

**TARTU UNIVERSITY**  
**School of Economics and**  
**Business Administration**  
**Institute of Finance and Accounting**



**ACCOUNTING AND PERFORMANCE**  
**MANAGEMENT PERSPECTIVES**  
**IN BUSINESS AND PUBLIC**  
**SECTOR ORGANIZATIONS**



**Tartu 2005**

**TARTU UNIVERSITY**  
**School of Economics and Business**  
**Administration**  
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**ACCOUNTING AND PERFORMANCE**  
**MANAGEMENT PERSPECTIVES IN BUSINESS**  
**AND PUBLIC SECTOR ORGANIZATIONS**

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## Section I

# FINANCIAL ACCOUNTING AND AUDITING

# ATS: ACCOUNTING TRAINING SYSTEM

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## Abstract

The change from the command to the market economy in Estonia has inevitably influenced the framework of accounting education. At universities, colleges, vocational training schools and even secondary schools, there is a growing awareness of the importance of accounting, auditing and finance. The goal of accounting education and experience is to produce competent professional accountants.

Eight educational organizations from seven countries of the European Union: Austria, Germany, the United Kingdom, Denmark, Hungary, Finland and Estonia are involved in creating of new web-based interactive multi-media learning tool – the **Accounting Training System (ATS)**. The present paper gives an overview of the basic ideas and describes the content of ATS.

**Key words:** accounting training system, case study, teaching, testing.

## Introduction

In today's fast-paced, rapidly changing world, few careers offer as many advantages and rewards as a career in accounting. These include a high level of job security, competitive starting salaries, top income potential, and satisfaction from helping others. The rapid development of a large number of small and medium-size enterprises, joint ventures, the privatization of large state enterprises and the process of globalization sets up new requirements for the professional qualification of accountants and auditors as well as for accounting skills of other specialists and managers involved in business administration. These requirements have a direct impact on the substance and methods of accounting education.

Eight educational organizations from seven countries of the European Union: Austria, Germany, the United Kingdom, Denmark, Hungary, Finland and Estonia participate in creating the **Accounting Training System (ATS)**. The project is financed by the Leonardo foundation and the Estonian partner is the Accounting Department of the Tallinn University of Technology. The project started on October 1, 2004 and will last for two years.

## Acknowledgments

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## 1. Description of the Accounting Training System

**The main target.** The main target of the project is to provide multi-media tools accessible via internet which can be used to strengthen and improve the knowledge of accounting independent of place or time. One of the goals is the development and introduction of a web-based interactive multi-media learning and testing system for accounting that will support students and help instructors with administrative tasks.

**The target groups.** Students and adults up to tax consultants who want to continue their education in the international business or are active in the field.

**Training students.** The testing system shall be as functional as the traditional accounting software. Students can train on the basis of examples from real-life case studies. Entries are compared with solutions and stored in a database. Every student gets a report showing his/her skills and a mark is computed by a variable algorithm. He/she can start the test in the exercise made again in which only the faulty examples are presented to him/her.

Furthermore, there will be components, such as multiple choice, completion texts, exercises for classification, etc.

**Testing system.** The testing system shall be as functional as traditional accounting software. Students can practice using examples from real office case studies with original vouchers. Their entries are compared to solutions and stored in a database.

**Case studies.** All partners will develop 3–4 case studies. Some cases are easy, others are difficult. Case studies will include typical transactions from real life situations. A collection of case studies with complete voucher copies from real life situations will be developed and adapted for each participating country. The national installations will be linked with one another so that the users will be able to access any ATS of one country with another and solve the case studies there. Therefore the qualifications of individual school types and regions should become more transparent and comparable as far as accounting is concerned.

**Reports.** After the correct journalizing and posting of transactions the system will automatically prepare (if necessary) all reports. There is also an opportunity to receive more concrete information about certain items (for example about customers' debts, etc); and the users will be asked to do this. The inputs of the users are checked and they receive feedback: about the correctness of the calculations and interpretations.

**Ratio trainer.** After the reports are prepared, the users can exercise their ability to calculate and/or interpret certain indicators (ratios), for example, the cash ratio, the return on investment etc. The inputs will be checked and the users will receive a feedback by means of the correct way to calculate and interpret these ratios.



**Accounting thesaurus.** In the central database a special area will be created for the accounting thesaurus which includes up to 4,000 accounting terms. It contains important technical terms of the accountancy in the respective national language of the participating countries with the corresponding translations. There is an English equivalent provided for each term. The thesaurus does not only translate the words, but provides definitions for 200 most important technical terms and shows the respective differences to the IFRSs (International Financial Reporting Standards). Furthermore, the translation is referred to the appropriate law places of the respective country and is linked to existing instances and studying sequences in the test system.

On addition to the special dictionary this database also contains the documentation of the different layout of balance sheets, account frameworks, tax rates, limiting values, etc.

The accountancy thesaurus shall make national differences very quickly traceable. The database will also include also source documents and layouts of annual accounts.

## **2. Case studies**

A case study comprises an average of 50 typical connected transactions (business cases) of a virtual or real enterprise (with original documents from the real world). Every case study has a short title, a short description, logo and background information. The business cases contain original documents and can be booked similarly with accounting software. A user simply can either continue a case study or can enter all the examples already booked faultily work again. The users receive immediate feedback about their strengths and weaknesses. This can also be shown by a mark.

Every case study will be developed in the national language as well as in English and will be up loaded on the common platform. This applies also to original vouchers and attachments.

Every partner takes the case studies of the other partners and transfers them into the national system of accounting. After that all the case studies should exist in the national language as well as in English. All case studies will be in line with the local accounting requirements.

It is possible to use the cases for teaching, training and improving knowledge. Furthermore, there will be multiple choice tests and educational organizations can use these tests and cases instead of typical exams.

ATS includes two subsystems: an open system and a closed system. The open system is publicly available: everybody can register on a public server and can use the open system for a certain time (a year or half a year). He/she pays only a low fee depending on the time and all features of ATS are available in that period. The

students can practice and get also a feedback in form of a mark which, however, is not further evaluated with that. The closed system runs on a server of an educational institution. The data of the instructor and student will be entered by an administrator or taken by an interface.

The tests can be managed by every instructor. There is an opportunity to change the questions. The tests can then be carried out in the local area network of the institution in a manner that the result can be considered in the real judgment. The students have both opportunities. They can either practice freely like in the open system or carry out a real test with their instructor.

The instructor must be able to analyze the results of the test in the class. He/she gets a listing of the results of the test of all students with the starting and ending times, the maximum and the reached points and the resulting mark. The average mark of the test shall be computed and shown at the end of the listing.

The test shall be analyzed to see which questions the students had difficulties with. For every question of the test the maximum points are displayed and in comparison to this, average points reached by the students.

The instructors can choose from examples stored in an internet database from where they can download tests and enter them into the testing system. It will be very easy (within few minutes) to compile tests for different criteria in a database in the internet and to import selected questions and problems into the instructor's local test system. After finishing the test the instructor gets the results immediately. They are stored in a database and are available for numerous future analyses and evaluations. It will be easy to analyze the questions to avoid shortcomings (for example, in wording) in compiling future tests.

The tests can be corrected easily and the new results are stored automatically. After correcting the points received or solution of a question the new results will be received automatically. Approved tests can be transferred to the central database and are at other instructors' disposal there. The administrative work of the instructors shall be reduced to a minimum. The security of the system will be high to avoid the students' access to the instructors' data.

The examples (case studies) in the database will include the original documents of concrete or virtual enterprises which will be available either as an image or in an Excel format. The second variant has the advantage that an instructor can change the values easily and develop new examples.

### **3. Expected results**

The complete system will be developed so that it is usable in different countries. Hopefully the users of the system will be all Estonian educational institutions where accounting is taught. The case studies are also adapted to the respective specific features of every single country. An increase in motivation and efficiency for

students and fundamental relief of work for instructors who will have then more time for individual support of students, is expected. And last but not least: the comparison of accounting systems and collection of learning materials in the internet will be provided.

## Summary

### ATS: ACCOUNTING TRAINING SYSTEM

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The development of a web-based interactive multimedia learning and testing system for accounting and to help instructors with administrative tasks is of great value, especially in conditions of a shortage of Estonian accounting literature. It is possible to use the cases for teaching, training and improving knowledge. The users receive immediate feedback about their strengths and weaknesses. Furthermore, there will be multiple choice tests and the educational organizations can use these tests and cases instead of typical exams.

The demand for such a system has been existent for a long time. Estonia is among the most successful countries in the world in introducing IT and the internet. Hopefully the users of the system will be students and instructors of all Estonian educational institutions where accounting is taught.

### ATS Overview: Products – Target Groups and Benefits

Target groups/Products	Benefits		
	Testing system & instances & vouchers	Learning objects “just in time”	Accountancy thesaurus
Secondary education (pupils of ages 15–20)	Highly beneficial. Learning through real-life situations, interactive training facilities and immediate feedback. Methodology: individual learning (included at home).	highly beneficial. The learning objects help to remove the weaknesses which are shown by the testing system and be called after the test immediately.	Small benefit.
Students	Highly beneficial. Learning through real-life situations, interactive training facilities and immediate feedback. Methodology: video conferencing.	Highly beneficial. The learning objects help to remove the weaknesses which are shown by the test system and be called after the test immediately. The main emphasis is on the usage of video conferencing.	Medium benefit for international business students. High benefit for accounting students.
Adult education	Highly beneficial. Learning through real-life situations, interactive training facilities and immediate feedback. Methodology: video conferencing. The instances will be subdivided according to the lines of business.	Highly benefit. The learning objects are different in the processing and representation of the target groups mentioned above.	Very beneficial for people who are involved in the international business.
Instructor	Highly beneficial. Individual support for the students will be possible.	Highly beneficial. A lot of different case studies from different countries.	Very beneficial for instructors whose main emphasis is international business (especially accounting).
Business enterprises, self-employed accountants and tax consultants	Highly beneficial. Usage for training and retraining of employees by examples from the own line of business.	Medium benefit in training and retraining the employees.	Very beneficial in the inter-national business activities in the interpretation of foreign business reports.



# DEVELOPMENT OF ACTIVITY OF MONETARY INTERMEDIATION INSTITUTIONS IN LITHUANIA

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There is activity of institutions of Lithuanian monetary intermediation system (MIS) during 1990-2003 analysed, problematic relations of MIS formation and its losses interpreted, development perspectives of research object foreseen. Interpreted development problems of monetary intermediation (MI) can be assumptions seeking to avoid useless decisions for state economy.

**Keywords:** *system of financial intermediation, monetary intermediation system, monetary intermediation institution, deposit bank.*

## Introduction

Experience of countries working under market conditions shows that state economic situation and citizens' welfare mostly depends on release of financial assets from savers to debtors, and efficiency of its usage. Experience of foreign countries shows there are 3 ways (directly from saver to debtor, through financial markets and through financial intermediators) to distribute funds to the required persons. Theory and practice shows financial intermediators organize delivery of financial assets the most efficient.

Relations of financial intermediation analysed scientists such as G.Smith, Mona J.Garden and Dixie L.Mills; David S.Kidwell, Richard L.Peterson and David W.Blackwell; A.V.Rutkauskas, L.Šadžius and others.

Financial intermediation system (FIS) in Lithuania compare with developed foreign countries is under formation, both development and intermediation relations are often a problem. There was noted in the European Commission report of macroeconomic evaluation of economic and finance sector of European Union countries candidates, that Lithuanian finance sector (banks are dominant) provide too less funds for enterprises and the whole economy growth, also insufficient stimulation for foreign investments and also financial intermediation system should be developed more intensive (Liukaitytė, 2002; Linkaitis, 2002). There is monetary intermediation dominates in latter system, which will be wide analysed in this work. Besides, due to limited extent of this article, it is difficult fully reveal variation consistent and research results of such huge system as financial intermediation. Dynamic international processes, as rapid development of technologies, faster globalisation in financial markets affect processes in monetary intermediation



system of any country and Lithuania also. There are too few surveys on these processes and there is no systematic approach on them. Thus, periodical evaluation of variations, their recognition and generalization in MI system of the state are **actual scientific problems**. Since nowadays there are only separate fields of MI and separate members' activity during chosen independent years of Lithuania analysed (A.Maldeikienė, 1998; A.V.Rutkauskas, 1998; V.Terleckas, 1995; T.Staniulytė, 1999; L.Šadžius, 2005 and others). **Novelty of scientific and practical work** consists of systematic activity evaluation of all institutions of MIS during independent years according to compulsory EUROSTAT (European Union Statistical Office) classification in Lithuania.

**Purpose of research** – evaluate activity development, its problems and perspectives of institutions of monetary intermediation system in Lithuania.

**Object of research** – activity of institutions of MIS.

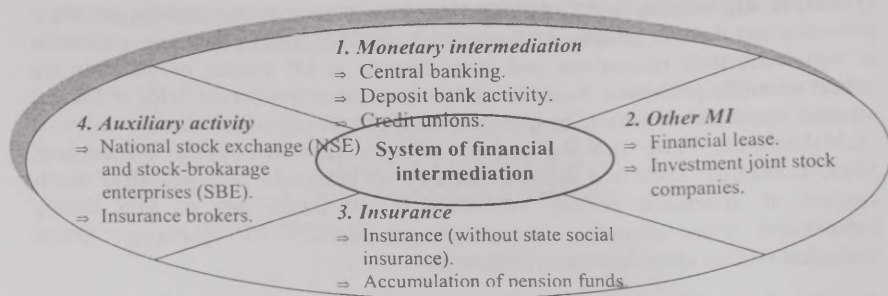
**Methods of research** – systematic analysis of statistical literature, grouping, comparison and generalization methods.

### Financial intermediation system

Classification of financial intermediation (FI) services provided in Lithuania is constituted according to EUROSTAT classification and presented in Figure 1. There are banking services, lease most active developed in Lithuanian FIS, insurance becomes more active but its speed is not sufficient and activity of NSE is developed the slowest. The product of FI activity during 2002 in comparable prices of 2000 was only 2% of GDP and almost unchanged from 1996 (Statistical Yearbook of Lithuania, 2003). There are also positive FIS variations noticed. 2003 compare with 1995 income of FIS increased 61%, and expenses – only 15%, activity became profitable. Accumulated assets and ownership capital consisted accordingly 39,61 (81% consists MI share, banks from them – 80,6%) and 3,88 milliard LTL (73% consists MI share, banks from them – 72%), net profit margin (net profit/ income), return on capital and assets was accordingly 16,3; 1,2 and 12% (Department of Statistics of Lithuania, 1995; Statistics of financial enterprises, 2003). Due to reasons declared earlier and new competition circumstances (Lithuania is a member of EU) according to classification of FI services presented in Figure 1, further we will analyse development of MI services under Lithuanian conditions.

### Monetary intermediation

MI services in Lithuania provide the Bank of Lithuania, commercial (deposit) banks and credit unions. Activity rate dynamics of institutions of monetary intermediation system during 1992-2003 is presented in Table 1. According to Table 1, during 1992-2003 activity of institutions of MIS developed rapidly: income and expenses increased about 4 times, assets and ownership capital more than eight and about six times and net profit increased three times. But profitability rates due to rapid increased income, assets and ownership capital decreased about 7, 13 and 2 cents per litas.



**Figure 1.** Lithuanian financial intermediation system (Classification of economic activities, 1999).

2003 compare with 1996 activity rates of analysed institutions of the system changed slower and in various directions: income, assets and ownership capital increased, but expenses decreased, activity became profitable. During 2000-2003 activity of institutions became more efficient, since income decreased about 4%, but expenses decreased even 18%, and profit increased 2 times. Institutions became more solid, since their assets and capital increased constantly. Activity result variations of different institutions, which we will analyse, further had an impact on changes of MIS activity mentioned earlier.

**Table 1.** Activity rates dynamics of institutions of monetary intermediation system during years 1992, 1996, 2000 and 2003 (The Bank of Lithuania, Department of Statistics of Lithuania, 1994; 1996; Statistics of financial enterprises, 2003)

Rates	1992	1996	2000	2003	2003 compare with		
					1992, times	1996, %	2000, %
1. Income, LTL million	397,5	1249,6	1595,9	1536,3	3,9	122,9	96,3
2. Expenses, LTL million	273,3	1576,8	1418,9	1168,7	4,3	74,1	82,4
3. Net profit (loss), LTL million	124,2	-335,4	178,9	367,7	3,0	-	2,1*
4. Assets, LTL million	3703,8	11774,3	19771,7	31924,9	8,6	2,7*	161,5
5. Ownership capital, LTL million	485,7	2224,6	1882,1	2824,3	5,8	126,9	150,0
6. Net profit (loss) margin, %	31,2	-26,8	11,2	23,9	-	-	-
7. Return on capital, %	25,6	-15,1	9,5	13,0	-	-	-
8. Return on assets, %	3,4	-2,8	0,9	1,2	-	-	-

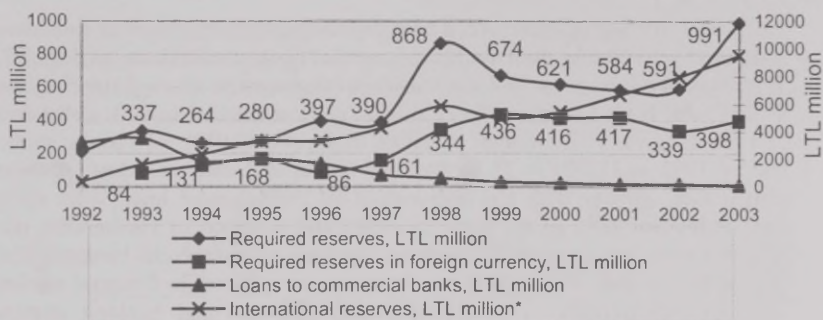
\* times

**The Bank of Lithuania (BL).** Central bank activity sphere, rights, relations with government differ in different states, however the most important function of all of them – a broad money and interest rate control – is the same (Mayer T., 1995).

Besides, central banks supervise financial institutions and financial markets, implement open market operations.

With Lithuania independence in 1990 it was established the national BL, which continued activity of the BL (established in 1922) under new conditions and it was started the formation of financial intermediation system in Lithuania.

There is noted in the law on the BL the primary objective of the bank is to maintain price stability. The latter objective of the BL is maintained using measures of monetary policy, which contains 4 stages: 1. From temporary money talonas till litas adoption (October 1<sup>st</sup>, 1992 – June 24<sup>th</sup>, 1993). 2. From litas adoption till the law of the credibility of the litas coming into force – currency board model (June 25<sup>th</sup>, 1993 – March 31<sup>st</sup>, 1994). 3. From the law of the credibility of the litas coming into force till determination of base currency and litas exchange rate (April 1<sup>st</sup>, 1994–February 1<sup>st</sup>, 2002). 4. Euro is determined (EUR) as a base currency from February 2<sup>nd</sup>, 2002, and its exchange rate with litas was determined according to euro and dollar exchange rate in currency market on February 1<sup>st</sup>, 2002 (1LTL=3,4528LTL/UE). Euro is considering to be adopted in Lithuania in the beginning of 2007, but it is required to fulfil Maastricht criteria (average annual inflation, public sector deficit, state debt, long term interest rate and national currency stability regarding euro).



\*Secondary Y-axis (on the right side) is valid only for international reserves

Loans to commercial banks, LTL million	270	292	157	168	141	70	52	30	24	15	16	10
International reserves, LTL million*	406	1608	2349	3276	3337	4251	5840	4968	5435	6677	7990	9528

**Figure 2.** Dynamics of required reserves during the end of 1992-2003 (The Bank of Lithuania, 2004).

One of the first monetary measures stabilizing liquidity of banking system was requirement for commercial banks to compose required reserves, which rates in litas and foreign currency, except long-term time deposits, fluctuated from 6,10 till 12%. But adjusting requirements to the EU from October 13<sup>th</sup>, 2000 it was decreased till 8% (Figure 2) and it is promised to decrease till 4% (there is interest rate of 2% valid in Euro zone) and even to pay interests.



As Figure 2 reports loans delivered to state banking system by the BL decreased 27 times. This reports banks' strengthening, sufficient liquidity, and security of Lithuanian banking system. Official reserves of the BL, 2003 compare with 1992 increased more than 23 times due to their management improvement, and successful investment into securities (10-77%) and interests received. However, it is necessary for the BL to become more independent (comparison analysis reported, that independence level is lower than any other Central Europe candidate state (Kelišius, 1999)).

World banks and Lithuanian also are concerned for decision of Basel Committee on Banking Supervision to change structure of capital provisions from 2005. It is supposed to evaluate not only credit and market price risk, but also operating risk. Since this new standard is trying to protect banks from adverse markets, other risks and also problem loans (Cem Karacadag, 2000), introduction of broader and deeper information will be adverse novelty for Lithuanian enterprises.

**Activity of commercial (deposit) banks.** Under competition conditions banks select and navigate state economy resources to efficient and perspective business field, which assure economy growth. Development of commercial banks in Lithuania can be divided into three stages:

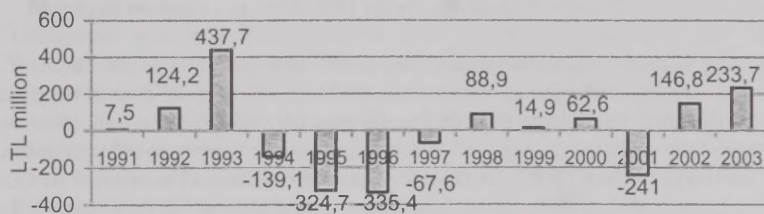
1. 1990-1993 –period of commercial banks creation. After the Bank of Lithuania started its activity and the Law on commercial (join stock) banks on July 2<sup>nd</sup>, 1992 was admitted legal and organizational terms were set to form classical double level banking system (Central bank and commercial banks). In the end of 1990 there were 12 commercial banks, in the end of 1991 – 16 banks, in the end of 1992 and 1993 – 25 commercial banks in Lithuania. Most of them started their activity with not high-authorized capital, most loans were short term (consisted 80% of all loans in 1990) and commercial banks were not effective participators of credit relations. Uprising of commercial banks shifted economic relations of state banking: there was competition in financial market developing (especially in short term loans delivery) and banking system became less monopolized.
2. 1994-1995 – bank crisis period. During this period requirements for banks were restricted, their control increased, bank activity became not profitable, a lot of banks bankrupted. According to resolution of the board of the Bank of Lithuania until the end of 1993 commercial banks had to increase join stock capital till 5 million LTL. In the beginning of 1994 only 13 commercial banks were accumulated required capital amount and obtained the right to perform international foreign investment operations. There were 30 banks registered, including BL in Lithuania, in 1994 and in the end of 1995 - only 11 banks (Lietuvos informacijos institutas, 1996). Therefore there were only larger and more solid banks remained under competition conditions.
3. 1996- till nowadays – period of bank activity stabilisation, strengthening and development. There were 10 banks possessing 117 branches, 3 foreign bank branches and 3 foreign bank representative offices in the beginning of 2004. From 1996 foreign banks became more active. In the beginning of 1996

foreigners possessed 16% capital of acting banks, then in 2004 01 01 already 89%. It is noted, Scandinavian states capital is dominating in Lithuanian banking system (Statistics of financial enterprises, 2003; [www.lbank.lt](http://www.lbank.lt)).

Main problems of the formation of Lithuanian deposit banking system are as following: 1. Problem loans portfolio; 2. Insufficient bankers' qualification, dishonesty; 3. Distrust in banks; 4. Not profitability of banks activity: decreasing interest margin, increasing operational expenses, special provisions.

Problem loans portfolio started to form rapidly in 1993 and in the end of the year contained 15,4% of banking system loans portfolio, i.e. increased 10,7 point. This shows bankers' disability sufficiently evaluate debtors' ability to pay and their reliability, dishonesty and misuse of status, weakness of legal basis, inefficient banking activity control. The BL only in the middle of 1994 approved loan grouping rules and necessary special provisions. There is anticipated to divide loans into 5 groups (standard, possible risk, increased risk, uncertain and not profitable) in the rules. Provisions are calculated for the last three loan groups (recently there are four groups). In 1996 problem loans consisted 36,2% of all banking system expenses and about 15% of all loans provided and was an interruption to form stable and reliable banking system.

Main reasons of not profitability of deposit banking system (Figure 3) are evaluation of special provisions, high operation expenses (Table 2) and decreasing interest margin. As Figure 3 reports there is every litas used in asset operations "earned" only losses in Lithuanian banking sector during 1994-1997.



**Figure 3.** Net profit (loss) of Lithuanian deposit banking system during 1991-2003 (The Bank of Lithuania, Department of Statistics of Lithuania, 1994-1995, 1997,2004; [www.lbank.lt](http://www.lbank.lt)), LTL million.

It is noted, despite annually rapidly decreasing interest margin from 1995, increased competition, increased bank capital and assets, both absolute and comparative profitability rates are high. Banking system return on assets and capital, also net profit margin rates were respectively 11; 11,1 and 18,5% in 2004 01 01. This was influenced by increasing scale economy and increasing share of assets earning interests in total assets.



**Table 2.** Structure of income and expenses of Lithuanian deposit banking system during 1992-2003 (The Bank of Lithuania, Department of Statistics of Lithuania, 1994-1995, 1997, 2000; <http://www.lbank.lt>), %

<b>Rates</b>  <b>Years</b>	<b>1. Income</b>	<b>1.1. Loan interests</b>	<b>2. Expenses</b>	<b>2.1. Interest paid</b>	<b>2.2. Operation expenses</b>	<b>2.3. Special provisions</b>
1992	100	47,6	100	29,9	16,7 <sup>1</sup>	---
1993	100	53,8	100	24,7	75,3 <sup>1</sup>	---
1994	100	79,9	100	44,8	16,8	27,0
1995	100	75,9	100	35,4	26,9	28,4
1996	100	64,6	100	19,0	30,5	36,2
1997	100	61,0	100	23,2	42,2	21,0
1998	100	61,7	100	28,0	44,5	5,6
1999	100	73,6	100	31,1	37,9	12,1
2000	100	70,2	100	34,8	36,2	9,2
2001	100	66,3	100	30,1	37,5	9,4
2002	100	58,7	100	23,6	45,5	7,3
2003	100	58,7	100	23,2	53,9	6,6

<sup>1</sup> Administration costs

From 1994 banking system profit also decreased due to special provisions, which were discarded to not profitable loans (not withdrawing request right) and then quality of loan portfolio of all system increased. This shows decreasing provision costs (Table 2) and the fact they consisted only 0,56% in loans portfolio in 2004 01 01 and long term loans about 77% (2003). Although recent years Lithuanian banking activity is profitable, net profit is lower due to decreasing interest margin with some fluctuations (from 1995 there is a constant decrease).

Improving citizens' economic status, favourable loan conditions, privileges of the law of tax on income of individuals from 2003, psychological changes regarding loans influenced rapid loan growth for citizens (in 2004 77% of all loans were mortgage loans). However, amount of mortgage loans compare to other countries is very low (about 6% of GDP), while mortgage loans contain 11% of GDP in Latvia, 15% in Estonia, this relation fluctuate between 10 and 60% in EU ([www.lbank.lt](http://www.lbank.lt)).

2004 01 01 capital adequacy rate of the whole banking system was 13,25%, while nominal rate is 8% from September 2004. It shows bank solidity and ability to depreciate losses. Liquidity nominal rate restricting bank risk is 12,4% (min. rate is 42,4-30) ([www.lbank.lt](http://www.lbank.lt)). However, state banking system impact on economic growth is not sufficient compare with other EU countries, where bank loans consist about 85% of GDP (32% in Poland, 40% in Estonia), and only 13-14% in Lithuania; money not in the banks consist respectively 8 and 60% of GDP (Milijardo baubas, 2002). European Commission notices European Union candidate (already member) banks perform intermediation function not sufficiently in economy and does not stimulate state development. Not even drawing abroad capital, Lithuanian banks are relatively small and give a few loans (M. Linkaitis, 2002).

Various authors note banks provide about 200 sorts of services in foreign developed countries. According to I. O. Spicin and J. O. Spicin classification (1993) there are services that are unpopular in Lithuanian banks yet as middle term loans, bills of exchange, forfeiting and others. This is influenced by economic situation, residents' treasury status, insufficient legal base, bank inactivity in some cases, and shortage of initiative. Thus, Lithuanian banks have a wide spread for development.

**Credit Unions (CU).** There was law on CU admitted on February 21<sup>st</sup>, 1995, when Canada International Development Agency both with Canadian Lithuanians analysed and evaluated positively micro crediting possibilities in Lithuania. When the law was admitted, there was a fast development of CU activity in small banking. There were 11 CU and they unified 806 members in 1996, and there were 57 CU, unifying 32 thousand members on January 1<sup>st</sup>, 2004. Ownership capital of CU increased about 26 times, assets - 47 times during 7 years and consisted respectively 20,7 and 154,9 million litas on January 1<sup>st</sup>, 2004. Increasing amount of members and capital increased deposits and loans. 2003 compare with 2000 deposits and loans increased respectively 12 and 11 times (Department of Statistics of Lithuania, 2001, 2003). Loans for business development are about 80% of all CU loans and consist about 70% of all assets. During the analysed period almost all CU followed risk-restricting nominal rates of CU activity assigned by the Bank of Lithuania. Still faster growing income, assets and ownership capital of CU system decreased net profit margin, return on capital and assets respectively 9,8; 3,8 and 1,3 points 2003 compare with 1997.

## Conclusions

1. Lithuanian monetary intermediation (MI) system compare with developed foreign countries is just under formation and its role in state economy is small (create about 2% of GDP), however there are also positive changes that mean activity became profitable. Net profit margin, return on assets and capital was respectively about 16,3; 1,2 and 12% in 2003.
2. There are services of MI institutions and especially bank services (consist about 81% and 72% of all assets and ownership capital of MI system) most active developed in Lithuanian MI system. During 1992-2004 income and expenses increased 4 times, assets and ownership capital more than 8 and about 6 times, and net profit increased 3 times. Due to fast growing income, assets and ownership capital profitability rates decreased respectively about 7, 13 and 2 cents per litas.
3. Lithuanian banks do not carry out FI functions in the economy and does not support state development (not solid, not sufficiently crediting state subjects, especially small enterprises, its activity is narrow diversified).
4. MI system institutions searching for activity development and efficiency, and a higher impact on state economy should do the following:
  - 4.1. The Bank of Lithuania should become more independent and execute monetary and not fiscal policy, permanently seek for price stability, and especially after adoption of the euro.

- 4.2. Regarding foreign practice and demand develop various bank services more active (to give more various time and interest rate loans, develop bills of exchange, trust and other operations).
- 4.3. For deposit banks and credit unions to use income earned more economically and manage costs more effective. To decrease expense rate until justifiable rate (30%).
- 4.4. Seeking for activity transparency of MI institutions and society education to publish audited reports in popular Lithuanian daily newspapers, also presenting objective analytical comments of independent experts.

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## Summary

### DEVELOPMENT OF ACTIVITY OF MONETARY INTERMEDIATION INSTITUTIONS IN LITHUANIA

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The role of financial intermediation system to Lithuanian economy is not so big – it creates only 2% of GDP. Bank services are the most developed in the analysed system (contains up to 80% and 72% asset and ownership capital of all MI system). Due to a novelty of activity and insufficient practice there are not performed various operations of financial intermediation (there are credit operations dominating in income structure) or there is not sufficiently developed technology of different operations, activity is narrow diversified, institutions compare with appropriate abroad institutions are not solid, high expenses rate of financial institutions, insufficient clarity of activity.



# REAL ESTATE VALUATION FOR ACCOUNTING PURPOSES IN ESTONIA

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## 1. Introduction

During the past few years there have been carried out many changes in financial reporting rules in EU countries. One significant change from the real estate point of view has taken place in balance sheet, where Investment Property account is switched to the asset side of the balance sheet, separate from the Property, Plant and Equipment. Since 2005, all companies in EU countries listed in the stock market have the obligation to apply International Accounting Standards/International Financial Reporting Standards (IAS/IFRS) in their everyday practice. In Estonia, companies not listed in the stock market have the opportunity to choose whether to apply IAS/IFRS or national accounting standards since 01.01.2003.

As national accounting standards in Estonia (Estonian GAAP) allow companies to choose between reporting the property either in cost (book) value or in fair (market) value in their balance sheet, the real estate valuation problem and market value estimation for financial reporting purposes comes along. Although most of the companies in Estonia are private entities and do not have the obligation to apply the IAS/IFRS, they are still connected with these international standards through the Estonian GAAP, which are based on IAS/IFRS and are compulsory to be applied by all Estonian companies. Choosing the way to report their property in fair value, they automatically connect themselves with International Valuation Standards (IVS), which are also closely connected with IAS/IFRS. It should be mentioned that in 2005 the first parts of Estonian national property valuation standards (EVS 875) were issued, which follow rather strictly the rules of international valuation standards (both IVS and EVS) and links them with national legislation.

The aim of the paper is to explore the practical problems in implementing the income approach in valuation of commercial real estate for financial reporting purposes in Estonia. Therefore, our research is narrowed (limited) only to income approach applied to commercial real estate valuation for accounting purposes.

To achieve the aim of the paper, the authors have set up the following research tasks:

- 1) to describe the need for valuation for accounting purposes from companies' side;
- 2) to define the investment property;
- 3) to identify all possible basis of value in valuation for accounting purposes, i.e. the meaning of fair value;



- 4) to conduct a comprehensive questionnaire among certified general appraisers (GA) to investigate the implementation of income approach in valuation of commercial real estate for financial reporting purposes in their every-day practice;
- 5) to provide a synthesis of research results and draw conclusions from empirical investigation.

## 2. Specific valuation issues for accounting purposes

### 2.1. Need for real estate valuation

The cases, when the company needs real estate valuation for financial reporting purposes, can be quite different. The real estate asset owned by a company can be reported either on:

- 1) property, plant and equipment (in case of owner-occupied real estate), according to IAS 16 – Property, Plant and Equipment, or
- 2) investment property (in case of non owner-occupied real estate, held mainly to earn rental income or for capital appreciation or both) account in the asset side of the balance sheet, according to IAS 40 – Investment Property.

In some certain cases the real estate assets could be reported according to IAS 2 – Inventories (properties held for sale) or according to IAS 17 – Leases (leased properties). Two latter cases are rather rare and therefore excluded from further discussion. The ways of reporting the property in balance sheet can be described by the following table 1.

**Table 1.** The ways of reporting property in balance sheet according to IAS/IFRS and Estonian GAAP.

Asset account	IAS/IFRS	Estonian GAAP
Property, Plant and Equipment	Company chooses to report between two methods: a) <b>Cost value method</b> – cost (book) value, which is depreciated periodically (does not assume revaluation). There is the onetime possibility to revalue asset to fair value, if needed. b) <b>Fair value method</b> – fair value, regular revaluations, and depreciation periodically.	<b>Cost value method</b> – book value, which is depreciated periodically (does not assume revaluation).
Investment Property	Company chooses to report between two methods: a) <b>Cost value method</b> – cost (book) value, which is depreciated periodically (does not assume revaluation). There is the onetime possibility to revalue asset to fair value, if needed. b) <b>Fair value method</b> – continual reporting at fair value, regular revaluations, no depreciation.	Company chooses to report between two methods: a) <b>Cost value method</b> – cost (book) value, which is depreciated periodically (does not assume revaluation). b) <b>Fair value method</b> – continual reporting at fair value, regular revaluations, no depreciation.

The rules of national standard are much more important in Estonian local context because only few entities are following IAS/IFRS (according to an expert opinion of PriceWaterhouseCoopers auditors only 100 enterprises out of about 20 000, i.e. 0,5%). But as table 1 show, there is only a slight difference in IAS/IFRS and Estonian GAAP. National standard is a simplified version of international regulation. Two principal differences from IAS/IFRS are:

- Estonian GAAP allows choosing Fair value method with regular revaluation for investment properties only.
- Onetime revaluation for properties by cost value method is not allowed as a rule. But revaluation is possible in transitional period until 2005.

Thus, the classification into investment property and fair value are issues that are interesting from valuation point of view.

## 2.2. Classification into investment property

According to International Accounting Standards, the investment property is property (land or a building or part of a building or both) held (by the owner or by the lessee under a finance lease) to earn rentals or for capital appreciation or both. (IAS 40.5) Investment properties have the distinguishing feature that they earn cash flows largely independently of an enterprise's other assets, whereas owner-occupied properties earn revenues in combination with other assets normally in the production or supply process.

Examples of investment property (IAS 40.8) are:

- Land held for long-term capital appreciation,
- Land held for undecided future use,
- Building leased out under an operating lease,
- Vacant building held to be leased out under an operating lease.

Investment properties do have characteristic features from both owner-occupied property (IAS 16, Property, Plant and Equipment) and financial investments. If a property is partly owner-occupied and partly let out as an investment property, the portions should be treated separately if they can be sold separately, if not it is treated under IAS 16 rules, unless only an insignificant portion is owner occupied. In some cases enterprises may have to use judgment to determine whether a property qualifies as an investment property. (Scott, 2001)

Investment properties that are under construction or development are treated under IAS 16, Property, Plant and Equipment, until they are completed. IAS 40 permits enterprises to choose between a fair value model and a cost model. One method must be applied to all of an entity's investment property. Change is permitted only if this results in a more appropriate presentation. IAS 40 notes that this is highly unlikely for a change from a fair value model to a cost model. (<http://www.iasplus.com/standard/ias40.htm>).

The rules for classification are rather clear for typical cases, but classification of properties partly used by the owner itself is not so clear: the property should be classified either into Property, Plant and Equipment, or into Investment Property, or divided between these two classes. The first question arises, what does „can be sold separately” mean? According to Estonian laws even a single room could be sold in the market whether as separate unit or as share of the property. Another question is, how significant is „insignificant”? Is it 5, 25, 45 etc per cent?

### 2.3. Fair value

According to IAS 40 the Fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm’s length transaction. The fair value of land and buildings is usually its market value. This value is determined by appraisal normally undertaken by professionally qualified valuers.

IVS 1 specifies the term Market value as the estimated amount for which a property should exchange on the date of valuation between a willing buyer and willing seller in an arm’s length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently, and without compulsion.

The Market value will be estimated regarding the “highest and best use” (HABU) only. Since year 2000 (IVS 2000) the concept of market value for the existing use (MVEU) as an exception for financial reporting is void.

IAS requires that an investment property’s fair value should reflect the actual market state and circumstances at the balance sheet date (IAS 40.31). Fair value should be estimated as the present value of future cash flows to be generated from the property, where there is no active market. Cash flows should be based on existing lease and other contracts and by external evidence of market rents for similar properties (IAS 40.40). Cash flow estimates should consider the property in its current condition and should not include future expenditure or associated inflows (IAS 40.45).

Here, the authors consider that the regulation of IAS about using data is not clear enough and may easily lead to the estimation of Value in Use instead of market value. Value in Use is the value a specific property has for a specific use to a specific user and is, therefore, non-market related. This value type focuses on the value that specific property contributes to the entity of which it is a part, without regard to the property’s highest and best use or the monetary amount that might be realized upon its sale. (IVS 2, 3.1).

Thus, for proper valuation result following rules of IVS is necessary, probably even more exact regulation is needed in practice. The problem is whether to use in cash flow calculations contractual data or market data? Using contractual data leads to the value in use, using market data leads to the market value. However, estimating market value requires analysing contractual data and comparison to market situation.



What is the level of difference where appraiser should reject contractual data? Further, when appraiser leaves contractual data and will choose market data (in case on unfavourable contracts) then what is the real meaning of estimated market value when in a real market the object could be sold only with lease contracts? How profoundly should an appraiser analyse the possibilities to change or to quit (current) lease contracts?

When there is no evidence of market value because of the specialized nature of the fixed assets and because they are rarely sold except as part of continuing business, they are valued at their depreciated replacement cost (DCR) (IAS 16). Speaking about investment property, the fair value is simply market value. But, from property, plant and equipment point of view, it can be different from market value.

### **3. Research method**

The authors of the paper gathered empirical evidence to investigate how the real estate appraisers apply the valuation techniques in their everyday valuation process and what are the main problems in doing it. The survey sample contains the list of all general appraisers (GA) in Estonia, who owned the valid appraiser certification within the year 2004. A comprehensive questionnaire with both closed-end and open-end questions was sent out by e-mail in April 2005 to 40 general appraisers in Estonia. Before sending out, the authors tested the questionnaire on two valuers taken out from the survey sample. Also, the valuers had unlimited time for filling the questionnaire.

The analysis made about the sample (Ilsjan, 2003) show that the educational background of the GA valuers is the following –  $\frac{1}{4}$  has the higher degree in economics,  $\frac{1}{4}$  in construction,  $\frac{1}{4}$  in real estate related areas (like land and forest surveying, geography, architecture) and  $\frac{1}{4}$  in other technical professions or in humanities. Further, about 60% of the GA appraisers have got their higher degree in 1990s, 15% in 1980s, 15% in 2000s and other 10% before 1980s. The gender analysis shows that only 10% of the GA appraisers in Estonia are women, and 90% of the representatives of the general appraiser profession are men.

All questions in the questionnaire were divided into three parts. The first part contained general questions about the background of the appraiser. The questions like, what was the time of acquiring the general appraiser certificate and how many valuation reports have you signed during the year 2004 (valuations for accounting purposes included) where asked in that part of the questionnaire.

The second part of the questionnaire consisted general questions about the valuation process of commercial property for financial reporting purposes. Here, the valuers were asked to assess themselves and their competence in various valuation aspects and knowledge in various documents regulating valuation process, like IAS/IFRS, IVS, EVS and EVS 875. Also, the questions about the relationship between valuer and the subscriber of the valuation work where asked in that part of the questionnaire.



The third part of the questionnaire described one hypothetical valuation case about the appraisal of fair value of the commercial real estate object. The description of the real estate object in the valuation case was formulated quite shortly to give only the general picture about the situation. The valuers were asked how they would behave assuming that they have got the order of the valuation of the similar kind of object described in the case. All the following questions in this part were set up on this assumption.

#### 4. Research results

The response rate to the send out questionnaire was 40%. Although the number of responded appraisers was small (16 out of 40), they represent all major real estate companies in Estonia, i.e. BalticPropertyExpert, ArcoVara, OberHaus, UusMaa, Pindi, Eri. Therefore, the authors of the paper regard the feedback sufficient for making analysis and general conclusions about the data. By means of Estonian terms, most of the responded appraisers (11 out of 16) have long-term valuation competence; they have acted in the valuation market from the very beginning. Majority of the responded valuers (81%) are working in Tallinn (the capital of Estonia) region, other responded valuers work in Tartu or other regions in Estonia. But, based on the survey made in 2003 (Ilsjan, 2003), only 44% of appraisers from the total sample has Tallinn as the main working region. From here, based on the background of responded valuers working area, one can conclude that the survey issue is topical mainly in Tallinn and other bigger cities.

According to empirical evidence, the average number of signed valuation reports was approximately 900 per general appraiser per year in 2004. From these valuations, 115 (or 13%) were made for commercial and industrial real estate and only 12 (10% from latter) were made for financial reporting purposes. Although the market of valuation for accounting purposes is currently not very big, 2/3 of the responded valuers have noticed the growth of the relevance in last year (2004) and 2/3 are expecting the growth of the relevance of these valuations in 2005.

The findings concerning the valuers assessment of their own work were rather remarkable. The valuers regard themselves as quite good specialists in valuation of market value. On the contrary, the experience with the valuation of non-market value is almost non-existing (only *ca* 10% from the total number of valuation cases) and therefore they have much less competence in it, which was the reason why they valued their knowledge in this area much lower. In some cases the valuers have experiences with valuation of depreciated replacement cost and sometimes even with valuation of market value for the existing use. Valuations of investment value, value in use and going-concern value in practice are very rare. For example, in case of the valuation of special purpose property, 50% of the valuers regard their competence in it as bad, about 40% as satisfactory and only about 10% as good. According to  $\frac{3}{4}$  of the responded valuers, their knowledge in various valuation standards is good; others regard their knowledge as satisfactory or bad. The knowledge in regulations of financial reporting and accounting standards is mainly

(i.e. 80% of the cases) either satisfactory or bad. Still, in general the self-esteem of the responded valuers is above the average.  $\frac{3}{4}$  of the valuers find their use of methodology and preliminary data as good or even very good,  $\frac{1}{4}$  as satisfactory.  $\frac{1}{2}$  of valuers are good in asset classification for financial reporting purposes; the other  $\frac{1}{2}$  find themselves as satisfactory in doing it.

Although valuers seem to be confident in their opinion about their knowledge in asset classification matter, the empirical evidence shows otherwise. The answers to the question about the asset classification in the hypothetical valuation case indicated that *ca*  $\frac{2}{3}$  would classify the valuation object as investment property, *ca*  $\frac{1}{4}$  classified it as 75% investment property and 25% property, plant and equipment and *ca*  $\frac{1}{8}$  classified the object as property, plant and equipment. The authors of the paper find the answer 75% investment property and 25% property, plant and equipment as the right one, but two other answers could not be regarded as totally false according to very general financial reporting rules. The need for more concrete regulation is obvious as discussed before in the paper.

Assuming that the object in the hypothetical valuation case is classified as property, plant and equipment, 60% of the appraisers would estimate the market value of the object, 13% would rely on the subscribers' opinion and 27% would estimate the market value for the existing use of the object (not valid since 2000). In case the object is classified as investment property, 80% of the appraiser would estimate the market value, 13% would estimate investment value and 7% market value for the existing use. Quite interesting observation here is that mistaken valuers assessed their own knowledge as satisfactory or even good.

What concerns the presentation of the final outcome, then 44% of the valuers know that the land and building value should be separated in the case of valuation of property, plant and equipment for financial reporting purposes,  $\frac{1}{4}$  knows that the land and building value should be separated always in the case of valuation for financial reporting purposes and  $\frac{1}{4}$  will do it only in case the subscriber asks. Here, the positive finding was that all the responded valuers were familiar with the methodology, how to separate the land and building value.

Questions concerning the use of methodology in valuation of commercial real estate market value gave the following results. In case of commercial real estate with active market, at least 50% of the valuers use two valuation methods, i.e. income approach and sales comparison approach; less than  $\frac{1}{2}$  of the valuers (6 out of 16) use only income approach, others vary between one or two methods. The use of cost approach was very rare and only in combination with other methods. Therefore, the income approach was the main method used in valuation of market value of commercial real estate.

Most of the valuers (*ca* 55%) prefer to apply discounted cash flow method in implementing income approach; others apply only capitalization method (25%) or both at the same time in one valuation (*ca* 20%). About 60% of the valuers assessed the reliability of data gathered for income approach as good, and 70% assessed the

same way the accuracy of final outcome of income approach. In implementing the discounted cash flow method, almost all valuers use 5-year long cash flow projection period, only one appraiser said that there is no point to use over 3-year long period in projecting cash flows. The major problem emerged with the estimation of terminal cap rate in discounted cash flow model – 50% of the appraisers use current market cap rate as the terminal cap rate, the other 50% adjusts the current market cap rate according to the changes in the cash flow projection. But, the adjustment is made rather by intuition than using special theoretical methods.

The authors cannot say very convincingly, what is the most proper way to use methodology in appraising the real estate object described in the hypothetical case study. The rental market of similar objects is quite active and also some comparable sales transactions could be found, i.e. probably it is the most active commercial market segment in Estonia. Despite of that, still rises a question – is it sufficient to use 5-year discounted cash flow analysis and sales comparison approach? Probably yes, when regarding objects in similarly active market, but hardly in many other market segments in Estonia. The question is related to the quality of input data. A general conclusion concerning the use of input data is that valuers are not very active and professional in analysing preliminary data and the risk issues, they do not fully understand the relation between risk and rates of return (discount rate, capitalization rate).

There is one observation that the authors have got from their practical experience which coheres with compiling the valuation report. The practical experience has shown that the weakest parts in many valuation reports is the market analysis, this raises also the question about adequacy of input data taken from the market. Do the valuers have enough data about market rents and operating costs to compare contractual data? How correctly could they derive rates of return from the market? And further – if the input data are not sufficiently correct then whether the capitalization method should be more proper to use instead of discounted cash flow method? In addition, many appraisers are not paying very big attention to describing clearly and thoroughly the part of description of used valuation method and its practical implementation, i.e. the actual way of valuation process. These flaws in valuation reports are well-described also in auditing acts which are direct materials from periodical audits conducted with valuers.

## 5. Conclusions

The authors of the paper can draw the following conclusions from the empirical findings:

- The valuation for accounting purposes is topical mainly in major cities in Estonia, where the concentration of companies is bigger. Even there only 10% of all commercial valuations are for financial reporting.
- The majority of the total valuation cases are valuations of market value, valuations of non-market values is quite unusual.



- The valuers behaviour refer to overconfidence in their actions concerning the discussion of asset-specific questions with subscribers of valuation report.
- Although the self-esteem of the responded valuers is above the average (concerning the estimation of their own knowledge and competence in valuation standards, asset classification for financial reporting purposes, using methodology and preliminary data and in valuation of market value) the survey findings show otherwise.
- The major methodology used in valuation of commercial real estate for accounting purposes is income approach, where discounted cash flow method is preferred to capitalization method.
- The authors got the confirmation from the empirical research that some theoretical regulations in standards are too general and need some specification to harmonise practical behaviour:
  - The rules for classification of properties, which are partly used by the owner itself and partly rented out, are confusing. Here, the following questions arise – what does it mean „can be sold separately” and how significant is „insignificant” mentioned in IAS 40?
  - The rules for using input data in income approach to find market value could lead to value in use. What is the level of difference where appraiser should reject contractual data and choose market data? How profoundly should the appraiser analyse the possibilities to change or to quit unfavourable lease contracts?

The authors still have suspicions about the adequacy of market data used in the cash flow projections. Do the valuers have enough market information about rents, operating costs, rates of return? And further – when the input data are not sufficiently correct then whether the capitalization method should be more proper to use instead of discounted cash flow method?

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## Summary

### REAL ESTATE VALUATION FOR ACCOUNTING PURPOSES IN ESTONIA

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During the past few years there have been many changes in financial reporting rules in EU countries. One significant change from the real estate point of view has taken place in balance sheet, where property investment account is switched to the asset side of the balance sheet, separate from the property, plant and equipment. Since 2005, all companies listed in the stock market, have the obligation to apply International Accounting Standards/International Financial Reporting Standards (IAS/IFRS) in their everyday practice. At the same time, more and more researchers have pointed to the problem of valuation accuracy and to the uncertainty of the valuation product. The valuers in Estonia rely on International Valuation Standards (IVS). In 2005 the first parts of Estonian national property valuation standards (EVS 875) were issued, which follow rather strictly the rules of international valuation standards (both IVS and EVS) and links them with national legislation.

The aim of the paper is to explore the practical problems in implementing the income approach in valuation for financial reporting purposes in Estonia. To achieve the aim of the paper, the authors conducted a survey, sending out a comprehensive questionnaire to certified general appraisers (GA) in Estonia.

The survey findings show, that the valuation for accounting purposes is topical mainly in major cities in Estonia. The valuers behaviour refer to overconfidence in their actions together with above-average self-esteem, which is not supported by hypothetical case study results. The authors got the confirmation from the empirical research that some theoretical regulations in standards are too general and need some specification to harmonise appraisers' behaviour in practice. For example, the rules for classifications of properties, which are partly used by the owner itself and partly rented out, are confusing. Also, the rules for using input data in income approach to find market value could lead to value in use.

# THE RELEVANCE OF AUDIT OPINIONS TO INTEREST GROUPS

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## Abstract

The relevance of audit opinions to various interest groups has been the focus of many studies. However, research has not provided conclusive results and thus the issue still seems to be unsolved. The objective of this paper is to briefly review the research done and present new possible explanations for the heterogeneous results that the studies report. As a result, this paper suggests that firm specific agency factors; management ownership and free cash flow possibly explain the differences in the relevance of the audit opinion to interest groups.

## 1. Introduction

The existing audit opinion literature presents heterogeneous evidence on the relevance of audit opinions when making investment decisions. The literature has covered several groups of decision makers (e.g. public company owners, analysts, loan officers) and the evidence is contradictory in nearly every group. The amount of research done however indicates that the issue is relevant among accounting and finance practitioners as well as academics.

The reliability of business reporting is essential for rational decision making. Companies are obliged to generate and report financial information on their business activities. Various interest groups e.g. investors, lenders, suppliers, competitors and employees rely on this information in their decision making process. However, information generated by companies needs to be protected. Various corporate governance instruments can be installed to assure the quality and quantity of financial information. Independent audit of financial statements is such an instrument.

The relevance of the audit opinion information can derive from two complementary/alternative arguments.

- A. *Audit report content*: the relevance of the audit opinion derives from the value of the information contained in an audit opinion. To be relevant the information needs to be relevant, new and timely.
- B. *Audit process*: the relevance of the audit opinion derives from the audit process. The audit report user is interested only to get a certificate that the company has been audited. The content of the report is of secondary or no interest.

## 2. Previous research on owner and user reactions on audit opinions

Over the past three decades several studies have been examining the informational value of audit opinions. The literature can broadly be divided into two categories: (i)

studies explaining the importance of audit opinions to investors through the impact on stock prices and (ii) experimental research focusing on user responses to audit opinions. The main goal in both categories is to test the information value of an audit opinion to different interest groups. The mentioned categories differ in the research approach, data settings and methods.

### **2.1. Market reactions to audit opinion announcements**

The first approach in studying the information content of audit opinions is the capital market approach. This line of research studies the relevance of information through the stock market reaction to audit opinion announcement.

Considerable evidence exists supporting the simultaneous or delayed correlation between earnings information and stock price changes (Ball and Brown 1968; Bernard and Thomas 1989; Jegadeesh and Livnat 2004). However, as Lev (1989) reported, earnings explain only a fraction of the change in returns at the earnings announcement date. Due to this, accounting researchers have explored market reactions with other financial information (Ou and Penman 1989; Livnat and Zarowin 1990; Sloan 1996). One such source of information is audit opinions. Audit opinions have the potential to change the market responsiveness to earnings by adding (reducing) noise or reducing (adding) the persistency of reported earnings (Choi and Jeter 1992). The correlation between stock prices and audit opinions has been extensively studied in the accounting literature.

The studies concerning audit opinions and share prices cover a large number of different stock markets. However, they report mixed results. Firth (1978), Ball, Walker and Whittread (1979), Banks and Kinney (1982), Chow and Rice (1982), Dopuch, Holthausen and Leftwich (1987), Wilkerson (1987), Fields and Wilkins (1991), Choi and Jeter (1992), Loudder, Khurana, Sawyers, Cordery, Johnson, Lowe and Wunderle (1992), Frost (1994), Chen and Church (1996), Chen, Su and Zhao (2000), Citron, Taffler and Uang (2001), Tan (2002), Pei, Opong and Hamill (2004) report that the audit opinion contains at least some information that significantly affects the expected returns of stock markets. The opposite conclusion, that the relevance of information contained in audit opinions is small and insignificant or none, has been reported by Baskin (1972), Alderman (1977), Davis (1982), Elliot (1982), Dodd, Dopuch, Holthausen and Leftwich (1984), Ameen, Chan and Guffey (1994) and Martínez, Martínez and Benau (2004).

Martínez, Martínez and Benau (2004) explain the inconclusive results from previous literature by two reasons. First, studies suggest that the information of the audit reports is neither new or timely. Therefore, the market has anticipated the information disclosed in the audit report and discounted it in the share price before it is published. Secondly, Martínez, Martínez and Benau (2004) conclude that the early studies suffered from methodological problems and thus the results should be interpreted with consideration. Only in the case of going-concern qualifications does the majority of evidence suggest that audit reports may be relevant (Martínez, Martínez and Benau 2004).



## 2.2. User responses to audit opinions

The professional auditor is assigned by the general meeting. This means that they are working for and reporting to the shareholders. However, the target group or user group of audit reports can be seen much broader as that. External investors, bank loan officers, authorities, financial analysts, i.e. users of financial statements, can all be considered as users of audit reports.

The impact of audit reports on users has been studied in experimental studies over a long period by many researchers (e.g. Libby 1979a and 1979b, Bailey 1981, Bailey, Bylinski and Shields 1983, Houghton 1983, Robertson 1988, Holt and Moizer 1990, Miller, Reed and Strawser 1993, Bamber and Stratton 1997, LaSalle and Anandarajan 1997, Lin, Tang and Xiao 2003). This research trend is based on the following question: how do professionals in different positions perceive the information contained in the audit opinion to affect the reliability of the financial statement information and their decision-making?

This line of research has remained interesting since the late 1970's until today. Experimental studies have tried to capture the usefulness of audit reports to several user groups. The most common groups used are bank loan officers and financial analysts.

Houghton (1983) studied the impact of audit opinions on loan decisions and reported that the existence of a qualified audit opinion does not have a significant impact on the loan decision outcome (accept or reject), but still the audit report was found to be significant in the loan decision process.

Houghton (1983) presented four possible reasons for this outcome: (1) bank lending staff are not aware of the significance of the audit opinion, (2) the written form of an audit opinion has become meaningless or ineffectual due to over usage, (3) the provided information is not considered important or (4) the signals of the audit opinion used in the experiment was not loud enough. All these explanations arise from the difference between the auditors' intended message and the users' perceptions of the intended messages. Libby (1979a) illustrated this issue as "link 1" in his auditor-user communication sequence. Houghton (1983) received confirmation for his fourth explanation when Robertson (1988) concluded his research on financial analysts' reactions to auditors' messages by stating that audit report messages fail to be received as auditors expect them to be received and he suggests that more explanatory, straightforward report language ought to be considered.

LaSalle and Anandarajan (1997) and Bamber and Stratton (1997) examined in experimental studies whether bank loan officers' reactions to entities with litigation or going concern uncertainties. Their results show that litigation uncertainties reduce the loan officers' willingness to grant loans, decreases loan officers' assessment of the entity's ability to pay their loan or possibilities to improve its profitability and



increases the interest rate spread charged if the entity was granted a loan. Going concern uncertainties reduces the loan officers' willingness to grant a loan and decreases the assessment of the ability to service the loans.

Lin, Tang and Xiao (2003) found in their study that qualified audit opinions had a negative impact on the Chinese credit and loan officers perception on the credibility of the financial statement, whereas no impact on the perceptions of business managers as investors was found. However, qualified audit opinions were not found to have an impact on investment or loan decisions made by investors or creditors. This result has been explained in three possible forms: by users failing to fully understand the implications of different audit reports, by users not used to paying attention to audit reports in making decisions or that the western-style juridical audit qualifications are difficult for Chinese users to interpret.

Gómez-Guillamón (2003) studied the importance of the audit report to investment and lending decisions. The research subjects were Spanish financial analysts and loan managers. Gómez-Guillamón (2003) came to the conclusion that credit institutions and dealers/brokering companies consider auditors' reports relevant and useful to their investment and lending decisions. Audit opinions were reported to influence the acceptance/rejection of the loan application and the quantity granted. The same findings were reported on investment decisions and amount invested.

### **3. Agency theory; managerial ownership and free cash flow**

The accounting literature suggests that the demand for audits stems from the agency theory i.e. the manager-shareholder conflict and the lender-borrower conflict (Jensen and Meckling 1976; Watts and Zimmerman 1986). Agency theory implies that there are several groups that depend on audit services: e.g. managers, owners, external investors and authorities. These are referred to as interest groups. In general, all parties who rely on the annual corporate financial information expect the financial reports to be in accordance with generally accepted accounting standards.

Furthermore, audit and accounting literature strongly suggests that agency factors have a strong influence on various aspects of accounting and auditing issues. Agency theory implies that there is a conflict of interest between managers and shareholders in a firm with low management ownership (Jensen 1986, 1989). This conflict may arise because ownership is separated from management and the interest of the managers and the shareholders may not be aligned (Gul and Tsui 2001). Additionally, Jensen (1986, 1989) argues that conflict of interests is more severe in companies with a high free cash flow (FCF) and a low growth rate. Particularly managers of low growth and high free cash flow firms are involved in non value-maximizing activities. Managers increase perquisite consumption and compensation as well as manipulation of accounting numbers at the expense of shareholders (Jensen 1989; Shleifer and Vishny 1989; Lang, Stulz and Walking 1991). For a company to operate efficiently and maximize shareholder value, free cash flow must be distributed to shareholders rather than retained (Jensen 1989). Thus, Jensen

(1986) argues that the agency costs are higher for firms with low growth and high free cash flow.

The demand for auditing may however vary across companies of different size and ownership structure. In management-owned companies it could be expected that the manager-shareholder conflict does not exist, whereas the lender-borrower conflict may arise as the firm seeks for financing e.g. from a bank. Furthermore, in companies where management ownership is low, i.e. management and ownership is separated, both manager-shareholder and lender-borrower conflicts may arise. This could imply that the demand for auditing varies in companies with different ownership structure.

#### **4. Discussion**

The purpose of this paper is to present one possible explanation for the heterogeneous results of previous studies. Firm specific attributes, here in particularly levels of management ownership and free cash flow could be factors that explain why audit opinions seem to be relevant in some cases and in others they are not.

First, the relevance of audit opinions can be expected to vary in different management ownership settings. When, e.g. the level of management ownership is considerable, then the monitoring role of the audit opinion is less relevant for owner-manager relationships, because the owners get all relevant information directly from the company, non-public. Whereas, when the level of management ownership is small, then the possibility for owners to get private information is smaller and they depend more on public information assured by the auditor.

Second, the level of free cash flow could be another firm specific factor explaining the relevance of audit opinions. According to Jensen (1986, 1989) managers of low growth and high free cash flow firms are involved in non value-maximizing activities. Thus, the audit opinion could be assumed to be more relevant to interest groups of high free cash flow firms.

As a conclusion, based on reviewed previous studies, this paper proposes that the level of management ownership and the level of free cash flow could be important factors in explaining the relevance of audit opinions and why audit opinions contain relevant information in some cases and "old news" in other cases.

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## Summary

### THE RELEVANCE OF AUDIT OPINIONS TO INTEREST GROUPS

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This theoretical paper focuses on the discussion concerning the relevance of audit opinions to various interest groups. Auditing is one mean for principals (e.g. shareholders and external investors) to monitor their resources managed by agents (management). However, the evidence whether the audit report is relevant for the principals or not, remains inconclusive. Based on a review of previous studies, this paper presents two firm specific variables that can possibly help explain the relevance of audit opinions to the interest groups. The variables presented are level of management ownership and free cash flow. These two variables can from a theoretical point of view be expected to affect the content of and need for public company information, and thus affect the relevance of the audit opinion.

# ПРОБЛЕМЫ СОВРЕМЕННОЙ ПРАКТИКИ УЧЕТА КРЕДИТНЫХ ТРЕБОВАНИЙ В КРЕДИТНЫХ УЧРЕЖДЕНИЯХ И ПЕРЕХОДА НА ИСПОЛЬЗОВАНИЕ СПРАВЕДЛИВОЙ СТОИМОСТИ

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## 1. Введение

В условиях международной интеграции финансовых рынков актуальным вопросом, особенно для предприятий, деятельность которых выходит за национальные границы, является переход на полное использование международных стандартов учета и финансовой отчетности. С 1.01.2005 все кредитные учреждения Эстонии должны вести бухгалтерский учет и составляют консолидированные годовые финансовые отчеты на основе действующих IFRS/IAS<sup>1</sup>. Наибольший удельный вес в их балансах имеют финансовые инструменты, для которых предусмотрены такие основные стандарты, как IAS 39 «Финансовые инструменты: отражение и измерение», IAS 32 «Финансовые инструменты: раскрытие и представление» и IAS 30 «Информация, раскрываемая в финансовых отчетах кредитных учреждений»<sup>2</sup>.

Почти 70% имущества кредитных учреждений Эстонии представлено кредитами клиентам, поэтому от их адекватной и надежной бухгалтерской оценки и отражения в отчетности во многом зависит объективность и достоверность годовой финансовой отчетности в целом<sup>3</sup>. Исходя из этого, целью статьи является выявление критических моментов в действующем порядке бухгалтерского учета и отражения в годовой консолидированной отчетности портфеля выдаваемых кредитов в кредитных учреждениях, а также при переходе в будущем на использование принципа справедливой стоимости.

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<sup>1</sup> В соответствии с § 17 (2) Закона о бухгалтерском учете Эстонии (2003) до 1.01.2005 кредитные учреждения могли использовать на выбор или хорошие обычаи бухгалтерского учета Эстонии или международные стандарты финансовой отчетности, но обычно практиковали частичное или полное использование IFRS. В связи с этим Финансовая инспекция Эстонии считает, что обязательный полный переход на международные стандарты не окажет существенного количественного влияния на финансовую отчетность кредитных учреждений в части отражения кредитных требований (Raamatupidamise...: 17-18).

<sup>2</sup> В Эстонии основные положения перечисленных международных стандартов в несколько сокращенном и упрощенном виде используются предприятиями с 2003 г. в соответствии с инструкцией Службы бухгалтерского учета № 3 «Финансовые инструменты». С 1.01.2005 эта инструкция действует с изменениями, введенными в связи с изменениями IFRS (Hea...2005: 105-131).

<sup>3</sup> Проблемы, рассматриваемые в данной статье, могут представлять интерес (но в меньшей степени) и для других предприятий финансового и нефинансового сектора.

## 2. Измерение амортизированной стоимости приобретения кредитов с применением внутренней (эффективной) процентной ставки

Стандартами IFRS выданный кредит (ссуда) определяется, в общем случае, как финансовое имущество с фиксированными или распознаваемыми платежами, не относящееся к категории деривативов и не котируемое на активном рынке. Его измерение и отражение в финансовой отчетности должно осуществляться по амортизированной стоимости приобретения, т. е. в сумме первоначального приобретения, из которой (1) вычтены платежи в уплату основного долга, (2) прибавлен (или вычтен) кумулятивный износ, рассчитанный с использованием метода внутренней процентной ставки относительно каждой разницы между первоначальной суммой финансового имущества и суммой погашения, (3) вычтены все уменьшения, возникающие из-за снижения стоимости имущества или невозврата сумм. (IAS 39 § 9)

Перечисленные корректировки должны осуществляться с учетом принципа существенности, при этом на практике могут возникать вопросы, требующие дополнительной проработки. Например, вопрос корректного расчета внутренней процентной ставки, от величины которой зависит как изменение балансовой стоимости кредитного требования, так и сумма начисленного на момент возникновения процентного дохода. Внутренней (эффективной, действительной) процентной ставкой (*effective interest rate*) называется ставка дисконтирования, уравнивающая ожидаемые будущие денежные платежи (поступления) от финансового инструмента (за исключением будущих кредитных убытков) с его балансовой стоимостью (IAS 39 § 9). У кредитов она может отличаться от годовой номинальной ставки кредитного договора, так как при ее расчете кредитор должен учесть все виды своих доходов (денежных потоков) от кредитной сделки: плату за заключение, изменение или невыполнение условий кредитного договора, пеню, плату за просрочку и другие. Понятие эффективной процентной ставки, в принципе, соответствует внутренней доходности финансовой сделки (*Internal Rate of Return, IRR*) и она может быть выведена из следующей формулы (Tarbijakrediidi... 2002: 1):

$$\sum_{t=1}^{k=m} \frac{A_k}{(1+i)^{t_k}} = \sum_{k'=1}^{k'=m'} \frac{A_{k'}}{(1+i)^{t_{k'}}}, \text{ где}$$

$k$  и  $k'$  – соответственно порядковый номер части выдаваемого кредита и порядковый номер части погашаемого кредита и/или процентных платежей;

$A_k$  и  $A_{k'}$  – соответственно сумма выдаваемого кредита с порядковым номером  $k$  и сумма погашаемого кредита с порядковым номером  $k'$ ;

$m$  и  $m'$  – соответственно порядковый номер последней части выдаваемого кредита и порядковый номер последней части погашаемого кредита и/или процентных платежей;

$t_k$  и  $t_{k'}$  – соответственно длительность периода между выдачами частей кредита до  $m$  и длительность периода между возвращением частей кредита и/или процентных платежей до  $m'$ ;

$i$  – эффективная годовая процентная ставка (%).

Эффективная процентная ставка зависит от суммы и частоты процентных и прочих договорных платежей; разницы между фактически выданной и возвращаемой суммой; количества и частоты выдач и погашений; длительности периода выдачи и погашения. Она тем выше, чем выше годовая номинальная процентная ставка, чем чаще в течение года погашается основная сумма кредита и/или уплачиваются процентные платежи, чем больше разница между суммой выдачи и возврата. Немаловажное значение имеет также метод начисления процентов. Так, при методе суммирования проценты начисляются не на текущий остаток кредитного требования, а на общую основную сумму выданного кредита, погашаемого периодическими платежами, поэтому эффективная процентная ставка почти в два раза превышает номинальную (Koch, MacDonald 2000: 725-728). Примеры в таблице 1 раскрывают сущность и логику формирования эффективной процентной ставки.

**Таблица 1.** Расчеты эффективной процентной ставки

Фактор, влияющий на эффективную процентную ставку	Ситуация	Расчет эффективной процентной ставки	Эффективная процентная ставка
Величина процентных и прочих платежей	1000 евро должны быть возвращены через 1,5 года с процентами, всего 1200 евро	$1000 = \frac{1200}{(1+i)^{1,5}}$	12,92%
Срок и частота погасительных и процентных платежей	1000 евро должны быть возвращены в двух частях по 600 евро каждая в конце первого и второго года соответственно	$1000 = \frac{600}{(1+i)^1} + \frac{600}{(1+i)^2}$	13,07%
Частота погасительных и процентных платежей	1000 евро должны быть возвращены в трех частях: через 0,25 года 272 евро, через 0,5 года 272 евро, через 1 год 544 евро	$1000 = \frac{272}{(1+i)^{0,25}} + \frac{272}{(1+i)^{0,5}} + \frac{544}{(1+i)^1}$	13,19%
Разница между суммой выданного и погашаемого кредита	950 евро должны быть возвращены через 1,5 года с процентами, всего 1200 евро	$950 = \frac{1200}{(1+i)^{1,5}}$	16,85%

Источник: составлено автором по методике постановления Министра финансов Эстонии № 98 от 7.08.2002.

Чем больше условий включено в кредитный договор, тем более трудоемким становится точный расчет эффективной ставки, что может потребовать использования метода интерполяции или какого-то итерационного метода (например, метода Ньютона-Рафсона), поэтому расчеты удобнее выполнять по специальной программе пакета *Excel*.



### 3. Переоценка качества кредитных требований

Регулярной переоценки качества еще не погашенных клиентами кредитов требуют от кредитных учреждений не только международные стандарты финансовой отчетности, но и предписания Базельского Комитета (Basel... 2004), а также соответствующее постановление Президента Банка Эстонии (Krediidiastutuste... 2000). Нетто-стоимость кредитного портфеля, которую стандарты IFRS разрешают отражать в балансе кредитных учреждений напрямую или через счет скидок, зависит от суммы скидок, определяемой при регулярной переоценке. Скидки зависят от степени вероятности погашения кредитов. Появление в портфеле некачественных (сомнительных) кредитов зависит не только от фактора платежеспособности и корректности заемщика, но и от кредитной политики банка. Чем либеральнее кредитная политика и чем проще получить кредит при повышенном предложении в условиях высокой конкуренции между банками, тем ниже может быть качество анализа кредитоспособности заемщика и выше вероятность выдачи некачественных кредитов, при переоценке которых в дальнейшем необходимо делать повышенные отчисления в текущие расходы.

Целью переоценки кредитных требований является соблюдение принципа консерватизма. Необходимо доказать, что при списании ожидаемых потерь в операционные расходы соблюдается преемственность и сравнимость и используемая для этого информация и отчетность дает возможность объективно оценить стоимость кредита. В своей кредитной политике кредитное учреждение должно стараться установить баланс между увеличением объема кредитного портфеля за счет более выгодных условий кредитования и приемлемым для него кредитным риском (приемлемой долей возможных невозвратов). Кроме того, адекватное измерение сомнительных кредитов дает возможность более достоверно отразить в балансе реальные, приносящие доход, кредитные требования. Корректировка балансовой стоимости кредитного портфеля является одной из важнейших, но болезненных корректировок с точки зрения финансового результата. Поэтому переоценкой должно заниматься независимое подразделение, а специалисты, выдающие кредиты.

С 2000 года кредитные учреждения Эстонии переоценивают кредиты самостоятельно, на основе внутренней политики управления рисками. Крупные кредиты переоцениваются индивидуально, а массовые мелкие общей суммой, учитывая различные аспекты: наличие просрочек в прошлом и сейчас, качество управления, существующее и ожидаемое в будущем финансовое состояние, общеэкономические условия, состояние и текущую стоимость залога и другие. В настоящее время актуальным вопросом является разработка и совершенствование кредитными учреждениями своих методик оценки и переоценки кредитов, в основе которых лежат внутренние рейтинговые

системы<sup>4</sup>, базирующиеся на собственных статистических данных по ранее выданным кредитам. Образцом при разработке рейтинговых систем являются, как правило, методики международных рейтинговых агентств *Moody's* и *Standard&Poor's*. При этом большое значение имеет наличие достаточной информации (за продолжительный период времени) и метод ее обработки (например, дискриминантного анализа, линейной, мультилинейной или нелинейной регрессии, logit, нейронных сетей, генетического алгоритма и другие).

#### 4. Оценка справедливой стоимости кредитов

Хотя в настоящее время кредиты учитываются и отражаются в годовой отчетности по амортизированной стоимости приобретения, но уже сейчас вызывает интерес проработка проблемы перехода в будущем на метод справедливой стоимости, который как по международным, так и по эстонским стандартам бухучета и отчетности уже действует для торгуемых финансовых инструментов. Переход на учет по справедливой стоимости кредитных требований представляется делом времени, так как ситуация, когда часть финансовых инструментов учитывается одним, а часть другим методом, дает возможность при необходимости манипулировать финансовыми результатами и представлять их в более выгодном свете, чем в реальности. Кроме того, предложение перейти на полное использование метода справедливой стоимости при учете всех финансовых инструментов дискутировалось на уровне Европейского Союза, но под нажимом Западно-Европейских банков, ссылавшихся на технические трудности с расчетами и усиление волатильности собственного капитала, в Европейском Союзе пока что сохраняется компромиссный вариант международных стандартов бухгалтерского учета и финансовой отчетности, который требует использовать метод справедливой стоимости только для торгуемых финансовых инструментов. По неторгуемым финансовым инструментам, в т. ч. кредитам, действующие стандарты IFRS требуют раскрытия справедливой стоимости в приложении к годовому консолидированному балансу.

Справедливая стоимость (*fair value*) – это сумма, за которую возможно обменять имущество или произвести расчет по обязательствам в сделке с сознательными, заинтересованными и независимыми сторонами (IAS 39 § 9). Ее лучшим индикатором является рыночная стоимость (*market value*), точнее рыночная цена (*market price*), существующая для торгуемых на активном рынке финансовых инструментов. При отсутствии активного рынка справедливую стоимость допускается определять другими методами. Традиционные кредиты, как правило, на активном рынке не котируются,

<sup>4</sup> Подробнее о рейтинговых системах и системах переоценки стоимости выданных кредитов в зависимости от качества, действующих в кредитных учреждениях Эстонии, см. в статье автора Принципы создания кредитных резервов в коммерческих банках Эстонии. – *Reserves in Accounting. The 4<sup>th</sup> International Conference NO-RA*, 2003, Wrocław, Academia Economiczna im. O. Langego, 2003, с. 141-150.

поэтому их справедливую стоимость можно, в принципе, рассчитать методом современной стоимости (*present value*)<sup>5</sup>.

С точки зрения бухгалтерского учета, использование метода современной стоимости является значительным новшеством, хотя финансисты используют его относительно давно и широко. Понятие современной стоимости вытекает из концепции временной стоимости денег, в соответствии с которой более ранний по времени платеж оценивается инвестором более высоко, нежели более поздний (Brigham, Gapenski 1993: 3). По методике этой концепции, современная стоимость инструмента рассчитывается<sup>6</sup> путем дисконтирования ожидаемых будущих денежных потоков (*discounted cash flow*) по ставке дисконтирования. При этом предполагается, что понятие ставки дисконтирования истолковывается всеми заинтересованными лицами однозначно и известна ее адекватная величина, соответствующая среднерыночной ставке по аналогичным финансовым инструментам с аналогичным сроком и аналогичными специфическими рисками. Однако на практике использование такого подхода вызывает определенные трудности, так как несмотря на публикуемую Банком Эстонии статистику процентных ставок по различным категориям банковских кредитов, их дифференциация в аспекте учета риска не всегда достаточна. Кроме того, в соответствии с финансовой концепцией анализа дисконтированного денежного потока ставка дисконтирования, как правило, должна помимо риска конкретного денежного потока, отражать также альтернативные затраты. Трудности могут возникнуть и с расчетом ожидаемых будущих денежных потоков, особенно в условиях широкого использования плавающей процентной ставки, базирующейся на 6-месячной ставке *Euribor*.

## 5. Заключение

Использование в бухгалтерском учете и при отражении в финансовой отчетности по выданным кредитам метода амортизированной стоимости приобретения, предписываемого действующими стандартами IFRS, распространившимися с 1.01.2005 на все кредитные учреждения Эстонии, вызывает необходимость, с одной стороны, корректного расчета эффективной процентной ставки, а с другой - адекватного определения суммы скидок по сомнительным кредитам. От этого зависит как балансовая стоимость кредитного портфеля, так и прибыль кредитного учреждения. Поэтому при расчете эффективной процентной ставки (если расчет является существенным) важно внимательно учитывать все условия по кредиту и для математической корректности расчетов использовать программу *Excel*.

<sup>5</sup> Современную стоимость называют еще текущей, приведенной или капитализированной стоимостью (Четыркин 2001: 31).

<sup>6</sup> Принципиальная схема расчета современной стоимости финансового инструмента представлена правой частью формулы на с. 2, где ставка дисконтирования соответствует величине  $i$ .



С точки зрения адекватности измерения суммы скидок на сомнительные кредиты важно, чтобы каждое кредитное учреждение использовало систему внутренних кредитных рейтингов, а также статистически проверенные методики провизионирования кредитов.

Тенденции изменения стандартов IFRS дают основание предположить, что в будущем не только торгуемые финансовые инструменты, но и выданные кредиты нужно будет измерять и отражать в финансовой отчетности по справедливой стоимости, которая ввиду отсутствия активного рынка кредитов может быть рассчитана методом современной (приведенной) стоимости. Целью распространения принципа справедливой стоимости на некотируемые на активном рынке кредиты является повышение степени объективности финансовой отчетности кредитных учреждений, но возникают определенные трудности. Для использования метода современной стоимости необходимо наличие подробной надежной информации об ожидаемых будущих денежных потоках, получение которой, например, в случае долгосрочных кредитов, особенно выданных под плавающий процент, проблематично. Кроме того, на практике не исключена проблема с выбором подходящей ставки дисконтирования будущих денежных потоков. Стандарты IFRS, обязывающие сейчас раскрывать информацию о справедливой стоимости выданных кредитов в приложении к балансу, исходят из того, что все кредитные учреждения будут однозначно трактовать понятие рыночной процентной ставки, которую предлагается использовать в качестве ставки дисконтирования и что требуемая статистика рыночных процентных ставок по кредитам достаточно дифференцирована. Однако, по мнению автора, вопрос о ставке дисконтирования в связи с возможным переходом на отражение справедливой стоимости кредитов в балансе требует дополнительной проработки, учитывая все требования финансовой теории.

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## Summary

### THE ACCOUNTING OF THE CREDIT CLAIMS BY CREDIT INSTITUTIONS: THE PROBLEMS OF CURRENT PRACTICE AND THE INTRODUCTION OF THE FAIR VALUE METHOD

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Currently approximately 70% of Estonian credit institutions' total assets are held in loans to customers. Therefore, the objectivity of general annual accounting and reporting of credit institutions is influenced by adequacy and transparency of the valuation of credit claims. Since 1.01.2005 all IFRS standards are obligatory for consolidated annual financial statements of Estonian credit institutions. According to the IAS 39 standard the accounting of given credit has be in amortized cost using the effective interest rate. There are at least two problems associated with this method – the calculation of the effective interest rate and the proper estimation of loan loss provisions. The importance of the effective interest rate comes up from two reasons – firstly, the size of the effective interest rate may affect the book value of the claim. Secondly, the effective interest rate influences also the accrual interest income. Therefore it is important to carry out detailed and accurate calculations of the effective interest rate. The central problem in formulation of loan loss provisions is the possible underestimation or overestimation that can strongly influence the book value of a loan. To overcome that problem it is important to develop modern rating systems and provision methods based on statistical data that is also required by Basel II.

The tendencies in IFRS standards indicate that in the future it is likely that in addition to the financial assets for sale also credit will be accounted in fair value that is calculated as the present value of expected future value cash flows. The use of fair value method enables to increase the objectivity of financial accounting but it there may raise also additional problems as the estimation of fair value of loans presumes the existence reliable data about future cash flows and the discount rate used to capture the market interest rate has to be commonly accepted and available at the differentiation required by IAS 39.

# THE CONCEPTS OF EXTERNAL AND INTERNAL AUDITOR INDEPENDENCE AND OBJECTIVITY

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## Abstract

The purpose of this theoretical paper is to compare the concepts of external auditor and internal auditor independence and objectivity. The independence and objectivity of external auditors and internal auditors are viewed in the literature as attributes of strong corporate governance. Among others, Porter (1999) has recognised the need to develop audit function in order to improve the corporate governance mechanism. As a means to enhance corporate governance, independence and objectivity are required of both auditors, even though they traditionally provide assurance services from different starting points. However, the roles of external and internal auditors have become more aligned due, for example, to internal audit outsourcing to external audit firms. This creates a need to discuss the differences in the concepts of independence and objectivity for external and internal auditors, which has not been addressed in the previous literature. The purpose of this paper is to increase the understanding of these differences based on the IFAC and the IIA standards.

**Keywords:** *external auditor, internal auditor, independence, objectivity, corporate governance*

## Introduction

The objective of this paper is to compare the concepts of external and internal auditor independence and objectivity. To organise our discussion we adopt the perspective that corporate governance comprises four cornerstones: 1) the external auditor, 2) the internal auditor, 3) the audit committee and 4) the management. Each party has a critical role to play in corporate governance (Gramling, Maletta, Schneider & Church 2004). Both external and internal auditors must provide assurance regarding the integrity of financial statements and the adequacy of internal controls. To perform their work effectively and reliably, both auditors must be independent and objective (Gallegos 2004). However, there is a risk that the concepts of independence and objectivity cause confusion, because they are not well established in the literature. Thus, this article aims to generate discussion of these key concepts and the differences between them (see also Jokipii & Miettinen 2005).

While several studies have focused on corporate governance and internal and external audit issues (Baker & Owsen 2002; Haron, Chambers, Ramsi & Ismail

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2004), no earlier paper has compared the concepts of internal and external auditor independence and objectivity. This study contributes toward understanding the concepts of independence and objectivity in external and internal auditing. The paper uses the definitions of independence and objectivity provided by two parallel organisations, namely the International Federation of Accountants (IFAC) and the Institute of Internal Auditors (IIA). The IFAC represents the external audit profession and the IIA the internal audit profession. Their standards are generally accepted and used by most practitioners in Europe.

The insight into these concepts provided by this article is useful to academics, to practitioners and to both audit professions. The aim is to simplify and discuss the differences of the two approaches to independence and objectivity given by the IFAC (2005) and the IIA (2001a). This paper aims to contribute to the corporate governance discussion and to motivate academics to generate future research.

The remainder of this article is organised as follows. The second and third sections review the concepts of external and internal auditor independence and objectivity. In the final section, the similarities, differences, and future challenges of these concepts are discussed.

### **External auditor independence and objectivity**

The external auditor's legally defined role is to express an opinion on whether the financial statements fairly present the financial position and results of operations of the auditee (Baker et al. 2002). The external auditor's opinion provides key assurance to the shareholders and other parties. Thus, several regulatory bodies have taken steps to ensure that the information generated by the external auditor is accurate. Traditionally it has been considered that the ultimate goal of the external audit is to express an objective opinion (FEE 1998). According to the IFAC (2005) the principle of objectivity imposes:

*"An obligation on all professional accountants not to compromise their professional or business judgment because of bias, conflict of interest or the undue influence of others."*

However, there is a widespread view in the external audit literature that objectivity, as an auditor's state of mind, cannot be directly regulated. Therefore, independence is considered as a main means by which the external auditor demonstrates that she or he performed the task in an objective manner (FEE 1998) and therefore, standards are mainly focused on ensuring external auditor independence. The literature variously discusses "independence in fact," "independence of mind," "mental attitude" and "independence in appearance". This paper uses the terms independence in fact and independence in appearance. IFAC's (2005) code of ethics defines independence in fact (i.e. independence of mind or mental attitude), in the following way:

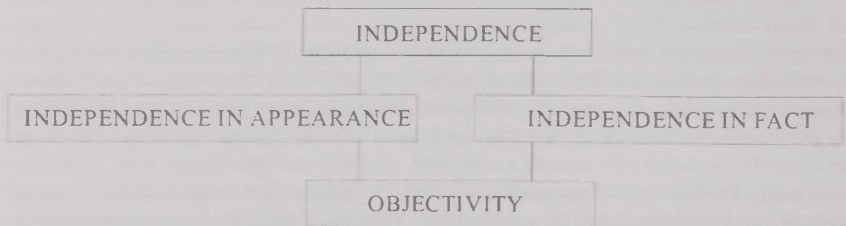
*"It is the state of mind that permits the provision of an opinion without being affected by influences that compromise professional judgment, allowing an individual to act with integrity, and exercise objectivity and professional judgment".*

Independence in appearance according to IFAC (2005) means:

*"The avoidance of facts and circumstances that are so significant a reasonable and informed third party, having knowledge of all relevant information, including any safeguards applied, would reasonably conclude a firm's, or a member of the assurance team's, integrity, objectivity or professional scepticism had been compromised."*

In brief, independence in fact refers to an individual auditor's state of mind, which includes objectivity and other attributes. Independence in appearance represents the interested parties' perceptions of the profession's independence in general and the individual auditor's independence in particular. Our literature review revealed that research on auditor independence in fact is limited. However, a substantial amount of research has focused upon identifying the factors which potentially influence perceptions of external auditor independence. Research on the appearance of independence has primarily focused on identifying situations in which an auditor might not be perceived to be independent (Firth 1981; Shockley 1981; Knapp 1987; McKinley, Pany & Reckers 1985; Lindsay 1989; Gul 1991; Gul & Tsui 1992; Lindsay 1992; Bartlett 1993). Significantly less attention has been paid to the factors that enhance auditor independence (Gul 1989, Emby & Davidson 1998; Beattie, Brandt & Fearnley 1999; Hussey & Lan 2001).

Figure 1 simplifies the concept of external auditor independence. At the top of Figure 1 there is the concept of independence, which divides into two dimensions: independence in fact and independence in appearance. Independence in fact aims to ensure that an auditor has an appropriate mental attitude of objectivity. Independence in appearance aims to ensure that an auditor could be perceived as objective by third parties. Therefore, independence in fact and independence in appearance constitute objectivity which is placed at the bottom in Figure 1.



**Figure 1.** Independence and objectivity of the external auditor.



## Internal auditor independence and objectivity

The importance of internal auditing has been widely recognised during the past two decades. Recent scandals in the corporate sector have increased the prominence of internal auditing even more. While external auditors are concerned primarily with financial reporting, internal auditors often concentrate on the review of controls (Schneider 2003). The Institute of Internal Auditors (IIA) defines internal auditing in their standards as:

*"Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes."*

As can be seen, the concepts of independence and objectivity are at the heart of the definition. Overall, the IIA refers to independence and objectivity in the Standards for the Professional Practices of Internal Auditing (2001a), in the Code of Ethics (2001b), and in the Practice Advisories (2004). Standard 1100 requires that:

*"Internal audit activity should be independent and internal auditors should be objective in performing their work."*

The IIA do not precisely define independence in their standards. However, they recognise organisational independence as:

*"The chief audit executive should report to a level within the organization that allows the internal audit activity to fulfil its responsibilities."*

That is to say that status of the internal audit should enable it to function effectively and the head of internal audit should have direct access to, and freedom to report to management, the board of directors and the audit committee (Vinten 1999). There is a clear trend for internal auditors to report functionally to the audit committee and administratively to management (Gallegos 2004). In addition, the more recently published Practice Advisories (2004) gives a broader description of independence. It states that:

*"Internal auditors are independent when they can carry out their work freely and objectively. Independence permits internal auditors to render the impartial and unbiased judgments essential to the proper conduct of engagements. It is achieved through organizational status and objectivity."*

However, it should be noted that compliance with Practice Advisories (2004) is optional and it is not, in our interpretation, completely in compliance with the standards and code of ethics. In professional standards organisational independence and objectivity are separate requirements, while Practice Advisories introduces the concept of independence, which encompasses both objectivity and organisational

independence. Thus, independence is achieved through the organisational independence of internal audit function and the objectivity of internal auditors (Vinten 1999).

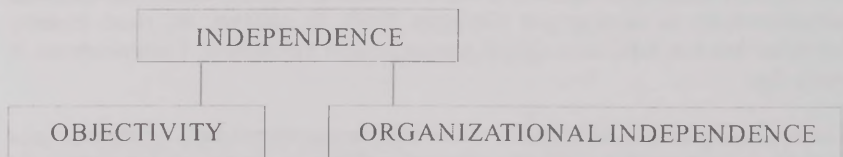
As is evident from the definitions of internal auditor independence, objectivity is a key element in the effectiveness of an internal audit function. Many studies have emphasised objectivity for internal auditors (e.g. Messier & Schneider 1988; Church & Schneider 1992; Brody & Kaplan 1996). Objectivity is defined in the Standards (2001a) as:

*"An unbiased mental attitude that requires internal auditors to perform engagements in such a manner that they have an honest belief in their work product and that no significant quality compromises are made. Objectivity requires internal auditors not to subordinate their judgments on audit matters to that of others."*

and the Code of Ethics (2001b) requires that internal auditors maintain objectivity:

*"Internal auditors exhibit the highest level of professional objectivity in gathering, evaluating, and communicating information about the activity or process being examined. Internal auditors make a balanced assessment of all the relevant circumstances and are not unduly influenced by their own interests or by others in forming judgments."*

Figure 2 summarizes and outlines the concepts described by the IIA. The main goal for the internal auditor, which is presented at the top of the figure, is to be independent according to Practice Advisories (2004). Independence consists of two components, which are objectivity of the internal auditor and organisational independence of the internal audit function. The first component, objectivity, is a state of mind in which biases do not inappropriately affect judgments and assessments. The second component, organisational independence, refers to an independent organisational position in which auditors are able to exercise judgment, express opinions and present recommendations with impartiality.



**Figure 2.** Independence and objectivity of the internal auditor.

## Discussion

Figures 1 and 2 reveal interesting differences between the concepts of independence and objectivity within external and internal audit regulation. According to our interpretation the IFAC seems to regulate objectivity through independence (i.e.

independence in fact and independence in appearance) whereas the IIA seems to regulate objectivity and organisational independence directly. In brief, the concept of independence for external auditors encompasses independence in fact and independence in appearance, which are expected to ensure objectivity. In contrast, independence for internal auditors includes only objectivity and organisational independence. In conclusion we argue that independence has a different meaning in the two audit groups. The concept of independence is broader in external auditing than internal auditing. In our opinion there is a risk that this causes misunderstandings when independence and objectivity are discussed in external and internal auditing.

Traditionally external and internal audit functions have been positioned differently in the organisation, which partly explains the differences discussed above. However, the roles of external and internal auditors have become more aligned due, for example, to internal audit outsourcing to external audit firms. To be effective, both internal and external auditors must maintain their independence and objectivity according to their professional standards. At the moment standards for external and internal auditor independence and objectivity are difficult to interpret and they are not in accordance with each other. This could lead to problems in a situation when an external auditor conducts both external and internal audits. This may create a need to develop professional standards to ensure more consistent independence and objectivity.

In addition, the internal audit literature concerning independence and objectivity is in the early phases of development compared to the external audit literature. Moreover, some authors have adopted concepts used in the external audit literature for the internal audit literature (see for example Chang, Mutchler & Prawitt 2001). This indicates that concepts which are now applied in external auditing are guiding the development of the internal audit discussion.

When the concepts of independence and objectivity are used inaccurately in the corporate governance discussion it may cause confusion. If corporate governance parties do not have in-depth knowledge about these concepts they may not perceive the differences, i.e. how the IFAC and the IIA emphasise independence and objectivity. This could result in unrealistic expectations concerning auditor's independence and objectivity.

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## Summary

### THE CONCEPTS OF EXTERNAL AND INTERNAL AUDITOR INDEPENDENCE AND OBJECTIVITY

Annukka Jokipii, Johanna Miettinen  
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This paper discusses the concepts of independence and objectivity of external and internal auditor. The independence and objectivity of external and internal auditors are viewed in the literature as attributes of strong corporate governance. As a means to enhance corporate governance independence and objectivity are required of both auditors, even though they provide assurance services from different starting points. However, in the earlier literature the concepts of independence and objectivity are often used synonymously and with a lack of clarity. This paper analyses and discusses the differences between the concepts of independence and objectivity as defined by the IFAC and the IIA.

# THE ROLE OF QUALITATIVE INFORMATION IN AUDITOR'S DECISION MAKING - PRELIMINARY RESEARCH PROPOSAL

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## Abstract

This research examines the role of qualitative information in auditors' decision-making. More specifically, it attempts to explain how auditors combine qualitative information with the traditional quantitative information. The task that is studied is going concern decision. The earlier literature lacks a theoretical framework for qualitative information in auditor's going concern assessment. The framework will be created using earlier audit research and appropriate insolvency and bankruptcy research. This research moreover investigates more specifically how the seriousness and the type of financial distress affects the use of qualitative information in auditor's going concern task. The results of this research will provide additional evidence on how auditors weight qualitative information in decision-making.

**Keywords:** *auditor, qualitative information, going concern*

## 1. Introduction

Auditors face numerous decision-making situations every day. Auditing a company is a challenging task and demands continuous decision-making. The decision-making situation depends on the auditor's, the auditee's characteristics. One of the controversial decision-making situations is auditors' going concern assessment. This research focuses more closely on the qualitative information in this decision-making.

An auditor normally considers the client as a going concern for the foreseeable future (not more than 12 months), unless he does finds events or conditions that would require adjusting this assumption. IFAC's (2004) ISA-standard 570 includes examples of events and conditions that may cast significant doubt on the going concern assumption. In this case the auditor is required to perform additional audit procedures and assess management plans for future action which may mitigate the threat. After gathering all relevant audit evidence the auditor decides on the form of the audit report. If the auditor decides that no material uncertainty exists he does not qualify the audit report in this respect. Otherwise the auditor gives a qualified, adverse opinion or report with emphasis on the matter in a paragraph that highlights the factor causing material uncertainty.

The auditor's choice of opinion regarding whether the company is a going concern is important in many ways. Nogler (1995) showed that after receiving a going concern opinion only one company out of three remained in its present form at the end of the research period. The rest of the companies suffered bankruptcy, dissolution, liquidation or merger. Prior studies (e.g. Altman 1982; Chen and Church

1992) have also indicated that about half of the failed companies had received going concern reports in the period prior to bankruptcy. Moreover, negative going concern assessments can cause loss of reputation and increased litigation risk to the auditor himself (see e.g. Nogler 1995; DeFond, Raghunandan and Subramanyam 2002). There is also contradictory evidence indicating that a going concern opinion may be self-fulfilling prophecy, i.e. the opinion contributes to the crisis of an otherwise viable client (see e.g. Mutchler 1986; Citron and Taffler 2001; Tucker, Matsumura and Subramanyam, 2003).

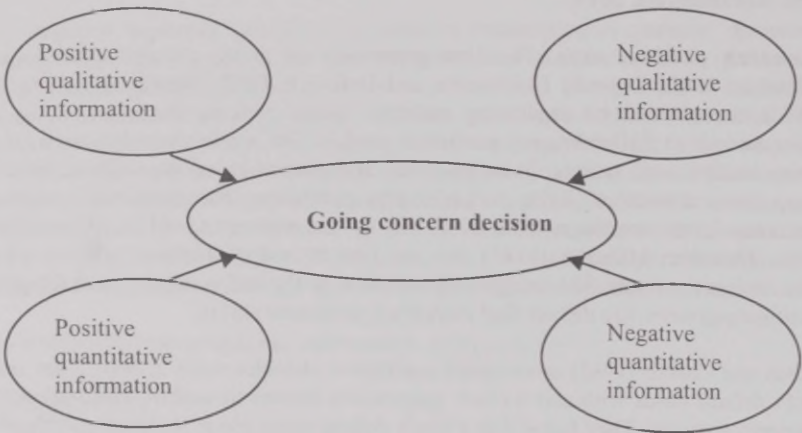
**Research problem area.** The first generation of going concern studies (e.g. Mutchler 1985; Dopuch, Holthausen and Leftwich 1987; Menon and Schwartz 1987) concentrated on explaining auditors' going concern decision-making by comparing it to the bankruptcy prediction models. The models which were used in these studies used mainly financial ratios and market-based data. These models outperformed auditors' ability in bankruptcy prediction. The combined prediction accuracy for the models was 82–90 % and for the auditors 15–84 % (Asare 1990: 50). However, Mutchler (1985) was the first to test qualitative variables using discriminant analysis. She categorized variables to the bad (contrary) and the good (mitigating) news, but did not find increasing predictive ability.

Chen and Church (1992) investigated qualitative variables more closely. They used debt default status with and without quantitative factors to explain auditors' going concern opinions. They found that a firm's default status alone is almost as effective a predictor of auditors' going concern opinion as the models including only quantitative factors. Later, Goodman and Braunstein (1995) and Behn, Kaplan and Krumwiede (2001) integrated variables concerning management capability and plans to the models and found these factors to be statistically significant predictors of going concern opinions.

However, despite the earlier research investigating the importance of qualitative factors, the area contains many open research questions. So far, there is no coherent theoretical framework for the qualitative factors in auditors' going concern assessments. In the earlier literature qualitative factors are primarily categorized to contrary and mitigating information, but not by other characteristics. Also, almost all the current studies are limited because the factors are derived from public sources e.g. databases and conversations which may not entirely capture all relevant factors and may therefore give biased results (see Kleinman and Anandarajan 1999). Moreover, the interactions between qualitative and quantitative factors have not been completely empirically tested in these settings.

**Purpose of the study.** The purpose of this study is to investigate the role of qualitative information in auditors' decision making. A good example of typical decision making situation is auditors' going concern assessment. The earlier literature indicates that there is still a lack of evidence on how auditors combine qualitative information with the traditional quantitative information. Thus, this research aims at finding new information of auditor's decision making variables.

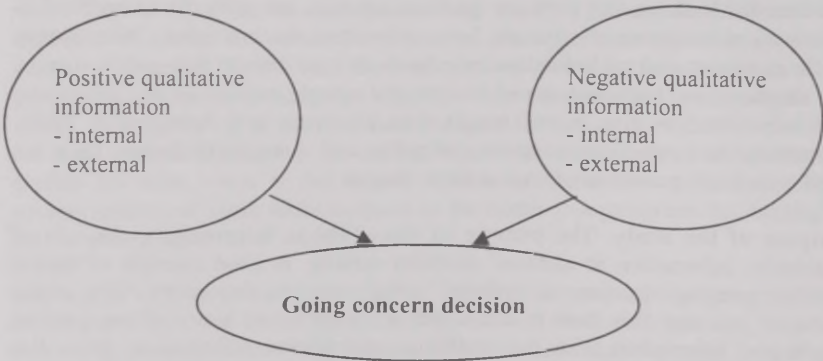
The primary objective is to empirically test the role of qualitative information in auditors' decision-making situations. When making a going concern decision the auditor has two options. Based on the information available he may or may not state that the firm suffers from going concern problems.. The information behind this decision may be quantitative or qualitative. This is illustrated in the following Figure 1. In earlier studies the quantitative information has played a major role in this decision making process.



**Figure 1.** Sources of information in going concern decision making.

This study aims at a closer examination of the role of qualitative information in the auditor's decision making process. It also tries to explain how the auditor uses and weights the qualitative information available. It moreover examines the interactions between qualitative and quantitative information.

Qualitative information can be divided into the following categories as illustrated in Figure 2.



**Figure 2.** Categories of qualitative information.



Possible examples of the information described in Figure 2 are:

- 1) Internal, mitigating information (e.g. good relationship to key supplier)
- 2) Internal, contradictory information (e.g. poor management)
- 3) External, mitigating information (e.g. good general economic conditions)
- 4) External, contradictory information (e.g. new products from competitors)

**This study attempts to answer the following research questions:**

What kind of role has qualitative information in the auditor's decision-making?

Is one type of qualitative information more important than another?

Does the importance of qualitative information vary depending on other factors (e.g. the seriousness and type of financial distress) and information affecting the decision-making situation?

What is the relative importance of qualitative information compared to that of quantitative information?

**Contribution of the study.** Audit firms have recently recognized the increased need to include non-financial information in the audit process (Cohen, Krishnamoorthy and Wright 2000). Also several authors (e.g. Graham 1993; Asare and Davidson 1995) have argued that qualitative information research in auditing decision-making has been insufficient over the years. This research contributes to this gap in several ways.

While earlier research in going concern decision-making (e.g. Mutchler 1985; Kleinman et al. 1999) has mainly concentrated on qualitative information available from public sources, this study extends the existing research by adding other qualitative information for empirical testing. To date, there is no theoretical framework for qualitative information in auditors' going concern assessments. The framework for this purpose will be created using earlier audit research and appropriate insolvency and bankruptcy research.

Secondly, this research contributes to the existing literature by examining interactions between quantitative and qualitative information. Rosman, Seol and Biggs (1999) studied in experimental settings if auditors' use of qualitative information varied between start-up and mature companies when financial health changed (bankrupt and non-bankrupt). This research investigates more specifically how the seriousness and the type of financial distress affects the use of qualitative information in the auditor's going concern task.

The results of this research will provide additional evidence on how auditors weight qualitative information in going concern assessment. This information is important for a firm's management and internal auditors. This knowledge helps them to affect the qualitative information considered important by the auditor and possibly avoid

the going concern opinion. In addition, the results of this study may be useful in practice when discussing the recommendations and standards concerning auditor's going concern decision.

## 2. Data and methodology

Experienced auditors will be represented by 3-5 case studies. Experienced auditors will be selected because they are used to making such judgments in practice and their information usage differs from that of less experienced auditors (see Goodman et al. 1995 and Lundberg and Nagle 2004).

The case studies will include brief background information, e.g. branch and history and a large amount of quantitative and qualitative information. Quantitative and background information will be constructed from the real financial statement data, possibly from firms receiving going concern qualification from the auditor. Selected firms will then be divided into 3 to 5 groups. The grouping is based on the type and seriousness of the financial distress. One firm in every group will then be chosen for the base of each case. The type and the amount of qualitative information will be determined in the theoretical part of this research. The same set of qualitative information will be applied to every case. Control variables will be derived carefully from the earlier literature.

Respondents will be asked to read one case at a time and then decide the form of audit report (unqualified or going concern qualified). Then respondents will be asked to complete a questionnaire including questions concerning the information they used in their decision-making. Respondents will also be asked to weight the relative importance of the information they used in their judgment process. The analysis of case data will be performed with statistical methods.

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# **ФАКТИЧЕСКИЕ РЕАЛИИ ПЕРЕОЦЕНКИ ОСНОВНОГО ИМУЩЕСТВА НА ПРЕДПРИЯТИЯХ ЭСТОНИИ**

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## **Введение**

Реформирование эстонского финансового учета в соответствии с требованиями международных стандартов финансовой отчетности идет полным ходом. Обобщение опыта, накопленного за последние пятнадцать лет, позволило определить как успехи, так и недостатки в его методологии.

Долгое время преобладающей оценкой объектов имущества являлась стоимость приобретения, преимуществом которой считается возможность ее подтверждения первичными документами. В то же время эта стоимость отражает прошлое, и чем больше времени прошло от момента приобретения, тем дальше эта оценка от реальности. Поскольку оценка объектов имущества является наиболее важным фактором, обеспечивающим достоверность финансовой отчетности для ее пользователей, необходимо исходить из реальных оценок имущества.

Одним из важных этапов преобразований можно считать постепенный переход на оценку различных объектов имущества по справедливой (реальной) стоимости. При этом необходимо учитывать, что справедливая стоимость – это условный термин, определяющий достоверно рыночную стоимость объектов. В то же время в эстонских нормативных документах по финансовому учету по одним видам объектов имущества допускаются альтернативные методы, а по другим выбор ограничивается определенными условиями. Наличие альтернативных методов оценки ставит перед финансовыми работниками предприятий существенную задачу выбора оптимального метода, позволяющего реализовать конкретные цели оценки. Далее в статье рассматриваются вопросы оценки материального основного имущества.

## **Актуальность вопросов оценки материального основного имущества**

Действующий порядок оценки основного имущества регламентируется с 1 января 2003 года инструкцией Службы бухгалтерского учета Эстонии номер 5 «Материальное и нематериальное основное имущество», которая опирается на международные стандарты IAS 16 «Материальное основное имущество», IAS 38 «Нематериальное основное имущество» и IAS 36 «Обесценение имущества». При этом новым моментом в финансовом учете является выделение из материального основного имущества объектов недвижимости, стоимость которых теперь отражается в балансе на отдельной статье. Актуальность и важность выделения недвижимости в отдельный участок учета связаны с быстрым развитием рынка недвижимости в Эстонии и



прибыльностью деятельности этой отрасли. Многие предприятия заинтересованы в том, чтобы иметь недвижимость и производить с этим видом имущества различные хозяйственные сделки. Этим и обусловляется введение отдельной инструкции номер 6 «Инвестиции в недвижимость».<sup>1</sup>

Увеличение объемов и происходящие изменения в составе и структуре материального основного имущества повышают его роль в развитии деятельности предприятий. В связи с этим возрастает необходимость обеспечения как внутренних, так и внешних пользователей достоверной информацией об имущественном состоянии предприятия. Поскольку определенная часть материального основного имущества имеет длительный срок использования и оно приобретено достаточно давно, его стоимость, с одной стороны, поддается резким колебаниям по различным причинам, как то: изменения рыночных цен, физический и моральный износ, реструктуризация производства и т. д. С другой стороны, свое влияние оказывает и амортизация стоимости приобретения объектов материального основного имущества, целью которой является отражение их использования, а не изменений в рыночной стоимости. Соответственно, в таком случае балансовая стоимость (стоимость приобретения минус износ) показывается в завышенных или заниженных величинах, искажая этим имущественное состояние предприятия.

В то же время отдельные виды материального основного имущества (например, земля, здания, сооружения) эстонских предприятий в основном приобретены в прошлом столетии и при этом имеют по различным обстоятельствам заниженную балансовую стоимость. Это характерно для публичного сектора: государственных и муниципальных учреждений.

Если реальная стоимость объекта материального основного имущества значительно отличается от его балансовой стоимости, то с точки зрения адекватности информации, такую стоимость необходимо пересмотреть. Для того чтобы «приблизить» балансовую стоимость такого объекта к справедливой, предприятиям предоставляется право ее переоценки, т. е. дооценки или уценки. Что касается эстонской учетной практики, то по старому Закону о бухгалтерском учете дооценка в ходе использования материального основного имущества была запрещена, поскольку она противоречила действующему принципу стоимости приобретения. Она разрешалась только в особых случаях по разрешению министра финансов. В настоящее время по инструкции номер 5 предприятию косвенно предоставлено право проведения дооценки.

С переоценкой объектов материального основного имущества возникают следующие, требующие ответа, вопросы:

- по каким объектам проводить переоценку,

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<sup>1</sup> В данной статье проблемы, связанные с оценкой недвижимости, не излагаются.

- какие процедуры применять для того, чтобы с максимальной осмотрительностью оценить подлежащие переоценке объекты,
- как отразить результаты переоценки в учете.

От правильного решения вышеназванных взаимосвязанных вопросов в существенной мере зависит объективность информации об имущественном состоянии предприятия.

### **Новые аспекты в оценке материального основного имущества**

Переоценка как инструмент корректировки, с одной стороны, является положительной и позволяет определить справедливую стоимость объектов материального основного имущества. С другой же стороны, предприятию предоставляется слишком большая свобода в оценочных действиях, что может привести к злоупотреблениям, поскольку правильность определения этой стоимости является весьма дискуссионной. Отрицательные моменты, настораживающие руководителей, выражаются в следующем:

- несмотря на то, что переоценка должна проводиться по справедливой стоимости, в условиях Эстонии ее весьма сложно определить, поскольку по многим объектам материального основного имущества отсутствует как активный рынок, так и квалифицированные эксперты-специалисты, имеющие соответствующие знания и навыки по проведению оценки;
- процесс переоценки является слишком дорогостоящим;
- результаты дооценки, в первую очередь, отражаются на свободном капитале, а в дальнейшем происходит увеличение амортизации, оказывающее отрицательное влияние на прибыль.

В эстонской учетной практике вопросы переоценки решаются следующим образом. В соответствии инструкции номер 5, предприятие может заменить балансовую стоимость переоцененной стоимостью, если справедливая стоимость объекта существенно отличается от его балансовой стоимости. Если балансовая стоимость занижена, из толкований инструктивных положений вытекает, что дооценку можно производить только в тех случаях, когда это обусловлено одним из нижеследующих обстоятельств:

- объект приобретен не позднее 1995 года или
- отсутствуют достоверные данные о фактической стоимости приобретения объекта.

Следовательно, такая однократная дооценка балансовой стоимости объектов материального основного имущества связана с корректировкой предыдущих ошибок в бухгалтерском учете и с учетом гиперинфляции, имевшей место в начале 90-х годов. В ходе переоценки объектов материального основного имущества, по которым разрешается дооценка, предыдущая стоимость заменяется справедливой стоимостью на день переоценки, при этом накопленный износ элиминируется. В таком случае на день переоценки справедливая стоимость считается новой стоимостью приобретения и

амортизация этой стоимости начинается с нуля. В то же время пересматривается полезный срок использования объекта и, соответственно, корректируется норма амортизации.

В инструкции номер 5 четко указывается, что наилучшим индикатором справедливой стоимости является рыночная стоимость, т. е. сумма, за которую объект можно продать или которую нужно заплатить в ходе сделки, имеющей место на активном рынке. При определении рыночной стоимости могут быть использованы как данные о ценах на аналогичные объекты, полученные от предприятий-производителей или торговых предприятий, так и экспертные заключения специалистов. Очевидно, что производителями или торговыми предприятиями предоставляется информация об уровне рыночных цен на обновленные объекты, которые могут в определенной степени отличаться от переоцениваемых. Поэтому в большинстве случаев при определении справедливой стоимости объекта приходится опираться только на один источник, т. е. на экспертные заключения специалистов извне.

Новшество заключается и в порядке отражения результатов переоценки в отчетности. Если вследствие переоценки балансовая стоимость объектов материального основного имущества увеличивается, то разницу между новой и старой стоимостью отражают на балансовой статье «Нераспределенная прибыль/убыток прошлых периодов». При этом изменение нераспределенной прибыли прошлых периодов вследствие дооценки отражается отдельной статьей в отчете об изменениях собственного капитала. В тех случаях, когда происходит уценка, разница между новой и старой стоимостью отражается как убыток от уценки основного имущества в отчете о прибыли.

Законодательством уценка объектов материального основного имущества не запрещалась, однако она имела весьма субъективный характер и опиралась, в основном, на гносеологическую основу. Пределом при уценке была рыночная стоимость, которую легко определить на объекты, имеющие спрос на рынке. Проблемы возникают тогда, когда не возможно определить рыночную стоимость или когда она не соответствует справедливой стоимости объекта. В то же время многие предприятия используют объекты материального основного имущества, не имеющие спроса на рынке, но имеющие существенное значение для самого предприятия, порождая денежные потоки и участвуя в создании его доходов. Возникший вакуум не способствовал всестороннему применению уценки для определения реальной стоимости объектов материального основного имущества. Эта проблема нашла решение в IAS 36 «Обесценение имущества», действующем для финансовой отчетности за периоды, начинающиеся с или после 1 июля 1999 года и устанавливающим:

- порядок действий, предпринимаемых предприятием во избежание завышения стоимости своего имущества, т. е. во избежание превышения его балансовой стоимостью суммы, возмещаемой от использования или продажи;



- требования относительно того, когда предприятие должно учитывать идентифицированный убыток от обесценения, а также восстановление такового;
- требования к раскрытию информации по объектам имущества, стоимость которых снизилась.

Таким образом, уценка была возрождена на новой основе: появились дополнительные виды стоимости, т. е. «покрываемая стоимость» и «стоимость использования». Положения вышеназванного стандарта нашли свое отражение и в инструкции номер 5.

В настоящее время объекты материального основного имущества уцениваются до их покрываемой стоимости в случае, если покрываемая стоимость объекта меньше его балансовой стоимости. При определении покрываемой стоимости исходят из обстоятельства, что она равна наибольшему из двух следующих показателей:

- рыночной стоимости – сумме, за которую объект можно продать в сделке между компетентными, заинтересованными и независимыми сторонами, за минусом расходов, связанных с его продажей или
- стоимости использования – текущей стоимости денежных потоков, генерируемых от использования и последующей продажи объекта.

Такое расширение подхода к определению покрываемой стоимости весьма оправдано, поскольку позволяет более точно определить справедливую стоимость объекта. Если покрываемая стоимость определяется только на основе одного показателя, то может возникнуть ситуация, при которой денежные потоки от использования или продажи выше уцененной стоимости объекта. Это указывает на неправильное отражение балансовой стоимости объектов материального основного имущества.

Из буквального толкования правил инструкции номер 5 можно сделать следующие выводы:

- руководству предприятия необходимо на каждую балансовую дату критически оценить состояние материального основного имущества и выявить признаки, указывающие на снижение стоимости определенных объектов материального основного имущества;
- если возникает опасение в отношении снижения стоимости какого-либо объекта ниже его балансовой стоимости, то необходимо провести тестирование стоимости, определяя при этом соответствующие виды стоимости и оценивая необходимость уценки этого объекта.

На необходимость уценки могут указывать следующие как внешние, так и внутренние признаки:

- в течение периода рыночная стоимость объекта уменьшилась существенно больше, чем можно было бы ожидать в результате нормального использования,



- ухудшение общей экономической среды и ситуации на рынке, вследствие которых происходит вероятное уменьшение генерируемых доходов от этих объектов,
- доказательства, указывающие на устаревание или физическое повреждение объекта,
- прекращение или реструктуризация деятельности предприятия, с которой связан соответствующий объект,
- балансовая стоимость нетто-имущества предприятия больше, чем его рыночная капитализация.

Приведенный перечень не является окончательным, поскольку руководство предприятия может выявить и другие существенные и специфические признаки, указывающие на объекты материального основного имущества с возможным обесценением.

Определение стоимости использования предполагает прохождение двух этапов:

- в первую очередь, рассчитываются и оцениваются будущие притоки и оттоки денежных средств, связанных с использованием объекта и его окончательной ликвидацией,
- далее осуществляется дисконтирование будущих потоков денежных средств с применением соответствующей ставки дисконтирования.

Для оценки объекта по стоимости использования составляется реалистическая проекция денежных потоков за определенный период (обычно не более 5 лет). Прогнозы потока денежных средств должны быть подкреплены доказательствами. При этом большое значение придается внешним свидетельствам. Прогнозы строятся на субъективных оценках, которые дает руководство предприятия экономическим условиям, которые будут существовать на протяжении оставшегося срока полезного использования переоцениваемого объекта. За основу проекции денежных потоков принимаются, по возможности, самые последние финансовые сметы-прогнозы. В расчет стоимости использования принимаются все денежные потоки как от использования, так и от конечной продажи объекта, включая необходимые денежные потоки по его обслуживанию и ремонту. Дополнительные инвестиции по модернизации объекта не учитываются. На практике зачастую достаточно сложно идентифицировать потоки и оттоки денежных средств, связанные с конкретным объектом. В этих случаях выходом является выделение предприятием минимальной по объему группы объектов, включающей рассматриваемый объект. Признаком обособления группы выступает способность генерировать денежные средства независимо от других объектов.

Целью дисконтирования является выражение будущих денежных потоков по современной стоимости. Ставка дисконтирования опирается на оценки, которые по возможности, должны быть правдивыми, учитывающими

сущность объектов материального основного имущества и риски, специфически присущие этому объекту. Для определения ставки дисконтирования можно использовать следующие общепринятые ставки: средневзвешенная стоимость капитала предприятия, предполагаемая ставка кредитования предприятия и пр. Согласно инструкции номер 5, для вычисления современной стоимости денежных потоков в качестве ставки дисконтирования предлагается использование такой процентной ставки, которую предпочли бы инвесторы при инвестировании в подобный проект.

## Заключение

Обновленные правила проведения переоценки, особенно в части уценки, объектов материального основного имущества способствуют повышению качества и достоверности учетной информации по отражению реального имущественного состояния предприятия. Несмотря на то, что признаки для переоценки объектов материального основного имущества очевидны, руководители не торопятся с ее проведением, поскольку освоение и применение бухгалтерами новых способов оценки по справедливой стоимости только начинается, а это не может произойти в одночасье. Очевидно, что процедуры, необходимые для определения реальной стоимости объекта и убытка от обесценения, являются достаточно сложными. Кроме того, определение стоимости использования предполагает наличие большого объема оценочной информации.

В связи с переходом на оценку по справедливой стоимости можно выделить три существенных круга проблем:

- в многих случаях рыночная стоимость неопределяема или она не отражает реальную стоимость объектов материального основного имущества,
- проведение переоценки требует экспертов, однако это тормозится недостаточностью профессиональных специалистов,
- при расчете стоимости использования предполагается дисконтирование денежных потоков, однако конкретных предложений для определения ставки дисконтирования инструкция не содержит.

Неопределенность в расчете справедливой стоимости, с одной стороны, не способствует формированию единого подхода, а с другой, предоставляет предприятию определенную свободу в оценках. Следовательно, вопросы применения справедливой стоимости в оценке объектов материального основного имущества требуют дальнейшей проработки для устранения вышеописанных проблем. Возможности, заложенные в действующей инструкции номер 5, позволяют предприятиям достовернее отражать в балансе стоимость своего материального основного имущества, повышая этим достоверность отчетности.

## Summary

### PROBLEMS OF REVALUATION OF TANGIBLE ASSETS IN ESTONIAN COMPANIES

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The new Estonian Accounting Law and the accompanying Accounting Standards that entered into force in January 2003 changed the accounting principles of tangible assets considerably:

- first of all, investment properties should be separated from the property, plant and equipment;
- attention should be paid to the value of the tangible assets in the balance sheet.

The most important change is the stepwise fading of the cost method that is replaced by the fair value method i.e the value by which the assets is exchangeable in a transaction of informed, interested and independent parties.

Whereas tangible assets are used for a long time and obtained decades ago, their value has tendency to change. In order to present the used tangible asset in the balance sheet at the fair value, revaluation is necessary. Therefore tangible assets are accounted in the balance sheet in their fair value, from which the accumulated depreciation and the write-downs from the impairment of the asset are deducted. The goal of the revaluation is to account for the tangible assets used in the production and administrative purposes in the value, which is the closest possible to their true value.

Estonian companies face problems due to the fair value requirement if the market price of the tangible asset is not determinable. Especially many production enterprises are affected because there is no demand for their assets in the market.

## THE ANALYSIS OF THE SARBANES-OXLEY ACT

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The article focuses on the Sarbanes-Oxley Act (SOX) which is a US law introduced in 2002 in response to many accounting and auditing scandals including Enron, Arthur Andersen and WorldCom. The law applies to US public companies and certain subsidiaries of US public companies outside the US, and also to their auditors.

The aim of the article is to explain the nature and influence of SOX, and discover the reasons for establishing SOX.

US public companies make a great part of the international economy therefore it can be said that SOX affects the entire international economy. On the other hand, the US government has established the law also to subsidiaries outside the US which has raised many questions and discussions.

The most important provisions of Sarbanes-Oxley include:

- accelerated reporting of trades by insiders
- public reporting of Chief Executive Officer (CEO) and Chief Financial Officer (CFO) compensation and profits
- auditor independence and a prohibition on audit firms offering value-added services
- companies are required to have an internal audit function, which must be certified by external auditors
- certification of financial reports by CEOs and CFOs.

SOX established a Public Company Accounting Oversight Board (PCAOB) under the Security and Exchange Commission (SEC) to oversee public accounting firms and issue accounting standards. This means that if a public accounting company wishes to audit a public company, it will have to register with PCAOB and pay the fee for registering and being a member. After registering, the accounting companies with more than 100 clients are subject to annual revisions and smaller accounting companies are subject to revisions once in 3 years. The fees are also set according to the size of an accounting firm. The other duties of PCAOB are:

- establish, or adopt, by rule, auditing, quality control, ethics, independence, and other standards relating to the preparation of audit reports for issuers;
- conduct inspections of accounting firms;
- conduct investigations and disciplinary proceedings, and impose appropriate sanctions;
- perform such other duties or functions as necessary or appropriate;
- enforce compliance with SOX, the rules of PCAOB, professional standards, and the securities laws relating to the preparation and issuance of audit reports and the obligations and liabilities of accountants with respect thereto;



- set the budget and manage the operations of the Board and the staff of the Board.

One of the most controversial standard is set by section 404 which requires an internal audit function in a public company and a management report that confirms the existence of internal control and the assessment by management regarding the effectiveness of internal control. The main problem with section 404 is that the compliance is very costly – average compliance cost is between 3 and 8 million US dollars. The cost falls disproportionately hard on small companies (those with less than \$2 billion in sales) because there is less revenue across which to spread the costs.

There are not many requirements concerning internal control in Estonia. The author believes that many frauds could be prevented if Estonian laws were supplemented with stricter requirements.

According to section 201, a public accounting firm is not permitted to provide any non-audit service to an public company contemporaneously with the audit, including:

- bookkeeping or other services related to the accounting records or financial statements of the audit client;
- financial information systems design and implementation;
- appraisal or valuation services, fairness opinions, or contribution-in-kind reports;
- actuarial services;
- internal audit outsourcing services;
- management functions or human resources;
- broker or dealer, investment adviser, or investment banking services;
- legal services and expert services unrelated to the audit;
- any other service that the Board determines, by regulation, is impermissible.

There are some similar requirements in Estonia but as these are quite general and not specific enough then these are often not followed.

If a European public accounting company audits a subsidiary of a US public company and the subsidiary's audit hours or fee, or assets or revenue is more than 20% of the consolidated figure and European audit is necessary for the principal accountant (in USA) to issue an audit report on the issuer, the European public accounting company is required to register with PCAOB and these subsidiaries need to comply with SOX. If the European company is not confident whether it should register then it should contact the principal accountant of the group for clarification. This requirement has become difficult to follow as some Europeans laws restrict to disclose as much information as SOX requires. The problems also arise as some people view the requirements of SOX as a US attempt to interfere in European economy.

There are no companies large enough in Estonia that would have to comply with SOX.

The reason for establishing SOX was in many large accounting frauds that occurred in the USA. One of the ways to reduce the possibility for frauds is to set up a whistleblower program. That is a program which sets rules for receiving and processing complaints regarding accounting and auditing matters and encourages employees to come forward when they have become aware of frauds in the company. The whistleblower program helps to collect worries of employees, improve the communication in the company and collect information before the crisis emerges, and to enhance the internal control system in the company.

Four steps of an effective whistleblower program are:

- assessment
- establishment
- disclosure
- monitoring

According to the survey carried out in the USA, one third of employees have witnessed unethical behavior. More than half of them did not report it. 71% of the respondents thought that people who report the corruption will sooner or later have to suffer from it. Employees usually do not know what to do with the information concerning fraud in the company.

The author finds it quite obvious that internal controls can be more effective if there were certain rules and standards regarding the reporting the fraud and that the SOX can improve that. Whistleblower programs could be also established in Estonia but it might prove difficult due to very small companies compared to the USA as many companies consist of only few employees. In this case there could be a mailbox to collect anonymous complaints but there has to be a trustworthy person processing these complaints.

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## Summary

### THE ANALYSIS OF THE SARBANES-OXLEY ACT

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Sarbanes-Oxley Act was introduced in the USA in 2002 in response to large accounting and auditing frauds including Enron, WorldCom and Arthur Andersen. The main aim of the law is to restore the public confidence in accounting and reporting practices.

Sarbanes-Oxley Act with its extensive standards applies to the US public companies as well as their relatively large subsidiaries outside the US, and their auditors. This includes Europe and also Estonia which means that Europe needs to acknowledge the requirements of SOX.

# VARIABLES THREATENING AND ENHANCING AUDITOR INDEPENDENCE: Research Proposal

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## Abstract

The purpose of this study is to examine variables affecting perceived auditor independence and the factor structure of an auditor independence framework. The objective of the research is twofold. Firstly, a framework is developed to measure variables affecting perceptions of auditor independence. The preliminary scale of 55 variables, which are hypothesized to either threaten or enhance perceived auditor independence, was formulated based on earlier literature. The framework suggests that 55 variables form 14 first-order factors and four second-order factors. Secondly, the framework is assessed empirically. The empirical data will be collected with a questionnaire developed to measure perceptions of auditor independence. Three groups of professional financial statement users are included in the study, namely creditors, shareholders and tax authorities. The empirical part of the study includes an analysis of individual variables as well as the examination of the reliability of the framework. The individual analysis of the variables aims at determining whether they affect perceptions of auditor independence. In addition, confirmatory factor analysis is used to assess the reliability and validity of the factors and variables in the framework.

**Keywords:** *auditor independence, perceptions, confirmatory factor analysis*

## Introduction

This research investigates perceptions of auditor independence. Auditor independence is one of the most important issues in audit practice today. Auditor independence is considered to be an essential feature of efficient capital markets and a cornerstone of the accounting profession. The reliability and credibility of the financial information is dependent, among other things, on auditor independence. Independence increases the effectiveness of the audit by providing assurance that the auditor will plan and execute the audit objectively (ISB 2000; Myring & Bloom 2003: 31).

Audit research has proposed varying definitions of auditor's independence over the years. The following definition of auditor independence encompasses key aspects which appear in the audit research: acting with integrity and objectivity, being able

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to withstand pressure from management and to follow professional standards (Beattie, Brandt & Fearnley 1999).

Several individuals and groups have an interest in audited financial statements. External financial statement users including current and potential investors, creditors, and others need reliable financial statements on which to base their resource allocation decisions. Auditees including management, audit committees, and boards of directors have an interest in quality audits, for example, to help to lower auditees' cost of capital. In addition, regulators and standard setters can increase the effectiveness of capital markets by promulgating rules and regulations that help ensure that audits improve financial statement reliability (ISB 2000).

However, there have been concerns about auditor independence in the present audit environment where severe audit failures have emerged. It has been found that perceived auditor independence and the perceived reliability of audited financial information have declined. In contrast, the perceived relevance of audited financial information has increased (Hodge 2003).

It is evident that there is a need for additional research on auditor independence. This research presents a framework of the perceived auditor independence. The framework includes variables which are hypothesized to either threaten or enhance perceptions of auditor independence. The variables are suggested to form 14 first-order factors and four second-order factors. The reliability of the framework is also assessed empirically. The empirical data will be collected with a questionnaire directed to external financial statement users.

The framework serves the needs of several interest groups of auditing and auditor independence. The framework helps researchers to organize their examination of independence related issues and can be useful in guiding future research. The academic contributions of the research are discussed in a later section of this paper. Practitioners can use the framework in developing policies to protect auditor independence and audit quality. The knowledge of variables influencing the perceptions of independence will help regulators and standard setters to decide what kind of rules are needed to enhance appearance of independence. Financial statement users and other interest groups in auditing can use the enhanced knowledge of the variables affecting auditor independence in evaluating the quality of financial information they use in their resource allocation decisions.

The rest of this paper is organised as follows. The second section will present the research problem in more detail. This is followed by a discussion of the academic contributions of this research. Finally, the methodology including subjects and the questionnaire are introduced.

## **Research problem**

This research presents a framework which aims to encompass variables affecting perceptions of auditor independence discussed in earlier audit literature. The

framework contributes to the knowledge of auditor independence by including both independence threatening and enhancing variables in a single framework. In addition to the variables that have been empirically found to affect auditor independence in appearance, the framework attempts to identify variables that have not so far been addressed by empirical research.

The framework is based on the earlier audit literature. The review resulted in a scale of 55 variables which are hypothesized to affect perceptions of auditor independence either negatively or positively. These variables are suggested to form 14 first-order factors and four second-order factors. First-order factors synthesize individual variables into more general categories such as financial dependence. Second-order factors represent parties which are present at the audits and thus can influence auditor independence (i.e. audit firm, auditor, auditee and audit environment). Summarization of the framework (i.e. second-order factors, first-order factors, variables and their hypothesized effect on perceived auditor independence: PAI) can be seen in Appendix 1.

The framework is assessed empirically to investigate financial statement users' perceptions of auditor independence related variables. Empirical assessment of the individual variables aims to shed light on the two following research questions. The first research question is whether the hypothesized threat factors have a negative impact on perceptions of auditor independence. The second research question is whether the hypothesized enhancement factors have a positive impact on perceptions of auditor independence. These questions can be answered by using, for example, ANOVA (Analysis of Variance) or t-test. In addition, confirmatory factor analysis is used to test the hypothesized factor structure and to suggest refinements to the framework.

## **Contribution**

This research contributes to the literature on auditor independence in the following ways. Firstly, the research is one of the first attempts to develop a framework for understanding dimension categorization of variables affecting perceptions of auditor independence. So far factor analytic research has been limited to the study by Beattie et al. (1999), which used exploratory factor analysis to reduce 45 auditor independence related variables to a smaller number of uncorrelated underlying dimensions. The four most important dimensions were: recent regulatory enforcement mechanisms, regulatory rights and requirements surrounding auditor chance, importance of NAS (non-audit services), and economic significance of client. This research attempts to refine and develop further the framework of perceived auditor independence by using confirmatory factor analysis. Moreover, the framework extends previous theoretical frameworks of Goldman and Barlev (1974), Nichols and Brice (1976), Shockley (1982) and Johnstone, Sutton and Warfield (2001) by presenting a more comprehensive conception of the variables affecting perceptions of auditor independence.

Second, the empirical assessment of the framework enables an extensive analysis of the effects of individual variables on perceived auditor independence. Traditional empirical research on perceptions of auditor independence has focused almost solely on independence threatening variables. While Shockley (1981), Knapp (1985), McKinley, Pany and Reckers (1985), Lindsay (1989), Gul (1991), Gul and Tsui (1992), Lindsay (1992) Bartlett (1993) and Geiger and Rama (2003) focus on independence threatening variables this research expands the approach by also examining independence enhancing variables that are hypothesized to affect financial statement users' perceptions of auditor independence positively. So far the empirical evidence of enhancement variables is very limited (Gul 1989; Emby & Davidson 1998; Beattie et al. 1999; Hussey & Lan 2001). Moreover, the framework enables testing of new threat and enhancement variables that have not previously been addressed in empirical research.

### Methodology and results

**Subjects.** The empirical data will be collected with a questionnaire directed to a sample of subject groups associated with the use of audited financial statements. The aim is to select professional financial statement users as subjects for this research because participating in the questionnaire requires an understanding of the relevance of independent audit and the ability to make judgments concerning the effects of variables on auditor independence.

Thus, creditors, shareholders and tax authorities are selected to represent sophisticated users of audited financial statements for this research. To ensure that subjects are professional financial statement users, financial analysts represent shareholders and bank managers represent creditors in the sample. Tax authorities' perceptions have not been previously studied in the context of auditor independence.

The data collection will be conducted using an Internet survey because this has important advantages relevant for this research. Firstly, sample size has almost no effect on the cost of an Internet survey. This is important because the sample size required for this research is decidedly large. In addition, data collection is fast using an Internet survey, which is an advantage when the sample is large (Czaja & Blair 2005).

**Questionnaire.** The questionnaire has been developed to measure perceptions of auditor independence. The questionnaire contains two sections. The first section contains questions on socioeconomic factors. The second section investigates the effects of the auditor independence related variables, which are listed in Appendix 1. In this section closed-form questions are used. Respondents are asked to indicate their opinion concerning the extent to which each listed variable has an impact on the independence of auditors. The response scale with neutral mid-point is used so that subjects' perceptions on the direction of variables' impact on independence is not restricted. The response scale will be:

- 1 – seriously threatens independence
- 2 – slightly threatens independence



- 3 – no effect on independence
- 4 – slightly enhances independence
- 5 – strongly enhances independence

For example t-test or ANOVA will be used to analyse the effects of individual variables on perceived independence from the data derived from section two. Furthermore, confirmatory factor analysis will be used to investigate whether the suggested factor structure of the auditor independence framework is confirmed.

An alternative approach to studying dimension categorization of variables affecting perceptions of auditor independence is to do exploratory factor analysis in one sample. The extent to which the solution reached with exploratory factor analysis describes the data in the other sample can be tested using confirmatory factor analysis.

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## Summary

### VARIABLES THREATENING AND ENHANCING AUDITOR INDEPENDENCE: Research Proposal

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This research aims at presenting and testing empirically the framework on perceived auditor independence. The framework is founded on the earlier audit literature and encompasses 55 individual variables which are hypothesized to have either negative or positive effects on perceived independence. These variables are further hypothesized to form 14 first-order factors and four second-order factors. The empirical part of this research includes the analysis of individual variables as well as an attempt to confirm the factor structure of the independence framework. The results of this research are important for several interest groups of auditing such as researchers, practitioners, regulators and financial statement users.

**Appendix 1.** Framework for perceived auditor independence (\* variables not addressed by prior empirical research).

Second-Order Factors	First-Order Factors	Variables	Hypothesized Effects on PAI
Audit firm	Financial dependence	- Audit firm receives significant audit fees from a single auditee	Threatening
		- Audit firm receives significant non-audit service fees from a single auditee	Threatening
		- Audit firm has unpaid audit fees from the auditee	Threatening
	Types of services provided	- Audit firm provides MAS (Management Advisory Services) to the auditee	Threatening
		- Audit firm provides internal audit services to the auditee	Threatening
		- Audit firm provides specialized non-audit services to the auditee	Enhancing
		- Non-audit services are provided by separate division within audit firm to the auditee	Enhancing
	Audit firm characteristics	- Audit firm initiates long term mandates with client	Threatening
		- Audit firm owes primary duty to capital seekers (auditee)	Threatening
		- Audit firm is neutral and not obligated to capital providers or capital seekers	Enhancing
		- Audit firm owes primary duty to capital providers	Enhancing
	Audit firm policies	- A non-Big Four international or national audit firm	Threatening
		- Big Four audit firm	Enhancing
		- Audit firm practices concurring partner reviews*	Enhancing
		- Audit firm practices peer reviews*	Enhancing
Auditee	Auditee's characteristics	- Audit firm practices within-firm consultations*	Enhancing
		- Audit firm practices auditor competence programs*	Enhancing
		- Audit firm practices compensation plans*	Enhancing
	Auditee's management control of audit mandate	- Auditee has high status	Threatening
		- Auditee is large listed company	Threatening
		- Auditee is in strong financial condition	Threatening
		- Existence of audit committee	Enhancing
		- Management control of auditors' appointment	Threatening
		- Management control of auditors' fees	Threatening
		- Management ability to determine audit engagement working conditions	Threatening
		- Management ability to "opinion shop"	Threatening
		- Management ability to terminate audit relationship	Threatening

Second-Order Factors	First-Order Factors	Variables	Hypothesized Effects on PAI
Auditor	Auditor's financial dependence	<ul style="list-style-type: none"> <li>- Auditor has direct investments in the auditee</li> <li>- Auditor's fees are contingent upon specific opinions</li> <li>- Auditor's income depends on the retention of a specific auditee</li> <li>- Auditor assumes potential employment with the auditee*</li> </ul>	Threatening Threatening Threatening Threatening
	Auditor's indirect incentives with the auditee	<ul style="list-style-type: none"> <li>- Auditor's desire not to lose status by losing key auditee</li> <li>- Auditor possesses a personal, family, or professional relationships with the auditee*</li> <li>- Auditor evaluates his/her own work</li> </ul>	Threatening Threatening Threatening
	Auditor's competence and expertise	<ul style="list-style-type: none"> <li>- Auditor is not a CPA</li> <li>- Auditor is a CPA</li> <li>- Auditor does not possess auditee industry specific expertise</li> <li>- Auditor possesses auditee industry-specific expertise</li> </ul>	Threatening Threatening Enhancing Threatening Enhancing
Audit environment	Aggressive competition within audit firms	<ul style="list-style-type: none"> <li>- Competition among audit firms is aggressive</li> <li>- Audit fee discounting and low-balling</li> <li>- Budget pressures imposed by audit firm on staff</li> </ul>	Threatening Threatening Threatening Threatening
	Flexibility of accounting standards	<ul style="list-style-type: none"> <li>- Accounting standards are ambiguous</li> <li>- Accounting standards are unambiguous</li> </ul>	Threatening Enhancing Enhancing
	Rights and prohibitions obligating auditor	<ul style="list-style-type: none"> <li>- Right to communicate with predecessor auditor</li> <li>- Auditor's direct investments in the client are prohibited</li> <li>- Auditor's interpersonal relationships with the client are prohibited*</li> </ul>	Enhancing Enhancing Enhancing Enhancing
	Sanctions for independence violations	<ul style="list-style-type: none"> <li>- Risk of audit firm of loss of registered auditor status</li> <li>- Risk of audit firm of disciplinary action by professional body</li> <li>- Risk of damage to auditors' reputation from public scandals</li> </ul>	Enhancing Enhancing Enhancing
	Requirements obligating auditee	<ul style="list-style-type: none"> <li>- Risk of litigation against audit firm</li> <li>- Requirement to disclose auditor change</li> <li>- Requirement for mandatory auditor rotation</li> <li>- Requirement for auditors to be reappointed annually</li> <li>- Requirement to disclose audit fees</li> <li>- Requirement to disclose non-audit fees</li> </ul>	Enhancing Enhancing Enhancing Enhancing Enhancing Enhancing

## STANDARDIZATION OF ACCOUNTING IN LATVIA - DEVELOPMENT, PROBLEMS AND SOLUTIONS

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The principal normative acts, which regulate accounting and preparation of reporting in the Republic of Latvia after returning of Independence, namely, the laws "On Accounting" (*«Par grāmatvedību»*) and "On the Annual Accounts of Enterprises" (*«Par uzņēmumu gada pārskatiem»*) were adopted in October 14, 1992 and came in force in January 1, 1992. Part 2 of Article 15 of the law "On Accounting" compelled the government to form the Council of Accounting Methodology (*Grāmatvedības metodiskā padome*), but Part 3 determined the main tasks of the Council:

1. to work out the draft laws on the questions of preparation and keeping of reporting, to estimate their suitability to the requirements of accounting;
2. to work out recommendations on the questions of teaching accountants and to issue licenses for activity of the sworn auditors;
3. to appraise the accounting computer programs and to recommend them for working.

The Solution "On Order for Inuring of the Laws "On Accounting" and "On the Annual Accounts of Enterprises" of the Supreme Soviet of the Republic of Latvia was adopted and came in force simultaneously with the mentioned laws in October 14, 1992. Article 1 of Section 3 compelled the Cabinet of Ministers to form Council of Accounting Methodology, and to confirm its regulation in December 1, 1992. The Cabinet of Ministers, the successor of the rights and responsibilities, adopted the Regulation No. 34 "On Council of Accounting Methodology" in December 21, 1992.

The Council consisted of 14 members. This was the biggest authority of this sort with the biggest quantity of the represented organizations (12). These organizations can be conditionally divided into 5 groups: ministries (the Ministry of Finance, the Ministry of Agriculture, the Ministry of Transportation), state institutions (the State Revenue Service), higher institutions (Latvian Agricultural College, Latvian State Institute of National Economy of Supervisors and Specialists, the University of Latvia); research organizations (the Institute of Agricultural Economics) and the representatives of private business (audit company *«Arthur Andersen»* and the Baltic Transit Bank). Article 3 of Regulation stated that the Council was under supervision of the Ministry of Finance, which was occupied with the technical aspect of the activity of the Council. The main functions of the Council (in accordance with the Laws «On Accounting» and «On the Annual Accounts of Enterprises») were listed in Article 8 of the Regulations:

1. to control and to work out the draft laws, projects and other normative acts, regulations, instructions and recommendations, which are necessary for organizing and keeping accounting;



2. to estimate the suitability of the draft laws, draft decisions and instructions of Cabinet of Ministers, regulations and recommendations of the other state agencies to the requirements of accounting and auditing;
3. to estimate the blanks of the accounting documents and to recommend them for working;
4. to work out recommendations for teaching of the accountants and auditors; to determine the requirements of the professional qualifications of these specialists; to take qualification exams of sworn auditors and to issue licenses for their activity; to determine the order of passing exams, issuing and abolition of licenses.

The successor of the Council of Accounting Methodology – the Consultative Council of Accounting Standards (*Grāmatvedības standartu konsultatīvā padome*) was the result of adding of the concept “Latvian Accounting Standards” to the legislation of the Republic of Latvia. The idea of forming of the new Council and development of the standards was first mentioned in the Regulations No. 270 «Changes in the Law «On Accounting»» dated July 23, 1996, which were adopted by the Cabinet of Ministers in the procedure, set in Article 81 of the Constitution of the Republic of Latvia (*Latvijas Republikas Satversme*). The sworn auditors were the initiators of the amendments. They considered the variant of standardization of accounting to be used, because it is the most abundant in the world and strictly delimits the competence of the legislative department and originators of standards. The Parliament adopts the normative acts, which contain only general requirements concerning accounting and preparation of reporting. At the same time the special organization develops and affirms the standards, «thus separating the function of legislation from the procedure of adoption of the standards». This method was based on the assertion that the legislation cannot quickly respond to inter-temporal changes of the national economy that prevents the further development (Daņeviča, 1998, p.3).

Yet, the authors of the amendments disregarded the cognitions of G. Hofstede's and S. J. Gray's theory of cultural values, according to which accountancy to a large extent depends on national history and local practices. While in Anglo-Saxon countries the accountancy establishment prefers professional self-regulation [whereby standards are regulated by an independent institution, which in Latvia would be Latvian Association of Sworn Auditors (*Latvijas zvērinātu revidentu asociācija*, further- *LASA*) or the Accounting Association of the Republic of Latvia (*Latvijas Republikas Grāmatvežu asociācija*, further- *AARL*)], in continental Europe accountancy regulation by legislation is the norm. In Latvia the relevant normative documents would be laws and Cabinet of Ministers regulations, the latter also being used as a tool for adopting any national standards deliberately drafted as such.

Article 15 was amended and some questions were specified in the result of the changes. If the Cabinet of Ministers reserved the right to issue regulations on especial questions of accounting, then the transferring of the following rights by the Cabinet of Ministers to *LASA* was a significant innovation: «(1) to develop and to amend the accounting standards of the Republic of Latvia, in accordance with the

international standards of accounting and regulations of the European Union, which regulate accounting, as well as to issue them; (2) to give official explanations of accounting standards of the Republic of Latvia». The amendments had the edition of Part 2 of Article 15, which obliged the Cabinet of Ministers to form the new organization – the Consultative Council of Accounting Standards, consisting of 11 members, including 3 representatives of the Ministry of Finance and Accounting Association of the Republic of Latvia (*Latvijas Republikas grāmatvežu asociācija*, further- *AARL*) and 5 representatives of *LASA*.

In Parts 3 and 4 of Article 15 the main tasks of the Council were listed, but, namely, these were estimating and giving recommendations to the Minister of Finance and *LASA* concerning:

- developed draft laws or adopted laws in the sphere of accounting;
- draft regulations of the Cabinet Council or ordained regulations in the sphere of accounting;
- developed draft accounting standards developed by *LASA* or ordained accounting standards and their alterations.

In distinction from the Council of Accounting Methodology, the competence of the Consultative Council was significantly limited – estimation and recommendations concerning the mentioned documents. The following conclusion can be done – the aim of the Regulations of the Cabinet of Ministers dated July 23, 1996 was to change completely the existing system of methodological accounting in Latvia. The amendments supposed to divide the tasks and functions of the Council of Methodology into two parts. The consultative functions in a very limited volume had to be transferred to the recreated Consultative Council (this is confirmed also by its name), but, the constitutive functions (development, adoptions, issuance and displacing of the accounting standards) – to *LASA*.

It is difficult enough to give the definite answer to the question – what was the reason, which made the Cabinet of Ministers change the system of Methodological Accounting by establishing the Consultative Council of Accounting Standards and forming the mechanism of standardization of accounting. However, it is clear – the problems, connecting with the development of accounting and reporting after the retrieval of Independence of the Latvian Republic, cannot escape observation. The excessively long period of time between the adoption of the law “On Accounting” in 1992 and the above-mentioned amendments in 1996 clearly suggested lack of activity in developing accountancy on the part of competent government institutions. It cannot be denied that in other aspects this period was also marked by active work – since one of the aim tasks was to devise a new system of taxation, fit for market economy, considerable attention was paid to the accountancy treatment of taxes. Hence, this process took the form of the competent fiscal institutions – the Ministry of Finance and the State Revenue Service – issuing instructions, decisions and interpretative letters to try and fill “gaps” in tax legislation. Occasionally these documents were not published, or contradicted laws or Cabinet regulations on accounting, not to mention the International Accounting Standards. Thus, the whole

process of development was expressly unilateral – all accounting was gradually and by stealth subordinated to the requirements of tax accountancy. Meanwhile, financial accountancy remained without sufficiently detailed regulation, thus trashing the primary aim of financial statements to disclose “true and fair view” of an enterprise’s economic situation. This state of affairs perplexed and disappointed many accountancy researchers and practitioners. For example, head of the *LASA* Methodology Committee (Ūdre, 1998, p.1) stated with regret that “after the adoption of laws “On Accounting” and “On the Annual Accounts of Enterprises” it would have been reasonable to develop Latvian accounting standards. For three years [...] almost nothing has been done in this respect”. The adoption of the accounting standards had to solve this problem.

The appointed date – January 1, 1997 was indicated in the Regulations No. 270 of the Cabinet of Ministers «Alterations in the Law «On Accounting». However, in accordance with Article 81 of the Constitution of the Republic of Latvia, these normative acts had to be submitted not later than three days after the next session of the Parliament (*Saeima*) has been convened. Otherwise they lost force automatically. In November 6, 1996 the Parliament enacted the Law «Alterations in the Law «On Accounting» and adopted 6 amendments without basic alterations from 11 amendments offered by the Cabinet of Ministers. Unfortunately, the editions to Article 15 did not rank among them. The Parliament considered the right of developing, adopting and issuing of the accounting standards of the *LASA* to be infringement of the principle of division of powers, that is why in redraft of the alterations the Parliament authorized the Association to develop draft standards and to give recommendations concerning using of the standards, but the Cabinet of Ministers was authorized to adopt regulations on accounting standards (thus the last obtained the binding status). The Regulation of the membership and activity of the Consultative Council of Latvian Accounting Standards was not altered. *LASA* has an opinion that limitation of the activity in the sphere of standardization of accounting made it more difficult to rise funding from the international aid program, but the state budget provided under funding for development of draft standards.

In February 4, 1997 the Cabinet of Ministers adopted Regulations No. 61 «On Abolition of Regulations No. 34 dated December 21, 1993 «On the Council of Accounting Methodology», one day after, in February 5 formed the new organization of Systematic Supervision of Accounting in Latvia by instruction No. 49 «On the Consultative Council of Latvian Accounting Standards». Article 2 of the instruction authorized the Ministry of Finance to provide technical working of the Council using the budget finance. This form was identical to the second (2) sentence of Article 3 of Regulations of the Cabinet of Ministers «On Council of Accounting Methodology» dated December 21, 1992.

In spring of 1997 the Board of *LASA* decided to commence work on drafts of Latvian accounting standards. In late 1997 the work of the Methodology Committee of *LASA* eventuated in completion of the first two drafts of Latvian accounting standards – No 7 “Cash flow statements” and No 1 “Presentation of accounting policy in financial statements”. Yet, the law “On Accounting” did not specify the



way in which drafts were to be embodied in Cabinet of Ministers regulations. This turned out to be a severe and lasting obstacle to the creation of standards.

In an attempt to accelerate the "legalization" of standards, in September 1998 the Board of *LASA* invited all the institutions concerned (for example, the Department of Coordination and Analysis of Accounting Methods of the Ministry of Finance, Accounting Association of the Republic of Latvia, the Bank of Latvia, the Treasury of the Republic of Latvia) to discuss this problem and try to find an appropriate solution. To effectuate prompt implementation of the standards, a work group was established, consisting of representatives of all the institutions taking part in the meeting. The main task of the work group was to formulate suggestions for the acceleration of adoption of national accounting standards. (Üdre, 1998, p.2)

Regardless of the obstacles and the inability to increase the efficiency of standardization, the process continued and drafts were approved in meetings of the Methodology Committee and the Board meetings of *LASA* as well as in the Advisory Council on Accounting Standards. In 1998 work on 4 more drafts of Latvian accounting standards (*Latvijas grāmatvedības standarts*, further- *LAS*) was completed:

- # *LAS* No 2 "Valuation and presentation of inventories";
- # *LAS* No 8 "Unusual and prior period items and changes in accounting policies";
- # *LAS* No 10 "Contingencies and events occurring after balance sheet date";
- # *LAS* No 23 "Capitalization of borrowing costs".

In 9 months, efforts of the work group to elaborate the procedure of preparing and adopting national accounting standards resulted in success. On 14 May 1999, using a standard statute, the Latvian Technical Committee for Standardization of Financial Accounting (*Latvijas Finanšu grāmatvedības standartizācijas tehniskā komiteja*, further- *LTCsFA*) was established, and on 21 May 1999 it was registered and its statute approved by the state limited liability company "*Latvijas standarts*". Initially the membership-holding organizations of the Committee were the Bank of Latvia, the Latvian Association of Commercial Banks, the Insurance Supervision Inspectorate and the Securities Market Commission (on 1 July 2001 the latter two being merged into the Financial and Capital Market Commission), the Riga Stock Exchange, the Latvian Central Depository, the Institute of Accountancy of the University of Latvia and *LASA*. Later these organizations were joined by the State Revenue Service and the professional services firm "PricewaterhouseCoopers".

The basic task of *LTCsFA* was defined as preparing and adopting Latvian financial accountancy standards (*Latvijas Finanšu grāmatvedības standarts*, further- *LFAS*) in line with the International Accounting Standards, as well as inclusion of amendments of the latter in the *LFAS*. The structure of *LTCsFA* consisted of the Committee itself, several sub-committees and work groups, and activities were managed and coordinated by the chairman and his deputy. It might be noted that *LTCsFA* was established not only as a successor to the Advisory Council on Accounting Standards, since the competence and duties of the new institution were



considerably broader (e.g. developing a unified terminology of financial accounting, provision of resources for preparing and publishing *LFAS*).

On 8 July 1999 the law "On Accounting" was amended once more. An essential novelty was the newly introduced second sentence of Article 15, which provided that "the preparation and adoption of the accounting standards of the Republic of Latvia, and adaptation and registration of the International Accounting Standards shall be regulated by the Standardization Law". Although these amendments and the changes thus brought about should be seen as a considerable progress and perhaps even escape from *cul-de-sac*, where the Latvian standardization process was trapped for a period longer than one should like, publicists did express doubts as to the future perspectives of this solution, i.e. "standards adopted under this law [Standardization Law] are not obligatory, which, of course, gives rise to concerns about their application". (Daņēviča, 2000, p. 11) As evidenced by further developments, these concerns were well founded.

In its first year of operation *LTCSFA* adopted two drafts of financial accounting standards – No. 2 "Inventories" and No. 7 "Cash flow statements". Pursuant to the requirements of the Standardization Law and the statute of *LTCSFA* information about these standards was published in the official publication "The Latvian Herald" (*Latvijas Vēstnesis*) at least 30 days prior to their adoption to afford any interested party time to become acquainted with the contents thereof and within 3 weeks submit to *LTCSFA* written proposals, which were aggregated and considered upon the adoption. The fact of adoption was entered in minutes, signed by all the representatives of the participatory organizations of the Committee; afterwards an announcement was published in "*Latvijas Vēstnesis*". The adopted version of a standard was deposited with the state limited liability company "*Latvijas standarts*" for registration and publication.

As of the end of 2000, *LTCSFA* had adopted the following documents:

- # Objectives and Procedures of Preparing Financial Statements;
- # 1. LVS 264-1: 2000 Presentation of Financial Statements;
- # 2. LVS 264-2: 2000 Inventories;
- # 7. LVS 264-7: 2000 Cash flow statements;
- # 8. LVS 264-8: 2000 Net Profit or Loss for the Period, Fundamental Errors and Changes in Accounting Policies.

Analysis of failure of *LTCSFA* in preparing and implementing standards can reveal several causes, however, the two most notable among them are the lack of government finance and the unavailability of the adopted *LFAS* to the great many of accountants – as provided by the Standardization Law, "*Latvijas standarts*" enjoyed exclusive publishing and distribution rights of the standards. This greatly hindered the spreading of these documents, because they were not available in shops but could only be obtained by placing an order with the above-mentioned enterprise. Another obstacle to the implementation of national accounting standards was identified in the year 2000 Regular Report from the European Commission on Latvia's Progress towards Accession, i.e. "taking into account the shared

responsibility between the Ministry of Finance and the Ministry of the Economy concerning accounting issues close co-operation needs to be ensured. [...] Latvia's administrative capacity needs to be improved particularly concerning enforcement of auditing and accounting standards as well as its supervision". (*quoted in Lasis et al.*, 2002, p.9) Article 5 of the Standardization Law (which regulated the preparation and adoption of accounting standards) stipulates that "the state policy in the sphere of standardization is operated by the Ministry of Economy". The Ministry of Finance, for its part, developed the state policy of accounting methodology. Thus the preparation and adoption of *LFAS* was on the margins of both Ministry's competence and required seamless coordination between the two, and, unfortunately, it never came to exist.

Eventually the inability to surmount the obstacles effectively became stark, and on 15 May 2003 the legislator once more amended the law "On Accounting". Articles 15<sup>1</sup> and 15<sup>2</sup> introduced a new accounting standardization system in Latvia. The Cabinet of Ministers was entrusted with a task to establish a new institution – Accounting Council, which is to operate under a statute adopted by the Cabinet. A more detailed list of the Council's functions can be found in Article 15<sup>2</sup>: (1) organizing and managing the process of preparing, discussing and coordinating drafts of Latvian accounting standards and amendments thereof; (2) publishing and updating Latvian accounting standards; (3) submission of proposals to the Minister of Finance on elaboration of the normative acts regulating accountancy. A comparison of the Accounting Council and its predecessors reveals that the new institution enjoys considerably more competence: not only **passive tasks** (e.g., evaluation of prepared drafts of accountancy regulation and submission of proposals to the Minister of Finance), but also an **active promotion** of the standardization process, and most importantly – **guidance of the process** and its reasonably **specific regulation** in the "Statute of the Accounting Council". The next important novelty is the financing of the Accounting Council from state budget and the duty of the Ministry of Finance to ensure its operation. Thus, the two most acute problems of *LTCSFA* were resolved – non-existence of a mechanism for assigning financial resources and imprecise definition of the competence of the Ministry of Finance.

Certain changes, as compared to the Consultative Council of Accounting Standards of the Republic of Latvia and *LTCSFA*, have taken place in relation to composition of the Accounting Council. The Council consists of 12 members, appointed by the Minister of Finance. With the number of the members remaining almost identical to that in the Consultative Council (11), a positive development is the extension of institutional participation and the more egalitarian representation, which in theory should ensure greater democracy in decision-making. Pursuant to parts III and IV of the "Statute of the Accounting Council" the institution is presided over by a Chairperson, who is appointed by the Minister of Finance from among the representatives of the Ministry. Deputy Chairperson is elected from among the members of the Council by simple majority, and his / her duties are to substitute the chairperson in his / her absence.

The fact that the law does not authorize the new institution to extend its membership clearly indicates that a retreat to the model of 1996 is under way, whereby the state is increasing its role in the standardization process. In other words, influence of the Anglo-Saxon model is dwindling as Latvia once again emphasizes the continental European model of standardization.

The Ministry of Finance supposed that, the first Latvian accounting standards had to be adopted already at the end of the year 2003, but this task turned to be impossible. Only on 5 February 2004 the Accounting Council adopted the decision about approval of standards No.1 "Presentation of Financial Statements" and No.2 "Cash Flow Statement". There were 8 planned standards (including "Income Taxes", "Leases", "Revenues", "Long-term Contracts", "Fixed Assets") for the year 2004 (Malējs, 2004, p.9), but only the standard No.3 "Events after Balance Sheet Date" was adopted. Standard No.4 "Accounting Policies, Changes in Accounting Estimates and Errors" was adopted already next year – on 9 February 2005.

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## Summary

### STANDARDIZATION OF ACCOUNTING IN LATVIA - DEVELOPMENT, PROBLEMS AND SOLUTIONS

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At a time of rapid development of accounting standards on an international scale and in a number of countries, it is appropriate to observe recent trends in Latvian accountancy. The study overviews the problems of implementation of national accounting standards in Latvia, its' general outlines and peculiarities. The article attempts to clarify a mission and purposes, a structure, a competence and achievements of accounting standardization institutions. Taking into account G.Hofstede and S.J.Gray theory of cultural influence the conception of accountancy standardization model propounded by Latvian Association of Sworn Auditors in 1996 is analyzed and criticized as well as its expediency is appreciated.



# IMPACT OF COMPANY'S LEVERAGE AND SIZE ON FINANCIAL ACCOUNTING METHOD CHOICE: LITHUANIAN CASE

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## Introduction

Financial accounting methods have a great impact on financial results and performance, however, accounting methods choice is very restricted by requirements of laws. Therefore it is very useful for the users of accounting information to know which factors determine company's accounting method choice. A big number of foreign authors investigated theoretically and empirically social, ethical and economic determinants of accounting method choice: *R. L. Watts, J. L. Zimmerman, R. L. Hagerman, M. E. Zmijewski, R. Bowen, D.S. Dhaliwal, E. Press, J. Weintrop, D. Skinner, A. A. Christie, G. L. A. Daley, R. L. Vigeland, G.L. Salamon, E.D. Smith, V. Gopalakrishnan, C. W. Tan et al., etc.* Whereas, accounting methods have been investigated by *J. Mackevičius, D. Mačernienė, G. Kalčinskas, G. Deveikis.* However, there are no theoretical and empirical investigations on the influence of economic determinants (e.g., company's size, leverage, etc.) on accounting method choice in Lithuanian companies.

**Research objective:** to analyse impact of company's leverage and size on financial accounting method choice by testing the Leverage and Size hypotheses.

**Research object:** financial accounting method choice.

**Research method:** the research was performed with reference to publications. The main research method – logical analysis of scientific literature including comparison and synthesis. In order to investigate impact of company's leverage and size on accounting method choice questionnaire and statistical analysis of empirical evidence were used.

**Research findings** are offered in the conclusions.

## Assumptions of Company's Leverage and Size Impact on Financial Accounting Method Choice

Determinants of company's rational accounting method choice are the main object of research in Positive Accounting Theory (further – PAT). In fact, the main purpose of the positive approach is to develop hypotheses about factors that influence accounting method choice in different companies and to test the validity of these hypotheses empirically.



PAT is based on these underlying assumptions, which form the hard core of the neoclassical economic theory:

- (i) All decision-makers are motivated only by their narrowly defined self-interest and not by the public interest.
- (ii) The firm is considered to be a nexus of contracts among self-interested parties.

The manager of the company who confirms accounting policy is motivated by selfish interests, therefore according to Agency Theory he chooses the most beneficial to him accounting methods. Determinants influencing this choice are generalised in PAT hypotheses.

One of the three main hypotheses of PAT – Leverage hypothesis, which explains the impact of company's leverage ratio on accounting policy, - argues that **“Ceteris paribus, the higher a firm's debt/equity ratio, the more likely the firm's manager is to choose accounting procedures that shift reported earnings from future periods to the current period”** (Watts and Zimmerman, 1986, 1990).

The reasoning is that increasing reported net income will reduce the probability of technical default. Most debt agreements contain covenants that the borrower must meet during the term of the agreement (L. A. Daley, R. L. Vigeland, 1983), for example, a borrowing firm may covenant to maintain specified levels of debt-to-equity, interest coverage, working capital, and/or shareholders' equity. If such covenants are violated, the debt agreement may impose penalties, such as constraints on dividends or additional borrowing. This suggests that management could manipulate accounting results through selective choice of accounting methods, and thus possessed the ability to relax constrictive debt covenants.

Other of the three main hypotheses of PAT – Political costs (or Size) hypothesis, which explains the impact of company's size on accounting policy, - argues that **“Ceteris paribus, the larger the firm, the more likely the manager is to choose accounting procedures that defer reported earnings from current to future periods”** (Watts and Zimmerman, 1986, 1990).

This hypothesis is based on the political process assumption that larger companies rather than small firms are more politically visible and therefore more likely to be subject to public attention, therefore, large companies incur more political costs (Watts, Zimmerman, 1978). As recognised by Holthausen, Leftwich (1983), a “firm's reported accounting numbers indirectly affect the extent to which the firm is either criticised or supported by consumers, employees, unions, politicians, and bureaucrats”, e.g., political costs can be imposed by company's size or/and high profitability, which may attract media and consumer attention. Such attention can quickly translate into political “heat” on the company and politicians may respond with new taxes or other regulations. Very large corporations may be held to additional requirements: higher performance standards, for example with respect to environmental responsibility, simply because they are felt to be large and powerful. Thus, managers of large companies are more likely to prefer stable income

decreasing accounting methods than managers of small firms, in order to reduce possible negative political situations (*Tan et al., 2002*).

Profitability is also important variable for the users of accounting information (*Wallace, Naser, Mora, 1994*). PAT argues that companies with high profit, i.e., more politically visible, may attract attention of regulators, therefore they seek to choose income decreasing accounting policy (*Hagerman, Zmijewski, 1979; Holthausen, Leftwich, 1983*).

There are a lot of empirical research testing Leverage and Size hypotheses. Considerably fewer scientists after conducting their empirical research received contradictory results or rejected these hypotheses.

In a review of the prior ten years of accounting policy choice studies, *Watts, Zimmerman (1990)* conclude that the development of Size hypothesis is driven by sensitive industries (e.g., the oil and gas industry, etc.) company's accounting method choice. Most researchers (*Watts, Zimmerman, 1978; Zimmerman, 1983, etc.*) provide supporting empirical evidence for oil and gas companies' accounting policy choices. Likewise, the Political costs hypothesis does not seem to apply (*Zmijewski, Hagerman, 1981; V. Gopalakrishnan, 1994, etc.*) to smaller firms.

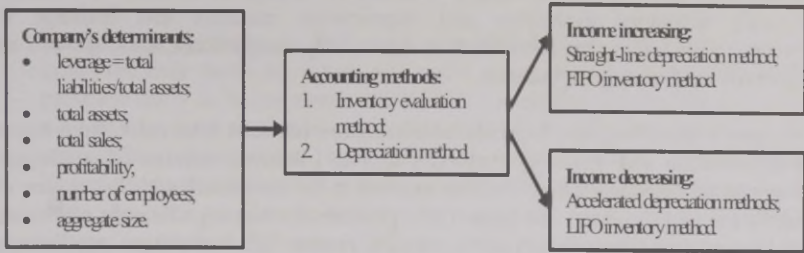
Lithuanian and Russian authors analysing accounting policy and determinants of its choice limit themselves to enumeration of these factors making logical assumptions that they should influence company's choice of accounting method. *Mačernienė D. (2002), Pietrova V.I., Barsukova I.V. (1997), Bakaiev A.S., Šneidman L.Z. (1995), Nikolaieva S.A. (2003), etc.*, indicate company's size as an important determinant to accounting policy choice, but their propositions are not based on empirical results. But nobody indicate company's financial leverage as an important determinant to accounting policy choice.

The results of foreign research and no empirical investigations in Lithuania suggests the theory be developed further to increase its predictive and explanatory power.

### **Empirical Test of the Leverage and Size Hypotheses in Lithuania**

Leverage has been used as a proxy for proximity to and/or cost of violation of debt covenants. The analysis of financial leverage's estimations in empirical research shows that common ratio of liabilities (total liabilities/total assets) frequently is used testing the second hypothesis of PAT. Company's size may be measured in various ways including sales, total assets, profitability, market value of equity (*Hagerman, Zmijewski, 1979; Tan et al., 2002*), number of employees, etc.

Depreciation of fixed assets, valuation of inventory methods choice is investigated most frequently. It is widely accepted that straight-line depreciation and FIFO inventory methods are income increasing, accelerated depreciation and LIFO inventory methods – income decreasing methods. This relationship is shown in *Figure*.



**Figure.** The Impact of Company's Financial Leverage and Size on Accounting Results.

The authors of this article investigate depreciation and inventory methods choice dependence on company's financial leverage, assets in balance sheet, total sales, profitability (profit after taxes divided by total assets), number of employees and aggregate company's size variable, which was identified by determinants from *The Law on Small and Medium Business (2002)* in Lithuania. Company's size is an aggregate variable which was the compound of all these determinants: number of employees, total sales or total assets and autonomy of a company.

It may be logically hypothesized:

*H<sub>1</sub>: the higher the Lithuanian firm's leverage ratio, the more likely the company's manager is to choose straight-line depreciation and FIFO inventory methods;*

*H<sub>2</sub>: that the larger the Lithuanian firm, the lesser the likelihood, that it will choose straight-line depreciation and FIFO inventory methods.*

Having examined the questionnaires about 2002 financial accounting data of 162 profit seeking limited and unlimited responsibility legal entities, the following correlation coefficients between depreciation of fixed assets, inventory methods and determinants of company's financial leverage and size were received (1 table).

**Table 1.** Correlation between Accounting Methods Choice and Determinants of Company's Leverage and Size

Determinant	Depreciation method	Inventory method
Leverage	-0.04	0.14
Log of total assets	-0.11	-0.03
Log of total sales	-0.02	-0.03
Profitability	0.21 *	0.01
Number of employees	-0.07	-0.05
Company's size (aggregate variable - number of employees, total assets or total sales, autonomy)	-0.08	-0.09

\* - level of significance less than 5 %



It appeared that there was a weak correlation (0.14 and -0.04) between income-increasing inventory evaluation and depreciation methods and leverage in Lithuanian companies, but correlation is statistically insignificant, so it showed no support for the Leverage hypothesis.

There was a weak negative logarithmic correlation between total sales, total assets and depreciation and inventory method's choice. Likewise, number of employees and aggregate company's size variable seemed to be associated with the choice of depreciation and inventory methods. Only profitability was significantly correlated with income-decreasing depreciation method choice. All correlation coefficients (except profitability) were not statistically significant, therefore, it showed a weak support for the Size hypothesis.

Even 91 % of sample companies choose straight-line depreciation method. This is consistent with the evidence reported in *Hagerman, Zmijewski (1979)* and *Press, Weintrop (1990)*. The percentage of sample companies choosing FIFO was 78%. It is considerably more (about 30-40 points) than in foreign large corporations, but it is similar to the results of *Gopalakrishnan's (1994)* empirical research of small unlevered firms. Independently from company's financial leverage and size, the most of Lithuanian companies choose income-increasing methods (2 table).

**Table 2.** Accounting Methods in Lithuanian Companies

	Depreciation		Inventory	
	Number	Percent	Number	Percent
Income increasing methods	147	91	125	78
Income decreasing methods	1	0	0	0
Other methods or/and combinations	9	6	36	22
N.a.	5	3	1	0

n.a. – not available.

The findings above do not support the Leverage and Size hypotheses. This result is not surprising for the following reasons:

1. **Lithuanian tax system** is not favourable to apply income decreasing accounting methods, i.e., *The Law on Income Tax (2001)* states that "calculating profit tax inventories are deducted using "first to – first from (FIFO)" method", and a big number of fixed assets' groups are allowed to use straight-line and only some of them - straight-line or declining balance depreciation methods. Additionally, up to the end of 2001 it was allowed in calculation of Income tax to use only straight-line or units of production depreciation methods. Therefore, a big number of companies choosing financial accounting method follow the requirements set up in the tax law. It is not likely that such situation will change from 2002 when in exceptional cases for tax administration purposes companies by *the Order of the Head of State Tax Inspectorate (2003)* were allowed to apply LIFO, weighted average, concrete prices or other inventory method, because they would need permission from



State Tax Inspectorate and indicate reasons why they want to apply this method.

2. **Inexpensive methods.** As Ball and Foster (1982) point out political sensitivity is not the only factor for which size could proxy. The information production costs are likely to be important, particularly for smaller firms and therefore they may be motivated to choose accounting methods that are inexpensive (such as straight-line depreciation and FIFO inventory method) to implement. Therefore, to the extent that size variable captures the information production costs, the size variable is likely to be positively related to an inexpensive accounting method. Whereas, LIFO inventory and other depreciation methods are considered complex and expensive, consequently, adoption of these methods increases information production costs.
3. **Small companies.** PAT argues that minimising political visibility is not likely to be a major concern for smaller firms compared to larger companies, that is why Size hypothesis has been confirmed only in very large companies. Many large Lithuanian companies from sensitive industries (e.g., oil and gas industry, etc.) were not examined in this study. Additionally, the biggest Lithuanian companies are not so large as foreign large corporations.

## Conclusions

This article examined company's financial leverage ratio and size impact on accounting method choice and the research conducted allows formulating the following conclusions:

1. Two of the three main hypotheses of Positive Accounting Theory argues that "*Ceteris paribus, the higher a firm's debt/equity ratio, the more likely the manager is to choose accounting procedures that shift reported earnings from future periods to the current period*" and "*Ceteris paribus, the larger the firm, the more likely the manager is to choose accounting procedures that defer reported earnings from current to future periods*".
2. Most of empirical research confirmed Leverage and Size hypothesis, but these results are driven by the data of companies from sensitive industries (at least in the oil and gas industry). Considerably fewer scientists received contradictory results or rejected the hypotheses. The Size hypothesis does not seem to apply to smaller firms. Lithuanian and Russian authors have not investigated empirically the Leverage and Size hypothesis. They limit themselves to argue that company's size is an important determinant of accounting method choice. Nobody indicate company's financial leverage as an important determinant of accounting method choice.
3. Correlation analysis showed weak statistically insignificant relationship between company's leverage and size variables with accounting method choice in all Lithuanian companies. It showed no support for the Leverage hypothesis and very weak support of the Size hypothesis because of only profitability was found weakly correlated with accounting method choices.
4. Independently from company's leverage, most Lithuanian companies choose income increasing depreciation and inventory methods: 91 % of sample

companies choose straight-line depreciation and 78 % - FIFO inventory method.

5. Such accounting method choice of Lithuanian companies may be explained by several reasons: unfavourable tax system for income decreasing methods, companies' efforts to minimise information production costs, i.e., by choosing inexpensive (straight-line depreciation and FIFO inventory) methods. While changing tax laws, increasing availability of companies financial accounting data (coming more objective data gathering ways than questionnaires), further research is needed determining influence of company's financial leverage, size and other economic determinants on the accounting method choice.

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## Summary

### IMPACT OF COMPANY'S LEVERAGE AND SIZE ON FINANCIAL ACCOUNTING METHOD CHOICE: LITHUANIAN CASE

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Two of the three main hypotheses of Positive Accounting Theory states:

1. "Ceteris paribus, the higher a firm's debt/equity ratio, the more likely the firm's manager is to choose accounting procedures that shift reported earnings from future periods to the current period". This proposition is based on the statement, that a default on a debt contract is costly, so contracts that define a breach in

terms of accounting numbers provide managers with incentives to choose accounting procedures that reduce the probability of a breach.

2. "Ceteris paribus, the larger the firm, the more likely the manager is to choose accounting procedures that defer reported earnings from current to future periods". This proposition is based on the assumption, that large companies seek to decrease political costs, public attention, political visibility, which can be imposed by a company's size or/and high profitability.

These hypotheses are being confirmed by empirical research conducted elsewhere, however, influence of leverage and size on accounting method choice has not been investigated in Lithuania.

Correlation analysis indicated, that Leverage and Size hypotheses were not supported in Lithuanian companies, because majority of firms independently from their debt/equity ratio and size choose income increasing accounting (depreciation of fixed assets and valuation of inventory) methods. Such a choice could be explained by unfavourable tax system for income decreasing accounting methods, also by companies' attempts to minimise information production costs and by the fact that comparably small firms were analysed in this research.

**Keywords:** *accounting method choice, company's size, leverage, accounting policy*



# OPTION CLAUSES' VALUE IN SPORT: RECOGNITION AND MEASUREMENT

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## Ice Hockey Contracts Specifics

*The National Hockey League (the NHL)* consists of 30 clubs divided into two conferences (*The Western Conference* and *The Eastern Conference*) and into six divisions (three for both conferences). Before the strike the NHL was regarded as the most attractive ice-hockey competition round the world. The season 2004/2005 was influenced of the players' strike and it was the first season in the NHL history which was **cancelled**. Nowadays the representatives of the NHL and the NHLPA (the players' association) negotiate about the season 2005/2006. Historically the NHL is the first professional competition in the Northern America territory which was cancelled.

## The National Hockey League Players' Association

*The National Hockey League Players' Association (the NHLPA)* is a labour union whose members are the players of the NHL and whose mandate is to represent their interests. Headquartered in Toronto, the NHLPA has a staff of approximately 50 employees who work in such varied disciplines as labour law, product licensing and community relations.

A principal responsibility of the NHLPA is to negotiate, on behalf of the players, the terms of the *Collective Bargaining Agreement* ("CBA") with the NHL. The most recent CBA, which was signed on January 13, 1995, following a three-month lockout by the owners, expired September 15, 2004.

The CBA is a document that governs all aspects of a player's rights and responsibilities relative to his employment with an NHL club. It covers such matters as entry-level compensation, free agency, waivers and grievances.

On an on-going basis, the NHLPA provides assistance to players in filing disability, medical and dental claims, as well as in obtaining personal disability-insurance coverage. One important provision of the CBA covers the NHLPA's power to administer the insurance and pension entitlements of players.

## Eligibility for Play in the NHL

No player shall be eligible for play in the NHL unless he:

- a) had been claimed in the 1994 Supplemental draft or in the last Entry draft, or was ineligible for claim in the 1994 Supplemental draft; or
- a) had been eligible for claim in the last Entry draft but was unclaimed, and:

- (i) had played hockey in North America the prior season and was age 20 or older at the time of the last Entry draft, and signed a player contract which was signed and registered with the NHL between the conclusion of the Entry draft and commencement of the next NHL season.
- (ii) had played hockey in North America the prior season and was under age 20 at the time of the last Entry draft, and signed a player contract which was signed and registered with the NHL between the conclusion of the Entry draft and commencement of the Canadian Major Junior Hockey League season.

### Draft Choice Compensation for Restricted Free Agents

Any club that is entitled to but does not exercise its right of first refusal shall be entitled to obtain draft choice compensation from the new club. The number and quality of draft choices due to the prior club shall be based on the average annual value of the compensation contained in the principal terms of the new club's offer sheet, based on the following scale.

**Table 1.** Draft Choice Compensation

OFFER	DRAFT CHOICE(S)
\$400,000 or below	none
over \$400,000 to and including \$550,000	3 <sup>rd</sup> round
over \$550,000 to and including \$650,000	2 <sup>nd</sup> round
over \$650,000 to and including \$800,000	1 <sup>st</sup> round
over \$800,000 to and including \$1.0 million	1 <sup>st</sup> and 3 <sup>rd</sup> round
over \$1.0 million to and including \$1.2 million	1 <sup>st</sup> and 2 <sup>nd</sup> round
over \$1.2 million to and including \$1.4 million	two 1 <sup>st</sup> rounds
over \$1.4 million to and including \$1.7 million	two 1 <sup>st</sup> rounds and one 2 <sup>nd</sup> round
over \$1.7 million	three 1 <sup>st</sup> rounds
each additional million	additional 1 <sup>st</sup> round, up to max. of five 1 <sup>st</sup> round picks

Source: the C.B.A.

### Players' Contracts

The *standard form Player Contract* is the sole form of employment contract used for all player signings after the date of CBA. Contracts entered into on or after a player's 32<sup>nd</sup> birthday may contain a *no-trade clause*. Contracts containing a "no-trade" clause may be entered into prior to the player's 32<sup>nd</sup> birthday, so long as the fixed term of the contract containing the no-trade clause extends through the player's 32<sup>nd</sup> birthday and the no-trade clause does not become effective until the player reaches his 32<sup>nd</sup> birthday. If the player is traded prior to the no-trade clause taking effect, the clause does not bind the acquiring club. The acquiring club may separately agree to a no-trade clause.

**Bonuses** earned by a player pursuant to a player contract shall be paid within the period set forth in the player contract, provided if no period is set forth, then within 10 days of the club's last game. Players shall receive awards earned as soon as practicable after entitlement. In cases where the club is to receive monies from the NHL to pay for such awards, the club shall disburse such monies to the entitled players as soon as practicable after receiving such monies from the NHL.

Player contracts shall not contain any *option clause* in favour of the club or the player except an option clause that:

- (a) is specifically negotiated between a player and a club;
- (b) authorizes the extension of such contract beyond its stated term; and
- (c) states the compensation to be paid to the player during that option year or years.

Any option clause must be exercised by the later of June 30 or the day following the last day of that club's season immediately prior to the season covered by the option clause. Salary arbitration shall not be available to the player for any option year, except as expressly set forth in the transition rules. Option clauses in standard player contracts in effect as of the date hereof are hereby abolished, subject to the transition rules.

**All-Star Game payments** shall be paid only to the players who participate in the game, or who were chosen to participate but are unable to do so as a result of injury or illness shall receive an equal share payment from the existing payment pool.

### Salary Arbitration

A player is eligible to elect salary arbitration if the player meets the qualifications set forth in the following chart:

**Table 2.** Level of Experience to be Eligible for Salary Arbitration

First Contract Signing Age	Minimum Level of Professional Experience Required to be Eligible for Salary Arbitration
18 – 20	5 years professional experience
21	4 years professional experience
22 – 23	3 years professional experience
24	2 years professional experience
25 and older	1 year professional experience

Source: the C.B.A.

A player entitled to elect salary arbitration must make a written request to the parties (NHLPA, NHL) not later than July 15 in the league year in which such player is eligible for salary arbitration.

### Player's Transfer

A player whose contract is assigned from one club to another shall be reimbursed from the assignee-club a sum equal to 6 months' rent or mortgage, as the case may

be, on his living quarters in the city from which he is assigned; provided, however, that such reimbursement shall be made only if and to the extent that the player is legally obligated to make and does make such payment and, provided, further, that the club's obligation shall in no event exceed for the season, \$2900 per month. Any such payments shall be made on a pro rata basis if a full month is not involved.

The reasonable moving expenses incurred by a player who is assigned during the playing season by one club to another club and moves to the area where it is located shall be paid by the club to which the player was assigned. If for family reasons the player delays moving his family to the area to which he is assigned, no moving expenses incurred at the time of assignment by the player shall be paid by the club but the reasonable moving expenses incurred by the player in connection with the move of his family to the area to which he is assigned shall be paid by the club to which he was assigned. *Reasonable moving expenses* shall include the costs of moving player's automobile (two automobiles if player is married). A player will have the right to relocate within 12 months after the date of assignment.

The club acquiring a player through a trade shall provide the player a single room hotel accommodation at the Club's expense for a period up to 21 days in the city to which he has been traded.

A player's spouse and children will be entitled to one round-trip economy class airfare between the City from which the player was assigned and the city to which he was assigned.

Upon the occurrence of a player assignment in which an assigned player goes from one country to another, the assigned player shall have the following options in regards to currency:

- ◆ the assigned player can elect to convert his entire contract to the currency of the club he is assigned to at the effective currency exchange ratio on the day of the player assignment;
- ◆ the assigned player can elect to continue to be paid the actual currency of his contract; or
- ◆ the assigned player can elect from time to time to be paid the actual currency of his contract or to convert his contract to the currency of the club he is assigned to on a bi-monthly basis at the currency exchange ratio in effect on the last business day of the month immediately preceding the applicable election.

The per diem meal allowance for each player accompanying his team while it is away from its home city for the purpose of playing NHL games during the regular season and play offs shall be 85 USD.

Each player entitled to a full credited year of service shall have allocated and credited to an account established in his name, for his sole benefit, the following:

- (i) for players who have received credit for less than 400 games played, the amount of \$10,000 CDN per year.



- (ii) for players who have received credit for 400 games played or more, the amount of \$15,250 CDN per year.

A player who played 84 games in the season shall be entitled to a full credited year of service and full allocation of contributions for the applicable playing season. A player who played less than 84 games in the season shall have credited to his account a proportionately reduced amount for the applicable playing season determined by the ratio that the number of games credited bears to 84 for the season.

### Insurance Coverage

The clubs shall maintain in effect a group life insurance policy providing a face policy amount of \$245,000 US per player, for all players who play in at least one NHL game during the year. An accidental death and dismemberment policy shall also be maintained by the clubs in a face amount of \$245,000 US. Coverage shall continue until October 1<sup>st</sup> the following season. Claims are to be paid in U.S. Currency.

The clubs shall also maintain in effect a group life insurance policy providing for a death benefit in a face policy amount of \$125,000 US per spouse, for the spouse of each player who plays in at least one NHL game during the year. Coverage shall continue until October 1<sup>st</sup> the following season. Claims are to be paid in U.S. Currency.

The NHLPA shall maintain in effect a group life insurance policy providing a face policy of \$125,000 US per spouse. An accidental death and dismemberment policy shall also be maintained by the NHLPA in a face amount of \$125,000 US per spouse. Claims are to be paid in U.S. Currency.

The clubs and the NHLPA shall also maintain in effect a career ending disability policy providing for a one-time benefit in the event a player who is on a club playing roster suffers a career ending disability. Disability must be due to an injury or illness which results solely and independently of any other cause. Disability shall be considered career-ending if the player is continuously disabled for a period of 12 months and permanently prevented from playing professional hockey.

Benefit coverage is dependent upon age at date of disability, as outlined below, for the following periods:

**Table 3. Insurance Coverage**

Players Age	NHL Benefit	NHLPA Benefit
under 21	USD 120,000	USD 60,000
21 to 26	USD 245,000	USD 125,000
27	USD 200,000	USD 100,000
28	USD 145,000	USD 75,000
29	USD 100,000	USD 50,000
30 and over	USD 50,000	USD 25,000

Source: the C.B.A.

A player under contract who is disabled and unable to perform his duties as a hockey player by reason of an injury sustained during the course of his employment as a hockey player, including travel with his team or on business requested by his club, shall be entitled to receive his remaining salary due in accordance with the terms of his contract for the remaining stated term of his contract as long as the said disability and inability to perform continue but in no event beyond the expiration date of the fixed term of his contract, which fixed term shall in no event be deemed to include any option period related to a playing season after the league year in which the injury occurred.

### Czech Conditions

The **Czech Ice Hockey Federation** (*Český svaz ledního hokeje*) is the founding member of the IIHF. The Czech Republic organised in 2004 the IIHF World Championship in Prague. The highest league in the Czech Republic is called **Tipsport Extra-League**. In the following text we deal with the measurement of the player's value using Tipsport Extra-League rules.

### Measurement of the Player's Value in Tipsport Extra-League

**Table 4.** Basic Value of the Player

Age of the player	Basic value (in CZK <sup>1</sup> )
under 20 yrs.	743,000
21 yrs.	798,000
22 yrs.	869,000
23 yrs. – 27 yrs.	942,000
28 yrs.	869,000
29 yrs.	798,000
30 yrs.	753,000
31 yrs. – 33 yrs.	668,000
34 yrs. and more	291,000

Source: [www.cslh.cz](http://www.cslh.cz)

Basic value of the player is adapted for each new Tipsport Extra-League season by inflation coefficient given by Czech Statistical Organisation (ČSÚ).

### Increasing Coefficients for Measurement of Player's Value

#### a) *number of seasons played in Tipsport Extra-League*

Seasons	Coefficient
0	0
1	4
2	8
3	10
4	15
5 and more	20

<sup>1</sup> 1 EUR = 30 CZK (approximately)

b) *number of starts in Tipsport Extra-League*

Starts in Tipsport Extra-League	Coefficient
0	0
1 – 20	4
21 – 40	8
41 – 70	10
71 – 100	15
101 and more	20

c) *position of the player in club's standings at last season (goals, assists, +/- points)*

Goaltender	Coefficient
No. 1	20
No. 2	10
No. 3	5

Defenseman	Coefficient
1 <sup>st</sup> or 2 <sup>nd</sup> place	20
3 <sup>rd</sup> or 4 <sup>th</sup> place	15
5 <sup>th</sup> or 6 <sup>th</sup> place	10
7 <sup>th</sup> place and worse	5

Forward	Coefficient
1 <sup>st</sup> – 4 <sup>th</sup> place	20
5 <sup>th</sup> – 8 <sup>th</sup> place	15
9 <sup>th</sup> – 12 <sup>th</sup> place	10
13 <sup>th</sup> place and worse	5

d) *position of the player in Tipsport Extra-League's standings at last season (goals, assists, +/- points)*

Goaltender	Coefficient
1 <sup>st</sup> – 3 <sup>rd</sup> place	30
4 <sup>th</sup> – 6 <sup>th</sup> place	25
7 <sup>th</sup> – 10 <sup>th</sup> place	20
11 <sup>th</sup> place and worse	2

Defenseman	Coefficient
1 <sup>st</sup> – 5 <sup>th</sup> place	30
6 <sup>th</sup> – 10 <sup>th</sup> place	25
11 <sup>th</sup> – 15 <sup>th</sup> place	16
16 <sup>th</sup> – 20 <sup>th</sup> place	14
21 <sup>st</sup> – 30 <sup>th</sup> place	12
31 <sup>st</sup> – 40 <sup>th</sup> place	8
41 <sup>st</sup> – 50 <sup>th</sup> place	4

Forward	Coefficient
1 <sup>st</sup> – 9 <sup>th</sup> place	30
10 <sup>th</sup> – 19 <sup>th</sup> place	25
20 <sup>th</sup> – 29 <sup>th</sup> place	14
30 <sup>th</sup> – 39 <sup>th</sup> place	10

40 <sup>th</sup> – 49 <sup>th</sup> place	8
50 <sup>th</sup> – 75 <sup>th</sup> place	4
76 <sup>th</sup> place and worse	0

*e) number of representation starts for senior A-team of the Czech Republic*

Representation Starts	Coefficient
0	0
1 – 5	1 – 5
6 – 10	6 – 10
11 – 15	11 – 15
16 and more	20

*f) foreign contract in the highest competition in the country of the participant of the IIHF World Championship – group A*

*g) health status (chronic and long-term injuries)*

For players who represented the Czech Republic at last IIHF World Championship and played there 5 and more games (goalies 3 and more), it is necessary to increase their total value for **10%**.

*Illustrative Case: Valuation of the Czech Ice-Hockey Player Petr Průcha*



<b>Name:</b>	Petr Průcha
<b>Born:</b>	14 <sup>th</sup> September, 1982
<b>Position:</b>	forward
<b>Team:</b>	HC Moeller Pardubice (since the season 2001/2002)

**Table 5.** Player's Statistics in the Season 2003/2004

Competition	Games	Goals	Assists	Pts	+/-	Rank
Tipsport Extra-League	48	11	13	24	5	
Extra-League – playoff	7	4	3	7	0	
<b>Extra-League total</b>	<b>55</b>	<b>15</b>	<b>16</b>	<b>31</b>	<b>5</b>	<b>18<sup>th</sup></b> <i>(2<sup>nd</sup> in Pardubice)</i>
Czech Representation	20	12	4	16	0	1 <sup>st</sup>

Source: [www.hokej.cz](http://www.hokej.cz)

**Table 6.** Counting of the Coefficient

Component	Coefficient
Seasons played in Tipsport Extra-League	3
Starts in Tipsport Extra-League	146
Position in Pardubice' standings	2.
Position in Tipsport Extra-League' standings	18.
Representation starts	20
Starts at WC 2004	6
<b>Coefficient – total</b>	<b>95</b>

Source: [www.hokej.cz](http://www.hokej.cz), own counts



**Table 7.** Valuation of the Player

Components	Value (in CZK)
<i>Basic value as at 1<sup>st</sup> July 2004</i>	<i>798 000</i>
Coefficient (95 %)	758 100
<b>Subtotal</b>	<b>1 556 100</b>
WC 2004 participation	155 610
<b>„Table value“ of the player</b>	<b>1 711 710</b>

Source: own counts

In case that both parties didn't agree the transfer price for Petr Průcha, the Arbitration defines value of his contract as **1,711,710 CZK**.

### The Option Clauses in Players' Contracts

The special theme is the option clause in the sport branch. The option clause is the option of the player or the club to prolong the contract. So the player has the option to sell his services to the club for next seasons. For this option clause the value of the contract is higher.

So how to account the option clause? I impose on the fact I work for several seasons a few years ago for the Czech ice-hockey club *HC Sparta Prague*, so I was given the information how the option clauses are accounted in one of the most successful Czech ice-hockey club. As it's not possible to measure the value of the option clause, therefore the whole contract sum is regarded as deferred costs. This sum is divided for the whole length of the contract. Each month the proportional part is disbanded to expenses.

### Valuation of the Option – ROA Approach

I would like to stress the attention to the problem how to measure the value of option condensed in the contract. Is possible to use the experiences of valuation of financial options not only to ROA (Real Options Analysis) but also for valuation of players' contracts with option?

We can say that in measurement of the financial options is generally used the Black-Scholes Formula, but in the Real Options Analysis approach is used the binomial model.

#### ◆ *binomial model*

$$C = S * B[n, a, b] - K * V^{-n} * B[n, a, p]$$

$$P = K * V^{-n} * \bar{B}[n, a, p] - S * \bar{B}[n, a, b], \text{ where}$$

$$B[n, a, b] = \sum_{j=a}^{j=n} \frac{n!}{(n-j)! j!} b^j (1-b)^{n-j}$$

$$B[n, a, p] = \sum_{j=a}^{j=n} \frac{n!}{(n-j)! j!} p^j (1-p)^{n-j}$$

$$\bar{B}[n, a, b] = \sum_{j=0}^{j=a-1} \frac{n!}{(n-j)! j!} b^j (1-b)^{n-j}$$

$$\bar{B}[n, a, p] = \sum_{j=0}^{j=a-1} \frac{n!}{(n-j)! j!} p^j (1-p)^{n-j}$$

### ✱ Black-Scholes Formula

$$C = S \cdot N(d_1) - K \cdot e^{-r} \cdot N(d_2)$$

$$d_1 = \frac{\ln \frac{S}{K} + (r + \frac{\sigma^2}{2})T}{\sigma \sqrt{T}}$$

$$d_2 = d_1 - \sigma \sqrt{T}$$

$$N(d) = \frac{1}{\sqrt{2\pi}} \cdot \int_{-\infty}^d e^{-\frac{x^2}{2}} dx$$

### Modification of the Black-Scholes Formula for Option Clauses

Strouhal (2005) modified the standard Black-Scholes Formula for the valuation of the option clauses:

**Table 8.** Financial Option versus Options Clause

Symbol	Financial Option (1973 – Black, Scholes)		Options Clause (2005 – modification for the sport)
S	strike price	→	“table value” of the player
K	realisation price	→	contract sum
T	time to expiration	→	time to expiration of the option clause
$\sigma$	volatility of underlying asset	→	risk of injury
r	interest rate	→	risk of age

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Because the club will have the right of buying his services, we should count the premium of call option. The main problems are how to measure the risk of injury and the risk of age.

### Risk of Age

The basic value of the player depending on the age. The “better” the age, the higher the basic value. Let’s assume the risk of age as an inverse function of the function of the basic value. As we have nine age categories, we should assume the basic “risk of age” value as 11.11 %. This basis is corrected by the age category. The correction is given in the column “Average versus share”.

**Table 9. Risk of Age**

Age	Basic value	Share	Avg vs. Share	Risk of age
under 20	743,000	11.04 %	+ 0.07 %	11.18 %
21	798,000	11.86 %	- 0.74 %	10.37 %
22	869,000	12.91 %	- 1.80 %	9.31 %
23 – 27	942,000	13.99 %	- 2.88 %	8.23 %
28	869,000	12.91 %	- 1.80 %	9.31 %
29	798,000	11.86 %	- 0.74 %	10.37 %
30	753,000	11.19 %	- 0.08 %	11.04 %
31 – 33	668,000	9.92 %	+ 1.19 %	12.30 %
34 and more	291,000	4.32 %	+ 6.79 %	17.90 %
<b>TOTAL</b>	<b>6,731,000</b>	<b>100.00 %</b>	<b>x</b>	<b>100.00 %</b>
<b>AVERAGE</b>	<b>747,889</b>	<b>11.11 %</b>	<b>x</b>	<b>11.11 %</b>

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The risk of age table of coefficient depends on each competition. This table was constructed under conditions in Czech ice-hockey Tipsport Extra-League.

### Risk of Injury

Measuring the risk of injury is much more difficult than determination of the risk of age coefficient, because the risk of injury is definitely the random variable. Here we can see the similarity with the volatility of underlying assets measuring the value of financial options.

### Illustrative Case

Let try this theoretical model on the case of Petr Průcha. As we know, his “table value” is 1,711,710 CZK. Pardubice offers him new contract for 2 years with 1 year option for 2,000,000 CZK. Petr Průcha is young player, so we assume that his risk of injury is 15 %.

S	1,711,710 CZK
K	2,000,000 CZK
T	2 years
$\sigma$	15 %
r	22 years → 9.31 %

$$d_1 = \frac{\ln \frac{1,711,710}{2,000,000} + (0.0931 + \frac{0.15^2}{2})2}{0.15\sqrt{2}} = 0.25006$$

$$d_2 = d_1 - 0.15\sqrt{2} = 0.25006 - 0.15\sqrt{2} = 0.03793$$

$$C = 1,711,710 \cdot N(0.25006) - 2,000,000 \cdot e^{-0.0931 \cdot 2} \cdot N(0.03793)$$

$$C = 1,024,851 - 0.830108 \cdot 1,030,255 = 169,629$$

Under this model we calculate the value of the options clause for **169,629 CZK**.

**Table 10.** Final Decomposition of the Contract Value

Item	Value	Reporting
Contract value	2,000,000 CZK	Current Liabilities (C)
"Table value" of the player	1,711,710 CZK	Deferred Expenses (D)
<i>Difference I</i>	288,290 CZK	
<i>Value of the options clause</i>	169,629 CZK	Option (D)
<i>Difference II = "goodwill of the player"</i>	118,661 CZK	Retained Earnings (D)

Source: own counts

Finally, in case the contract will be, due to the option clause, prolonged, then the value of the option clause will be covered into deferred expenses.

Let's imagine the situation, that the "table value" of this player wouldn't be 1,711,710 CZK, but 2,000,000 CZK. Then the value of the option clause will be 380,077 CZK. How to report this fact?

**Table 11.** Final Decomposition of the Contract Value

Item	Value	Reporting
Contract value	2,000,000 CZK	Current Liabilities (C)
"Table value" of the player	2,000,000 CZK	Deferred Expenses (D)
<i>Difference I</i>	0 CZK	
<i>Value of the options clause</i>	380,077 CZK	Option (D)
<i>Difference II = "goodwill of the player"</i>	380,077 CZK	Retained Earnings (C)

Source: own counts

As we can see here, there is a negative value of the "goodwill of the player". It's caused by the fact that the club offers to the player only the sum due to his table value. But, as we assume that the option clause has some value, therefore we should account this negative amount.

### "Risk of Age" coefficients for NHL purposes

For the NHL purposes is possible to count this coefficient as an inverse function to the insurance benefits given to players by NHL and NHLPA:

**Table 12.** Risk of Age – NHL

Age	NHL Benefit	NHLPA Benefit	Basic value	Share	Avg vs. Share	Risk of age
under 21	120	60	180	13,90 %	+ 2,77 %	19,43 %
21 – 26	245	125	370	28,57 %	- 11,90 %	4,76 %
27	200	100	300	23,17 %	- 6,50 %	10,17 %
28	145	75	220	16,99 %	- 0,32 %	16,34 %
29	100	50	150	11,58 %	+ 5,08 %	21,75 %
30 and more	50	25	75	5,79 %	+ 10,88 %	27,54 %
<b>TOTAL</b>	860	435	1 295	100,00 %	x	100,00 %
<b>AVERAGE</b>	143	73	216	16,67 %	x	16,67 %



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## Summary

### OPTION CLAUSES' VALUE IN SPORT: RECOGNITION AND MEASUREMENT

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Year 2004 was influenced by the strike in the National Hockey League. The reason of this strike was the option of adoption of the wage ceiling for the NHL players. This analytical study focuses on the differences in accounting of players' contracts (NHL) and the contracts when the players are employees of the team (Czech Ice Hockey Tipsport-Extra League). The study also stress on the accounting of the contracts with the option in ice hockey.

Second part of this study deals with accounting of the contracts in the soccer. Current situation in the Czech Republic, when the players are not employees of the team terminates. Study compares the current situation (players as service providers) with the new obligation that the player should be the employee of this team. The study stresses the attention to the problem how to account and measure the possibility of the players' contracts with options in the new model.

The study deals with the following hypothesis: *"Is possible to use the experiences of valuation of financial options not only to ROA (Real Options Analysis) but also for valuation of players' contracts with option?"*

We can say that the valuation of the option clause given in this paper couldn't be perceived as the only possible approach. The modified Black-Scholes Formula is one of the possible solutions how to measure the value of the option clause. Current situation, when the value of the option clause is similar to the contract value, is bad solution. We can hope that in the near future this problem will be solved and will be generally accepted in the common practice.

# ESTONIA'S HIGH CURRENT ACCOUNT DEFICIT REASONS: SMALL DOMESTIC MARKET AND ACCOUNTING RULES

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## Introduction

Soon twenty years have passed in Estonia since the beginning of the transition towards the market economy. In a few years' Estonia has achieved considerable results in reforms and in stabilizing its economy. Unfortunately Estonia has not resolved the current account deficit problem.

However, the unfortunate truth is that Estonia's current account deficit is one of the largest among transition countries, making up 13.2% and 12.7% of GDP in 2003 and 2004, respectively. We can compare the average 8–9% deficits in the Baltic States in 1997–2001 with the figure of 5% or less in other EU candidate countries, the level which wouldn't scare foreign investors (Dabrowski, 2003).

Our hypothesis is that the high ratio of current account deficit to GDP is not merely an indicator of Estonia's low competitiveness level. The balance of payments reserves are increasing. One reason for the high current account deficit is the higher degree of internationalization of Estonian economy compared to our neighbours. The second reason of the high ratio of current account deficit in Estonia is double registration in the balance of payments of reinvested earnings.

For testing these hypotheses we analyse the data of Estonian balance of payments during the period from 1998 to 2004 and compare the evolution of money inflows and outflows with other indicators of economic development to find the causalities.

## 1. Estonian current account balance evolution

The current account of the Estonian balance of payments has been negative each year since 1994. From Table 1 we see that two subaccounts have positive balance (services and transfers) but the deficit of goods and income subaccounts is much bigger.

**Table 1.** Estonia's balance of payments current account evolution (EEK m)

	1998	1999	2000	2001	2002	2003	2004
<b>Current account</b>	<b>-6,760.2</b>	<b>-3,607.7</b>	<b>-5,093.4</b>	<b>-5,889.5</b>	<b>-11,882.9</b>	<b>-15,401.9</b>	<b>-17,963.0</b>
Goods and services	-7,676.2	-3,755.4	-3,569.0	-3,623.7	-8,318.2	-9,700.5	-11,064.7
Goods	-15,725.5	-12,096.9	-13,143.6	-13,783.9	-17,995.6	-21,483.1	-24,803.2
credit (f.o.b.)	37,786.3	36,955.2	56,345.9	58,667.1	58,333.6	63,599.8	75,061.0
debit (f.o.b.)	-53,511.8	-49,092.1	-69,489.5	-72,451.0	-76,329.2	-85,082.8	-99,864.2
Services	8,049.3	8,341.5	9,574.6	10,160.2	9,677.4	11,782.6	13,738.5

	1998	1999	2000	2001	2002	2003	2004
credit	20,804.0	21,951.9	25,485.8	28,866.5	28,279.7	30,819.9	35,591.3
debit	-12,754.7	-13,610.4	-15,911.2	-18,706.3	-18,602.3	-19,037.3	-21,852.8
Income	-1,164.0	-1,505.8	-3,483.4	-4,926.1	-5,423.1	-7,411.2	-8,979.6
credit	1,871.8	1,964.3	2,008.0	2,994.7	3,339.3	3,422.1	5,453.6
debit	-3,035.8	-3,470.1	-5,491.4	-7,920.8	-8,762.4	-10,833.3	-14,433.2
Transfers	2,080.0	1,653.5	1,959.0	2,660.3	1,858.4	1,709.7	2,081.2
credit	2,424.2	2,257.5	2,454.8	3,174.1	2,876.3	3,221.4	5,734.7
debit	-344.2	-604.0	-495.8	-513.8	-1,017.9	-1,511.7	-3,653.4

Source: Estonia's Balance of Payments yearbook, 2004, 2005:4.

However, the high ratio of current account deficit to GDP is not merely an indicator of our low competitiveness, but partly and perhaps even more importantly, the result of massive inflow of money into Estonia. One can see from Table 2 that the overall balance of payments has always been positive during this millennium. Thus, the financial resources of the country are increasing. In addition, the share of foreign trade in GDP is in Estonia higher than in Latvia and Lithuania and our ratio of exports to imports of goods is also better. Therefore, another reason for the high current account deficit is the higher degree of internationalization compared to our neighbours due to our small domestic market. Nevertheless, comparing the year 2000, in 2004 gross domestic product has grown faster than foreign trade and imports have also grown faster than exports.

**Table 2.** Internationally comparable indicators of the Estonian balance of payments

	Estonia					Latvia	Lithuania
	2000	2001	2002	2003	2004	2002	2002
Foreign trade turnover (% of GDP)	135.4	125.5	115.2	116.8	123.6	84.5	106.3
Exports and imports ratio (%)	81.4	80.8	76.4	74.7	75.4	56.4	71.8
Ratio of external reserves change to GDP (%)	2.4	-0.7	0.8	1.8	2.4	na	na
Current account balance (% of GDP)	-5.5	-5.6	-10.2	-13.2	-12.7	-7.8	-5.3

Source: Estonia's Balance of Payments Yearbook 2004, 2005:5.

From Table 2 we see that Estonia's exports and imports ratio is better than in Latvia and Lithuania. But balance is yet negative and Estonia should to improve the export in future to balance current account. Table 3 shows that Estonia has the biggest deficit in trade with CIS and euro-zone countries.

By foreign trade balance by countries is not good to compare the competitiveness of Estonia with different countries for capacities of trade are small and in some cases our businessmen for price differences prefer to by from one country and to sell to the other. But in statistics of Eesti Pank where are data of trade with 40 countries, Estonia has positive balance with 15 of them.

**Table 3.** Estonia's foreign trade balance in 2004 by groups of countries (EEK m)

Group or country	Exports	Imports	Balance	Exports and imports ratio (%)
<b>EU-25</b>	<b>59815</b>	<b>78089</b>	<b>-18274</b>	<b>76,6</b>
Finland	17271	22402	-5131	77,1
Germany	6225	12956	-6731	48,0
Sweden	11414	9856	1558	115,8
Lithuania	3319	5352	-2033	62,0
Latvia	5895	4833	1062	122,0
<b>Euro-zone</b>	<b>29903</b>	<b>47287</b>	<b>-17384</b>	<b>63,2</b>
<b>CIS</b>	<b>5850</b>	<b>11828</b>	<b>-5978</b>	<b>49,5</b>
Russia	4221	8932	-4711	47,3
Ukraine	1268	1374	-106	92,3
Belarus	172	1208	-1036	14,2
<b>Other countries</b>	<b>9396</b>	<b>9947</b>	<b>-551</b>	<b>94,5</b>
China	594	1771	-1177	33,5
Japan	223	1346	-1123	16,6
USA	2405	1162	1243	207,0
<b>Total</b>	<b>75061</b>	<b>99864</b>	<b>-24803</b>	<b>75,2</b>

Source: Eesti Pank, Balance of Payments and Economic Statistics Department, 2005.

## 2. Accounting rules influence

Estonia started compiling national balance of payments in 1992. It is the responsibility of Eesti Pank. Due to the weakness of the banking system at that time, the survey system was introduced. However, as this system is not sufficiently flexible in the changing economic environment, the possibilities to apply the settlements system upon compiling the balance of payments were studied. The settlements system was launched in parallel to the survey system in 1994. Arising from the compilation of international investment position as of 1996, surveys have become more significant. Above all, surveys facilitate collecting information on an accrual basis and other indicators not reflected in money flows (e.g. trade credit, reinvested earnings).

Three very different systems and their combinations are used in the world for the compilation of balance of payments:

- survey system;
- settlements system, cash-based system;
- administrative system.

The *survey system* draws upon information from various statistical surveys and studies. Both sampling and census are used, depending on the requirements, field of study and peculiarities of a specific country. The structure of the questionnaire follows either the balance of payments structure or the structure of financial statements and accounting principles. The advantage of the survey system lies in its flexibility but, on the other hand, statistical surveys are expensive to conduct, they



have a low response rate and are not very operational. Anglo-American countries Australia, New Zealand, the United Kingdom, Ireland, The USA, and Canada are among successful users of the survey system (Balance of Payments Yearbook 2004, 2005:47).

The *settlements system* is based on collection, coding and processing of international payments through resident banks. Based on the description of the transaction, clients, commercial institutions or the central bank attribute a transaction code to each incoming or outgoing payment in compliance with the balance of payments structure. The settlements system allows to collect detailed and operational information but is still limited. Money flows do not reflect accrual approach, the description of a transaction or balance of payments code is often missing, netting appears, and money flows do not allow to estimate positions. Pure settlements system is being pushed out by the mixed system in most countries of continental Europe.

The administrative system draws information from the data collected beforehand by various agencies. The use of this system requires full control over external transactions by the public sector. There are few countries using solely administrative information for balance of payments purposes but almost all countries apply it to a larger or smaller extent. The major shortcoming of the administrative system lies in weak data quality control.

This methods combination is not guaranteeing avoiding mistakes. For example, in Estonia's balance of payments of year 2004 errors and omissions sum is 1058,9 mln. EEK or 30,9% comparing with growth of reserve assets. This sum increased twice comparing with year 2003. This problem requires Eesti Pank every year correct previous years data.

But accounting rules show in current account deficit also sums what were not leaved Estonia and namely on the subaccount of income.

Income account reflects income related to the use and render for use of production factors (capital and labour). Income falls into two categories:

- (a) *compensation of employees* – gross wages together with social transfers earned abroad under a labour contract with a duration of up to a year and paid to foreigners in Estonia;
- (b) *investment income* – generally reflecting income on foreign (direct, portfolio and other) investment claims and payable from foreign investment liabilities (interests, dividends and other proprietary income). Investment income also includes reinvested earnings reflected as direct investments, being a proportional change equal to investment in the undistributed profit of the investment company.

Accounting income on realised and unrealised exchange rates and spreads are not records as income, because the balance of payments records movement of financial

instruments at market prices. For accounting purposes the latter comprises acquisition cost and realised exchange rate and/or price profit/loss.

So income account includes among income outflows earnings reinvested into Estonia. These sums are big for very high foreign direct investment (FDI) inflows into Estonia. The research of Kálmán Kalotay brought detailed information of invarded FDI stock of selected economies as a percentage of GDP on 2002, where Estonia took the second position after Argentina (75.3%) with its percentage (58.6) on 2002 (Kalotay, 2004:121).

Table 4 shows that share of reinvested earnings into Estonia is forming already two thirds of FDI inflows. From Table 2 we saw that in 2004 current account deficit was 12,7%, comparing with GDP. When we take off reinvested earnings deficit will be only 6,3% what is quite acceptable level for quickly growing transition economy.

**Table 4.** Reinvested earnings in GDP and FDI in Estonia

Year	GDP in current prices (EEK m)	FDI total volume (EEK m)	Reinvested earnings		
			volume (EEK m)	share in FDI (%)	per GDP (%)
1998	73538	8071,4	389,4	4,8	0,5
1999	81640	4448,0	721,9	16,2	0,9
2000	92717	6644,5	1815,2	27,3	2,0
2001	104338	9429,6	3878,9	41,1	3,7
2002	116869	4800,2	3370,3	70,2	2,9
2003	125832	12865,9	6407,3	49,8	5,1
2004	139150	13111,3	8965,1	68,4	6,4

*Source:* Estonia's Balance of Payment Yearbook 2004, 2005; Eesti Pank Annual Report 2004, 2005.

From the oposit side, Estonia has invested lot of money ahead to the Latvia and Lithuania. Several studies have shown that, foreign investors who are oriented to developing markets are interested to maximize the proprietary income (Nunnenkamp, 2000). According to the literature, 43% of German investors in Central and Eastern European countries are aiming for efficiency and 40% orienting towards new markets (especially in car, cement and chemical industries) (Zschiedrich, 2003:79). Lankes and Venables (1996) and Lankes and Stern (1998) find that the motive of entering new markets dominates in investments into Central and Eastern European (CEE) countries. Naturally, the motive of spreading risks plays role due to higher economic and financial risks due to higher in transition countries compared with developed market economies.

Investments from Estonia abroad already started to produce incomes to investors. But part of these earnings did not return to Estonia but were reinvested abroad. These sums we should to add to the income account real deficit to find real income money outflow from Estonia. So, we may conclude that by accounting rules in

income subaccount are registered some sums which did not leave Estonia and some sums what did not come into Estonia.

From Table 5 we may see that FDI income inflows grew during last 4 years 2,7 times, but FDI income outflow grew even 3,4 times.

**Table 5.** Inflows and outflows of income in Estonia (mill. EEK)

	2000	2001	2002	2003	2004
Income inflow, total	2008	2995	3293	3422	5454
of which: income on direct investment	224	456	841	1275	1919
income on portfolio investment	1028	1621	1435	802	868
income on other investment	717	808	812	792	749
other income	39	110	191	553	1918
Income outflow, total	5491	7920	8764	10833	14433
of which: income on direct investment	3502	5421	6555	8656	11757
income on portfolio investment	711	1163	950	808	1072
income on other investment	1252	1321	1231	1142	1291
other income	26	15	27	227	313
Income inflow to outflow ratio, %	36.6	37.8	37.6	31.6	37.8

*Source:* Estonia's Balance of Payments Yearbook 2004, 2005; completed by authors.

We also see that the outflow of income has grown especially quickly. As investments outflow started later than investments inflow and are lower in amount, income inflows on direct investments are much more modest than outflows, but are nevertheless growing fast as is demonstrated by Table 5. For example, in first quarter 2005 the income deficit in Estonia decreased 15% year-on-year. This arose from faster growth in income earned by Estonian investors abroad compared with the growth in income earned by foreign investors in Estonia – 2,4 and 1,2 times respectively (Comments on Estonia's preliminary balance of payments for the first quarter of 2005).

The conclusion from the above mentioned analysis is that in the medium term, large inflows of direct investments into Estonia are unable to balance the current account of the balance of payments, since the part of earned income is taken out from Estonia, while another part is reinvested in to markets with better profit outlooks. Thus, if one wants to balance Estonian income money inflows and outflows, it is necessary to develop in further measures to avoid outflows of income earned in Estonia.

## Conclusions

For years Estonia has been an attractive transition country for foreign investors, but due to continuously high current account deficit the increase outflow of money will causes for Estonia problems and gives very negative signal to new potential foreign investors.

In the short run FI inflows increase the current account deficit of a transition country for their strongly positive influence to the import: import of technological reconstruction and increased purchasing power of the domestic market. But even now Estonia's current account deficit is one of the largest among transition countries.

Our research showed that this high current account deficit has two untraditional reasons. One reason for the high current account deficit is the higher degree of internationalization of Estonian economy compared to our neighbours. The second reason of the high ratio of current account deficit is double registrating reinvested earnings in the balance of payments. On income subaccount are registrated reinvested earnings which did not leave Estonia and they are at the same time included to the FDI inflows data.

Our position is that these economic policy measures enabling significantly reduce the Estonian current account deficit should be applied immediately and we should to explain the accounting influence to the current account balance to our investors and inside of Estonia also.

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## Summary

### ESTONIA'S HIGH CURRENT ACCOUNT DEFICIT REASONS: SMALL DOMESTIC MARKET AND ACCOUNTING RULES

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During the transition period Estonia has been very successful in reforming its economy. But Estonia's current account deficit is one of the largest among transition countries, making up 13.2% and 12.7% in 2003 and 2004 respectively.

However, the high ratio of current account deficit to GDP is not merely an indicator of our low competitiveness. The balance of payments reserves are increasing. One reason for the high current account deficit is the higher degree of internationalization of Estonian economy compared to our neighbours.

The second reason of the high ratio of current account deficit in Estonia is reinvested earnings. They are double registered in the balance of payments: firstly, as the income outflow and secondly, as foreign direct investments inflow. In 2004 the current account deficit without reinvested earnings constituted in Estonia 6.3% of the GDP.

Our paper analysed Estonia's balance of payments current account deficit reasons and compared them with other Baltic countries data. We should to explain these reasons in Estonia and to our partners to decrease the groundless worries of about our economic policy reliability.

# LONG TERM TANGIBLE ASSETS VALUATION AND TAXES IN LATVIA

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## Introduction

During the last years Latvia is characterised by a rapid development of immovable property market. The beginning of 2004 has distinguished through a certain stability of the immovable property market, when, after a sharp fall in 2003, the exchange rate of the US dollar settled and also the credit interest rates of the banks became stable. The most important political event, having left a considerable impact on the immovable property market, was the joining of Latvia to the European Union.

The accounting of long term tangible assets in Latvia is regulated by the laws "On Yearly Account of Enterprise" and "On Accounting", defining that, according to these laws and the general accounting principles, every enterprise determines the accounting order of its assets [4].

## Long Term Tangible Assets Valuation

The accounting of the assets is carried out solely on the basis of source documents that have to contain a fair image about the value, the proprietor, address and the person responsible for every object of the asset. Source documents become prepared in a certain number of copies, directed, controlled, processed and hold in accordance with a circulation scheme approved of the director of the enterprise [3].

Initially, the long term tangible assets are to be evaluated in accordance with the initial accounting value, i.e. – the acquisition or production costs.

**Table 1.** Calculation of Initial Value of the Long Term Tangible Assets

	Expense	Acquisition in cash	Constructi on	Investment in fixed assets	Donation	Exchange
1	Evaluation forms					
	Actual acquisition expenses.	x	x			
	Contract price			x		
	Market price				x	
	Received property exchange price.					x

2	Acquisition expenses.					
	Contract price of purchase	x				
	Contract price of construction		x			
	Price of information and consultation services	x	x			x
	Registration payments, state tax	x	x	x	x	x
	Intermediaries compensation	x				x
	Customs duties	x	x		x	x
	Irretrievable taxes	x	x	x		x
	Loan interest	x	x			
	Other acquisition expenses	x	x			x
3	Delivery expenses to the address of long term tangible assets	x	x	x	x	x

Accounting evaluation is a process, in result of which the objects or elements of the enterprise are expressed in cash.

### **Necessity of revaluation of the long-term tangible assets**

Very often there may emerge situations, when in the process of using of long-term tangible assets their book value is no more adequate to their fair value or market value. Such inadequacy may create a wrong image about the asset fair value to the users of finance statements. In such case, it becomes necessary to revalue the assets.

The causes, usually creating a revaluation of long-term tangible assets, are:

- transactions with long term tangible assets;
- attraction of investors for development of the enterprise;
- calculation of the potential value of long term tangible assets;
- investing of long term tangible assets in stock capital;
- reorganisation of the enterprise;
- insurance of long term tangible assets;
- preparation of enterprise finance statements [6].

The revaluation is carried out according to the valid evaluation principles, taking into consideration the specific circumstances, having caused the revaluation.

Evaluation is a process used for calculation in cash the sum, at which the elements of finance statements are to be recognised and entered in the balance sheet and profit and loss account. It makes necessary to choose a concrete evaluation principle. In finance statements, more or less and in different combinations, several evaluation principles may be used [2]:

- initial expenses. Assets are entered in terms of value adequate to the sum of cash or the amount of its equivalent paid at the moment of acquisition of the asset. Liabilities are entered in terms of a sum adequate to the amount of receivable cash in exchange against liability.
- current expenses. Assets are entered at the sum adequate to the cash or its equivalent that should be paid at the moment to acquire an equal or similar asset. Liabilities become accounted at an undiscounted sum adequate to the sum of cash or its equivalent, necessary to pay off the debt during the accounting period;
- realization value. Assets get entered at a sum, being adequate to the cash or its equivalent, possibly to be obtained during the accounting period, if the assets were sold in the course of an alienation process carried out in planned procedures;
- current value. Assets are entered at the sum adequate to the current discounted value of the future cash flow the enterprise plans to receive from the asset by continuation of its business activities. In their turn, the liabilities become accounted at a sum, corresponding to discounted future payments planned to pay off obligations, continuing business activities of the enterprise [8].

With the market value of an asset usually a sum of cash is to be understand, which might possibly to be received for the property at the evaluation date between a free-will seller and a free-will purchaser.

It is common in accounting that assets are accounted at the purchase price, but written off at the liquidation price. Disagreements in connection with evaluation of the assets may appear during the intermediate. Some consider that the right approach is not to revalue the assets up to their realization, others insist upon their revaluation, taking into consideration different factors, for example, such as inflation. The opinion of the thirds is that the value of assets is to be reflected in their selling price before the cash is received.

The choice of evaluation method is determined by evaluation objectives of accounting. There exists a point of view that logically substantiated are the values based on production costs, but there are also followers of other points of view. In any case, the value of assets must be adequate to the requirements of accounting.

The value of long-term tangible assets may be increased, if their fair value exceeds essentially their initial value or their previous year book value of evaluation. The



asset may be revaluated according to its highest value only then, if such increase of value turns out as constant, continuous and essential.

The frequency of revaluation depends on the amount and the frequency of changes of the fair value of the objects of the long-term tangible assets. If the fair value of an asset changes little, the revaluation may be carried out once in three or five years. If the changes of the fair value are considerable, then it is necessary to revalue the asset every year [5].

In the case of revaluation, the whole group of accounted assets must be included. The revaluation of long-term tangible assets means that the accounted value becomes increased or decreased. The revaluation is carried out in the following cases:

- According to the regulations passed by the Cabinet of Republic of Latvia,
- In the case of privatisation of the enterprise,
- If the market value of the asset declines from the book value,
- The depreciation period of the asset is calculated incorrectly,
- The asset is already once depreciated, but continues to take part in business activities and, therefore, is evaluated anew and accounted [7].

The majority of enterprises in Latvia do not carry out the revaluation, and in their accounting there are long term tangible assets without a residual value (0 value), and, therefore, the balance sheet assets do not reflect the actual value of the respective period, and production costs and services do not reflect the actual expenses.

The main causes, why enterprises carry out the revaluation of assets rarely, are:

- Avoidance of additional accounting, being to be carried out regarding the revaluated assets to account the corporate income tax;
- The enterprise management do not evaluate the impact of losses, made by a loose cost calculation on evaluation of assets and production and service costs and acquisition of new equipment;
- Insufficient evaluation of the impact of market value.

According the Latvian legislation, the revaluation of long-term tangible assets is regulated by the Commercial Code (item 154), defining the evaluation of property investment. Namely, the property investment is to be evaluated on the basis of the conclusion of an expert, included in the list approved by the institution of Commercial Register. In the case of foundation of a Ltd., the shareholders themselves may evaluate the property investment, if the total of the property investments value do not exceed 4000 LVL and the total of property investments make less than a half of the equity (share capital).

The revaluation reserve of long-term investment may not be paid out in dividends, used for compensation of losses, included in the equity or other reserves, used for beneficiation in social area or some other aims. Therefore, the increase of the item "Revaluation reserve of long-term investments" of the equity is created by

revaluation of the assets and long-term investments during the accounting period, but decrease is caused by decrease of the value of revaluated object or alienation (liquidation) of the revaluated object [5].

Often there may appear situations, when depreciation norms of assets are defined unsubstantiated and incorrectly, without proper calculations and substantiation, using generally accepted depreciation norms, being not always adequate to the enterprise. For example, presently, the period of using of computers usually is planned for three years, without taking in account the information technology requirements of concrete enterprise, as well as without evaluation of possibilities of acquisition of a new asset. Regarding other long-term tangible assets, the situation is similar. Therefore, an inadequacy becomes created. The assets become amortised untimely, in accounting they are reflected without a residual value, but it does not satisfy the production requirements of the enterprise, and, as a result, the using of them becomes continued.

Sometimes in accounting, there are also buildings and constructions of 0 value, being used in production process. In most cases it occurs, when in the process of privatisation or purchase the object (the plant or its part) is acquired as a whole without evaluation of its parts. As a result, the balance sheet assets do not reflect the actual value, having taken place during the respective period and the production costs and services do not reflect the actual expenses. There may be also situations, when the motor transport of the 0 value is accounted by the Road traffic security service, and for its use the fuel is written off by the enterprise. The situation with the computers of 0 value is similar. They are functioning, using licensed computer programmes, and machines make production. It causes losses in the budget, because currently the enterprises pay the immovable property tax on buildings and constructions, adapting the tax rate to the yearly average book value. But, if there is no value, there are also no tax payments.

Why cannot we revalue the asset in its market value and plan the possible time of its exploitation and, consequently, its depreciation normative?

The decision on revaluation of an asset is to be made by the enterprise director.

In practice, the calculation of depreciation norm of long-term tangible assets is carried out rarely, by keeping the non-depreciable part, i.e. the value that might be their market (realization) value after the planned use of the assets. However, every object has such value, if not otherwise, then at least on the level of the value of scraps or retrievable spare parts.

By calculation of the market value, the information about the prices of similar products is to be used, being obtained on the basis of information about other enterprises, media publications, of special literature, conclusions prepared by experts.

The market value is usually calculated in transactions with immovable property, as well as for calculation of future value of the property and attraction of investors.

### **Reflection of revaluation of long-term investments in tax legislation of Latvia**

The revaluation of long-term investments is related to corporate income tax and immovable property tax.

By definition of the taxable income for every accounting period, the pre-taxation calculated profit of finance accounting, being affected by the reflected in yearly report of the enterprise fixed assets depreciation, calculated taking in account its revaluation, i.e. its new value, is taken as basis. The taxable income, included in yearly taxation declaration of the corporate income tax, becomes increased by depreciation of fixed assets, but decreased by depreciation, calculated according to the item 13 of the law "On Corporate Income Tax". By calculation of that depreciation, the value of fixed assets before revaluation is taken into consideration, therefore, in this case the taxable income increases and, consequently, affects essentially the amount of corporate tax. Practically, it means that the taxable income becomes increased through the difference of these both depreciations, because the depreciation sum of the fixed assets, indicated in the yearly report of the enterprise, will be considerably larger than the depreciation calculated for the needs of taxation, as the revaluation has been taken in account.

If the revaluated long-term investment, for example, the fixed asset becomes liquidated, the reserve is to be closed by debuting of the account "Revaluation reserve of long-term investment" and by crediting of the account "Other incomes of business activities".

At the end of the accounting period, the calculated finance accounting profit becomes increased by this amount. As the revaluation reserve of the fixed asset becomes written off to the income and included in the profit and loss account, the taxable income of the enterprise is to be decreased by the income from exclusion of the revaluation reserve [2]. Therefore, it may be said that the evaluation reserve of long-term investments do not increase the income, taxable by corporate tax, during the accounting period in the case, when the fixed asset becomes excluded from the amount of long-term investments.

Regarding the legal persons, in property of which such fixed assets as buildings and constructions are to be found, the objects, being taxable by immovable property tax, is the book value of these buildings and constructions. In result of the revaluation, the book value of these objects increases and, therefore, the calculated and payable sum of the immovable property tax increases too.

The immovable property tax on the land, belonging to the enterprise, is calculated according to the cadastre value by the self-government, in which territory the land is placed. In result of evaluation of the land, its cadastre value changes. The cadastre value of the land may differ from the land value, which is included in the enterprise



book value, therefore, there do not exist a close relation between the market value of the land and the amount of the payable immovable property tax. According to accounting methods of fixed assets, the depreciation of the land is not calculated for the needs of enterprise yearly account, and also, according to the item 13 of the law "On corporate income tax", the paid off immovable property tax during the accounting period decreases the taxable income, being taxed by corporate income tax, because it becomes entered in the profit before taxation.

## Conclusions

1. The law "On yearly accounts of enterprises" defines that the long-term investments are to be evaluated according to their initial value, i.e. their acquisition or production costs.
2. During the business activities, the value of long-term assets may change, i.e. it may decrease or increase.
3. The value of long-term tangible assets may be increased on the basis of:
  - 3.1. investments, in result of which the life of the asset increases or the amount and quality of production improves essentially,
  - 3.2. market situation.
4. The causes of decrease of long-term assets value may be the damages or changes in their market value.
5. In the case of revaluation, the whole group of accounted assets is to be taken into consideration:
  - 5.1. in transactions with long-term tangible assets;
  - 5.2. by attraction of investors for development of the enterprise;
  - 5.3. in the case on investing long-term tangible assets into the equity;
  - 5.4. in the case of reorganisation of the enterprise;
  - 5.5. by insurance of long-term tangible assets;
  - 5.6. by preparation of finance statements of the enterprise.
6. The revaluation should be carried out regularly and the frequency should be defined by every enterprise individually, once in 3-5 years.
7. The revaluation of long-term investments is related to the corporate income tax and to the immovable property tax.
8. By liquidation of a revaluated long-term asset, the revaluation reserve does not increase the income, being taxable by corporate income tax.
9. The amount of the payable corporate income tax is essentially increased by the circumstance, that in the case of calculation of the depreciation for the needs of corporate income tax, the increase of the value of long-term tangible asset is not taken in account.
10. In the result of revaluation, the book value of the assets increases and, therefore, the calculated and payable sum of immovable property tax increases too.
11. The cadastre value of the land may differ from the book value, therefore, there do not exist a close relation between the market value of the land and the payable amount of the immovable property tax.



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## Summary

### LONG TERM TANGIBLE ASSETS VALUATION AND TAXES IN LATVIA

Vita Zarina  
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Laws and regulations define that every enterprise determines the accounting order of its assets. Initially, the long term tangible assets are to be evaluated in accordance with the initial accounting value. Very often there may emerge situations, when in the process of using of long-term tangible assets their book value is no more adequate to their fair value or market value. Such inadequacy may create a wrong image about the asset fair value to the users of finance statements. In such case, it becomes necessary to revalue the assets. The majority of enterprises in Latvia do not carry out the revaluation, and in their accounting there are long term tangible assets without a residual value, and, therefore, the balance sheet assets do not reflect the actual value of the respective period, and production costs and services do not reflect the actual expenses. The revaluation of long-term investments is related to corporate income tax and immovable property tax. Practically, it means that the taxable income becomes increased through the difference of these both depreciations, because the depreciation sum of the fixed assets, indicated in the yearly report of the enterprise, will be considerably larger than the depreciation calculated for the needs of taxation, as the revaluation has been taken in account.

## ASSET - LIABILITY MANAGEMENT USING GARCH (1,1)

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### Introduction

Nowdays, models from the GARCH class are the most popular volatility models among practitioners. Estimates of asset return volatility are used to assess the risk of many financial products. Accurate measures and reliable forecasts of volatility are crucial for derivative pricing techniques as well as trading and hedging strategies that arise in portfolio allocation problems.

Financial return volatility data is influenced by time dependent information flows which result in pronounced temporal volatility clustering. These time series can be parameterised using Generalised Autoregressive Conditional Heteroskedastic (GARCH) models. It has been found that GARCH models can provide good in-sample parameter estimates and, when the appropriate volatility measure is used, reliable out-of-sample volatility forecasts (Alexander, 2005).

Many financial systems in a corporate as well as an individual context are underpinned by a cashflow-balancing (also called matching) activity. At a corporate level, many institutions take contributions from the working employees of a corporation and invest these contributions by acquiring assets. These assets are, however, pledged to meet the pension payments of the individuals at future dates of their retirement (Mitra, 2003).

These pension payments are again the liabilities for the financial institution. A basic aspect of financial planning encompasses such matching activities of cashflows and is given the generic label of asset and liability management – ALM. From a mathematical perspective these models can be set up in an equational form involving non-negative variables that represent in- and outflow of funds and carry over retained assets and funds from one planning period to the next (Mitra, 2003)

Management of interest rate risk and other risks impacting both assets and liabilities is referred to as ‘Asset Liability Management’ (ALM).

The main purpose of this article is to illustrate GARCH model and its appliance to asset-liability management. The object of this research is companie's assets and liabilities.

The main methods used in this article is the analysis and synthesis of scientific literature, mathematical and graphic methods for better displaying data.

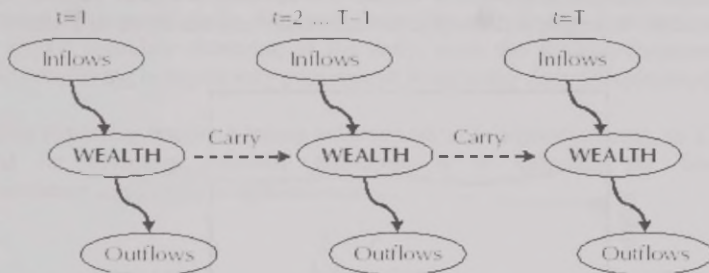
## Asset liability management

Asset liability management (ALM) is a term whose meaning has evolved. It is used in slightly different ways in different contexts. ALM was pioneered by financial institutions, but corporations now also apply ALM techniques. (Connor, 2003)

Traditionally, banks and insurance companies used accrual accounting for essentially all their assets and liabilities. They would take on liabilities, such as deposits, life insurance policies or annuities. They would invest the proceeds from these liabilities in assets such as loans, bonds or real estate. All assets and liabilities were held at book value. Doing so disguised possible risks arising from how the assets and liabilities were structured.

Immunization method is an earlier ALM method that is still very popular today. Bond immunization attempts to match the interest rate sensitivity of a bond portfolio with the interest rate sensitivity of a liability stream. The resulting allocation only hedges against a small shift in the term structure of interest rates and is a single stage model with no transaction costs. Therefore, immunization is inadequate for the multistage and stochastic problems of ALM (Valente, 2001).

Analysing the fundamental aspect that any company has both assets and liabilities, it is clear that in the course of business the company will benefit from cash inflows and also have to meet liabilities. When asset streams are greater than liability streams there is a surplus, and vice-versa; when liability streams are greater than asset streams, there is a deficit (see figure 1).



**Figure 1.** Illustration of an ALM stochastic programming model (Pirbhai, 2003).

By fully integrating assets and liabilities, it is possible to evaluate the impact of asset experience upon key metrics that are relevant to the plan. In addition, asset/liability integration is also an important element for developing a comprehensive investment policy. It provides a sound economic foundation for the plan's objectives, and structures the asset allocation to meet those objectives.

Asset liability management process is gaining an understanding of how the company operates, how the company intends to operate in the future and the steps the company will take to achieve its overall goals.

Such a process allows companies to:

1. Identify key financial risks

- assets (interest rates, inflation, defaults and liquidity)
- liabilities (mortality, lapses and expenses)
- GDP, adverse loss development, adverse timing of payouts, catastrophic risk, etc.

2. Quantify key financial risks and interactions between risks

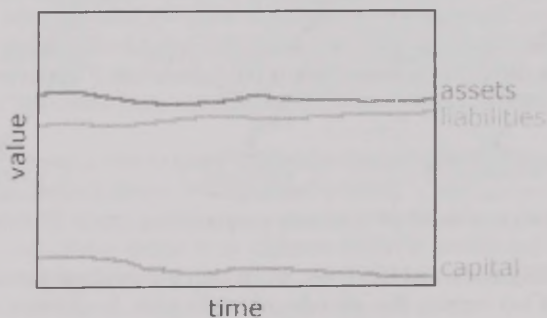
- probabilistic and prospective
- stochastic scenarios
- projected financial statements

3. Compare alternative financial solutions

- investment strategy, crediting strategy, business plan, etc. (Grebeck, 2005)

Increasingly, managers of financial firms focused on asset-liability risk. The problem was not that the value of assets might fall or that the value of liabilities might rise. It was that capital might be depleted by narrowing of the difference between assets and liabilities—that the values of assets and liabilities might fail to move in tandem. Asset-liability risk is a leveraged form of risk. The capital of most financial institutions is small relative to the firm's assets or liabilities, so small percentage changes in assets or liabilities can translate into large percentage changes in capital.

Figure 2 illustrates the evolution over time of a hypothetical company's assets and liabilities. Over the period shown, the assets and liabilities change only slightly, but those slight changes dramatically reduce the company's capital (which, for the purpose of this example, is defined as the difference between assets and liabilities).



**Figure 2.** Asset liability risk.

In figure 2, the capital falls by over 50%, a development that would threaten almost any institution.



Asset-liability risk is leveraged by the fact that the values of assets and liabilities each tend to be greater than the value of capital. In this example, modest fluctuations in values of assets and liabilities result in a 50% reduction in capital.

Accrual accounting could disguise the problem by deferring losses into the future, but it could not solve the problem. Firms responded by forming asset-liability management (ALM) departments to assess asset-liability risk. They established ALM committees comprised of senior managers to address the risk (Kreuser, 2002).

### Generalized autoregressive conditional heteroscedasticity

In a generalized autoregressive conditional heteroscedasticity (GARCH) model, returns are assumed to be generated by a stochastic process with time-varying volatility. Instead of modeling the data after they have been collapsed into a single unconditional distribution, a GARCH model introduces more detailed assumptions about the conditional distributions of returns. These conditional distributions change over time in an autocorrelated way – in fact the conditional variance is an autoregressive process (Alexander, 2005).

Using the standard notation for the GARCH constant  $\omega$ , the GARCH error coefficient  $\alpha$  and the GARCH lag coefficient  $\beta$ , the symmetric GARCH (1,1) model is:

$$\sigma_t^2 = \omega + \alpha \varepsilon_{t-1}^2 + \beta \sigma_{t-1}^2, \quad \omega > 0, \alpha, \beta \geq 0$$

Many financial time series display volatility clustering that is autoregressive conditional heteroscedasticity. Equity, commodity and foreign exchange markets often exhibit volatility clustering at the daily, even the weekly, frequency, and volatility clustering becomes very pronounced in intra-day data. (Alexander, 2005)

Volatility clustering implies a strong autocorrelation in squared returns, so a simple method for detecting volatility clustering is to calculate the first-order autocorrelation coefficient in squared returns:

$$\frac{\sum_{t=2}^T r_t^2 r_{t-1}^2}{\sum_{t=2}^T r_t^4}$$

In equity markets it is commonly observed that volatility is higher in a falling market than it is in a rising market. The volatility response to a large negative return is often far greater than it is to a large positive return of the same magnitude. The reason for this may be that when the equity price falls the debt remains constant in the short term, so the debt/equity ratio increases. The firm becomes more highly leveraged and so the future of the firm becomes more uncertain. The equity price therefore becomes more volatile (Franses, 1998).

The „leverage effect“ also implies an asymmetry in volatility clustering in equity markets: if volatility is higher following a negative return than it is following a positive return then the autocorrelation between yesterday's return and today's squared return will be large and negative (Alexander, 2005).

The classical linear regression model assumes that the unexpected return  $\varepsilon_t$ , that is, the error process in the model, is homoscedastic. The error process has a constant variance  $V(\varepsilon_t) = \sigma^2$  whatever the value of the dependent variable. The fundamental idea in GARCH is to add a second equation to the standard regression model: the conditional variance equation. This equation will describe the evolution of the conditional variance of the unexpected return process,  $V_t(\varepsilon_t) = \sigma_t^2$  (Alexander, 2005).

Using GARCH model in asset liability management a very important process is scenario generation. A major focus of scenario generation is to create a tree-structure of scenarios that „best“ approximates a given underlying distribution of the random parameters. The criterion for choosing the „best“ approximation is usually based on some measure which quantifies the distance of the generated scenario tree from the underlying distribution (Domenica, 2004).

In general, a scenario generation procedure (for multistage problems) involves some or all the following steps:

- Assumption of a model which explains the behaviour of the random parameters.
- Estimation/Calibration of parameters for the chosen model which uses historical data.
- Generation of data trajectories paths according to the chosen model or discretisation of the distributions using approximation of statistical properties.
- Conditional sampling of the trajectories so that a scenario tree with the desired properties can be constructed. (Mitra, 2002)

A novel scenario generation system, developed by Kyriakis (2002) is ScenGen (figure 3).

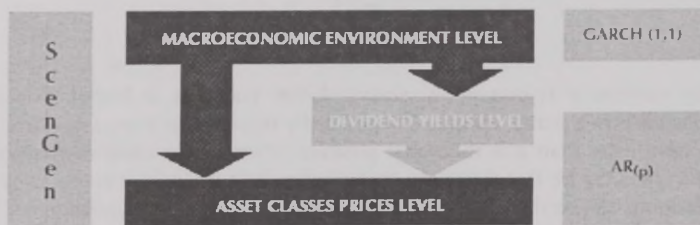


Figure 3. Levels and influences in the ScenGen.

In particular, it combines the GARCH(1,1) and AR(p) processes in such a way that it makes use of factors that influence the asset classes. The system is composed over three levels (macroeconomic, dividend yields and asset classes prices), and is used to generate scenarios for stocks, financial indices, industry sectors, Treasury bills, bonds and interest rate-linked liabilities.

Figure 3 illustrates the three levels of ScenGen, their interdependencies and the methodologies employed in the different levels to generate the data parameters.

The macroeconomic level lies at the top of the hierarchy and constitutes the core of the system. The rationale behind this is the observation that, in complete and integrated financial markets, the actions of the whole market and the prices of securities reflect all the available information. Furthermore, financial markets relate, to a great extent, to the economic situation not only in the country under consideration but also to the economies of other countries. (Mitra, 2003)

Therefore, explaining and replicating the economy of a country is the first step in obtaining valid information about the possible movement of the financial markets. However this information may not be sufficient to explain in full the movement of the financial market(s).

Consumer price index, long-run and short-run interest rates represent the macroeconomic environment, which translates into a closed-form economy, since an open economy requires the inclusion of the exchange rates dynamics. Despite this restrictive assumption, for the purpose of this study where we only concentrate on portfolios with domestic stocks, considering a closed economy does not negatively affect the quality of the generated scenarios. That is because extending the system to an open economy becomes crucial when considering internationally diversified portfolios. The three macroeconomic variables are only influenced by each other. Their outcome, however, affects the dividend yields on the second level and the variables on the third level.

The dividend yields level is second in the hierarchy. Thus, when moving from the macroeconomic to the microeconomic point of view, an investigation into the dividend policy of a company becomes essential. There are three reasons that make dividend policy interesting. First, dividend payout is one of the major financial decisions of a company. Further, announcements of dividends can influence the market sentiment positively, and vice versa. Finally, understanding the dividend policy helps decision makers in gaining a better insight of additional financial conditions and corporate policies of the company, such as asset price, capital structure, merger and acquisitions. (Mitra, 2003)

In the third level of the system, asset classes prices, there are two categories of variables:

1. those that are influenced directly only by interest rates; and
2. those that are influenced by both dividend yields and interest rates together.

The first set of variables consists of interest rate-linked liabilities, bonds, Treasury bills and cash, while the second consists of financial indexes, industry sectors and individual stocks.

Figure 4 shows how each of these stages inter-relate.

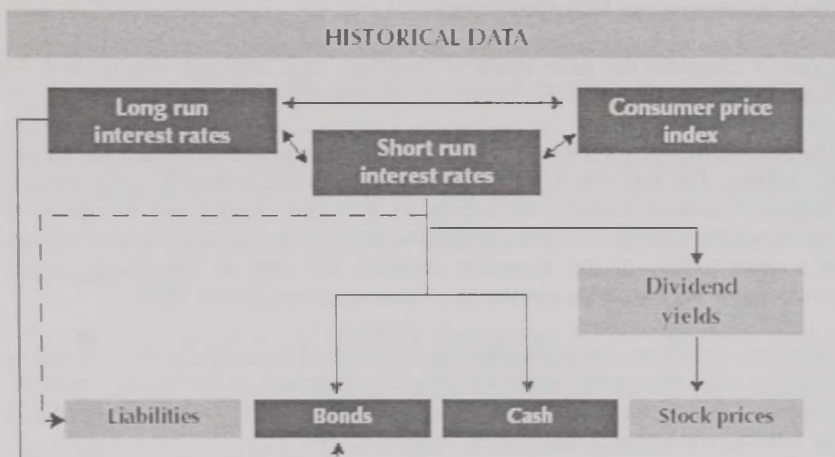


Figure 4. Inter-relation of levels in the ScenGen (Mitra, 2003).

## Conclusions

Asset and liability models are widely used by financial institutions to manage their assets and liabilities in order to achieve their business objectives.

Asset liability management attempts to find the optimal investment strategy under uncertainty in both the asset and liability streams. In the past, the two sides of the balance sheet have usually been separated, but simultaneous consideration of assets and liabilities can be very advantageous when they have common risk factors. By allocating assets such that they are highly correlated with the liabilities, one can increase returns and reduce risk.

The generalized autoregressive conditional heteroscedastic (GARCH) model is used to capture the conditional heteroscedasticity, or clustered volatilities, in time series with constant unconditional variance.

GARCH models enjoy such popularity because they are capable of describing not only the feature of volatility clustering, but also certain other characteristics of financial time series, such as their pronounced excess kurtosis or fat-tailedness.

GARCH and other time series methods create scenarios that severely overforecast the unconditional volatility at distant time periods. This creates a problem because ALM models should include scenarios far into the future. At longer horizons, it



appears more appropriate to generate scenarios that match the future volatilities implied by the market data.

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## Summary

### ASSET - LIABILITY MANAGEMENT USING GARCH (1,1)

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Asset liability management is very important process in every company. More popular it is in banks and insurance companies because they take on liabilities and invest the proceeds from these liabilities in assets. Every business company seeks to get any cash inflows but of course on this way it meets liabilities.

Asset liability management helps to identify companies' financial risks, to quantify financial risks and interactions between risks and compare alternative financial solutions.

Managers of financial firms more and more focus on asset liability risk. It is so not because the value of assets might fall or the value of liabilities might rise. It is because of the capital depletion. Such a process can be succeeded by narrowing of the difference between assets and liabilities.

Heteroskedasticity is an important concept in finance because asset returns in the capital and commodity markets often exhibit heteroskedasticity. The prices exhibit non-constant volatility, but periods of low or high volatility are generally not known in advance. But when we are able to predict a price volatility in any period then prices exhibit unconditional heteroskedasticity.

Estimates of asset return volatility are used to assess the risk of many financial products. Accurate measures and reliable forecasts of volatility are crucial for derivative pricing techniques as well as trading and hedging strategies that arise in portfolio allocation problems.

Financial return volatility data is influenced by time dependent information flows which result in pronounced temporal volatility clustering. These time series can be parameterised using Generalised Autoregressive Conditional Heteroskedastic (GARCH) models. It has been found that GARCH models can provide good in-sample parameter estimates and, when the appropriate volatility measure is used, reliable out-of-sample volatility forecasts.

## **Section II**

# **MANAGEMENT ACCOUNTING AND PERFORMANCE MEASUREMENT**

# **PERFORMANCE IMPLICATIONS OF STRATEGIC PERFORMANCE MEASUREMENT AT THE TOP MANAGEMENT LEVEL - EMPIRICAL EVIDENCE FROM A GERMAN STUDY WITHIN THE ELECTRICAL AND ELECTRONICS INDUSTRY-**

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## **Motivation and Research Questions**

The perceived inadequacies in traditional accounting-based performance measures have caused a still on-going discussion on performance measurement issues.

Whereas most of the existing empirical work examined performance consequences of modern performance measurement only at the organizational level, there has been little empirical work investigating possible outcomes at the individual level of top managers. To address this shortcoming this study focuses on the following two research questions:

- (1) What factors explain top manager's satisfaction with their available performance measures?
- (2) Do managers that are more satisfied with their available performance measures achieve higher levels of individual performance?

## **Hypotheses**

The use of information is widely recognised as being one of the most important managers' tasks. With regard to quantitative information performance measurement literature suggests that managers should be supplied with a balance of financial and non-financial performance measures from all important functional areas of the company.

Linkage between the performance measures supplied is supposed to increase managers' satisfaction with their available performance measures as this contributes to the understanding of the company and its environment.

For decision and control purposes the performance measures have to be delivered timely and calculated in an accurate way. Additionally proponents of the balanced scorecard approach argue that managers should have some key performance measures derived out of the firm's strategy at their disposal in order to control the success of strategy chosen.

The reasoning above leads us to the following five hypotheses:

- H1:** Measurement diversity of the performance measures positively influences managers' satisfaction with their available performance measures.
- H2:** Linkage between the supplied performance measures positively influences managers' satisfaction with their available performance measures.
- H3:** Timeliness of the performance measures positively influences managers' satisfaction with their available performance measures.
- H4:** Accuracy of the supplied performance measures positively influences managers' satisfaction with their available performance measures.



**H5:** The availability of key performance measures that are derived out of the company's strategy positively influences managers' satisfaction with their available performance measures.

Managerial satisfaction with their quantitative information available can be considered being an appropriate proxy for the overall quality of the supply with performances measures to top management, which in turn is expected to enhance managerial performance. Therefore we can formulate the following hypothesis:

**H6:** Managers that are more satisfied with their available performance measures yield higher levels of individual performance.

## Research Method

The data for this study is derived from a large scale empirical, questionnaire-based survey of top managers of manufacturing companies in the German electrical and electronics industry. This study focuses on a single industry as we can thereby control for the myriad of possible confounding variables that disturb cross industry studies. The German electrical and electronics industry was chosen due to its intense competitive environment in comparison to other industry sectors.

The high response rate of more than 30% allows representative conclusions for the German electrical and electronics industry.

As most of the constructs have characteristics of latent variables we operationalized them by measuring multiple indicators at 7-point Likert scales. Furthermore, we used LISREL 8.57 for hypotheses testing.

## Results

The results indicate that managers' satisfaction with their available quantitative information can almost entirely be explained by the five performance measurement characteristics investigated.

We find strong support for the hypothesis that managers with higher degrees of satisfaction with their quantitative information yield higher levels of individual performance.

Contrary to expectations, from the five factors investigated it is the accuracy of performance measures that has the strongest influence on managers' satisfaction and performance and not measurement diversity though being important for managerial satisfaction. The availability of performance measures derived from the company's strategy does not have any significant influence on the dependent variables examined in this study.

## Note

This is an extended abstract of a draft version of an unpublished working paper. Please do not quote or distribute without the permission of the authors.

# PERFORMANCE MEASUREMENT IN THE CONTEXT OF KNOWLEDGE ECONOMY

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## Introduction

The preconditions of knowledge economy have influenced global changes, which, consequently, had an impact on the nature of organizational equity. In the industrial century, the basic equity consisted of material resources<sup>1</sup>, namely factories and equipment, which were of value, as they were traded on the market. The value of equity, to a great extent, coincided with organisation's value in capital markets. Therefore, the management of organisation's value could be identified as the management of material equity and employees, i.e. human resources, who utilized this equity in the process of creating value. In the new knowledge economy, knowledge becomes the most important equity, which, usually, is not reflected in the organization's balance sheet. Hence, the measurement issues are determined by one essential attribute, namely, the variance in critical value-creating factors, which distinguish the old industrial economy from the new knowledge economy.

Thus, new measurement tools are in demand, which should assist in measuring, planning, evaluating and managing the value-creating process inside the organization. Furthermore, a dynamic and competitive climate urges managers to perfect their skills in global orientation, strategic flexibility and quick response to changes as a prerequisite of working under ever-transforming conditions, where an organization should be in the state of continuous development, responding to new technologies, new markets, new businesses, and new people (employees and consumers). The above-mentioned business environment and information access alternates the nature of market competition as well as determines particular information demand. Quick response and flexibility could be achieved, only if decisions are based on timely and adequate information, knowledge and experience in managing the external business environment and internal capacities of an organization.

Performance measurement, as management accounting function, with the help of IT is more accurate, detailed and systematic. Now organizations are able to accumulate measures and analyse lots of data, useful in different management areas. On the other hand, there is a threat to have too much information, which puzzles the decision makers.

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<sup>1</sup> According to the studies performed in the USA in 1982, the material equity of organizations comprised 62% of net equity, while in 1998 – only 15%.

The scientific problem of this paper is formulated as following:

*To what extent the information, generated in the process of performance measurement is applicable in Lithuanian organizations?*

The paper's aim is to discuss the functions of the process of organizational performance measurement under the conditions of knowledge economy and to disclose the peculiarities of it in Lithuania's organizations.

### **The role of modern management accounting methods in the performance measurement process of knowledge economy organization**

Knowledge economy had formed new economic relations and global changes, namely (1) the changing nature of organization's equity and value-creating factors, (2) dynamic business conditions dictating its rules in the competitive market. In this context, performance measurement is of paramount importance in dealing with economic and managerial issues.

Traditionally performance measurement is defined as the process of data identification, accumulation, measurement, interpretation and dissemination, the main aim of which is to provide information about value creation and ongoing improvement processes in the organization.

The main difference is that in knowledge economy conditions the information in performance measurement process should be generalized in the way, which could transform it into valuable knowledge about the internal opportunities of an organization. These opportunities alongside perceived knowledge about external environment conditions could serve as a beneficial background for further development of an organization. Organizational measurement process, which functions in dynamic business conditions, (a) is oriented towards the assessment of intellectual resources from the economic and sometimes specific perspectives, and (b) should ensure the following functions:

- **The function of data integration.** Performance measurement should ensure the integrated process of accumulating and further transforming data from all levels of an organization. This function could be performed in an organization when it has in its possession an appropriate selection of tools for measuring and monitoring performance results on all organizational levels.
- **The function of creating and upgrading adequate information and knowledge.** Performance measurement should ensure the creation and on-going upgrading of adequate bases (*data, information and knowledge*), which will be essential in further planning organizational performance and substantiating decision-making. This function will be performed when the generated information and knowledge in measurement process are adequate to the needs of management information.
- **The function of ensuring adaptation.** Performance measurement should assist an organization in adapting in the dynamic business environment. Information and knowledge about internal opportunities for an organization and changes in



the external environment through appropriate managerial decisions guarantee the organization's adaptation. The organization adapts because it is capable of improving its performance and its measurement process via the learning process.

These functions are realized with the help of three components namely 1) measurement, 2) control /analysis and 3) planning /decision making. As we argue that measurement as itself, it is meaningless if the information isn't analyzed and applied for decision making and planning.

According to scientific studies and research findings, performed in the fields of knowledge, management and organizational learning by I. Nonaka (1991), G. P. Huber (1991), P.E. Bierly, E. H. Keser, E.W.Christensen (2000), performance measurement process incorporates processes, during which the transformation of organizational performance data into information and knowledge takes place, which, consequently, properly adapted, become organizational wisdom. Data is converted into information in measurement process. Subsequently, in the control process, appropriately measured information becomes knowledge. If a manager is capable of adapting the available knowledge in organizational performance planning, knowledge in an organization could become wisdom. That means that the performance measurement process is data transformation process into information, knowledge and wisdom.

The permanent accumulation of data, transformation of it to information and knowledge and dissemination of it in an organization is performed by management accounting, therefore, on a permanent basis, an appropriate management accounting system ensures a steady operation of the performance measurement process and the maintenance of its functions in an organization.

Management accounting studies disclosed the significance of management accounting as a stimulus for organizational change and progress and substantiated the benefit of performance measurement process not only for financial results (*improving financial indicators, increasing market value*) but also for *ongoing performance improvement, communication and control* processes. This scientific field was researched from various angles by J. S. Demsi, S. Bainen (1987), R. Balakrishnan, T. Linsmeier, M. Venkatachalan (1996), T. Kennedy, J. A. Graves (2001), M. A. Malina, F. H. Selto (2001). Studies on organizational change, as a stimulus for management accounting changes, were aimed at determining volatile economic principles, which challenge changes in organizations and information demand, simultaneously considering its nature. Extensive research and comparative studies on these related issues has been performed world-wide, including post-communist countries<sup>2</sup>. These studies were based on conceptual contributions by

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<sup>2</sup> Studies on management accounting changes were conducted by Z. Hoque and T. Hopper (Bangladesh, 1994), T. Libby and J. H. Waterhouse (Canada, 1996), Alam (Bangladesh, 1997) Dent (World-wide, 1996), M. Granlund and K. Lukka (Finland, 1998), E. K. Laitinen (1999), S. W. Anderson and W. N. Lannen (India, 1999), J. E. Bailey (Hungary, 1995), T. Wnuk and



J. Innes, F. Mitchell (1990), B. Kellet, R. C. Sweeting (1991), J. B. Coates, E. W. Davis, C. R. Emmanuel, R. J. Stacey (1992), I. Cobb, C. Helliar (1995), J. Burns and R. W. Scapens (2000).

The research findings indicate that analogous ideas and methods on management accounting are used world-wide. Models of performance measurement systems, proposed by R. S. Kaplan, D. P. Norton (1996-2000), have broadened the spectrum of financial indicators by non-financial quantitative and qualitative measurements.

However, findings from national studies demonstrate that the changing environment of organizational performance has a direct impact on changes in management accounting, which, in due turn, are realized in close connection with projects on re-organizing internal management systems. Research has proved that new management accounting methods are promptly adapted by the business organizations in speedily developing countries (Lithuania could be allotted to this group as well; though, special in-depth research was not carried out in this country). Therefore, the greater is the demand for management change, the faster is the change in a measurement process. The adaptation of management accounting methods for a performance measurement in an organization directly depends on specific needs for information in an individual organization. It presumes that the adaptation issue of management accounting methods should be analyzed in relation to political, cultural and economic factors, which influence the managerial needs of an organization. Hence, the implementation of a theoretically descriptive method of management accounting into practice does not automatically imply its **outright functionality** in an organization.

Furthermore the full system implementation of the most popular management accounting methods applied in performance measurement (ABCM, BSC) is typically an expensive investment. Thus, according to some critics it is not usually an economically beneficial process. On the other hand, economic criteria are fairly important in the process of selecting management instrumentation (E. Palmer, D. Parker, 2001; R. B. Troxel, M. G. Weber, 1990).

There are cases when organizations, which have implemented such techniques, do not manage to fully resource all their capacities or these methods malfunction due to their incompatibility with the specifics of organizational performance, culture and values. Thus, there are authors, who propose not to implement concrete theoretically based systems, but to research criteria, which could assist in creating specific performance measurement systems in individual organizations (S. Globerson, 1985; B. Maskell, 1989; J. D. Wisner, S. E. Fawcett, 1991). This does not automatically imply that creation of specific systems would disclaim models, proposed on the theoretical level as well as applied in practice. Such an approach implies that every organization should individually deploy and implement principles of theoretical models in accordance with management needs for information.

From one point of view we claim, that modern management accounting methods are useful instruments for data accumulation and transformation into valuable knowledge. On the other hand we argue over that because of economic criteria and specific informational needs, organizations can create their own performance measurement process. The question is whether this process is functional while creating useful information and knowledge for decisions in different management areas. Summarising this theoretical review we hypothesize that the functionality of performance measurement doesn't always depend on the techniques used in this process.

### Method and results of empirical research

Application of modern management accounting conceptions in organizational performance measurement process and it's functionality will be discussed analysing data that were collected with the help of empirical research. The research of performance measurement systems made in Lithuania's organizations was performed in 2003-2004. The main aim of the research was to disclose peculiarities of performance measurement process and it's functionality in Lithuania's organizations.

Postal questioner was undertaken to collect primary data in this survey. The research population is confined to Lithuania's organizations. The research elements were performance measurement concepts, methods, instruments, means and procedures used in the organizations.

We formulated research question:

*What management areas performance measurement process is functional in Lithuania's organizations?*

Two independent variables were measured with the help of questioner namely 1) **functionality** of performance measurement system, presuming that wider range of application areas of information that is generated in performance measurement process means greater functionality of performance measurement process. These data will be used for future analysis in this paper and 2) **level of implementation** of modern management accounting conceptions (ABCM, BSC).

Level of modern management accounting methods implementation was estimated by making presumption that it depends on knowledge of the conception and implementation experience (see table 1). Respondents marked the most suitable situation for their organization.

In order to evaluate functionality of performance measurement system respondents were asked to mark the areas where they usually use information of performance measurement. We have listed 16 possible areas, which cover main management functions planning, control/process improvement, communication/ motivation and relations with environment.

The survey covers a total sample of over 200 organizations. 90 filled questioners were suitable for future analysis (feedback 45%).

35% of respondents are organizations that employ from 50 till 300 employees; accordingly 6%- form 300 till 500; 18% - 500 and more. 48% of the respondents, that took part in the research, are active in the market for ten and more years, 35% - form five to ten years. This parameter shows that practise of performance measurement is steady enough. Furthermore 52% of the respondents indicated that their turnover in the last year had grown for 50% and more. Fast growth reflects changes in structures and processes of an organization.

68 % of the respondents have heard or use ABCM; 37% of the respondents know or use BSC. ABCM conception is more popular than BSC. That means that problems of costing are more important than problems of strategy implementation in Lithuania's organizations. On the other hand 63% respondents don't know BSC.

**Table 1.** Evaluation of management accounting conception implementation level

Level of implementation	Points	ABC	BSC
Full system	5	21%	6%
Partly implemented system	4	17%	9%
Implemented but not used system	3	0%	0%
Failed to implement	2	0%	0%
Known but not implemented	1	30%	22%
Unknown system	0	32%	63%

**Table 2.** Evaluation of performance measurement functionality

Possible areas	Result
Harmonization of mission, values vision and strategy	31%
Adjustment of strategy and opportunities	32%
Adjustment strategy and long term objectives	31%
Tactical tasks formulation and adjustment with objectives	37%
Ongoing information about strategic achievements	27%
Ongoing information about tactical results	34%
Ongoing performance improvement	31%
Problems identification and solution	43%
Communication with shareholders	42%
Quality reward	9%
Background for incentive and motivation system	23%
Motivation of employees for better results	23%
Communication between managers and employees	26%
Incentive for collaboration and team work	23%
Mean to help employees better realize themselves	16%
Communication with government institutions and controllers	4%



**Table 3.** Evaluation of performance measurement functionality in different levels of management accounting conception implementation

Level of implementation	Functionality of ABC		Functionality of BSC	
	Average	Standard deviation	Average	Standard deviation
Full system	4,40	2,97	7,25	4,23
Partly implemented system	6,06	3,64	4,80	2,68
Implemented but not used system	0	0	0	0
Failed to implement	0	0	0	0
Known but not implemented	2,89	1,85	3,97	2,72
Unknown system	4,52	4,05	4,03	3,62

Low average of the whole sample functionality (4, 33) shows that managers are unaccustomed to use performance measurement information in their activities. According to the results it could be maintained that performance measurement process in Lithuania's organizations assists traditional management areas: problems identification solution (43%) and communication with shareholders (42%). It is logical that respondents don't see performance measurement system as a mean for communication with government institutions and controllers (4%). (They have financial accounting for this purpose). Though performance measurement process doesn't serve as a background for incentive and motivation system; communication between managers and employees (about 24%). Situation of strategic planning is better, because about 35% of respondents accept the role of performance measurement process for strategy creation, harmonization with mission, vision, values and adjustment with long and short term task.

Average of performance measurement process functionality is similar in organizations that use modern management accounting conceptions and in those that don't use them. (ABC case 4, 40 - full system; 6, 06 partly implemented system and 4, 52 – doesn't know about the system; BSC case 7, 25 - full system; 4, 80- partly implemented system and 4, 03 – doesn't know about the system). This result let us come to conclusion that these two variables are independent. It means that wide range of application areas of information generated in performance measurement process (functionality) does not mean that organization uses modern managements accounting techniques. Functional performance measurement process can be created by organization's members itself *on specific needs of the managers*.

## Conclusions

1. **Performance measurement process is functional if it assists organization in adapting to dynamic business conditions, stipulated by knowledge economy.**
  - The function of the performance measurement process in the organization, which operates under the preconditions of knowledge economy, is to ensure the integrated accumulation of data on performance results on all organizational levels. It also secures their on-going transformation into



information and knowledge, which, consequently, should foster the development of organizational activities in the future.

- Changing environment of organizational performance has a direct impact on changes in management accounting. Performance measurement is one of management accounting functions. Therefore, the greater is demand for management change, the faster is the change in a performance measurement process.
2. **According to the results of empirical research it could be maintained that implementation of a theoretically descriptive method of management accounting into practice does not automatically imply its outright functionality in organization.**
- Performance measurement process in Lithuania's organizations assists traditional management areas: problems identification solution and communication with shareholders. Though performance measurement process does not serve as a background for incentive and motivation system; communication between managers and employees.
  - Functionality of performance measurement process is similar in those Lithuania's organizations that implements modern management accounting conceptions (ABC, BSC) and in those that does not know about them.

The main limitation of the research is high level of respondent's passivity, because of great amount of surveys, preconceived negative position and absence of direct benefit; reluctance to answer some questions, because of intrusion to confidential information about organizations. Another limitation is that questioner was of high volume and it took a lot of time to fill it. Accuracy of the analysis and conclusions was depended on the correctness of the respondent's answers. Declaration that organization has implemented ABCM or BSC doesn't mean perfect interpretation of the conception. Implications for future are to disclose to what extent implemented model fit theoretical background of the conception, what is its content.

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## Summary

### PERFORMANCE MEASUREMENT IN THE CONTEXT OF KNOWLEDGE ECONOMY

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Knowledge economy had formed new economic relations and global changes. In this context, performance measurement is of paramount importance in dealing with economic and managerial issues. Performance measurement, as management accounting function, with the help of IT is more accurate, detailed and systematic. Now organizations are able to accumulate measure and analyse lots of data, useful in different management areas. On the other hand, there is a threat to have too much information, which puzzles the decision makers.

The scientific problem of this paper is formulated as following:

*To what extent the information, generated in the process of performance measurement is applicable in Lithuanian organizations?*

The paper's aim is to discuss the functions of the process of organizational performance measurement under the conditions of knowledge economy and to disclose the peculiarities of it in Lithuanian organizations.

The first part of this paper defines organizational performance measurement process, discusses the functions of it under the conditions of knowledge economy; the impact of this process on organizational learning and knowledge creation; short review of management accounting studies and implications of their result for performance measurement is as well presented.

The second part reviews the results of empirical research which was performed in 2003-2004 year. The main aim of the research was to disclose the peculiarities of performance measurement process and it's functionality in Lithuanian organizations. Postal questioner was undertaken to collect primary data in this survey. The research population is confined to Lithuanian organizations. The survey covers a total sample of over 200 organizations.

The results of the research highlight the peculiarities of management accounting methods applications for performance measurement in Lithuanian organizations. Finally, limitations of the study and implications for future research are discussed.

**Keywords:** *knowledge economy, performance measurement, management accounting, activity based costing, balanced scorecard.*



## **ARCTIC PERFORMANCE MANAGEMENT**

A case analysis on management and performance measurement practices in North-Russian SME's

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### **1. Introduction**

Barents Euro-Arctic Region has recently been an interesting area for many kinds of topics. The transformation process in Russia has brought about a new dimension to the scientific, cultural, political and business relations between the four countries in the Northern Europe. The inhabitants in the North have understood the importance of horizontal contacts between Norwegian, Swedish, Finnish and Russian people and organizations. In recent years many people have moved to the Southern parts of their countries, but Barents region has huge resources, and by joining the forces the people, and business and other organizations can forward the positive development of the Arctic periphery.

My first contacts with Russian businesses started in December 1992, and since that I have been following the development of Barents region businesses with great interest. In Western parts of Europe the importance of small and medium sized enterprises (SME's) has increased and today SME's are also an interesting topic for research. The Russian parts of Barents region have been characterized by big industries, but since the collapse of Soviet Union, the role of SME's has increased also in North of Russia.

The main perspective of this qualitative study is that of accounting, but I have studied the seven case firms with multiple lenses. My view is holistic and I am studying accounting and performance measurement as a social practice, not as an isolated structure. Accounting is not seen as a method but rather as a philosophy, as an integrated part of the business, as the language of business. The theoretical background lies in the structuration theory, the stakeholder theory, and the contingency theory. In addition I have studied the entrepreneurial orientation of the case firms using a configurational approach.

The four theories have many similarities and differences. What is common for the four theories is that with their help it is possible to study the interplay between the firms, and the external (legal, social, political and cultural, creditors, suppliers, customers etc.) and internal (HRM, customer orientation, structures, processes, etc) factors. It is not only the context that influences the businesses but it is also the businesses that influence the context. Both the external and internal factors then influence entrepreneurial orientation, the strategic planning, and the implementation and monitoring of the strategies. This process in the end becomes a (double) loop because the results of the monitoring then influence the strategic and operative planning.



## 2. Goals and research method

The aim of this interpretative case study was to find out what are the special characteristics of the business milieu in the Euro-Artic regions of Russia, what are the external and internal elements that influence the businesses, and how and why do these elements influence the entrepreneurial orientation, the strategic planning and the performance measurement in the seven case firms.

The interviews took place between November 2002 and February 2005. The main case company was visited three times, the other six once or twice. In the main case company, a retail and wholesale group, I had access to confidential material and had the possibility to interview managers on different levels. In three other companies, the management team was interviewed. The main focus was still on the entrepreneur/managing director interviews.

## 3. Theoretical background

### 3.1. Performance measurement

Earlier most management accounting information system research focused on financial performance measurement systems. Nixon, Laitinen and Wingren say in their article "Control and the Twenty-First-Century Firm" (2002) that in the new economy not only has uncertainty increased but power shifted from shareholders to knowledge workers and customers. Therefore, knowledge management and control of intellectual capital are very different from financial management and control of tangible assets.

Based on the Balanced Scorecard, Kaplan and Norton (1992) have suggested that the linkage between financial and non-financial measures is extremely important. The essence of their approach is that the drivers of financial performance are the relationships a company develops with its customers and that the internal processes that it designs and manages to achieve customer satisfaction define and shape customer relationships. Kaplan and Norton develop a model of how process results create customer satisfaction that, in turn, creates owner results (Kaplan and Norton 1996, 2001, 2003).

Customers, employees, suppliers and the community are important because they help the company achieve its primary objectives by giving it what it needs to pursue the strategy designed to achieve its primary objectives. If increasing shareholder wealth is the organization's primary objective, meeting requirements of the other stakeholders are secondary objectives. Failure to achieve secondary objectives will cause the stakeholder group to withdraw its contribution from the organization, thereby impairing its ability to achieve its primary objectives.

A performance measurement system helps members understand and evaluate the critical factors for success. According to Atkinson et.al (1997, 36) primary performance measures are the shareholders objectives, which are related to increasing owners' wealth. The secondary objectives are those performance

elements that explain or drive performance on primary objectives. Therefore, the measurement of secondary (often non-financial) and primary (financial) must be in balance.

In addition to the *Balanced Scorecard*, other multidimensional performance measurement frameworks have been developed. *Tableau de Bord* has been in use in France in more than 50 years (see e.g. Bessire and Baker 2004). The idea is that it represents the minimum set of indicators that allow the manager to successfully operate the physical and human assets that are under his or her responsibility. The *Determinants and Results matrix* was originally introduced to service businesses. The matrix is divided into six performance dimensions; competitiveness, financial performance, quality of service, flexibility, resource utilization, and innovation (Fitzgerald et.al. 1991). The matrix emphasizes the notion that improvements in quality, for example, may not affect the financial results in the current period but if these quality improvements are valued by customers the financial results should improve in the future (see Kasurinen 1998, 38). The *Performance Pyramid* is divided into three levels; business unit, core business process, and department, groups and work team level. Lynch and Cross (1991) argue that measures should be developed into all levels of the company hierarchy and that there should be a distinction external and internal effectiveness. The *Performance Prism* (Neely et.al., 2002, Marr et.al. 2004) is based on the belief that those organizations aspiring to be successful in the long-term within today's business environment have an exceptionally clear picture of who their key stakeholders are and what they want.

Nixon et.al. (2002) conclude that despite the lively discussion during the last 15 to 20 years in strategic management accounting and performance measurement literature, there seems to be a broad consensus that an effective measurement system

- is driven by customer needs,
- has a strategic orientation,
- reflects critical success factors,
- is balance between financial and non-financial, quantitative and qualitative, objective and subjective measures,
- is comprehensive yet simple and transparent,
- measures should relate to variables that can be influenced by those whose performance is measured.

There is also a general consensus that there is no universal solution and that a performance measurement system must be customized and used appropriately for each situation (Lynch and Gross 1991, Kaplan and Norton 1992, Nanni et.al. 1992).

### 3.2. Stakeholder theory

The basic assumption of stakeholder theory is that values are necessarily and explicitly a part of doing business. In their paper Freeman et.al (2004) conclude that truth and freedom are best served by seeing business and ethics connected. The focus of stakeholder theory is articulated in two questions:

1. What is the purpose of the firm? What are the shared values that bring the stakeholders together?
2. What responsibility does management have to stakeholders? How management wants to do business and what kinds of relationships they want and need?

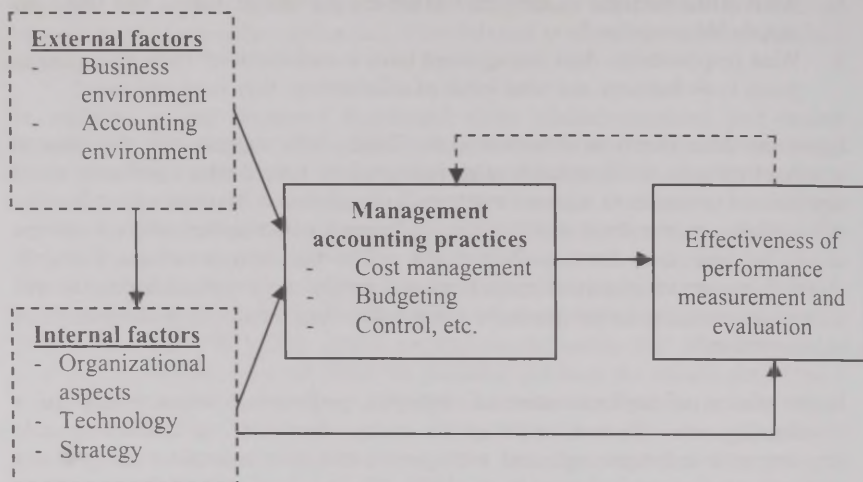
Based on these questions Freeman et.al. (2004, 365) suggest that the core of stakeholder theory is: "Economic value is created by people who voluntarily come together and cooperate to improve everyone's circumstance. Managers must develop relationships, inspire their stakeholders, and create communities where everyone strives to give their best to deliver the value the firm promises. Certainly shareholders are an important constituent and profits are a critical feature of this activity, but concern for profits is the result rather than the driver in the process of value creation."

In the process of implementation of strategies, performance measurement has a coordinating role (focuses attention on main objectives), a monitoring role (measurement and reporting), and a diagnostic role (for example employee and customer satisfaction) (Atkinson et. al. (1997, 30). Stakeholders help the company to achieve its primary objectives by giving it what it needs to pursue the strategy designed to achieve its primary objectives. The aim of performance measurement is to monitor, how well the business has succeeded in this, and what should be done to improve the situation.

### 3.3. Contingency theory

Contingency theory assumes that the design and use of management control systems is dependent upon the context of the organizational setting. A better match between the control system to the contingency variable is hypothesized to result in increased organizational performance (Fisher 1998, 47 – 48). Contingency theory assumes that there is no universal control system which is optimal in all settings and firm, the appropriateness of different control systems depends on settings of business. The extreme situation-specific approach argues that the factors affecting each control system are unique so that general rules and models cannot be applied. The researcher is forced to study each firm and control system individually, and supporters of this rationale tend to do case research. (Fisher 1998, Anthony and Govindarajan 2001, Drury 2004, Hofer 1975, Chenhall 2003, Chapman 1997, Khandwalla 1977, Merchant 1990, Hartman 2000, Gupta and Govindarajan 1984, Simons 1987).





**Figure 1.** Theoretical framework of the contingency approach (adapted from Haldma and Lääts, 2002, 384).

The strength of the relationship between entrepreneurial orientation and performance depends on the characteristics of the external environment as well as internal characteristics. The logic of the configurational approach rests on the premise that firms that are able to align certain firm attributes such as strategy and organizational characteristics (structure, processes, capital) with the characteristics of the environment outperform other firms. In their research Wiklund et.al. (2004) are interested in the three-way interaction between entrepreneurial orientation, the elements of resources and the environment. They found that access to capital and the dynamism of the environment are important for small businesses, and when combined with entrepreneurial orientation the configurational approach explains variance in performance.

### 3.4. Structuration theory

Anthony Giddens is a sociologist and an active writer, and is famous for instance for his theory of structuration (1984, 1989), which has been used as basic theory and framework as well in management (see Whittington 1992), management accounting (see Scapens et.al. 1996, Ahrens 2002) and in entrepreneurship research (see Jack et.al. 2002).

To study social practices, it is necessary to look to the relationship between day-to-day social action and various dimensions of social structure (Ahrens et.al. 2002, 5-6). Giddens calls the totality of practices to which systems give a form, "structure". The key of his structuration theory lies in the characterization of structure and



particularly its relationship to practices. Structures should be located in their wider social context and examined how they evolved through time. This means for example, that I am trying to find out how performance management is conditioned by the socio-economic system in the North of Russia, if there are rules which structure certain types of behavior in the businesses. Performance management as such is an outcome of organizational activities. As much in times of planned economy, it is also in modern businesses used to legitimize particular forms of organizational activities and as a source of power for particular groups within the organization.

Referring to Giddens, Ahrens et.al. (2002, 6) point out that it is necessary to locate current practices in their historical, economic, and organizational contexts. In this way also I adopt a holistic view in which performance measurement is a part of a unified social system and a build up a picture of, how the various elements contribute to the design of a particular system.

Jack et al. (2002, 470) argue that to understand entrepreneurship, we must take account of both structure and agency; we can then appreciate how societal influences shape entrepreneurial agency and how agency redefines or develops structure. In their paper they narrow the concept of structuration to the notion of embeddedness to explore how entrepreneurs use structure in the creation and operation of their businesses.

Embeddedness is a process of becoming a part of the structure. It means more than developing social networks, although it is through these that social endorsement and acceptance occurs. The level of embeddedness in the local environment is determined by the networks, ties and relationships of the entrepreneur. Thus, social networks provide the mechanism for becoming embedded. The process of embedding is about establishing those social relationships which enable the entrepreneur to become a part of the local structure. Being embedded creates opportunities. The opportunities exist within the structure and only become manifest by the action of entrepreneurial agency. Through embeddedness, conclude Jack et.al (2002, 479), entrepreneurial action converts "limited" resources into a "rich environment". "Being embedded in the social structure creates opportunity and improves performance."

#### **4. Preliminary results**

##### **4.1. Changes in the business context**

In Murmansk and Archangelsk oblasts the number of inhabitants has decreased dramatically since the collapse of USSR, but the situation has stagnated in the beginning of the new millennium. The enormous resources and the interest of foreign and domestic investors, the increasing contacts with enterprises in other parts of Barents region and with other international partners, give a new look for the rise of the economy. Alongside the traditional big industries, the entrepreneurship is seeking forms which differ from many other geographical areas because of location, climate, infrastructure and other factors. The role of big industry and specially the

military sector will get smaller. The big industries cannot employ as many people as they still do. Therefore, the importance of SME sector will increase in near future.

In transitional economies, the external environment was considered unstable and often hostile by SME's during the 1990's, and some certain key resources, particularly capital, were missing (Smallbone et al., 2001, 260). The entrepreneurial climate in Archangelsk and Murmansk has changed to a positive direction during the last years. The interviewed managers of this study consider the relations with local and regional administrations today much more flexible, and the cooperation with the banks easier than before.

#### 4.2. Changes in the entrepreneurship and management style

According to Wiklund (2005, 72) the relationship between entrepreneurial strategic orientation and performance depends on the characteristics of the external as well as the internal environment. In Russia the future entrepreneurial environment may be uncertain but businesses cannot ignore it. Planning of future takes the business from the short-term thinking, and helps it think about long-term trends and changes in its environment. The Russian entrepreneurs sometimes prefer to learn by doing and take short-term approach to decision-making, reacting to events as they occur. However, in an uncertain environment, planning by having a look in the future changes in the business context is a lot cheaper than making mistakes. "We have to change even more quickly than the external situation."

"The biggest differences between the Russian and Western business are distances, management culture and Russian mentality". The traditional Russian leadership style still partly seems to exist in Murmansk and Archangelsk (see also Puffer 1996). The managers and employees discuss issues in an open forum. In one case firm, the work procedures and the relationships between individuals were not formally established, and the managing director considered himself as a team member, and coach of the "football team".

In most case companies it would be important that the managers learned to delegate some tasks so that they could concentrate on strategic decision making. Personal relationships can help individual companies to solve several problems. First of all, relationships are more important than capital. Secondly, relationships can be used to increase inter-firm security and thus predict risks.

In an uncertain business context, it is difficult to realize strategic thinking. "It is impossible to make strategies in the uncertain environment, it doesn't work in Russia at the moment."

All the managers of the case companies are also entrepreneurs, i.e. founders and owners of their businesses. As the business grows, the manager/owner has a multiple role as creator, leader, entrepreneur, navigator and coach. One manager said she is like a *partisan*, who knows the right path but who goes around and around. She

doesn't go far from the right path, but stays quite near. She doesn't take the direct path because of the uncertain and changing conditions.

In all case companies, the entrepreneurs themselves have lot of energy and enthusiasm, but the difficult task they have is, how to inspire the employees, how to motivate them to reach the commitment to objectives and strategies. When the business grows, more empowerment is also needed and some managers give more responsibility. Russians like to work in teams, and two case companies use team-work in an efficient way.

The performance is linked to the strength of a company's *corporate culture*. Two of the case companies stress the importance of skilled employees and unifying organizational culture. The human capital is seen as the company's most valuable resource which can be seen for example in the list of values of a case company:

1. ☐ omake the culture in every division the same, so that all employees can feel in another division like in their own.
2. Effective interaction between divisions and between people in divisions.
3. Profitability, and the social safety of the personnel and personal development of every employee.
4. To be the leader in quality in the sector
5. Rising of intellectual capital of the company.

#### 4.3. Strategic thinking and performance measurement

The stakeholder theory, the contingency theory and the configurational approach all stress the importance of environmental and organizational factors in strategic planning and performance measurement processes in SME's. This case study has focused on the special characteristics of the Russian part of Barents region. In the economy of transition the firms have been living in an uncertain entrepreneurial milieu, and also internally the firms have met many challenges. The practices have evolved in a continuous interplay with the external and internal elements. The entrepreneurs have used their tactical nose when navigating the firm towards the goals. One entrepreneur said she is like a partisan, who cannot take the shortest way to the goal.

The main case company of this study is an example of a firm which has succeeded in this navigation. The owner/manager of the company started by selling lemons in the streets of Archangelsk, but has with determination managed to create a well performing retail and wholesale trade group. Today the company is in the stage where more formalized systems are needed and the company has a new organizational structure. To be able to increase the accountability and empowerment, the owner/manager has also started a process of designing a performance measurement system. Many of the factors such as marketing, customer service, brand building and staff training are already well organized. The owner/manager has also created an exemplary network of external stakeholders for



instance by giving "golden cards" to the important people in regional and local administration and by taking actively part in local politics. The participation in charity is a part of the strategy. These actions the company have increased the embeddedness with the local business environment.

In regions of transformation the socio-cultural factors, such as the big differences in purchasing power between people (some rich, most poor, the middle-class growing), and declining population, must be taken into account in business planning.

One of the case company owner said it is impossible to make strategies in the uncertain environment. During the transition the main external challenges have been the legislation, taxation, and attitudes and actions of the regional and local officials. Since the year 2000 there has been a positive change in all of these and future perspectives of entrepreneurship locally look brighter but federally the business climate is still quite uncertain. The competition is getting tougher, but the local companies have, after years of mutual fighting, joint there forces against newcomers from the South and abroad.

The case companies have been among the first ones to set up a business on their fields; bier brewing, retail and wholesale, ICT services, tourism and window manufacturing. Two case companies, an airport service company and a hotel, already existed in Soviet time. All seven companies have managed to consolidate their positions in the regions and have also managed to grow. Internally the biggest challenges have been:

- human resources management; Russian mentality, shortage and competition about skilled labor, how to work in teams, continuous training,
- logistics; long distances, bad roads, harsh climate,
- customer orientation; customer service, how to find the different target groups,
- accounting; because of the tax link two sets of accounts are still in use, does not serve needs of decision making; education and training based on big industries.

The communication systems in all case companies are still quite informal. When the companies grow, more formalized structures are needed, which means that also more structured accounting are needed. From the interviews and the discussion above the conclusion can be drawn that many elements of an effective performance system already exist in the case companies. For instance in the main case company the new management structure was set up recently and the company is starting to design and implement an information system which helps the management to monitor how well they have succeeded in the implementation of the new structure. It should just be noted that this kind of work cannot only be done by one person. It should be a process where managers and other employees of all departments can participate to ascertain the accountability and commitment.



The main case company, a retail and wholesale business, is in an interesting face. They have started to diversify and have started a completely new type of business, fish processing. The managing directors said they are good in management, marketing and brand building but have much to learn about the processes, and therefore would like to get help from similar businesses in the Nordic countries.

Some case companies are in close cooperation with local vocational schools and universities. Even if the contacts (staff and management training) work relatively well, the owners of the SME's said that the education and literature, especially in accounting, is too much focusing, for instance in cost management, and on big manufacturing corporations. Therefore a suggestion was made that a network of Barents region SME's, universities and different organizations should be knit. In this network all member organizations would learn from each others.

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## Summary

### ARCTIC PERFORMANCE MANAGEMENT

A case analysis on management and performance measurement practices in North-Russian SME's

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Structuration theory, stakeholder theory, contingency theory and the approach of entrepreneurial orientation all claim that what ever the ultimate aim of the business activity, managers and entrepreneurs must take into account the legitimate interests of those groups and individuals who can affect (or be affected by) their activities. Business is about putting together a deal so that communities, shareholders, suppliers, customers, and employees all win continuously over time. All stakeholders must be traveling to the same direction.

In Russia the regional cultures differ substantially from each others and therefore I have studied the characteristics of the Murmansk and Archangelsk region. The political changes are often very hard to separate from economic conditions and therefore their contribution to the total effect is hard to determine. In Russia the, however, the political decisions on federal, regional and local level have influenced the development of entrepreneurship, as can be seen in one of the case businesses. In early years of transition, entrepreneurial behaviour was viewed with considerable suspicion, entrepreneurs were seen as antisocial, self-seeking and acting unethically, if not illegally. During the last 14 years the entrepreneurial environment has changed to a more positive direction, and private businesses are seen as an important part of the society. All parties should benefit from a fruitful cooperation.

From performance management point of view it is important that the environmental and organizational characteristics are taken into account when planning, implementing and monitoring strategies in an uncertain business milieu.

The interviews of seven SME's in Murmansk and Archangelsk indicate that factors such as enthusiasm, team-work, envisioning, entrepreneurial touch, informal communication, customer orientation, and networking are characteristic for most case company managers. The owner-managers also follow closely the changes in the environment.

Factors that most, if not all managers, could put more emphasis on, are training of young managers and other employees to motivate them and to learn to understand the business in general, long-term planning, internationalization, and use of accounting information, financial and non-financial, in decision making. In other words, all case companies are in such a stage, that they should move towards a more formalized approach of process development. It seems that all interviewed company owners are good practical strategists, and also that they have understood the role of team-work to achieve better performance. The role of the entrepreneur in this phase is multiple; he or she should be a creator, a leader, an architect and a coach.

To conclude, accounting is the language of business and accounting systems are structures in practices of social interaction over time. In this development process of social interplay many external and internal elements need to be taken into consideration. This qualitative research has tried to highlight the special factors that the SME's in the Russian part of Barents region have to take into account when developing their business processes, strategic planning and performance measurement.



# INTELLECTUAL CAPITAL PERFORMANCE MEASUREMENT: QUESTIONING ITS APPLICABILITY TO THE FIRM LEVEL MANAGEMENT

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## Abstract

The purpose of the paper is to study the applicability of intellectual capital performance measurement (ICPM) system to firm level or lower level management. The empirical evidence is given by case study in high-technology company. Present paper argues that no unique and definitive set of measures can exist at the firm level management – different business units have different strategies and develop their own competences, capabilities and skills. It is difficult to develop ICPM system that can be applied to the firm level management consisting common IC measures for all business units. The paper argues that intellectual capital measurement should be adopted at business unit, department or project level management in order to reach common language and understanding of performance measures.

## 1. Introduction

The literature of IC comprises variety of terms and interpretations, which makes the concept too complex, dynamic and very fuzzy (O'Donnell 2004), discussing the issues of IC on a very abstract level (Kaufmann and Schneider 2004). The abstractness and fuzziness can be also found in practice, where the common language of IC is difficult to reach. One reason for difficulties is that existing approaches try to measure IC performance of the organization as a whole and do not account for individual departments or knowledge workers (Bontis 2001). The IC has been regarded as belonging to the domain of top management, but it has to be considered that strategy formulation and implementation take also place at the level of the strategic business units (Govindarajan 1988, Govindarajan and Gupta 1985, Gupta and Govindarajan 1984, Hambrick 1980) considering also operational strategies (Langfield-Smith 1997).

The purpose of the paper is to analyze the applicability of IC performance measurement at the firm level and business unit level of management. The paper suggests that IC measurement should be implemented at business unit level or department level management in order to reach common language and understanding of ICPM. The empirical evidence is given focusing on the biotechnology company. The remainder of the paper is organized into a three section. The next section reviews the IC concept and its relations to the strategy. It presents arguments, why is it complicated to apply ICPM at the firm level management. The overview of the case study gives practical implications and the last section reaches the conclusions.

## **2. Theoretical background**

### **2.1. Intellectual capital concept**

As the management control has nowadays focused more on the control of strategy through comprehensive performance measurement systems, the implementation of ICPM has become more attractive topic of discussions and research. Several authors have encouraged measurement and reporting of IC to improve IC management and gain better performance (Andriessen 2004, Bontis, et al. 2000, Edvinsson and Malone 1997, Edvinsson and Sullivan 1996, Hudson 1993, Lev 2001, Roos and Roos 1997, Roos, et al. 1997, Sullivan 1998, Sveiby 1997).

Many authors agree that management control systems (MCS) should be tailored explicitly to support firm's strategy that lead to competitive advantage and higher-level performance (de Haas and Algera 2002, de Haas and Kleingeld 1999, Dent 1990, Langfield-Smith 1997, Simons 1987, Simons 1990). The ICPM systems should follow this notion. Despite of the active discussions, there has still been little research about the linkage between intellectual capital concept and firm's strategy (Nilsson and Ford 2004).

There are two theories of strategy that are closely connected to the concept of intellectual capital: the resource-based view on strategy (Barney 1991) and the network theory of competitive advantage (Dyer and Singh 1998). Both of these theories agree that firm's resources are the main sources of competitive advantage. According to the Nilsson and Ford (2004): "Within the resource-based view on strategy the analytical object is the resource configuration of the firm; not just the resource configuration, but also the activation of this resource configuration. Resources need to be activated to generate value and become the basis for competitive advantage". In addition to theories of strategy, knowledge-based theory suggests that knowledge and capability to create and utilize such a knowledge are the most important sources of competitive advantage (Henderson and Cockburn 1994, Prahalad and Hamel 1990). Therefore, the emphasis is mainly on non-financial resources and capabilities that are needed to control and develop.

In speaking of firms non-financial resources that are in the hart of IC concept, one can ask what is different in IC approach and Kaplan's and Norton's (1992, 2000, 2001) balanced scorecard (BSC), where non-financial measures comprise essential part of the system. There are considerable differences between scorecard type of measurement systems and intellectual capital concept. Mouritsen et al. (2005) suggest that BSC and the intellectual capital approach as comprehensive performance management systems behave differently due to the very different notions of strategy. The BSC is based on competitive strategy (Porter 1996) but intellectual capital focuses on competency-based strategy. According to the concept of IC, gaining better performance and competitive advantage is based on development of firm's competencies. Competencies are seen as the main sources of competitive advantage. Second difference between IC and MSC is that BSC takes indicators as causally related, whereas IC concept takes resources as bundled and complementary (Mouritsen, et al. 2005).

## 2.2. Hindrances in developing the system of ICPM

The existing literature seems to suffer from a lack of common language and understandability due to the heterogeneousness and ambiguity of the IC concept. Therefore, the literature gives no clear reference, how ICPM system should be developed in practice. Many authors refer to the lack of proper definition (Bukh, et al. 2001, Grasenick and Low 2004, Kaufmann and Schneider 2004). Bukh et al. (2001) claims that no unique definition for intellectual capital exists. The boundaries, constituents and definitions of IC vary according to the perspectives of the different interest groups considering them (Grasenick and Low 2004). O'Donnell (2004) has even claimed that "we have no consensus yet on what intellectual capital is...". Therefore, IC comprises different meaning for the different authors.

The plurality of interpretations has created the situation, where the numbers of theoretical IC measurement frameworks have been developed but no widely accepted measurement and reporting model exists. Kaufmann and Schneider (2004) have studied existing literature in the field during the period 1997- 2003 and found that 60 percent of the literature includes theoretical explanations. The existing models have at least 18 different purpose that they are proposed for (Andriessen 2004), being with unclear structure, lack of widespread acceptance and limited dissemination (Kaufmann and Schneider 2004). In addition, the emphasis of several models proves to be merely on a theoretical categorization of IC components. These categories are quite board and stay on a very abstract level with no direct guidance which goods and resources belong to each category (Kaufmann and Schneider 2004).

In the middle of the confusion about IC terms and frameworks, the categorization of human, structural and relational capital (referred also as a customer capital) has emerged and gained wider acceptance. The approach has been favored in theoretical discussions by many authors (M'Person and Pike 2001, Sveiby 1997, Viedma 2001), but its applicability in practice should be questioned. The notion of Carson et al. (2005) should be considered, according to which "...intellectual capital is not just the sum of human, structural and relational capitals, but rather, is that sum plus the interaction of human and structural, structural and relational, and human and relational capitals, respectively". Additionally, considering the number of different resources and employees, as well as processes and activities in the company, the Mouritsen and Larsen (2005) have stated: "The person is always entangled and bound up in relations, and therefore it is not possible for the firms to separate between the functions of human, organizational and customer capital". As resources exist in bundles (Dierickx and Cool 1989, Lippman and Rumelt 1982), it is impossible to implement any theoretical categorization, but follow the firm's own notion of intellectual capital. Therefore, the existing categorizations should be taken only as metaphors, as stated by Mouritsen and Larsen (2005): "The boundaries between human, organizational and customer capital blur and it is difficult to uphold them as more than metaphors".



As resources are in bundles and IC has different meaning for different persons, it is questionable, if any general categorization and measurement model can be produced to develop a general system of ICPM. As no unique and definitive model of IC reporting can be identified, ICPM needs to be adapted to the specification of each firm (Bukh, et al. 2001). The question remains, how can the common understanding of IC be achieved inside the firm with different managers, processes and activities? As for authors of intellectual capital field, the intellectual capital can also comprise different meaning for different organizational members. In order to measure IC, specific context needs to be identified, because "...the boundaries, constituents and definitions of intangibles vary according to the perspectives of the different interest groups considering them" (Grasenick and Low 2004). Therefore, it is more likely that common understanding and goals of IC can originate at lower level management, for example business unit level or level of department.

### **3. Case study**

#### **3.1. Research method**

Much of the research reported in the field of intellectual capital is based on case studies. Single case study method has been also used to achieve the research objectives in present paper. The case company is an innovative biotech company focusing its activities on molecular diagnostics and pharmaceutical research, providing high quality molecular diagnostics services in the field of sexually transmitted diseases. With the team of 25 persons, it provides medical diagnostics services, runs the technology development programs and performs as a technology and service partner for biopharmaceutical industry.

Multiple sources of evidence were used during the period of January - May 2005. These include: artifacts, interviews, observations and meetings. Interviews, both structured and unstructured, and meetings are tape-recorded. Two persons were interviewed: Chief Executive Officer and Director of R & D, comprising 6 hours of interviews. The role of the researcher has been considered as facilitator (Ryan, et al. 2002).

#### **3.2. Description of the case study**

The general consensus in management team was that financial measures of performance do not give enough information for decision-making in strategic management. Managers expressed the additional need for systematic way of handling and measuring intellectual capital performance to control operations and activities to manage firm's strategic goals. The main purpose of IC performance measurement was agreed to be as a planning and control tool, which enables to evaluate achievement of company's objectives.

Before designing IC performance measurement framework, the key areas of IC had to be identified. The managers identified main competencies that needed special attention to achieve company's objectives. The main competences were specified as technical competence, management competence, marketing competence, production



competence, and network competence. Managers also addressed most important skills and capabilities that were of main importance to achieve these competencies.

In context of most popular classification of IC dimensions (as human, structural and relational capital), technical and management competencies refer to the human capital dimension. Marketing and network competencies can be considered as the relational capital but it might also be interpreted as the human capital, because these factors refer to the knowledge and skills of employees. The technical capacity refers to the structural capital and also to the human capital because it includes several aspects from both dimensions of intellectual capital. The categorization also depended on the level of management. For example, some skills and capabilities of network competence were more reasonable to classify into the human capital category at the project level of analysis, but into the relational capital at the firm level management. Therefore, no complete categorization was implemented.

Despite of open-mindedness and enthusiasm that managers had during the identification of the main competencies, it was still difficult to find a consensus on substance of those competencies because they tended to speak about different knowledge, skills and capabilities. In addition, both managers tended to change the content of listed competencies and speak about slightly different skills and capabilities after some time. For example, there were several occasions during the interviews, when managers were slightly confused about some capabilities that were discussed in previous interview. Sometimes they did not understand their own thoughts and logic that they developed in previous meetings. After reminding them previous discussions, they understood and agreed but occasionally they even changed their view and logic – the explanation and logic of IC had changed in their minds. These situations led to the notion that understanding of IC was changing continuously during the case study.

During the discussion about the competencies, it came more and more clear that they are not actually dealing with the firm level competencies, but these were more like set of different unit and project level competencies that were aggregated together. The capabilities and skills, that were listed, were merely words, i.e. the “signs” that were carrying different meaning to the different persons at different time. The main reason of emerging such a situations was that, speaking about some capability or skill, managers always approached to the issue thinking in the context of concrete business unit or even concrete project. As business units had different strategies, the competencies, capabilities and skills were also differently managed. Therefore, there were very difficult, or even impossible, to find a consensus about the firm level capabilities and skills. These were identifiable only at the unit level management. In addition, in order to reach the common understanding during one discussion of IC, many capabilities and skills needed a specification of concrete project. The common understanding was not reachable at the firm level.

As every firm level measure needed additional explanations and specifications, these additional specifications always led the discussion to the unit level or project level of business. The difficulties at the firm level IC measurement were also caused

by the issue that competencies, capabilities and skills were very closely connected. The managers referred to the notion that there was no capability, which was useful without other capabilities and skills. Therefore the existence of several interdependencies between intangible resources made firm level identification and measurement of main competencies and capabilities very difficult. The consensus was reached that IC does not have a value *per se*. It has only value and usage in concrete context. This context can be found usually at lower level of management, where common language and understanding is more easily achievable and measures are not so ambiguous.

In addition to the shift of lower level management, the discussions and meetings were needed in order to guarantee the common interpretation of measures and evaluation against business unit objectives. It became clear that discussion meetings were necessary in evaluating the reports to make sure that the results had common meaning to all related parties. The other purpose of discussion sessions was the consideration of firm level objectives in designing business unit measures to ensure that development of business units' strategies and competencies are consistent to firm level objectives.

#### **4. Discussion and conclusions**

The present paper refers to the notion, according to which IC performance measurement is preferred to apply at the business, department or even project level of management. The first reason is, that strategic business units and departments have different core competencies. In designing ICPM system, one must consider that as a strategic business unit evolves, it develops unique competencies (Prahalad and Hamel 1990). Govindarajan (1988) argues that different business units often pursue different strategies and the administrative mechanism for those businesses should differ.

Secondly, performance measurement systems may also hold different meanings for different organizational members. There may exist different understandings and concerns of performance measurement at operational and firm level management (Ahrens and Chapman 2002). To diminish these differences in comprehension of performance measurement, discussion sessions are necessary. It helps to reach the situation where measures have common meaning to different level managers and supports the development and improvement of existing IC measures to better face environmental uncertainties. Simons (1995) has conceptualized these kinds of discussion sessions as interactive control where a multitude of visions, opinions, knowledge regarding strategic issues are exchanged among the organization's members through strategic dialogue. Effective information sharing is comprised of translating events, developing shared meanings and conceptual schemes (Daft and Weick 1984).

The evidence of present study goes also align with de Haas and Kleingelt (1999), who emphasize strategic dialogue throughout the organization, where each constituency, at the company or business unit level, should engage in the strategic

dialogue doing it in its own "language". Therefore de Haas and Kleingelt (1999) suggest different dimensions of performance to be controllable at different organizational levels. "Strategic dialogue ought to be consistent, causing the same strategic issues to be discussed at multiple organizational levels, albeit in terms appropriate for each level." In studies of Roberts (1990) management meetings were also viewed as an important integrating mechanism, facilitating the relationship between MCS and strategy.

The present paper claims that IC performance measurement is preferred at the business unit or department level management due to several reasons. Firstly, strategic business units have different core competencies that are difficult to aggregate into a common firm level measures. Secondly, IC measures often held different meaning to different level managers and employees, which raises difficulties in designing clear and commonly understandable ICPM system at the firm level management. Thirdly, because resources exist in bundles and have several interdependencies, unit level measurement and management of IC gives better results in reaching understandable measurement reports.

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## Summary

### INTELLECTUAL CAPITAL PERFORMANCE MEASUREMENT: QUESTIONING ITS APPLICABILITY TO THE FIRM LEVEL MANAGEMENT

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Rising attention on technological and competitive advantage is causing managers to seek more suitable management control systems. In nowadays' competitive environment traditional financial accounting measures can give misleading information for strategic control. Measuring and reviewing the progress towards strategic objectives requires systematic focus on the resources and capabilities of the company. In recent decade the intellectual capital (IC) concept has become popular and both academics and practitioners have designed various intellectual capital measurement and reporting systems. Theoretical and empirical evidence, however, includes variety of interpretations and approaches with no common understanding of IC.

Variety of interpretations and approaches in the field reflects also the situation in the case study of present paper, where the common language and understanding was difficult to achieve at the firm level management. As existing literature suffers from lack of common language and understandability, the intellectual capital also comprises different meaning for different organizational members. The common meaning of IC is more easily achievable in concrete context, which is usually a lower level of management, where measures tend not to be so ambiguous. Because resources exist in bundles and have several interdependencies, unit level measurement and management of IC gives better results in reaching understandability and common language.

# TRANSLATING A NON-LINEAR SYSTEMS THEORY MODEL INTO ACCOUNTING SCIENCE

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## Abstract

Understanding Company as a system means that successful firms are able to describe and to use the interactions between all stakeholders for satisfying the wants and needs. Main daily tasks of the of the managers in firms are measuring, analysing and communicating the degree of stakeholder satisfaction as well as planning actions to achieve the satisfaction. Additionally to this diagnostic task the managers should develop improvement strategies to reach a higher lever of stakeholder satisfaction, which changing in behaviour of the stakeholders, the environmental level, the interaction issues and the orientation framework could do. Based on the non-linear systems theory model the degree of satisfaction could be defined as a certain condition specific to a certain firm, manifested by bunch of reactions on the different levels of a firm exhibited by he stakeholder. The accounting should support the management in giving all relevant information and present them in the way the stakeholders want, which means, that the diagnostic and the development tasks should be supported.

The author will give an overview about the non-linear systems theory model to explain the degree of satisfaction including the development strategies and the impact of this theoretical approach on the accounting.

**Keywords:** *Systems theory, Complex theory, Entanglement Theory, Accounting Science*

## 1. The Firm as a self-organising system

### 1.1. "What is a firm?"

"A firm conducts its business not as an end in itself, but serving a societal purpose and operating through an active, constant dialogue with a wide range of stakeholders." (Rüegg-Sturm 2001). This dialogue with the stakeholders takes place on the level of environmental spheres (society, technology, nature and economy) and on the level of issues of interactions (Resources, norms and values, concern and interests) in a way of contribution and satisfaction. Implementing of the dialogue will be in a frame (strategy, structure and culture) in certain processes (management, business and support processes) and in a certain direction (modes of development). Based on this definition the company could be understood therefore as a unified, dynamical, nonlinear, complex living system.

## 1.2. Development in system theory

In the last 50 years since it's inventing by L. Bertalanffy the systems theory continuously develops. Latest developments could be mentioned as the complexity (Boulton 2004), chaos, catastrophe theory and theory of self-organizing systems<sup>1</sup>. Especially the theory of self-organizing systems find high acceptance in different science (Fuchs 2003, Freund/Hütt/Vec 2004, Klimecki 1995). Main principle of self-organisation is that dynamical system always tends to evolve towards a state of equilibrium without influence from outside.

## 2. The challenge for a New Accounting

### 2.1. Purpose of the Accounting

The purpose of accounting is to give an overview about the economic situation of the firm or organisation to support the stakeholder in decision making. To give the overview the accounting needs to be built up in suitable way concerning the purpose, the decision targets, the mapping objects, the measures, the time frame and time scope (Küpper 2001).

Characteristic	Attributes						
Purpose	Documentation		Planning-info		Control-info		Checking-info
Decision target	Financial	Success	Product	Potential	Social	Environment	
Mapping object	Money		Liabilities and assets		Real good		
Measures	Financial		Non-financial		Intangibles		
Time frame	Past			Future			
Time scope	One period (Short-term)			Multi period			
				Medium-term		Long-term	

**Figure 1.** Characteristics of accounting (based on Küpper 2001).

Traditional accounting is focusing on the information to describe the situation and to check the fulfilment of targets. Modern accounting is taking over information for planning and managing the firm and presenting the results for each stakeholder separately depending on their special needs (Stöslein/Mertens 2004). Measures in the traditional accounting are mostly financial measures (Küpper 1998). In the new Accounting there are also relevant non-financial information and intangibles in the same way as advanced information like methods, the results of information processing (Meier 2002, Kellen 2003) and uncertain opportunities (Park/Herath 2000).

<sup>1</sup> See wikipedia encyclopedia



## 2.2. Performance Measurement System as an important part of the Accounting

Different stakeholders evaluate doings in firms and the firm as a whole according to their success, the degree of achieving goals (Rüegg-Stürm 2003). This measuring could be done in different ways:

- Evaluation with Excellence-Models (EFQM1999)
- Evaluation in a Success-contribution context (Neely, 2002)
- Evaluation with value approaches (EVA approach, Mäkeläinen 1998)
- Evaluation in the context on sustainability (GRI Reporting, GRI 2002)
- Evaluation in the context of Business-failure analysis<sup>2</sup>

Especially in the context of starting firms with these approaches the future success of the firm could hardly be evaluated and the factors which are the success driver are hardly to define. Entrepreneur-success models – try to find answer of these questions, but even these models give not satisfied answers (See e.g. the Black-Box in the Jacobsen-Model; Jacobsen 2003). In this context could and should be asked: do performance measurement systems have an impact on business performance (March/Sutton (1997), Martinez, Kennerly, Neely 2004). A similarly discussion had been held in 1935/36 in quantum physics, which is the basic of the understanding in (quantum) physics (Einstein/Podolsky/Rosen 1935, Schrödinger 1935).

Based on this discussion there is a need to redefine the understanding of the doings in companies and in the same way also the value of measurements and PMS (Performance Measurement Systems).

## 3. Complementary understanding of the firm

Using different approach in explaining economical effect is not new in management science. E.g. in the theory of optimal organisation complexity Schwaninger uses theory of living systems to explain the optimal equilibrium of an organisation (Schwaninger 2000). But the way to get it is not clearly shown. Symptom-diagnostic-therapy approaches find direct correspondence between symptoms (value of measures) and therapies (actions) (Zeller 2004). In medical science there are beside the traditional approaches other alternative and complementary approaches that support the understanding of therapeutic mechanisms (Hyland 2003 p. 927). In the following the author will transfer these approaches into the understanding of behaviour in companies.

### 3.1. “Health” and “Disease” of a company

As mentioned before self-organising systems always tends towards a state of equilibrium. This means that the “health” (equilibrium) of a company could be defined as a situation of stability in static and dynamical view on the stakeholder level (their contribution and satisfaction), the environmental level, the level of

<sup>2</sup> Like the Basel II approach in the bank sector

interaction issues and the level of orientation framework<sup>3</sup>. The “disease” of the company could in this way defined as certain condition specific to a certain company, manifested by the sum of reactions on the different levels of a company exhibited by the stakeholders<sup>4</sup>. This means that the stakeholders’ evaluation of the equilibrium is giving reasons for developments.

### **3.2. Consequences**

#### **3.2.1. Consequences for the Accounting**

The complementary understanding of the company has directly impacts on the understanding of the accounting. The author’s point of view is that the task of the accounting is only to satisfy the information needs of the stakeholders and present this information in the way they want. This means the accounting is a stakeholder information system; not more and not less. In this regard regular checking of measures - like PMS suggests - is in the self-organizing system Company a work with very questionable impact on the company’s development and performance. But PMS have benefits as a diagnostically instrument, which gives the management and the stakeholder an overview of the achievement of objectives and support the management in daily controlling the enterprise using statistical, logical/mathematical, or independent rules to link success indicators to self-regulating cycles (Weber/Schäffer 1999). Solution could be developing interactive PMS models, which should allow more space for control of the doings in the company like. The developing of these models requires a deeper understanding of the behavioural aspects of the doings in the company especially the impact of decisions.

#### **3.2.2. Others consequences**

The traditional “optimizing” approaches should turn into an approach of “dynamical stability”. E.g. the understanding about “happiness in business” (Vos et al. 2004) replaces the traditional understanding that companies want to maximize their success and growing.

### **4. Further researches**

Besides proofing the theoretical statement request for further research are in the identification and classification of different equilibrium-situation types including the characterizing of the different measures and their values. Also there is a need for identifying different levels of stability and development strategies to reach another level. Using different approaches (like CAM<sup>5</sup>) and theories (e.g. quantum

<sup>3</sup> a similar definition could be find in the constitution of the WHO in the context of human health “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” WHO (1948)

<sup>4</sup> Oberbaum, Vithoulkas, van Haselen (2003) give a similar definition of disease in medical science

<sup>5</sup> CAM= Complementary and Alternative Medicine

entanglement theory, extended network theory) should support in giving an answer to these questions. Measuring performance has a questionable but limited impact on business performance. Researches should find out under which circumstances PMMS (Performance Measurement and Management Systems) has an impact. Additional should be identified and classified the different effects e.g.

- internal and external effects
- direct and indirect effects
- robust or subtle
- negative and positive effects

These outcomes could help understanding the development mechanisms and the impact of decisions on the equilibrium levels, which are the basis for creating interactive models of PMMS.

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# PROJECT MANAGEMENT ACCOUNTING IN POLISH IT COMPANIES

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## Introduction

The focal point of numerous books on contemporary management are projects which are undertakings of single, unique and unrepeatable nature. Current research on project management concerns not only the traditional area of investment projects, but also more often undertakings connected with products prepared with consideration of individual requirements of customer (contracts and orders), particular and single activities such as an advertisement campaign, research and development (designing of a new product), implementation of organizational changes (for instance reengineering), obtaining new source of financing (emission of bonds) etc. The wider scope of project activities within the whole range of activities of a company requires the proper management instruments – and management accounting instruments within – adjusted to the peculiarity and uniqueness of such activities.

Nowadays the interests of many researchers and practitioners are focused on IT sector which – due to the way of preparing IT products – is regarded as one of the typical project-oriented sectors. The increasing role of the products of IT projects affect the fact that they are widely analyzed. More often the IT projects are analyzed from the perspective of the final user and the main point of such analyses are the issues connected with the assessment of project effectiveness and of its influence on the whole activity of a company. Another important but less often discussed issue of effectiveness assessment is the analysis from the perspective of the company providing software products and services. It is worth to analyze the methods which assure the effectiveness of such activity, especially the methods and techniques used within management accounting system.

The main aim of this paper is to present the results of research on the scope of project management accounting. The conclusions presented were prepared mostly on the basis of literature review, however the results of empirical research (pilot studies) conducted in chosen companies of IT sector were also demonstrated and analyzed. The research was focused on such crucial issues as definition of project management accounting, the difference between traditional and project management accounting, the characteristics of the instruments of project management accounting and the area of their application in the practice of enterprises.

## Projects and management accounting

According to Project Management Institute project is a unique set of co-ordinates activities, with defined starting and finishing points, undertaken by an individual or organization to meet specific objectives within a defined schedule, cost and performance parameters (Duncan 1996). The main attributes of a project are

uniqueness, novelty, complexity, and differentiation to other endeavours (Brandenburg 2002, Trocki et al. 2003). Projects have been playing more and more important role in companies, and their part in the whole activity of a company has been increasing.

One of the main reasons of the increase of project activities seems to be growing dynamics on markets resulting in requirements on flexibility and customer orientation. Flexibility depicts the speed of adaptation of a company to the new conditions of its functioning. Contemporary companies consider flexibility as the key factor shaping their success or survival (Koźmiński 2004). Owing to this fact projects are also one of the important issues of world-wide research in the area of management accounting.

Such tendencies observed in world literature are to be discovered also in Polish publications (for instance *Kontrakty długoterminowe...* 2004). The number of books and other publications on project management is increasing steadily. In particular, numerous publications are focused on such issues as evaluation, selection, planning, controlling, and termination of a project. And these issues are the basic issues of project management accounting system.

Project management accounting can be understood as this part of management accounting system of a company which encompass only this part of activities which has project-oriented character.

The necessity to distinguish 'project management accounting' results from specific work tasks, novelty and uniqueness of condition of project realization. In result, the major part of instruments used for permanent and repeated activities cannot play their role in unique project activities properly. It means that the adaptation of methods used is required, and sometimes even the completely new, different methods have to be introduced and developed.

Table 1 provides the overview of the main differences between project management accounting and traditional management accounting (used when activities are permanent). The differences listed result primarily from the unique and novel character of a project.

**Table 1.** Traditional management accounting and project management accounting – main differences

Criteria	Traditional management accounting	Project management accounting
Application of instruments	Periodical and repeated systematically	Single or repeated periodically, but only in the cycle of project realization
Structure of responsibility centres	Permanent	Fluent
Assessment of effectiveness	Periodically	At the moment of decision making

Measures of effectiveness	Standard, usually the influence of activity on results	Specific, adjusted to the project
Information basis for budgeting	Historical data – quantities from previous periods or standards	Data prepared in relation to the schedule or on the basis of previous projects
Basic measures of activity size	Sale or production	Time and progress in project (extent of schedule realization)
Control of realization	Periodical analysis of results	Analysis of progress and post project analysis

The single nature of a project affects the fact that almost all instruments of management accounting have to be introduced at particular moments of the project life cycle and are useless in other phases. For example the assessment of the project effectiveness has to be done at the moment of making decision, the budget has to be prepared before the realization starts up and the control has to be taken during the realization and just after the end of a project. The single character of a project causes the variability of scope and terms of application of different instruments of management accounting. For instance the structure of responsibility centres alters in project oriented companies, the projects finished are replaced by new appearing undertakings.

As it was mentioned before, another significant characteristics of a project is its unique character. This factor causes the necessity of the proper choice of instruments for the certain project. In particular, it concerns planning methods, effectiveness measures and terms of control. It should be also underlined that the uniqueness of a project affects the limited possibilities as to the usage of historical data for planning purposes as well as it influences the risk of a project significantly.

### **Project management accounting in the practice**

The broadest scope of the application of project management accounting exists in project-oriented companies, i.e. in companies which realize projects as unique products offered to particular customers (such project are called often contracts) (Kontrakty długoterminowe... 2004). Nearby the traditional sectors such as for instance construction sector, the new dynamic service sectors such as information technology, advertisement, media etc. are good examples of project-oriented activities.

In the project-oriented companies the variety of instruments could be used. Their aims cover the following:

- forecasting of income,
- preparing financial plans (budgets) in relation to schedules,
- effective allocation of limited resources among different projects,
- assessment of project effectiveness considering its peculiarity (for example information technology or ecological projects),
- appraisal of risk in project assessment process,



- making decision which compromise cost and scope of a project,
- credible assessment of the total cost of project,
- cost control considering the real progress in project realization.

It is worth to be underlined that most often in project-oriented companies each contract (instead of department or another organizational unit) is a separated responsibility centre, which is under planning, control and assessment. The whole system of management accounting is oriented at responsibility centres which usually are projects.

Indisputably, quite similar problems have these companies which realize projects nearby their main permanent activities. In such companies the instruments used for project management accounting have to be integrated with the whole management accounting system oriented at predominant permanent activity. Due to this fact the scope of project management accounting has to be limited. It happens very often that projects, and cost projects in particular, are integrated part of the activity of an internal unit supervising their realization, in such case the methods of planning, assessment and control have to be similar to the methods used to permanent activities.

The most common area of project activities are investments which in Polish companies are very often identified with tangible investments. The methods and procedures of the assessment of long-term investment project, called also capital budgeting, have been applied commonly. It could be pointed at the fact that very rarely in terms of investment are treated project aimed at creating intangible values, such as designing new products, creating value through reputation, creating good relations with local society through social responsible attitude, environment protection etc. It seems that this new but wide area of the activities of contemporary companies gives the new perspectives for the application of the methods of project management accounting.

### **Pilot studies**

The subject of the pilot studies was the specific group of projects connected with the development of information systems – and software development especially – responding to the requirements and expectations of an individual customer. The literature of the subject describes IT projects as a particular class of projects of complexity and extended influence on their environment (Szyjewski 2001). In result, the review of the literature reveals the publications dedicated particularly to IT projects, but mainly analyzing them from the viewpoint of project management (Szyjewski 2001, Polak 2003, Phillips 2005). It is not so easy to find the books on IT projects' controlling or management accounting – the majority describes performance measurement systems (Milis, Mercken 2004, Sureshchandar, Leisten 2005) or presents case studies (Cases in...2000, Michalak 2001).

The main aim of the pilot studies was the verification of the scope of application of main instruments of project management accounting in IT companies. The focus



was put on these instruments which are presented in the literature on management accounting as recommended for IT projects. The survey contained 23 questions gathered in 6 major clusters concerning the following issues:

- the characteristics of the enterprise analyzed,
- peculiarity of projects and customers,
- project planning,
- project effectiveness assessment,
- realization and control of projects,
- application of modern instruments of management accounting.

The pilot studies were conducted in the sample of 12 IT firms which prepare software adjusted to the individual needs of customers. The questionnaires were filled in by financial directors or any other persons responsible for management accounting system in the enterprise.

## Results of research

Among the firms being analyzed there were small, medium and large companies (number of employees from 11 to 1200, turnover from 2 to 582 mln PLN). Seven firm belong to holdings, but only one of them works mostly for the needs of holding's members, the others work for independent customers.

In each firm the realization of a project happens in result of the negotiations of contract conditions, and project price primarily. In case of 7 larger firms the realization results from tenders, the smaller firms find customers through direct contacts. As declared by 6 firms, the basis for pricing are market prices. In 5 firms project price is based on project cost and in such cases cost calculation is presented to a customer.

### Project planning

As the research displayed, project planning and cost planning occur on regular basis in all firms (12), and in 10 firms the detailed project schedule is prepared. The data for project planning is zero-based (8), is based on historical data of similar, previously conducted projects (5) or is based on technological standards (4). These methods are used mostly to estimate project direct cost (12), and 4 firms limits themselves to these positions. Eight firms take into account indirect cost through standards (5) or plan these positions individually (3). Quite similar attitude is observed as to planning of financial cost and revenue.

Only the half of firms analyzed prepare cash flows of projects (6). In most cases such plans are prepared on the basis of revenue and cost plans (4) or direct on the basis of project schedule (2).

In all firms of the sample computerized tools such as spreadsheets or project management software are used to assist the process of project planning. The most popular is application of Excel spreadsheet (10), but only one firm uses Excel exclusively, as one and only. It is common among the firms queried to use special

software for project management (9 firms), cost calculation systems (2 firms) or special modules within computer integrated company management systems (3 firms). Among the special software of project management Microsoft Project seems to be the most popular (7).

Seven firms combine project plans with other financial plans prepared for the rest of the activities of the enterprise. Budgeting seems to be the most popular instrument of project planning and controlling – budgeting is used in 11 firms. In 6 firms operational budgets in master budget are prepared for projects, in 4 firms project cost are taken into account of the cost of the department which realizes the project, and in one firm budgeting is applied only for projects.

#### Effectiveness assessment

According to the results of pilot research the assessment of project effectiveness is conducted mainly after the accomplishment of a project (9). In all firms from the sample in the assessment of project effectiveness the measures based on relation between revenue and cost of project are used. The most popular is project profit (7) computed as the difference between revenue and total cost with overheads. Six of the firms use project margin computed as the difference between revenue and cost of project and five firms use profitability (relation of margin to revenue). Only one firm declares using the measure based on cash flow, i.e. net present value NPV.

In the process of project planning and effectiveness assessment only 8 firms analyze risk of a project. The methods of risk assessment used commonly by these firms are: scenario planning (5), descriptive analysis (3), sensibility analysis (1) and critical path method (1).

#### Project realization and control

In all firms queried in research cost are recorded for each project separately and almost all firms (11) analyze cost during the realization of a project or after its completion. Five firms compare actual and planned data adjusted to the level of project progress (such method is called earned value analysis), 3 firms compare actual data with planned data, and 3 limit the analysis to actual data.

As to the modern methods of management accounting, most often the firms declare the usage of target costing (10), next – activity based costing (7), and then project life-cycle costing (4). The least popular appeared to be the balanced scorecard (1).

#### **Research conclusions**

On the basis of the answers given by the firms chosen for the pilot study some interesting conclusions can be formulated. The most important seem to be the following:

1. It is quite common for IT firms to plan direct cost of project, most often in connection to project schedule. Rarely and less detailed indirect cost and financial cost are planned and taken into consideration.

2. Cash flow planning seems to play secondary role comparing to planning of revenue and cost of project. The uncommon usage of NPV measure can reveal that cash flow – even if planned – is not used for effectiveness assessment.
3. Effectiveness assessment is based mostly on traditional measures of profitability, i.e. on the relation between revenue and cost of projects. Similarly in the assessment of project risk main role play traditional methods such as scenario planning.
4. It is common among the firms that they use the software supporting project planning, however in the sample analyzed it is difficult to prove any relation between the software and the scope of methods being used.
5. The most popular instrument of project management accounting is operational budgeting, used both in planning and controlling of project realization.
6. It is worth to point at the fact that majority of firms declares usage of target costing. In contrary, in the literature it is often underlined that the scope of application of target costing in Polish enterprises is very limited.
7. Quite similar conclusion can be withdrawn as to the usage of activity based costing.

Summing up, the scope of application of the methods of project planning and controlling declared by the firms queried in pilot studies seems to be very traditional and similar to the scope of basic methods presented in the literature on project management. It can be assumed that one of the reasons is the common usage of software offering the standard package of methods. It could be also underlined that the majority of firms regards the methods applied as the integral part of the management accounting system of the enterprise.

### **Directions of further research**

The results of pilot research can give a perspective on the scope of the application of management accounting methods in IT projects, as well as can display the directions of further research in this area. Among various research issues which can be formulated after the analysis of the survey, the following questions should be pointed at:

1. To what extent are the solutions common for IT firms and other firms functioning in one holding?
2. To what extent is the application of the methods chosen determined by the software being used?
3. What are the reasons of such little interests in the application of project cash flows?
4. Why are target costing and activity based costing more often used by IT firms in comparison with Polish companies on average?

The answers to such set of question requires further, more complex research in the form of survey conducted in the larger group of the firms of IT sector. Next, it is also worth to organize and carry out the interviews with the management of the firms. The interviews can explain the fact as well as the main reasons of the applications of certain instruments of project management accounting. Finally, it



seems to be interesting to perform comparison among various sectors to display and analyze the specific attributes of the solutions of project management accounting system in IT sector.

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## Summary

### PROJECT MANAGEMENT ACCOUNTING IN POLISH IT COMPANIES

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The main aim of this paper is to present the results of research on the scope of project management accounting. The conclusions presented were prepared mostly on the basis of literature review, however the results of empirical research (pilot studies) conducted in companies of IT sector were also demonstrated and analysed. The research was focused on such crucial issues as definition of project management accounting, the difference between traditional and project management accounting, the characteristics of the instruments of project management accounting and the area of their application in the practice of IT enterprises.

**Key words:** *project, project management, management accounting, project cost*

# MANAGEMENT ACCOUNTING IN MARKET AND PLANNING ECONOMY

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## Introduction

Already centuries economic environment and development have influenced among other fields also accounting considerably. Although, industrialisation and economic growth have favoured the progress of the accounting methodology and calculation practices, there are variations in the development of accounting practices between regions and countries. The countries differ in their potential and forces of economic arrangements, and also in the handling of the economic information. The accounting system reflects the general priorities and content of the information in the particular economic system. This paper has been concentrated on the role of accounting information for management in the market and planning economies. Central planning economy was applied in the Eastern Europe until 1990s. Afterwards the drastic political and economical changes have been taking place, when number of the Eastern European countries made turnaround towards market economy. It is important to understand the structure and objectives of accounting information for management before and after these changes. While these objectives and functions may prevail for some time while the transformation process takes place.

## 1. Accounting function in the market and planning economy

The price mechanism for resource allocation is the major distinction between market and planning economy. The prices for labour, goods and other services will be formed in the competitive marketplace. The success and survival of a business will depend on the economic transactions. In the planning economy the government commands and regulations formed the base of economic transactions and their prices. Competitive forces have been excluded from the market. Among enterprise managers existed certain competition concerning the more suitable planned targets, but not the competition about the market.

In the both economies the enterprises represent the so called economic units putting into practice the various economic transactions. From pragmatic approach their performance should be measured and evaluated in order to guaranty the effective management regardless the economic system. In the market economy the primary aim of the profit-oriented organisations (manufacturing and service companies) is to earn profit for their owners. The profit reflecting the simple computation by subtracting costs from revenues needs to be measured and calculated. At the same time, to succeed on the market managers need to use economic information comprising not only monetary (financial), but also non financial information. In the conditions of planning economy the term profit has been rather the subject of propaganda from the side of the monopolistic owner – state - than the subject of economic rationality. The economic connections and profit measurement were

formed primarily on the bases of the subjectively planned targets (Kyrep 2004, p. 84). Thus, in the planning economy the actual and rational economic behaviour had been largely ignored. The major task of the enterprises in the planning economy was to carry out planned targets and profit earning was not their first priority.

Regarding the common definition accounting in the market economy, the role of accounting has been seen as follows: "Accounting is the process of identifying, measuring and communicating economic information to permit informed judgements and decisions by user of the information" (American Accounting Association 1966, p1). The cited accounting definition views accounting as a process collecting economic information that will help to make good decisions. In general, the main aim of accounting is to systematise the economic information by identifying the information users and their information needs.

The role of accounting in the market economy differs from its role in the conditions of planning economy. The main role of accounting in the planning economy appears first of all in the accounting definition from this period. Accounting in planning economy was defined: "As the quantitative expression and the qualitative characterisation of the economic resources and processes with the aim to control and advance them" (Mihhejev 1979, p3). From the definition we can see that the priority of control has been clearly emphasized. The control was applied by means of plans and budgets, which were compiled at the macro level by government institutions (Planning Committee, Ministries) outside of the accounting domain. Accounting systems of the enterprises collected detailed data at the brigade, department and organisational level, which were aggregated and reported back to the state institutions. (Linnaks 1983, p5-6) Data for planning derived from enterprises' accounting systems were transmitted to the Planning Committee and accounting was subordinated to the central planning and its tasks (Mihhejev 1979, p8). Therefore, planning as function was not a part or a component of accounting system within the enterprises.

In the centrally planning economy the predominant purposes of accounting were following (Linnaks *et al* 1984, p5):

- Centralized control over the achievement of planned targets by way of economic use of resources, and
- Protection of socialist property.

These objectives were realised by strict control and monitoring of the financial results of business activities by and for the corresponding higher management bodies and the central government agencies (Enthoven 1999, p32). In the planning economy the rigid state regulations were assumed to maintain the macro-economic balance of economic systems. Also we cannot underestimate the importance of one party political power and the economic tools were used to enforce this power.

In the planning economy different management levels coordinated the enterprises economic processes similarly to the Western market economies. The highest management (supervision) level was situated outside the enterprise at ministry or

national economy (Planning Committee) level (Linnaks *et al* 1984, p5). The managers of enterprises had not much responsibility about products quality and profit generation, since their main target was to fulfil the planed targets. Therefore we have to consider the possible influence of restricted responsibility and decision rights of enterprise managers.

In the planning economy accounting information was a tool adjusting timely the production process to meet planned targets. (Новиченко *et al* 1983, p10) In general, accounting did not serve the interests of enterprises, but the interests of state and its ministries at national economy level. Therefore, accounting comprised methods and techniques developed out for central planning and control for every industry type respectively. These centrally focused accounting methods and techniques had been applied to all enterprises within the industry without sufficient customisation to the particular circumstances. (Mihhejev 1979, p14) Enterprises were using standard chart of accounts, by which various pieces of accounting information are accumulated and systemized. Detailed overview of Soviet accounting system and its methodology has been described by Enthoven *et al* (1993). The main feature of planning economy accounting system was the high level of unification so that all enterprises provided comparable information to the central planners. This approach is different from market economy practice where only one part of accounting information, namely information that will be delivered to the outside interest groups, has been unified to the certain extend. While accounting information for management is not an object of unification, rather it has to be customised according to the needs of the organisations managers.

Concerning the accounting methodology, as pointed out by Mihhejev (1979, p6-7), accounting in Western economy is a private matter of a company, but in planning economy accounting is first of all a major tool for national economy management. Managers in the market economy conditions have more freedom to advance the management accounting systems that would increase the usefulness of these systems. In the planning economy enterprise managers could hardly use the accounting methods and techniques different from central authority regulations. Therefore, they had practically no intention to develop their accounting systems separately from the general state instructions.

It is also important that in the planning economy government fixed prices and the inflation did not exist within this rather closed economic system. This has enabled to reduce uncertainty and use budgets for control without additional adjustments. Ignorance of the inflation effects has created an artificially "safe" situation for the enterprises, where special adjustment procedures of financial information were not needed. Normally, in the open market economy conditions, inflation will increase uncertainty about future profits and assets values. Changing value of money should be reflected showing the economic reality providing information to the managers. There are areas where effects of inflation may be rather significant, e.g. pricing decisions, investment appraisal. In reality, the inflation might also influence the nature and use of accounting information.



## 2. Management accounting concept in the market economy

In the market economy the common branches of accounting have been identified according to the users of accounting information. These various users of accounting information can be divided into two categories: internal and external users. The objective of an organisation's accounting system is to provide sufficient information to these users. Respectively, it is possible to distinguish between two branches of accounting: management accounting (or managerial accounting) and financial accounting. Management accounting is concerned with the preparation and use of accounting information to people within the organisation assisting them to make better decisions. Whereas financial accounting is mainly concentrated on the provision of information to external interest groups, such as investors, creditors, tax authorities and other institutions.

In the accounting literature we can find variety of management accounting definitions. The most comprehensive definitions have been developed by the professional societies. The global organization for the accountancy profession International Federation of Accountants (IFAC) including 163 member organisations from 119 countries has defined management accounting as: "The process of identification, measurement, accumulation, analysis, preparation, and communication of information (both financial and operating) used by management to plan, evaluate, and control within an organization and to assure use of and accountability for its resources" (IFAC 1998, p 99). This definition is the combination from the related activities of information processing and different management functions.

During the decades, the content and meaning of management accounting has been extended accordingly to developments in the business philosophy and changes in the economic environment. As pointed out by several authors, e.g. Atkinson and Kaplan (1989), Horngren (1995), Kaplan (1995) and Hilton (2002,) the role of managerial accounting is very different now than it was in the 1960-s and 1970-s. Previously management accounting was seen rather as a method to calculate accurate costs for inventory and sales pricing. Therefore, in the earlier accounting literature we can find rather narrow terms of management accounting. The management accounting techniques and costing principles from this period are often called as traditional once.

Management accounting has been seen first of all as an integral part of the management process and its main objectives are to provide information essential for (IFAC 1998, p 99):

- Planning its future strategies, tactics and operations;
- Controlling the current activities of an organisation;
- Measuring and evaluating performance;
- Optimising the use of its resources;
- Reducing subjectivity in the decision making process; and
- Improving internal and external communication.

Since management accounting has been recognised as an integral part of management process, which comprises several tasks, the following discussion follows the general functions of this management process. According to the scientific management theorist Henry Fayol the management process comprises several management tasks. But four of these - planning, organising, leading, and controlling – are known as classical management functions (see e.g. Boone 1992, Robbins and DeCenzo 2004). These basic functions are manager's tools to achieve the organisation's stated objectives. Decision making has been seen as a comprising component of every managerial function. Detailed observation of the beforehand listed objectives of management accounting information indicates that majority of these objectives are directly or indirectly connected with these classical management functions. Three of these objectives - planning strategies, tactics and operations, controlling the current activities of an organisation, and reducing subjectivity - are closely associated with the planning, controlling and decision-making. Optimising the use of its resources, performance measurement and evaluation can be mainly related to the organising and leading function. The last objective, to improve organisations' communication demonstrates the common purpose of the management and accounting fields.

To understand the concept of management accounting we must to identify its components enabling the supplementation of the relevant information for the managers. The basic management accounting information is to a great extent related with different cost information. In general, cost information is essential to several management activities, especially for planning and controlling purposes. Other two fundamental functions, organising and leading, have less connection with the accounting information. Organising includes the organisational design and human resource management issues. Leading function encompasses motivating employees and directing the activities within the organisation. Nevertheless, one common theme here is the performance measurement and evaluation, where accounting information is needed. Summarising the discussion between management process and management accounting, we can argue that management accounting incorporates different parts of diverse management information systems, such as: planning, control and performance measurement systems. Accordingly, management accounting consists from four with each other connected components:

- Cost accounting (as base information for other components),
- Planning (including budgeting),
- Control (including reporting), and
- Performance measurement.

Accounting theorists have described various functions of management accounting. Hilton (2002, p14) underlines the need for information as the driving force behind management accounting. Therefore, management accounting information often serves two general functions: a decisions-facilitation function and a decision-influencing function. Information usually is supplied to a decision-maker to assist that manager in choosing an alternative. Often, that information is also intended to influence the manager's decisions. Generally organisations have various managers – operative managers, middle managers, and senior executives. Making distinction between different management levels and their information needs Atkinson *et al*

(2001, p11) describe different functions of management accounting information including operational control, product and customer costing, management control, and strategic control. These examples of management accounting functions describe the management accounting area from the decision making and management levels perspectives.

### 3. Accounting information for management in the planning economy

In the planning economy there was no practice to classify accounting into financial and managerial part (Палий 2004, p6). Generally, accounting in the planning economy was classified into three fields (Mihhejev 1979, p11) (Raamatupidamise teooria, Kirjastus Valgus, Tallinn, 1979): statistical financial and operational-technical accounting. Instead of the term "accounting" Enthoven *et al* (1993) suggest to use here the term "record keeping" which describes better the essence of the planning economy accounting system. Therefore, according to Enthoven *et al* accounting system was classified as follows (Enthoven *et al*, 1993, p3): statistical record keeping, financial record keeping and operational-technical record keeping.

Statistical record keeping included various economic data about production volume, cost of production, productivity, productive capacity, and resources. These statistical data from the enterprises were aggregated at the national economy level. Statistical information was needed for management of general economic structures, such as enterprises, programmes, industries, regions and state economy (Кыреп 2004, p80). Financial record keeping having a centralised nature dealt with assets, liabilities, revenues, and expenses in financial terms. The main information contained financial data about already occurred events. Financial record keeping has been concentrated on the information collection about the enterprise as whole (Валуев 1984, p54-55). Therefore, financial record keeping had rather historic than future orientation and almost no connection with the operative decision making. Operational-technical record keeping monitored the materials provision, products physical movement within plan, working efficiency, labour productivity, fulfilment of production and realisation plans. The operational-technical record keeping contained information for the operative management area.

Accounting departments within the enterprises focused mostly on the data collection about inputs and outputs and preparation of statistical and external reports. Operational-technical record keeping was handled usually by separate organisational unit, often called as planning department. (Linnaks 1983, p9) Therefore, we can see the interesting role of accounting department, where there is no scope for planning. Although, there was no common practice to use accounting for enterprise management, we can still identify the tasks or functions of accounting information with the internal and external use. Statistical and financial record keeping can be clearly associated with the financial accounting purposes preparing information for external use. According to Кыреп (2004, p78) the financial record keeping can be separated into internal and external part. Internal part serves the interests of managers and external part the interest of parities outside the organisation. The internal part included mainly cost information in order to calculate production cost,



but it did not contain other necessary information for managerial planning and controlling needs. Operational-technical record keeping was a part of accounting which altogether served financial accounting area, but additionally supported also the operational management and therefore, has also some connections with management accounting area. Operational-technical record keeping contained information for example about how many goods and machines were needed on a daily basis, so the daily volume of production was known. The items were typically calculated in quantity, not in money terms. (Enthoven *et al*, 1993, p4) The managers were concerned mainly about production volume and not significantly about how many financial resources are spent, because the main task was to control the fulfilment of the plans.

## Conclusions

We agree with the argument by Enthoven *et al* (1999, p34) that the concept of management accounting, as it is called in the Western market economies, did not exist as a clear discipline in the planning economy, although cost accounting and cost analysis have been practiced extensively. Accounting systems included cost accounting and analyses which have been concentrated mainly on the statistics enabling to compare the actual results with planned targets. The closer examination of accounting concept in the planning economy indicated that the roots of management accounting still existed in the enterprises. Nevertheless, management accounting information and detailed cost and profitability data were of limited use to the management of enterprises in the planned economy as they had few discretionary decision-making responsibilities. In summary, accounting has different role and tasks depending on the economic context.

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## Summary

### MANAGEMENT ACCOUNTING IN MARKET AND PLANNING ECONOMY

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The aim of the paper was to underline the differences of accounting information for management in the two different economic systems – market and planning economy. The accounting objectives and functions of planning economic structure have been different from those of market economy because of distinct socioeconomic conditions and objectives. In the market economy the primary aim of accounting is to give information for decision-making and it has been classified into financial and management part. In the planning economy there was no tradition to use the similar classification. Accounting system in the planning economy was classified into: financial, statistical and operative-technical parts. Management accounting information and detailed cost and profitability data were of limited use to the management of enterprises in the planned economy as they had few discretional decision-making responsibilities.

# THE NEW APPROACHES TO THE PERFORMANCE ANALYSIS OF SMEs (IN THE CZECH REPUBLIC)

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(Research Findings In this Paper Present a Part of the Scientific Project which Has Been Undertaken at The University of Economics, Prague, Identification Code 6138439903 - Development of Financial and Accounting Theory and its Application in Practice from Interdisciplinary Point of View).

## Introduction

The business environment can be characterized by permanent and quick changes. These changes are caused by increased global competition, increased intensity of changes in technology and better communication networks using the Internet. The critical role of managers consists in **continuous** assessment of the firms performance aimed at seeking steady improvement – **potential development**. Standard procedures of performance assessment, which have been used in the past, do not reflect new entrepreneurship approaches. The most frequent questions that address the evaluation of company's performance of contemporary management are the following: [1].

- **How well is the main company's process organized?**
- **How well is the innovation process managed and what is the position of the company's product, compared to the product trend? Does the company set the trend? Or is it falling behind?**
- **How good is the company's financial performance? Can it stand to the benchmarked values? Is the shareholders value increasing?**
- **How well does it stand in the eye of the customer? Does it satisfy the customer's needs?**
- **How intensive and well defined is its corporate social responsibility?**

The traditional methods of rating the company's performance have concentrated on measuring the benefits of cash inflows rather than providing an answer to the above mentioned questions. The professionals have reacted with the development and proposal of new models such as the **Balanced Scorecard** [2], and also proposing the European model of **EFQM - European Foundation for Quality Management** [3] and have therefore created a new paradigm for the measurement of performance. See - Figure 1 [4].

1920	1970	1980	1990→
Dupont Pyramid ROI- Return on Investment	EPS Earnings per Share	M/B Market to Book Value per Share ROE Return on Equity RONA Return on Net Assets CF- Cash Flow	EVA Economic Value Added Gross Margin MVA Market Value Added BSC Balanced Scorecard CFROI EFQM TSR Total Revenue For the Owners

Figure 1. The Change in Paradigm in Evaluating the Company's Performance.

### Can the Managerial Accounting Contribute to Identification of Processes Which Create the Added Value?

Managerial accounting includes the organization of accounting process in the company and the implementation of produced accounting information for improvement of **decision-making process**. Managerial accounting does not represent a firm set of regulations. The organizations differ in their goals and are composed of different entities and parts so they cannot make use of the universal system of methods and rules for performing managerial accounting. Managerial accounting has to be adapted for the needs of optimal decisions. But organizations are dynamic entities they develop in the time. Changing business environment, global competition, and the personality of the leading manager causes the different intensity of the change. CEO's bring different leadership style, stress different values and prefer specific approaches. Three most invasive changes influencing day-to-day decisions of organizations are:

- **New information technologies**
- **Global competition -forcing companies to relentless lowering of costs**
- **Corporate social responsibility**

Managerial accounting has to provide relevant information for all three of them. It has to cope with processes and not with set of the rules. New information technologies have brought incredible amount of information for decision-making process. Net creates efficiencies through the economy, intensifying rivalry between

competitors and lowering barriers to market entry. It can **arm consumers** and suppliers with greater power because of their increased access to information, enhanced ability to communicate with each other, and greater freedom of choice. Net dramatically reduces search, coordination contracting, and other transaction costs between firms. Through Internet can companies communicate in real time with the whole network included in business model. Companies that have slogged through the tough work of building e-commerce systems – from ALCATEL to BASF to NESTLE –have lowered their transactions cost and boosted efficiency. Alcatel takes now 90% of its orders over the Net, saving hundreds of thousands of dollars a year vs. manually entering sales. Another example is Pan-European Fish Auctions, or PEFA.com, in Zeebrugge, Belgium. The privately held exchange sold \$ 200 million worth of fish over the Net in 2002, nearly double over the previous year's figure. Before PEFA was launched in 1998, distributors had to dispatch live representatives to daily auctions held at various European ports. Through PEFA.com, fish sellers in 18 ports auction their catch online to more than 200 large buyers from all over Europe. (See. Business Week, May 12<sup>th</sup>, 2003, page 46). The success of DELL Computer Corp. stipulated creation of internet business model in service industry companies like health care giant Eli Lilly & Co., which had been employing 7 500 workers in R&D. Their number has tripled since without keeping them physically located in the buildings of the company. How was it possible? Eli Lilly created on-line scientific body, called InnoCentive Inc., which organizes contests for the participants regardless of nationalities or countries on solving research tasks and the winners are being paid in cash.

But investment in the new technology will in the contrary substantially influence the cost of the company. To compete in the global world means changing the company philosophy- **orientation on creating value for the consumers**. This means that companies must operate at lower cost and/or command a premium price, either through operational effectiveness or by creating unique value for customers. To increase operational effectiveness would require the identification of the processes, which are critical for satisfying the consumers. These processes create value added chain, which could be described as follows:

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**&DEVELOPMENT→DESIGN&TEST→PRODUCTION→MARKETING→DISTRIBUTION→ CONSUMER SERVICE &RELATIONSHIP.**

Whichever processes are not included in the chain be considered as the processes which do not create added value for customers, shareholders and community. The elimination of these processes lowers the costs and allows selling products by lowering prices. So we have arrived to the role of managerial accounting. The core contribution of managerial accounting consists in permanent analysis of **cost – benefit relationship**. But in many situations to identify relevant costs and relevant benefits (revenues) won't be an easy task. There are basically problems of two arts:

- a) **Problems in identifying and measuring benefits**
- b) **Problems in identifying and measuring costs**



a) The benefits of making a particular decision depend on the goals of the organization. The achievement of some goals is not easily identified and measured especially those connected with difficult quantifiable characteristics as for example customer satisfaction. Traditionally have been the benefits measured of cash inflows. The change in paradigm in measuring the company's performance shows Figure Nr.1. But the cash inflow from a decision is not always known and must be often estimated. For example, the benefit of introducing a new product would be measured based on marketing estimates of future sales. Because these cash inflows occur in the future, there will be some uncertainty in measurement. Also, cash flows from different time periods should be adjusted for the time value of the money before they are accumulated. Not all the benefits of a decision have immediate monetary implications. Benefits such learning and training, improved working environment, greater worker satisfaction and evaluation in the eyes of customers are difficult to identify and measure in terms of money. These benefits have monetary consequences in later years.

b) Problems in identifying and measuring costs. Cost represents the use of organizational resources. Costs are easy to identify and measure when cash is the resource being used. But, measuring the cost of using non cash resources is also a problem. For example, what is the cost of using raw materials in inventory? The possible answers include purchase price, the current market price, or the future replacement costs. Using the company resources whether in cash, inventory, buildings or employees time, leads to forgone opportunities. If cost is used to buy a machine, it can't be used to hire a new employee. If a building is used to house the office it can't be used for assembly line or sold to another party. The size of the forgone opportunity of using resources is the **opportunity cost**. The concept of opportunity cost is consistent with cost/benefit analysis. Opportunity costs provide a means of measuring the cost of a particular decision. The costs of each alternative decision should be identified and measured in terms of forgone opportunity in using the resources for other purposes. The identification and measurement of opportunity costs may appear cumbersome and difficult, but they are appropriate costs for evaluating organizations performance. Another problem creates **sunk costs**. Sunk costs are costs that have already been incurred and can not be changed no matter what action is taken. Because they have already been incurred and are, therefore, the same for all possible alternative decisions in the present and in the future, and we consider them as irrelevant. But the process of seeking the best alternative how to allocate company resources should cover the whole **value chain**, which is shown above. Managerial accounting should provide decision support in each of these business functions. Customers are pivotal to the success of an organization. The challenge facing managers is to continue investing sufficient resources in customer satisfaction. Customers are demanding ever-improving level of performance regarding: price, innovation, quality and time. These searches for higher level of performance have been called **continuous improvement**. Continuous improvement is fundamental to success in the global marketplace. Companies that are just maintaining the status quo on the value chain are like a runner who is standing still in an Olympics race. Last year's records are sure to be broken this year. Athletes who don't improve continually are not likely to remain long in the winner's circle.

The same is true for companies. The Japanese used the term **kaizen** for continuous improvement. Kaizen covers all aspects of organization activities: Total Productive Maintenance, Labour Management, Cooperation, and Automation, Quality Circles, Just in Time, Teamwork, and Customer Focus. Kaizen is not based only on the traditional WHO, WHAT, WHERE, WHEN and WHY but much more stress is being put on **HOW?** One of very often cited example \* is the practice of the **Citizen Watch**. Citizen Watch is the world's largest manufacturer of watches. Component part costs for each watch are a sizable percentage of the unit cost of each watch. A central part of Citizen's cost management system is kaizen budgeting. All parts of its entire supply chain, including component suppliers, are required to continually seek out cost – reduction opportunities. At its Tokyo plant, Citizens budgets steady cost reduction of 3 % per year per purchased materials. Suppliers who exceed this 3 % target retain for at least one year any cost reduction above the 3 % level. Suppliers who do not attain the 3 % target receive the “assistance “of Citizen Engineers in the following year. But there is even more impressive example on cost cutting war in the car industry - Toyota versus Nissan (see. Business Week, April 9<sup>th</sup>, 2001, page 22, 23.). For years Toyota Motor Corp. has steadily made use of kaizen techniques to lower its production costs and get record profits. Nissan reaction with his merging partner Renault has been approval of a highly ambitious competitive plan for cost-cutting by 10 % in 2001, by dropping out its most inefficient suppliers. Toyota has responded in completely changing its philosophy – from the slow and steady approach to diminishing expenses to jump up decrease in the cost of almost every type of auto part sourced from outside, by about 30 %. The sweeping undertaking was the cornerstone of a plan dubbed CCC21, or Construction of Cost Competitiveness for 21 century. The goal of the drive was to chop costs by \$ 8 billion by the end of the fiscal year of 2005. It is tremendous change. To get this savings, using traditional kaizen approach would have asked for at least one decade. How could they manage it? A key part of procedure –figuring out the lowest prices paid by carmakers for 173 commodity type components, from rear view mirrors to the bearings inside shock absorbers. Once Toyota has learned these **benchmark** prices, it asks suppliers to match them as closely as possible without sacrificing quality. The broader message for its long time suppliers has been clear – you had better to follow. But to be “*the lowest – cost producer of the highest- quality automobiles* “you need more than lower the costs of component parts. You have to look for improvement in supply –chain, and human factors in order to produce one care in around 24 hours. General Motors Corp. has taken this challenge seriously and through pain staking rationalization of processes has come- to beat Toyota in comparable category car product to **18-19 hrs. !** (BW –Feb 10<sup>th</sup>, 2003, page 42.). The cost cutting war goes still on. In its new plant in the Czech Republic, consortium of TPC proclaimed to build a new car in 14-15 hrs.

### The Role of Small and Medium Firms

There are over 15 millions unemployed people within the EU and tens of millions worldwide. Many scientific papers presented at the ICSB World Conference 2005 in Washington concluded in their findings that there is overall world tendency for decrease in the new start- ups. This tendency has been confirmed in the research

studies performed at the European Universities as well as at the USA Universities. To cope with these two problems would ask for more international cooperation and more research in finding effective solutions. The SMEs perform in the same global environment as big MNC but there are specific problems that affect SMEs more than larger businesses:

- they have more difficult access to capital and conclusively they can't invest in technological advancement
- they have weaker position in acquiring state contracts
- they don't have enough financial means to have top experts on their payrolls
- the system approach to a product development is not generally practiced
- they have to compete very often with dumping prices of multinational corporations
- they do not possess enough expertise to follow and interpret the impact of a steady inflow of new laws, regulations and prescriptions which create a difficult business environment in the Czech Republic. (They often have to hire a specialized consulting agency in order to obtain funding from the EU, because of complexities of the application procedure).

Regardless of these barriers, SMEs represent a formidable economic force, creating 37 % GDP of the CR and providing employment for 60% of the labor force. Some selected indicators can be seen from the (Table 1.)

**Table 1.** Number of Employees of SMEs in the Czech Republic. (The data put together from the statistics of the Czech Ministry of Industry and Trade.), [www.mpo.cz](http://www.mpo.cz)

Year 2003	Number of Employees 0 - 249	Self-employment	Total SME +Self	The Share of Employees of SME +Self-employment on the Total Employed Workers
	Number of Businesses	Number	Total	%
Manufacturing	25 641	131 608	157 249	49,70
Construction	6 517	88 756	95 273	80,18
Wholesale & Retail	55 250	194 857	250 107	80,40
Groceries/Restaurants	4 689	47 639	52 328	89,34
Transportation	5 173	40 531	45 704	29,93
Financial	901	28 998	29 899	21,74
Services	46 691	268 791	315 482	81,45
Agriculture	3 578	39 167	42 745	85,00
Total	148 440	840 347	988 787	62,21



Some research has been undertaken at the University of Economics, aimed at problems of entrepreneurial activities of SME. The first question being asked by money providers deals with efficiency of small businesses. Logically the effort has been directed on finding some general performance criteria which would include traditional money values and the new ones, such as Balance Scorecard or EFQM. Figure Nr. 1. shows the overall tendency to models which are more complex and cover not only monetary criteria but the overall activity of the firms.

### The First Experimental Research [5], Using EFQM – Small Sample

For the first pilot study project the EFQM model was used and a sample of two companies was acquired for implementation. The short description of the EFQM:

1. **Leadership (100 points)** - mission, ethical code of behavior, delegation of authority, structure, relationship with customers, performance appraisal.
2. **Policies & Strategy (90 points)** – how the strategy was implemented. The overall work for supporting the information system. Effectiveness of market research and its use for market prognosis and consumer behavior. Internal reporting system and its organization.
3. **Human Resources (90 points)** – planning, recruiting and skills development of employees.
4. **Partnership & Resources (90 points)** - partnership with suppliers and community. Effective use of financial resources, financial strategy, investment in technology, R&D.
5. **Processes (140 points)** - how well are the main processes organized? The detailed description of processes, parameterization of processes and its outputs. ISO 9001. Services and customers.
6. **Customer Satisfaction (200 points)** - quality, safety and reliability of a firm's product, customer loyalty, CRM.
7. **Results Concerning Employees (90 points)** - motivation and transparent options for promotion. Performance appraisal of individual's effort. Working environment
8. **Results Concerning Social Responsibility (60 points)** - *image* in the public, corporate social responsibility, environmental protection.
9. **Performance and Results ( 150 points )** - summarization of key results covering:
  - Financial performance i.e., cash flow, liquidity, EPS, sales, revenues, net profit,
  - Intangibles, expertise, knowledge - based progress etc.

### TARGET COMPANY: AXIS Ltd.

Axis Ltd. is a company well established on the Czech market, belonging to the SME group, producing a broad spectrum of steel products - production of steel constructions, technological facilities, high pressure pots, reconstruction of machinery equipment, assembly of gas equipment, machine tool shaping etc.

The company was subject to a certification process in 1999 according to ISO 9001 norm, and gained the corresponding certificate. This research study has made use of



a standardized questionnaire of EFQM, recommended by National Centre for Quality. The questionnaire consisted of fifty questions which were to be answered using a self assessment procedure. The answers had to follow four grade evaluations:

- A. Fully accomplished - excellent process or result, fully implemented.
- B. Considerable progress- giving enough space for improvement.
- C. Moderate progress - needs further research. Bringing good results if implemented.
- D. There are no measurable results. There are some good ideas which were not seriously reviewed or practiced.

The self assessment process has been implemented at the top and middle management levels of the company. The results of the overall evaluation can be seen on figure 2.



**Figure 2.** AXIS – Assessment According 9 Criteria of EFQM.

## Conclusions

Managers of AXIS have to direct their attention to the improvement of customer satisfaction or to implement a system of CRM. The next recommendation would be to pay more attention to create a clear and effective strategy concerning main firm processes.

### **Development Potential of a Company, an Alternative Approach to Measurement of Successful Performance.**

The authors [6],[9], define development potential as a set of tangible and intangible factors directly influencing contemporary and the future success of a company. Development potential in this interpretation is a vector of six components describing basic areas of a company's activities. Within each component, six characteristics follow. The model had been originally developed at the University of West Bohemia in the U-SME innovation project, supported by the Leonardo da Vinci programme of the EU [7]. The definition of development potential and its components was followed by field research using the structured questionnaire. A sample used in the research consisted of fifty companies active in different industries in North Moravia and five companies from the Pilsen region. Field research in North Moravia was performed by the Faculty of Management of Tomáš Bat'a University in Zlín in the second quarter of 2002 [7] and it was continued by the collection of data from more companies in both regions. Conclusions presented in this study are based on data acquired from fifty companies from the following industries: 13- rubber and plastics, 20- machinery, 12- steel and steel products, 5- mechanical engineering. For the description of DP have been used the following components:

- **Strategy and Planning:** strategic control system, mission and vision of a company. Awareness and sharing a vision by employees.
- **Marketing:** marketing costs can be today as high as 50% of total expenses. It is traditionally the weakest point of many Czech companies. The following factors were subject to analysis: market research, market positioning, competitor's analysis, and advertising.
- **Production Processes and Technology:** does the company follow its competitors or does it set up a trend? Is there an internal innovation centre, or does the firm make use of licenses? How is the innovation process organized? How is the technological development and its applications in products and production processes implemented? Although innovation is a central issue discussed in connection with the development potential, innovation itself is not a goal, but only a tool in achieving company goals.
- **Quality and Environment:** these are assessed in relation to EN ISO standards. Quality goals are measurable and consistent with the quality strategy. From a microeconomic point of view, the environment is treated as a public good or negative externality.
- **Logistics:** (Supply Chain Management) - complete system of planning, organizing, realizing and controlling the flow of goods. The role of outsourcing and its impact on lowering (increasing) costs.
- **Managing Human Resources. Support of MIS for Integration of All Informational Activities** i.e. approaches to information processing and use of internet technologies. Motivational systems, learning processes, company culture and knowledgeable management.

The development potential assessment was performed in three steps. In the first step, the development potential of individual components was evaluated. In the second step, the overall assessment was determined and in the third step the classification of the company was done according to its overall assessment and put into one of the four categories (C, AB, B, A). The classification of companies into the corresponding categories was done according to a set of European Standards – EN ISO 9000:2000, which specifies the rules and system terminologies and on the British norm BS 7000-1:1999, providing a manual for management of development processes and innovations in long time periods. The classifications of companies according to their development potential are shown in the following (Table 2.)

**Table 2.** The Classification of Companies According to their Development Potential

Evaluation of Development Potential	Type of Company according to its Development Potential
1.00 – 1.49	C
1.50 - 2.49	AB
2.50 - 3.49	B
3.50 - 4.00	A

Companies classified as **C** are not ready to implement development activities, to improve their performance and to better satisfy their customers. If they want to develop, they should first implement fundamental changes in their organization and other basic company processes. Companies classified as **AB** are prepared to complete changes necessary for improving their performance, but must consistently improve their basic processes. Management training can help to achieve long-term goals. Companies classified as **B** can employ and further develop their potential and they are prepared to undergo a certification process according to corresponding ISO standards. Class **A** includes companies with the highest development potential, highly competitive, high performers successful in mid- and long-term horizon. **Nine** of these companies were classified as AB, **twenty seven** as B, **fourteen** as A. There was no company classified as C. The total average achieved in the four-point scale was 3.06. The results were processed using one- and multi-dimensional statistical analysis.

## Multidimensional Regression Analysis

In multidimensional regression analysis, the development potential was treated as a dependent variable, while its components were treated as independent variables. The resulting regression model had the following form:

$$\begin{aligned} DP = & -0.0037 + 0.1809 * \text{Quality and environment} \\ & + 0.1683 * \text{Logistics} \\ & + 0.1938 * \text{Marketing} \\ & + 0.1488 * \text{Information systems and human resources} \\ & + 0.1775 * \text{Strategy and planning} \\ & + 0.1305 * \text{Production processes and technology} \end{aligned}$$

## Conclusions

The development potential includes factors which can be influenced by the company owners and managers. They had a considerable effect on the financial performance and correlate with value creation. Although **marketing** is the most sensitive factor, its values in the sample were the lowest. It confirms the general experience, that **Czech companies generally have a lack of marketing expertise and do not collect information about customer's behavior.** (Confirmed also by conclusions of the AXIS case). **Production processes and the technologies** components achieve the highest values. For firms in the sample this component is of the highest importance. It was demonstrated that this component provides the best one-component estimate of the total development potential and its correlation with ROE is the strongest. **Companies having leading positions in technology and having high quality products attract employees and satisfy their customer's needs.** **Strategy and planning** component significantly influences classification of the companies according to their development potential, but its explaining power is low. It confirms that the **dependence between the performance measurement and the strategy is rather weak.** Correlation analysis has proven to be a both-sided statistical dependence between the development potential and ROE. It indicates that, when DP is growing, the value of the invested capital by company owners is also growing. The results had demonstrated that the company with a higher DP has the potential to satisfy its customers, owners and other stakeholders. Finally, an important precondition for implementation of the DP assessment procedure is the understanding, learning and willingness of companies' management to practice it.

## The Development Potential of Czech SME – Enlarged Sample

Enlarged Sample of SMEs and their characteristics: The sample consisted of 95 SMEs [8], which were described by following characteristics:

### Number of Employees:

- a) 1 – 9 ( 32 % of the sample)
- b) 10 – 49 ( 32 % of the sample)
- c) 50 – 250 (31 %)
- d) N/A (5 %)



### Sales in 2002:

- a) < 250 mil. Czech crowns (69 %)
- b) 250 - 1.450 mil (14 %)
- c) more ( 16 %)
- d) N/A (1 %)

### SME by Industry:

- a) Retailing
- b) Services
- c) Building
- d) Machinery
- e) Electronics
- f) Metal industry
- g) Chemical and pharmaceutical
- h) Food and beverages
- i) Agriculture
- j) Power engineering
- k) Wood processing
- l) Textile and clothing industry
- m) Transportation
- n) Insurance
- o) Other
- p) N/A- not filled in ( or performing more different activities)

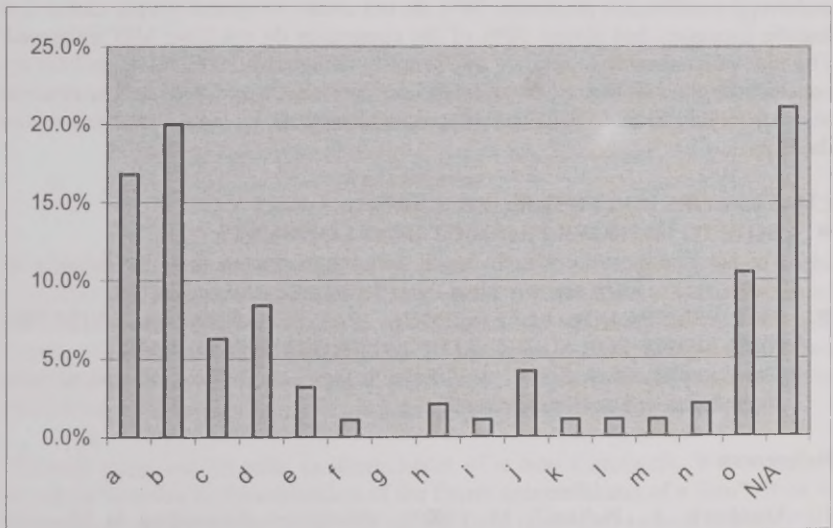


Figure 3. SME by Industry.

**Production Is Aimed at:**

- a) Domestic market (56 %)
- b) International market (0 %)
- c) Both (43 %)
- d) N/A (1 %)

**The Evaluation of Development Potential of Czech SME – Enlarged Sample**

In the third stage the same questionnaire was used to examine 95 SMEs (heterogeneous group). The same six characteristics correspond with categories used in the second research study were chosen.

**Conclusions**

The last phase of research is still taking place, so we can make some preliminary conclusions. The same questionnaire has been used as in the previous stages as well as the same self assessment technique, so the conclusions are fully comparable. It gives us a sample of 145 SMEs covering a broad spectrum of companies. The latest evaluation has brought evidence that more than **50%** of the companies do not create any vision and corresponding strategy (though we have proven that the dependence between performance measurement and the strategy is rather weak). More than **30%** do not perform marketing activities and do not practice CRM. Almost **50%** of sample companies produce using licenses or copying products. Only **50%** of companies make use of their own R&D for the products innovations. Just **28%** underwent certification processes, **70%** do not create integrated supply chains and logistic processes and almost **50%** of the companies do not have MIS integrated. The motivational systems are not satisfactorily composed. This set of preliminary conclusions gives us a clear direction of how can we proceed with further research in order to help SME in the Czech Republic to increase its competitiveness within the EU.

**CHALLENGES FOR FUTURE RESEARCH:**

- **HOW TO IMPROVE PRODUCT DEVELOPMENT?**

The interviews and research conclusions have proven that the majority of SMEs need to learn a new method for efficient product development.

- **THE PSYCHOLOGICAL FACTORS AND PERSONAL ATTRIBUTES NECESSARY FOR SUCCESSFUL MANAGEMENT OF SME.**

The Czech Business Schools will have to focus on the development of more courses, focused on entrepreneurship.

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## Summary

### THE NEW APPROACHES TO THE PERFORMANCE ANALYSIS OF SMES (IN THE CZECH REPUBLIC)

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This paper discusses the conclusions of some research projects undertaken at the University of Economics in Prague, aimed at the measurement of performance of SME. The aim of the initial project was to test some recommended methods and models and its practicality for SME. For this purpose, a small sample of just two companies was chosen. It has revealed that even companies certified according to ISO EN have the weakest point in marketing expertise and strategy creation.

The next stage started with the formulation of a new hypothesis. Which factors should be included in the evaluation of the future successfulness of a firm? How to define the development potential? To answer these questions, a much larger sample has been analyzed. Fifty companies were analyzed according to six components- strategy and planning, marketing, production processes and technology, quality and environment, logistics and human resource management. Several statistical methods were used to analyze the interdependencies between the main group factors and the

six remaining determinants. The conclusions of the self assessment approach were used by placing the companies into four groups A, B, AB, and C, which express the development potential.

In the third stage the same questionnaire was used to examine 95 SMEs (heterogeneous group). The conclusions have proven that more than 50 % of companies do not have any mission and corresponding strategy. More than 30% do not perform marketing activities and do not practice CRM. Almost 50% of the sample companies' produce using licenses or by copying products. Only 50% of companies make use of their own R&D for the product innovations. Just 28 % underwent certification processes, 70% do not create integrated supply chains and logistic and almost 50% of companies do not have their MIS integrated. Motivational systems are not innovatively created.



## Section III

# ACCOUNTING AND ACCOUNTABILITY IN THE PUBLIC SECTOR

# THE REASONS FOR CHANGES IN THE CONTROL OF DUTCH LOCAL GOVERNMENT

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## Introduction

The last fifteen years have seen a succession of changes in different aspects of the management control of Dutch municipalities and provinces. Many municipalities and provinces, further denoted here as local government, decentralized their organizational structures, adopted new management methods like integral management, and introduced contract management, customer-orientedness, output and outcome budgets, and quality models. Moreover, they often implemented human resource management instruments, such as job appraisal interviews and knowledge and competence management, or they enhanced the role of these instruments.

Some of the reforms that were introduced probably were a success, but others were dropped after a while. It is interesting to find out more about the reasons why local government organizations in the Netherlands have introduced so many reforms in their financial management and other control aspects. Besides, it is interesting to find out more about the effects of the reforms on the organizations and citizens.

The literature discusses different reasons for the introduction of changes in accounting systems and, more generally, the financial management and other aspects of the control of organizations. Sometimes, a striving for more economic efficiency and effectiveness is supposed to be the main reason for changes in the control. In other cases, social (institutional) pressures and the wish 'to look modern' are regarded as important reasons for organizational change. This paper considers the reasons for the various changes in management control that were introduced in Dutch local government and to some of the effects of the changes. Mainly based on interviews, the paper pays specific attention to reforms in the area of financial management, but its focus is more broadly on the various control instruments that are used.

The paper is structured as follows. The next section briefly explores the literature in the field of contingency and institutional theory and develops the research questions. Section 3 summarizes the changes introduced and some findings from previous research on financial management changes in Dutch government organizations. Section 4 presents the research method for the empirical research and some of the findings from the interviews in government organizations. The final section briefly discusses the findings and also includes some conclusions of the paper.

## Factors that may induce changes in the control of organizations

Researchers have used contingency theory as well as (sociological) institutional theory to explain changes in organizational control. Below, contingency and institutional theory will be briefly explored to develop some general research questions, which gave guidance to the empirical research.

### *Contingency theory*

The management control system of an organization includes all the resources that the management has at its disposal in order to control and manage the organization while striving to ensure its continuity. The accounting system and financial management system are part of an organization's overall management control system which, besides other internal and external factors, may influence its performance and effectiveness (Otley, 1980, p. 421; Birnberg, 1998; Donaldson, 2001, pp. 7-11).

Contingency theory is mainly interested in the influence that factors ('variables') may have on the control forms an organization chooses. These control forms, in turn, are supposed to influence the economic efficiency and effectiveness of the organization. According to contingency theory, the set-up of an organization's accounting and financial management system depends on one or more specific contingent variables, such as the uncertainty and dynamism in the organization's external environment, its size, or its strategy (Thompson, 1967; Chenhall, 2003, p. 157; Tillema, 2005). It is interesting to research whether this is also true for Dutch local government organizations. Contingency theory is a functionalist approach. One of its basic assumptions is the idea that organizations 'rationally' choose the means of achieving their objectives, where rationally means that they base their choices on considerations of economic efficiency and effectiveness, in order to 'survive' in the long run.

### *Institutional theory*

Institutional theory emphasises the influence that structures in society and the social and cultural aspects of an organization's environment - such as the rules, knowledge, standards and habits ('routines') in a particular group or society - and their development have on that organization and its efficiency - and vice versa.

Old institutional theory discussed organizational forms, and their efficiency, as well as other institutions (Commons, 1931, pp. 649-650, 654-657; Covaleski et al., 1995, pp. 26-30). However, most authors in the field of *sociological* institutional theory, were this paper focuses on, are the opinion that economic considerations do not adequately explain why many organizations are so alike and tend to introduce similar innovations (DiMaggio and Powell, 1983, pp. 149-157; Meyer and Rowan, 1977, pp. 353-355). Sociological institutional literature focuses on the influence of institutional factors - such as rules, values, habits, power, and internal and external pressure - on change processes in organizations. It is concerned, for example, with the question of mimicry (i.e., why do organizations in a certain sector often mimic changes in organizations around them?), and of why fixed templates for

organizational change and thus 'isomorphic' organizations come into being (DiMaggio and Powell, 1983). From a sociological institutional perspective, the introduction of 'businesslike' management styles in government and the increased focus on outputs, could possibly be regarded as an answer of government organizations to external changes in expectations and rules (i.e. in the institutions). However, probably sometimes formal changes are introduced only for reasons of 'external legitimation', whilst the information provided by a new system is hardly used for internal decision-making and control (Ansari and Euske, 1987, pp. 557-564). In such a case, internal control and decision-making are probably only 'loosely coupled' to a formal information system which is based on external rules and expectations (Meyer and Rowan, 1977, pp. 352, 356-359).

By conforming to much-used organizational forms and working methods ('myths'), an organization may seek to avoid critical questions from its social environment and try to achieve external legitimacy. In other words, an organization may consider it socially advisable to imitate other organizations; i.e. to adopt 'socially rational' and 'socially efficient' behaviour (cf. ter Bogt, 2003a, pp. 160-163).<sup>1</sup> Probably, socially rational behaviour exists alongside economically rational behaviour. Both kinds of rationality might play a role in organizations striving for continuity.

Based on this brief exploration of contingency and institutional theory, the following research questions have been formulated:

1. To what extent do local government organizations alter their management control system in order to increase their economic efficiency?
2. To what extent are the changes local government organizations made to their management control based on mimicry and are they 'ritual' changes, which are implemented primarily for reasons of external legitimacy and social rationality?
3. To what extent is there a measurement of the effects on economic efficiency and effectiveness of the changes in the control of local government organizations?

### Recent changes in the planning and control of Dutch local government

#### *A sketch of NPM-like changes in local government since about 1985*

As in several other countries, organizational structures and performances of central and local government organizations in the Netherlands were criticised in the 1980s. The critiques resulted in many changes, ranging from deregulation to decentralization and privatization, the use of private sector management techniques, the introduction of output budgeting, performance indicators, quality management and job appraisal interviews, and other elements of New Public Management (NPM; Hood, 1995). Traditionally, as is other countries, the financial management of the Dutch local government was highly input-oriented, i.e. organizations were controlled by means of financial budgets. The adoption of output- and performance-

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<sup>1</sup> Social efficiency might be defined as the amount of resources, including time and energy, which an organization needs to invest in contacts with persons and groups within and outside the organization in order to achieve its own plans and aims.



oriented planning and control and management approaches in the 1980s and 1990s was at the core of the innovations in Dutch local government organizations. Accrual accounting was introduced in provinces already in 1979 and in municipalities in 1985.

In the 1990s, many local government organisations in the Netherlands introduced output-oriented planning and control documents, such as budgets, interim reports and annual reports. These documents include information about the performances of the government organization.<sup>2</sup> Especially the Public Management Initiative (PMI; in Dutch: project Beleids- en Beheers Instrumentarium – BBI), which was started in 1988 and set up high ambitions, became very popular among Dutch municipalities and provinces (van Helden, 1998). With PMI, which was an NPM-like project, most municipalities and provinces introduced decentralized organizational structures and such instruments as job appraisal interviews, which is an element of human resource management. Further, they introduced private sector management techniques and sought to improve their insight into the performance and outputs of their organizations and to increase efficiency, transparency and public accountability (ter Bogt, 2004, p.221). Initially, municipalities and provinces mostly organized their decentralized units by policy field. However, since the mid 1990s many organizations introduced new changes and nowadays decentralized units are often formed around certain types of processes. Moreover, recently several organizations re-centralized their staff activities, for example in the field of IT, finance and human resources management.

Since 2004, the new Governments Accounts Act obliges provinces and municipalities to make a distinction between policy-based outcome budgets and the output budgets.<sup>3</sup> In municipalities, the municipal council decides the outcome budget, which is a broad outline of future activities, the resources involved and the outcomes to be achieved. The municipal executive exercises control by means of the more detailed output budgets, stating products to be delivered and resources that can be used. In provinces, similar changes took place. Municipalities and provinces are free to decide about the information included in the output and outcome budgets and their layout. As the outcome budgets were introduced recently, they have not been really researched yet.

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<sup>2</sup> In the Dutch government the term performance is primarily reserved for activities, outputs and outcomes. In this paper, too, the concept of performance does not focus on inputs, but on activities, outputs (goods or services) and outcomes, and related aspects, such as data on processes, quality and service and unit costs of outputs.

<sup>3</sup> This change is a consequence of the introduction of the so-called dual system of government, which was introduced for municipalities in 2002, and which means that the responsibilities and powers of the municipal council are now more clearly separate from those of the municipal executive, i.e. the mayor and the aldermen. In the new system, the municipal council is supposed to outline policies in a more explicit fashion than in the past in the outcome budget, with the municipal executive being clearly responsible for policy execution. The introduction of the dual system has also resulted in various changes to the municipal planning and control process. For provinces, a similar dual system was introduced in 2003.

*Some findings from previous research into the effects of NPM-like changes*

Previous research shows that a large majority of the municipalities and provinces in the Netherlands have introduced decentralized organizational structures and performance-based financial management systems, mostly as part of a broader set of NPM-like initiatives. In 1997, a survey showed that already approximately 75% of the municipalities in the Netherlands had applied output-oriented planning and control instruments. This survey also indicated that the smaller the municipality, the lower the average use of these instruments (Moret, 1997). In an examination of the 12 Dutch provinces, van Helden (1999, p. 248) also found that medium and large-sized provinces used performance budgeting more intensively than small-size provinces.

However, the research findings also show that generally the information in the output budgets and related documents was incomplete and that its quality was insufficient. It seems doubtful whether the claims made for these innovations, such as contributing to efficiency and effectiveness, have been realized. Often, several indicators in the budgets do not refer to outputs and outcomes, but to inputs and activities. The budgets include almost no 'textbook format' output information, i.e. not such information as the number of units supplied multiplied by the unit costs. Van Helden and Johnsen (2002) found that information about, for example, quality standards and costs per unit, which could be relevant for assessing effectiveness and efficiency, played an insignificant role. They indicate that such information as the number of products or service units available or delivered could be interesting to obtain a general picture of the activities of a municipality. However, it is questionable whether such information is very relevant for decision-making. Further, the controllability of the performance indicators seemed to be disputable (van Helden and Johnsen, 2002).

Bordewijk and Klaassen (2000, p. 94) concluded that the real planning and control in local government still is mostly based on financial budgets. Such stakeholders as politicians and consultants generally emphasize that the development of performance indicators is crucial to public sector reforms. However, the Dutch case seems to reveal that in practice many indicators are limitedly used for decision-making and evaluating performances (ter Bogt, 2001, 2003b, 2004).

### **Reasons for the succession of management changes in Dutch local government**

The previously sketched research findings suggest that the success of the NPM-like changes introduced in the Netherlands is doubtful – and that it is probably (much) lower than expected at the start of the PMI-initiative. This raises the question why many organizations continued to frequently introduce major management changes. This question seems to be even more relevant as the literature on change processes sometimes suggests that it may take several years, probably even five, to really implement major changes in the financial management and other control aspects of organizations (see e.g. Shields and Young, 1989). Are these local government organizations just interested in every new management fad, or are they introducing the changes because they are striving for an increase in efficiency and effectiveness?

### *Research method*

To find some tentative answers to this question, 23 politicians and professional managers in twelve municipalities and two provinces were interviewed in 2004-2005. The interviews took place in such municipalities as Assen, Eindhoven, Hengelo, Hoogezand-Sappemeer, Nijmegen, Rotterdam, Smallingerland and The Hague (with between 35,000 and 600,000 inhabitants) and the provinces of Groningen and Fryslân (575,000 and 640,000 inhabitants, respectively). Twelve interviewees performed activities in the field of financial management, whilst eleven were working in various other policy areas, such as spatial planning, public works, social security and welfare.

The previously developed research questions served as a guideline for the interviews (cf. Eisenhardt, 1989, p. 536). The interviews and the additional written information in reports that was obtained from some of the organizations do not allow for in-depth case research. However, the descriptive and exploratory research that was conducted can probably help to gain more insight into the opinions of the interviewees and into the actual state of affairs, and it may generate ideas to focus on in further research.

### *Some findings from the interviews and the reports*

The research findings which were previously presented mostly focused on the quality and use of financial management instruments, such as product budgets, interim reports and annual reports. During the interviews, the financial management was discussed in combination with other reforms in the management of the organizations. This brief paper only allows for a summarized presentation of some of the research findings.

By and large, the interviewees indicated that their organizations introduced the kinds of changes in their organizational structure and financial management that were mentioned in the previous section. Many of them brought forward that in recent years there has been much attention for changes that relate to human resources. Several interviewees indicated that there was a gradual shift from 'technical' changes, such as changes in organizational structure and financial management, to changes that relate to organizational culture and the employees, such as their attitude and competences. This does not imply that technical aspects are irrelevant nowadays or that no attention at all was paid to the attitude of employees before. However, it does suggest a change in the areas for special attention, i.e. a shift from decentralized organizational structures around the end of the 1980s and early 1990s, to output-oriented planning and control at the beginning and mid 1990s, and to quality models, integral management and human resources management since the end of the 1990s.

The goals of the management changes were mostly relatively clear in broad main lines, the interviews suggest. However, some interviewees said that the changes not always were sufficiently prepared, for example because there was a fear to lag behind the developments elsewhere. In other cases, plans seemed not to be considered thoroughly because some enthusiast individuals had the opportunity 'to



go their own way'. Sometimes, the goals of individual changes were not defined clearly, or they were altered during the implementation process. Such alterations were considered as partly inevitable, because in complex change processes it is not always possible to rationally draw a detailed implementation path in advance. However, insufficient preparation of changes and the following of fads also caused serious delays in implementation processes, or change processes which were deserted halfway.

The reasons that were mentioned for the various and frequent management changes varied. Many interviewees referred to a desire to improve the quality of services delivered to citizens, a wish to raise the flexibility and transparency of their organization, and a need to increase efficiency and effectiveness because of (new) budget cuts imposed by central government. Some of the other reasons that were mentioned by interviewees were the frequent introduction of new instruments by consultants and academics, and a desire not to be regarded as a 'wally organization' that sticks to traditional methods of working. Moreover, interviewees indicated that they felt a need to react to the increasing demands of citizens after serious incidents in some municipalities that raised nationwide attention and much discussion in the press, and the ever increasing speed of developments in society. Political 'impatience' and the need for politicians to show 'quick results', especially since citizens have become more critical of politics and government, also are mentioned as factors creating pressure to introduce new changes frequently. It might seem that, after the great concern which was caused by falling turnout rates in local elections in the beginning of the 1990s, the rise of 'populist' parties and the more volatile political preferences of considerable groups of voters since about 2002, raised a feeling of uncertainty amongst politicians (and perhaps amongst professional managers, too). This may have intensified the need politicians feel to improve the performances of their organization. To summarize, it seems that, on the one hand, the various influences and developments put pressure on local politicians and on local government organizations to improve their performance and incited a 'real' wish to increase efficiency and effectiveness. On the other hand, in several cases they also may have evoked that more attention was paid to the 'appearance' of local government organizations.

Performance measurement in local government, too, partly seemed to originate from economic rationality, whilst 'appearance' also may have played a part. For example, it seems that the organizations of all interviewees were seriously involved in various benchmarking projects with other organizations. Although some of them were the opinion that benchmarking was a new 'plague' for the government sector, several interviewees regarded benchmarking as an instrument that, despite problems with comparability, could be helpful to improve performances. Apart from the benchmark studies, which can give an indication of an organization's relative efficiency and effectiveness, many municipalities and provinces initiated systematic research on citizens' opinions on public service delivery. This may also give some indications of the effectiveness of local government. On the other hand, most of the interviewees said that their organization did not integrally and structurally evaluate efficiency and effectiveness. Only in specific cases, for example when there were problems in a



certain department, an external consultant sometimes did a quick scan to assess efficiency and effectiveness. In reports, too, there was hardly any information about efficiency and effectiveness and their development. One of the reasons mentioned for this was that it is often hard to measure efficiency and effectiveness in government organizations. However, as one professional manager put it, it also seems that most government organizations still were more interested in making plans and 'looking ahead' than in critically evaluating the effects of decisions in the past.

Because they lacked factual data on the development of the efficiency and effectiveness of their organization, the interviewees indicated that it was impossible for them to draw firm conclusions about the effects of the (individual) control changes. However, in the perception of most of them the combined effect of the various changes on the effectiveness of their organization was slightly positive. They indicated that the combined changes also seemed to have (slightly) positive effects on the quality of the services supplied to citizens, the quality and labor satisfaction of the employees, and the realization of the political goals of the organization.

Several reports were available about citizens' satisfaction levels with various aspects of the services provided by local government organizations. In principle, these reports might give tentative impressions of changes in the effectiveness of local government. However, municipalities and provinces that have such reports drawn up, mostly only do so since some years. So, it is not very clear yet whether the satisfaction with local government services increased in the course of time (neither do the reports univocally indicate whether a change in satisfaction is a consequence of management changes). Citizens' opinions about government, politicians and civil servants in general may be rather negative. However, the data suggest that most citizens are (moderately) satisfied with many of the concrete services provided by local government.

Most organizations paid noticeable attention to the improvement of performances in recent years. This was done not only by measuring 'citizen satisfaction' but also, for example, by underlining the importance of performances and a client- and result-oriented attitude of the employees. Several organizations started quality improvement projects and (new) projects to change the organizational culture, in combination with the development of performance-based human resources management. For example, in recent years most organizations focus much more than before on strengthening a culture of 'sticking to one's word'. Approaches were introduced to systematically make agreements between managers and their subordinates about a subordinate's performances, personal development and competences and to discuss these once or several times a year. Further, some organizations developed or enhanced systems for performance-related pay of civil servants, also at lower levels of the organization. Interviewees said that, apart from factual data, subjective 'impressions' admittedly played a part in these forms of performance-orientedness. However, they mostly were rather positive about the

effect of the increased attention for organizational culture and human resources instruments on the quality of services and effectiveness.

At the end of each interview, a brief questionnaire about the effect of various individual management changes which was presented. This showed that, on average, respondents who are working in the financial sphere of activity are less positive about the effects of the various changes than the others. However, for most items the differences between the two groups are not statistically significant, probably because of the small sample. It could be interesting to further research possible differences in the perceptions of stakeholders with a financial and a non-financial background.

### **Discussion and conclusion**

In the last fifteen years, many local government organizations in the Netherlands not only changed their planning and control instruments, but also several other aspects of the control of their organization, such as the organizational structure and the human resources management. Previous research showed that a contingent factor such as size might influence the degree to which such changes were introduced.

The interviews with 23 politicians and professional managers indicate that, on average and all in all, they are more or less positive about the effects that the various changes they implemented had on the effectiveness of their organizations. The interviews suggest that such reasons as mimicry and the 'wish to look modern', mentioned in sociological institutional theory, are relevant to a certain extent. A need for external legitimation, i.e. social rationality, seems to play some part in the introduction of the management changes (see research question 2). This need might be intensified because politicians realize that the press or citizens, who are the voters, may not judge politicians only in terms of economic efficiency (see also Wilson, 1989, pp. 131-134; ter Bogt, 2003a, pp. 161-163). Such aspects as equity, or an organization's appearance and citizens' impressions of government could be relevant, too.

However, most interviewees strongly emphasized such aspects as the need to improve the quality of services delivered to citizens and the wish to increase efficiency and effectiveness. Although the organizations researched did not integrally evaluate efficiency and effectiveness, all of them were involved in benchmark projects (research question 3). Besides, most of them – especially the larger ones – were also involved in doing research into the satisfaction of citizens with various outputs and policy aspects. This suggests that a 'rational' striving to increase economic efficiency and effectiveness – as it is mentioned in contingency theory and suggested in old institutional economics – also plays an important part in the frequent succession of changes in the control of Dutch government organizations (research question 1).

The questionnaire that was presented to the interviewees showed that, on average, they highly ranked the effects on efficiency and effectiveness of such instruments as job appraisal interviews (which have become more structured and performance-

oriented), quarterly accountability interviews between politicians and professional managers, competence management and integral management (which means that a department manager, within certain boundaries, has responsibility for financial matters and personnel policy, too). This suggests that especially 'soft' management instruments are appreciated. However, it may be doubtful whether these instruments are used in a soft way, as in most organizations human resources management nowadays seems to focus on 'businesslike' aspects such as competences, a client-oriented attitude, performances and accountability of employees.

Many changes in the field of quality management, organizational culture and human resources management were introduced only recently, so that negative effects probably were not observed yet. It is not clear whether this played a part in the interviewees' relatively high appreciation of recent changes. It is obvious, anyway, that in comparison to the 'technical' changes in organizational structure and planning and control, the recent projects in the field of organizational culture and human resources management mostly were valued higher. In themselves the output-oriented planning and control instruments introduced are lowly appreciated. However, they may have influenced the way of thinking in government organizations. In that way, output- and outcome-oriented planning and control could be favourable towards the recent efforts to introduce a more performance-oriented culture and a performance-based human relations management in Dutch local government organizations.

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## Summary

### THE REASONS FOR CHANGES IN THE CONTROL OF DUTCH LOCAL GOVERNMENT

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The last fifteen years have seen a succession of changes in the management control of organizations in the Dutch local government sector, i.e. municipalities and provinces. These changes relate to, for example, organizational structures, financial management and human resources management, and also to IT. Many organizations decentralized their organizational structures, they adopted new management methods like integral management, and they introduced contract management, output budgeting, customer-orientedness, quality models, job appraisal interviews and competence management. This paper researches why so many management changes were introduced. The main focus is on changes in the field of accounting and financial management, such as the introduction of output- and outcome-oriented control, and their effects. However, these changes are studied together with other changes in the management of Dutch local government organizations. The empirical findings suggest that in many organizations mimicry played a part in the introduction of the changes. However, it seems that there also was a real striving to increase the efficiency and effectiveness of governmental organizations. All in all, most interviewees are slightly positive about the effects of the various changes on the effectiveness of their organization.

**Keywords:** *management changes, planning and control, local government, efficiency, mimicry, exploratory research*

# **CRITICAL ANALYSIS OF THE CONCEPT OF CONTROL ACCORDING TO IPSAS REFERING GERMAN AND ITALIAN LOCAL GOVERNMENTS**

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## **1. Introduction**

Local Governments are passing through a difficult period of transition. Because of the low economy in many industrial countries local governments are faced to small financial resources. Besides, citizens have changed their expectations about public services. This has occurred within a context in which social efficiency, in addition to management efficiency and effective satisfaction of the community's needs, have together acted as key elements in promoting a new model of local government (Schedler/Proeller, 2000). This model is focused on the process of decentralisation of public services and the constitution of the municipal corporate groups.

On one hand this development helps local governments to meet the changed expectations of the citizens, on the other hand there is a lack of information about the financial situation of the local government and how it is influenced by the decentralised organisations.

Consolidated financial statements are useful accounting instruments in order to improve internal and external accountability and to provide an overall true and fair view of assets and liabilities and the profit or loss of the year (Grossi, 2004; Srocke, 2004). The obligation to present consolidated financial statements is ruled by the concept of control. It rules which decentralised organisations owned by the local government has to be included in the consolidated financial statements. IPSAS 6 changed the conditions of control use in the private sector fundamentally in order to create an applicable concept for the public sector. Therefore, it will be analysed in the context of German and Italian municipal corporate groups if this concept is able to cover all relevant decentralised organisations that have to be included in order to provide consolidated financial statements that presents an overall view of assets and liabilities, the financial situation and profit or loss of the year. Only if the concept of control by IPSAS covers all relevant organisations of a municipal corporate group the consolidated financial statements will be able to provide this information and therefore fill in the lack of information caused by the process of decentralisation. Because the organisational structure of municipal corporate groups influence the ability to control the paper also consider different models that exist in municipal corporate groups.

## **2. Characteristics of municipal corporate groups and the need of consolidation**

Within the last decade municipalities followed a strong process of decentralization in behalf of making the rendering of services or production process more effective and efficient (PinaTorres, 1998). In result of this process municipalities present itself as true and proper municipal corporate groups, that are economic complex

conglomerates made up of public and private companies controlled completely or partly by the local government (Grossi, 2001).

In contrast to groups in the private sector municipal corporate groups can be described with the following distinctive characteristics (Srocke, 2004):

- **Corporate subjectivity:** Decentralised organisations are constituted in different legal forms and organisational structures.
- **Ownership:** Majority ownership interests with or without the ability to control, joint ventures or associates.
- **Different basis of accounting:** Some decentralised organisations as well as the local government itself might not have changed from a cash based to an accrual based accounting system.
- **Heterogeneous tasks:** Local governments provide services that differ significantly.
- **Complex objectives:** Financial as well as non-financial objective have to be considered in steering, controlling, co-operating and reporting processes.

The development of municipal corporate groups has led to the fact that annual accounts of local governments disclose only a partial view of their economic and financial activities, because the financial consequences of subsidiaries, joint ventures and associates are not necessarily included in the annual account of the local government. Thus, a great lack of information has been occurred because of the decentralisation process (Walsh, 1994). In result accountability and decision usefulness is not guaranteed by the annual accounts of local governments anymore. Internal (e.g. politicians, managers) and external users (e.g. citizens, voters, suppliers, banks) of financial information are not able to base their decisions on reliable and relevant information about the financial position, financial performance and cash flows of the whole local government (Owen Hughes, 1994). In order to avoid this lack of information consolidation is a necessary step (Lande, 1998).

Consolidated financial statements of a municipality will be only able to fill in the lack of information if the consolidated financial statements cover all decentralised organisations that have impact on the financial situation of the local government either directly or indirectly. Therefore the criteria that define the area of consolidation is the basic aspect of consolidated accounting.

### **3. Concept of control and consolidation area according to IPSAS**

#### **3.1. Definition of control**

In the private sector the obligation to compile consolidated financial statements as well as the consolidation area will be defined according to concept of control. If a company controls another company, the controlling organisation is obliged to present consolidated financial statements (IFRS 27, § 290 HGB (German Commercial Law), Document CNDC No. 17 (Italian Accounting Principals)).

According to IAS 27 control is given if the parent is able to govern the financial and operating policies of another company. It does not matter if the parent actually uses the power to influence and if the parent benefit because of the influence either in a positive or negative way. The ability to govern the financial and operating policies must be proved by a formal agreement like the statute, an agreement with the other investors or because of the majority of voting rights (IAS 27.12).

Because local governments aim on financial as well as non-financial objectives and municipal corporate groups consist of inhomogeneous decentralised organisations the definition of control used in the private sector does not satisfy the complexity of the public sector. Therefore the definition of control obviously must be changed in order to satisfy the special characteristics of the public sector.

The criteria that define control according to IPSAS 6 are the following (IPSAS 6.36):

- The local government benefits from the activities of the decentralised organisations;
- the local government has the power to govern the financial and operating policies of the decentralised organisations; and
- the power to govern the financial and operating policies is presently exercisable.

If all three criteria are met the local government controls the other decentralised organisation and there is an obligation to prepare consolidated financial statements.

In contrast to the definition of control used in the private sector these criteria fix two elements of the definition of control: The “benefit element” and the “power element” (IPSAS 6.26). Both elements have to be considered. The benefit element signifies that the controlling entity has to receive a financial or non-financial benefit from the activities of the decentralised organisation. This can also be a financial risk (IPSAS 6.27). The power element signifies that the government or the parent of a subgroup must be able to exercise the power to govern the financial and operational policies of the decentralised organisation. This does not require a majority of voting rights but the power must be conferred by law or another formal agreement. The formal agreement must presently exist. If the ability to exercise the power requires changing law or renegotiating agreements the power is not presently exercisable. The existence of power to control does not mean that the controlling government or parent of a subgroup has to use this power. It is sufficient that the controlling entity is able to use it. It is possible that the controlling entity never gives any instruction to the decentralised organisations (IPSAS 6.28). Besides, the controlling entity does not have to have influence on the day-to-day business (IPSAS 6.29) (Adam, 2004; Grossi, 2004; Srocke, 2004, 2004a).

### 3.2. Area of consolidation

Generally, every controlled entity should be consolidated (IPSAS 6.21). Only if “control is intended to be temporary because the controlled entity is acquired and



held exclusively with a view to its subsequent disposal in the near future; or it operates under severe external long-term restrictions which prevent the controlling entity from benefiting from its activities" the controlled entity should be excluded from consolidation (IPSAS 6.22).

If control does not exist it is necessary to investigate whether the decentralised organisation might be a joint venture or associate.

According to IPSAS 8.5 a "joint venture is a binding arrangement whereby two or more parties are committed to undertake an activity which is subject to joint control." That means that the controlling government or parent of a subgroup can not decide about the decentralised entity on its own. The entity has joint control over the joint venture together with another venturer.

IPSAS 7 should be applied for accounting by local government for investments in associates (IPSAS 7.1). Associates are decentralised organisations "in which the investor has significant influence and which is neither a controlled entity nor a joint venture of the investor" (IPSAS 7.6). Significant influence means the power to influence financial and operating policy decisions of the investee. An investor is supposed to have significant influence if it holds at least 20 % voting power of the investee. If the voting power is about 20 % and significant influence does not exist, it can be proven that the investee is no associate according to IPSAS 7. If there are less than 20 % voting rights a significant influence still exists if the government or parent of a subgroup holds an ownership interest in the other decentralised organisation and the relationship between both organisations shows a significant influence of the investor.

Depending whether control, a joint venture or an associate exist the consolidation method is determined and therefore the effect of the decentralised organisation will be presented in the consolidated financial statements regarding the influence the local government is able to exercise.

In the following it will be analysed if the concept of control and the consolidation area is suitable for German and Italian municipal corporate groups in order to present an overall true and fair view of the assets and liabilities and profit or loss of the year as if the local government were just one single organisation.

#### **4. Concept appraisal according to the individual structures of municipalities in Germany and Italy**

##### **4.1. German situation**

The legal framework of local government accounting is mainly ruled by Local Government Acts (*Gemeindeordnungen*) and Municipal Budgetary Acts (*Gemeindehaushaltsverordnungen*) enacted by the respective state government. Up to now the Local Government Acts and Municipal Budgetary Acts of a few states have been changed and now require the use of accrual accounting including the

obligation to present consolidated financial statements at least for reporting periods starting at 1 January 2012 (Budäus/Behm/Adam, 2003).

The states that have already set up accounting policies for consolidated financial accounting define the obligation and area of consolidation simply with listing legal forms that occur in municipal corporate groups.

Up to now only some local governments has introduced accrual accounting and only a small number of local governments has presented consolidated financial statements.

Compared to the concept of control according to IPSAS this way to define the obligation to compile consolidated financial statements brings up following problems:

- Because of vague formulation in the legislation, the list tends to be incomplete.
- There is no obligation to compile consolidated financial statements for subgroups within the municipal corporate groups.
- It is not considered if the decentralised organisations actually influence the financial situation of the local government and if the local government actually can govern the financial and operating policies of the decentralised organisation.

These problems have not become visible in practice because there are only little experiences with consolidation in the public sector.

In order to analyse if the concept of control according to IPSAS will be suitable for German municipal corporate groups the legal forms that occur in German local governments will be described briefly (Finger, 1998; Budäus/Behm/Adam, 2003).

Autonomous undertakings (Eigenbetrieb, Regiebetrieb) are operationally autonomous trading fund activities without legal personality because they are totally owned by the local government. Usually autonomous undertakings are depended on financing by the local government. Autonomous undertakings occur for example for public transport or waste disposal.

Public corporations (Körperschaft des öffentlichen Rechts) and public institutions (Rechtsfähige Anstalt des öffentlichen Rechts) are legally independent. They are completely owned by the government, because private partnership is not legally allowed. Universities and social insurance companies are organised in public corporations. Public institutions are broadcasting institutions or city savings banks. They usually work on a full cost recovery.

Consortiums (Zweckverband) are a special kind of public corporation. This legal form is used if two or more local governmental want to provide a public service together, e. g. public transport, waste disposal or removal of water.

Local governments can also set up private companies like limited companies or joint-stock companies to provide its services. Limited companies (*Gesellschaft mit beschränkter Haftung*) are legally independent. They appear for example as housing companies or trade fair companies. In some cases local governments set up joint-stock companies (*Aktiengesellschaft*). The joint-stock company is not common in municipalities because they have less influence on them compared to the limited company. Some energy suppliers are organised as joint-stock companies. Sometimes private investors hold ownership interests in limited companies or in joint-stock companies founded by local governments.

Foundations under private law (*Stiftung*) are set up by local governments for example for cultural services or to support the education system. Because of the legal requirements they are legally independent. The capital of the foundation is not owned by the local government but belongs to the foundation itself. In many cases foundations receive grants by the government.

#### 4.2. Italian situation

The consolidation of annual accounts is not mandatory in the Italian context, but the Local Government Act (*Testo Unico degli Enti Locali*) of 2000 encouraged local governments to include the obligation to compile consolidated financial statements in their individual regulation of accounting. Individual regulation of accounting can oblige the preparation of a consolidated balance sheet and the knowledge of the global results of the institutions or companies founded for the exercise of functions and services. This normative provision would surely have had different applicative results if it had been introduced as obligatory at least for the larger cities or for those in which the level of decentralisation was beyond determined limits.

Up until now, only some local governments have required in their own accounting regulations the compilation of consolidated financial statements for providing the knowledge of results accomplished by the local government and by the decentralised corporations.

In the Italian context there are also other obstacles in introducing consolidated annual accounts at local level:

- Up to now only some local governments have introduced accrual accounting;
- within Italian local governments there are not enough knowledge and experiences of consolidation;
- no national accounting principles exist and each local government can set up its individual consolidated accounting policy.

In the Italian institutional framework are contemplated the following legal forms of providing public services (Grossi/Mussari, 2004).

Special undertakings (*azienda speciale*) are owned by one local government and are characterised by an own public personality. Even if they have managerial and

accounting autonomy they are financial dependent by local government's grant. They are usually created in order to provide technical services like water, gas and refuse collection.

Consortiums (*consorzio*) are owned by more than one local government. Apart from this difference they have the same structure than special undertakings.

Institutions (*istituzione*) are organs of the municipality without an own legal personality. Even if they have managerial and accounting autonomy they are financial dependent by local government's grant. They are usually created in order to provide the social and cultural services.

Joint-stock companies (*società per azioni*) can have public or private majority and are regulated by the private law. They have a private legal personality and they are supposed to be financially independent but in many cases the public owner has to cover losses. They are usually created in order to provide technical services like water, gas and refuse collection.

Limited companies (*società a responsabilità limitata*) can have only public majority and are regulated by the private law.

Foundations (*fondazione*) and associations (*associazione*) are characterised by an own private personality and they are owned totally or partially by local governments. They are often financial dependent by local government's grant. They are founded in order to provide cultural and recreational services.

#### **4.3. First comparative results**

In the following it will be exercised whether the different legal forms usually occur as subsidiary, joint venture or associate. This analyse will show if the concept of control is able to create a consolidation area in German and Italian municipalities that cover all decentralised organisations that has an influence on the financial position, financial performance and liquidity of the local government. The following table will summarize this analyse. Some decentralised organisations always occur in one specific category. Others might occur in more than one category depending on the law, the statute and the agreement of the partners. This will be recognised with 'always' respective 'possible'.



**Table 1.** Classification of German and Italian legal forms

Legal form \ Influence	IPSAS 6		IPSAS 8	IPSAS 7
	Power element	Benefit element	Joint control	Significant influence
<b>Germany</b>				
Autonomous undertaking, trading fund activity	Always	Always		
Public corporation and public institution	Always	Always		
Consortium			Possible	Possible
Limited company	Possible	Possible	Possible	Possible
Joint-stock company	Possible	Possible	Possible	Possible
Foundation		Possible		
<b>Italy</b>				
Special undertakings	Always	Always		
Institution	Always	Always		
Consortium	Possible	Possible	Possible	Possible
Limited company	Always	Always		
Joint-stock company	Possible	Possible	Possible	Possible

Autonomous undertakings, trading fund activities, public corporations, public institutions, special undertakings and Italian institutions always meet the criteria of control according to IPSAS 6 because all these legal forms are totally owned by the local government. Therefore the local government is actually able to exercise its power and the power element is met. It is assumable that because of this 100 % ownership also the benefit element is met. In practice most of these decentralised organisations are dependent on government's grant. Therefore it is important that these decentralised organisations have to be fully consolidated.

The consortium in Germany usually meet the criteria of a joint venture if there are two to four partners participated in the decentralised organisations with the same quote of voting rights. If there are more than four partners it should be classified as an associate because a significant evidence of control tend not to exist in this case anymore and proportional consolidation would reflect more financial influence than this organisations actually have on the parent. Consortiums never occur as subsidiaries because it is their specific character that they are founded by two or more partners with equal participation. In contrast to this the Italian consortium can occurs also in that way that one partner has the majority. In this case the consortium meets the power and benefit element.

Mainly depending on the statute, the ownership interests and the voting rights the German limited company and the joint-stock company can either occur as subsidiary, as joint venture or as associate. Because of this it is an individual decision how to classify these companies and therefore how to include in the consolidated financial statements. The Italian limited company is always a subsidiary because public majority is required by the law.

In Germany the foundation is a special case. Some states in Germany include in their Local Government Act that foundations have to be fully consolidated. According to IPSAS foundations do not meet the power element because the managers of foundations are appointed by a kind of advisory panel that usually have to consist of experts of the subject the foundation is operating in. The local government that originally set up the foundation and might spent money for the foundation regularly has no power to govern the operational or financial activities. The municipal corporate group is not presented in a right way if foundations are fully consolidated.

The Italian foundation is a new phenomenon introduced by law in 2002. Up to know there are only a few experiences in the Italian local governments. For these reasons it is difficult to categorize it according to IPSAS.

In Germany municipalities have to exclude public saving banks from consolidation because the activity of a bank differs too much from the other activities of municipal corporate groups. The first projects in Italy also tend to exclude companies that activity differs significantly from typical public services like insurance companies or banks. According to IPSAS 6.38 all decentralised organisations have to be included if control exist. Comparable to IAS 27.14 it is clearly stated that different activities is not a reason for excluding from the consolidation area (Srocke, 2004).

## **5. Further consideration according to organisational aspects**

In the German and Italian context it is possible to identify three alternative solutions for the development of the directional, control and co-ordination functions of the companies owned by the local government (Department of Interior of Northrhine-Westfalia, 2001, Grossi, 2001a).

The "fragmented" solution occurs when the political bodies make use of the support of structures that already exist in the local government and that are competent in the different areas of activity in which each decentralised organisation operates. The greatest risk that originates from this solution is the excessive fragmentation within the administration of subjects involved in exercising this function, as it is not possible to identify any specialised unit in the management of relationships with the decentralised organisations. In this case there is a low quality of internal and external reporting and financial objectives are not considered in an adequate extent.

The "departmental" solution occurs in the case in which a special organisational unit is instituted within the local government, with the principle aim of creating and maintaining a stable link with the decentralised organisations. This new structure, having specific professional powers, would have the duty to support the political bodies in the definition of the strategic objectives of the group and, at the same time, to constitute a constant point of reference for the companies in the implementation phase of the objectives. In this case there is a higher quality of internal and external reporting and balanced consideration of financial and non-financial objectives.

The "holding" solution consists in the creation of a special company (usually established in a private legal form owned by the local government) specialised in assisting the political bodies in the definition of strategic objectives regarding the aggregation of companies controlled by the local government. The government becomes the single shareholder of another subgroup. The parent of this subgroup is a financial holding that hold shares in the different kinds of decentralised organisations. In this case there is also a high quality of internal and external reporting, but a stronger consideration of financial objectives.

These three organisational models obviously influence the appearance of control. In the fragmental solution the local government directly controls the decentralised organisations but because the responsibilities are shared between different departments of the local administration the control tend to be weak. Therefore it might be possible that control actually not exist although the legal constitution and the ownership are constituted in that way that control does exist. In the fragmental solution it might be possible that control is not presently exercisable and therefore control does not exist according to IPSAS.

In the departmental and holding solution control is presently exercisable because the holding respective the department of the local government is responsible for steering and controlling the decentralised organisations. But it becomes visible that in particular in the holding model financial objective are considered stronger than non-financial objectives because the personnel of the holding is often qualified only in financial issues. Personnel of the department tend to be a mixture of persons qualified in financial issues as well as qualified in non-financial issues. In these two solutions it is likely that the previous categorisation of legal forms according to IPSAS tend to meet the reality.

## Conclusion

The concept of control according to IPSAS provides a good solution to define the consolidation area in the German and Italian context. According to IPSAS the consolidation area of German and Italian municipal corporate groups will be defined in that way that the consolidated financial statements presents a overall true and fair view over the assets and liabilities and profit and loss of the year.

Because there is no specific accounting policy for consolidated accounting in Italy it would be suitable to adopt this policy. The definition of the consolidation area in the German Local Government Acts that already include consolidated accounting are inferior than the definition according to IPSAS.

It becomes visible that the organisational structure of the municipal corporate group influences the ability to exercise the power. Therefore this aspect should be considered carefully in order to decide whether a decentralised organisation is controlled or not.



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**Summary****CRITICAL ANALYSIS OF THE CONCEPT OF CONTROL ACCORDING TO  
IPSAS REFERING GERMAN AND ITALIAN LOCAL GOVERNMENTS**

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The paper analyses the concept of control according to IPSAS in the context of German and Italian municipal corporate groups. Firstly, the concept of control (IPSAS 6), joint ventures (IPSAS 8) and associates (IPSAS 7) will be described in general. Secondly the German and Italian situation referring the introduction of consolidation accounting and the different legal forms that occur in municipal corporate groups will be described. Finally, it will be analyzed if the concept of control covers all decentralized organisations that need to be included in consolidated financial statements in order to present an overall view about the financial position, financial performance and liquidity of the local government.

# LEGAL FRAMEWORK AS AN ACCOUNTING CHANGE FACTOR IN ESTONIAN LOCAL GOVERNMENTS

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## 1. Introduction

In 1990s an almost world-wide public sector reform within the framework of New Public Management (NPM) was started. Its proposals focus on externalising those activities and services which do not belong to the core of public administration, such as the introduction of mandatory competitive tenders in the provision of public services, private funding of infrastructures, as well as privatisation of state-owned companies. In the circumstances of NPM these initiatives will encourage adaptation of private sector management techniques by the public sector, as well as development of assessing performance measurement in order to monitor the degree of efficiency and effectiveness with which the public services are delivered, and to evaluate the financial consequences of management decisions.

In the course of the recent transition process, Estonia has simultaneously experienced many economic, social and political changes. As a result of the dramatic environmental shifts, the country's local government system has also undergone both a financial and a management reform. These alterations have also implications to the nature and practice of accounting systems.

During the transition process, due to the dramatic environmental shifts, the Estonian local government system has also undergone both a financial and a management reform. These alterations have also implications to the nature and practice of accounting systems. The present study intends to analyse the legal framework influencing accounting changes in Estonian local government organizations using contingency approach.

The paper is organized as follows. The next section sets a theoretical framework for the analysis, drawing on the contingency approach. The third section will analyze the legal framework for the accrual accounting reform in Estonian local governments and subsequently the stages of the accounting reform in Estonian local governments will be described. Fifth section will analyse the drivers of the process of implementation accrual bases accounting. Finally, concluding remarks on the study will be presented.

## 2. Theoretical framework

In accounting research, the influencing impacts on accounting system are often studied with help of contingency approach.

The contingency approach is based on the premise that there is no universally acceptable accounting system, which would be equally fit for all organisations in all

circumstances (Emmanuel *et al.*, 1990, p. 57). The effectiveness of accounting system will depend on its ability to adapt to changes in its external environment and internal factors. There are two different contingency approaches to accounting systems:

- contingency model oriented to public sector accounting (primarily governmental accounting) (see Lüder, 1992; Lüder, 1998);
- contingency model oriented to business sector accounting (see Emmanuel *et al.*, 1990; Chenhall and Morris, 1995).

A contingency model of governmental accounting was developed by Lüder (1992) to specify the social-political-administrative environment and its impact on governmental accounting innovations (Lüder, 1994, p. 1). This model was designed in circumstances of the absence of reform stimuli, unfavourable structural variables and the presence of implementation barriers. Over the next years the main contextual features have changed through the governmental fiscal stress and dominating 'superiority of managerialism' doctrine (Lüder, 1998).

Innes and Mitchell (1990) pointed out, that contingency theory attempts to explain why accounting system exists in a particular form within a company at a given point in time. The dynamics of moves or changes are not prescribed. Although the original contingency model of governmental accounting, developed by Lüder, included only contextual variables (Chan *et al.*, 1996, p. 19) during the next years the attitudinal and behavioural variables were added to the contextual variables. Some can distinguish three generation of contingency models in governmental accounting (Monsen and Näsi, 1998). At the same time the attitudinal and behavioural variables can be regarded as drivers of the accounting innovation or change.

Innes and Mitchell (1990) describe the mismatch between the accounting system and its environment, which creates a tension and pressure for change. They explain the accounting change process drivers in terms of facilitators, motivators and catalysts, which have been widely used by other researchers (see Laitinen, 2001; Luther and Longden, 2001). Facilitators are drivers, which are necessary but not sufficient for a change to occur (such as, for example, an adequate number of accounting staff). Motivators are drivers, which influence the change in a general manner (such as competitiveness of market). Finally, a third set of drivers directly associated with the timing of change is termed catalysts (such as arrival of a new accountant). Innes and Mitchell (1990, p.13) point out that motivators and catalysts act positively to generate change but could only become effective where suitable facilitating conditions exist. Besides the positive influences on accounting change Lüder (1992) as well Groot and Lukka (2000) distinguish also the impact of barriers or obstructers on the accounting change. Facilitators, motivators and catalysts may be necessary to create a potential for change, but action by individuals is needed to overcome the barriers to change.

### 3. Legal framework for local governments in Estonia

Having regained independence in 1991, Estonia has undergone fundamental political and structural changes over the last decade, which have also affected the operation of its governmental units on the State as well as on the municipal level. The principles of the local government are stipulated in the Constitution of the Republic of Estonia which was adopted by a referendum held in 1992. The Chapter 14, article 154 of the Constitution provides that all local issues shall be resolved and regulated by local governments, which shall operate independently in accordance with law.

At begin of 1990s Estonian local government system was based on two tiers. Counties formed the local government units of the second tier, those were formed on the basis of the former Soviet administrative units. The first tier of the local government comprised cities, rural municipalities and towns. Since 1994 the Estonian local government system began functioning at one tier, which consists of rural municipalities and cities. The counties became the regional administrative units, the county governors became the representatives of the state in the counties. During 1993-1994 a package of the laws regulating the local government was adopted. This set includes the following acts, which have also impact on the regulation of financial management and accounting issues in local governments:

- ◆ Local Government Organisation Act (adopted in 1993);
- ◆ Rural Municipality and City Budgets Act (adopted in 1994);
- ◆ Rural Municipality and City Budgets and State Budget Correlation Act (adopted in 1994);
- ◆ Local Taxes Act (adopted in 1994);

According to the Local Government Organisation Act, section 10, an each municipality is an independent public legal person and an economic and accounting entity.

Local budgets are separated from the state budget. The procedure for preparation, approval and implementation of local budgets has been established by the Rural Municipality and City Budgets Act. The relationship of the local budgets with the state budget has been regulated by the Rural Municipality and City Budgets and State Budget Correlation Act.

### 4. Regulatory framework for the governmental accounting reform

In the process of development of the Estonian financial accounting and reporting regulation one can distinguish between three stages:

- the introductory stage (1990-1994),
- the system-building stage (1995-2002) and
- the system improvement stage (since 2003).

These stages are discussed in more detail by Haldma (2004). In following, within the framework of the development of Estonian financial accounting and reporting



regulation we shall analyze the tendencies in local government accounting regulation.

#### **4.1. The introductory stage**

Estonia started its accounting reform at the beginning of the 1990s when it was still a part of the Soviet Union. In July 1990, more than a year before independence was regained in August 1991, the Regulation on Accounting was adopted by the Estonian Government and it came into effect from 1 January 1991. This event was the first step towards creation of market-economy accounting environment in Estonia. In the contemporary sense, the Regulation was quite modest in content and volume, consisting of only ten pages.

However, section 2 of the Regulation on Accounting, stipulated that the bodies of State and local government funded from the state and local budgets are required to organize their accounting recording and reporting. Section 4 added that state and local governments have based their accounting in accordance with instructions and recommendations issued by the Ministry of Finances. As it was mentioned above, the local government reform was first completed in 1994 and therefore local government accounting issues were not improved substantially during the first stage of national accounting reform. The Local Government Organisation Act provides the general framework for municipal economic management and budgeting. Chapter 5 of the Act is entitled 'Economy and budgeting'. This chapter regulated only general requirements on annual budgets, for example a requirement of a balanced budget was introduced. Any particular accounting issues were not mentioned. The Local Government Organisation Act is amended quite rarely. Consequently, during the first stage of Estonian accounting reform, local government accounting issues have not given much attention. But it is evident that the basic legal regulations on local government accounting issues have been introduced. Therefore, we can conclude, that the first regulations can be estimated as facilitators of future accounting change in local governments.

#### **4.2. The system-building stage**

In the middle of the 1990s, the development of the business environment in Estonia was affected by the conceptual changes and improvements in the legal system (particularly in taxation), ownership changes (the most intensive period of privatization was 1993-1995) and increasing FDI inflow.

Therefore, the main question of accounting reform was: how to build a forward-looking and flexible accounting regulation system, which would enable Estonian accounting integration into the European accounting framework. After a comprehensive exploration, internal discussions, careful consideration and some testing in practice, the Estonian Accounting Law (EAL) was passed by the Estonian Parliament in June 1994 and came into effect in January 1995. One of the most conceptual issues of the EAL was the creation of parallel accounting regulation system - the accounting framework and procedures in Estonian companies and

institutions are legally regulated by the Estonian Accounting Law as a frame-law and by the Estonian Accounting Standards issued by the EASB. This combination had a number of advantages, in particular in the initial period of the accounting reform, speeding it up and enabling the transition process to be flexible.

According to the EAL, section 2, the law applied among other institutions also to central and local government entities. They were required to comply their accounting with the general principles of the EAL (sections 1-16), but the majority of the guidelines were still issued by the Decrees of the Ministry of Finance. On the one side, section 4 of the EAL stipulated that business transaction of the institutions, which applied the EAL, are recorded on an accrual basis. On the other, these sections excluded the requirements on financial statement (were disclosed in sections 18-24). In June 1996 due the amendments to the Law, the application was expanded also to public legal persons. As it was mentioned above, according to the Local Government Organisation Act, an each municipality is an independent public legal person. The public legal persons were required to apply the entire EAL. Consequently, the accounting issues of local government entities were regulated by two different EAL sections, which caused some confusion among the local government entity officials.

More detailed accounting guidelines were given by the Decrees of the Estonian Ministry of Finance. First accounting guidelines for central and local government entities were adopted in 1995. Through these new guidelines, referring to the sections 1-16 of the EAL, it was made the first attempt to apply a business or accrual accounting model to municipal accounting. Theoretical suitability of Estonian business sector accrual model, which itself was first applied for four years, since 1991 only, was taken to the local governments as granted and therefore the change was considered to be first place technical in its nature. In the contemporary sense, the guidelines included some obscure sections and contradictions to the EAL. According to the section 7 of the guidelines, an accounting entity was required organize its accounts in such a way as to ensure relevant, objective and comparable information. At the same time all items of the financial statements were prescribed. The same section also required to prepare and publish financial statements and report on the implementation of the state budget, although the EAL did not require within the sections 1-16 of the EAL the preparation of financial statements.

The operating transactions were recorded with a mixed system, including as a cash-basis as well accrual basis principles. According to the section 8 of the guidelines, the utilization of state budgetary resources was recorded on cash-basis and accounting issues for non-budgetary resources (for example, for revenues from municipal enterprises, municipal agencies and municipal assets) on accrual basis. This mixed system was replaced by solely accrual basis through the amended guidelines in 1998. But it seems that for the governmental institutions the mixed accounting system has posed a lot of problems and confusion. This reflected also in the formats of the financial statements, required by the guidelines. For example, according to the Rural Municipality and City Budgets Act and the formats of the financial statements, the loans were recorded as revenue. Although the EAL defined

the format of the balance sheet basing on decreasing liquidity (beginning from cash and ending by intangible assets), for local governments required a balance sheet and a chart of accounts basing on increasing liquidity. In addition, the financial statement formats change almost every year without giving any reason or substantial explanations. However, since 1998 the accrual-basis principles of accounting have been formally introduced.

#### 4.3. The system improvement stage

The new, amended version of the EAL, which came into force in 2003, has also expanded the scope of the Law, involving in accordance with sections 2 and 35-40 also central governmental institutions (the Law has applied to them since January 2004). The Ministry of Finance is responsible for the organization of state accounting and financial reporting pursuant to the EAL. This objective is conducted by the general rules for organisation of the accounting and financial reporting of the state and the state accounting entities (*riigi raamatupidamise üldeeskiri*) which are based on and are in compliance with the accounting principles generally accepted in Estonia and the international public sector accounting standards and in accordance with which the state accounting entities are required to organise their accounting and financial reporting.

Section 36 of the EAL stipulates, that the general rules also explain and specify the requirements of the accounting principles generally accepted in Estonia as regards the state and the state accounting entities and serve as the accounting policies and procedures for the state as a whole. The existence of the general rules does not release the state accounting entities from the obligation to establish their own accounting policies and procedures.

The general rules establish also the procedure, necessary for the Ministry of Finance to organise state accounting and financial reporting, for regular reporting by the state accounting entities, local governments, legal persons in public law, and other accounting entities which are not state accounting entities or companies but over which the state exercises dominant influence.

According to the section 37 and 38 the state accounting entities shall prepare their annual reports in accordance with the requirements of the EAL and the general rules. The annual accounts of the state shall contain an additional report on the implementation of the state budget, subdivided according to the state budget adopted by the Estonian Parliament (*Riigikogu*) for the accounting year.

Therefore, it can be concluded that beginning from 2004, the EAL covers the regulation of the accounting principles of all types of institution. The business entities and public legal persons have followed the EAL and the accounting standards for years and are accustomed to doing so. But our observations revealed that for the central governmental institutions the switch from cash-basis to accrual-basis accounting in January 2004 has posed a lot of problems and confusion.



Thus the public sector has adopted the main principles and rules of private sector accounting and as general observation, the development in public sector in Estonia from cash-basis to accrual accounting it can be regarded, in the light of the New Public Financial Management Framework, as an attempt to adopt the accounting principles that applied in the private sector.

### **5. Governmental accounting change drivers**

In this section, using the theoretical framework described in section 2, we try to analyse the main set of change drivers influencing the development of local government accounting issues. According to Groot and Lukka (2000) the drivers of change are actions, development, actors and circumstances that cause, provoke or facilitate change processes to take places. In our opinion a local governmental accounting system can be regarded as an information system. Changes in organizational arrangements of the system are influenced by facilitators and barriers. We argue, basing on the analysis of the development of local government accounting, described in Section 4, that the legal framework of local governmental accounting regulation (acts, laws, guidelines etc.) serves as the main facilitating condition of the change. But as it was revealed in section 4, the accounting guidelines for central and local government entities, adopted in 1995, included some unclearness and variability concerning the implementation of the accrual basis accounting procedures. Therefore, this unclearness of some regulation items serves as a barrier for accounting change. Other barriers were, firstly, a weak knowledge about business accrual based accounting principles, while the accountants in local governments were used to use cash-basis and fund accounting principles for years. Secondly, proceeding from the latter, a limited retraining of the officials of local governments and also ministries. Thirdly, a weak inspection and control from the side of Ministry of Finance. The main responsibility of local authorities was to submit the require statements, the substantial or methodical control was not arranged from the side of Ministry. An official from a local government commented: "If you have submitted in proper time the statements, they were also accepted already without any control".

Motivators and catalysts create a potential for change, and corresponding actions by individuals are needed to overcome the barriers to change. In our opinion, the fact that accounting regulations have expanded its scope, involving in accordance with the EAL local governments units during the second stage of accounting reform can be serve as a motivator of the change process. During the third stage, according to the sections 2 and 35-40 of the EAL, also the accounting issues of central governmental institutions (the Law has applied to them since January 2004) are involved. Next, also the influence of auditors on the development of local government accounting issues can be regarded as a motivator. The requirement on professional auditing of local governments has been changeable, while for some periods the audit was required by the Local Government Organisation Act, for some periods it was excluded. Only since 2004 due the requirement of EAL based on local government budget volume, the majority of local authorities are required to audit. At the same time, before that date a relevant number of local authorities were audited in



Estonia. In our opinion, this event improved substantially accounting procedures in local governments toward accrual bases and business accounting. However, accounting methods and skills could remain quite different between authorities. Therefore, a new skilled accountant, having accounting experiences from private companies can serve as a catalyst for local government change in particular place. Also, a poor financial performance as a catalyst, can start an accounting change.

## 6. Conclusions

The present study, focussing on the legal framework influence on the Estonian local government accounting developments revealed the following.

First, the development of the Estonian local government accounting system is following the development of business accounting system, which can be divided into three different stages - the introductory (1990-1994), system-building (1995-2002) and system improvement stage (from 2003 onwards).

Second, the Estonian local government accounting regulation, including different regulatory acts has succeeded a remarkable evolution on the way to transfer cash-basis accounting onto accrual-basis procedures.

Third, an integrated theoretical framework, including the contingency model and accounting change drivers approach can be used to analyze the process of the accounting reform in Estonian local governments and legal framework impact on it.

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## Summary

### LEGAL FRAMEWORK AS AN ACCOUNTING CHANGE FACTOR IN ESTONIAN LOCAL GOVERNMENTS

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During the transition process, due to the dramatic environmental shifts, the Estonian local government system has also undergone both a financial and a management reform. These alterations have also implications to the nature and practice of accounting systems. The paper analyses the legal framework influencing accounting changes in Estonian local government organizations. Our study showed a wide gap between the formal accounting regulation and its actual application. The paper intends to analyse the legal framework as an accounting change impact using contingency approach. The legal framework influencing accounting aspects in local governments has been analysed as a facilitator, motivator and barrier of an accounting change.

## ASSUMPTIONS OF IMPLEMENTING EFFICIENT MANAGEMENT INFORMATION SYSTEM IN PUBLIC SECTOR

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Essential phases of Management Information System (MIS) are (Kallas K.):

- Management of organization receive different external information (contracts, legal acts) from suppliers, customers, state- and local government institution (tax- and statistic department) credit institution and others to organize economic activities.
- Management of organization accomplishment internal tactical and strategic managerial decision (schedule, plans, budgets) for organizing economic activities based on external and internal information. This comprises as well about arranging accounting principles (regulations) and required internal and external information. These directions are transferred to organizations subunits including accounting unit.
- Basic data of identified transactions will register on the basic document. Accounting department processes irregular basic data, this includes grouping and summaries accounting data for internal and external report. Reports will be analysed and interpreted by management.
- Obligatory external report will transfer to register -, tax- and statistic department, credit institution, stock exchange and others interested parties.

Analogical is MIS illustrated on the figure 1 (Glautier M.W.E., Underdown B. Figure shows how environmental and analytical information is combined in the plans which are designed to meet the organization's objectives. These plans are implemented as resources become inputs which are converted into products and services. Feedback and control systems should function so as to ensure the effectiveness of the plans.

MIS is communication process which includes transferring information to make managerial decision by management. Communication is an exchange of facts, ideas and options by two or more persons. The exchange is successful only when actual understanding results. Merely saying is not enough; a receiver or information must understand the message which the sender is trying to communicate. Communication occurs when the former understands what the latter means to convey (Glautier M.W.E., Underdown B).

### How to value efficiency MIS?

Author's judgement is that MIS is efficient when:

- constructed hierarchically;
- measures given to subunits and achievement their goals, drives fulfilment organization's objectives;

- are supported by other units and fields (for example results are related with bonuses and motivations.);
- measures follows trends and changes of environment.

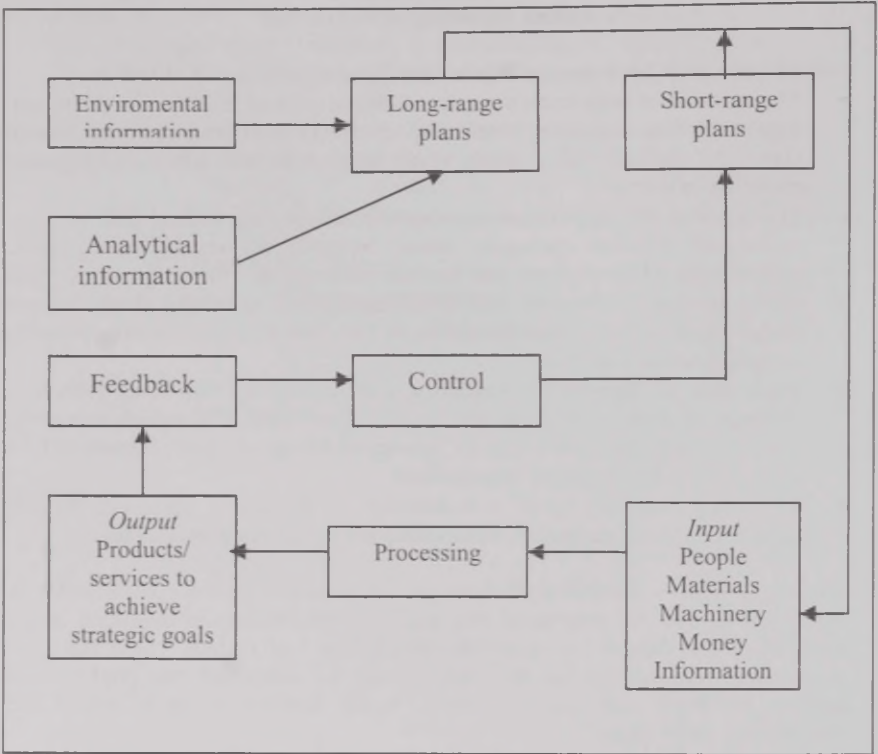


Figure 1. Management Information System.

### Specific of public sector

Before focusing to assumptions of implementing efficient MIS is necessary to describe specific of public sector.

MIS should be designed to enhance the probability that the organization's goals will be achieved, and assessments about the MIS effectiveness should be predicated upon judgments of likelihood (or degree of) goal achievement. Goal clarity exists in profit organizations: the primary goal is to maximize shareholder value. Managers of publicly owned corporations can easily obtain timely feedback on their goal achievement by monitoring their company's stock performance and comparing it to those of their competitors and the overall market (Merchant K. A., W. A. Van der Stede).



This goal clarity does not exist in many public sector organizations. Usually many constituencies have an interest in the organization, its goals, and its performance. But these constituencies often do not agree; their values and interests conflict (Hofstede G.). Government organizations are often directed from a number of sources, including the executive, legislative, and judicial branches of government and, possibly, from federal and local levels. Managers of these organizations face external pressure because the press and public in democratic societies have access to considerable information. Some key officials may face re-election pressures and, thus, a need to please the public at large and (hopefully not) potentially large campaign donors. This diffusion of direction greatly complicates management. At a minimum, it provides for more goal complexity. In many cases the goals given to the organization from its various constituencies conflict (Merchant K. A., W. A. Van der Stede).

Even if a public sector organization's goals are quite clear to all, managers of these organizations do not have their disposal any single, quantitative bottom-line performance indicator, such as the profit indicator in for-profit organizations (Smith P.). The degree of achievement of organization's overall goals – the provision of quality service to constituencies – cannot usually be measured accurately.

Without a small set of quantifiable performance indicators the tasks of management and management control are greatly complicated. It becomes difficult to:

- measure organizational performance in light of the overall goals and thus, to use results controls even at the organization level;
- analyse the benefits of alternative investments or courses of action;
- decentralize the organization and hold subunit managers accountable for specific areas of performance that relate exactly to the organization's overriding goal; and
- compare the performances of subunits performing dissimilar activities.

The boards of directors of public sector organizations have been specifically criticized for their inattention to performance measures (Taylor B. E., Chait R. P. and Holland T. P.). They are commonly unable to do their jobs effectively because they „have never determined what matters most“ (Taylor B. E., Chait R. P. and Holland T. P.). Thus they do not have the performance measures they need to assess the organization's health and to signal potential problems.

### **Ambiguity objective to actual objective**

Implementing efficient MIS in practice is strongly correlated with support by management and communication by them. No valuation by management is replaced by hiring project manager. MIS is valuable for organization when organization's objectives are directed from up to down to subunits level. It must start from founder of public sector organization clearly and regularly expressed interests about development of it. Despite of ambiguous, non-common objective of public

sector, management have to make selection of those. Organization can not allow inside ambiguity of objective standing front of public sector organization. Otherwise, using the same goal orientation inside the organization for subunits, are consequences: stagnation, demotivation of employees and high percent of employees who leave. Even if board values and approves achievement of apparent objectives then management have to differentiate essential and existence objective proceed from how organization support society. Management have to it proceeding from organization progress and reject interest of different groups. From this base arise assumptions for efficient implementing MIS.

### **Highly ambition objectives are not guarantee of high performance measurement**

Objective set for organization and achievement has to depend on them itself. Excessively ambitions and illusory objectives are against to implanting efficient MIS as well. Because moving with over potency objectives from up to down are consequences same: stagnation, demotivation and high number leaving employees and fall efficiency. For example, social support organization who main objective is application proceed and decide about subsidy can not take responsibility of state level. They have no potency to surrender with poverty and inequality in society. It is not proper to value their performance trough macroeconomic measures. Most important input – funds – does not depend from them.

### **Creation responsibility centre**

After taking actual objective the next step what follows to efficient MIS is distributing activities as main and supporting activities and creation responsibility centre from this base. Setting goals from up to down should do by management with awareness and purposeful. Setting goals to unit trough direction to get goals itself, may consequences be not derived from entire organization's objectives and not synchronized. In addition on that, units goals may be contradicting. Idea, conflict inside the organization, is not usually progressive and gets waist of resources.

### **Institution of main and supporting process**

Activities (repeated) are necessary to range into main or supporting process. Control over results must be regular. Leader of responsibility centre must own resources and possibilities to improve something inside his area what follows achievement of organization's objectives. If you can measure you can lead it. In practice is often that centres have no right, resources and possibilities for achieving set goals. Rights, resources must be balanced with obligations. This makes centre informal and management of it goes outside. This leads again leaving specialist, refer to weakness of culture inside. This will not guarantee acceptable results, because employee without competence can get results inside new profile. If lack of competence is regular then training in first is necessary and only after that in sensible set the goal.

An assumption of efficient implementing MIS is high culture inside the organization. Then is justified buying and selling of support activities. Otherwise is common that line position will set "orders" to staff position in remarkable quantity.

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## Summary

### ASSUMPTIONS OF IMPLEMENTING EFFICIENT MANAGEMENT INFORMATION SYSTEM IN PUBLIC SECTOR

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Article gives overview of assumption of implementing efficient MIS in public organization. Implementing MIS is long-term process and for efficient MIS are some assumption. At that has taken into account specific of public sector. Basic assumptions are:

- organization's objective must be clear, actual;
- strong, leading support from management
- necessary is range activities as main and supporting;
- creation responsibility centre
- high level of culture

## THE RULES OF VALUATION AND CREDIBILITY OF THE COMMUNE BALANCE SHEET

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Basic legal act adjusting principles of conducting of accountancy in Poland is The Accounting Act of 29 September 1994. Regulations of this act has got appliance not only for earning units, but also for self-government units and their organization departments<sup>1</sup>.

Mentioned units are not concerned in regulation act included in chapter 5 and 6, which regulate principles of composing and researching reports of financial units and related undertakings<sup>2</sup>. According to The Accounting Act the minister component for public finance may, by way of ordinance, impose an obligation to audit the financial statements of those units<sup>3</sup>. Such duty has not been introduced yet.

From the point of view of specificity of activities led by units of local governments and ownership of property, these units are bound to use not only The Accounting Act regulations but specific principles of accounting as well.

Specific principles of accounting in Poland are introduced in executive regulations in act of public finance and are applicable instead of or as an attachment of adjustment result from The Accounting Act. Principles concerning the valuation of assets and liabilities, structures and contents of charts of accounts, composing financial reports and budgetary reports are written down in:

- Ordinance of the Minister of Finance dated 13 March 2001 on the budgetary reporting<sup>4</sup>
- Ordinance of the Minister of Finance dated 18 December 2001 on the detailed principles of accounting and on the chart of accounts for national budget, self-government units budgets and some units of the sector of public finance<sup>5</sup>.

In consequence these units use homogeneous accounting and financial reporting rules<sup>6</sup> and they use homogeneous chart of accounts. That assure clarity of public finance.

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<sup>1</sup> The Accounting Act of 29 September 1994 Consolidated text of 27 March 2002 (Journal of Laws No. 76, item 694) Art. 2.1.4

<sup>2</sup> The Accounting Act of 29 September 1994 Consolidated text of 27 March 2002 (Journal of Laws No. 76, item 694) Art. 80.1

<sup>3</sup> The Accounting Act of 29 September 1994 Consolidated text of 27 March 2002 (Journal of Laws No. 76, item 694) Art. 80.2

<sup>4</sup> Journal of Laws No. 24, item 279

<sup>5</sup> Journal of Laws No. 153, item 1752

<sup>6</sup> Act of public finances from dated 26 November 1998 (Jurnal of Laws No. 15, item 148) Art. 11.4



On the basis of The International Accounting Standards polish Accounting Act defines supervising accounting rules in articles from 4 to 8, like<sup>7</sup>:

- true and fair view,
- going concern,
- accrual basis
- matching,
- prudence,
- balance sheet correspondence,
- content superiority over form,
- materiality.

On result of realization of above-mentioned principles, account books equal, as well as financial report should include verifiable, honest and reliable information<sup>8</sup>. Quality of this information has meaning not only for managers buy for external receivers of financial reports as well. Realization of accounting rules serve to require information about needed qualitative features.

Act of public finance and particular regulations issued on its base endure or limit three of them in units of local governments and they organizational units (in similar degree in state sector), these principles are: going concern, accrual basis and prudence.

Going concern does not have implementation in budgetary units, because decision of their creation and liquidation takes always establishing unit, taking into consideration social requirements and economic capabilities of given unit of local government. Chief of budgetary unit does not decide about it. Liquidation of budgetary unit does not effect evaluation rules of properties of units, particular regulations present, that it is evaluated according to inventory prices, proper for continuing operations undertakings (with exception when liquidation agreement presents otherwise).

Application of accrual basis is limited. According to particular principles of accountancy to find result of execution of budget, that is surplus or deficiency, economic operations concerning revenue and expenses of budget of state and revenues and expenses of budgets of self-government units are shown in accounts books on separate accounts in range actually (cash realized) incomes and expenses performed on bank accounts of budgets and current accounts of revenues and expenses of budgetary units, with exception of particular operations. However incomes and costs of budgetary units should be shown in accounts books according to accrual basis.

<sup>7</sup> Nowak E.: Accounting – basic course, PWE, Warsaw 1998, pages18-20

<sup>8</sup> Kwiecień M.: Financial reporting, management versus chart of accounts, in: Financial reporting and audit in process of increasing top management qualifications, edited by B.Micherdy, Cracow 2003, Cracow University of Economics and DTP Chorzow, page 803

Basic meaning for reality of value of assets and passives and financial result in earning units has prudence principle. Principles of valuation, especially assets valuation, from which particularly financial assets and current assets should not be valued in higher value than market, and receivables in amount not higher than expected incomes. According to this principle it is indispensable to make revaluation write-offs of these assets, but not later than on balance sheet day, which will adjust them to the real value.

Regulations of the ordinance on the detailed principles of accounting present, that in budgetary units:

- You do not make stocks' revaluation write-offs but you show it in balance sheet in prices that have been entered into accounts
- You do not make receivables' title of revenues and budgetary expenses revaluation write-offs

Ordinance's regulations does not concern prudence for remaining components of assets, which means that they should be valued according to the principles of Polish Accounting Act. In practice, in spite of such regulatory duty, budgetary units do not make fixed assets and tangible assets under construction revaluation write-offs. A few units only try to find real values of long-term financial assets, which are mostly shares in communal companies, and in the same to make revaluation write-offs, what is obligatory.

Question emerges, can limitation of prudence principle usage or giving up it, contrary to regulatory duty, have significant meaning for the reality of the property value by specific budgetary unit? Largely it depends on structure of property of unit. Table 1 shows assets and liabilities juxtaposition summary one of small communes of the Lower Silesia.

The biggest participation in assets have fixed assets, over 90%, and long-term financial assets present over 30% in it. The manner of their valuation has big influence on value of property presented in balance. Unit shares are valued according to acquisition price without revaluation write-offs. It happens because companies, for which those shares have been contributed, lead economic activity, in spite of incurred losses. Besides, these shares are not offered for sale and it is not possible to establish their current market price. Not making revaluation write-offs in presented situation is justifiable only till moment, in which equity of companies, after covering liabilities, allows withdraw the full value of shares contributed by commune. If the balance sheet shows that it is not possible, according to Accounting Act, revaluation write-offs should be made.

**Table 1.** Collective balance sheet of commune X for year 2004 (in thousands of PLN)

ASSETS	State at the beginning of the year	Participation in structure %	State at the end of the year	Participation in structure %
A. Fixed assets	58.226,02	94,76	59.352,25	94,06
I. Intangible assets	0,00		0,00	
II. Tangible assets	37.961,58	61,78	38.972,78	61,76
III. Long-term receivables	226,02	0,37	311,45	0,49
IV. Long-term financial assets	20.038,42	32,61	20.068,02	31,80
V. Value of sold liquidated units	0,00		0,00	
B. Current assets	3.221,37	5,24	3.750,37	5,94
I. Stocks	43,45	0,07	80,65	0,13
II. Short-term receivables	2.657,74	4,33	3.047,95	4,83
III. Cash	519,18	0,84	620,77	0,98
IV. Short-term securities	1,00		1,00	
V. Inter-period settlements of accounts			0,00	
C. Other assets			0,00	
Total assets	61.447,39	100,00	63.102,62	100,00

LIABILITIES	State at the beginning of the year	Participation in structure %	State at the end of the year	Participation in structure %
A. Equity	58.800,82	95,69	60.008,56	95,10
I. Unit's equity	67.065,05		71.172,99	
II. Net result	(8.264,23)		(11.164,43)	
III. Surplus of the current capital (-)			0,00	
IV. Write-offs from financial result (-)				
V. Equity of liquidated units				
VI. Others				
B. Earmarked funds				
C. Long-term liabilities				
D. Short-term liabilities and earmarked funds	2.420,55	3,94	2.782,61	4,41
I. Short-term liabilities	1.703,43	2,77	1.951,39	3,09
II. Earmarked funds	717,12	1,17	831,22	1,32
E. Accruals	226,02	0,37	311,45	0,49
I. Income's accruals	226,02	0,37	311,45	0,49

II. Other accruals				
F. Other liabilities				
Total liabilities	61.447,39	100,00	63.102,62	100,00

Source: personal elaboration

In current assets, presenting only over 5% of total assets, predominating participation have receivables, but stocks and money assets – very few. Insignificant participation of stocks in entity assets of budgetary units is typical situation for most of them.

They are mainly materials. Their valuation in acquisition price, without using the prudence principle, allows to save real balance sheet valuation and it does not distort image of financial condition.

Short-term receivables mainly formed from budgetary incomes, mainly by amounts due, but unpaid taxes on balance sheet day. According to present regulations budgetary units cannot create revaluation write-offs for them, to thought of assumption, that all budgetary incomes will be paid. It does not correspondent with the truth. Value of receivables by virtue of taxes and degree of their collections presents table 2.

**Table 2.** Analysis of collections of taxes in commune X for year 2004 (in PLN)

Specification of taxes	Arrears on 01.01.04	Size in year 2004 – write-offs	Payments for 31.12.2004			Collections in % (5:3)	Remaining for payment		% (8:2)
			Payment of arrears	Current payment	Total:		Arrears on 31.12.04	Deferred amount dues on 2005	
1	2	3	4	5	6	7	8	9	10
<b>Agrarian tax</b>	<b>447.346</b>	<b>2.069.573</b>	<b>137.093</b>	<b>1.881.416</b>	<b>2.018.509</b>	<b>91</b>	<b>500.920</b>	<b>1.724</b>	<b>112</b>
entity	317.371	1.128.045	102.308	986.620	1.088.928	87	357.538	-	113
individual	128.975	941.528	34.785	894.796	929.581	95	143.382	1.724	111
<b>Property tax</b>	<b>525.340</b>	<b>4.389.877</b>	<b>72.515</b>	<b>4.130.980</b>	<b>4.203.495</b>	<b>94</b>	<b>633.805</b>	<b>86.128</b>	<b>121</b>
entity	292.754	3.257.299	12.745	3.164.806	3.177.552	97	374.239	-	128
individual	232.586	1.132.578	59.770	966.174	1.025.943	85	259.566	86.128	112
<b>Forest tax</b>	<b>1.395</b>	<b>54.767</b>	<b>68</b>	<b>54.089</b>	<b>54.957</b>	<b>99</b>	<b>2.229</b>	<b>-</b>	<b>160</b>
entity	1.197	52.628	-	51.954	51.954	99	2.088	-	174
individual	198	2.139	68	2.135	2.203	99	141	-	71
<b>Transport tax</b>	<b>87.759</b>	<b>250.600</b>	<b>43.459</b>	<b>184.674</b>	<b>228.133</b>	<b>74</b>	<b>109.182</b>	<b>1.045</b>	<b>124</b>
entity	8.772	68.898	-	69.448	69.448	100	8.222	-	94
individual	78.987	181.702	43.459	115.226	158.685	63	100.960	1.045	128
<b>Total taxes:</b>	<b>1.061.840</b>	<b>6.764.817</b>	<b>253.135</b>	<b>6.251.159</b>	<b>6.505.094</b>	<b>92</b>	<b>1.246.136</b>	<b>88.897</b>	<b>117</b>

Source: personal elaboration



## References

1. **Nowak E.:** Accounting – basic course, PWE, Warsaw 1998, pages 18-20
2. **Kwiecień M.:** Financial reporting, management versus chart of accounts, in: Financial reporting and audit in process of increasing top management qualifications, edited by **B. Micherdy**, Cracow 2003, Cracow University of Economics and DTP Chorzow, page 803

## Summary

### THE RULES OF VALUATION AND CREDIBILITY OF THE COMMUNE BALANCE SHEET

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State entities, their auxiliary households, state businesses are public finance sector units. They are endowed with specific assets and empowered within certain limits to incur liabilities in order to fulfil their tasks. To appraise the assets, the liabilities and define the performance level the entities are obliged to comply with the measurement categories stemming from the Accounting Act and specific regulations on the accounting principles set forth exclusively for these entities. The problem arises whether the regulations and the measurement method are adequate for the specific nature of the entities' operation and for the reflection of the value of the assets, the income statement, own funds and liabilities in their balance sheet and consequently in the balance sheet of a self-government unit. Does the application of these principles guarantee the achievement of the overriding objective of accounting i.e. providing diligent information about the state of the assets and financial performance of each entity, e.g. a commune. The paper is an attempt at answering the aforementioned questions.

# **ACCRUAL ACCOUNTING PRINCIPLES AND POSTULATIONS IN THE PUBLIC SECTOR: RHETORIC OR REALITY**

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## **1. Introduction**

The transition to accrual accounting has been the most notable reform of government accounting in the last two decades for many countries. New Zealand was the first country to adopt accrual accounting in the public sector as a whole (pursuant to Public Sector Act 1989) and then soon followed by the New South Wales Government in Australia. Since then, the transition to accrual accounting has become increasingly common amongst governments around the world. However, public sector accrual accounting remains an under-researched topic. Namely, government accounting reform has remained mostly like a black box. One clear message that emerges from the analysis of accrual accounting reform in the public sector is that there remains considerable room (and indeed there is a need) for further debate and research. For instance, accrual accounting is based on some principles and postulations (e.g. matching principle and going concern postulate) that have been used for decades as an obstacle in the way of its adoption in the public sector. While IFAC has issued the IPSASs (International Public Sector Accounting Standards) in order to be applied to the public sector entities, there is a lack of conceptual framework which is really required for transferring accrual accounting concepts into public sector. Consequently, there is a need for further research to develop this framework. This paper is a small step in this direction. Therefore, this paper aims at clarifying some of the accrual accounting principles and postulations that can create confusion within the public sector and making clear how such principles and postulations can be applied to the public sector in order to facilitate the adoption of accrual accounting.

This paper is organized as follows. The next section discusses and analyzes some of the accrual accounting principles in order to make clear how they can be applied to the public sector. The third section will analyze one of the accrual accounting postulations, which is the going concern, and discuss the extent to which this postulation can be applied to the public sector.

## **2. Accrual accounting principles**

### **2.1 Matching principle**

One of the cornerstones of the accrual accounting system is the matching principle. This principle means that the revenues, which were earned during the accounting period, should be matched with the associated expenses. The matching principle is used by the business enterprises to measure the net income. Thus, the process of identifying the revenues and assets, which expired in production of those revenues, are fundamental for the matching principle. Accordingly, the direct link between revenues and expenses is a prerequisite in order to apply the matching principle. On

the other hand, in the governmental entities the direct link between services and revenues is mostly missing and so is the link between expenses and monetary value of the output. The lack of direct and traceable linkage between expenditures and revenues has made some of the opponents of the transition to accrual accounting in the public sector to conclude that accrual accounting with its matching principle cannot generally be properly applied to governmental organizations (Monsen and Nasi 1997, p.13). Furthermore, they stated that it is true that it can be applied to certain activities where the linkage between expenses sacrificed and revenues earned is direct or close enough, but in general this is not the situation in government accounting. So according to Monsen and Nasi, the general lack of a coupling between expenditures and revenues in governments indicates that the matching concept cannot be applied similarly to government accounting as it is applied to business accrual accounting. Generally, the opinion of the opponents is based on the fact that since the measurement of the net income, which is so central to business organization accounting, is not a goal of the governmental entities, there is no need to apply the matching principle to government accounting. Consequently, in the absence of direct link and hence the measurement of the net income, the application of accrual accounting with its matching principle will create a great confusion and distortion for the governmental entities.

In reality, for the application of the matching principle to the governmental entities, we can say that it is not necessarily the matching principle as a cornerstone of accrual accounting to perform exactly the same function as it did in business firms, and that simply, because the nature and objectives of the business firms and governmental entities are largely different. The objective of the business firms is the profit motive, therefore, the function of the matching principle here is the measurement of the net income by matching the revenues with the associated expenses.

So : Revenues – matched with -- associated expenses = the measurement of the net income

Hence, the matching principle performs here the function that is consistent with the objective of the business firms. On the contrary, the governmental entities do not aim at making profit but at serving the public interest by providing the services and goods required. Hence, the matching principle can perform other function, which should be consistent with the objective of the governmental entities. *Basically, for the governmental entities the net annual measure is of the net resources consumed to provide services during the year and net accumulated figure is a measure of unconsumed economic resources* (IFAC, 1991, p.16). In this context, the application of matching principles can be addressed in two approaches as follows:

#### **- Conceptual approach:**

Herein, the matching principle can be used to match resources consumed during the accounting period with services and goods provided (and usefulness accomplished) during the same accounting period, or to match outputs with the associated costs. Where the use of the matching principle by this way in the governmental entities



will show to what extent the governmental entities have used the resources, which are entrusted to them, efficiently. For instance, the efficiency of an organization can be measured by the ratio:

$$\frac{\text{Output}}{\text{Input}}$$

The greater the ratio, the more output for input, the more efficient the organization. Similarly, if we considered the resources consumed as input and the services and goods provided (and usefulness accomplished) as output, then the efficiency of the governmental entities of using the public resources could be measured by the following ratio:

$$\frac{\text{Services and goods provided}}{\text{Resources consumed}}$$

Similarly, the greater the ratio, the more service and goods for resource consumed, the more efficient the governmental entity in using the public resources. Thus:  
Services and goods provided ---- matched with – Resource consumed

Thus the matching principle can be used in the public sector not to measure the net income, but to measure the efficiency of the government in using the available resources. In the business firms, the accounting system is used to fulfill the objective of these firms. Similarly, the accounting system that should be used in the governmental entities has to be able to achieve the objective of these entities. Accordingly, the traditional governmental accounting system is not in position to assist in measuring of the government's efficiency in using the available resources. On the contrary, accrual accounting with its matching principle can efficiently fulfil this task. The New Zealand experience regarding the public sector reform has demonstrated that accrual accounting with its matching concept is an essential element in order to achieve the desired performance and to discharge the accountability in the government. As a consequence of enactment of State Sector Act 1988, the management system in New Zealand is changed from an input focused system to an output focused system. Accordingly, the chief executives have been given extensive authority in the use of resources, such as staffing, purchasing, travel, office accommodation, information technology, etc. As part of this change, the chief executives have annual performance agreements, which are linked to departmental purchase agreements. These purchase agreements specify in detail the outputs or services to be provided by departments during the forthcoming financial year. Accordingly, the chief executives are clearly accountable for the delivery of agreed services, and are accountable for all the resources that they consume in the production of those services (Ball, 1994). Consequently, the adoption of accrual accounting with its matching principle has assisted the chief executives (agent) in discharging their accountability, at least, towards the ministers (principal) who have specified in the beginning the performance that is required from the chief executives. Thus, its application was inevitable in order to measure the performance and efficiency of the chief executives in the use of the resources to provide the agreed



services. Consequently, it can be concluded that the matching principle can be applied to the public sector in order to measure the efficiency of the government in using the available resources through matching services provided with resources consumed in stead of measuring the net income as it did in the private sector.

However, the operationalization of the conceptual approach through the financial statements has revealed that it is not possible to gauge efficiency from the financial statements, since one has to determine whether the outcomes (the policy objectives, for example) have been delivered. If they have been delivered, then one can ask whether they could have been delivered as effectively for a lower cost – which is the efficiency point. So it has been found that it is so difficult and even it is impossible to prove the above-mentioned conclusion by the financial statements, as they do not indicate the level or the quality of the good and services which have been provided. Accordingly, we think that this conclusion is only right to the extent that the accruals accounts show the resources consumed in providing services. That is, the inputs are matched against the outputs in financial reporting terms but the inputs and outputs are not matched against the outcomes.

#### **- Practical approach:**

Due to the difficulties inherent in the operationalization of the conceptual approach, there is a need to address the application of matching principle to the public sector in a practical way that can justify the adoption of accrual accounting with it matching principle. In fact, the use of accrual accounting in the public sector will allow for the measurement of the total cost of providing services on an aggregated basis and also allow for more accurate cost measurement of specific programs and activities. The total costs include not only the cost of goods and services produced or purchased and paid during the accounting period but also the cost of using long-lived assets (e.g. depreciation and cost of capital) and other non-cash costs. Accrual accounting with its matching principle means that the actual cost will be recognized in the year in which it occurs. It is stated in the Consolidated Financial Statements of the NSW Public Sector 1996-97 that “*expenses are recognized when incurred and are reported in the financial year to which they relate*”. In addition, Sacco (1997) argued that in government, matching would be central to calculating intergenerational equity, that is, there are sufficient revenues collected this period to cover all costs, whether actual outlays or promised outlays.

*So the matching principle can be used to allow for the total costs of one period to be charged to the operating statement in the period in which they are incurred and matched with the total revenues (whether levied through the sovereign power or earned through the operations) related to the same period.* In fact, taking into consideration the specific nature and characteristics of the public sector in comparison with the private sector, the matching of revenues with expenses of a certain fiscal year should be based on a **timing relationship** in stead of an **exchange relationship**. GASB (1987) argued that “governments generally use resources from a variety of sources to pay for a variety of services. The “matching” relationship that normally exists between resources provided and services received is

a timing relationship (that is, both occur during the fiscal year) rather than an exchange relationship". So in the context of lacking the direct link between the revenues and expenses, the matching principle can be used in the public sector to show the surplus (or deficit) of revenues over expenses. This is a useful measure of whether a government has managed to meet current expenses from current revenues, and whether its net resource position has increased or decreased. Thus, comparing revenues with total expenses helps in assessing the inter-period net assets/equity (i.e. whether current revenues are sufficient to cover the costs of programs and services provided in the current period). In addition, the use of matching principle in the public sector entities will assist in fulfilling the intergenerational fairness by charging the costs incurred in production of the usefulness to the period in which this usefulness will be consumed. Bac (2000), stated that "good allocation and sound intergenerationally neutral government financing demands that the cost of government activities will be so divided over time that cost will be attributed to the period in which the usefulness of such activities and the referred assets will be consumed". This means that:

Costs incurred should be -- attributed to -- the period of consumption of the usefulness

From the sound intergenerationally neutral government financing point of view, we agree with Bac that the generation who has ever consumed some services (usefulness) should pay for their costs, and this in turn will fulfil the intergenerational fairness. The matching principle means that both usefulness and the costs incurred in providing this usefulness have to be recognized in the same reporting period in order to prevent the current generations from benefiting on the account of the future generations or vice versa. This assists in ensuring an equitable distribution of expenses between generations and that the long-term position of the government remains sound (Bartos, 2000). In addition, it is argued in Financial Information Strategy Accounting Manual of Canada (2001) that "in the case of tangible capital assets, a systematic and rational allocation policy is used to approximate the matching principle. This type of expenses recognition involves making assumptions about the benefits that are being received as well as the cost associated with those benefits. The cost of long-lived asset is allocated over the accounting periods during which the asset is used because it is assumed that the asset contributes to the generation of the benefits throughout its useful life. So in order to operationalize the practical approach, the following financial statements can show how accrual accounting with its matching principle is applied to the public sector of New Zealand. These are: Statement of financial performance (operation statement), Statement of movements in equity and Statement of financial position: for six months ended 31 December 2004 and published on 18 February 2005. Generally, the expenses can be provided in the statement of financial performance in one of two ways (IPSAS 1): *the first* is referred to as the nature of expense method. Expenses are aggregated in the statement of financial performance according to their nature (for example depreciation, purchases of materials, transport costs, wages, salaries), and are not reallocated amongst various functions within the entity. *The second* is referred to as the functional method of expense classification, classifies expenses according the programs or purpose for which they were made (for example

Health expenses, education expenses, defence expenses, etc.). This presentation often provides more relevant information to the users than the classification of expenses by nature. The following statement of financial performance of the New Zealand government uses the functional method:

**Statement of Financial Performance (Operating Statement): For six months ended 31 December 2004**

**\$ Million**

**Revenue**

**Levied through the Crown's**

**Sovereign power**

Taxation revenue	22.877
Levies, fees, fines and penalties	1.547

<b>Total revenue levied through the Crown's</b>	<b>24.424</b>
<b>Sovereign power</b>	

**Earned through the Crown's operations**

Sales of goods and services	5.371
Investment income	1.926
Other revenue	1.003

<b>Total revenues earned through the</b>	<b>8.300</b>
<b>Crown's operations</b>	

<b>Total Crown Revenue</b>	<b>32.724</b>
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**Expenses**

**By function classification**

Social security and welfare	8.535
GSF pension expenses	966
Health	4.083
Education	4.185
Core government services	897
Law and order	1.050
Defence	600
Transport and communication	2.707
Economic and industrial services	2.140
Primary services	560
Heritage, culture and recreation	833
Housing and community development	336
Other	14
Financial costs	1.356
Net foreign-exchange loss/(gains)	5

Total expenses	28.267
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<b>Revenue less expenses</b>	<b>4.457</b>
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Net surplus/deficit attributable to State-Owned Enterprises and Crown entities	69
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<b>OPERATING BALANCE</b>	<b>4.526</b>
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**Statement of Movements in Equity: For the six months ended 31 December 2004**

**\$M**

<b>Opening Crown Balance</b>	<b>35.463</b>
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Operating balance for the period	4.526
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Net revaluations	2
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<b>Total Recognized Revenues and Expenses</b>	<b>4.528</b>
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Closing Crown Balance	39.991
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**Statement of Financial Position: As at 31 December 2004**

**\$M**

**ASSETS**

Cash and bank balances	3.202
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Marketable securities, deposits & equity investments	29.442
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Advances	7.941
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Receivables	12.783
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Inventories	903
-------------	-----

Other investments	211
-------------------	-----

Property, plant & equipment	58.553
-----------------------------	--------

Commercial forests	251
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Investment in TEIs	4.449
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Intangible	777
------------	-----

<b>Total Assets</b>	<b>118.512</b>
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**LIABILITIES**

Payables and provisions	13.259
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Currency issued	3.667
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Borrowings- sovereign guaranteed	30.317
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Borrowings-non-sovereign guaranteed	7.504
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Gover. superannuation fund pension liabilities	13.976
--	--------

ACC liabilities	9.798
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**Total Liabilities****78.521****Total Assets less Total Liabilities****39.991**

Crown Balance

Taxpayer funds

Revaluation reserve

Minority interest

20.030

19.822

139

**Crown Balance****39.991****2.2 Consistency principle**

The consistency principle refers to the use of the accounting procedures by a single firm or accounting entity from period to period and the use of similar measurement concepts and procedures for related items within the statements of a firm for a single period (Hendriksen, 1982). In fact, the consistency principle requires a persistent application by a company of any selected accounting method or procedures, period after period. As a result, a user of company financial statements may assume that in keeping its records and in preparing its statements the company used the same procedures used in previous years (Larson and Pyle, 1987). The use of consistency principle is important because if different measurement procedures are used, it will be difficult for the user to discern the effects on the company, from period to period, caused by external factors such as changes in economic conditions. In addition, it is difficult for the user to separate the fluctuations caused by internal and external economic factors.

While the use of the consistency principle in the business enterprise is necessary, its use in the public sector is an imperative. For instance, it has been stated under matching principle that the matching principle can be used in the public sector to show the surplus (or deficit) of revenues over expenses. As long as the rules of recognizing expenses and revenues have been established and are applied in accordance with the principle of consistency, the variations in the surplus or deficit over years can provide important information about the impact of fiscal policies.

In addition, the use of the consistency principle in the public sector can provide the user with reliable measure of the net worth, period after period. The user can measure and judge the impact of government actions on the net worth, whether those actions have deteriorated or improved the net worth. Without the use of persistent accounting policies or procedures, the government can easily affect the net worth, for example, by valuing its assets at historical cost at some periods and at replacement cost in other periods. Consequently, it will make the comparison of net worth from period to period meaningless. Similarly, the use of consistency principle will provide a reliable measure for the intergenerational equity, period after period.

Also without the use of consistency principle the true and fair view about the financial position of the government can be distorted.

In fact, one significant issue that arises from the use of accrual accounting for consolidated statements of the government as a whole is the meaning of any reported deficit. Accordingly, the use of the consistency principle is important for assisting in interpreting the meaning of reported deficit, as it is inferred that in order to avoid the misinterpretation of the meaning of a reported deficit, the governmental entities financial statements and the consolidated financial statements of the whole of government should be prepared and presented on unified and consistent accounting policies (Ouda, 2003). Thus, similar to the private sector, the use of consistency principle in the public sector is necessary for analyzing and evaluating the impact of fiscal policies, comparing years, measuring trends and discerning the effects on the governmental entity caused either by external or internal factors.

### 2.3 Conservatism principle:

This principle is sometimes expressed simplistically as “recognize all losses but anticipate no profits” (Larson and Pyle, 1987). The conservatism principle is generally used to mean that accountants should report the lowest of several possible values for assets and revenues and the highest of several possible values for liabilities and expenses. It also implies that expenses should be recognized sooner rather than later and that revenues should be recognized later than sooner (Hendriksen, 1982). So: recognize no gains until they happen but record all possible losses even before they take place.

Unlike the private sector, the government obtains on its revenues (inflows) from different sources, and this in turn makes the recognition and realization of these revenues in case of the adoption of accrual accounting more difficult since diversity of sources will require different recognition points. The main categories of revenues to government are: revenues derived from exchanges in a manner similar to the private sector, these include revenues from sales of goods or services, dividends, interest and gains arising from the sale of assets; revenues derived from the use of sovereign powers: these include a variety of direct and indirect taxes, duties, fees and fines; and other non-reciprocal transfers such as grants or donations from other governments, from supranational authorities or from the private sector. The conservatism principle holds that some degree of risk is involved in the collection of these revenues. Hence it may be unwise to treat these revenues in the financial statements as fully collectable. The historical data may support the fact that, over the past several years, government had only been successful in collecting 90% of these revenues. An application of conservatism principle in this case would be to state the probable collection of revenues based on this objective information. In general, government accountants should also avoid the use of subjective judgement in making estimates for financial statements. In this instance, there is some support both for the use of historical trends and taking a more conservative view.

Furthermore, unlike the private sector, governments own different sources of physical assets such as infrastructure assets, heritages assets, etc. These assets are, to a great extent, difficult to measure reliably; and the realization of the value increases of these assets will also be difficult. Then, overstating of the value of assets can result in overstating the probably assets base of the governmental entity. Similarly, recording the value of these assets should be based on the historical data and conservative view.

Consequently, it may be concluded that the conservative principle is more required and applicable to the public sector accounting in comparison with the private sector accounting. This means that proper allowance should be made for all known and foreseeable losses and liabilities; income should only be included where there is a reasonable certainty of it arising (Green Paper, 1994). Thus, pessimism is assumed to be better than optimism in budgeting and financial reporting of the governmental entities.

#### **2.4 Full-disclosure principle**

This principle implies that financial statements and their accompanying notes should disclose all information of material nature relating to the financial position and operating results of the company for which they were prepared (Larson and Pyle, 1987). This principle is one of the most important accounting principles that is missing in the governmental accounting. The lack of this principle has led to that the governmental activities are managed with poor quality financial information. The accounts of governments usually do not fully report the liabilities or assets of the government, and frequently take items into revenue which are clearly of capital nature- for example the sale of government assets. Hence, the lack of this information resulted in that decision-making process in the public sector has been confused and distorted, and the accountability is not effectively discharged. For instance, when there is no information available about the assets the focus of the decision will be on whether or not to spend on new assets but when this information is available then the focus will be extended to whether to retain or upgrade the existing assets.

In addition, the full disclosure can promote the accountability through greater financial transparency. Generally speaking, transparency and accountability are interrelated concepts and mutually reinforcing. Without transparency there could not be any accountability. Unless there is accountability, transparency would be of no value. In fact, transparency is built on a free flow of information and it requires that the governments should be explicit about their fiscal objectives and should report on a wide range of economic and fiscal information. On the other hand, transparency is a key element of bureaucratic accountability that entails making available for public scrutiny all public accounts and audit reports. Therefore, the governments are requested to overcome the lack of financial transparency and the poor quality of financial information by reporting information about their assets, liabilities, revenues and expenses as well as information about their exposure to losses and potential obligations related to contingencies and commitments (IFAC, 1998). Thus,



the transition to accrual accounting in the public sector will improve the quality of governmental financial information.

### 3. Accrual accounting postulations:

#### 3.1 Going concern

The going concern postulate assumes that the accounting entity will continue in operation long enough to carry out its existing commitments. In other words, the accounting entity will exist for a time period sufficient to justify the deferral process inherent in business organization accrual accounting (Ingram et al, 1991). In practice, most governments are using the cash accounting. *One of the fundamental flaws in argument for cash accounting is that assumes that government is not a going concern (Hardman, 1982).* Certainly, the apparent ownership of government operations may change periodically with the election of a new government, however, the business, management, assets and clientele of government continue more or less unchanged through successive governments. This also means that the existence of the public sector entities is independent of the successive governments. Frankly speaking, the governing and legislative bodies can be changed but the governmental entities themselves will remain in operation. Moreover, the going concern postulate means that it is expected that the business will remain in operation at least as long as the longest useful life of any of its resources or obligations. Simply, this assumption is more applicable to the public sector due to the very long life of many physical assets and long-term liabilities in comparison with the business enterprises.

The governmental entities are also expected to continue providing services in the future as a consequence of the yearly allocation of appropriations (political decision). The UK Financial Reporting Manual stated that for non-trading entities in the public sector, the anticipated continuation of the provision of a service in the future, as evidenced by inclusion of financial provision for that service in published documents, is normally sufficient evidence of going concern. This also means that the continuation of the governmental entities is not only based on an economic decision but also on a political decision.

Unlike the private sector, governmental entity has a certain power or agreement that makes it more going concern. IPSAS 1 argued that there may be circumstances where the usual going concern tests of liquidity and solvency appear unfavorable, but other factors suggest that the entity is nonetheless a going concern. For example:

- In assessing whether a government is a going concern, the power to levy rates or taxes may enable some entities to be considered as a going concern even though they may operate for extended periods with negative net assets/equity; and
- For an individual entity, an assessment for its statement of financial position at the reporting date may suggest that the going concern assumption is not appropriate. However, there may be multi-year funding agreement, or other arrangements, in place that will ensure the continued operation of the entity.



Consequently, one can conclude that the major difference between the private and public sector is that in the private sector the going concern is an economic decision which may be based on the financial statements. In the public sector it is a political decision and the financial statements may or may not assist with this decision. An state enterprise which is considered politically essential may be retained despite making huge losses.

Yet, the going concern postulate should be accepted on the basis of their ability to permit predictions. Information regarding a specific firm should be presented in such a way that users of financial reports could make their own assessments regarding the future of enterprise. However, it is relevant postulate, leading to the presentation of information regarding resources and commitments and operational activity on the ground that such information may aid in the prediction of future operational activity (Hendriksen, 1982). Similarly, many users (i.e. investors, creditors, the public, lenders, service customers, etc.) of governmental financial reporting require information that can assist them in making prediction regarding the ability of the government in meeting its future obligations and the continuity of providing the services in the future. Therefore, the assumption that government is not a going concern can not be justified, due to the fact that the going concern assumption is based on different criteria in the public sector i.e. political rather than financial factors.

#### 4. Conclusion

As a consequence of the discussion of the accrual accounting principles and the going concern assumption, it could be inferred that the public sector and the private sector are not sufficiently different to the extent that the notion of accrual accounting can be rejected. In reality, this makes us agree with Macmillan (1982) that difficulties in getting accrual accounting adopted universally in government are implementation problems, not matters of principle. In fact, accrual basis of accounting recognizes transactions and events when the transactions or events occur rather than when cash is paid or received and its financial statements disclose the total assets (include current and physical assets), total liabilities (include short and long-term liabilities), net worth, revenues and expenses. Accordingly, the measurement focus under the full accrual accounting is on the total economic resources. Effectively, assets, liabilities, revenues and expenses arising from transactions and events must be recognized in the financial statements when they have an economic impact on the government, regardless of when the associated cash flows occur. Furthermore, it has been revealed that the accrual accounting postulation, which has been considered for decades as an obstacle for its adoption in the public sector, such as the going concern, is more applicable to the public sector than the private sector as this is not only based on economic factors but also on political factors.

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## Summary

### ACCRUAL ACCOUNTING PRINCIPLES AND POSTULATIONS IN THE PUBLIC SECTOR: RHETORIC OR REALITY

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The transition to accrual accounting has been the most notable reform of government accounting in the last two decades for many countries. However, public sector accrual accounting remains an under-researched topic. For instance, accrual accounting is based on some principles and postulations (e.g. matching principle and going concern postulate) which have been used for decades as an obstacle in the way of its adoption in the public sector. While IFAC has issued the IPSASs (International Public Sector Accounting Standards) in order to be applied to the public sector entities, there is a lack of conceptual framework which is really required for transferring accrual accounting concepts into public sector. Consequently, there is a need for further research to develop this framework. The paper has developed a framework which aims at clarifying some of the accrual accounting principles and postulations and making clear how such principles and postulations can be applied to the public sector in order to facilitate the adoption of accrual accounting. The paper has made clear that due to the fact that governments generally use resources from a variety of sources to pay for a variety of services, the matching of revenues with expenses of a certain fiscal year in the public sector should be based on **a timing relationship** in stead of **an exchange relationship**. The paper has also revealed that the going concern assumption is more applicable to the public sector than the private sector as this is not only based on economic factors but also on political factors.