial assets or the gains /losses generated from translation of foreign reports to reporting currency. When Estonian companies occasionally develop gains/losses, which have been contemplated by IFRS as part of other comprehensive income, however failing to be met in our rules, IFRS shall govern.

Earnings per share (EPS). Some accounting systems require that the income statements have to contain a line after the last line (net profit or comprehensive income line, depending on what report type is used) – called *earnings per share (EPS)*.

EPS is the figure, which is preferred by stock market analysts in evaluating the profitability of an enterprise, and by stockholders as well.

EPS indicate the profit earned by each share of common stock.

EPS is called a summary indicator because here the information is summarised in such a way that a single item can communicate considerable information about an enterprise's performance (Wolk *et al.* 2001).

Because of the importance of earnings per share information, this figure is required to report in the income statement below net profit in many countries. The US accounting practice has dealt with the EPS problems for a long time.

To achieve international comparability related to EPS presentations IASB issued in 1997 IAS 33, Earnings per share (IASB 2011, IAS 33).

The EGAP does not incorporate the instruction on EPS, because generally it is not required to present EPS.

In Estonia the requirement of EPS reporting applies to the following kinds of enterprises: which shares are noted at Stock Exchange, or which common stock or potential common stock is traded on open market, or which seek permission for open issuance of common stock or potential common stock (RTL 2000, 40, 561). Those companies must abide by IAS 33 instructions.

The computation of earnings per share is usually as follows: Net income less preferred dividends is divided by the weighted average of common shares outstanding.

$$\text{Earnings per share} = \frac{\text{Net income} - \text{preferred dividends}}{\text{Weighted average number of shares outstanding}}$$

When the income statement contains intermediate components of income, earnings per share should be disclosed for each component. These disclosures enable the user to recognize the effects of income from continuing operations on EPS, as distinguished from income or loss from irregular items.

The formula of EPS computing, indicated above, is used when the capital structure is simple: it consists only of common stock and includes no potential common stock that upon conversion or exercise could dilute earnings per common share. This EPS figure is called *basic EPS*.

At the latest thirty years in the world business practice a heavy merger activities have taken place, which have caused an increase in the use of securities such as convertible bonds, convertible preferred stocks, stock warrants, and contingent shares to structure these deals. Although not common stock in form, these securities enable their holders to obtain common stock upon exercise or conversion. They are called *dilutive securities or potential common stock* because a reduction – dilution – in earnings per share often results when these securities become common stock. The widespread use of dilutive securities has led to the need of the presentation the earnings per share figures that recognize their potentially dilutive impact on outstanding stock. The EPS figure, where the potential impact of dilutive securities is taken into account, is called *diluted EPS* and is reported with basic EPS figure in income statement. So the enterprises with complex capital structure have to report two EPS numbers: *basic EPS and diluted EPS*, where

$$\text{Diluted EPS} = \text{Basic EPS} - \text{Impact of dilutive securities outstanding during the period}$$

To measure the dilutive effect different methods are used, depending on the type of dilutive securities.

Using two profit numbers (net profit and comprehensive income) on the same level raises the question of whether this dual approach is also needed to use for the highest level aggregating – does EPS need to be calculated on the bases of both net profit and comprehensive income? The question then comes of how the reader of the report should understand two different numbers for profit, and which one should be preferred. It is well known that stock-market investors often make decisions not on the basis of profound analysis, but rather on the simplest data possible, for example EPS, so having two numbers for profit could cause confusion.

4.3. EGAP and IFRSs vs. US GAAP

4.3.1. Analysis of Notions and Terminology

The elements of financial statements defined within financial accounting may carry a different meaning in various systems. Considered in this connection have been the main notions of financial accounting in use in Estonia, as compared with IFRSs. It is necessary to be emphasised that the Estonian Accounting Act, which is a governing document in Estonia with regard to organising financial accounting, has defined the basic notions differently, as done in IFRSs, although the purpose of the Act is to create the legal bases and establish general requirements for organising accounting and financial reporting pursuant to internationally recognised principles (Estonian Accounting Act § 1). Because the basic conceptions of every area of activities are the basis, underlying the theory and normative acts and which must be proceeded from also in practice, the proper definition of basic concepts, in pursuance of international custom in the given area, is of fundamental significance. At this juncture we will scrutinize the assets, liabilities, equity, income and expenses – the elements of financial statements, which are at the heart of the IFRS Conceptual Framework.

The IFRS Conceptual Framework adopts a balance sheet approach; in that the definitions of liabilities, equity, income and expenses all follow inexorably from the definition of assets: liabilities are defined to be the opposite of assets, equity is the residual interest in assets having deducted liabilities, and income and expenses are defined as, respectively, increases and decreases in net assets (other than from transactions with equity holders). This balance sheet approach can be viewed as an application of the logic of double-entry accounting, which is that assets are sources of value that are necessarily equal to the claims on those sources, namely, equity and liabilities (Cayley 1894).

An asset

The following definition in the IFRS Framework is central: An asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity (IASB 2011, Framework).

Asset in Estonian Accounting Act: a monetarily measurable object or right belonging to an accounting entity (Estonian Accounting Act, § 3).

ASBG 1: Asset is the resource (a thing or right) checked by an entity which a) was created as a result of an event having occurred in the past; and b) will probably participate in the future at creating an economic benefit (or at fulfilling the purposes set to companies – for not business entities).

Comments: The stipulation of the Accounting Act derives from the Law of Property Act and does not fit within context of the Accounting Act and other guidelines of accounting and differs from the IFRS definition. It is not the asset, which should be defined – defined should be the object (unit) of asset. Further, when identifying the object of asset it is not important, that the object of assets must be assessable monetarily. IFRS makes the difference between the definition of object of asset and the need to report the object of asset on balance sheet.

Liability

IFRS Framework: A liability is a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits.

Estonian Accounting Act: a monetarily measurable debt of an accounting entity (Estonian Accounting Act, § 3).

ASBG1: Liability is the debt encumbering an entity which a) was created as a result of an event having occurred in the past; and b) release from which presumably demands forfeiting of resources in the future.

Comments: Definition of the Estonian Accounting Act is not in conformity with the IFRS definition and it is also very perfunctory and conceptually erroneous, confounding, and misleading. One has confused the concepts “liability” with “debt”. “Liability” is of wider meaning than “debt”. Definition of liability does not specify, as a condition precedent for its identification that liability must be assessable monetarily.

Equity

IFRS Framework: Equity is the residual interest in the assets of the entity after deducting all its liabilities.

Estonian Accounting Act: (net assets) – the difference between the assets and liabilities of an accounting entity (Estonian Accounting Act, § 3).

ASBG 1: Owner’s equity (net assets) is the difference between assets and liabilities of the entity, as of the balance sheet day.

Comments: Both the Estonian Accounting Act and ASBG 1 provide only the guidelines for calculation, absent is the economic substance of the concept. With the help of the computational algorithm the practicing accountant can do his or her job, deplorably failing to understand the essence of matters (Sokolov 2010). This

has given rise to the situation where in practical accounting in Estonia too little attention is accorded to economic substance of indicators, overlooking and not accepting the basic concepts. Definition of IFRS specifies the economic substance (the residual interest in the assets) of the owner's equity.

Income

IFRS Framework: income is increases in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases of liabilities that result in increases in equity, other than those relating to contributions from equity participants (IASB 2011, Framework 4.25).

Estonian Accounting Act: Receipts of the reporting period, accompanied by increase of assets or decrease of liabilities, increasing the equity of an entity, except the contributions to equity made by owners (Estonian Accounting Act § 3). ASBG 1: Receipts for the reporting period (enhancements of economic benefits), accompanied by increases of assets or decreases of liabilities, increasing the equity of the entity, except the contributions to equity made by owners (Estonian Good Accounting Practice 2011, ASBG 1, 24).

Comments: Both the Accounting Act and ASBG 1 use the vague term "receipts", accompanied by increases of assets or decreases of liabilities. Within IFRS framework however, in evidence are such increases in economic benefits, which are accompanied by inflows or enhancements of assets or decreases of liabilities. The definition of income in IFRS Conceptual Framework is incorrect too. That problem had been considered formerly.

Expenses

IFRS Framework: Expenses are decreases in economic benefits during accounting period in the form of outflows or depletions of assets or incurrence of liabilities that result in decreases in equity, other than those relating to distributions to equity participants (IASB, 2011, Framework 4.25).

Estonian Accounting Act: Outlays of the reporting period, accompanied by decrease of assets or increase of liabilities, decreasing the equity of an accounting entity, except the payments from equity made to owners (Estonian Accounting Act, § 3).

ASBG 1: Outlays for the reporting period (decreases of economic benefit), accompanied by decreases of assets or increases of liabilities, which decrease the equity of the entity, except the payments from equity made to owners (Estonian Good Accounting Practice 2011, ASBG 1, 25).

Comments: Both the Accounting Act and ASBG 1 use the term of vague meaning "outlay". Under IFRS Framework however expenses include such decreases in economic benefits, which may be accompanied by depletions of objects of assets. For instance depreciation expense is not an expense, subject to definition of Estonian Accounting Act and ASBG 1, however it is defined as such under IFRS formulation. Outlay is not the obligatory feature of expenses, short of being expense itself. The definition of expense in IFRSs Conceptual Framework is incorrect too. That problem had been considered formerly. In Estonian guidelines gains-losses have gone undefined; profit-loss is being used.

4.3.2. Comparative Analysis

In the process of qualitative analysis, subjected to comparison have been the guidelines of EGAP, applicable as from 1 January 2009 and the guidelines of EGAP, applicable as from 1 January 2013, the IFRSs 2011 and the respective US GAAP. Beside the EGAP, IFRSs rules are also allowed in Estonia. The US GAAP as known and acknowledged worldwide and as the main competitor for IFRSs is a necessary and interesting compendium of rules for both Estonian companies involved in international relations and for foreign investors. The author has also compared the differences of impact of the rules, applicable in Estonia before 2013 and those entering into force in 2013.

In what follows the regulations have been analysed, the impact of difference whereof on profit formation is material, as opined by the author.

1. The issues of valuation of property, plant, equipment and intangible assets.
 - a) In all accounting systems under consideration the initial recognition takes place in historical cost.
 - b) The further reporting uses either *cost model* or *revaluation model*.
 - *Cost model*. After recognition as an asset, an item of property, plant or equipment or intangible asset shall be carried at its cost less any accumulated depreciation and any accumulated impairment losses. Depreciation and impairment losses are reported in the profit of the period.
 - *Revaluation model*. After recognition as an asset, an item of property, plant and equipment or intangible asset whose fair value can be measured reliably shall be carried at a re-valued amount, being its fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses. Revaluations shall be made with sufficient regularity to ensure that the carrying amount does not differ materially from that which would be determined using fair value at the end of the reporting period.

Revaluation surplus is not reported in profit. Transfers from revaluation surplus to retained earnings are not made through profit or loss. The depreciation and discount are analogical with cost model.

EGAP 2009 allows basically the use of cost model; revaluation is allowed in exceptional cases (ASBG 5.23, 33, 51).

EGAP 2013: revaluation is not allowed.

IFRSs: allows the use of both cost model and revaluation model (IASB 2011, IAS 16.30, 31).

US GAAP: allows only cost model (Wiley GAAP 2010).

Comments: Differences arising of use of cost model or revaluation model cause impact on size of profit with regard to different depreciation amounts created. The difference of owner's equity is created due to revaluation surplus. It must be noted however that in case of revaluation model, the principle of clean surplus income has not been abided by. Therefore profit calculated according to Estonian old framework of rules may be smaller compared to that of calculating according to new framework, if revaluation model is taken into account.

c) Reversal of previously recognized impairment, when a respective need arises.

EGAP and IFRSs: in certain conditions reversal of previously recognized impairment is allowed. The result is disclosed in the profit for the period (ASBG 5.76; IAS 36.110-111).

US GAAP: Reversal of previously recognized impairment is not allowed (Wiley GAAP 2010).

Comments: The said difference impacts on difference in profit in the period of reversal of impairment loss and further depreciation expense.

d) Criteria of the need of impairment are somewhat different with EGAP, IFRSs and US GAAP.

EGAP and IFRSs: the need for impairment occurs in case when the assets book value exceeds its recoverable amount (greater of value in use discounted cash flows and fair value less cost to sell).

US GAAP: The need for impairment occurs, when the discounted future cash flows fall below the book value (Wiley GAAP 2010). This is in use, as one variant also by EGAP and IFRSs.

- e) Borrowing costs. In case of borrowing costs, the difference may derive from whether or not those costs must be capitalised.

EGAP 2009: allows the usage of both alternatives – either to capitalise or not the borrowing costs of the building period (ASBG 5.16).

EGAP 2013: Interest expenses are not allowed to capitalise.

US GAAP and IFRSs: capitalisation of borrowing costs of the building period is mandatory, while US GAAP allows capitalising of the interest expense only (Wiley GAAP 2010), with IFRSs allowing capitalisation also of other expenses, besides the interest expense (IASB 2011, IAS 23.12).

Comments: Profit calculated according to the US GAAP is bigger, when borrowing costs are capitalised. Profit calculated according to the EGAP 2013 is supposed to be less than profit calculated in accordance with the guidelines 2009.

- f) Research and development expenses.

EGAP 2009 and IFRSs: The expense on research is promptly posted as expense; the development expense is capitalized and depreciated (ASBG 5.47-48; IAS 38, 57, 63, 67, 69).

EGAP 2013: The development expense can be posted as expense or can be capitalised.

US GAAP: Both research and development expense is promptly posted to expense (Wiley GAAP 2010).

Comments: Profit calculated according to the US GAAP is smaller; profit calculated according to the EGAP 2013 is supposed to be less than profit calculated in accordance with the guidelines 2009 when the development expense is promptly posted to expense.

- g) Goodwill.

Different impairment testing procedures are used by IFRSs and US GAAP.

EGAP 2009 and IFRSs: Measurement of goodwill impairments similar to other long-lived assets, requires only single-step computation; measured at lowest level goodwill can be assigned (cash-generating unit) (ASBG 5.75; IAS 36.104).

EGAP 2013: Goodwill has to be amortized.

US GAAP: Measurement of goodwill impairment uses two-step approach: requires first comparing fair value of reporting unit to its carrying amount (book value including goodwill), then comparing implied goodwill to its carrying value, measured at level of reporting unit (business segment or one level below) (Wiley GAAP 2010).

2. Real estate investments.

- a) Initial recognition takes place in historical cost.
- b) Further disclosure takes place by use of *cost model* or *fair value model*.
 - *Cost model*. The real estate investment shall be carried at its cost less any accumulated depreciation and any accumulated impairment losses. Depreciation and impairment losses are reported in the income of the period.
 - *Fair value model*.

Increases: through other comprehensive income, accumulated in equity under the heading of revaluation surplus. However, the increase shall be recognised in profit or loss to the extent that it reverses a revaluation decrease of the same asset previously recognised in profit or loss.

Decrease: The decrease shall be recognised in profit or loss. However, the decrease shall be recognised in other comprehensive income to the extent of any credit balance existing in the revaluation surplus in respect of that asset. The decrease recognised in other comprehensive income reduces the amount accumulated in equity under the heading of revaluation surplus.

EGAP 2009 and IFRSs: allowed is the use of both cost model and fair value model (ASBG 6.18-30; IAS 40.33-56).

EGAP 2013: Cost model is allowed in exceptional cases.

US GAAP: allowed is only cost model (Wiley GAAP 2010).

Comments: Fair value model vs. cost model causes differences in profit: a gain or loss arising from a change in the fair value of investment property shall be recognised in profit or loss (the fair value of investment property shall reflect market conditions at the end of the reporting period).

3. Short time financial investments.

The differences from US GAAP belonging under financial investments concern hedge accounting, for which the EGAP does not contain any rules and in case

whereof the Estonian companies must consequently follow the IFRSs requirements. The main differences between IFRSs (IASB 2011, IAS 39) and the US GAAP (Wiley GAAP 2010) are as follows:

IFRSs: Hedging gains and losses from cash flow hedges of firm commitments and of forecasted transactions can be included as part of the initial measurement of the cost basis of the related hedged item (basis adjustment).

US GAAP: Basis adjustment arising from firm commitments and forecasted transactions may not be included in initial measurement of hedged item.

IFRSs: Non-derivative instruments can be used to hedge foreign currency risk.

US GAAP: Non-derivative instruments can be used to hedge currency risk associated with net investment in foreign entity or a fair value hedge of unrecognized firm commitment (Wiley GAAP 2010).

IFRSs: Hedging of portion of cash flows of hedged item is permitted.

US GAAP: Hedging of portion of cash flows of hedged item not permitted.

IFRSs: Reclassifications to or from “trading” prohibited.

US GAAP: Reclassifications to “trading” required under certain conditions, but reclassification from trading not permitted (Wiley GAAP 2010).

IFRSs: Hedging for part of term of hedged item permitted if effectiveness can be shown.

US GAAP: Hedging for part of term of hedged item not permitted (Wiley GAAP 2010).

IFRSs: “Macrohedging” is permitted.

US GAAP: “Macrohedging” not permitted (Wiley GAAP 2010).

IFRSs: Gain/loss on hedging net investment in foreign subsidiary taken to income upon partial or complete disposal or liquidation of investment.

US GAAP: Gain/loss on hedging net investment in foreign subsidiary taken to income upon complete liquidation of investment (Wiley GAAP 2010).

4. Inventories.

EGAP and IFRSs: Allowable costing methods include FIFO and average cost (ASBG 4.15-18; IAS 2.23-27).

US GAAP: allowable costing methods include FIFO, LIFO and average cost (Wiley GAAP 2010).

Comments: Profit is smaller when using LIFO in conditions of rising prices.

5. Revenue recognition

IFRSs: More possibilities for up-front revenue recognition when some performance has occurred (IASB 2011, IAS 18).

US GAAP: Generally must recognize revenue rateably over service period, no upfront recognition (Wiley GAAP 2010).

IFRSs: Revenue generally recognized on delivered part of multi-element contract even if refund triggered by failure to deliver remaining elements, if delivery is probable (IASB 2011, IAS 18).

US GAAP: Revenue recognition deferred on delivered part of multi-element contract if refund would be triggered by failure to deliver remaining elements (Wiley GAAP 2010).

IFRSs: If percentage cannot be reliably estimated, use of cost recovery method required: "revenue/cost" approach to percentage of completion mandatory; completed contract method banned (IASB 2011, IAS 18).

US GAAP: Revenue-cost and gross-profit approaches to percentage-of-completion both allowed for long-term construction contracts; use of completed contract method under certain circumstances is required (Wiley GAAP 2010).

Comments: The period, when revenue is accounted as a part of profit, depends on rules presented above; therefore profit can be different in different accounting systems.

6. Income taxes. EGAP: dividends are taxed.

7. IFRSs and US GAAP: Comprehensive inter-period allocation using liability method (statement of financial position orientation) (Wiley GAAP 2010).

Comments: Profit calculated according to the EGAP can be bigger.

In the following Table 8 the impact of aforementioned rules of different accounting systems to formation of profit is presented whereas it is displayed which components of profit are affected.

Differences of accounting methods of assets presented in the Table 8 create a difference in profit size. Because the financial accounting enables making alternative choices, this analysis uses those causing the largest differences in profit. Two consecutive years have been highlighted, because the impact on profit can be revealed in the next period (e.g. as depreciation expense). Whether profit is larger or lesser under Estonian or US rules depends on what objects of assets dominate in the given company: in companies with large share of tangible fixed assets the Estonian profit is generally more conservative. At domination of differences in accounting intangible assets the Estonian profit is larger. In case of real estate investments and inventory the result depends on the trend on movement of their prices. In case of real estate investments, in case of increase in prices the Estonian profit is larger, in case of decrease in prices smaller. In case of inventory, presuming the general domination of increase in prices the Estonian profit is larger, if with US GAAP LIFO is used, which is not allowed in Estonia. An illustrative example regarding the principles presented in Table 8 is presented in Appendix 1.

Table 8. The impact of different factors on profit numbers (EGAP vs. US GAAP)

	EGAP 2009		US GAAP	
	n. year	(n+1). year	n. year	(n+1). Year
<u>Tangible fixed assets</u>				
Revaluation	Revaluation takes place	-	-	-
Depreciation expense		+		
Profit		Lesser than by US rules		
Reversal of impairment	There is reversal of impairment	-	-	-
Gain	+			
Depreciation expense		+		
Profit	Bigger than by US rules	Lesser than by US rules		

Borrowing costs			Capitalised	Capitalised
Expense	+	+		
Depreciation expense			+	+
Profit	Lesser than by US rules	Lesser than by US rules		
<u>Intangible fixed assets</u>				
Development expense	Capitalised	Capitalised		
Expense			+	+
Amortization expense	+	+		
Profit	Bigger than by US rules	Bigger than by US rules		
Real estate investments	Fair value model		Cost model	
Gain from change in value	+			
Loss from change in value		+		
Profit	Bigger than by US rules	Lesser than by US rules		
Inventory	FIFO		LIFO	
Cost of goods sold	Lesser than by US rules	Lesser than by US rules		
Profit	Bigger than by US rules	Bigger than by US rules		

Source: Compiled by the author.

In Table 9 there is compared profit, calculated under rules effective until 2013 in Estonia and to become effective as from 2013. An illustrative example regarding the principles presented in Table 9 is presented in Appendix 2.

Table 9. The impact of different factors on profit numbers (EGAP 2009 vs. EGAP 2013)

	EGAP 2009		EGAP 2013	
	n. year	(n+1). year	n. year	(n+1). Year
Tangible fixed assets revaluation	Revaluation takes place		-	-
Depreciation expense		+		
Profit		Lesser as compared to the EGAP 2013		
Borrowing costs			Capitalised	Capitalised
Expense	+	+		
Depreciation expense			+	+
Profit	Lesser as compared to the EGAP 2013	Lesser as compared to the EGAP 2013		
Development expense	Capitalised	Capitalised		
Expense			+	+
Amortization expense	+	+		
Profit			Lesser as compared to the EGAP 2009	Lesser as compared to the EGAP 2009
Accounting of Goodwill				
Impairment loss	+	+		
Amortization expense			+	+
Profit				

Source: Compiled by the author.

As revealed from the Table 9 the new profit is bigger when revaluation or borrowing costs are of great importance and smaller when development costs are of great importance. When accounting of goodwill is under consideration, it depends on the impairment loss and depreciation expenses if the old or new profit is bigger.

5. ASSESSMENT OF PROFITABILITY MEASUREMENT ACTIVITIES AND ATTITUDES IN ESTONIAN COMPANIES

As aforesaid, the term ‘profit’ may mean different things, not only to economists and accountants but also to a company’s various interest groups, each of which view the profit a company makes from a different perspective. It has been emphasised that in a free enterprise economy the measurement of profit is a major consideration (Bray, 1949). Profitability measures are essential and very important components of the management control systems of businesses. They must also motivate managers and employees at all levels of an organisation to strive to achieve the organisation’s goals. Performance evaluation and rewards are key elements for motivating individuals in an organisation. Profitability measures should also be linked to the objectives of wealth measurement.

This part of research intends to analyse using the profitability indicators in Estonian business practices, with recourse to the survey of the respective topic, carried out at companies, with the goal to present the methods, to which preference is given in Estonian companies when the efficiency of business activities is analysed, and for the wealth measurement purposes. Generally the application of quality analysis could not be overestimated for company as well as for all of society.

Under consideration are internal and external financial measures based on accounting figures, which are routinely reported by legal business entities, and how familiar respondents are with different profit indicators.

The companies were submitted a questionnaire (Appendix 3 and Appendix 4), with the purpose to find out: which figures are needed from regular income statement; are some indicators of income statement and balance sheet adjusted, for obtaining necessary information for analysis; is the capital maintenance issue taken into regard? Is profit as indicator of change in company value valued? Are the profit and the investments made compared, in order to find out the actual growth in wealth? Is the cash based profit analysed etc.

The objective of this research is to elucidate the overall attitude of Estonian companies at interpreting the profit indicators, i.e. what profit indicators and profitability indicators are used by companies when analysing their activity, and also when passing investment decisions; to what extent they are available in regular report forms; whether or not capital maintenance and value added are paid attention to etc.

Rather similar surveys have been performed also in other countries with short history of market economy. For instance, in Latvia there has been carried out a

survey for improving the model of analysis of financial reports, comprising the estimates of companies on importance of various financial indicators (Kasalis 2005) and the research on links of cash flow with other indicators (Subatnieks 2007). In Slovenia, there have been studied the conceptions of companies regarding the issue of what indicators are important for performance measurement (Marc *et al.* 2010). The latter contains interesting material for comparison: used as a polling method has been, like in this research, the 5-grade Likert-type scale questionnaire. The aforementioned researches handle the broader range of indicators as compared with this research, focussing on finding out the attitudes of companies, as regards the analysis of profit.

Because the financial accounting practices of various countries have developed over a long time in close relationship with the political, social and economical environment of each of them and because IFRS allows for alternatives, there are differences in financial accounting practices of countries within the IFRS framework, as thoroughly described in Chapter 4. It thence transpires that the surveys carried out in various countries on attitudes of companies etc. are of vital importance in the first place in formation of the given country's financial accounting system, providing necessary information for methodical embarking on activities aimed at moulding attitudes, novating the report forms etc.

5.1. Survey Results

Methodology was presented in the Chapter 2 of this research.

As follows the results of investigated enterprises are analysed.

The first group of questions included in the survey identified whether and how the companies use the regular income statement in their financial analysis. The statements in the questionnaire were as follows:

I use the income statement when analysing the performance of the company as follows: a) I calculate profitability indicators; b) for comparison with competitors; c) for other purposes (please specify).

Table 10 presents the mean scores, modes and medians.

Table 10. Usage of income statement when analysing the company performance (5 – always; 4 – frequently; 3 – sometimes; 2 – very rarely; 1 – never at all)

Manner of use of the Income statement	Arithmetic mean	Mode	Median
Calculation of profitability indicators	4.06	5	4
Comparison with competitors	3.08	3	3
For other purposes	2.51	1	2

a) Calculation of profitability indicators.

Average estimate is 4.06, i.e. the closest to estimate ‘frequently’. The responses distribute as follows: always 45%; frequently 29%; sometimes 17%; very rarely 7%, never at all 2%. Calculation of profitability indicators takes place in the majority of companies, whereas 45% of respondents calculate profitability indicators always and 29% frequently. Altogether only 2% of the respondent companies are not calculating.

b) Comparison with profits of competitors.

Average estimate is 3.08, i.e. close to estimate ‘sometimes’. Distribution of estimates is the following: sometimes 31%; very rarely 23%; frequently 21%; always 15%; never at all 10%. Comparison with data of competitors takes place always in 15 % of respondent companies and frequently in 21% companies. In 10% of the companies it never takes place.

c) Open-ended question: For other purposes (please specify).

Average estimate is 2.51, hence ‘very rarely’.

Respondents more often specified performance of analysis of subunits and comparison with budget and plan indicators.

The second group of questions surveys preferences of the companies when using various profit figures in economic analysis.

The question was posed to 8 profit figures: *a) Operating profit; b) Gross profit; c) Earnings before taxes (EBT); d) Net profit; e) EBITDA; f) Contribution margin; g) Cash based profit; h) Other (please specify).*

Table 11 presents the means, modes and medians of the responses.

Table 11. Use of various profit numbers in the analysis (5 – always; 4 – frequently; 3 – sometimes; 2 – very rarely; 1 – never at all)

Profit indicator	Arithmetic mean	Mode	Median
Operating profit	4.22	5	5
Net profit	4.14	5	4
Gross profit	4.01	5	4
EBITDA	3.67	5	4
Earnings before taxes	3.43	5	4
Contribution margin	2.63	1	2
Cash based profit	1.94	1	1
Other	1.64	1	1

As revealed from Table 11, the most popular indicator is the *operating profit* (average 4.22; mode 5; median 5). 52% of the respondents use operating profit always and 29% frequently.

Net profit is of a slightly lower average (average 4.14; mode 5; median 4) and gross profit (average 4.01; mode 5; median 4). Net profit is used always by 50% of the respondent companies and frequently by 27%. *Gross profit* is used always by 46% of companies and frequently by 26%.

The three profit indicators mentioned above have probably been preferred due to their simplicity and familiarity and also by the fact that several well known profitability ratios base just on those profit indicators.

The analysis of the cash based profit is not so popular (mean score 1.94, falling in between estimates ‘very rarely’ and ‘never at all; mode 1; median 1). 53% of respondents never use the cash based profit, 24% use it very rarely, and always as few as 9%. Dismissing the cash based profit i.e. quality of profit ratio is a significant shortcoming in estimating the company’s business activities. Company’s managers are frequently not able to distinguish accrual based profit and cash (cash based profit), failing to study the actual receipt of cash. That may result in insolvency. An opinion has been expressed that the use of cash based profit instead of accrual based profit would provide a more accurate picture of a company.

The contribution margin as indicator is hardly ever used (average 2.63; mode 1; median 2). Contribution margin has never been used by 28% of respondents, 28% use it very rarely. It would pay off to accord more attention to contribution margin, because e.g. when drawing the budget estimate, the income statement in the contribution margin format is necessary. Contribution margin also has a significant

role in the issue of how the cost behaviour impacts on profitability and adopting pricing decisions (Spaller 2006).

EBITDA has been appreciated by the companies as middlemost (average 3.67; mode 5; median 4). Estimates distribute between possible variants: ‘always’ 36%, ‘frequently’ 22%, ‘sometimes’ 24%, ‘very rarely’ 11% and ‘never at all’ 8%. *EBITDA* should still merit more attention on part of the Estonian companies. Under international estimates, *EBITDA* is viewed by analysts as the most informative profit indicator (Mosso 2010). Hence it would be worth considering establishing it as an interim outcome in income statements.

The open-ended question ‘Other’ was given as an answer in exceedingly few cases. There was a curious indicator catching the eye: Gross profit – marketing expense as per production types.

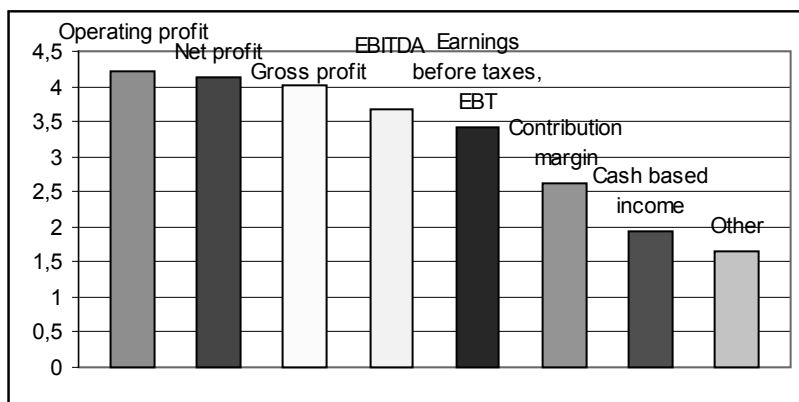


Figure 6. Frequency of use of different profit figures (5 – always; 4 – frequently; 3 – sometimes; 2 – very rarely; 1 – never at all)

The third question: *For the analysis needed by the company I adjust the regular income statement (and balance sheet).*

The responses reveal that adjustment of reports occurs moderately (average 2.97; mode 3; median 3). Hence the law-makers should consider the possibility to complement the reports, because the necessity in respect of grouping otherwise etc. exists.

The fourth group of questions studies, whether and what indicators the companies calculate for reporting profit + investments made therefore.

I calculate the following financial indicators:

- a) *RI (Residual Income)*,
- b) *EVA (Economic Value Added)*,
- c) *ROI (Return on Investment)*.

The frequency of use of the indicators is characterised by Table 12.

Table 12. Calculation of different indicators among the companies surveyed (5 – always; 4 – frequently; 3 – sometimes; 2 – very rarely; 1 – never at all)

Financial indicator	Arithmetic mean	Mode	Median
<i>ROI (Return on investment)</i>	3.12	4	3
<i>EVA (Economic value added)</i>	2.35	2	2
<i>RI (Residual income)</i>	2.11	1	2

Table 12 reveals that with respect thereto, most often used among the indicators studied is *ROI* (average 3.12; mode 4; median 3). In case of *EVA* the average is 2.35; mode 2 and median 2 and in case of *RI* respectively 2.11; 1; 2.

Probably *ROI* is most popular because this ratio is well-known from literature and practice.

Low values of *EVA* and *RI* show that companies do not pay attention to actual growth of wealth. This is also corroborated by responses to the **sixth question**: *Differentiation between return on capital and return of capital will significantly improve the management decisions.*

Response variants are: 5 – fully agree, 4 – agree, 3 – rather agree, 2 – rather not agree, 1 – not agree.

The aforementioned question has been dismissed by 9% of companies, testifying to the fact that the substance of the question has not been properly understood. Dominating among the respondents is the opinion in between ‘rather agree’ and ‘rather not agree’ (average 2.43; mode 2; median 2).

It thence transpires that analysis of the value-based financial performance is weak in Estonian enterprises. This is most deplorable, because *EVA* could be of much wider use than just a performance measure. At its best, *EVA* serves as the centrepiece of a completely integrated framework of financial management and incentive compensation (Stern and Stewart 1996).

By reference to estimates of companies, revealed in survey, a correlation analysis was carried out, in order to elucidate the strength of link between holding important the keeping apart of return on capital and return of capital, and the use of *RI*, *EVA* and *ROI*. The link between holding important the keeping apart of return on capital and return of capital and use of *RI* may be estimated as being average: the value of correlation rate is 0.325. Further, the link between holding important the keeping apart of return on capital and return of capital and use of *ROI* may be estimated as average: the value of correlation rate is 0.324. The link between holding important the keeping apart of return on capital and return of capital return on capital and use of *EVA* however is very weak, by reason of correlation analysis performed (the value of correlation rate is 0.200), a somewhat confounding outcome, because it is *EVA* that best expresses the value added created. The complicatedness of practical calculation of *EVA* may account for the fact – the regular profit statement needs be significantly innovated. *RI* can be viewed as a particular case of *EVA*, which is easier implemented in practice. This explains the stronger correlation link with *RI*. Regarding links between using of other profit indicators and holding important keeping apart of return on capital and return of capital, of essence is the outcome of correlation analysis, under which the link between holding important the keeping apart of return on capital and return of capital and other profit indicators is weak, rather.

Companies' attitude to the importance of profit when making investment decisions has also been studied.

Statement: Profit indicators of other companies are the main basis for passing decisions on investment.

Variants of response are: 5 – fully agree, 4 – agree, 3 – rather agree, 2 – rather not agree, 1 – not agree.

Frequency of estimates presented is as follows: average 2.40, in-between 'rather agree', and 'rather not agree', mode 2 and median 2. Low estimates are related to failed investments made by Estonian companies.

In what follows, the results of survey have been analysed based on the following:

The survey carried out seeks an answer to the questions, whether and to what extent the performance analysis differs in companies, where it is carried out by an accountant or a financial analyst, what the results are like, as dependent on the size of the company and as dependent on the activity area of the company and what the differences are with regard to users of Format 1 and Format 2.

Tables 13 and 15 present mean values of responses to all questions surveyed, respectively to compare estimates of companies with number of employees ≥ 250 , 50–249 and all respondent companies and to compare estimates of accountants, finance managers and all respondents together. Table 16 presents the data on how the use of profit figures differs between those drawing *Format 1* and *Format 2*. Table 17 presents the estimates as per branches of activity.

Subjected to check (*z*-test) have been the hypotheses: 1. At large companies the analysis is stronger than that at smaller ones. 2. Finance manager (analyst) handles the analysis more thoroughly than the accountant. 3. *Format 2* users handle the analysis more thoroughly than *Format 1* users.

Table 13 reveals that the medium value of all indicators is lower in the group of companies with employees numbering 50-249. The average through all indicators is 3.06, which falls near to the assessment ‘sometimes’, while the use of unsophisticated and wider-spread indicators is close to ‘frequently’. Hence analysis is also carried out in mid-size companies. As far as large companies with more than 250 employees are concerned the average value of all indicators is 3.18. The following *z*-tests however do not highlight a major statistical difference – hence the null-hypotheses hold valid.

Table 13. Average values of all indicators, using estimates of different size companies

Indicator	Arithmetic mean among all companies surveyed	Arithmetic mean among companies with number of employees ≥ 250	Arithmetic mean among companies with 50–249 employees
Calculation of profitability indicators	4.06	4.24	4.01
Use of income statement for comparison with competitors	3.08	3.37	2.95
Use of operating profit	4.22	4.20	4.22
Use of gross profit	4.01	4.00	4.03
Use of EBT (pre-income tax profit)	3.43	3.13	3.53
Use of net profit	4.14	4.17	4.11
Use of EBITDA	3.67	3.98	3.50
Use of contribution margin	2.63	2.75	2.58
Use of cash based profit	1.94	1.93	1.93

Adjustment of income statement	2.97	3.15	2.91
Use of RI	2.11	1.93	2.15
Use of <i>EVA</i>	2.35	2.37	2.33
Use of <i>ROI</i>	3.12	3.22	3.07
Consent to the statement that profit indicators of other companies are the main basis for making the investment decisions	2.39	2.49	2.35
Consent to the statement that making difference between <i>return on capital</i> and <i>return of capital</i> essentially improves the management decisions.	2.43	2.84	2.20
Arithmetic mean across all indicators	3.10	3.18	3.06

Alternative hypothesis: Large companies, having 250 or more employees, use different financial indicators significantly more than the companies of average size, keeping 50–249 employees on payroll.

The arithmetic mean of frequency of use of different indicators of large companies on Likert scale is 3.18. With mid-size companies that indicator is 3.06. *Z*-test's empirical value is 0.53, which however does not, on the significance level 5%, exceed *z*-test's critical value 1.645 in case of unilateral hypothesis. Hence there are no grounds to reject the null hypothesis: the extent of use of finance indicators does not differ significantly with large and medium-size companies.

In the following there are presented for comparison the results of the survey carried out in Slovenia in 2008 (Marc *et al.* 2010). 93 large companies were asked about their opinion on 10 important indicators for performance evaluation. The questionnaire was built up using 5-grade Likert-scale. In Table 14 indicators that are by content comparable with the indicators observed in the present survey carried out by the author are in bold.

Table 14. The most important performance measures in Slovenian large companies in 2008 (1-unimportant; 2-of little importance; 3-medium; 4-important; 5-very important)

Performance measure	Mean
Revenues growth	4.22
Profit growth	4.18
Liquidity	4.15
Revenues to cost ratio	4.12
Solvency	4.00
Days sales outstanding	4.00
ROE	3.95
Contribution margin	3.93
Value added	3.87
Days payable outstanding	3.86

Source: (Marc *et al.* 2010)

Revenues to cost ratio – 4.12 and *ROE* – 3.95 are by content closely comparable with the Estonian survey’s indicator “Calculation of profitability indicators” for large companies in Estonia – 4.24. Contribution margin – 3.93 is comparable with Estonian survey’s “Use of contribution margin” – 2.75, Value added – 3.87 in Slovenian survey can by content be paralleled with *EVA* and *RI* in Estonian survey – the values of these indicators are accordingly 2.37 and 1.93.

To continue with the analysis of the survey carried out by the author in Estonia it needs be pointed out that the use of almost all indicators is higher, when analysis is carried out by finance managers. It is shown in table 15.

Table 15. Average values of all indicators, using estimates of accountants and finance analysts

Indicator	Arithmetic mean among all respondents	Arithmetic mean among finance managers	Arithmetic mean among accountants
Calculation of profitability indicators	4.06	4.50	3.37
Use of income statement for comparison with competitors	3.08	3.24	2.74
Use of operating profit	4.22	4.39	3.98
Use of gross profit	4.01	4.10	3.79

Use of EBT (profit before income tax)	3.43	3.46	3.35
Use of net profit	4.14	4.05	4.26
Use of EBITDA	3.67	3.95	3.21
Use of contribution margin	2.63	2.60	2.55
Use of cash based profit	1.94	1.92	1.98
Adjustment of income statement	2.97	3.19	2.63
Use of RI	2.11	2.10	2.15
Use of <i>EVA</i>	2.35	2.30	2.24
Use of <i>ROI</i>	3.12	3.47	2.61
Agreement with the statement that profit indicators of other companies are the main basis for making investment decisions	2.39	2.30	2.56
Consent to the statement that making difference between <i>return on capital</i> and <i>return of capital</i> essentially improves the management decisions	2.43	2.53	2.11
Arithmetic mean across all indicators	3.10	3.21	2.90

That corroborates the surmise that the Estonian companies have historically developed an opinion, under which the accountant is generally not required to carry out the analysis. The companies, which have instituted a separate office of the finance analyst to perform that task, display higher level of analysis.

Alternative hypothesis: Finance managers use different financial indicators more often than accountants (arithmetic average of range of use of all indicators on Likert scale is significantly higher in case of finance managers).

Arithmetic mean of range of use of all indicators by finance managers on Likert scale is 3.21, by accountants 2.90. Z-test's empiric value is 1.31, which however does not, on the significance level 5%, exceed z-test's critical value 1.645 in case of unilateral hypothesis. Hence there are no grounds to reject the null hypothesis: the extent of use of finance indicators does not differ significantly with finance managers and accountants.

Although z-test does not suggest the statistical difference the use of almost all indicators is higher, when analysis is carried out by finance managers. The latter

suggests the need to change the attitude to the role of accountants – accountant should be engaged in the analysis. On the one hand, it would improve the level of analysis in the companies, lacking a respective separate office. On the other hand, involvement of accountant in the process of analysis would enlarge his/her view on finance data and financial statements, which would spur in the Estonian society the accounting-related discussion and would enhance the conceptual level of practice of financial accounting.

According to the Estonian Accounting Act every company can choose whether to prepare their annual accounts in accordance with International Financial Reporting Standards (*IFRSs*) or in accordance with the Estonian accounting guidelines (*Estonian GAAP*). These companies which have decided to follow *Estonian GAAP* must use one of the two income statement layouts: *Format 1* (where items are classified by nature) or *Format 2* (where items are classified by functions).

Regarding the usage of income statement *Format 1* respondents identified 38% and for the *Format 2* 56% level. There are also companies which use both formats (6% of respondents). In the latter case one of the formats is in use for reporting and the other one for intra-company analysis.

Table 16 presents the data on how the use of profit figures differs between those drawing *Format 1* and *Format 2*. The use of all figures of income statement is higher with those drawing *Format 2*. Hence the conclusion that the companies, attaching value to analysis, have selected *Format 2*, which is generally considered more informative for the analysis. While regarding the off-income statement figures, i.e. contribution margin and cash based profit, *Format 1* users display somewhat higher indicators.

Table 16. Average values of all indicators, using estimates of users of *Format 1* and *Format 2*

Profit figure	Arithmetic mean among <i>Format 1</i> users	Arithmetic mean among <i>Format 2</i> users
Calculation of profitability indicators	3.86	4.38
Use of income statement for comparison with competitors	3.03	3.14
Use of operating profit	4.00	4.60
Use of gross profit	3.90	4.24
Use of EBT (pre-income tax profit)	3.24	3.68
Use of net profit	4.08	4.38
Use of EBITDA	3.45	3.96

Use of contribution margin	2.82	2.48
Use of cash based profit	2.01	1.86
Adjustment of income statement	3.00	2.92
Use of RI	2.11	2.12
Use of EVA	2.32	2.34
Use of ROI	2.96	3.41
Consent to the statement that profit indicators of other companies are the main basis for making the investment decisions	2.41	2.35
Consent to the statement that making difference between <i>return on capital</i> and <i>return of capital</i> essentially improves the management decisions	2.39	2.51
Arithmetic mean across all indicators	3.04	3.22

Still, the z-test shows that differences in use of indicators are not statistically meaningful. The empirical value of z-test statistics carried out on the basis of arithmetic averages of estimates revealed in survey is 0.880, which in case of unilateral hypothesis on significance level 5% does not top the statistics critical value 1.645. Hence there are no grounds to reject the zero-hypothesis: use of profit indicators with users of Format 1 and Format 2 in financial analysis does not differ significantly.

Table 17. Estimates as per branch of activities of companies

Indicator	Arithmetic mean among companies in industry	Arithmetic mean among companies in building	Arithmetic mean among companies in service	Arithmetic mean among companies in trade
Calculation of profitability indicators	4.32	3.88	3.92	4.00
Use of income statement for comparison with competitors	3.05	2.75	2.69	3.26
Use of operating profit	4.52	3.88	4.38	3.91
Use of gross profit	4.25	3.82	4.46	3.76
Use of EBT	3.79	3.29	3.58	3.16
Use of net profit	4.34	3.81	4.08	4.23

Use of EBITDA	3.80	3.24	4.08	3.47
Use of contribution margin	2.76	2.13	3.38	2.63
Use of cash based profit	2.00	1.47	2.46	1.71
Adjustment of income statement	2.84	3.12	3.85	2.80
Use of RI	2.16	2.19	2.38	2.09
Use of EVA	2.52	2.13	2.31	2.24
Use of ROI	3.36	3.24	2.69	3.06
Profit indicators of other companies are the main basis for making the investment decisions	2.41	2.59	2.15	2.24
Making difference between <i>return on capital</i> and <i>return of capital</i> essentially improves the management decisions	2.44	1.83	2.27	2.69
Arithmetic mean across indicators	3.24	2.89	3.25	3.02

Of interest too is comparison of use of different profit indicators among companies surveyed as per branch of activities. Estimates of companies revealed by survey as per branch of activities of companies are presented in the Table 17.

It appears from Table 17 that on average, different profit indicators are used in company financial analysis more frequently in service and manufacturing sector, less frequently in trade and building sector. Conceivably the inherently more complicated economical activity of the former also calls for a deeper going analysis. The foregoing differences notwithstanding, the quality of analysis in surveyed Estonian companies may be deemed as being relatively uniform: z-tests revealed lack of statistical difference on significance level 0.05 between all groups surveyed.

5.2. System Integrated Analysis as a Method of Analysis of Overall Profitability

As evidenced in the above survey, there is some analysing of indicators of profit and profitability witnessed in the Estonian companies however preference is given to less sophisticated indicators and methods. In this connection the author suggests application of the system-integrated method, as a viable option for enhancing the efficacy of the analysis of income statement and profitability; the said method will enable the companies to bring to focus the interconnections of indicators and find index of overall profitability, while being easy to implement in practice.

For analysis it is suitable to apply Estonian academician Professor U. Mereste's method of system integrated analysis, both developed and promoted by U. Mereste in 1980s. (Mereste 1984; Mereste 1987; Mereste 1991).

5.2.1 Methodology

Mereste's system was created for analysis of the overall efficiency of the functioning of a company. In works by Mereste of the 1980s the following indicators were used as initial data under research: his simplest 4 x 4 matrix for instance included profit, sales revenue, number of man-hours worked and cost of fixed assets; 5 x 5 matrix included the following initial indicators: profit, sales revenue, cost of materials, cost of fixed assets and number of employees. Such an analysis operated also in companies – two decades ago system integrated analysis methodology was heavily applied in Estonian practice. Built on combination of system integrated analysis with matrix modelling method and theory of indices it had become an alternative approach for analysis of enterprise's business activities. At present unfortunately this method has fallen into relative disuse and the Estonian companies do not use it, as a general rule.

The method bases on matrix model. As follows, the design and characteristics of the matrix model are described. Here the notifications and interpretation of the matrix theory and index theory by P. Siimann (Siimann 2011) are used.

When denoting the numerical values of quantitative initial indicators to be covered in the analysis by Y_i , where $i = 1, 2, \dots, n$ (n – number of quantitative initial indicators) and the qualitative indicators found by correlating them by $x_{ij} = Y_i/Y_j$, where $i, j = 1, 2, \dots, n$, we will have a $n \times n$ sized square matrix X called matrix model of the phenomenon.

$$X = \begin{bmatrix} x_{11} & x_{12} & \dots & x_{1n} \\ x_{21} & x_{22} & \dots & x_{2n} \\ \dots & \dots & \dots & \dots \\ x_{n1} & x_{n2} & \dots & x_{nn} \end{bmatrix} = \{x_{ij}\}$$

This square matrix is characterized by the following attributes:

- The main diagonal elements are equal to one ($x_{11} = x_{22} = \dots = x_{nn} = 1$).
- Square matrix X consists of row and column vectors which are linearly dependent on each other. Column vectors

$$\begin{aligned} x_1 &= \{x_{11} = Y_1/Y_1 \quad x_{12} = Y_1/Y_2 \quad x_{13} = Y_1/Y_3 \quad \dots \quad x_{1n} = Y_1/Y_n\} \\ x_2 &= \{x_{21} = Y_2/Y_1 \quad x_{22} = Y_2/Y_2 \quad x_{23} = Y_2/Y_3 \quad \dots \quad x_{2n} = Y_2/Y_n\} \\ x_3 &= \{x_{31} = Y_3/Y_1 \quad x_{32} = Y_3/Y_2 \quad x_{33} = Y_3/Y_3 \quad \dots \quad x_{3n} = Y_3/Y_n\} \\ &\dots \\ x_n &= \{x_{n1} = Y_n/Y_1 \quad x_{n2} = Y_n/Y_2 \quad x_{n3} = Y_n/Y_3 \quad \dots \quad x_{nn} = Y_n/Y_n\} \end{aligned}$$

form a system of linearly dependent column vectors with the following relationship:

$$\begin{aligned} x_2 &= x_{21} \times x_1 \\ x_3 &= x_{31} \times x_1 + x_{32} \times x_2 \\ &\dots \\ x_n &= x_{n1} \times x_1 + x_{n2} \times x_2 + \dots + x_{nn-1} \times x_{n-1} \end{aligned}$$

- Since the square matrix X consists of correlated, linearly dependent row and column vectors, the elements x_{ij} of the matrix are also correlated.
- Since elements of the matrix that are symmetric with respect to the main diagonal are each other's reciprocal values ($x_{12} = 1/x_{21}$, $x_{13} = 1/x_{31}$ etc), it means that the square matrix consists of two triangular matrices that are mirror images of each other.

Due to the latter attribute, the focus while solving the task of analysis will be mostly on investigating and analysing the relationships between the elements of financial ratios of one triangular matrix. Usually the elements under the main diagonal are used.

Mereste's matrix of efficiency is designed as follows:

Of greatest importance for drafting the efficiency matrix is the choice and sequence of initial parameters (financial indicators) to be included in the matrix (Alver 1988). The indicators used in the analysis are divided to quantitative and qualitative indicators where in the context of current analysis the quantitative indicators are the main performance indicators of a company – these are initial data on which the matrix bases. Qualitative indicators are indices which reflect the relations between the quantitative indicators. Qualitative indicators are in fact the elements of the efficiency matrix.

The selection of initial parameters depends on the purpose of analysis. Business efficiency of a company can be analysed as a whole or any specific aspect can be under consideration (Siimann 2011) like profitability, which is of interest of this research.

Sequencing of initial indicators has to be started from the results or outputs according to their degree of finality and end with the resources or inputs for the achievement of these results based on their degree of initiality. Also the intensive development requirement can be used for arranging the initial indicators, according to what the initial quantitative indicators are arranged in the matrix in descending order of growth rate (Alver and Järve 1989; Alver and Rosenberg 1989; Alver and Järve 1987; Alver and Järve 1992; Alver and Järve 1994). A more precise principle for arranging the quantitative initial parameters: resources are metamorphosed via expenses into the final result.

Therefore it is possible to use the following formula for the arranging: RESULTS → EXPENSES → RESOURCES. The arrow indicates the direction of the decrease of the growth rate.

More deep analysis is possible, when linking the matrix analysis with the theory of indices and using the chain substitution method.

Usually there is the question of what has been the effect of different factors on absolute changes in a financial indicator under consideration in the period of analysis. That question can be answered using the **theory of indices**.

When two quantitative financial indicators, Y_1 and Y_2 , are analysed, with the help of which we can calculate the qualitative indicator $x_{21}=Y_1/Y_2$, the financial indicators Y_1 and Y_2 form a simple multiplicative factor system

$$Y_1 = Y_2 \times x_{21} \quad (1)$$

Since two comparable time periods are analysed, traditional time indices (I) must be added: 1 for the period to be analysed and 0 for the base period. Hence it is possible to construct three traditional composite indices:

$$I_{Y1} = \frac{Y_{2,1}}{Y_{2,0}} = \frac{Y_{2,1}x_{21,1}}{Y_{2,0}x_{21,0}} \quad (2)$$

$$I_{Y2} = \frac{Y_{2,1}x_{21,0}}{Y_{2,0}x_{21,0}} = \frac{Y_{1\text{hypothetical}}}{Y_{1,0}} \quad (3)$$

$$I_{x21} = \frac{Y_{2,1}x_{21,1}}{Y_{2,1}x_{21,0}} = \frac{Y_{1,1}}{Y_{1\text{hypothetical}}} \quad (4)$$

where

$Y_{1,0}$ – numerical value of the quantitative outcome indicator in the base period;
 $Y_{1,1}$ – numerical value of the quantitative outcome indicator in the period of analysis;
 $Y_{2,0}$ – numerical value of the quantitative factor indicator in the base period;
 $Y_{2,1}$ – numerical value of the quantitative factor indicator in the period of analysis;
 $x_{21,0} = Y_{1,0} / Y_{2,0}$ – numerical value of the qualitative indicator in the base period;
 $x_{21,1} = Y_{1,1} / Y_{2,1}$ – numerical value of the qualitative indicator in the period of analysis.

Equation 2 is an output index that characterises average relative change in the output indicator of the multiplicative factor system (equation 1) under the influence of changes in financial indicators included in the factor system.

Equations 3 and 4 are factor indices that reflect temporal changes in one factor. The quantity changes in which the index measures, is called variable. Another quantity which has equal values in the numerator and denominator of the factor index is called commensurator.

Factor indices are formed as based on the following principles (Mereste 1965): When choosing the commensurator it is important that the product of multiplying the variable and commensurator had independent economic meaning. It must be ascertained which of the two factors is quantitative and which qualitative. Qualitative measure is what characterises the number, quantity, amount or share of something. Qualitative factor shows either the level of using resources or is related to the quality of company's work. Quantitative factor of the factor index is commensurated with the base period value of the qualitative factor and the qualitative variable with the accounting period value of the quantitative factor.

It is possible to observe that the indices in equations 2, 3 and 4 also form a multiplicative system of index numbers similar to equation 1:

$$I_{Y1} = I_{Y2} \times I_{x21} \quad (5)$$

Output index can be formed also from more than two factor indices. In that case the principle is followed that the adjacent indicators should have independent economic meaning and every variable should be commensurable with the accounting period value of the preceding factor.

Absolute impact of individual factors on absolute changing of outcome indicators can be found as a difference between the numerator and denominator in the respective composite index formulas. The denominators form an additive system of absolute changes:

$$\Delta(Y_2)Y_1 = Y_{2,1} \times x_{21,0} - Y_{2,0} \times x_{21,0} = Y_{1,hypothetical} - Y_{1,0}$$

$$\Delta(x_{21,0})Y_1 = Y_{2,1} \times x_{21,1} - Y_{2,0} \times x_{21,0} = Y_{1,1} - Y_{1,hypothetical}$$

$$\Delta Y_1 = Y_{2,1} \times x_{21,1} - Y_{2,0} \times x_{21,0} = Y_{1,1} - Y_{1,0} \quad (6)$$

where

ΔY_1 – absolute change in outcome indicator;

$\Delta(Y_2)Y_1$ – absolute change in outcome indicator under the effect of quantitative factor Y_2 ;

$\Delta(x_{21,0})Y_1$ – absolute change in outcome indicator under the effect of qualitative factor x_{21} .

By using the chain substitution method the lead element of the efficiency matrix can be expressed as a multiplicative factor system from the independent main diagonal elements of the triangular matrix. For example in case of 4 x 4 matrix

$$x_{41} = x_{21} \times x_{32} \times x_{43}.$$

Analysing the factor system elements (financial ratios) in greater detail it is possible to identify the absolute effect of each element on final result and also the share of each element's absolute effect in total changes.

The matrix concept of measuring efficiency does not enable to present the performance efficiency as one number while in practice there is often a need to compare enterprises on the basis of efficiency or different time periods (Siimann 2011). Mereste (1984) suggests for solving the dynamic ranking task a synthetic efficiency index (*IEF*), calculated on the basis of structure indices of elements under the diagonal of efficiency matrix as

$$I_{EF} = \frac{2 \sum I_{ij}}{n^2 - n}$$

where I_{ij} – index of the efficiency matrix element I in position ij .

The synthetic efficiency index can be calculated also as:

$$I_{EF} = \sqrt{\frac{n^2 - n}{2} \prod I_{ij}}$$

Thus the synthetic efficiency index can be calculated on the basis of arithmetic mean or geometric mean. The synthetic efficiency index calculated on the basis

of arithmetic mean can be used for both rise and fall of the initial parameters. A weakness of the index found on the basis of the geometric mean is that in the event of an odd number of initial parameters the effect of average parameter is completely eliminated in the process of calculating (Alver 1989). Efficiency indices calculated on the basis of arithmetic or geometric mean yield similar results in principle.

5.2.2. Author's Model

Here the author of thesis suggests using Mereste's methodology in new context: for financial statement analysis. Under consideration is income statement and profitability, enabling to create a basis for more thorough analysis of company activity, by putting in perspective the interrelations of profit indicators and in this way calculate the index of overall profitability.

In the present case the following profit indicators from income statement – net profit, profit before taxes, operating profit and gross profit – can be expediently used together, by highlighting all links between those indicators. Subject to U. Mereste's methods, in the given case a matrix model must be composed, enabling to perform the system integrated analysis of the company profitability. In our case the matrix 5 x 5 is employed, with line and column titles being the above profits plus sales revenue. When placing the indicators in matrix, taken in consideration has been their degree of finality and the sequence is as follows: net profit, profit before taxes, operating profit, gross profit and sales. Model is presented in Table 18.

Matrix elements enable appraising the interrelation of profit fractions and the impact of all of them on profitability. The elements of the matrix are structure indices. The matrix elements (the elements of main diagonal of triangular matrix) can be put into the chain replacement equation:

$$NP/PBT \times PBT/OP \times OP/GP \times GP/S = NP/S$$

Hence it is possible to study the impacts of split components.

Table 18. 5 x 5 matrix model for system integrated analysis of company profitability

Numerator →	Net profit (NP)	Profit before taxes (PBT)	Operating profit (OP)	Gross profit (GP)	Sales (S)
Denominator ↓					
Net profit (NP)	X				
Profit before taxes (PBT)	$\frac{NP}{PBT}$	X			
Operating profit (OP)	$\frac{NP}{OP}$	$\frac{PBT}{OP}$	X		
Gross profit (GP)	$\frac{NP}{GP}$	$\frac{PBT}{GP}$	$\frac{OP}{GP}$	X	
Sales (S)	$\frac{NP}{S}$	$\frac{PBT}{S}$	$\frac{OP}{S}$	$\frac{GP}{S}$	X

Source: compiled by the author

In this way one can also study the change of indicators in time, characterizing it by average change index. It is also possible to find here the changes in split components and to draw conclusions as regards the proportions or disproportions having occurred.

The following example has been presented for the purpose of clarification: exemplary to the above is the case of system integrated analysis of company profitability drawn by the author using income statements data of AS Tallinna Vesi for 2011 and for 2010.

Table 19. Matrix for 2011 (thou EUR)

Numerator →	Net profit 21,513	Profit before taxes 25,766	Operating profit 28,890	Gross profit 30,313	Sales 51,240
Denominator ↓					
Net profit 21,513	X				
Profit before taxes 25,766	0.8349	X			
Operating profit 28,890	0.7446	0.8919	X		
Gross profit 30,313	0.7096	0.8499	0.9530	X	
Sales 51,240	0.4198	0.5028	0.5638	0.5915	X

Source: compiled by the author

As chain replacement: NP/PBT x PBT/OP x OP/GP x GP/S = NP/S
 $0.8349 \times 0.8919 \times 0.9530 \times 0.5915 = 0.4198$

Table 20. Matrix for 2010 (thou EUR)

Numerator →	Net profit 16,905	PBT 24,900	Operating profit 27,464	Gross profit 28,996	Sales 49,680
Denominator ↓					
Net profit 16,905	X				
Profit before taxes 24,900	0.6789	X			
Operating profit 27,464	0.5973	0.9066	X		
Gross profit 28,996	0.5657	0.8587	0.9471	X	
Sales 49,680	0.3402	0.5012	0.5528	0.5836	X

Source: compiled by the author

As chain replacement: $0.6789 \times 0.9066 \times 0.9471 \times 0.5836 = 0.3402$

Further on, the analysis can be detailed in conformity with the index theory presented in the part 2.1 of this chapter, by identifying the impact of interim results (profit before taxes, operating profit, gross profit, sales) on final result (net profit), considering the interim results in both the quantitative and qualitative meaning. Quantitative is the source indicator proper; qualitative – the relation with *end result/source indicator*. Hence it is to be found what share in the change of end result is played by the change of source indicator and what is the share played by the structural change.

By using the data of Table 19 and Table 20, the results are as follows.

Change in net profit in 2011, as compared to 2010, was by 4,608 thou EUR.

1)

Impact of change of profit before taxes (impact of quantitative factor) on change in net profit:

$$\begin{aligned} & \text{PBT}_{2011} \times \text{NP}_{2010} / \text{PBT}_{2010} - \text{NP}_{2010} = \\ & = 25,766 \times 0.6789 - 16,905 = 587.5, \text{ i.e. } 12.7 \% \text{ of change in net profit.} \end{aligned}$$

Impact of change in relation of net profit/profit before taxes (impact of qualitative factor):

$$\begin{aligned} & \text{NP}_{2011} - \text{PBT}_{2011} \times \text{NP}_{2010} / \text{PBT}_{2010} = \\ & = 21,513 - 25,766 \times 0.6789 = 4,020, \text{ i.e. } 87.3\% \text{ of change in net profit.} \end{aligned}$$

2)

Impact of change of operating profit (impact of quantitative factor) on change in net profit:

$$\begin{aligned} & \text{OP}_{2011} \times \text{NP}_{2010} / \text{OP}_{2010} - \text{NP}_{2010} = \\ & = 28,890 \times 0.5973 - 16,905 = 351, \text{ i.e. } 7.6 \% \text{ of change in net profit.} \end{aligned}$$

Impact of change in relation of net profit/operating profit (impact of qualitative factor):

$$\begin{aligned} & \text{NP}_{2011} - \text{OP}_{2011} \times \text{NP}_{2010} / \text{OP}_{2010} = \\ & = 2,153 - 28,890 \times 0.5973 = 4,257, \text{ i.e. } 92.4 \% \text{ of change in net profit.} \end{aligned}$$

The following calculations for gross profit and sales, base on similar equations.

3)

Impact of change of gross profit (impact of quantitative factor):

$30,313 \times 0.5657 - 16,905 = 243$, i.e. 5% of change in net profit.

Impact of change in relation of net profit/gross profit (impact of qualitative factor):

$21,513 - 30,313 \times 0.5657 = 4,365$, i.e. 95 % of change in net profit.

4)

Impact of change in sales (impact of quantitative factor):

$51,240 \times 16,905/49,680 - 16,905 = 531$, i.e. 11.5 % of change in net profit.

Impact of change in relation of net profit/sales (impact of qualitative factor):

$21,513 - 51,240 \times 16,905/49,680 = 4,077$, i.e. 88.5 % of change in net profit.

The results of the above calculations have been presented in Table 21. As evidenced therein, from among the changes in quantitative factors, the largest impact is effected on result by change in profit before taxes (12.7%), and from among the changes in qualitative factors, the change in the ratio "net profit/gross profit" (95%).

Table 21. Impact of change in quantitative and qualitative factors on net profit of 2011

Quantitative factor	Qualitative factor	The indicator affected
Profit before taxes +587 (12.7%)	Net profit/Profit before taxes +4,020 (87.3 %)	Net profit +4,608
Operating profit +351 (7.6%)	Net profit/Operating profit +4,257 (92.4%)	
Gross profit +243 (5%)	Net profit/Gross profit +4,365 (95%)	
Sales +531 (11.5%)	Net profit/Sales +4,077 (88.5%)	

Source: compiled by the author

Table 22. Matrix of growth indices (2011/2010)

	Net profit	Profit before taxes	Operating profit	Gross profit	Sales
Net profit	X				
Profit before taxes	1.2298	X			
Operating profit	1.2466	0.9838	X		
Gross profit	1.2543	0.9898	1.0062	X	
Sales	1.2713	1.0032	1.0198	1.0135	X

Source: compiled by the author

In our example values >1 of most of the growth indices display proportionate growth. The values of indices <1 in case of the ratio of profit before taxes and operating profit as well as the ratio of profit before taxes and gross profit indicate structural changes and are supposedly caused by the increase in the financial costs of the company.

Here the index of overall profitability can be found using geometric mean of indices from Table 22. For our example the value of overall index is 1.0952, giving information, that overall profitability has increased in 2011 in comparison with 2010. When comparing the overall index with the change of the simple profitability index - net profit/sales (1.2713), they are evidently different. Hence the conclusion: change in profitability is actually a more complicated phenomenon than the change in net profit/sales: it depends on absolute values and structural shifts of components of net profit.

The changes of profit indicators investigated above through matrix models can be analysed also through decomposition (Jeter and Chaney 2012). This method of analysis is simple and offers additional possibilities to understand the changes in indicators.

In the following, the profit indicators are described through structured approach: the Figure 7 reflects structured approach to evaluate company's performance.

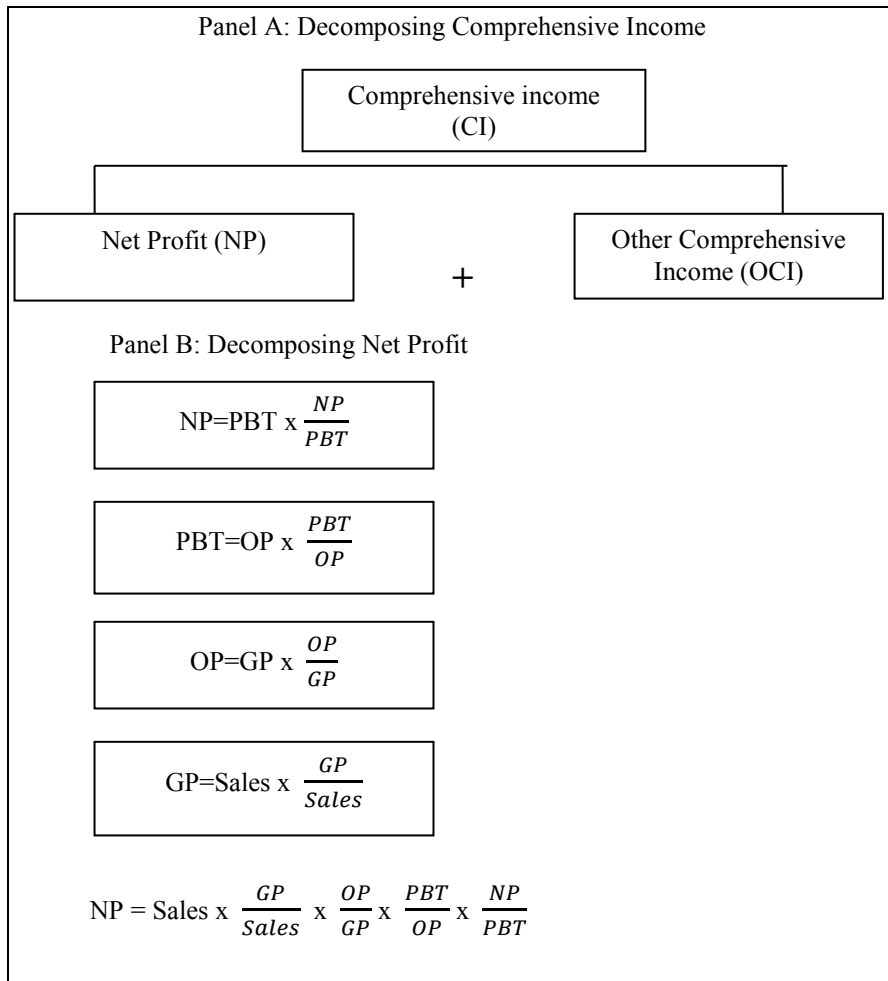


Figure 7. Structured approach to evaluate company’s performance.

Source: Compiled by the author.

As an example, the change of GP as a result of the interaction of the change of the quantitative factor (sales) and the qualitative factor ($\frac{GP}{Sales}$) on the basis of the relation $GP = Sales \times \frac{GP}{Sales}$ are analysed. The fixed change of gross profit 4.5% depicted in the Figure 8 bases on the change of gross profit calculated on the basis of the data of Table 19 and Table 20.

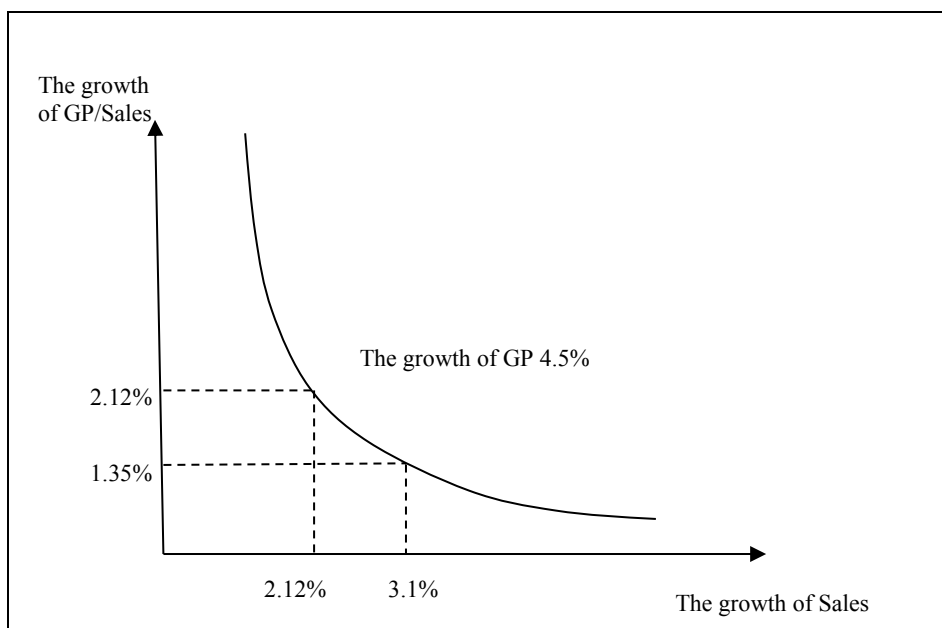


Figure 8. Decomposing GP.

Source: Compiled by the author

As depicted in the Figure 8, it may be concluded that if the growth of Sales is more than 2.12%, then in the growth of GP, the component of the growth of sales dominates, otherwise, the growth of the ratio $\frac{GP}{Sales}$ (gross profit margin).

In the following, some aspects of analyse of the **comprehensive income** are described. The relations between net profit, comprehensive income and other comprehensive income are under observation.

Unlike the multiplicative relations between components of net profit, the relations between net profit, other comprehensive income and comprehensive income are additive. Therefore the methods of analysis which are applied in the case of multiplicative relations and were used to analyse net profit (matrix models and chain substitution method) are not applied in the following.

The decomposition can be used.

Table 23 contains data for the following analysis: profit indicators of the years 2010 and 2011 and the extent of changes (comparing the year 2011 with the year 2010) are presented.

Table 23. Data related to Figure 9

Indicator	2011 (thou EUR)	2010 (thou EUR)	Change	Change (%)
Net profit (NP)	37,476	21,850	15,626	71.5
Other comprehensive income (OCI)	2,900	3,171	-271	-8.5
Comprehensive income (CI)	40,376	25,021	15,355	61.4

Source: Compiled by the author.

Figure 9 reflects the change of comprehensive income as the result of interaction of changes of net profit and other factors, where other factors contain changes in other comprehensive income and structural shifts.

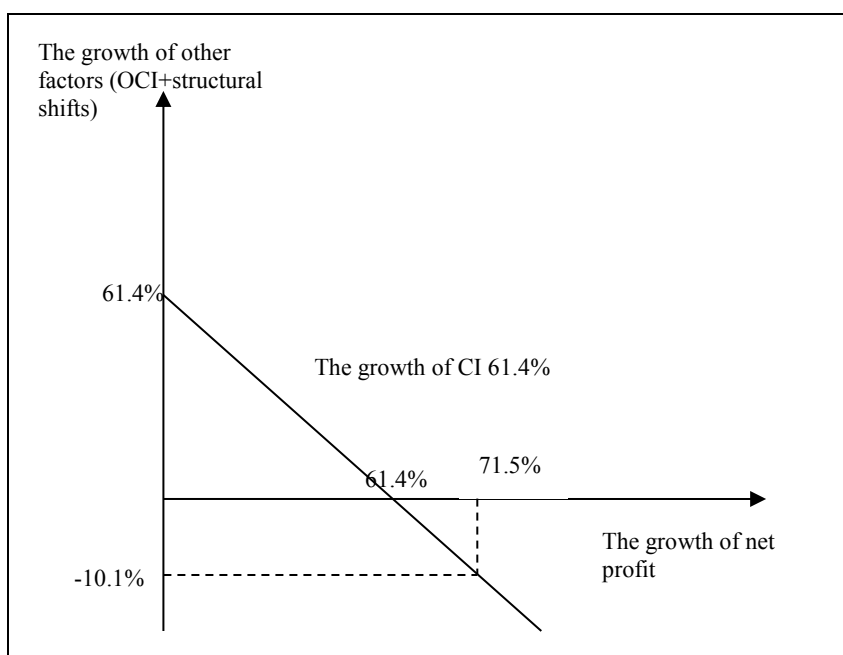


Figure 9. Decomposing CI

Source: Compiled by the author.

Compared to the traditional financial analysis and presentation of financial data, the following are regarded as advantages of the matrix approach:

The efficiency matrix enables to present financial data in a more compact and clearly arranged manner for analysing the efficiency of business activities,

choosing initial parameters according to the research objectives. The matrix model, in comparison with the other indicator systems, gives a more comprehensive and systematic picture of the reality also to specialists without special business education. The matrix approach enables to analyse all financial ratios in clearly expressed correlations and influences. During matrix modelling it is possible simultaneously to use different methods of financial analysis (for example, ratio analysis, index analysis, horizontal and vertical analysis etc). The analysis of financial data based on matrix approach is easy to develop further:

With the help of correlations of financial indicators it is possible to create various multiplicative and additive multi-factor systems. It is possible to identify absolute changes in quantitative output indicators caused by different factors (Vensel 2001; Root 1987).

System integrated analysis method is remarkable due to the fact that it investigates the change of relations and change of proportions of relations between indicators, allowing the early discovery of the disproportions. Disproportions in the change of profit indicators in different periods are apparently due to the disproportionate change of different expenses. The early discovery of disproportions and the analysis of their causes allow making adequate managerial decisions in order to avoid the undesirable results to the development of the company.

5.3. Conclusions

When assessing the activities of investigated companies and their attitude to profitability analysis, it is necessary to point out that companies should pay more attention to indicators, allowing to monitor the actual growth of wealth in the company. That would mean comparison of indicators, expressing the profit and the investments price, and involvement in the capital maintenance problem. The importance of profit, as the indicator of change of the company value has presently gained prominence in the world, ever more so given the current economic predicament.

Also the cash based profit is calling for due attention in companies. Dismissing the cash based profit analysis may all of a sudden end up with the company's insolvency. The latter attitude can be accounted for by the misconception deeply rooted in the companies that accrual profit is of equal value to the amount-of-money encashed.

As regards to organisation of analysis in the companies, it would be advisable to increase the role of an accountant as an analyst. That would allow the accountant to see the accounting issues from different aspects and have a say in conceptual

deliberations, enhancing in the society the level of accounting practice and its prestige.

In 67% of the respondent companies the results of their profitability analysis are actually used in the management process. 14% of the respondents hold, however that the analysis deplorably does not meet with actual use.

In the profitability analysis the author recommends handling the profit indicators in a complex manner, by applying U. Mereste's system integrated analysis methods, enabling, by highlighting the interrelations of profit indicators, to create a basis for fundamental analysis of the company activity. Hence the profit indicators – net profit, profit before taxes, operating profit and gross profit as well as the components of comprehensive income are to be used in aggregate, showing all connections between those indicators, and the system integrated analysis of profitability of company is to be carried out.

SUMMARY

Multiplicity of positions and ongoing discussions, when considering profit suggest the need to study that topic in greater detail in order to cast light on essential points relevant to measuring the profit, as seen from the perspective of managerial decision-making, and in order to show how the financial accounting would enable attaining the best result in that respect.

Under scrutiny in this thesis are positions and trends for development regarding the profit model having evolved in modern international financial reporting and the Estonian practice of financial reporting, as analysed through the prism of profit treatments of accounting theory and economic theory. Author's empirical research, with regard to measurement of profit in various financial accounting practices and the activities and attitudes by Estonian companies to profit and profitability analysis is presented.

The results of the thesis may serve as guidelines for analysis and comprehending of profit numbers for all users of financial data, for managers of enterprises for designing managerial accounting information, as well as for resolving accounting policy controversies in practice.

The results of the first research task

The discussion about theoretical foundations of profit figures and practical applications of financial accounting boil down to the quest for "true" profit, i.e. to find the measure of profit, most precisely disclosing the company performance, revealing different aspects of company operations in it, and the company's opportunities for the future.

The current changes for accounting profit model concern the treatment of comprehensive income. Indicative of complexity of the problem is the fact that regardless of FASB demanding the comprehensive income reporting since 1997 and IASB since 2007, discussions are still ongoing on the issues concerning the manner of presentation of comprehensive income.

For that matter, different positions are held in the issue on whether prominence should be given to the time-honoured classical net profit or to the novel comprehensive income or else those numbers are of equal stature.

Of importance is profit as stock exchange information, with two directions set apart: the informational approach, appreciating the profit's predictable abilities,

enabling to estimate the company's perspectives for the future, and the valuation approach, emphasising profit as an indicator of company's value.

Comprehensive income is an all-inclusive term that can be helpful to the user searching for the elusive true profit number. Lying hidden in comprehensive income are many opportunities for readers. It includes all changes in equity during a period except those resulting from investments by owners and distributions to owners.

The concept of comprehensive income approximates the treatment of accounting profit to the treatment of economic profit. Incorporated fully in the latter are market value changes in the determination of periodic profit. Because of the realization and recognition principles of accounting, comprehensive income is not quite equal to the economic profit but it has remained a subset of economic profit.

Implementation of comprehensive income has given rise to different opinions, proceeding from point of view of both theoreticians and practicing analysts.

As aforesaid, the object of discussion and empirical research has been the question whether and to what extent, comprehensive income is valuable as management and stock exchange information, as viewed from valuation or informational aspect, or whether and in what respect the classical net income is altogether more informative. As resulting from earlier theoretical and empirical research it is plausible to assert that by usage of comprehensive income, the informational and valuation value relevance of the profit number is actually provided. Yet generally dominating is the opinion that comprehensive income tells more about the facts while net profit has a larger predictive ability.

The Estonian financial accounting practice is actually little concerned with the issue of having predictive ability necessary for stock exchange information, given the dwindling number of Estonian companies listed in stock exchange.

Author of the work emphasises the importance of comprehensive income specifically due to its "tell it like it is": comprehensive income reports the change in company's net assets i.e. wealth over the period. Net profit, having traditionally been the accounting profit does not enable it, because net profit is based on historical cost model. Attracting attention to the issue of wealth is important from the standpoint of the whole society, besides the company management.

Author of the work holds the same position as the theoreticians, upon whose opinion the more accurate determination of wealth could even so much as avoid the rise of global economic crises, not to mention foreseeing the companies going bankrupt.

Awareness of profit as the indicator of change in net assets must be enhanced in Estonian companies, where it has not been bestowed due attention heretofore, as evidenced by survey carried out by author of this work. Capital maintenance problem has not even been driven home in the companies, by and large.

Emphasising the importance of comprehensive income as the marker of the company wealth, one should also point out the problems of implementing in practice the comprehensive income, viewed from that aspect.

The said circle encompasses the following questions:

1. There are the questions about profit presentation.

The question is, to what extent and in what ways financial statement users are affected by the presentation format for other comprehensive income.

Does it make a difference whether components of profit are presented in one single income statement rather than being reported in some other manner? Presently the IASB allows the following possibilities: a single statement of comprehensive income or two statements: classical income statement and the second statement beginning with profit or loss and displaying components of other comprehensive income (statement of comprehensive income). The FASB allows, besides that, also the reporting of other comprehensive income through the report on changes in owners' equity.

A single report, laying down all elements of profit simultaneously brings the essence of comprehensive income in a better perspective. Such report is informative as regards the changes in the company wealth, while also allowing analysing the company management's activity at achieving the outcomes for the concrete period, because the subtotal net profit will not go amiss anywhere. The author holds that it should be implemented as a report also in Estonia. Single comprehensive statement was theoretically substantiated by classical treatment of Edwards and Bell dating from 1961, which has been thoroughly reviewed in this work, and which coincides with views of economic theory in respect of profit.

An important and presently pending issue of the presentation is whether certain profit elements should belong to the composition of net profit or other comprehensive income. The segregation of net profit and other comprehensive income is not based on consistent theory but is a result of the application of current and changing accounting standards. On the one hand, the lack of a theory in the standards and on the other hand, measurement options may bring about a situation when the same value-relevant events lead either to a change in net profit or in other comprehensive income.

In reality, the question of presentation methods for comprehensive income is linked with issues of measurement and recognition. It is just the inability to settle between the historical cost and fair value measurement paradigms that finds its way into present day discussions concerning the income statement.

2. An old and unresolved issue in accounting has been whether profit should be determined according to the principle of clean surplus accounting.

Clean surplus profit includes all value changes in equity, except those resulting from transactions with owners.

The comprehensive income concept is based on clean surplus relation. The IASB Framework endorses clean surplus accounting.

Actually, standard setters have departed from the clean surplus rule, for example IAS 16, revaluation of property, plant and equipment; IAS 21, foreign exchange gains/losses on translation of net investment; IAS 39, unrealized gains/losses on available for sale instruments.

Some guidelines of the Estonian Accounting Standards Board (EASB) 2009 also tolerate deviation from clean surplus accounting and allow presenting changes in value of certain assets directly in equity: especially ASBG 5 and ASBG 6. It should be pointed out that EGAP 2013 considers clean surplus model more, as compared to EGAP 2009. Nevertheless, it thence transpires that actually the comprehensive income is not fully comprehensive. In the capacity of a methodological recommendation, attention should be drawn at this juncture to the need to reduce in Guidelines the range of options in respect of valuation of assets.

The results of the second research task

The second circle of questions scrutinized in this work is the impact of different financial accounting practices on profit formation.

Lying hidden in the accounting theory are the options to create different accounting systems, hence the various countries have developed different rules of financial accounting, deriving from cultural, political, economical, legal, financial and other variations. Also embedded within one system are usually alternative possibilities to account and report of the indicators. The said differences are to be taken into account when comparing the financial data and passing decisions.

The most obvious reason why companies from different countries use different accounting methods or report different information is because the rules or

regulations call for different treatments. But even where the rules of two countries are identical, they may be interpreted in different ways by companies in the two countries. Namely, with indicators, which are appreciable according to rules of financial accounting, national idiosyncrasies and traditions may play a role at their estimating. A distinction must be made between accounting regulations, or *de jure* issues, and actual practices, or *de facto* issues. Accounting regulations often contain a number of options, where making a choice may also depend on national traditions.

One cannot underestimate either the possible different content of notions and terms in various financial accounting systems. The notions of financial accounting may carry a different meaning in various accounting systems. In this thesis, some terminological problems cropped up, when comparing with one another the notions pertinent to the topic of IFRSs, US GAAP and EGAP.

1. Considered in this connection have been the main notions of financial accounting in use in Estonia, as compared with IFRSs. It needs be emphasised that the Estonian Accounting Act, which is a governing document in Estonia with regard to organising financial accounting, has defined the basic notions differently, as done in IFRSs, although the purpose of the Act is “to create the legal bases and establish general requirements for organising accounting and financial reporting pursuant to internationally recognised principles”. Because the basic notions of every area of activities are the basis, underlying the theory and legal acts, which must be proceeded from also in practice, the proper definition of basic notions, in pursuance of international custom in the given area, is of fundamental significance. At this juncture the notions income, expenses, assets, liability and owner’s equity were scrutinized. It needs be pointed out that with all these notions, a difference on the substance of the case was revealed between IFRSs and EGAP, whereas the EGAP terms do not warrant understanding the essence of matters and their economical gist.

2. There were cases of usage of some terms in different meaning by IFRSs and US GAAP. It is to the point to quote W. Churchill in this connection: “Americans and British are one people separated by a common language”. Some terms were ambiguous, clearly making it hard to infer and analyse whatever has been implied, and therefore calling for remediation.

Endemic for the present time is the tendency to universally unifying the rules of financial accounting and the year of 2005 can be considered the beginning of breakthrough of IFRSs, with the EU stock exchanges establishing the requirement to accounting in line with IFRSs. Although significant progress is in evidence towards national acceptance of IFRSs, there are nevertheless the differences, impacting on formation of profit, and therefore meriting attention. This research

compares the profit calculated under the EGAP rules with the profit calculated under the US GAAP rules, and IFRSs is used as the focus of comparison. In the process of analysis, subjected to comparison have been the guidelines of EGAP applicable as from 1 January 2009, the guidelines of EGAP applicable as from 1 January 2013, the IFRSs 2011 and the respective US GAAP. Beside EGAP, IFRSs rules are also allowed in Estonia. The EGAP is knowingly the subset of IFRSs rules, without its conceptual framework. The US GAAP as rules known and acknowledged worldwide is a necessary and interesting compendium of rules for both Estonian companies involved in international relations and for foreign investors. The author has also compared the differences of impact of the rules till 2013 applicable in Estonia and those entering into force in 2013.

The author reached the following conclusions.

Differences of accounting methods of objects of assets create a difference in profit size. Because the financial accounting enables making alternative choices, this analysis uses those causing the largest differences in profit. Whether profit is larger or lesser under Estonian or US rules depends on what objects of assets dominate in the given company: in companies with large share of tangible fixed assets the Estonian profit is generally more conservative. At domination of differences in accounting intangible assets the Estonian profit is larger. In case of real estate investments and inventory the result depends on the trend on movement of their prices.

The results of the third research task

The third aspect in the work purports to analyse using the profitability indicators in Estonian business practices, with recourse to the survey of the respective topic, carried out at companies, with the goal to present the methods, to which preference is given in Estonian companies when the efficiency of business activities is analysed, and for the wealth measurement purposes. Generally the application of quality analysis could not be overestimated for company as well as for all of society.

Under consideration are internal and external financial measures based on accounting figures, which are routinely reported by legal business entities. The companies were submitted a questionnaire, with the purpose to find out: which figures are needed from regular income statement; are some indicators of income statement and balance sheet adjusted, for obtaining necessary information for analysis; is the capital maintenance issue taken into regard; is profit as indicator of change in company value valued; are the profit and the investments made compared, in order to find out the actual growth in wealth; is the cash based profit analysed etc.

As evidenced in survey, there is some analysing of indicators of profit and profitability witnessed in the Estonian companies however preference is given to less sophisticated indicators and methods.

When assessing the activities of companies investigated and their attitude to profitability analysis, it is necessary to point out that companies should pay more attention to indicators, allowing to monitor the actual growth of wealth in the company. That would mean comparison of indicators, expressing the profit and the investments price, and involvement in the capital maintenance problem. The importance of profit, as the indicator of change of the company value has presently gained prominence in the world, ever more so given the current economic predicament.

Also the cash based profit is calling for due attention in companies investigated. Dismissing the cash based analysis may all of a sudden end up with the company's insolvency. The latter attitude can be accounted for by the misconception deeply rooted in the companies that accrual profit is of equal value to the amount-of-money encashed.

As regards to organisation of analysis in the companies, it would be advisable to increase the role of an accountant as an analyst. That would allow the accountant to see the accounting issues from different aspects and have a say in conceptual deliberations, enhancing in the society the level of accounting practice and its prestige.

To improve the profitability analysis in companies the author recommends handling the profit indicators in a complex manner, by applying Professor U. Mereste's (1984; 1987; 1991) system integrated analysis method, enabling, by highlighting the interrelations of profit indicators, to create a basis for fundamental analysis of the company's business activities. Hence the profit indicators – net profit, profit before taxes, operating profit and gross profit, which the companies use most often in analysis – are to be used in aggregate, showing all connections between those indicators, and the complementary analysis of profitability of company. System integrated analysis method is remarkable due to the fact that it investigates the change of relations and change of proportions of relations between indicators, allowing the early discovery of the disproportions.

To sum up, the author views as the most important outcome of this work, the thorough theoretical analysis of possibilities of measuring of accounting profit and in particular the analysis of currently ongoing discussion over comprehensive income. The author appreciates the possibilities seminal in the comprehensive income model to reflect the change in net assets of the company and hence also the wealth. Comprehensive income conception approximates the accounting

income to economic income, being the balance sheet approach in profit treatment. Such way of treatment is important from the point of view of both the company management decisions and also of the whole society, enabling as it does to anticipate the bankruptcies and more broadly also the economic crises. In the Estonian entrepreneurial environment, where the stock exchange has an insignificant role to play, the reflection of wealth in profit is of great significance and therefore application of comprehensive income model is important. That's why the author ventures suggestions for specification of Estonian rules in that respect: for instance to establish as a form of reporting one comprehensive income form; to diminish in the rules the possibility of implementing alternative algorithms; to eliminate the rules not in compliance with the comprehensive income model etc.

Theoretical positions of the thesis are complemented by empirical studies of the author. For that matter, survey of the companies testifies to the fact that the companies effectively overlook the changes in wealth and are quite ignorant of the need for capital maintenance. The survey as well points out the need for more efficient methods of analysis of profit carried out in companies. The author suggests analysing profit and profitability through system integrated method of analysis which allows clarifying the relations between different components of profit and their influence on the final result and calculating the overall index of profitability. An advantage of the method described above is its relatively simple application in companies.

Meriting attention is also the comparative analysis of US GAAP and EGAP guidelines with regard to profit formation carried out by the author, making manifest the need to take into account the impact of rules when interpreting the results of financial accounting as a discipline allowing for alternatives.

Consequently this work presents interest both for the business community and the actors involved in issues of legislative framework of financial accounting.

Author has got quite a few problems still outstanding, to be tackled by further research: for that matter, missing are good methods of analysis of comprehensive income, imperatively calling for elaboration.

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APPENDICES

Appendix 1

Illustrative example of the impact of different factors on profit numbers (EGAP vs. US GAAP)

	EGAP		US GAAP	
	n. year	(n+1). year	n. year	(n+1). Year
Tangible fixed assets 1000000 euro, depreciation rate is 20%				
Revaluation 200000 euro	Revaluation takes place	-	-	-
Depreciation expense		more 40000		
Profit		- 40000		
Reversal of impairment 200000 euro				
	There is reversal of impairment	-	-	-
Gain	+ 200000			
Depreciation expense		more 40000		
Profit	+ 200000	- 40000		
Borrowing costs 200000 euro per year				
Expense	- 200000	- 200000	Capitalised	Capitalised
Depreciation expense			More 40000	more 40000
Profit	less 160000	less 160000		
Intangible fixed assets 1000000 euro, amortization rate is 5 %				
Development expense 200000 euro	Capitalised	Capitalised		
Expense			- 200000	- 200000
Amortization expense	more 10000	more 10000		
Profit			Less 190000	less 190000

Real estate investments 1000000 euro, depreciation rate is 20%	Fair value model		Cost model	
Gain from change in value	+ 200000			
Loss from change in value		- 200000		
Profit	+ 200000	- 200000		
Inventory Inventory contains 1000 oldest units with historical cost 200 euro per unit and 1000 newest units with 300 euro per unit	FIFO		LIFO	
Expense of goods sold (1000 units)	- 200000		- 300000	
Profit			Less 100000	

Source: Compiled by the author

Appendix 2

The illustrative example of the impact of different factors on profit numbers (Old EGAP vs. New EGAP)

	Old EGAP		New EGAP	
	n. year	(n+1). year	n. year	(n+1). Year
Tangible fixed assets 1000000 euro, depreciation rate is 20%				
Revaluation 200000 euro	Revaluation		-	-
Depreciation expense		- 40000		
Profit		less 40000		
Borrowing costs 200000 euro			Capitalised	Capitalised
Expense	- 200000	- 200000		
Depreciation expense			- 40000	- 40000
Profit	less 160000	less 160000		
Development expense 200000 euro	Capitalised	Capitalised		
Expense			- 200000	- 200000
Amortization expense	- 40000	- 40000		
Profit			less 160000	less 160000
Accounting of Goodwill 1000000 euro				
Discount expense 300000	- 300000	- 300000		
Amortization expense			- 200000	- 200000
Profit	less 100000	less 100000		

Source: Compiled by the author.

Appendix 3

Küsimustik ettevõtete tegevuste ja hoiakute väljaselgitamiseks kasumi- analüüsi valdkonnas

1. Kasutan kasumiaruannet ettevõtte tulemuste analüüsimisel:

a) Arvutan rentaablusnäitajaid

Mitte kunagi Väga harva Mõnikord Sageli Alati

b) Võrdluseks konkurentidega

Mitte kunagi Väga harva Mõnikord Sageli Alati

c) Muu. Mis nimelt?

Mitte kunagi Väga harva Mõnikord Sageli Alati

2. Analüüsis kasutan järgmisi kasuminumbreid (andke kõigile hinnang):

a) Ärikasum (*Operating income*)

Mitte kunagi Väga harva Mõnikord Sageli Alati

b) Brutokasum

Mitte kunagi Väga harva Mõnikord Sageli Alati

c) Kasum enne tulumaksustamist (EBT)

Mitte kunagi Väga harva Mõnikord Sageli Alati

d) Puhaskasum

Mitte kunagi Väga harva Mõnikord Sageli Alati

e) EBITDA

Mitte kunagi Väga harva Mõnikord Sageli Alati

f) Piirkasum (*Contribution margin*, jääktulu)

Mitte kunagi Väga harva Mõnikord Sageli Alati

g) Kassapõhine kasum

Mitte kunagi Väga harva Mõnikord Sageli Alati

h) Muu. Mis nimelt?

Mitte kunagi Väga harva Mõnikord Sageli Alati

3. Ettevõttele vajalikuks analüüsiks korrigeerin tavapärasest kasumiaruannet (ja bilanssi).

- Mitte kunagi Väga harva Mõnikord Sageli Alati

4. Arvutan järgmisi finantsnäitajaid:

a) RI (*Residual income*)

- Mitte kunagi Väga harva Mõnikord Sageli Alati

b) EVA (*Economic value added*)

- Mitte kunagi Väga harva Mõnikord Sageli Alati

c) ROI (*Return on investment*)

- Mitte kunagi Väga harva Mõnikord Sageli Alati

5. Teiste ettevõtete kasuminäitajad on põhiline alus investeerimisotsuste langetamiseks.

- Ei nõustu Pigem ei Pigem nõus Nõus Täiesti nõus

6. Vahe tegemine *return on capital* ja *return of capital* vahel parandab oluliselt juhtimisotsuseid.

- Ei nõustu Pigem ei Pigem nõus Nõus Täiesti nõus

7. Kas Teie analüüsi tulemusi kasutatakse praktiliselt?

- Jah Ei Ei oska öelda

8. Kas Teie palk sõltub kasumi suurusest?

- Ei Pigem ei Pigem jah Jah

9. Kas kasutate

- Skeem 1 Skeem 2

10. Teie amet

- Raamatupidaja Finantsjuht

11. Teie ettevõtte töötajate arv

- 250 ja enam 50-249

12. Teie ettevõtte tegevusvaldkond

- Tööstus ja energeetika Ehitus ja kinnisvaraarendus Kaubandus
 Teenindus

Appendix 4

Questionnaire for assessment of profitability measurement activities in Estonian companies

1. I use the income statement when analysing the outcome of the company:

a) For calculating the efficiency indicators

Never at all Very rarely Sometimes Frequently Always

b) As the background enabling comparison with competitors

Never at all Very rarely Sometimes Frequently Always

c) For other purposes. Please specify

Never at all Very rarely Sometimes Frequently Always

2. When analysing, I use the following income numbers (please provide an estimate to all of them):

a) Operating income

Never at all Very rarely Sometimes Frequently Always

b) Gross profit

Never at all Very rarely Sometimes Frequently Always

c) Earnings before taxes (EBT)

Never at all Very rarely Sometimes Frequently Always

d) Net profit

Never at all Very rarely Sometimes Frequently Always

e) Earnings before interest and taxes and depreciation (EBITDA)

Never at all Very rarely Sometimes Frequently Always

f) Marginal profit (Contribution margin, residual income)

Never at all Very rarely Sometimes Frequently Always

g) Cash based income

Never at all Very rarely Sometimes Frequently Always

h) Other. Please specify

Never at all Very rarely Sometimes Frequently Always

3. For the analysis needed by the company, I adjust the regular income statement (and balance sheet).

- Never at all Very rarely Sometimes Frequently Always

4. I calculate the following financial indicators:

a) RI (Residual income)

- Never at all Very rarely Sometimes Frequently Always

b) EVA (Economic value added)

- Never at all Very rarely Sometimes Frequently Always

c) ROI (Return on investment)

- Never at all Very rarely Sometimes Frequently Always

5. The income indicators of other companies are the main basis for taking investment decisions.

- I do not agree I'd rather not agree I rather agree I agree
 I fully agree here

6. Making difference between *return on capital* and *return of capital* essentially improves the management decisions.

- I do not agree I'd rather not agree I rather agree I agree
 I fully agree here

7. Are the results of your analysis used in practice?

- Yes No I cannot say

8. Is your salary dependent on the amount of profit?

- No Rather no Rather yes Yes

9. Do you use

- Scheme 1 Scheme 2

10. Your position

- Accountant Financial Manager

11. Number of workers of your company

- 250 plus 50-249

12. Area of business of your company

- Industry and energy Building and real estate development Trade
 Service

KOKKUVÕTE

Doktoritöö uurimisobjektiks on kasum.

Olles ettevõtte edukuse näitajaks ja aluseks juhtimisotsuste langetamisel nii ettevõttes kui ka väljaspool, on kasumil eriline koht ärimaailmas. Seetõttu on kasumil ka eriline koht finantsarvestuse teoorias, olles ühe võimaliku paradigma – ideaalkasumi paradigma – keskmes. Küsimuse üle, milline on õige viis kasumit mõõta, on toimunud diskussioonid raamatupidamise teoreetikute ja praktikute seas aastakümneid ja need jätkuvad.

Autori arvates on just praegu, kui rahvusvahelistes finantsaruandluse standardites (IFRSs) toimuvad olulised kontseptuaalsed muutused, õige aeg võtta kasumi küsimus selles uues kontekstis vaatluse alla ja uurida finantsarvestuse raamistiku mõju kasumi kujunemisele üldiselt ja Eesti finantsarvestuse praktikas.

Kontseptuaalsed muudatused kasumimudeli osas puudutavad koondkasumi mõistet ja selle aktsepteerimist finantsarvestuse kasumina. Probleemi keerukusele viitab asjaolu, et hoolimata sellest, et koondkasum on FASB-i poolt aruandluses nõutud juba aastast 1997, IASB-i poolt aastast 2007 ja Eesti Hea tava poolt aastast 2009, jätkuvad diskussioonid koondkasumi esitusviisi osas senini. Peamiseks probleemiks on koondkasumi iseloom, mis hõlmab nii soetusmaksumusepõhist arvestust kui ka õiglase väärtuse põhist arvestust ja küsimus on, kuidas koondkasum peaks kajastama nende kahe paradigma kooslust.

Käesoleva töö eesmärk on läbi teooriaprisma analüüsida kasumi mõõtmise praegusi iseloomulikke jooni finantsarvestuse praktikas, arengutrende rahvusvahelises ulatuses ja Eesti finantsarvestuses, eesmärgiga esile tõsta parimad võimalused kasumi toimimiseks juhtimisotsuste alusena ja määratleda, milline peab olema finantsarvestuse reeglistik selle kindlustamiseks.

Teoreetilise analüüsi toetuseks on töös esitatud autori kaks empiirilist uuringut.

Esimene näitab finantsarvestuse mõju kasumile sellest küljest, kuivõrd eri riikide reeglistikes kujunenud kasumid võivad erineda: vaatluse all on Eesti Hea Tava ja IFRSs vs US GAAP. On teostatud nii kvantitatiivne kui ka kvalitatiivne uuring, kus kvalitatiivne uuring antud töö kontekstis tähendab normatiivaktide võrdlusanalüüsi ja kvantitatiivne uuring toob välja eelmainitud mõjude ulatused.

Autori teine uuring on viidud läbi selleks, et selgitada Eesti ettevõtete suhtumist kasumi ja kasumlikkuse analüüsi ning seostub töö eesmärgiga, andes alusmaterjali soovitusteks finantsarvestuse metodoloogiliste juhendite tarvis finantsarvestuse ja analüüsi protsessi täiustamiseks.

Uurimisülesanneteks on:

1. „Õige” kasumi otsimine, s.t püüd välja selgitada, milline on parim kontseptuaalne lähenemine kasumi mõõtmisele ja esitusviisile, pidades silmas Eesti ärikeskkonda: kas kasum peab eelkõige sisaldama informatsiooni börsiennustusteks investeerijatele või aktsiahindade kujundamiseks ehk hoopis peegeldama muutust ettevõtte netovaras ja rikkuses. Sellest sõltuvalt on vaja eelistada finantsarvestuse lõpliku kasumina kas kasumiaruannete klassikalist viimast rida – puhaskasumit – või uuenduslikku koondkasumit või hoopis neid võrdsel tasemel. Eespool tooduga on seotud finantsarvestuse teooria vana, kuid siiani vaidluse all olev küsimus: kas kasumi mõõtmiseks on õige kasutada *clean surplus* või *dirty surplus* arvestust? Siin on uurimise all ka kasumi esitusviisi küsimus: kas, kuidas ja mil määral mõjutab infotarbijat kasumi esitamine finantsaruannetes.

2. Vaatluse all on probleemide ring, mis on seotud finantsarvestuse eri reeglistike mõjuga kasumi kujunemisele. Erinevusi võimaldava olukorra tekitab finantsarvestuse olemus olla valiku/alternatiivide põhine. Seetõttu on tavapärane, et finantsarvestuse eri raamistikud (antud juhul on silmas peetud riikide finantsarvestuse reeglite süsteeme) võimaldavad erinevaid arvestus- ja aruandlusreegleid, mis aga annavad ühe ja sama majandusüksuse finantsaruannetes erinevaid väljundeid. Autor seab ülesandeks uurida võimalikke mõjusid kasumi kujunemise osas, võrreldes Eesti ja USA praktikat.

3. Uurida, kuidas Eesti ettevõtte suhtub oma finantsaruandluse kasuminäitajatesse, s.t. mida eelistatakse näha infona, mida kasuminäitaja(d) eelkõige peaks(id) sisaldama ja millised analüüsivõtted on eelistatud.

Ülevaade teoreetilisest taustast ja probleemidest. Kasum kui juhtimisinfo allikas on vajalik eri huvirühmadele, mistõttu on palju seisukohti küsimuses, kuidas peab kasumit mõõtma.

Kaks polaarset seisukohta kasumi osas on finantsarvestuse kasum ja majandusteoreetiline kasum, mille vahelisele skaalale mahub hulk vahevorme, mis püüavad saavutada parima tulemuse eri seisukohti ja võimalusi ühendades. Finantsarvestus seab kasumi mõõtmisele teatud piirangud, mis tulenevad finantsarvestuse olemusest ja alusprintsipiidest (tulu fikseerimise ja tulude/kulude õige vastavuse printsiip ning konventsionaalselt kehtestatud soetusmaksumuse ja realiseerituse printsiibid).

Klassikaline finantsarvestuse kasum on kujundatud transaktsioonipõhimõttel, kujutades perioodi tulude ja kulude vahet. Majandusteoreetiline kasum seevastu leitakse perioodi lõpu ja alguse netovara vahena, pidades silmas kapitali asendusvajadust. Seejuures on arvestusmeetodiks tulevaste oodatavate

rahavoogude diskonteerimine tänasesse päeva, mida finantsarvestuse teooria ei tunnista.

Finantsarvestuse kasumiuuringud on eri aegadel olnud suunatud erinevatele eesmärkidele: kaks põhilist seisukohta on 1) omistada kasumile tähelepanu kui firma väärtuse indikaatorile või 2) pöörata tähelepanu kasumile, mille omadused võimaldavad tulevikuennustusi investeerimisotsusteks börsil.

Kolmas, normatiivse kasumi koolkond, on käesolevas töös eriliseks huviobjektiks, kuna pakub teoreetilise baasi praegusele koondkasumi mudelile. Sii koolkonda kuuluvad teooriad, mille eesmärk on saavutada majandusteoreetilise kasumi mõõt finantsarvestuse meetodite ja protseduuridega, kasutades soetusmaksumusest erinevaid väärtustamise meetodeid (*business profit, realizable profit, realized profit*). See koolkond moodustab ideaalkasumi paradigma tuumiku, kus eesmärk on luua majandusteoorial põhinev finantsarvestuse raamistik.

Doktoritöö ülesehitus ja meetod. Doktoritöö on üles ehitatud eesmärgiga anda kasumi olemuse igakülgne ülevaade läbi erinevate teoreetiliste käsitluste, finantsarvestuse praktika analüüsi ja autori empiiriliste uuringute. Selline lähenemine võimaldab täita töö eesmärki: hinnata praegusi finantsarvestuse reeglistikke kasumi mõõtmise osas ja tuua esile, millised reeglid võimaldaksid parimat tulemust kasumi kui juhtimisotsuste aluse mõõtmiseks.

Uurimise raamistiku moodustavad kaks finantsarvestuse teooria paradigmat: ideaalkasumi/deduktiivne paradigma ja otsustuskasulik/otsustaja/turukäitumuslik paradigma.

Metodoloogilise valiku sellise teoreetilise baasi osas tingib asjaolu, et selline käsitlus võimaldab kasumi igakülgse analüüsi, sisaldades normatiivse, informatsioonilise ja väärtustamisliku lähenemise.

Kasumit kui fenomeni uuritakse teooria triangulatsiooni kaudu, kus peamisteks vastandlikeks teooriateks on majandusliku kasumi ja finantsarvestuse kasumi teooria ning sidusrühmade teooria.

Finantsarvestuse praktika reeglistikke on uuritud, tuginedes finantsarvestuse teooria eri kontseptsioonidele, mis tähtsustavad kasumi eri omadusi (normatiivne, informatsiooniline ja väärtustamislik kontseptsioon) ning varasematele empiirilistele uuringutele kasumi informatsioonilise väärtuse osas börsi- ja juhtimisotsustele. Kasumi mõõtmise teoreetilisi ja praktilisi küsimusi on käsitletud väärtustamise ja kapitaliasenduse eri teooriaid analüüsides. Seega kuuluvad kontseptsioonid nii finantsarvestuse kui ka majandusteooria valdkonda.

Finantsarvestuse teooria arengus ongi olnud tähtis etapp, kus on püütud luua majandusteoorial põhinevat finantsarvestuse raamistikku ja kasumikontseptsioonidena on nähtud kasumimõõdikuid, mis on majanduskasumi – esitatud Fischeri (1906) ja eriti Hicksi poolt (1946) – lähendid, mis on saavutatud finantsarvestuse protseduuride ja meetoditega. Sellesse suunda on põhilise panuse andnud Solomons (1961) ning Edwards ja Bell (1961). Siin käsitletakse kasumit kui finantsarvestuse fundamentaalset mõõtu. Nüüdisaegse suunaga finantsarvestuse kasumi kontseptuaalses käsitluses – koondkasumiga – on selle suuna kontseptsioonidel (*business profit, realizable profit, realized profit*) palju ühiseid jooni ning mainitud autorite uuringud on praeguse koondkasumi mudeli teoreetiliseks põhjenduseks. Oluline on märkida ka, et koondkasumi idee sisaldus juba Schmalenbachi dünaamilise bilansi teoorias (1933).

Ideed käsitleda finantsarvestuse kasumit fundamentaalse mõõdikuna on kritiseerinud Barton (1974) ning Beaver ja Demski (1979) ning neoklassikaline majandusteooria kaotas oma tähtsuse finantsarvestuse jaoks. Edasised uuringud on seotud finantsnäitajate väärtuslikkusega kapitaliturgude, eriti väärtapaberituruga. Need uuringud on valdavalt empiirilised uuringud. Informatsioonilise suuna olulisemateks uurijateks on olnud Beaver (1968; 1998), Lev (1989), Miller ja Rock (1985), Kormendi ja Lipe (1987), Easton and Zmijewski (1989). Väärtustamisliku suuna väljapaistvaimad tööd on Ohlsoni (1989, 1990, 1993) ning Felthami ja Ohlsoni uuringud (1995), kes jällegi tõstasid fundamentaalse mõõtmise küsimuse.

Viimasel ajal on uuringute keskmeks olnud koondkasum: s.t. uuritakse, kui infoväärtuslik on koondkasum või selle üksikud komponendid börsiennustustes või aktsiahinna kujunemisel. Ka siin võib uuringud jaotada informatsioonilisi eesmärke uurivaiks (Chambers *et al.* 2006; O’Hanlon ja Pope 1999; Biddle ja Choi 2006) või väärtustamislikke eesmärke uurivaiks (Brimble ja Hodgson 2005; Cahan *et al.* 2000).

Finantsarvestuse praktikat on käsitletud IFRSi reeglistike alusel. IFRSs on reeglite kogum, mis üha enam leiab ülemaailmset järgimist, olles aastast 2005 kohustuslik Euroopa Liidu börsiettevõtetele ja paljudes maailma riikides kasutusel täies mahus või osaliselt. Osaliselt on võrdlusena kasutatud US GAAPi.

Normatiivaktide võrdlusanalüüs on teostatud, et selgitada välja erinevate finantsarvestuse raamistike võimalik mõju kasumi kujunemisele. Eesti Hea Tava reeglistiku (1. jaanuar 2009 ja 1. jaanuar 2013) kasumit ja IFRSs kasumit on võrreldud US GAAP reeglistiku kasumiga.

Ankeetküsimustiku meetodit kasutatakse ettevõtete hoiakute selgitamiseks kasumi ja kasumlikkuse analüüsi osas.

Maatriksudelil põhinevat sidusanalüüsi meetodit soovitab autor ettevõtetele kasumiaruande ja kasumlikkuse analüüsiks.

Töö tulemused, uudsus ja rakendused. Kokkuvõtteks tuleb märkida, et diskussioon kasumi teoreetiliste aluste ja praktiliste rakenduste osas on „õige“ kasumi otsingud, mis parimal viisil väljendaks ettevõtte tulemust, ettevõtte tegevuse eri külgi selles ja ettevõtte tulevikuväljavaateid. Eri koolkonnad peavad aga kasumi puhul tähtsaks informatiivsust erinevate otsuste jaoks. Praegusel etapil on oluline diskussioon koondkasumi kui uuendusliku finantsarvestuse kasumi omaduste ja esitusviiside üle.

Töö autor on seisukohal, et koondkasum, mis väljendab kõiki muutusi ettevõtte kapitalis, välja arvatud tehingutest omanikega, on väga hea kasumimõõt, võimaldades info tarbijal lugeda sellest välja just temale vajaliku. Koondkasum on orienteeritud muutuste kajastamisele ettevõtte netovaras ja ettevõtte rikkuse mõõdule. Seega on koondkasumi mudeli kaudu toimunud finantsarvestuse kasumi lähenemine majanduskasumile.

Autori arvates on koondkasumi eelistamine klassikalisele puhaskasumile väga sobiv Eesti ärikeskkonnas, kus side börsiga on nõrk. Nimelt peetakse varasemate väärtipaberiturupõhiste uuringute põhjal klassikalist puhaskasumit börsiifona informatiivsemaks, võrreldes koondkasumiga. Koondkasumi eeliseks on ettevõtte varandusliku seisundi adekvaatne peegeldus, mis on oluline nii ettevõtte juhtimise seisukohalt kui ka ühiskonna seisukohalt tervikuna, võimaldades ette näha nii ettevõtte pankrotistumise ohtu kui laiemas plaanis ennetada majanduskriise.

Koondkasumi kontseptsiooniga on finantsarvestuse kasumikontseptsioon lähenenud majandusteoreetilise kasumi kontseptsioonile, võimaldades perioodi kasumis arvesse võtta turuväärtuse muutusi. Koondkasum ei võrdu siiski täpselt majanduskasumiga, jäädes selle alamhulgaks, kuna finantsarvestuses kehtib realiseerituse printsiip.

Nagu selgub autori poolt läbiviidud uuringust, ei näe ettevõtted ise vajadust kasumis eelistada netovara (rikkuse) muutuse aspekti. Kapitaliasenduse küsimus on neile tundmatu, mis võib seega viia kasumi ülehindamisele ja dividendide liiga ulatuslikule väljamaksmisele, mis on ohtlik ettevõtte jätkusuutlikkuse seisukohalt.

Autori poolt on tehtud järgmised tähelepanekud probleemide osas, mis kerkivad üles koondkasumi praktikasse rakendamise ja vajavad lahendamist.

Esiteks on lahendamata küsimus koondkasumi esitusviisist aruannetes, kus IASB lubab kahte varianti: 1) esitada tavapärase kasumiaruande ja lisaks koondkasumiaruande, mis algab tavapärase perioodikasumiga, millele lisanduvad

muu koondkasumi elemendid, või 2) esitada üks koondkasumiaruanne. Eestis on praegu kasutusel esimene variant, autor soovib teist, kuna koondkasumi esitamine ühe aruandena tõstab selle olulisust interpreteerija silmis. Just ühtse koondkasumi teoreetiliseks põhjenduseks on normatiivse kasumi koolkonna uuringud, mis seostavad finantsarvestuse raamistiku majandusteooriaga. Samas on võimalik sellise esitusviisiga ühes aruandes eristada kasumi olulisem komponent – perioodi kasum – ja vähemolulisem komponent – muu koondkasum.

Lahendamata on küsimus, kas teatud kasumielemendid peaksid kuuluma perioodi kasumisse või muu koondkasumi alla. Siinkohal tuleb esile finantsarvestuse raskus ühendada soetusmaksumuse ja õiglase väärtuse paradigmasid.

Teiseks, vana ja lahendamata küsimus on, kas kasumi mõõtmiseks on vajalik kasutada *clean surplus* arvestust. *Clean surplus* kasum sisaldab kõiki muutusi kapitalis. Seega koondkasumi mudel baseerub *clean surplus* seosel. IASB kontseptuaalne raamistik võimaldab *clean surplus* arvestust, nagu eelnev analüüs näitas. Tegelikuses esinevad nii IASB kui Eesti reeglites sellest kõrvalekaldumised (näiteks IAS 16, IAS 21, IAS 39, RTJ 5, RTJ 6). Märkimist väärib, et kasumit ja koondkasumit puudutavad reeglid on IASB poolt esitatud ebakorrektselt ja ebajärjekindlalt, defineerimisel on rikutud kahekordse kirjendamise põhimõtteid.

Autori tehtud empiiriline uuring finantsarvestuse eri reeglite mõjust kasumi kujunemisele andis järgmisi tulemusi. Esiteks selgus, et mitmel antud valdkonna terminil on erinev tähendus Eesti Hea Tava ja IASB raamistikus või omakorda erinevad IASB ja FASB tähtsad kasumit puudutavad terminid (s. h. näiteks *income* tähendab IASB puhul tulu, FASB puhul aga hoopis kasumit jne).

Selline olukord vajaks korrastamist, vastasel juhul on tekstide mõistmine ja analüüs raskendatud.

Mis puudutab Eesti ja USA seadustike võrdlust kasumi kujunemise osas, siis võib järeldada, et see, kas ühe või teise riigi reeglite puhul ettevõtte kasum on suurem või väiksem, sõltub ettevõtte vara koosseisust ja sellest, milliseid alternatiivsetest arvestusmeetoditest on kasutatud.

Eesti ettevõtete uuringust selgus, et ettevõtted üldiselt tegelevad kasumi analüüsimisega, eelistatakse aga lihtsamaid näitajaid ja analüüsivõtteid.

Uuringu tulemusena võib esile tuua ettevõtete juba eespool mainitud vähest teadlikkust kapitali asenduse ja kasumi arvestuse bilansivariandi osas.

Samuti selgus, et paljud ettevõtted vajaksid aruandlusvorme mõnel teisel kujul, mida võiks arvesse võtta juhendite koostamisel.

Kassapõhise kasumi ja piirkasumi vähene kasutamine ettevõtetes vähendab samuti nende analüüsi kvaliteeti.

Seega näitas uuring vajadust efektiivsemate kasumianalüüsi meetodite kasutamise järele. Need on autori poolt esitatud. Autor soovib kasumi ja kasumlikkuse analüüsimiseks kasutada süsteemintegreeritud analüüsimeetodit, mis võimaldab leida kasumikomponentide omavahelisi suhteid ja mõju lõpptulemusele ning arvutada kasumlikkuse koondindeksit. Meetod põhineb maatriksudelil, mis on ühendatud indeksite teooriaga ja ahelasendusvõttega. Nimetatud meetodi eeliseks on lihtne rakendatavus ettevõttes ja ettevõtte kasumi kujunemise põhjalikum selgitamine. Süsteemintegreeritud analüüsimeetodi puhul väärib tähelepanu ka võimalus avastada näitajatevaheliste seoste ja proportsioonide muutuste ilmnemisel ajas varakult võimalikke disproportsioone ettevõtte tegevuses.

Ühiskonna seisukohalt on huvipakkuv samuti fakt, et analüüsi tase on madalam ettevõtetes, kus puudub finantsjuht ja analüüsi teostab raamatupidaja. Raamatupidaja kõrvalejätmine analüüsist on ajalooliselt kujunenud, aga tema ulatuslikum kaasamine analüüsiprotsessi võimaldaks tõsta analüüsi taset kõigis ettevõtetes ja avardaks raamatupidaja vaadet finantsandmetele üldiselt, tõstaks selle elukutse prestiiži ning elavdaks finantsarvestusealast diskussiooni ühiskonnas jne.

Käesolev töö on huvipakkuv kõigile, kellel on vajadus interpreteerida kasuminäitajaid, eriti aga ettevõtjatele, välissidemeid omavatele ettevõtetele ja välisinvestoritele. Ettevõtete juhtidele pakub käesolev töö alusmaterjali juhtimisarvestuse info kujundamisel. Samuti on tehtud analüüs ja ettepanekud kasulikud finantsarvestuse reeglistike muutmise keeruliste ja vastuoluliste küsimuste lahendamisel.

Diskussiooni jätkumine finantsarvestuse parima kasumimudeli üle võiks tulevikus pakkuda lahendusi ka koondkasumi heade analüüsimeetodite leidmisel.

CURRICULUM VITAE

1.	GENERAL DATA	
1.1.	Name and surname	MARET BRANTEN
1.2.	Date and place of birth	25. 05. 1953, Tallinn
1.3.	Citizenship	Estonian
1.4.	Address, phone, e-mail	Õismäe tee 134-7. Tallinn 13513 +3726579937 +37256674946 maretbranten@hotmail.ee , maret@eurouniv.ee
1.5.	Current occupation	Euroacademy, Co-ordinator of the Faculty of Business Management

2.	EDUCATION (<i>time of graduation, educational institution, acquired level/degree, language skill</i>)	
	2003: Estonian Business School, Master of Business Administration, Major in Accounting and Finance	
	1996 – 1998: Estonian Business School, Master Programme in International Business Administration, Graduate Diploma in International Business, Major in Accounting	
	1971 – 1976: Tallinn Polytechnic Institute, Diploma in Information Processing, qualification of engineer-economist	
	Languages: Estonian, Russian, English (TOEFL-test)	

3.	PROFESSIONAL CAREER	
	2001: EuroUniversity, Co-ordinator of the Faculty of Business Management	
	2000: EuroUniversity, Lecturer	
	1976 – 1993: Computing Centre of Planning Committee of the ESSR, in 1991 reorganised to State Computing Centre, programmer and team leader.	
	1978 – 1981: „Algorithm“ hourly-rate lecturer, the subjects taught: management systems of the databases and the programming languages.	

4.	RESEARCH ACTIVITIES	
4.1.	Publications	
	<p>Alver, J., Branten, M. 2011. Measurement and Analysis of Profitability in Estonian Companies. <i>Journal of International Scientific Publications: Economy & Business</i>, 5, 160-174.</p> <p>Alver, J., Branten, M. 2011. Profitability Analysis in Estonian Business Practice. <i>Proceedings of the International Academy of Business and Public Administration Discipline</i>, 298-311.</p> <p>Branten, M. 2011. The Impact of Financial Accounting on Profit Numbers. <i>Baltic Horizons</i>, 18(115), 62-81.</p> <p>Branten, M. 2005. The impact of financial accounting on the formation of profit numbers: the standpoints of the IFRS, Estonian accounting practice and the economic theory of profit. <i>Baltic Horizons</i>, 3 (102), 28-75.</p> <p>Branten, M. Compiler. <i>Baltic Horizons, No 11(110) December 2009</i>. Eurouniversity, Tallinn.</p> <p>Branten, M. & Kess, Ü. Compiler. <i>Baltic Horizons, No 18(115) December 2011</i>. Euroacademy, Tallinn.</p>	
4.2.	Presentations at conferences	
	<p>Alver, J., Alas, R., Branten, M. 2013. Profitability Measurement Activities and Attitudes in Estonian Companies. <i>European Accounting Association 36th Annual Congress</i>, Paris, 6-8 May 2013.</p> <p>Branten, M. 2011. Comprehensive Income – the New Approach. <i>Business analysis, accounting, taxes and auditing</i>. Tallinn, TTU, 10.-11. 11. 2011</p> <p>Branten, M., Kess, Ü. 2010. Knowledge-Based Educational Technologies. <i>Emerging Educational Technologies and Digital Assessment Methods. Sixth EDEN Research Workshop</i>, Budapest, 25.-27. 10. 2010</p> <p>Branten, M. 2012. Kasumianalüüs Eesti ettevõtetes. <i>Audit, maksud, raamatupidamine ja majandusanalüüs</i>. Tallinn, TTÜ, 12. 12. 2012.</p>	
4.3.	Other research activities	Master's thesis defended „Measurement of Profit in Theory and in Practice“ 2003

5.	TEACHING ACTIVITIES (last 5 years)	
5.1.	List of lecture courses and practical tasks	Financial and Management Accounting (to bachelor students in Estonian and in Russian) Intermediate Accounting (to master students)
5.2.	Study tools	Lecture notes: „Financial and Management Accounting “; “Intermediate Accounting”.
5.3.	Supervision	
	<p>At EuroUniversity:</p> <ol style="list-style-type: none"> 1. Natšjotova, Olga.” <i>Estimate of finances at Eesti Ehitus LTD based on analysis of financial statements</i>” (Master’s thesis, 2009) 2. Savtšenko, Julia. <i>Accounting and financial results analysis of Hecksher Eesti OÜ</i> (Master’s thesis, 2009) 3. Simonenko, Jelena. “<i>The financial analysis of OÜ Kurista Saeveski</i>” (Master’s thesis, 2009) 4. Gujevskaja, Jekaterina. „<i>Achievement of strategic tasks by Estonian Shipping Company as viewed through the prism of financial analysis</i>“ (Master’s thesis, 2007) 5. Teleš, Jelena. „<i>Ettevõtte pöhvvara arvestuse teooria ja praktika</i>“ Theory and practice of accounting of the company fixed assets (Master’s thesis, 2007) 6. Gordijevitš, Natalia. „<i>Ettevõtte debitoorse võla ja lühini- ning pikaajaliste kohustuste analüüs ja juhtimine</i>“ Analysis and management of the company receivables and current and long-term liabilities (Master’s thesis, 2006) 7. Novikova, Jelizaveta „<i>Ettevõtte materiaalse pöhvvara juhtimine AS VANT näitel</i>“ Management of fixed assets of the company (BA thesis, 2008) 8. Sepp, Reet „<i>Palgapoliitika Kesko Agro Eesti AS-s</i>“ Salary policy in Kesko Agro Eesti AS (BA thesis, 2008) 9. Tabur, Vivika „<i>Eesti juhtivate veebipõhiste töövahendusportaalide finantsanalüüs</i>“ Financial analysis of Estonian leading web-based labour mediation portals (BA thesis, 2006) 10. Troitskaja, Jelena. „<i>AS Refetra finantsmajandusliku seisundi võrdlevanalüüs</i>“ Comparative analysis of the financial position of AS Refetra (BA thesis, 2006) 	

6.	ADMINISTRATIVE WORK AND PROFESSIONAL ACTIVITIES (last 5 year)	
6.1.	Participation in commissions, councils <i>ect.</i>	Member of Euroacademy Council Member of Council of the Faculty of Business Management
6.2.	Reviews	Review: J. Tikk “Accounting Changes in the Public Sector in Estonia” for “Business: theory and Practice”, Vilnius (Oct., 2009) Review: For 8 th European Conference on Management Leadership and Governance, 8-9 November 2012, Paper Title: Adoption of IFRS in Emerging Economies – a Note on Cost/Benefit Analysis from Czech Perspective
6.3.	Membership in editorial boards	<i>Baltic Horizons</i> - member of editorial board
6.5.	Organization of conferences	Annual students’ research conferences of the Faculty of Business Management
6.6.	International co-operation Cooperation with Bialystok Finance and Management University (Poland) and Nigde University (Turkey) within framework of Erasmus-programme EDEN-network membership	
7.	SOCIAL ACTIVITIES	
7.1.	Membership in associations and organisations Eesti Raamatupidajate Kogu	
8.	PROFESSIONAL SELF IMPROVEMENT	
	Estonian Business School, doctoral studies	

