

**TARTU UNIVERSITY**  
**Institute of Finance and Accounting**



**ACCOUNTING PERSPECTIVES  
ON THE THRESHOLD OF THE  
21<sup>st</sup> CENTURY**

**Tartu  
ESTONIA**

**TARTU UNIVERSITY**

**School of Economics and Business Administration**

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*(proceedings of the conference)*

**October 28. – 29, 1999**

**Tartu**

## Contents

<b>Aire Aart, Kristel Kerson.</b> KAPITALITOETUSTE PROJEKTIDE ANDMETE KASUTAMISE VÕIMALUSI MAJANDUSARVESTUE ÕPETAMISEL .....	5
<b>Iluta Arbidāne.</b> PROPORTION OF LONG-TERM AND CURRENT ASSETS IN SERVICE ENTERPRISES OF REZEKNE DISTRICT, LATVIA.....	9
<b>Justas Babarskas.</b> DOES THE CREATIVE ACCOUNTING AFFECT COMPANY'S SHARE PRICE? .....	14
<b>Pille Banhard, Evi Kitvel.</b> BANKRUPTCY PROCEDURE IN ESTONIA .....	18
<b>Loreta Čebatoriūtė.</b> ABC SUGGESTION FOR PRICING POLICY .....	24
<b>Toomas Haldma, Kertu Lääts, Priit Peets.</b> DEVELOPMENT OF COST ACCOUNTING SYSTEMS IN ESTONIAN COMPANIES .....	28
<b>Чесловас Христаускас.</b> ПРОБЛЕМЫ ИСПОЛЬЗОВАНИЯ КОМПЮТЕРИЗИРОВАННОЙ БУХГАЛТЕРСКОЙ ИНФОРМАЦИИ.....	33
<b>Rita Ilisson.</b> ACCOUNTING IN ESTONIA .....	41
<b>Andres Juhkam.</b> FINANCIAL REPORTING-IS IT SUFFICIENT FOR INVESTORS FOR DECISION MARKING.....	47
<b>Aushra Jurkshiene.</b> THE BALANCED SCORECARD AND THE ENTERPRISES OF KNOWLEDGE MANAGEMENT .....	54
<b>Kristine Justus, Kertu Lääts.</b> THE COSTING PRINCIPLES IN ESTONIAN COMPANIES .....	58
<b>Vello Järve.</b> HIND JA HINNAALANDID .....	63
<b>Kaido Kallas.</b> USAGE OF THE ACCOUNTING INFORMATION .....	67
<b>Sinaida Kalnin.</b> KULUARVETUSE TÄIUSTAMISE PROBLEEME RAVIASUTUSTES.....	72
<b>Margo Karp.</b> DIE VERWENDUNG DER BILANZKENNZAHLEN BEI STATISTISCHEN FRÜHERKENNUNG VON UNTERNEHMENSKRISEN .....	75
<b>Janis Kasalis.</b> FINANCIAL STATEMENT ANALYSIS RELATED TO CREDIT RISK MANAGEMENT .....	84
<b>Ivars Kassalis, Maiga Kasale.</b> LEASE TRANSACTIONS IN LATVIA.....	87
<b>Evi Kitvel.</b> THE DISTRIBUTION OF INFORMATION IN INCOME STATEMENT .....	89
<b>Pille Kroosmann.</b> SOME VIEWPOINTS ABOUT THE ESTONIAN BALANCE SHEET'S CONFORMITY TO THE EUROPEAN ACCOUNTING DIRECTIVES .....	93

<b>Ester Kõrgesaar. ARVESTUSE INFOSÜSTEEMI TÄIUSTAMINE EESTI ETTEVÕTETES MAJANDUSTARKVARA PAKETI ABIL .....</b>	<b>101</b>
<b>Riina Käi, Evi Kitvel. ANALYSING AND USING CASH FLOW STATEMENTS ....</b>	<b>107</b>
<b>Signe Künnapu, Kaido Kallas. TAX AUDITING – THE NORMAL PART OF ACCOUNTING .....</b>	<b>111</b>
<b>Erkki K. Laitinen. MANAGEMENT ACCOUNTING CHANGE IN FINNISH SMALL TECHNOLOGY COMPANIES .....</b>	<b>117</b>
<b>Jüri Lehtsaar. MAJANDUSANALÜÜSI EESMÄRKIDE JA ÜLESANNETE TEISENEMINE 20. SAJANDI LÕPU EESTIS.....</b>	<b>128</b>
<b>Игорь Лудборжс, Инга Бумане. ПОЛИТИКА УЧЁТА НЕМАТЕРИАЛЬНЫХ АКТИВОВ, СОЗДАНЫХ САМИМ ПРЕДПРИЯТИЕМ.....</b>	<b>132</b>
<b>Ийви Маспанов. ВНУТРЕННИЕ АУДИТОРСКИЕ ПРОВЕРКИ И АУДИТОРСКИЕ КОМИТЕТЫ В ЭСТОНСКОЙ РЕСПУБЛИКЕ .....</b>	<b>141</b>
<b>Iivi Maspanov, Juta Sarapik. OF THE STUDY MATERIALS PROVIDING STUDENTS WITH INDEPENDENT WORK IN THE ACCOUNTING PRACTICALS.....</b>	<b>143</b>
<b>Лидия Мурдсалу. УЧЁТ АССИГНАЦИЙ В БЮДЖЕТНЫХ УЧРЕЖДЕНИЯХ .....</b>	<b>144</b>
<b>Merle Muru. ABOUT SOME PROBLEMS OF EXPENDITURE RECORDS AND CALCULATION OF COST VALUE IN AGRICULTURAL ENTERPRISES .....</b>	<b>148</b>
<b>Aime Mäekask. ÜBER DIE STEUERN IN ESTLAND IN DER ERSTEN UNABHÄNGIGKEITSPERIODE.....</b>	<b>151</b>
<b>Aime Mäekask. EESTI VABARIIGI MAKSUDEST PÄRAST ESIMEST ISESEISVUMIST.....</b>	<b>155</b>
<b>Maire Nurmet. FINANCING FIRM'S GROWTH AND INVESTMENTS .....</b>	<b>159</b>
<b>Ааво Отсар. ПРОБЛЕМЫ АНАЛИЗА ИСПОЛЬЗОВАНИЯ МАТЕРИАЛОВ.....</b>	<b>163</b>
<b>Viia Parts, Aivo Purm, Anu-Ell Visberg. PÕLLUMAJANDUSTOETUSTE ARVESTUS JA MAKSUSTAMINE.....</b>	<b>168</b>
<b>Andris Pelšs. АНАЛИЗ ПРОБЛЕМ УПРАВЛЕНЧЕСКОГО УЧЕТА, ИНТЕРЕСУЮЩИХ БУХГАЛТЕРОВ ЛАТВИЙСКИХ ПРЕДПРИЯТИЙ .....</b>	<b>177</b>
<b>Анита Пузуле. ПРОБЛЕМЫ УЧЕТА НАЛОГА НА ДОБАВЛЕННУЮ СТОИМОСТЬ НА ПРЕДПРИЯТИЯХ ЛАТВИИ .....</b>	<b>182</b>
<b>Evi Pärnits. PROBLEMS OF AUTOMATION OF ACCOUNTING IN ESTONIA.....</b>	<b>188</b>
<b>Вамбола Раудсепп. АНАЛИЗ ФИНАНСОВОЙ СБАЛАНСИРОВАННОСТИ ПРЕДПРИЯТИЯ .....</b>	<b>190</b>

<b>Mare Rebane.</b> SOME PROBLEMS THAT OCCUR AT THE VERIFICATION OF THE ASSETS.....	199
<b>Priit Sander.</b> TAX PLANNING AND TRANSACTION COSTS .....	201
<b>Paavo Siimann.</b> USES OF LABOUR FORCE – AN ANALYSES.....	208
<b>Uno Silberg.</b> ACCOUNTING PERSPECTIVES AND DEVELOPMENT OF A ESTONIAN AGRICULTURAL INFORMATION SYSTEM .....	211
<b>Irena Sobańska, Tomasz Wnuk.</b> CAUSES AND DIRECTIONS OF CHANGES IN COSTING SYSTEMS IN POLISH ENTERPRISES DURING 1991–1999.....	217
<b>Heidi Soe.</b> PÕLLUMAJANDUSRAAMATUPIDAMISE MÕNINGAID PROBLEEME .....	222
<b>Март Сырг, Надежда Иванова.</b> РАЗВИТИЕ РАСЧЕТНОЙ СИСТЕМЫ ЭСТОНИИ.....	225
<b>Libuše Šoljaková.</b> STRATEGIC COST MANAGEMENT.....	233
<b>Людмила Шорикова.</b> АНАЛИЗ РАЗВИТИЯ РЫНКА ЦЕННЫХ БУМАГ В ЭСТОНИИ.....	239
<b>Janek Uiboupin.</b> BANKING AUDIT IN NORDIC COUNTRIES .....	245
<b>Elvi Ust.</b> PRINCIPLES OF THE DISTINCTION OF CAPITAL AND REVENUE EXPENDITURE IN PUBLIC SECTOR.....	250
<b>Liisi Ventsli.</b> THE SUCCESS OF COMPANY MERGERS AND ACQUISITIONS.....	260

## KAPITALITOETUSTE PROJEKTIDE ANDMETE KASUTAMISE VÕIMALUSI MAJANDUSARVESTUE ÕPETAMISEL

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Majandusarvestuse õpetamisel on vaja objektiivseid kriteeriume ja võrdlusandmeid ülesannete tulemusnäitajatele hinnangute andmiseks.

Eesti Vabariigi Statistikaameti poolt avaldatavates bülletäänides sisalduvate andmete alusel ei saa jälgida konkreetse tegevusala naturaali- ja finantsnäitajaid. Samuti ei saa võrrelda mitme perioodi andmeid, kuna ESA avaldatud näitajate sisu ja struktuuri on muudetud. 1998. aastast alates kasutab Statistikaamet uut rahandussuhtarvude avaldamise meetodit. Kui enne leiti tulemused andmete summeerimise ja laiendamise teel, siis 1997. a kohta saab kõrvutada oma ettevõtte rahandussuhtarvude väärtusi sama tegevusala alumise kvartiili, mediaani ja ülemise kvartiili suhtarvude väärtustega.

Majandusarvestuse õpetamisel on vaja kasutada lisaks statistikale võrdlusbaasina praktikast saadud andmeid, mis on ülevaatlikud ja Eesti tänast põllumajanduskeskkonna eripärasusi arvestavad.

Üheks võimaluseks on kasutada Põllumajanduse ja Maaelu Krediteerimise Fondi poolt eraldatava kapitalitoetuse projektide andmeid. Kapitalitoetus on riiklik tagastamatu toetus, mille andmise eesmärk on maapiirkondade areng ja struktuurne kohanemine turumajanduse tingimustega, looduslike ressursside ratsionaalne kasutamine arvestades keskkonna nõudmisi, tehnoloogia uuendamise ja ettevõtete konkurentsivõime ja majandusliku efektiivsuse tõstmine ning maaelanike tegevuse mitmekesistamine ja elatustaseme tõstmine.

Põllumajandusülikoolis koostatakse 1997. aastast alates põllumajandusettevõtete kohta andmebaasi, mis põhineb esitatud ja rahuldatud kapitalitoetuste projektide andmetel. Kapitalitoetuse eraldamise korrast tulenevalt on need ettevõtted rentaablimad ja vastavas piirkonnas mõju andvad.

Äriprojekt sisaldab eelmis(t)e majandusaasta(te) tegelikke, jooksva ning kahe järgneva aasta planeeritavaid näitajaid. Praegune andmebaas sisaldab Eesti maakondade 1996.–1997. a tegelikke ja 1998. a osaliselt planeeritud andmeid. 1998. a koostatud äriprojektide andmetest on põhjalikum andmebaas Lõuna-Eesti põllumajandusettevõtete kohta, kokku 124 ettevõtet. Majandustulemuste analüüsimiseks on leitud iga maakonna vastava näitaja keskmine tulemus, kasutatud on kaalutud keskmise valemite. Tootmise ja realiseerimise osas on keskmise leidmiseks kogumahud jagatud tootmisharus tegelejate arvuga. Andmebaasis sisalduvad põhilised näitajad tööjõu, maakasutuse, tootmismahude, saagikuse ja produktiivsuse, produktiivloomade kohta.

Suhtarvudena on toodud näiteks käibevara ja käibekapitali haritava maa kohta. Realiseerimismahud ja -hinnad on olulised majandusanalüüsi tegemisel. Kulude struktuur ja suurus on maakonniti esitatud taimekasvatuse ja loomakasvatuse lõikes. Andmebaasist saab ülevaate ka investeeringutest ning rahandussuhtarvudest (tabel 1).

## Investeeringud kapitalitoetust saanud põllumajandusettevõtetes 1998. a (tuh kr)

	KESKMINE											
	SUMMA	Tartu	Jõgeva	Põlva	Valga	Võru	KOKKU	Tartu	Jõgeva	Põlva	Valga	Võru
Investeeringud kokku	74557	14967	26366	5672	16353	11198	601	680	942	258	454	700
Ehitised ja rajatised	19838	5933	3431	1647	5508	3318	160	270	123	75	153	207
Lõpetamata ehitus	4741	731	556	0	1113	2341	38	33	20	0	31	146
Masinad ja seadmed	19601	5904	2081	1448	6347	3821	158	268	74	66	176	239
Masinad (kap.rent)	20214	3247	8538	2059	5628	741	163	148	305	94	156	46
Produktiivloomad	3733	189	1935	261	372	976	30	9	69	12	10	61
Maa	867	230	173	0	464	0	7	10	6	0	13	0

Koostatud andmebaasi saab kasutada põllumajandussuunaga koolides majandus-arvestusainete, statistika, operatsioonianalüüsi, põllumajandusökonoomika jt kursustel, võttes sobivad näitajad algandmeteks seminaridel-praktikumides lähendatavate ülesannetele. Antud andmebaasist saavad informatsioon on adekvaatsem kui kolhooside- sovhoosidegaesed näitajad, mida praegu veel õppetöös kasutatakse. Viimaste põhjal on tudengitel raske õigeid järeldusi ja juhtimisotsuseid teha.

Kapitalitoetuse projektide koostamisel on ettevõtete andmed viidud ühtsesse kuluarvestuse süsteemi. Juhtimis- ja kuluarvestuse õppeainetes on võimalik andmebaasi abil teha kulu võrdlusi, tuua välja optimaalseid lahendusi ja kõrvaldada ebaefektiivsust. Kululiikide arvestuses on üldiseks eesmärgiks jälgida komplekselt ettevõtte tegevustsükli kulutatavaid ressursse, nende struktuuri ja olulisust majandustulemuse seisukohast. Ettevõtte kulude kompleksne ja süsteemne käsitlemine, mis hõlmaks kulude kujunemisele mõjuvaid tegur-süsteeme, erinevaid kulude käitumise aspekte jne, on vajalik nii finantsarvestuse kui ka juhtimisarvestuse tarvis. Korrektno kululiikide klassifitseerimine on aluseks bilansis kajastavate toaraine ja materjali, lõpetamata toodangu ja valmistoodangu ning kasumi-aruandes kajastuva realiseeritud kaupade kulu maksumuse kujunemisele.

Ettevõtte-siseste finantsotsuste langetamise keskseks kriteeriumiks on majandustulemuste muutumise erinevate tegevusmahtude tingimustes. Muutuvkulud ja jääktulu kujunevad paralleelselt ettevõtte tegevusmahtude muutustega. Ettevõtte püsikulud kujunevad sõltumatult tegevusmahtudest. Järelikult on ettevõttesisese majandustulemuse kujunemisel vajalik jälgida püsikulude kate võimalusi. Seda saab teostada käibe ja muutuvkulude vahena kujuneva jääktulu abil. Kui soovime teatud kasumit, peab jääktulu katma nii püsikulud kui ka kasumi. Nimetatud seoste jälgimine võimaldab mängida läbi erinevaid lahendusi ja leida optimaalne alternatiivide hulgast. Sellisel käsitlusel põhinevad paljud igapäevased majandusotsused.

Audiitorkontrolli õpetamisel võrdlusandmete põhjal anda "õigemaid ja õiglasemaid" hinnanguid ettevõtte juhtkonna töötulemustele. Informeeritus põllumajanduses toimuvast võimaldab vähendada teatud määral audiitorite töömahtu.

Teatud infovahetus tuleb enamasti kasuks ka konkurentide vahel, et analüüsida ja võrrelda tegevuste tulemuslikkust.

Kapitalitoetuste projektide andmebaasi saavad kasutada põllumajandustootjad, et jälgida tootmise arengut vastavas piirkonnas ja võrrelda kogu Eesti põllumajandusnäitajatega. Ettevõtjad vajavad kuluinfot selleks, et juhtida riske ja olla veendunud ettevõttesse tehtud investeeringute tasuvuses. Kulud on vajalikud ka õigete strateegiliste otsuste vastuvõtmisel,

planeerimisel ja hinnangu andmisel tegevjuhtkonna töötulemustele. Samuti annab antud andmebaasi ga tutvumine üldpildi kapitalitoetust saanud ettevõtete majandusnäitajatest.

Andmebaasi koostamisel ei ole momendil veel kasutatud ettevõtete rühmitamist suuruse järgi, st ei ole välja toodud, kui palju on maakonnas kapitalitoetust saanud väiketootjaid ja kui suur osakaal on ühistutel ning osühingutel. Seega on maakonna keskmine tulemus vastavate näitajate lõikes (nt keskmine töötajate arv ettevõttes) oluliselt mõjutatud suurtootjate tulemustest. Täpsema andmebaasi saamiseks on tulevikus plaanis andmed rühmitada.

Andmebaasi täiendamine igal järgneval aastal annab võimaluse jälgida kapitalitoetuste saajate jagunemist maakonniti, ettevõtjate aktiivsust, arenemist ja prognooside paikapidavust.

### **Kasutatud kirjandus**

1. Haldma, T., Karu, S. Kuluarvestuse süsteemi loomine ettevõttes. Tartu: Rafiko, 1999, 192 lk.
2. Kitvel, E. Rahandussuhtarvude süsteem. Tallinn: Tehnikaülikool, 1998, 48 lk.

## **INTEGRATION OF GOVERNMENT ACCOUNTING INTO TEACHING PROCESS**

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### **Summary**

For teaching economical accounting we need objective criteria and comparative data that can be used for assessing resultative indices derived on different tasks.

Bulletines published by Estonian Board of Statistics include data that cannot be used for continuous observation of natural and financial indices of concrete fields of business. For teaching economical accounting we need practical data that can be used as a basis for comparison, that give an objective review and consider the specific features of the economical environment of present agriculture in Estonia.

One of the options would be to make use of data included in capital grants projects collected by the Agricultural and Rural Life Credit Foundation.

The Agricultural University makes use of the agricultural entrepreneurship data base that was established in 1997 and that is based upon data included in capital grant projects that have been submitted and satisfied. On account of the Rules established for allocating capital grants these enterprises appear to be more profitable and have a stronger impact on the given area.

The data base established on the basis of capital grant project data can be used for different purposes and different spheres. As the data base includes data of the last couple of years, the information appears to be quite adequate and the results hold water.



The business project includes actual data and planned indices for previous, current and next couple of economic years to come. The present data base included realistic data of Estonian counties for the period between 1996 and 1997 and partially planned indices for 1998. There is also a more comprehensive data base for agricultural enterprises in the Southern part of Estonia for 1998 including 124 enterprises.

## PROPORTION OF LONG-TERM AND CURRENT ASSETS IN SERVICE ENTERPRISES OF REZEKNE DISTRICT, LATVIA

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The use of money resources often causes big problems to entrepreneurs. Evaluating the assets' structure in balances, the proportion of long-term and current assets can be observed by sectioning branches. Services can be characterized by need of high proportion of capital investments in long-term assets, large amount of long-term assets and low amount of current assets in total assets structure.

More and more Latvian entrepreneurs realize the necessity of cooperation with scientists to assure the success of their entrepreneurship in future. Science also has tendency to become more practical. Today's entrepreneurs willingly listens into scientific recommendations, projections.

One of the biggest problems for entrepreneurs both establishing new company and developing already existing business is ability to estimate and share correctly assets, e.g., how large part goes to current assets and how large – to long-term assets.

In conditions of free market economy this problem gets more and more actual.

Most usually the weak point for entrepreneurs is lack of money resources, but biggest problems are connected directly with use of resources.

Often entrepreneurs think that the only thing needed is money and everyone can spend it. Still the money can be spent differently. The quality and success of entrepreneurship is strongly influenced by purposeful, in time and economically reasonable decisions based on scientific considerations and analysis.

Both practice in world and research in Latvia proved the inability of enterprise management to plan cash flow is one of the most common reasons of their bankruptcy. It allows to conclude that starting entrepreneurs often have superficial delusion about planing and managing of money resources.

Ability to create a positive cash flow depends on several factors, which together can influence the successful development and activity of business. Besides essential criterions are:

1. the amount of capital investments – e.g. amount of long-term investments, what stimulates creating of products and services;
2. the amount of current assets, needed to provide making of products and services.

Appraising the assets' structure in balances in enterprises of different branches, turned out the existance of fixed proportion of these two criterions, which are correlated. Such models are efective remedies for management of enterprise in making important decissions and helps to specify the strategy in numbers, more concrete, how large amount of money must be directed for creating long-term investments and how large – for current assets.

Summarizing we can say that the task of management is to balance proportion of assets to reach optimal sharing of capital and to provide successful and profitable operation of enterprise.

In theory of economics the analysis of entrepreneurship is classified by several indications. And branch indication is one of the determinant here (G. V. Savicka 1998, T. P. Karlins 1998, D. Štainhofs 1997). Every branch has its own specification, definite economical relations.

After studying various literary sources we can conclude different classification of branches by different authors. As a reason for this can be will or/and abilities of every author to difference branches, as well as fact that there is no common classification of branches.

Analysing classification of different authors, cleared out domination of four branches:

1. agriculture,
2. industrial production,
3. trade,
4. services.

Taking into account the specification of region, at present the most favourable conditions for development of entrepreneurship have small enterprises. According to Western experience the most appropriate branches for small enterprises are:

1. trade,
2. agriculture,
3. construction,
4. services.

Business connected with services is mentioned as a priority. Besides now there are lot of opportunities to get small loans from crediting institutions, what often is enough to start small business in services field.

Services as a branch is one of those, which are widely represented and includes detailed division into sub-branches. According to Latvia State Statistics classifier field of services is divided into 8 sub-branches and more detailed division in each.

Services as a branch is characterized by large amount of capital investments in long-term assets – buildings, equipment e.t.c., as well as remarkable amount of assets is needed for current assets – raw materials, tangibles e.t.c.

In process of planning assets entrepreneurs should evaluate several factors and criterions.

Long-term assets planning:

1. need for premises;
2. conformity of premises for:
  - form of service
  - viewpoint of competition
  - marketing demands
  - customer comfort e.t.c.
3. need for transport, office and other equipment for services.

Current assets planning:

1. provision of raw materials and materials,
2. settlements of means or debts of debtors collection procedure,
3. need for cash to pay current payments

The research was burdened by fact that services include wide spectre of activities. Taking into account specifications of region, following sub-branches were observed in this branch:

1. transport services,
2. recreation and culture,
3. professional services,
4. post and communications,
5. tourism agencies,
6. hotels and restaurants,
7. social services,
8. operations with real estates (houses).

Table 1

**Proportion of long-term and current assets in service enterprises of Rēzekne district, Latvia**

<i>Sub-branch</i>	<i>Number of enterprises</i>	<i>Average 1997 long-term assets</i>	<i>Average 1998 long-term assets</i>	<i>Average with rounding off +/- 5%</i>
transport services	20	73,63:26,37	73,03:26,97	75:25
recreation and culture	10	82,65:17,35	69,83:30,17	75:25
professional services	3	32,18:67,82	14,44:85,56	20:80
post and communications	4	55,18:44,82	51,28:48,72	55:45
tourism agencies	4	96,21:3,79	83,35:16,65	90:10
hotels and restaurants	11	79,09:20,31	82,82:17,18	80:20
social services	12	89,94:10,06	87,22:12,78	85:15
operations with real estates	20	93,56:6,44	92,93:7,07	90:10

Data from questionnaire realized by Latvia State Statistics Committee Rēzekne branch about Year 1997 and 1998 are shown in Table 1.

*1. Transport services.*

Enterprises dealing with transit transportation, cargo and passengers carrying are included in this sub-branch. According to Table 1 data this sub-branch is characterized by high amount of long-term assets, what can be explained by need of vehicles, premises for parking and service. The level of current assets is much lower and usually it consists of fuel stocks, debts of debtors and cash resources for current payments.

## 2. *Recreation and culture.*

Average proportion according to Table 1 is 75:25. Large number of long-term assets is caused by enterprise's need of premises and current assets are only for paying regular payments. The structure of this sub-branch usually consists of culture clubs, recreation centres and others.

## 3. *Professional services.*

The structure of this sub-branch consists of advisory, training and other services. According to Table 1 the proportion of assets is 20:80. Insignificant long-term assets are needed for providing these services, which consists of rented premises and office equipment and furniture. In the structure of current assets the largest share is debts of debtors and cash resources for regular payments.

## 4. *Post and communications.*

This sub-branch includes postal, telephone, mobile communications enterprises. Assets proportion in these enterprises is almost equal, e.g., 55:45. From one hand large amount of long-term assets is consisting of buildings, equipment; from other hand large amount of current assets consisting of debts of debtors and money resources.

## 5. *Tourism agencies.*

These are all enterprises providing tourism services. According to World Tourism Organization information tourism sub-branch is one of the largest and has developed most quickly. Since tourism makes 10% of world GNP and provides every 10<sup>th</sup> working place, tourism is starting to consider as separate branch.

According to Table 1 tourism agencies have high rate of long-term assets, consisting of office equipment and mostly of transport.

## 6. *Hotels, restaurants, coffee.*

This sub-branch includes hotel service as well as restaurant service. These two forms of entrepreneurship could be separated, but taking into mind specifications of statistics, getting separate data is impossible.

This sub-branch is characterized by large amount of long-term assets, consisting of equipment, furniture and buildings and current assets, usually consisting of products and money resources for regular payments.

## 7. *Social services.*

There are such forms of entrepreneurship like laundries, dry-cleaning, hairdressing saloons, beauty parlours, individual services, car repair and maintenance etc included in this sub-branch. In the beginning of nineties these enterprises were particularly fallen into decay, but in last two years growth can be observed. As it is shown in Table 1, like in previous sub-branches the largest part of assets proportion consists of long-time assets –

85% from total assets. The volume of these assets is made of equipment and facilities. Little amount of current assets is needed for regular payments and revolation of stocks.

#### 8. *Operations with real estates.*

This form of entrepreneurship is represented by enterprises offering premises for rent and so on. Undoubtely the high structure of long-term assets is formed of real estates – buildings, houses, what gives 90% from total assets.

Appraising the data of Table 1 in total we can conclude that services are characterized by large amount of long-term assets, what consists of buildings, equipment and vehicles and low proportion of current assets, where money resources for regular payments dominate.

As an exception here we can mention enterprises providing professional services and they are characterized by oposite proportion – low amount of long-term assets and high proportion of current assets.

Research done in this branch allows to conclude that services as a branch can be characterized by very wide range of sub-branches, where we can distribute even separate branches like tourism.

Entrepreneurs who want to develop their own business in services in process of planning cash flow should take into account that largest capital investments should be directed to long-term assets except professional services.

#### References

1. A. Klauss. Uzņēmējdarbības lekciju materiāli. Ventspils Augstskola. 1998. 33.
2. Ekonomisko terminu vārdnīca uzņēmējdarbībai. Latviešu – angļu R. “Ekonomisko reformu institūts”. 1997. 64.
3. M. Rurāne. Uzņēmuma finansu vadība. Turības Mācību centrs. 1997. 22.
4. Uzlabojiet savu uzņēmumu. Rokasgrāmata. Starptautiskais darba birojs. Ženēva. 1995. 7-38.
5. Vispārējā ekonomiskās darbības klasifikācija. Latvijas Statistika. R. 1996.
6. D. Stainhoff, J. Bridges. Small business management basics M. Binom. 1997. 144-153.
7. Junior Achievement “Business economics”. M. “Prosveschenie”. 1992. 425.
8. G. V. Savicka. Analysis of economic management in enterprise. M. “Infora-M”. 1998. 56-70.
9. T. P. Karlin, A. R. Makmin. Analysis of financial reports. M. “Infora-M”. 1998. 56-70.

## DOES THE CREATIVE ACCOUNTING AFFECT COMPANY'S SHARE PRICE?

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Probably none will argue that Capital Market plays a vital role in the whole economy, and probably none will argue that sound economy is made up of well performing companies. Usually this relationship is imagined as stock pricing which serves as one of indicators of economy. Do we consider if the share pricing mechanism is an efficient and fair indicator of ongoing processes in the economy? Furthermore are the share prices determined precisely and they reflect real market value of the company? And finally is possible for the company managers to manage the share price fluctuations in some way?

A very basic approach dealing with share price fluctuations relates it to the performance of the company itself. The success of the company without any doubt affects prices, but usually this price driving force is granted for the news coming as heresy. On the other hand we have the other source of information about the company – the annual reports. These reports are used as one of the most important sources of information at the investment decision making process. But do they carry this value of information on which the investment decisions are made? There are various theories and models involving market efficiency, price fluctuations cycles, share valuation, and the company performance trying to predict market movements. This article will try to examine these models and theories to find out if the company's performance is among the major driving forces of price movements and are the annual reports and creative accounting outcomes substantial in investment decision making process.

Every company desires to look better in sight of investors. Therefore it is very natural that they employ some techniques of creative accounting to make their situation more attractive. Efficient market hypothesis asserts that you can not beat the market in such a way, because market participants have all the information at their disposal and prices reflect all the available information in the market. The implications of the efficient market hypothesis are truly profound. Most individuals that buy and sell securities (stocks in particular), do so under the assumption that the securities they are buying are worth more than the price that they are paying, while securities that they are selling are worth less than the selling price. But if markets are efficient and current prices fully reflect all information, then buying and selling securities in an attempt to outperform the market will effectively be a game of chance rather than skill.

An "efficient" market is defined as a market where there are large numbers of rational, profit-maximizers actively competing, with each trying to predict future market values of individual securities, and where important current information is almost freely available to all participants. In an efficient market, competition among the many intelligent participants leads to a situation where, at any point in time, actual prices of individual securities already reflect the effects of information based both on events that have already occurred and on events which, as of now, the market expects to take place in the future. In other words, in an efficient market at any point in time the actual price of a security will be a good estimate of its intrinsic value. The random walk theory asserts that price movements will not follow any

patterns or trends and that past price movements cannot be used to predict future price movements.

There are three forms of the efficient market hypothesis 1.The "Weak" form asserts that all past market prices and data are fully reflected in securities prices. In other words, technical analysis is of no use. 2.The "Semistrong" form asserts that all publicly available information is fully reflected in securities prices. In other words, fundamental analysis is of no use. 3.The "Strong" form asserts that all information is fully reflected in securities prices. In other words, even insider information is of no use.

Considering strong form of Efficient Market Hypothesis we arrive at the point where any technique to make the company look more attractive than it is not effective because market participants know the underlying information. In Semistrong form the market participants may not know the inside information but the price reflect all the relevant and publicly available information. Finally in a Weak form where prices are constructed on the past information basis the attempts to show better situation than it is can be successful. In general only in a weak form the annual reports and creative accounting techniques can influence the share price. While in a strong form this information is already considered even before it was made public.

The other idea, which we should approach, is whether the valuation models estimate the performance of the company using the accounting data. The main group of models as a basis to evaluate shares uses the discounted dividend cash flow. A wide variety of these dividend discount models are in use. Each organization that uses one seems to have added its own features to the basic dividend stream structure. In particular, it is assumed that the future dividend stream is projected through two or more periods on the basis of security analysts' assessments of growth, payout, and profitability. The basic model is not affected by the success of the company. It is based only on the past information basis and reflects previous dividend payments expecting that they will remain unaltered. It has very similar limitations as the weak form of Efficient Market Hypothesis where the only source of information considered is the historical data. The modified models use two or more periods trying to get more close to a real world pattern. It has been shown that most of the accumulated value of a stream of dividends comes from the long term. The parameters of a valuation model are important as they affect the long term although this can include parameters that also (and perhaps more directly) affect the short term. These models do not seek to foresee short term price movements.

The next source of information considered by the investors and closely related with the real data of the company is ratio analysis. It is common that at the decision making process the various ratios which arrive from the reports. What happens if these reports fail to disclose the fair view. There we return to the efficient market hypothesis. In the strong form even if reports do not present fair and subjective view the investors know the actual situation because the internal information is available for the public. On the contrary in a weak form this may effect the market for a short term. At the moment when they are made public available and get into historical data basis there is no test for their validity and fairness. Later on when it clears up the market may be affected again and corrects the price according to the new information but during the time period until it gets known price may reflect the unfair information as it was stated in the report.



We arrived at some opinion that reports do not presenting the fair view may influence the market. None will dispute about the needs of information and the necessity for this information to be true. There are statutory requirements for reports issued to be true and fair and if we look at the law tendencies in this area we will see that the legislator lays more regulation during the time. On the other hand the finance is developing as well and sometimes is difficult to draw the line between legal and illegal "creativity" in accounting. Off balance sheet financing, sophisticated leasing, repurchase agreements are the classical and legal tools to make the reports look better. It is clear that in the where there is no barriers for the information as it is presumed in the strong form of efficient market hypothesis such accounting gap is on no importance. But in a semistrong and especially in a weak form this is a substantial source of information asymmetry.

The recent studies of capital market in Baltic States showed that the discussion about market efficiency concentrates on the question whether the shares in a Official list meet the criteria of a weak form of Efficient Market hypothesis. If the market is efficient under the weak form of the hypothesis, there is no possibility to gain from the price movements possessing only historical data and carrying out the technical analysis of the securities. There are plenty of market participants observing the same information and therefore the current price fully reflects all the available historical data. The prices may shift only if the new information becomes available for the market participants. This new information is random and therefore prices should fluctuate randomly. This hypothesis usually is called as Random Walk Hypothesis. This hypothesis was tested on Lithuanian, Latvian and Estonia market Official list shares.

If the market is efficient according to this hypothesis the market price of the share  $P_t$  reflects the available information for the market participants. The prices may be affected only by the new information during the period from  $t$  to  $t+1$ . This information is random and therefore price movements should follow it. There is a presumption that market participants act in a rational way. There is a rational expectation operator  $E_t$  applied. Future price at moment  $t+1$  is defined as :

$$P_{t+1} = E_t [P_{t+1}] + \varepsilon_{t+1} \quad \text{where: } P_{t+1} \text{ share price at a moment } t+1$$

$$E_t [P_{t+1}] \text{ expected share price at a moment } t+1$$

$$\varepsilon_{t+1} \text{ prognosis error}$$

The equation tells that the future price is equal the sum of expected price and the prognosis error. The average of prognosis error is zero and it does not correlate with any information  $\Omega_t$  at the time  $t$  when the prognosis was made. This prognosis error  $\varepsilon_{t+1}$  may be defined as the unexpected profit or loss from holding shares from time  $t$  to  $t+1$ . Efficient Market hypothesis tells that there is no possible profit from holding shares if relying on the information  $\Omega_t$ , therefore the average of unexpected profit is zero. If the prognosis error  $\varepsilon_{t+1}$  is autocorrelated, the statement that the error is independent from the information available at the moment of prognosis is maid  $\Omega_t$  does not hold.

According to Efficient Market Hypothesis prognosis error  $\varepsilon_{t+1}$  shall be uncorrelated variable. Therefore it was verified whether the first difference of price is the "white noise" The process is called "white noise" if the average of random variables  $E(\varepsilon_t) = 0$ , dispersion  $E(\varepsilon_t^2) = \sigma^2$  are not correlated interdependently.  $E(\varepsilon_t \varepsilon_\tau) = 0, t \neq \tau$ .

The zero hypothesis that the first difference of prices is the "white noise" does not hold for some shares. "Union Bank of Estonia", "Estonian Savings Bank", "Bank of Tallinn", "Estonian Forexbank", "Tallinn Pharmaceutical Plant", "Baltica", "Merko Ehitus", "Kalnapilis" and "Snaigē" share prices first difference changes process is not "white noise" and their share prices do not follow the random walk theory. The other share in the Official lists in Lithuanian, Latvian and Estonia market holds the weak form of Efficient Market Hypothesis.

Considering that Baltic capital market is not really efficient and even not all shares in a Official lists hold the weak form of Efficient Market Hypothesis we arrive at the conclusion that some creativity in accounting policy may affect market for a short term. Despite that valuation models do not examine company performance and the CAPM theory which is classical in every finance textbook does not cover the direct examination of the company when valuing the shares, we can see that in our markets with low efficiency this is important. We find that even legal tolls of accounting may influence the market because not all market participants analyze and employ all the available information in the market.

## References

1. Nancy A Nichols. Efficient? Chaotic? What's the New Finance?. Harward Business Review.
2. Vita Butkutė, Petras Moščinskas. Baltijos šalių vertybinių popierių rinkų aprašomoji analizė. Pinigų studijos 1998/4.
3. James McNeill Stancill. Does the Market Know Your Company's Real Worth? Harward Business Review.
4. Valuation Models: The Key Considerations. Harward Business Review.

## BANKRUPTCY PROCEDURE IN ESTONIA

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Bankruptcy is an inevitability of market economy. In competitive market conditions it is unthinkable that all the market participants would succeed. Unfortunately, some of the market participants are to lose the competition and give up much, if not all, of their business achievements. Bankruptcy is a method for improving economy in competitive market conditions. For the parties concerned bankruptcy is an unpleasant way to admit defeat under law.

Bankruptcy may be regarded as ill fortune, which in a degree may strike any company or person. Therefore, it would be useful for everyone to be informed about the negative attendant phenomenon of market economy.

The Bankruptcy Act, which was passed on 10 June 1992 and took effect as from 1 September 1992, is the first bankruptcy act in the history of Estonia. The bankruptcy act did not exist even before the year 1940 during the first Republic of Estonia. At that time in the case of bankruptcy mainly the Law on Commercial Procedure effective in the czarist Russia was applied.

In the last few years, the economic activity of commercial undertakings has become a lot more complicated. Long-term financial troubles attend even the companies in which the economic activity has been properly arranged, but miscalculations (in marketing, cost management, taking of too high risks etc.) have brought along long-term insolvency. As a result, the bankruptcy proceedings have become more complicated and the need for a new substantially amended and updated bankruptcy act has arisen.

In 18 December 1996, the Parliament (*Riigikogu*) passed the Law Amending the Bankruptcy Act which took effect as from 1 February 1997 (*Riigi Teataja* I, 1997, 5/6, article 32).

In drafting the Bankruptcy Act the main focus was on the protection of the interest of creditors, which ensued from the current economic situation and needs in Estonia. The act was drafted by the example of the legislation of many other countries, especially the bankruptcy act of Sweden, as well as of Germany, the United States, France and Finland.

Insolvency means that the debtor's finances and property are not sufficient to satisfy the claims of creditors. Insolvency may be temporary or permanent. In the case of temporary insolvency the debtor's financial situation can be expected to improve soon to such an extent that the debtor will be able to meet the claims of creditors. In the case of permanent insolvency no improvement in the financial situation can be expected.

At this point, the underlying circumstances of permanent insolvency are not important. As a rule, permanent insolvency has been conditioned by the debtor itself, although quite often by another (legal) entity as well. If the debtor intentionally goes bankrupt, the bringing of criminal charges against the debtor for committing the so-called bankruptcy offence may be considered.

It has come across in practice, but not very often. Usually, the reasons for the bankruptcy are the debtor's inability and lack of experience to participate in business or excessive trust in others.

In early 1990s, too thoughtless and precipitate initiation of bankruptcy proceedings against the debtors emerged in Estonian economy. It was a prevalent belief that initiation of the bankruptcy proceedings was the fastest and surest way of recovering debts. The debtors were mainly the government enterprises that had no property, whose economic activity was not based on business plans and whose accounts were poorly kept or not kept at all. The creditors, however, tended to forget that bankruptcy proceedings primarily involve the proportional division of the debtor's remaining or recovered property between all creditors. The aim of the bankruptcy proceedings was fair distribution of the debtor's assets between all creditors pro rata with their respective claims.

Creditors should take into account that by means of the bankruptcy proceedings it is not possible to recover the sums claimed in full and that submission of a bankruptcy petition is only an extreme measure. Submission of a bankruptcy petition is expedient only in case it has been established that the debtor's assets are not sufficient to cover the claims of all creditors, whose term of the claims has arrived or a court order has already been enforced in favour of any other person, as a result whereof the recovery of debts by other creditors may turn out to be impossible. If the debtor's assets are not sufficient to repay the debts, but there is hope to recover property, which is possible only in the case of bankruptcy proceeding, the bankruptcy petition should be filed.

According to law one may talk about bankruptcy only after the declaration of bankruptcy under pertinent bankruptcy order made by court. The court has the right to declare an insolvent debtor (physical or legal person) bankrupt after the court has ascertained that the debtor is unable to satisfy the claims of creditors and such inability, due to the debtor's financial situation, is not temporary (Bankruptcy Act, §1).

Bankruptcy may be also conditioned by the bankruptcy of another entity, especially of a bank. Therefore, in market economy it is important to know the financial situation of business partners. From the processes in the Estonian banking market and economy it may be concluded that the available information does not often meet the reality and makes the decision-making risky for traders.

As a rule, the punishment of debtors who are unable to pay their debts, is considered the objective of the bankruptcy proceeding, but such an opinion is erroneous. The objective of a bankruptcy proceeding is to settle with minimum loss the situations of insolvency. On one hand, the interests of creditors can be protected by the distribution of the remaining assets between the creditors as proportionally as possible, while on the other hand, the debtor can be given a possibility to get rid of some debts or to extend the debt payment terms.

Depending on whose interests are preferred by the bankruptcy act, the relevant acts can be divided into two: debtor-centred bankruptcy acts and creditor-centred bankruptcy acts. The first are concerned with the giving to the debtors of as many opportunities as possible to extend their debt payment terms, to reduce their debts, and for that purpose the restrictions have been imposed for the creditors upon the collection of their debts. Generally, such acts provide for a relatively extensive reorganisation of the debtor. Such method may seem

efficient (the company continues to operate, jobs are retained, etc.), however, in practice the costs and expenses are very high and in many cases reorganisation does not produce a result. An alternative is the creditor-centred regulation, according to which the bankruptcy proceedings have only one objective - to sell the debtor's property. Although such an alternative does not bring in the bankrupt estate as much money as the first one, the advantage of the second alternative is the speed of the proceedings which in the most cases compensates the creditors for the absolute loss. Estonian law tends to favour creditors rather than debtors, although the last amendments made to the bankruptcy act provide for the possibility of more extensive reorganisation.

The bankruptcy petition may be filed by the debtor or a creditor. Upon the death of the debtor, the bankruptcy petition with respect to the debtor's property may also be filed by a successor of the debtor or the administrator of the estate of the debtor.

The law does not stipulate any special requirements for the submission by the debtor of the bankruptcy petition. Hence, a person is relatively free to file the bankruptcy petition. Articles 176 and 301 of the Estonian Commercial Code stipulate that in the event that the net assets of the company have become less than half of the company's share or stock capital the filing of the bankruptcy petition is mandatory.

The initiation of the bankruptcy proceeding is also limited by the amount of the claim. Namely, the court will not initiate bankruptcy proceeding if the claim serving as the basis for the bankruptcy petition is less than 100,000 kroons in the case of public limited companies, less than 10,000 kroons in the case of private limited companies, general partnerships and trust companies, or less than 5,000 kroons in the case of other legal entities or physical persons. The said requirements emanate from the need to protect the debtor against minor creditors, however, at the same time it also harms their interests by limiting the measures of protection of the minor creditors while the practice shows that often the claims of creditors are only satisfied after the giving of bankruptcy caution.

The filing by the debtor of the bankruptcy petition may cause problems in case the debtor is a legal entity. Namely, Article 4 of the Bankruptcy Act prescribes joint representation for the members of the management board of a legal entity or any other body substituting for it to file the bankruptcy petition. Such a procedure excludes the possibility that some members of the management board ignore the decision of the majority and in breach of the decision files the bankruptcy petition. Considering the consequences of the initiation of bankruptcy proceedings joint representation for the members of the management board is required to protect the legal entity. However, at the same time problems may arise from the responsibility of the members of the management board in the event where the submission of the bankruptcy petition is justified but majority of the members of the management board is against it. The Estonian Bankruptcy Act provides for a possibility that the bankruptcy petition may be filed by any full member of general partnership or trust company notwithstanding their right of representation.

Whereas with the declaration of bankruptcy the accrual of interests and default interests on the debtor's debt, it is sometimes useful for the debtor to independently petition for the declaration of bankruptcy. The limitations for the debtor's claim and the accrual of interests and default interests are not affected by declaring its debtor bankrupt.

The submission by the creditor of the bankruptcy petition is not that easy as the law prescribes certain preconditions which have to be met before the petition may be filed. In practice the majority of the bankruptcy petitions are filed under the Bankruptcy Act, Article 9 section 1 item 4. According to that a creditor may file the bankruptcy petition in case the debtor has failed to pay a debt within ten days after the expiry of the date for payment of the debt and the creditor has cautioned the debtor in writing of the creditor's intention to file a bankruptcy petition and thereafter the debtor fails to pay the debt within ten days.

Thus, after the claim has become enforceable, the creditor must first wait for ten days, whereafter it may file a bankruptcy caution and only after the lapse of ten days the creditor may file a bankruptcy petition.

Before the submission of the bankruptcy petition the creditors are advised to consider whether it would be more reasonable for them to file with the court a bankruptcy petition or a claim pursuant to the regular claim or action procedure. Although in the course of the bankruptcy proceedings the bankrupt estate can be expected to increase by the recovery of property which arouses hope to recover most of the debts, one should not forget that bankruptcy proceedings are much more expensive than the usual claim procedures.

If one of the creditors has filed a bankruptcy petition and the debtor has thereby declared bankrupt, claims against the debtor can only be filed in the bankruptcy proceedings and all other usual claims are joined to the bankruptcy proceeding.

Every creditor has the right to file a bankruptcy petition, however the court cannot declare the debtor bankrupt on the basis of the petition of such creditor whose claim has been fully secured by pledge. Such a creditor should refer to court for the collection of the debt in the course of usual action procedure.

In Estonia, creditors can petition for the declaration of bankruptcy only under Article 9 of the Bankruptcy Act. According to which the petitioning creditor shall file proof of the amount, basis and term for payment of the debt, and of the facts which are the basis for the bankruptcy petition or a justification to the effect that the debtor is unable to pay a debt. Hence, one may claim that the creditor has an obligation to prove the insolvency of the debtor. The bankruptcy proceeding is not a competition like a civil procedure. The submission by the creditors of relevant proof cannot be treated as the usual proof burden prescribed by the Code of Civil Procedure. In bankruptcy proceeding the court ascertains the insolvency of the debtor as an objectively existing condition.

If the court finds that the financial situation of the debtor is good enough to satisfy the claims of creditors, it will dismiss the petition. In such case the legal costs of the bankruptcy proceeding, which may not be low, shall be paid by the petitioning creditor (Bankruptcy Act, Article 100 section 3). The bankruptcy petition should be therefore avoided if actual insolvency of the debtor is not known.

Bankruptcy proceeding is initiated with the submission of a bankruptcy petition to court. Within 30 days following the submission of the petition, or with good reason within two months, the court must establish the financial situation of the debtor. For that, the court may request for information from banks and other organisations and ask for the explanations by the debtor itself. At that moment the court is already entitled to ask for the debtor's signature to the effect that the debtor will not leave its place of residence, as well as to seize its assets,

make a prohibitive notation in the property register in order to stop the debtor from transferring its property and apply any other measures to secure the claim.

If the bankruptcy petition meets the requirements of law, the court will accept it and initiate the bankruptcy proceeding within 10 days from the date of receipt of the petition. Besides formalities, the court must also check certain contentwise aspects. The first aspect to be checked by the court is the clarity of the claim being the basis of the bankruptcy petition. The claim is clear if it has not been contested by any civil, administrative or criminal action. The claim contested by the debtor cannot be deemed clear. If the court finds that the claim serving as the basis for the bankruptcy petition is not clear, the creditor must argue the claim clear before the submission of the bankruptcy petition.

Having perused the bankruptcy petition the court must decide, whether:

- To declare the debtor bankrupt;
- Dismiss the petition filed by the creditor;
- Terminate the bankruptcy proceeding by abatement or on any other grounds.

The analysis of court statistics shows that about 60 per cent of the bankruptcy cases filed with the court are terminated by abatement as the debtor's assets are not sufficient to cover even the legal costs of the bankruptcy proceeding and there is no possibility to recover or reclaim property.

The definition of the economic aspect of bankruptcy says that bankruptcy is based on the insolvency of the debtor. The debtor's temporary inability to pay a debt is not a basis for bankruptcy. That refers to the need for measuring insolvency in figures and for analysing the same over a longer period of time in order to prevent occasionality and temporality. By means of the analysis we are able to establish whether the debtor's insolvency is a certain result of the company's economic activity, whether the bankruptcy is due to a grave error in management, and if so, who is responsible for that.

Asymmetric dissemination of information or a situation where the creditor is not informed about what the borrower does with the money and what is its current financial situation, is considered to be the vehicle for the bankruptcy analysis.

Prior to going bankrupt a company passes certain crises stages, which are hidden and apparent crisis, followed by bankruptcy.

Hidden crisis could be described as the accumulation of negative factors into the hands of the company's management. Interest groups, however, take decisions in reliance on the apparent normal development.

Such a normal condition, which does not show any recognisable symptoms of a crisis and in which the company habitually operates, theoretically already refers to the possibility of crisis. As a general rule, the stage of hidden crisis cannot be diagnosed on the basis of the public information (balance-sheets, etc.). The symptoms of hidden crisis are manifested in management errors, inappropriate organisational structure, defects in production process or the absence of a production plan, poor procurement and logistics, bad personnel politics, unsuccessful investments, failings in research and development, insufficient level of equity and failings in supervision activity.

The next stage following the hidden crisis is the stage of an apparent crisis. The crisis is apparent if the problems in the company are known to the external information consumers, that are related to the company's economic unit, and the trader is unable to independently neutralise the negative developments.

In this stage the company requires help from third parties, as it is no longer able to manage independently. Usually the management hides the actual situation from the owners, which renders the taking of right management decisions impossible.

The characteristic features of an apparent crisis are:

- The financial indicators of the company differ materially from those of successful companies;
- The company informs exterior consumers of information by figures;
- Balance-sheet manipulations. These possibilities are still quite limited thanks to the supervision exercised by the information consumers to whom special rights have been granted
- Apparent crisis is usually accompanied by a substantial decrease in the sales and profitability
- An initiation of reorganisation by third parties.

The next stage for the company is bankruptcy.

Economic analysis is also an essential working method for the trustees in bankruptcy. Firstly, due to the fact that the matters in principle, such as whether or not to continue production, must be quickly decided. Secondly, fair evaluation of financial situation is a prerequisite to both reorganisation of the company as well as explication of the situation to the general meeting of creditors. Any decision concerning the results of the company can only be based on objective evaluation of the actual situation.

The foregoing clearly refers to the need of highly professional financial forecasting and fiscal control. That facilitates due detection of any possible deviations from the financial plan whereas a company would not survive long-term insolvency.

There is no single efficient legal or economic remedy for the prevention of bankruptcy. There are only commendatory suggestions concerning the minimisation of bankruptcy threats and mitigation of risks.

The Bankruptcy Act and other legal acts, concretising the Bankruptcy Act would require amendment and modification. While bankruptcy has recently become topical in Estonia, it is evident that the legal acts and regulations respecting bankruptcy need to be updated.

## References

1. Pankrotiseadus. Seadus ja kommentaarid. Tallinn, ILO, 1997.
2. Äriseadustik.
3. Riigi Teataja I, 1997, 5/6, artikkel 32.
4. Kitvel, E. Aastaruandluse analüüs. Tallinn, TTÜ, 1998.



## ABC SUGGESTION FOR PRICING POLICY

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New strategies, markets, competitors, technology, management initiatives and changing customer requirements are facts of life in the global environment. The main means of competition and growth of the companies in such environment are price, product and selling effort. But product changes require in most cases considerable funds, which must be committed for long periods of time. Thus product decisions cannot easily be retracted without substantial losses, while price and advertising decisions can be changed virtually overnight. (F. M. Scherer, 1980)

The pricing is a very difficult and important process. Unintentional mispricing is only the one of many possible disasters for company's activities. It can put you on crisis with the consequence chain course from which you may never recover. Pricing decisions are closely related to customers' expectations and requirements. P. B. B. Turney (1996) summarized customers' wishes: they are interested in quality, they desire good service, they want flexibility, and they covet value. The customers do not want to pay higher price as the product is worth. But customers' requirements aren't the only main factors which determinate the pricing policy. There are many factors and they should be estimated when company makes pricing decisions. Ph. Kotler has separated them into two groups: internal and external factors. (Figure 1) These decisions are important for all enterprise's activities and their results too.

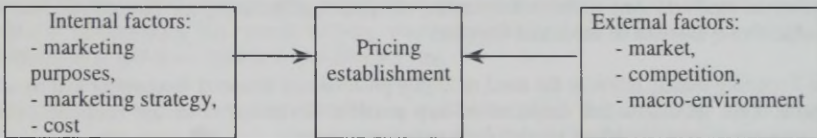


Figure 1. The pricing establishment factors (according to Ph. Kotler).

M. Bruhn these factors grouped to: cost, demand and competition factors, which could be called the pricing boundaries.

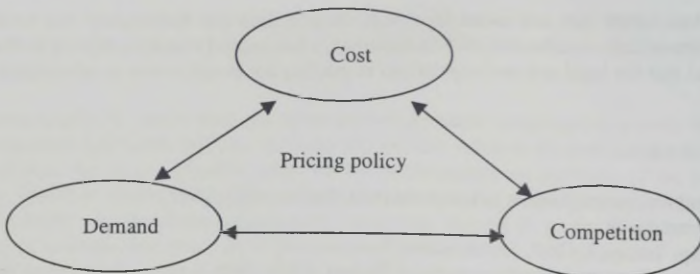


Figure 2. Pricing policy - "The magic three-cornered".

But companies have not the same opportunities to make their pricing policy, which could ensure the further profitable activity of the company. Some of them base their prices exclusively on cost, others use cost in combination with competitive factors to set price. But in both cases cost factor is existed as the main for making pricing decisions. Cost information is used in making a wide range of strategic and operational decisions. It should reveal problems to tackle and opportunities to exploit. But conventional cost systems actually hide problems and fail to identify opportunities.

Conventional cost systems do not work well in this quickly changeable environment because they:

- Do not communicate what matters to customer,
- Do not report which products and customers are profitable or unprofitable,
- Are often costly to operate,
- Provide few insights about how to improve,
- Encourage actions that damage competitiveness.

Activity based costing (a method of measuring the cost and performance of activities and cost objects) provides important information about problems and opportunities.

Nowadays companies are performing comprehensive activity based cost analysis that extends the domain of analysis beyond manufacturing and factory costs. They are getting marketing, selling and many administrative expenses. The analysis reveals that many demands for organizational resources arise not only from products but from customers, distribution or delivery channels. Activity- based costing enables managers to identify the characteristics that cause some customers to be more expensive or less expensive to serve. The Table 1 shows the characteristics of hidden cost (high cost-to-serve) and hidden profit (low cost-to-serve) customers. (R.S.Kaplan, 1997)

Table 1

High cost-to-serve customers	<u>Low cost-to-serve customers</u>
Order custom products	Order standard products
Small order quantities	High order quantities
Unpredictable order arrivals	Predictable order arrivals
Customized delivery	Standard delivery
Change delivery requirements	No changes in delivery requirements
Manual processing	Electronic processing
Large amounts of pre-sales support (marketing, technical and sales resources)	Little to no pre-sales support (standard pricing and ordering)
Require company to hold inventory	Replenish as produced
Pay slowly (high accounts receivable)	Pay on time

All companies can generally recognize customers that exhibit some or all of the high cost-to-serve characteristics. Companies are fortunate to enjoy low cost-to-serve customers as well. The only downside from having a low cost-to-serve customer arises when the customer itself realizes that its behavior reduces costs to its supplier, demands low prices in exchange. Supplying companies conducted their own ABC analyses; they could see the truth of this claim. Companies can view their customers through the lens of a simple diagram. (Figure 3)

The vertical axis shows the net margin earned from sales to the customer. The net margin equals net price, after all sales discounts and allowances, less manufacturing cost. The horizontal axis shows the cost of serving the customer, including order-related costs plus the specific customer-sustaining marketing, technical, selling and administrative expenses associated with serving each individual customer, as measured by an ABC customer costing model of these expenses.

Customers that are above the cost-plus diagonal are more profitable

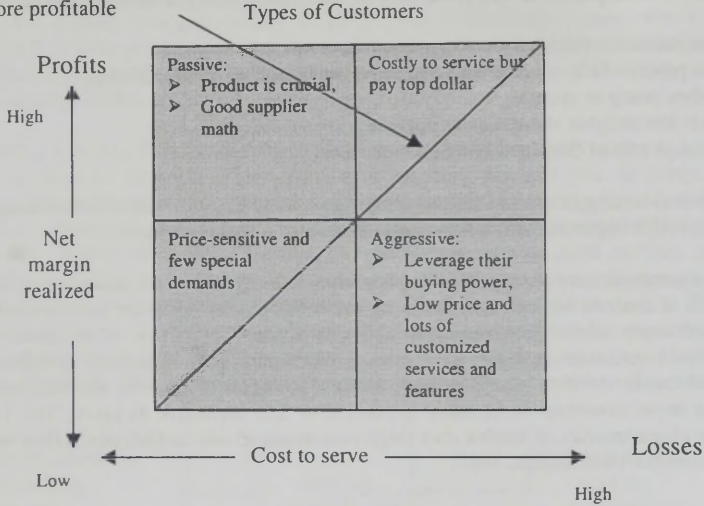


Figure 3. Options for managing customers. Profitability depends on whether and how much the net product margins recover the customer-specific costs. (Source Shapiro, Rangan, Moriarty and Ross, "Manage customers for profits (not just sales)" Harvard Business Review, Sep.,Oct.,1987).

This diagram shows that companies can enjoy profitable customers in different ways. A customer would be at the lower left hand corner of the curve: demanding low prices, so net margin will be low, but also working its suppliers so that the cost-serve is also low. High cost-to-serve (hidden cost) customers can also be profitable (these would be located in the upper right hand corner of diagram), if the net margins earned on sales to these customers more than compensate the company for the cost of all the resources deployed for these customers.

An ABC system enables a company to offer low cost service to customers, and special services to those customers who value unique functionality, features and extensive customer service. **A customer-based ABC model gives companies a new capability to offer and price out differentiated services to customers, based on their individual needs and preferences, so that they can be both low – cost and differentiated supplier and make money**

with both types of service. That's the cause, why the activity - based costing is so invaluable for pricing.

Increasingly, companies are going to menu-based pricing where the cost to the customer is determined not only by volume and mix of products purchased but also by method of delivering to and serving the customer. The menu based pricing is based on the cost-to-serve calculated by the company's activity based costing model. Price variations could be justified by differences in the cost to serve the different customers in the different industries. But we should not forget that the variation in prices and discounts can be caused by the bargaining power or skill of the customer not by the economics of serving the different customers.

A new price incentive intended to influence the trade to adopt more efficient practices in logistics and promotions. Pricing initiatives and process improvements, either by company or jointly with its customers, are often successful in transforming customers from unprofitable to profitable, moving them out of the lower-right hand of the diagram (Figure 3).

Activity based management principles (protecting existing highly profitable customers; re-pricing expensive services, based cost-to-serve, or discounting; if necessary to gain business with low cost-to serve customers) should enable managers with good (ABC) instrumentation to dramatically improve their profitability, especially in industries where competitors do not understand the economics of customers.

In conclusion, ABC offers new pricing possibilities, which could guarantee the successfully and profitably challenge for today's companies. This evidently indicates that without an ABC model of cost-to-serve, many companies' pricing and discounting policies will likely be unrelated to the cost of supplying individual customers.

In spite of new pricing policy possibilities offered by ABC system, the problem is the realization of such kind of model in real company's activity. We can easily separate customers according to the features shown in Table 1, but many of them are qualitative, difficulty forecasting in so changeable environment. The exact pricing depends on accurate measurement of these features. That's why it could be discussed in the further researches.

## Literature

1. R. D. Banker, J. S. Hughes. Product Costing and Pricing. – The Accounting Review No3, 1994, 479-494p.
2. R. Dickeson. Activity-based costing gets results. – Printing Impressions, Philadelphia, Mar., 1999.
3. A. Koutsoyiannis. Modern Microeconomics. 1980.
4. R. S. Kaplan. Using ABC to manage customer mix and relationships. 1997.
5. F. M. Sherer. Industrial Market Structure and Economic Performance. – Rand McNally, 2<sup>nd</sup> edn, 1980, p. 375.
6. P. B. B. Turney. Activity based costing. The Performance Breakthrough. – London. Kogan Page, 1996.

## DEVELOPMENT OF COST ACCOUNTING SYSTEMS IN ESTONIAN COMPANIES

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The cost accounting system of any organisation present foundation of internal financial information system. Companies' management needs variety of information to plan, to control and to make decisions. Lot of information regarding the financial aspects of performance is provided by the costing system. Cost accounting problems are linked with such areas as:

- Organisational planning,
- Profit planning
- Production decisions,
- Pricing decisions,
- Cost control, etc.

Accurately measured product cost information is particularly vital for companies' decisions in intensively growing competition. Companies' cost accounting systems have to capture precisely the resources consumed by specific products, and refrain managers from misleading decisions like dropping profitable products or continuing production of unprofitable products. An important part of the managerial task is to ensure, that operations, departments, processes and their costs are under control and that the organisation and its parts are working efficiently towards agreed objectives. Managers are also concerned to know what costs will be formed in the future, so that appropriate plans and decisions can be made. Limited available empirical evidence suggest that in many companies are operating cost accounting systems, that involve simplistic allocation principles, which does not supply accurate information.

Three main areas of the cost accounting systems are (Mayer, et al., 1994):

- Cost types accounting,
- Accounting for cost centres,
- Accounting for cost objects.

Factors affecting main activities (production, marketing etc) of the company serve as initial items for **cost differentiation and classification**. The base for specifying the manufacturing and non-manufacturing costs, material, labour, service etc. costs have to be stated by cost classification. Therefore is needed a complex and systematic cost treatment, including different aspects and behaviour of companies costs, which would serve both financial and management accounting purposes.

Financial accounting is the classification and recording of monetary transactions of an entity in accordance with established concepts, principles, accounting standards and legal requirements presenting of a view of those transactions during and at the end of an accounting period. Financial accounting is directed mainly to companies' external information users and is producing information considering their needs. In general financial accounting presents a broader, more overall view of the organisation with primary emphasis upon classification according to type of transaction rather than the cost and management accounting emphasis on functions, activities, products and processes and on internal planning and control information. However, it must be realised that different accounting objectives

form part of the companies' financial information system and the various aspects are totally integrated with no artificial divisions between them.

Useful cost information for managers has to be prepared by cost accounting. The companies' chart of accounts will determine how cost elements are classified and which information will be available for reports. Hence clear costs classification has an important roll in gathering data about costs. Besides supplying the base meant for assigning costs in income statement and inventories in balance sheet, clear cost classification in chart of account is relevant for companies' internal accounting. For rational and objective management decisions must cost accounting supply additionally also detail information of cost centres accounting and cost objects accounting.

Studying the classification of the expenses in the chart of accounts in Estonian manufacturing companies, it is evident that there has been mainly used classification based on official financial income statement formats. One income statement format used in Estonia classifies costs by types, and another format by functions. Classification based on cost function has preferred since 1995. Both ways of classification doesn't supply information for internal use, compile objective budgets, make decisions and control operations. Therefore, in order to help managers to make decisions, it is needed more detailed information: which costs, where and for what purpose will be used.

There are three main approaches by classifying costs:

1. Considering different functional areas and their specifics,
2. Cost behavioural aspects, separating fixed and variable costs,
3. Relation with cost object, separating direct and indirect costs.

Using assets to produce a product will first arise costs (material, labour, energy, etc costs), which occur together with every technological stage. In order to get result - a product - are these cost preconditions of technological process. Without this process and its stages there will be no product, which have to carry these production costs. Selling products can be occur when the products are finished and with selling there will arise additional costs. Therefore cost accounting has to concentrate on the functional areas and their costs, combining whole process with occurring costs.

The starting point for improvement of the cost accounting system will be companies' specific functional area. Hence, firstly has to be made distinction between functions and their costs. For example:

- Purchase and supplying costs,
- Manufacturing costs,
- Marketing and distribution costs,
- Administrative costs.

The material costs could reach until 80% and more of total costs depending on the company. These costs include material acquisition, transportation; etc costs, and is presenting initial point from which production costs will be further developed.

Manufacturing process can be divided into separate stages, like:

- Pre-production stage for manufacturing,
- Production process,
- Service supporting operations/functions.

Following the principle matching costs as close as possible with functions and operations; the production costs will include:

- Production preparation costs,
- Manufacturing costs and
- Service operation costs.

Applying the same principle to marketing function, the marketing and the distribution costs can include for example:

- Storage costs,
- Advertising costs,
- Distribution costs.

Administrative costs are naturally fixed costs, which are not depending on production volume; there is no need to relate them directly with products or other functions. These costs are relevant for company as a whole, not for internal production or other specific management decisions.

Survey, carried out by Tartu University Accounting Department among biggest Estonian manufacturing companies, has revealed that 91% of the companies distinguished cost elements and 80% cost centres. The majority (80%) of the Estonian companies divides costs into manufacturing and non-manufacturing costs, 58% into variable and fixed costs and 75% of the companies into direct and indirect costs (Haldma, Design Management Accounting, 1997, p44). Although cost analysis has been studied formally broadly, in many companies the accounting segments have been chosen too broad. The analysis of direct-indirect costs was carried out mainly in organisational dimensions and variable-fixed costs in product dimension.

The main problems concerning cost elements accounting in Estonian companies are following:

- 1) Cost allocation methods are assuming homogenous nature of costs, whereas companies are using direct costs as allocation bases. Cost accounting analyse among Estonian companies has revealed contrary behaviour.
- 2) In chart of accounts are direct costs separated into fixed and variable parts, but there is missing further differentiation in these parts, which would help to relate costs with cost centres and objects.
- 3) Direct costs are not clearly connected with technological process, which affects the choice of cost allocation rates.

**Cost centre** is a production or service location, function, activity or item of equipment. Managers can receive an answer on question, where costs appear, by identifying cost centres. In practice, identifying cost centre we are defining simply a method by which costs are gathered together, according to their occurrence.

Cost centres have to be determined according to the functional areas of the company. Clarified cost centres have to be consistent with technological process. Hence different stages of technological process must be defined and fixed on the technological charts. For example, proceeding the companies' functional areas and technological charts could be created following groups of the cost centres:

- Material purchases, handling or supply cost centres (department for supply, purchases, raw material storage, etc);
- Pre-production cost centres (could be department for cuttings, constructions, etc.);
- Producing/manufacturing process cost centres (production stages (equipment's), operations, assembling, painting, packing, etc);
- Production supporting cost centres (boiler house, mechanise department, reparation department);
- Marketing cost centres (department for direct selling, advertising, etc.);
- Administrative cost centres (finances, accounting, personnel, management);
- Other general cost centres (archive, coffee, building department).

In the case, if the cost centres are not clearly defined, could cost accounting results be incorrect. In a practice there are common two moments:

- Firstly, the cost centres are defined too broad and are covering not homogenous processes. The main production cost centres are for example different production departments and production supporting departments. In some cases, one department comprises many different technological equipment or production groups, therefore is not sufficient such low differentiation level. With different products has been used different technology, which are causing different costs. Thus is reasonable to handle with distinction between technological lines of different products, not to create only one cost centre – production department. Of course, if one department produces only one product group, than there will be only one cost centre.
- Secondly, the list of cost centres covers additionally to traditional cost centres also elements, which could hardly set down as cost centres. Common are following situations:
  - Types of cost (costs of products sold, retraining costs, transportation costs, supplying costs, repairing costs etc. It is possible to consider transportation, supplying, repairing department as cost centres, where within cost centre can be followed different costs, like material costs, labour costs, etc),
  - Types of revenues (sales of materials, purchased services and goods, etc),
  - The results of cost allocation (transportation cost for product group A, repairing costs for product group B, etc),
  - Cost drivers (number of employees, amount of used material).

Clearly defined **cost objects** (companies' segments, product groups or products) contribute the classification of direct and indirect costs. This classification represents a fundamental aspect differentiating costs in basis of cost relation with cost object. Direct costs are directly connected with chosen cost object (for example direct materials, direct labour costs, and direct expenses). All costs, which can not be identified as direct costs are termed as indirect costs. There has to be considered fact, that cost classification into direct and indirect costs differs between different levels and depends on the cost objects. Costs with indirect relation on the bottom levels can be described as direct costs for higher level. Hence for lower levels, both overhead and common costs might be observed as indirect costs.

Before choosing methods and allocation bases of indirect costs has to be specified additionally to cost object also volume of indirect costs. Consequently select appropriate allocation base and method considering specified cost volume and cost object.

Traditionally all manufacturing overheads and common costs are allocated on production groups, using labour or machine hours as allocation rates. This means that high volume standardised products would be charged with most overheads and short run production with



lower overheads in spite of the fact that short run production causes more set-ups, retooling, production planning and thereby generates more support overhead costs. Thus, traditional volume related overhead allocation tends to overcost products made in long runs and undercost products made in short runs.

Choosing allocation bases for indirect costs accounting specialists Horngren and Foster suggest to ground on cause-and-effect relations, which reflects more accurate information about actual costs (Horngren, 1991, p461). But this concept does not accept only the volume based cost drivers. In order to follow cause-and-effect concept must be implemented combination of volume and activity based cost drivers.

Survey, carried out by Tartu University Accounting Department among biggest Estonian manufacturing companies, has revealed that 55% of responding companies include non-manufacturing costs into product costs. For pricing, much more, 90% of responding companies allocate non-manufacturing costs (selling costs, administrative costs etc) to product cost. As allocation bases there are used sales volume (27% of them), direct labour costs (23%), direct materials (14%), direct labour hours (10%) (Haldma, Design Management Accounting, 1997, p44) As we see, the non-manufacturing costs, as real product-indirect costs, have been allocated to product cost on volume-rated allocation basis. Such behaviour is not acceptable, because these cost allocation principles can rarely provide suitable information for production and pricing decisions.

In practice there may be a large number of products and product combinations to consider and undertaking special studies for each might not be possible. In such situations a product costing system must report sufficiently accurate attention directing information to highlight products that justify more detailed investigation using the decision relevant approach.

Which costs, budgeted or actual, should indicate cause-and-effect relation? Cost accounting literature suggests use budgeted costs as allocation base for fixed costs, and actual costs as allocation base for variable costs (Drury, 1992, p78). Survey among Estonian manufacturing companies resulted that in cost planning sphere were mainly (94% respondents) used previous period costs. At the same time companies cost allocation were grounded mostly on volume based cost drivers, which are ignoring variable and fixed costs, and does not produce accurate information for management and pricing decisions. Hence, choosing cost allocation bases we have to integrate additionally to cost relation with cost object (direct and indirect costs) also behavioural aspect of costs (variable and fixed costs).

In result we can throw out three main cost classification aspects:

- Technological costs – manufacturing overhead,
- Variable and fixed manufacturing costs,
- Direct and indirect costs.

## References

1. Drury, C. Management and Cost Accounting, 3<sup>rd</sup> ed. Chapman & Hall. 1992.
2. Haldma, T. Design Management Accounting Systems in Estonian Companies: An Empirical Study. - Management (Beograd) 1997, 6, 42 - 45.
3. Horngren, C.T., Foster, G. Cost Accounting. A Managerial Emphasis. 7<sup>th</sup> ed. New Jersey: Prentice Hall, 1991,
4. Mayer, e., Liessmann, K. und Mertens, H.W. Kostenrechnung: Grundwissen für den Controllerdienst. 5.Auflage, 1994, Stuttgart, Schäffer-Poeschel Verlag.

## ПРОБЛЕМЫ ИСПОЛЬЗОВАНИЯ КОМПЮТЕРИЗИРОВАННОЙ БУХГАЛТЕРСКОЙ ИНФОРМАЦИИ

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В настоящее время, когда проводится новая политика бухгалтерского учета: утвержден план учета, приняты новые законы по основам бухгалтерского учета, придерживающиеся тех же самых основ как и международные стандарты по учету и т.д. – повышены новые требования системе учета. Бухгалтерам предприятий возникло множество вопросов на которые сразу нельзя найти правильных и однозначных ответов. Возникла потребность в получении конкретной информации, поэтому необходимо фильтровать учетную информацию, перед представлением их высшему органу управления для принятия стратегического решения. Еще необходимо обработать нужную оперативную информацию, чтобы она реально выполнила все ей предназначенные функции.

Автоматизация обработки экономической информации стало очень актуальным. Это важнейшее условия для увеличения эффективности и улучшения бухгалтерского учета. В последнее время компьютер стал универсальным и удобным способом передачи различного сорта информации. Очень важным является то, что этой компьютерной и телекоммуникационной техникой, а также возможностями программных средств могут быстро научиться рядовой служащий, даже неимеющий специального образования.

Дальнейшее развитие экономики заставляет предприятия все больше обрабатывать экономическую информацию с помощью компьютера. Экономическая система, также как и каждое предприятие необходимо управлять, поэтому желая чтобы управление было рациональным управленческий процесс должен быть соответственно скоординирован, обеспечен необходимыми начальными данными, из которых можно было бы сформировать актуальную информацию для управления.

Объект исследования – проблемы автоматизирования учета в условиях функционирования современных информационных систем.

Цель работы – провести анализ по автоматизации учета, возможности его улучшения используя современные программные средства и компьютеры, чтобы полнее удовлетворить информационной потребностью потребителя.

Управление невозможно без информации. Подготовка и принятие решения есть информационный процесс. Решение как информационный документ принимается выполнив сложную работу по обработке информации. Автоматизация учета значительно сократит время между получением информации и принятием решения.

Расширение связей между предприятиями, управления, вместе с учетом, постоянно дорожает. Поэтому расходы себестоимости производимой продукции и предлагаемыми услугами увеличиваются. Вместе с тем учет как и вся система управления, предназначена для получения результатов как можно быстрее и с минимальными затратами. Значит учет должен быть организован рационально в противном случае он может стать бессмысленным из-за больших затрат. Создается

парадоксальная ситуация, когда бухгалтеры которые только обрабатывают данные и информацию редко задумываются над тем какие должны быть результаты их деятельности – учетная информация необходимая для управления. Работники учета всё рассчитывают собирая и обрабатывая данные. Некоторые данные не обязательно будут использованы для принятия решений. Формирование информационного учета связано с значительными затратами – материальными и интеллектуальными, выраженные в основном через заработную плату работников учета.

Учет являясь информационной системой, занимает важную роль в информационной системе управления.

Степень слияние учета и управления систем информации на каждом предприятии различен, так как зависит от конкретных условий работ, от стабильности внешних обстоятельств, особенности технологических процессов и организации бухгалтерской структуры. Слияясь с информационной системой управления учет подготавливает информационную базу данных для принятия различных видов решений:

- контроля и оценки решений управления;
- определения целей деятельности предприятия;
- прогнозирование деятельности предприятия, тактики деятельности, которая помогла бы достиг наилучших результатов.

Одно из главных условий успешного расширения предприятий – должная оценка учетной информации и умением наилучшим способом использовать предлагаемые возможности. Информация необходимая для принятия решений различна и её так много, что всю её одновременно невозможно принять. Эта проблема полечает если работники управляющего аппарата рационально распределяются должностями и получают достаточно обобщенные данные.

Технические возможности персональных компьютеров (ПК) допускают результативную информацию представить как регламентирующую или с помощью запроса. При улучшении учетной информации и улучшении обеспечения служащих информацией управления и контроля, потребитель оперативнее получает информацию. Конкретное использование записей данных зависит от деятельности предприятий, расстояния до ПК, имеющихся регистрационных устройств начальных данных, типа компьютеров и других условий.

При подготовке начальных данных для дальнейшей работы, ввода (занесении) текстовых записей, названия запасов и нормативных текстовых записей необходимо иметь опыт работы с компьютером и время ввода текстовой информации. Эту информацию можно начать вводить заранее еще перед началом реальной работы. Предлагается сразу начать группировку записей будущих документов и создании систематизации, которая после определенного времени может дополнит информацией для анализа и тем самым привести к ожидаемому порядку внутри предприятия.

Переход от вычисления вручную к управлению базы данных компьютерных программ требует ввода начальных данных к такой дате, от которой будет выполняться ввод документов программными средствами. Поэтому потребитель должен быть подготовлен для ввода начальных запасов всех тех счетов с которыми готовятся работать. Известно, что наибольшее время затрат будет при фиксации краткосрочных обязательств, кредиторских и дебиторских начальных записей. А если число записей

большое, а операторов мало? В этом случае систему надо внедрять постепенно, то есть определить прерогативу ввода главных документов и подготовить среду для начала работы. В дальнейшем работая с программными средствами, документы будут создаваться и фиксироваться программным способом, освобождая от ручной работы. В процессе управления хозяйственной коммерческой деятельности экономическая информация используется обработанная, так как при принятии решения задач управления она часто должна быть сгруппирована по различным разрезам. Финансовый учет предназначен для определения деятельности и представления отчетов.

Сформированные массивы данных с помощью ПК приводятся в порядок по соответствующим модулям программы и формируется по заранее задуманным объемам результирующей информации (авторами программных продуктов). Она потребителю может быть представлена в порядке регламента или по желанию из меню. Возникает диалог человек – компьютер с оперативной обратной связью.

Возможности современной вычислительной техники позволяют организовывать базу данных (БД) по функциональным требованиям банка данных. Поэтому выбор модели организации БД становится актуальным вопросом. Выбранная модель организации БД должна сохранить не только бухгалтерские изменения полученных результатов, еще и государственной инспекции.

Исследование проектов компьютеризации учета и литературных источников показали, что структура предлагаемой информации остается неизменной, независимо от формы бухгалтерского учета. Общая черта показателей, используемых в целях управления и контроля предлагаемой результирующей информации, независимо от порядка проведения учета ручным или автоматизированным способом, остаются почти неизменными.

Частичное компьютеризация учета является только промежуточным этапом перехода к комплексной компьютеризации учета.

Представлением результирующей информации кончается процесс обработки учета данных и функции реализуемого бухгалтерского учета для удовлетворения управления и контроля информации. Исследуя представляемую учетную информацию можно выделить такие аспекты: технологии представления результирующей информации, дающая возможность использовать современную вычислительную технику максимально автоматизировав представление результирующей информации, контроля и операции коррекций, а также создания уверенного оперативного и удобного подхода к этой информации. Опедление экономического содержания результирующей информации для удовлетворения желаний потребителей, а также ориентирование бухгалтерского учета для выполнения своих функций.

При обработке учета данных, в технологиях литовских программных средств, содержание результирующей информации больше ориентирована на технику обработки учета данных, чем на удовлетворения управления и контроля информацией. Результирующая информация потребителям часто предлагается в таком виде, в котором есть много показателей различного назначения, часть которых редко используется. Предпринимателю часто неимеющему специальной бухгалтерской подготовки, использование такой информации (все данные о продажах, купле, персонале и другие) без дополнительной обработки тяжело.

Создается такая ситуация, когда для бухгалтерского учета необходимой информации достаточно, а предназначенная информация для управления и контроля недостаточно. Это происходит потому что усовершенствование учета проводится в основном улучшая технологию проведения учета и недостаточно внимание уделяется для удовлетворения информацией управления и контроля.

Использование компьютеров для учета дает возможность в основе изменить порядок представления предлагаемой результатной информации. Еще совсем недавно процесс обработки учета был отдельным от процесса представления результатной информации. Компьютер дает возможность представляемую результатную информацию распределить по целям ее использования. Такое распределение результатной информации в основе улучшает эффективность ее использования, так как потребитель получает необходимую информацию.

Результатная информация бухгалтерского учета должна быть использована для управления, для контроля технологического процесса обработки данных и проведения анализа. Об этом в своих работах описали многие авторы. Информацию подразделяют на информацию общего управления, контроля и переходную (остаточная), которая необходима на других этапах для решения тех же задач. Другие авторы предлагают результатную информацию распределять по видам использования. В работах не видно чтобы распределяли по целям использования. Поэтому она мало эффективна при информационном обеспечении управления и контроля. Подготавливая вид представляемой информации на экране или для печати необходимо результатную информацию распределять по видам использования. В этом случае улучшится обеспечение информацией управления и контроля. При представлении только необходимых данных, лицу принимающему решение обязательно иметь хорошую бухгалтерскую подготовку.

Автоматизированное рабочее место (АРМ) бухгалтера являясь частью информационного обеспечения предприятия должна формировать информацию подходящая использованию не только бухгалтерами, но и другими. Здесь выявляется превосходство АРМ, которое составляет возможность получение всем потребителям необходимую информацию непосредственно на своем рабочем месте без посредников. Поэтому распределение результатной информации по группам в зависимости от ее принадлежности обязательно.

В функционирование АРМ бухгалтеров и других специалистов, представление системой результатной информации, важную роль выполняют запросы для получения информации. Возможности современных компьютеров допускают представить по запросам, не только фрагменты результатной информации или всю желаемую информацию, но и рассчитать показатели характеризующие деятельность процесса, которые не входят в порядок регламентированного представления меню.

Состав представления запросов (информационное меню) целесообразно распределить по АРМ и потребителям, так как каждый может иметь свой круг запросов. Подготавливая запросы необходимо провести анализ потребностей работников. Исследования должны ответить на следующие вопросы: вид деятельности потребителей; система управления; функциональная должность потребителей;

необходимые показатели для решения проблем управления; частота представления результатной информации.

Результатную информацию необходимо подразделять не только по назначению, но и по возможному ее потребностям в различных отраслях хозяйства или в отношении изменения времени (например: при изменении нормативных актов в стране, состава деятельности предприятия) и распределить ее на постоянные и относительно постоянные.

К типичной постоянной бухгалтерской группе относят практически неизменяемая результатная информация, используемая во всей отрасли хозяйства например: остатки учета, оборот. Бухгалтерской нетрадиционной группе относят информацию подходящую к различным отраслям хозяйства например: производство, сельское хозяйство. Под интегрированием отдельных сортов данных учета понимается такой порядок учета, когда используя отдельные сорта начальных данных и каждого сорта методов упорядочения, рассчитываются показатели результатной информации. Например: данные учета в торговле о продаже должны быть использованы в статистических данных экономики для исследования потребностей товара (маркетинге) и тому подобное. Это не значит, что отдельные сорта учета перестанут существовать, а наоборот будут совершенствоваться типы учета, будет расти степень интеграции. Используя компьютеры возникает возможность рационально согласовывать данные отдельных типов учета и интегрированно их обработать, оперативно рассчитать комплексные показатели, которые всесторонне характеризуют управляющий объект.

Каждому типу учета соответствуют типичные способы группировки и обобщения данных. Проведенные исследования в сфере мелкой торговли, установлено что информация о товаре, которая представляет служба финансового учета, не дает информацию экономической службе предприятия и достаточной информации для эффективного управления маркетингом. Потому что товары, в учете товаров, идентифицируются по бар коду или по своему созданному, часто без всякой системы, коду (хотя есть не мало предприятий, которые учитывают товары по выражениям цены, то есть в процессе учета они совсем не идентифицируются). Проанализировав бар код, опираясь на него, можно определить только производителя и страну, где он зарегистрирован. Вся другая информация, которая входит в код необходима только, может самому производителю. Если использовать возможности создания единой базы данных по принципу упомянутой в данной работе – бар код не будет начальным данным, который может представить основную информацию экономисту или менеджеру торговли.

Каждый тип учета в информационной системе занимает свое место, обусловленные задачей учета, ее спецификой и функциями. Поэтому основная проблема менеджера торговли: как из учета данных получить результатную информацию для принятия решения. Бар код его не удовлетворяет, потому что не имеет достаточного количества закодированной информации. Надо создать новый – аналитический код товара, который мог бы указать всю необходимую информацию, о нужном товаре, для принятия решения при заключении контракта. Для специального учета характерно, то что ее данные, часто первичными документами не оформляются, поэтому надежность их бывает низкая. Аналитического кода от поставщика не получишь.

В настоящее время спешно подготавливается новая версия (в среде Windows) программа "BUHA" для компьютеризированного учета, которая сможет представить широкий спектор отчетов по финансовому анализу и сможет конкурировать с продуктами из-за границы. В этой программе очень близко соприкасаются учет персонала с другими типами учета. Особенно она связана с финансовым учетом. По данным учета персонала (документы учета рабочего времени) рассчитываются заработная плата, выплата пособий и т.д. Проводя бухгалтерский учет с компьютерами, подключенными к локальной сети, всю заработную плату и другие необходимые данные автоматически находят в базе данных и используются. Значит данные учета информации о персонале интегрируются с данными финансового учета. По данным учета персонала заполняются статистические отчеты о структуре персонала, его изменения, которые предлагает данные финансового отчета о заработной плате – представляются интегрированные данные учета.

Любой тип информации предложенный отдельно, не могут всесторонне характеризовать управляющий объект. Данные об обороте товара, продаже не могут указать о прибыльной деятельности предприятия и т.д. Следовательно представление потребителям интегрированных финансовых данных специального учета всесторонне охарактеризуют управляющий объект, тогда руководители и специалисты могут принять объективные решения управления.

Приобретая компьютерную технику или продукты учета программных средств – необходимо знать, что из системы учета желаем, какие должны быть результаты.

Делая анализ было рассмотрено программы компьютеризированного учета, которые работают в системах DOS ("BUHA", "Balansas", "Prototechnika", "Finvalda", "Debetas" и другие) и "Windows" ("Pragma", "Stekas", "Agnum", "Pagaute" и другие).

Открытие электронного документа является важным условием для создания технологии безбумажного учета. На современном этапе, особо важное значение выполняет электронная подпись, дающая возможность отказаться от множества бумажных документов в учете. Использование электронного документа дают возможность лучше использовать вычислительную технику и больше автоматизировать процедуры проведения учета.

Одним из перспективных вопросов в учете является создание безбумажной технологии. В настоящее время многие хозяйственные операции, используя компьютеры и вычислительную технику, оформляются традиционными бумажными документами, хотя для контроля таких операций бумажные документы ненужны. Списывая использованные материалы и сырьё, при производстве, составляются множество счетов, карточки лимитного получения и другие начальные документы. Хотя использование материала и сырья контролируются по произведенному количеству товаров и технологических норм затрат для сырья и материалов. Практический опыт показывает, что сфера применения безбумажной технологии при учете был бы значительно шире, если решится проблема юридической возможности считывания компьютером и вопросы идентификации материально ответственных лиц.

## Выводы

Создание баз данных (сбор начальных данных) не могут быть оставлены только создателям программных средств и бухгалтерам. Для этой цели должны быть консолидируемы все подразделения предприятия и силы создателей программных средств учета.

Стремясь к объективному и оперативному управлению решений – используемые системы компьютерного учета должны охватить все области деятельности учета. Потому что все типы учета предприятия между собой связаны.

Компьютеры не являются только инструментом для уменьшения и облегчения работы по учету, компьютеризированные системы активно действуют на учет и представление результативной информации.

Компьютерные программы предназначенные для сбора записей в базах данных их обработки и управления являются первым помощником для бухгалтеров, менеджеров, финансистов, директоров. Собранные записи в базах данных можно обработать в различных разрезах, которые зависят от желания потребителей. Важно чтобы структура находящаяся в базе данных соответствовала количеству информации для удовлетворения желаний.

Стремясь создать условия работы компьютеров в автоматическом режиме, уменьшить поток бумажных документов и уменьшить время ведения учета целесообразно внедрять безбумажную технологию ведения учета.

Внедряя безбумажную технологию ведения учета очень важно совершенствовать основы закона бухгалтерского учета, пополнить его правилами регламентирующими применения ведения учета безбумажной технологии.

## Литература

1. O'laery, T. J., Brian, K. Williams. Computers and Information Systems. 2 ed. – California: The Benjamin/ Cummings Publishing Company, Inc. – 1989. 688 p.
2. Meidan, A. Marketing financial services. – London: Macmilan press Ltd., 1996. 326 p.
3. Kvedaravicius, R., Christauskas, C. Pilnai automatizuoto saskaitu uzdarymo itaka finansu vadybai ir apskaitai. *Ekonomika ir vadyba* –98. Tarptautines konferencijos pranesimu medziaga. – Kaunas: Technologija. 1998. 191-194 p.
4. Christauskas, C. Kompiuterizuotas apskaitos diegimo proektas imoneje. *Ekonomika ir vadyba* –99. Tarptautines konferencijos pranesimu medziaga. – Kaunas: Technologija. 1999. 43-44 p.
5. Simanaukas, L. Kompiuterizuotos informacines sistemos. – V.: VU leidikla. 1994. 100 p.
6. Рожнов В. С., Островский О. М. Автоматизированные системы обработки экономической информации. – М.: Финансы и статистика, 1996. 256 с.
7. Сивак О. В., Офсейк, Н. Н. Бухгалтерский учет с помощью персонального компьютера. – Киев: Полиграфкнига, 1993. 259 с.



# PROBLEMS OF USING COMPUTERIZED ACCOUNTING INFORMATION

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## Summary

Lithuanian and foreign computing account systems, their possibilities to receive exhaustive resulting information complex for solving different tasks in department is analysing in article.

## ACCOUNTING IN ESTONIA

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### Accounting regulation

The **Estonian Accounting Law** was enacted in 1994 and came into effect on 1 January 1995. The law is in conformance with the 4<sup>th</sup> Company Directive and IAS.

As the Government of Estonia had expressed Estonia's desire to enter the European Union, we merged the requirements of the European directives with IASC's conceptual framework and treatments by carefully choosing the alternatives in the directives that result in convergence.

Our IASC orientation was not considered either wise or feasible in 1994. Having monitored the directives vis-à-vis international accounting harmonization issue, it is interesting to note that our strategy is now deemed both feasible and wise.

The law, which applies to all accounting entities registered in Estonia, requires that the annual accounts be prepared in accordance with the generally accepted accounting principles of the Republic of Estonia i.e. Estonian GAAP.

**Generally accepted accounting principles** are defined in §3 as the requirements set out in the Accounting Law and the guidelines issued by the Estonian Accounting Standards Board. The Board's guidelines are published in the State Bulletin and come into force either when published or at the date stipulated in the Board's decision.

The Estonian Accounting Standards Board is an autonomous government unit. The Chairman and the 6 members of the Estonian Accounting Standard Board are appointed by Cabinet for a three-year term.

The Accounting Law and the Estonian Accounting Standards Board's guidelines apply to all sectors including credit institutions and insurance companies. The only part of the law that does not apply to them are the balance sheet and income statement formats in Appendices 1-3.

The guideline "Annual Accounts of Credit Institutions", authored and approved by the Estonian Accounting Board, was issued by the Bank of Estonia on Feb. 13, 1995. It prescribes the balance sheet and income statement formats found in the EEC Directive on the Annual and Consolidated Accounts of Credit Institutions and is in line with IAS 30. This guideline was applied when compiling the annual accounts for year-end 1994 and subsequently. The guideline "Consolidated Accounts of Credit Institutions" was issued by the Estonian Accounting Board on Nov. 6, 1997. The guideline is in accordance with the 7<sup>th</sup> Directive, the banking accounting directives, IAS 27 and IAS 30.

The guideline, "The Annual Accounts of Insurance Companies", which applies to the separate accounts of insurance undertakings is in line with the EEC Directive on the Annual

and Consolidated Accounts of Insurance Companies, was issued in 1994. The guideline "The Consolidated Accounts of Insurance Companies" was issued in and applied as of year-end 1997.

The guideline, "Consolidated Accounts", which applies to all other parent undertakings, is based on 7<sup>th</sup> Company Directive and IAS 27, Consolidated Financial Statements and Accounting for Investments in Subsidiaries. It will come into effect as of January 1, 2000. At the present time listed companies are required to compile consolidated accounts and do this based on the aforementioned guidelines.

### **The guidelines issued by the Estonian Accounting Standards Board**

To date, the Board has issued 16 guidelines. The Board's guidelines are published in the State Bulletin of the Republic of Estonia.

Once a year the Board publishes a bound volume "Hea raamatupidamistava" (Generally Accepted Accounting Principles) which includes all effective guidelines and pronouncements with illustrative examples. The guideline's are reformatted to update cross-references and provide additional guidance on a yearly basis. The bound volume includes translations or summaries in English.

EASB 1 – Preparing the annual accounts for 1994 (issued Jan. 11, 1995)

This guideline deals with compiling the annual accounts for 1994. As the Accounting Law required that the annual accounts for 1994 be restated in conjunction with preparing the annual accounts for 1995, this guideline forced the issue.

EASB Pronouncement – Noncurrent Assets (issued May 23, 1995)

Government decrees allowed for the write-up of noncurrent assets in 1993 for financial accounting as well as tax purposes. As of Jan. 1, 1995, the cost principle is followed for accounting purposes and no further write-ups are allowed.

This guideline is in compliance with IAS 16, Property, Plant and Equipment, benchmark treatment and is in accordance with Estonian Company Law (effective date Sept. 1, 1995), which does not provide for a revaluation reserve.

EASB Pronouncement – Cost principle	This guideline covers the initial recognition under the cost principle.
	The guideline is in compliance with IAS 25, Related party transactions, IAS 22, Business Combinations and other IAS standards.
EASB 2 – Accounting Principles and Basic Requirements to be Complied with when Compiling Annual Accounts (issued June 15, 1995)	This guideline presents the terms defined in §3, the accounting principles prescribed in §5, the steps involved in compiling the annual accounts in §18 and accounting for the effects of changes in foreign exchange rates as set out in §26 of the Accounting Law.
	As §3 and §5 incorporate IASC's conceptual framework, this guideline is in line with IAS 1, Presentation of Financial Statements and IAS 10, Events After the Balance Sheet Date. § 26 is in compliance with IAS 21, The Effects of Changes in Foreign Exchange Rates.
EASB 3 – Revenue Recognition (issued July 11, 1995)	This guideline, which defines revenue recognition in accordance with the revenue principles in §5, is in compliance with IAS 18, Revenue Recognition.
EASB 4 – Accounting for Entities in Liquidation (issued July 11, 1995)	This guideline deals with accounting in accounting entities in liquidation.
EASB 5 – Business Combinations (issued July 11, 1995)	This guideline, which deals with accounting for business combinations, is in compliance with IAS 22, Business Combinations (before 1998 revisions). Only benchmark treatments are allowed.
EASB 6 – Accounting for Privatization Vouchers (issued Sept. 18, 1995)	This guideline deals with recording transactions involving privatization vouchers under the cost principle and the prudent valuation of privatization vouchers in the annual accounts.

EASB 7 – Balance Sheet (issued Sept. 30, 1995)

This guideline presents all the accounts in the prescribed balance sheet format and explains the recording and reporting treatments to be applied.

The balance sheet presents the items prescribed in the 4<sup>th</sup> Directive in their order of liquidity.

As the Accounting Law incorporates IAS treatments, this guideline incorporates treatments found in very many IAS standards such as IAS 2, Inventories, IAS 4, Depreciation, IAS 23, Borrowing Costs, IAS 25, Accounting for Investments, IAS 37, Provisions, IAS 38, Intangible Assets, etc.

EASB 8 – Income Statement (issued Sept. 30, 1995)

This guideline deals with the 2 income statement formats prescribed by law (EC 4<sup>th</sup> Directive report form) cost by nature and cost by function, account by account.

In addition, the guideline deals with reporting changes in accounting policies and the restatement of annual accounts as required by § 43 of the Accounting law and is in line with IAS 8.

EASB 9 – Equity Method (issued Aug. 15, 1997)

This guideline deals with implementing the equity method as prescribed in §28 of the Accounting law. This guideline is in compliance with IAS 28, Accounting for Investments in Associates.

EASB 10 – Leasing (issued Aug.15, 1997)

This guideline deals with accounting for financial and operating leases. Financial leases have been accounted for in accordance with IASC's Special Report – Accounting for Leases: New Approach.

Assets leased under a sale-leaseback agreement remain at their carrying amounts prior to the agreement and no excess of sales proceeds over carrying amount are recognized.

EASB 11 – Accounting for Government Grants (issued Nov.12 1997)	This guideline deals with accounting for government grants and is in compliance with IAS 20, Government Grants.
	The net method, whereby grants received for the purchase of tangible assets are deducted from the purchase price of the asset, is prescribed for business entities.
	The gross method, whereby grants received for the purchase of tangible assets are reported as liabilities and taken to income during the useful life of the asset is prescribed for government units and non-profit organizations.
EASB 12 – Consolidated Accounts of Credit Institutions (issued Nov. 6, 1997)	This guideline, which is based on the 7 <sup>th</sup> Directive the banking accounting directives, IAS 27, Consolidated Financial Statements and IAS 30, deals with the consolidated interim and annual accounts of credit institutions.
EASB 13 – Interim Financial Reporting (issued August 13, 1998)	This guideline, to be applied by credit institutions, insurance companies and listed companies, deals with interim financial reporting and is in compliance with IAS 34, Interim Reporting.
EASB 14 – Earnings Per Share (issued Aug. 17, 1998)	This guideline, to be applied by listed companies, deals with computing earnings per share, and is in conformity with IAS 33.
Draft EASB 15 – Segment Reporting (to be issued late 1999)	This draft guideline is in compliance with IAS 14, Segment Reporting (revised 1997).
Draft EASB 16 – Construction Contracts (to be issued late 1999)	This draft guideline is in compliance with IAS 11, Construction Contracts.
Draft EASB 17 – Presentation of Annual Reports (to be issued late 1999)	This draft guideline is in compliance with IAS 1, Presentation of Financial Statements.

Draft EASB 18 – Consolidated accounts (to be issued late 1999)

The guideline, “Consolidated Accounts”, which applies to parent undertakings, is based on 7<sup>th</sup> Company Directive and IAS 27, Consolidated Financial Statements and Accounting for Investments in Subsidiaries. It will come into effect as of January 1, 2000.

Draft EASB 19 – Financial Instruments (to be issued in 2000)

This draft guideline is in compliance with IAS 32 and 39, Financial Instruments.

Draft EASB 20 – Income Taxes (to be issued in 2000, if at all)

As the new draft of the income tax law, which eliminates corporate income taxation has been approved by Cabinet and is in the process of being approved by Parliament, this guideline will have to await Parliament’s decision. It would seem impertinent to require a liability and expense to be recorded only to be reported as income in a subsequent period. This would also play havoc with company law and distributable earnings.

Another natural concern of ours is the fact that IAS 12 seems in part in contravention of IAS 37, Provisions and Contingencies.

## FINANCIAL REPORTING-IS IT SUFFICIENT FOR INVESTORS FOR DECISION MARKING

Andres Juhkam  
Tartu Ülikool

Reporting on the future - is it paradoxial?

Investors are interested more in the future of company than past and this has to be as transparent as possible. It has to be transparent for all investors, not only core investors who have better access to firm's strategic information through Supervisory Board. *Purpose of article is to point out shortcuts of financial reports for investors in Estonia and propose the ways to improve that situation.*

All businesses should have one governing objective - to maximise shareholder value.

AICPA (American Institute of Certified Public Accountant's) reported in 1992: Financial reports do not provide value-based information. To meet user's changing needs business reporting must: provide more information about plans, opportunities, risk and uncertainties, focus on factors that create longer-term value (Andrew Black, ....., 1998, pg. 180).

Traditional accounting perspective explains to investors what has been done with their money. It assesses how much of the wealth created by the business has been realised in the form of tangible assets. It can be viewed as being a static model, concerned with the allocation of cost and revenues between relatively short time frames that draws on the concepts of accruals, profits, assets etc. By contrast economic profit type measures are concerned with the future economic value added that are likely to be generated over the life of business and the risk associated with them. Investors need that at least opportunity cost of capital is achieved by firm in the future, otherwise it destroys investor's money (Roger Mill, 1998).

The fact that financial future-oriented strategic information is poorly reported in Estonian stock market means that market (investors and analysts) is forced to act on its own "questimates", market rumors, speculations, and the media. Surely it would be better to for companies to take better control of this process.

Today's financial reporting model measures historical cost of physical assets, but ignores certain key drivers of corporate value. Result is a corporate disclosure gap, which reports incomplete information about a company's worth and is of diminished relevance to investors (Denis M. Vally, 1999). Report should better reflect, what management is doing to create shareholder value. According to recent poll of 1000 analysts and investors in 10 countries, commissioned by PwC, traditional reporting model is inadequate for demands of today's capital markets. David Phillips, partner of PwC said: Companies have relied for too long on reporting model which focuses on the past and is dominated by financial information.

Public companies looking to boost their standing with the investment community. In the increasing transparent world investors and analysts are becoming more demanding over the information they require (Nigel Page, oct 1998). I am sure that is a trend in Estonia either.



PwC anticipate that investors will continue to pressure companies for more disclosure of performance measurements, possibly including an annual statement of shareholder value achieved or even more detailed annual value report (Robert Black ,... .pg. 266).

### **Problems in Tallinn Stock Exchange (TSE) for investors**

Companies in TSE are not obligated formally to disclose information about future. And in practise they do not see usefulness of that or it is uncomfortable for them. I think it is big problem because investors and potential investors do not know what they own and buy. Investors only have traditional financial reports, which say nothing about firm goals, strategies, future cash flows (for valuation), market share, growth opportunities, dividend policy, financing strategy, operating strategy, research and development costs and so on.

Information what is disclosed through information system of Tallinn Stock Exchange is not adequate for valuation companies values, knowing about companies goals and strategies to achieve these goals. TSE disclosures company's financial statements (annual report), initial accounting reports and interim reports (<http://www.tse.ee/rules/eng/current/4.pdf>). Issuer is obliged to present the balance sheet and income statement in the form of comparative table comparing the information to that of the same period during the last financial year (*ibid.*,pg 12).

While disclosing the balance sheet or income statement the issuer is obliged to disclose the notes to the financial results. As this information is needed for assessment financial results and business activity in only current period. But investors can not assess are these results in accordance to strategic plans of company to create shareholder wealth. These notes are only about past activity. Firms have to disclosure information about circumstances that have influenced the activity or financial results of the issuer in current period. But how can investor assess company's plans and realise what went wrong or good. They do know the forecasted future goals of company and strategy.

Issuer in TSE is obliged to disclosure EPS ratio, based on the results of current period. But again it says nothing to investor about value of shares. And if investors wants then he can calculate it easily. It is academically proved that there is no correlation between shareholder value (share price) and accounting measures as EPS, EPS growth, ROE. Traditional measures, such as accounting profit and EPS played major role in determining this value. But excessive focus on these measures can give a distorted picture of the companies success and lead to wrong decision.. It is proved that cash flow figures are more suitable and economic value added measure has much higher correlation with share performance that accounting measures (Jim Marsh, Apr 1998). Cash flow is typically a better and cleaner number and it is ultimately a number of what the shareholder is buying (Andrew Black;.....,1998,pg. 198).

Economic value added (EVA) - return on investment methodology is rightfully gaining recognition as a bottom line measure of value creation. Surpassing GAAP-based return on equity (ROE) in analytic power. Major bigger companies report EVA in each annual report. EVA bottom line so strongly indicates value creation as to permit the dismissal of customary measures such as ROE, ROA, EPS (David C Cates,1997).

If the issuer wants to make forecast of financial results about future reporting periods in TSE then will be required to explain the forecast and describe the assumptions which have served as a basis for the forecast. But in practice it is normally practised very seldomly in TSE. Companies sometimes disclose only forecasted accounting profit and sales numbers only for the next period, but it is clearly not enough. Investors need to know much longer-term perspectives of companies. The information, investors get from TSE is clearly insufficient for valuation of share price and company's activity.

I hope that sooner or later Estonian companies understand the need for more active investor relations and need for value reports (disclosure of goals and strategies of firm). It would be in interests of investors and potential investors to change public companies more transparent. Institutional investors need to know how company manage his value through target value drivers in the future. What management intends to do for maximizing shareholder wealth. They need to know future growth potential, sales growth, returns and risks.

External reports should enable to evaluate Estonian company's strategic goals and monitor these achievements. These should show firm's ability to perform according to strategic goals. Investors are interested in how management uses their capital in the future. Does management creates additional value or destroys that. Investor can evaluate it only on the basis of future cash flows and investors want to be convinced that management has certain plan how to maximize shareholder wealth. Investors need that value creation would be measured through target value drivers. Then they can evaluate management abilities to rise shareholder wealth.

Annual report should focus on purpose, values and strategy of the organisation. It should illustrate the application of these values and strategy via a range of key performance measures covering areas, such as "investing in the future" and generating cash-it is a new style report (Management Today, June 1998). Companies may start to modify annual reports where they include value report items (*ibid.*).

### **Value report (VR) as a solution for problem**

Value Reporting explains how a company is creating wealth for its shareholders. It would represent major step forward for Estonia. It provides CEO and CFOs with the ammunition they require to explain more fully the long-term development of the business to investors and analysts. By becoming more transparent, shareholder value can be enhanced by reducing risk and lowering cost of capital. I am sure that investors in TSE want more future-oriented information, presented in consistent way, because they buy future, not past cash flows. Investors are interested in data on future earnings, market growth, cash flows, strategic goals, market share, cost and segment performance (Nigel Page 1998). VR would rise Estonian company's confidence and transparency for investors and lower risk.

In value report strategic level is divided into financial value drivers and this is divided into operational value drivers (prices, product mix, labour rate, overhead cost, manufacturing, productivity, work schedule, selling term, vendor terms and so on...)  
Activity of the company is indicated as generation of future cash flows, which are the base of the companies valuation. Many managements purposefully work at manipulating accounting numbers (profit) and deceiving investors to satisfy what are Wall Street desires (Jim Marsh,

1999). But cash flow measure are more pure for objective valuation. It is the same case in Estonian market.

Value report has to reflect strategic management philosophy of firm to affect target financial value drivers of the firm:

1. Sales growth
2. Cash profit margins (EBITDA)
3. Cash tax
4. Fixed assets
5. Working capital (capital expenditures)
6. WACC
7. Competitive advantage period

VR focuses the key target value drivers of firm (margins, sales growth, new investments, cost of capital), which create economic profit.

*Value reporting* consist of 7 core activities (Pwc 1998):

1. Perform a preliminary evaluation of financial value drivers of the company.
2. Determine how management has embodied these drivers in the corporation's objectives and how these drivers are shaping business operations.
3. Understand how management has developed the strategies to achieve these objectives.
4. Determine whether these objectives and strategies are supported by performance measurements, and assess the quality of the measurement data provided to management.
5. Assess whether management processes foster value creation.
6. Investor communication process, how company and management decision making has changed more transparent.
7. Review, how effectively the major processes of the company are functioning and fix what need to be fixed (like executive compensations, acquisitions, strategic planning etc.).

VR measures the success of business strategy, providing a true benchmark by which to compensate management. Traditional financial reporting does not reveal the future financing required to operate the business, future investments to working capital and capital expenditures, risks, operating and financial value drivers of the firm, firm's ability to generate cash in the future, financing strategy of the firm etc (William H. Wiersema 1999).

Value report (VR) is mainly focused to firm's operating business and exclude extraordinary items. VR measures cost of capital and evaluates firms ability to generate economic value added (EVA). VR is focused to achievement of strategic-goals of a firm and shows the ways how management going to perfor that. How they will find the solution between risk, growth and return (Monica Fle, 1997). Firm's value -is the sum of the future free cash flows discounted at the WACC.

Estonian quoted companies should introduce VR disclosures for investors. And it hope that sooner or later it will be done.

## **VR reflects firm's management value-based management (VBM)**

Since Alfred Rappaport first introduced the concept of shareholder value in 1986, there has been dramatic change in the way business define success and measure performance (Management Accounting, oct 1998).

VR should show, how management maximize shareholder wealth through value-based management (VBM). VP is a communication part of VBM.

VBM is managerial concept, which postulate that firm's value is determined by its discounted future cash flows, and value is created only when companies invest capital at returns that exceed the cost of capital. VBM takes these concepts further by focusing on how companies use them to make major strategic and everyday operating decisions. VBM is analytical technique and management process is aligned to help the company maximize its value by focusing management decision making on the key drivers of value (David C. Cates, 1997). VR is a essential part of Value communication, which aim is to keep investors informed of corporate strategies and goals.

VBM places shareholders at the centre of the company's activity. That directs company strategy, structure and process. VBM becoming the standard decision-making and reporting framework of companies across Europe (KPMG 1999).

In practise are used different firm's valuation and management techniques and approaches: *entity DCF* model and *economic profit* model are more widely used.

VBM is used in 75% of largest companies in Germany, Switzerland, 65% in UK and 50% in France (Management accounting 1999). By sector use was most widespread among companies in IT and telecommunication (2/3 of them) and manufacturing and financial services (over half of them). 80% of them uses DCF approach and 75% of them uses economic profit approach, too (*ibid.*). VBM is widely introduced in Anglo-Saxon economic model, like USA. USA has established culture of share ownership. Large institutional investors are becoming increasingly sophisticated in their equation of expected returns with value. Their focus is moving from extrapolation of growth from accounting-based earnings to free cash flow-based economic models which more explicitly capture risk, growth and returns on investment (Andrew Black, ... 1998, pg. 198-199).

Investors need value-oriented information. In-the long term, this will benefit the company and ensures the market properly reflects its achievements. PwC developed Value Reporting to provide management with framework to deliver broader-based, transparent information to investors. It focuses on long-term value-creation (Ken Armitage 1998).

## **Need for more active investor relations (IR)**

I think it is time to perform more active IR activity for his investors by Estonian quoted companies in TSE. If Estonian company wants to ensure that market value reflects real intrinsic value of company then firms must clearly communicate their strategy and implementation plans. Many companies in the world have started to spend lot of money and time to investor relations and value communications. I think it is time to introduce such kind of practice in quoted companies in TSE in Estonia either.

Good value communication and IR process is very essential. "We established an investor relations department in 1990, because we realized the importance of institutional investors to the company" said Pascal Thebe, head of IR department at AXA in Paris. As company looked to growth, it needed to gain the confidence of financial markets to raise money. Pascal Thebe : "It is two-way process, I receive feedback from investors which I then discuss at the board meeting. I also communicate with shareholders any discussions being made by the company. Very important are face-to-face meetings with investors." The development of investor relations demonstrates that companies are adopting a more professional approach to investors (Supid Roy , apr 1998). Stephen Peaks, executive director at Henderson Investors; said: "Companies are recognizing shareholders interests, if only they realize that they will remain uncompetitive otherwise (*Ibid*)".

IR can play critical role in linking the management of the firm with its shareholders. I is suggested that investing in investor relations can influence investor's awareness of corporate activity and their expectations of future growth and wealth creation potential. And that translates into share price (Investor Relations Business, dec 1998).

Annual reports and other financial statements do not provide enough disclosure (*ibid.*)

Investor communication must aim at ensuring investors understand your companies value-based strategies and goals and are confident in management ability to implement those objectives and deliver on them.

IR activity consist of frequent financial reports, press conferences, market researches, teleconferences, roadshows and so on. For example when company makes strategic decisions like acquisition, then it is necessary to explane size of synergy and expected results of this deal. There is clear need for active IR activity in Estonian market, too.

## References

1. Dennis M. Vally. Time for global reform. London, June 1999.
2. William H. Wiersema. Managing shareholder value: Useful tool or new fade. Chicago, June, 1999.
3. Companies not implementing value-based management; Management Accounting, London, Apr. 1999.
4. Nigel Page. Informing the stock market; Director, London, Oct 19998.
5. Value for money, Accountancy. London, Apr. 1999.
6. Roger Mill. Using economic profit in assessing business performance; Management accounting. London, Nov. 1998.
7. Ken Armitage. In Search of Shareholder Value. The British Journal of Administrative Management, Nov. 1998.
8. Annual brand report; Management Today. London, June 1998.
9. Jim Marsh. Finance can inhibit shareholder value creation; Management Accounting. London, Apr. 1998.
10. Supid Roy. Promoting Europe's best management; Global Investor. London, Mar 1998.
11. David C. Cates. Performance measurement: Welcome to the revolution. Chicago, May 1997.
12. Monica Fle. The Big payoff; Ivey Business Quarterly. London, 1997.

13. Andrw Black, Philip Wright, John E. Bachman, John Davis. In Search of Shareholder Value; Pitman Publishing, 1998.
14. Tallinna Väärtpaberite Börs, <http://www.tsc.ee/rules/eng/current/4.pdf>

### Summary

Author wanted to point out the problem about financial reporting in TSE. We analysed it in the context of other world. We found that financial reports (annual reports, interim reports) for investors are very insufficient, because it does not contain information about future: future projected cash flows, corporate goals, strategies, target value drivers, market share, growth opportunities and so on. Therefore there is no information for investors to value share price of the company and estimate company's success. The remedy for this is value reporting which should be published by companies and contains all this information investors need. VR should release, how management maximize shareholder wealth through value-based management (VBM). Estonian companies should be more active in IR activity which is aimed at ensuring investors understanding of companies strategies and goals.

## THE BALANCED SCORECARD AND THE ENTERPRISES OF KNOWLEDGE MANAGEMENT

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As companies around the world transform themselves for competition based on information, their ability to exploit intangible assets has become far more decisive than their ability to invest and manage physical assets. The last decade of information century indicated some features of leading organizations. They have implemented the simple slogan to their business philosophy: "If I can manage the information, I can manage the market". The concept of Knowledge Management has developed in parallel with other progressive business philosophy - Total Quality Management. All of these advanced concepts are guidelines in the way of becoming a leading organization: with the *strong competitiveness*, with the *loyalty of executives*, *trust of customers* and with *desirable value to shareholders*. The advanced business philosophy requires the advanced means of its implementation. Not a single organization can expect to reach such an abstract vision, if the leading management team lack the feasible targets and comprehensible quantitative expressions of these targets. Only intelligible targets make the vision important not only for few top managers of organization, but for all employees too.

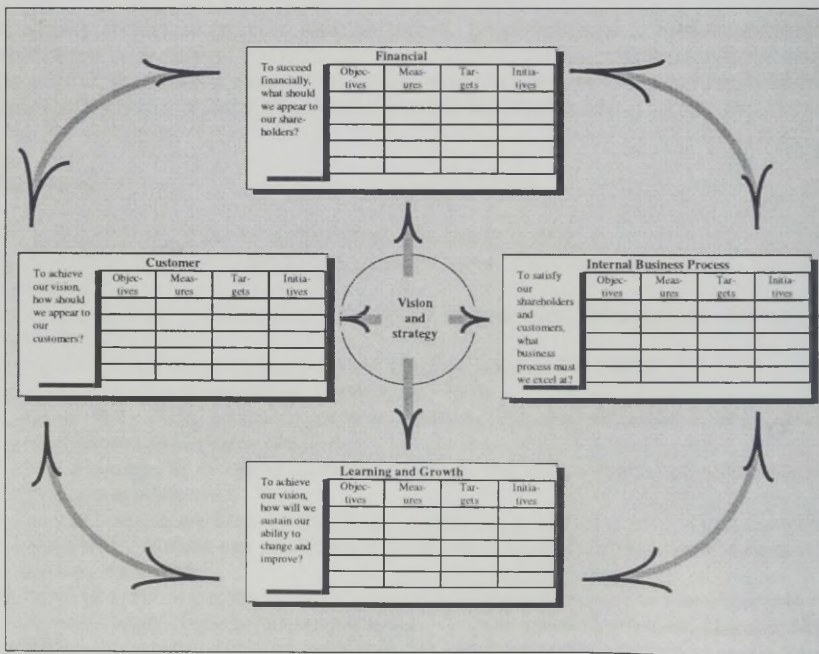


Figure: Translating Vision and Strategy: Four Perspectives [1, p.2]

What kind of "dictionary" does the organization need, if all levels of management want to talk in one language? Can we trust the existing traditional financial measures to serve this task? Sorry, but these measures often become the targets themselves, but they do not enable managers to find reasonable decisions and control the process of their implementation. Even at the beginning of 80's the American authors Hayes and Abernathy had proved, that an important reason for stagnation of US economy was the loose of touch between processes and analysis, that caused groundless investment strategies. Most companies' operational and management control systems are still built around financial measures and targets, which bear little relation to the company's progress in achieving long-term strategic objectives. Thus the emphasis most companies place on short-term financial measures leaves a gap between the development of a strategy and its implementation. A serious deficiency existed in traditional management systems: their inability to link a company's long-term strategy with its short-term actions. Improvement of the management accounting situation, according to the information systems capabilities is evident.

Several years ago, in recognition of this necessity, two American authors: R.S.Kaplan and D.P.Norton introduced a concept they called *the balanced scorecard (BS)*. The BS measures performance from four perspectives- those of financial, customers, internal business processes and learning and growth (see the chart "Translating Vision and Strategy: Four Perspectives."). The scorecard was not a replacement for financial measures; it was their complement. Otherwise, it enables companies to integrate their business and financial plans.

One Lithuanian industrial organization has begun implementation of the BS. The vision of the company was to implement Good Management Practice (GMP) into the organization. GMP was a necessary condition to the registration of their production abroad.

<i>Measures of</i>	<i>Strategic goals</i>	<i>Functional targets</i>	<i>Operational targets</i>
<b>Financial</b>	EVA Return on inventory	Net Income Cash flows Shares' emission	700 th.Lt. 700 th.Lt. 12 mln.Lt.
<b>Customer</b>	Market share early service of the customers	Sales Value ratio between the sales and the orders'	6780 th.Lt. 90%
<b>Innovation</b>	Periodical introduction of new products	Ratio of the new products in the sales  the number of new products	  3
<b>Internal business process</b>	the better control of the quality	investments into the technology  reducing the overheads	1200 th.Lt.  500 th.Lt.

Chart: Example of the Balanced Scorecard

The first stage of this process was to translate company's goals. The leading team had to decide, what targets should be established to achieve these goals and what measures should be applied to control these targets. The outcomes of the discussion was: a) understanding the main factors, influencing the goals and b) creation the tool (measures), showing the links



among the strategic, functional and operational goals (see the chart "Example of the Balanced Scorecard"). It was the first step on the way of implementation the BS. The next one should be the communicating among different levels of organization that enables to translate goals to every employee.

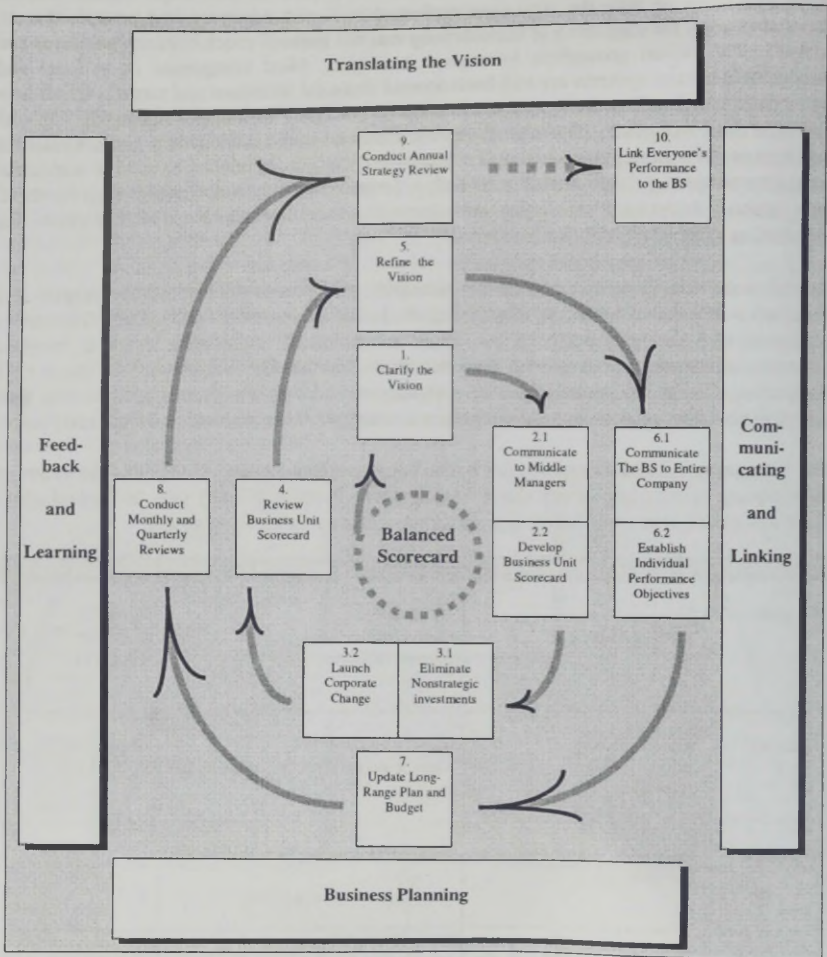


Figure: Sequence of the Implementing the BS to the Company

The BS has been implemented in practice by the suggested sequence. There are four main guidelines on this way: *translating the vision, communicating and linking, business planning, feedback and learning* (see the chart "Sequence of the Implementing BS to the Company").

The first process- *translating the vision*- helps managers build a consensus around the organization's vision and strategy. Despite the best intentions of those at the top, lofty statements about becoming "best in class," "the number one supplier" or an "empowered organization" is not translatable easily into operational terms which provide useful guidelines to action at the local level. For people to act on the words in vision and strategy statements, those statements must be expressed as an integrated set of objectives and measures, agreed upon by all senior executives, that describe the long-term drivers of success.

The second process - *communicating and linking* - lets managers communicate their strategy up and down the organization and link it to departmental and individual objectives. Traditionally, departments are evaluated by their financial performance, and individual incentives are tied to short- term financial goals. The scorecard gives managers a way of ensuring that all levels of the organisation understand the long-term strategy and that both departmental and individual objectives are aligned with it.

The third process -*business planning* - enables companies to integrate their business and financial plans. Almost all organizations today are implementing a variety of change programs, each with its own consultants, and each competing for senior executives' time, energy, and resources. Managers find it difficult to integrate those diverse initiatives to achieve their strategic goals- a situation that leads to frequent disappointments with the programs' results. But when managers use the ambitious goals set for balanced scorecard measures as the basis for allocating resources and setting priorities, they can undertake and co-ordinate only those initiatives that move them toward their long-term strategic objectives.

The fourth process- *feedback and learning* - gives companies the capacity for what we call strategic learning. Existing feedback and review processes focus on whether the company, its departments, or its individual employees have met their budgeted financial goals. With the balanced scorecard at the centre of its management systems, a company can monitor short-term results from the three additional perspectives-customers, internal business processes, and learning and growth - and evaluate strategy in the light of recent performance. The scorecard thus enables companies to modify strategies to real-time learning, because only learning organization is growing organization.

## References

1. R. S. Kaplan and D. P. Norton. Using the Balanced Scorecard as a Strategic Management System. Harvard Business Review. Nr.1, 1996.
2. R. S. Kaplan and D. P. Norton. Putting the Balanced Scorecard to Work. Harvard Business Review. Nr.5, 1993.
3. G. Jagelavitchius. Integrated Financial Evaluation of Company (PhD dissertation). Kaunas, 1999.

## THE COSTING PRINCIPLES IN ESTONIAN COMPANIES

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The success of an enterprise depends directly on managerial decisions made there, which in its turn are substantially based on the data received from accounting. For that reason it is important that a company accurately fix which kind of decisions should be done and what initial data are needed for. This allocates how it would be rational to handle data in a company and which accounting methods to use. One of the most important decisions in this field is the selection of a proper practicable principle of costing in a company; it affects both planning and control processes.

An internal accounting for receiving data and drawing managerial conclusions have been increasingly taken into account also in Estonian firms. Unfortunately the different possible accounting methods have not been become known there yet. There are mixed methods in use and received information is not suitable for drawing conclusions every time. One of the deceptive fields so far is selecting costing methods and fixing a cost classification system which is appropriate for a company. In the present article the principles of costing and the implementation of these in Estonian companies is being dealt with.

There are two different principles in the accounting methods for the costing:

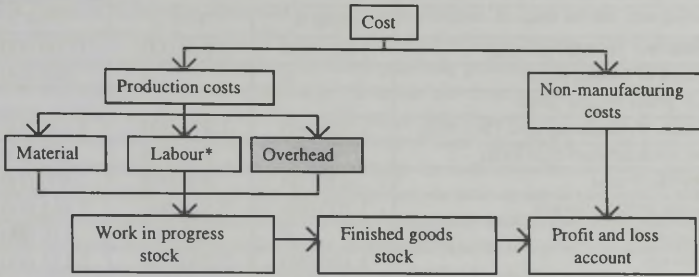
- 1) absorption costing (also: full costing);
- 2) marginal costing (also: direct costing, variable costing).

Difference between those two methods is in the circumstance that in case of the absorption costing the cost of a manufactured production besides direct costs also consists of indirect costs. In case of the marginal costing product costs are divided into the variable and fixed costs. Production costs consist only of direct manufacturing costs and variable factory overhead costs. Fixed factory overhead are treated as period costs under the marginal costing approach and in the income statement they are shown as a whole at a period they have been done. Consequently these costs are treated same way as administrative and selling costs. The methods of the absorption costing and the marginal costing are shown in a diagram form on the figure 1.

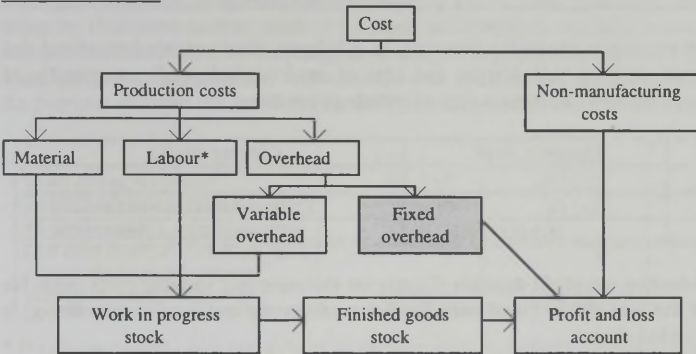
Both costing methods apply different cost classification and because of that the result of an account will be the different basic data for making decision about the unit costs of manufacturing, for drawing company plans and budgets, drawing up reports etc.

The implementation of the principles of the cost accounting mentioned above while other terms will stay constant gives different production costs and different profit (or loss) in the financial reports of company. The following example will explain this allegation:

Absorption costing:



Marginal costing:



\* It is assumed that direct labour is a variable cost

Figure 1. Absorption and variable costing systems cost (Drury 1992, p 183).

Supposing the sale price of production, the buying price of material and all charges will stay constant during three years. Company sells 10 000 units at the price of 300 EEK per unit. Direct material cost of one unit is 90 EEK and direct labor expenditure is 60 EEK. Indirect costs consist of variable overhead 20 EEK per unit and fixed overhead 400 000 EEK. Selling and administrative expenses are 500 000 EEK during the period.

Company produces 10 000 units first year, 12 500 units second year and 8000 units third year. Supposing practicable stock accounting system in the company is FIFO method.

In case of the absorption costing we can see that though the sale do not change during three years, a resultant annual profit of every three years is different:

	Year 1	Year 2	Year 3
Sales (10000 unit, 300 EEK. per unit)	3 000 000	3 000 000	3 000 000
Opening stock of finished goods	0	0	505 000
Add cost of goods manufactured:			
Direct costs of manufacturing (á 150,- EEK)	1 500 000	1 875 000	1 200 000
Variable overhead costs (á 20 EEK)	200 000	250 000	160 000
Fixed overhead costs	400 000	400 000	400 000
Cost of goods available for sale	2 100 000	2 525 000	2 265 000
Less closing stock	0	505 000	110 000
Cost of goods sold	2 100 000	2 020 000	2 155 000
Gross margin	900 000	980 000	845 000
Less selling and administrative expenses	500 000	500 000	500 000
Net income	400 000	480 000	345 000

When absorption costing is in use the Inventory in a balance sheet contain both direct and indirect production costs in full. Hereby net cost of stock unit depends on quantity of production and will not stay unvaried in case of steady prices too:

	Opening stock	Closing stocks
Year 1	0	0
Year 2	0	2500 units*202=505000 EEK
Year 3	505 000 EEK	500 units*220=110000 EEK

Under marginal costing net profit depends directly on the sales and variable costs made for the producing of the sold goods. Fixed costs (both manufacturing and non-manufacturing) is observed as the period costs:

	Year 1	Year 2	Year 3
Sales (10000 units, 300 EEK. per unit.)	3 000 000	3 000 000	3 000 000
Less variable expenses (10000 units.):			
Direct costs (material and labor force)	1 500 000	1 500 000	1 500 000
Variable overhead costs	200 000	200 000	200 000
Contribution margin	1 200 000	1 300 000	1 300 000
Less period costs:			
Fixed factory overheads	400 00	400 00	400 000
Selling and administrative expenses	500 000	500 000	500 000
Net profit	400 000	400 000	400 000

Under the marginal costing the price of a stock unit contains only variable costs, due to that in case of steady prices the net cost of a production will not change. In this example stocks in a balance sheet would be following:

	Opening stock	Ending stock
Year 1	0	0
Year 2	0	2500 units*170=425000.- EEK
Year 3	425 000 EEK	500 units*170= 85000.- EEK

We can conclude on the assumption of this example that in case of the absorption costs a profit is a function both from sales and a production volume. In case of the marginal costing the profit depends just on the sales. If the sales are equal with the production and there are no residue stock of completed production left from previous periods, the implementation of the absorption and marginal costing systems gives us an identical profit. If production exceeds sales and a residue stock increase, the profit under the absorption costing system will be shown higher than by the marginal costing system and per contra. This could obstruct drawing the managerial conclusions. For example, in case of a break-even analysis it is necessary to divide costs into variable and fixed costs. In case of the absorption costing it can be come into service that after selling the output quantity which has been found with the break-even analysis the result is not 0 in the income statement but profit or loss according to in what proportion are capacity of manufactured and sold production.

Both absorption and marginal costing have their advantages and weak points. The most important advantage of the absorption costing is that in many countries, including Estonia, using an absorption costing method by stock accounting is required. However if company requires implementation of the marginal costing, it is possible to reprocess period results so that a profit-and-loss statement will coincide with principles of absorption costing. In case of the previous example we can reprocess indicators of profit as follows (the sums are in EEK):

	Year 1	Year 2	Year 3
Direct costing net income	400 000	400 000	400 000
Add fixed overhead costs that under Absorption costing are in inventory*	0	80 000	25 000
Less fixed overhead costs of previous periods which left in inventory	0	0	-80 000
Absorption costing net income	400 000	480 000	345 000

\* Fixed production costs are divided on product units manufactured during the period and are multiplied by number of units left in inventory:

Year 2:  $400\ 000 : 12\ 500 * 2\ 500 = 80\ 000$  EEK.

Year 3:  $400\ 000 : 8\ 000 * 500 = 25\ 000$  EEK.

The second positive circumstance of the absorption costing is that by this costing system managers do not underestimate an importance of the fixed costs and allowance of these by calculating of net cost reduces possibility to establish too low products sale prices which cover variable costs but no fixed costs. The circumstance that obstructs the implementation of the absorption costing method is the complexity of dividing indirect costs on a production unit.

There are existing numerous advantages applying the marginal costing. Several planning methods are based on classification of costs into variable and fixed costs. For example, in order to plan a profit the break-even analysis can be brought pass only on the basis of the variable and fixed costs. Planning methods of costs often are based on the cost behavior in relation to changes in production volume. The classification of costs by the marginal costing method will make possible drawing up different internal reports. For example, by contribution-type income statements it is possible to draw up a profit statement according to different departments, production groups, selling groups etc. It facilitates bringing pass planning and managerial superintendence in the different operating sections of a company. Besides, as it came into service from previous examples, the marginal costing will withdraw

from income an influence of inventory change which in case of absorption costing can substantially change the period results of a company.

The negative circumstance of the marginal costing is a fact that it is often quite complicated to divide costs into variable and fixed costs and there may be a lot of mixed costs in a company.

From 1995 to 1996 the Chair of Accounting of the Faculty of Economics and Business Administration at the Tartu University conducted research in Estonian companies within the implementation of the costing in the companies was researched, too. Resultant records showed that 96% of the respondents used the cost accounting. 80% of the enterprises distinguished their costs into manufacturing and non-manufacturing costs and 58% of the respondents divided costs into variable and fixed costs, and 75 % of the companies distinguished direct and indirect manufacturing costs. Survey indicated that 91% of the enterprises distinguished cost elements, 80% cost centers and 73% cost objects. Though most companies use the principle of the marginal costing if they categorize their costs, the received records are comprehensively not in use in an internal accounting but the each stage of an account is dealt with separately. At those enterprises where the contribution-type income statements were in use, costs were divided into variable-fixed costs in 81% of the firms and direct-indirect costs in 94% of the firms. We can conclude that not every company is aware of the nature of the marginal costing because such dividing of costs serves as a basis for an account by a contribution income. The Estonian companies mostly use the absorption costing for calculating a unit price of products. The majority of the firms (55%) also divide non-manufacturing costs on product unit. It changes the calculating of a net cost more rough and non-objective since the net cost of the production may contain only manufacturing costs.

Consequently we can say that though a cost accounting is being brought to pass in the Estonian firms, it is being done fragmentary without the implementation of the certain principle of a costing. The resultant records are not analyzed comprehensively; therefore the resultant notes for making managerial decisions often are insufficient. The marginal costing is in use in a few firms though exactly this principle of a costing allows to draw up reports which are more effective for a drawing managerial conclusions and which managers can easily use.

## References

1. Berry,A.; Jarvis,R. Accounting in a Business Context. Second Edition, Chapman & Hall, 1994, pp298-321
2. Drury,C. Management and Cost Accounting. Third Edition. Chapman & Hall, 1992, pp183-189
3. Garrison,R.H. Managerial Accounting. Concepts for Planning, Control, Decision Making. Fifth Ed., Business Publications, Inc. 1988. pp274-289
4. Haldma, T., Karu,S. Kuluarvestuse süsteemi loomine ettevõttes, Tartu 1999, lk 89-93
5. Horngren, C.T., Foster, G., Cost Accounting. A Managerial Emphasis. Seventh Edition, Prentice Hall, 1991, pp 288-303
6. Juhtimisarvestuse ja controllingu süsteem Eesti ettevõtetes. Grandiaruanne. (Management Accounting and Controlling Systems in Estonian Companies. Research Grant Report.) Tartu, 1997. lk 21-25

## HIND JA HINNAALANDID

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Turumajanduse tingimustes on tähtsaim näitaja kasum (mitte omahind), mis kujuneb kauba realiseerimisel saadud tulu ja sellest tulust sama kauba valmistamise, soetamise ja müügi kulu mahaarvamisel, s.o tulude ja kulude erinevusena. Sellepärast huvitab turumajanduse tingimustes eelkõige müüüd, mitte ostetud kaup. Et turg toimib kokkuleppelistel alustel (vaba konkurents, kokkuleppehinnad), on ta kauba- ja rahasuhte korraldamise paik ja osapoolte kõige vastuolulisemate huvide (mitteantagonistlike) suur lepitaja. Ent turg ei ole veel see, kui müüte seda, mida toodate. Turg on siis, kui müüte seda, mida inimesed vajavad. Turg ei tähenda seega niivõrd võimalust osta, kui võrd vajadust midagi müüa. Kuna kasumit on võimalik saada eelkõige suurema käibega, mitte aga kõrge (maksimaalse) hinnaga, toimub turul pidev positiivse seleksiooni e "loova purustamise" protsess. Vähepotentsiaalsed tootjad tõrjutakse kõrvale, leidlikke, tootmiskulusid alandavaid ja hinda kui keskse tähtsusega turuinstrumenti õigesti kujundavaid ja oskuslikult kasutavaid tootjaid aga tasustatakse. Selle protsessiga seonduvad otseselt järgmised küsimused:

- kuluarvestusmeetodi valik hinna kujundamisel ning
- hinnaalandite oskuslik kasutamine hankija-ostja ja ostja-hankija vahelistes ärisuhetes.

Täis- (kogu-) kuluarvestus (kulud jaotuvad otse- ja kaudkuludeks) on hinna kalkuleerimiseks ja otsustamiseks sobimatu. Ta ähmastab arusaama erinevate kulude käitumise ja tegevus- (tootmis-) mahu vahelistest seostest, sellest, millised kulud on tootmisest loobumisel lühiajaliselt välditavad (muutvukulud) ja millised esinevad ka siis, kui tootmine lakkab (püsikulud). Sellepärast peab lühiajalise hinnakujundamise aluseks olema osakuluarvestus, mis eeldab muutuv- ja püsikulude eristamist ning jääktulu leidmist.

Hinnakujundamise baasaluseks ei sobi seejuures keskmised kulud ega ka muudel mineviku suunatud vara rahalise väärtuse muutumist (mitte vara füüsilist liikumist) iseloomustavate meetodite (FIFO, LIFO, HIFO, LOFO jne) alusel leitavad arvestuslikud minevikukulud.

Eeltoodust lähtudes tuleb uus ratsionaalne hind kujundada hetke (nüüdis-) kulude alusel.

Ettevõtjal on hindade kujundamisel otstarbekas:

- kõrgkonjunktuuri tingimustes, kui on suur nõudlus ning toodangu maht ja seetõttu püsikulud tooteühiku kohta väikesed, kalduda hinna alandamisele;
- majandusliku languse tingimustes, kui väheneb nõudlus ja vastavalt ka toodangu maht, minna suurenevate tooteühiku püsikulude tõttu hinna tõstmisele.

Toote kulusoodsa hinna kindlakstegemiseks on olulise tähtsusega planeerimisperioodi pikkus. Lühiajaliselt moodustavad antud tootmistingimustes toote hinna alampiiri selle toote muutvukulud. Iga alampiiri ületav enamhind aitab katta sellele tootele langevaid püsikulusid ja moodustada kasumit. Pikaajaliselt ei tohi aga hind langeda alla toote täis- (kogu-) kulusid. Pikaajalise hinna alampiir sisaldab niisiis tooteühiku muutvukulude kõrval ka osa juurdearvestatavate püsikulusid. Need on püsikulud, mis tulevikus antud tootest loobumisel ära jäävad (kalkulatiivne mahaarvatis, toote ladustamiskulu, litsentsikulu jne). Mida pikem on



plaaniperiood, seda rohkem püsikulusid tuleb tooteühikule juurde arvestada. Hinna alampiir tõuseb koos planeerimise ajahorisondiga, sest pikaajaliselt on kõik kulud muutuvad. Seega:

**lühiajaline hinna alampiir = tooteühiku muutuvkulu**

**pikaajaline hinna alampiir = tooteühiku täis - (kogu-)kulu**

Kasumimahtu mõjutab käibe kaudu oluliselt ka hinnaalandite (hinnasoodustuste) kui turumõjutusinstrumentide majanduslikult põhjendatud ja oskuslik ärakasutamine hankija-ostja vahelistes ärisuhetes. Sellega stimuleeritakse müüjate-hankijate käibemahu suurenemist ja luuakse ostjatele-klientidele vara soetamise soodustingimused. Hinnaalandid avalduvad skontona, rabatina ja boonusena.

**Skonto** on hankija poolt kokkuleppelistel skonteerimistingimustel ostjale võimaldatav mahaarvatis arve esialgselt summast selle maksetähtajast varasemal (ennetähtaegsel) tasumisel. Skonto on sisuliselt intress vara järeltasumisega müümisel võimaldatud laenu ennetähtaegse tasumise eest, mis vara hinna kaudu lülitatakse arve summasse ja skonteerimistingimuste täitmisel ostjale ka välja makstakse. Hankija jagab sellega tema poolt antud laenu ennetähtaegsest tasumisest tuleneva intressikulude säästu laenu saajaga, s.o ostjaga-kliendiga. Skonteerimine soodustab käibe suurendamist, kiirendab raharinglust (normaalseks majandustegevuseks vajalik raha hulk väheneb), parandab ettevõtte likviidsust, vähendab kulusid.

**Rabatt** on hinnaaland, mille hankija võimaldab kokkuleppelistel tingimustel suurema varakoguse ostmisel pikaajaliste ärisuhete korral (püsikliendid), vahendajatele-müügiagentidele jne. Rabatt on müügi- (ostu-) hinna diferentseerimise ja aktiveerimise turuinstrument käibe suurendamiseks, mis aitab kaasa hinnakonkurentsi tekkimisele ja turu läbipaistvuse saavutamisele.

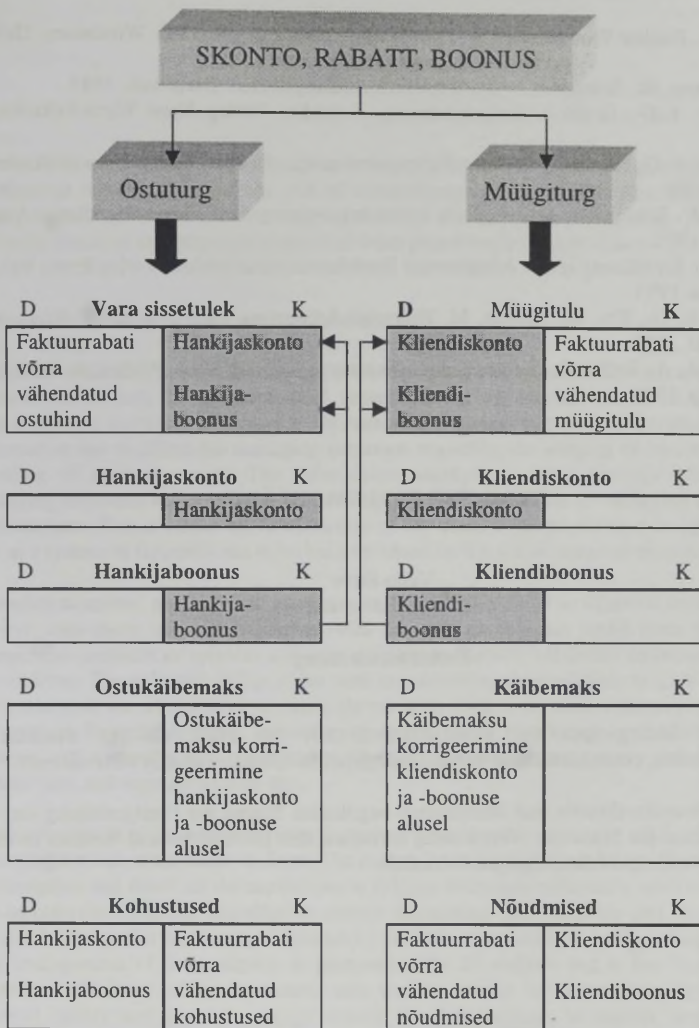
**Boonus** on hankija poolt tagantjärele (kuu, kvartal jne) võimaldatav hinnaaland, mille viimane astmestab tavaliselt kliendi käibemahu alusel.

Boonust käsitatakse sellepärast kui käibeboonust (-hüvitust) hankija ja ostja vahelistel kokkuleppelistel tingimustel. Boonuse võimaldamisega püüab hankija mõjutada oma kliente, et need rahuldaksid võimalikult suure osa oma ostu (tarbimis-) mahust tema juures.

Hinnaalandeid (-soodustusi) kasutatakse seega hindade otsese alandamise asemel. Nende võimaldamine hankijate-tootjate poolt teenib mitte üksnes nende tootmiskulude katmise ja vajaliku (soovitava) kasumi moodustamise huve, vaid arvestab ka klientide-ostjate, nende kaudu aga lõpptarbijate huve.

Maksunduslikult on hinnaalandid hankija müügitulu ja käibemaksukoormust ning ostja soetuskulutusi ning ostukäibemaksu vähendavad tegurid.

Hinnaalandite kasutamist ilmestab järgmine skeem.



Skeem. Hinnaalandite kasutamine.

## **Kirjandus**

1. Bähr, G., Fischer-Winkelmann, W. Buchführung und Jahresabschluß. Wießbaden: Gabler, 1992.
2. Deitermann, M., Schmolke, S. Industrielles Rechnungswesen. Darmstadt, 1987.
3. Däumler, K-D., Grabe, J. Kostenrechnung. – Berlin: Verlag Neue Wirtschafts-Briefe, 1991.
4. Däumler, K-D., Grabe, J. Deckungsbeitragsrechnung. - Berlin: Verlag Neue Wirtschafts-Briefe, 1991.
5. Eisele, W. Tehnik des betrieblichen Rechnungswesens, 5. Auflage. München: Verlag Vahlen, 1993.
6. Wöhe, G. Einführung in die Allegemeine Betriebswirtschaftslehre. Verlag Franz Vahlen, München, 1993.
7. Larson, K. D., Zin, M., Nelson, M. Financial Accounting Principles. USA: Richard D. Irwin, Inc., 1991.
8. Nikolai, L. A., Bazlei, J. D. Intermediate Accounting. 5<sup>th</sup> Ed. USA: PWS-Kent Publishing Company, 1991.

## **PREIS UND PREISNACHLÄSSE**

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### **Zusammenfassung**

Unter den Bedingungen der Marktwirtschaft übt der Preis, als ein wesentliches Marktinstrument, einen bemerkenswerten Einfluß auf das Umsatz- und Gewinnvolumen.

Im Artikel werden aktuelle und ökonomisch begründete Fragen der Preisgestaltung und des Preisnachlasses im Sinne der Vergütung zwischen den Lieferanten und Kunden in ihren gegenseitigen Geschäftsbeziehungen behandelt.

## USAGE OF THE ACCOUNTING INFORMATION

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Financial data presented in the financial statements make up the main part of the public information regarding companies. All of these figures have an important function in the managing processes of different society levels. The discussion regarding some of the primarily practical and empirical aspects of these processes is brought below.

### **Economic efficiency and accounting information**

Economic efficiency is an important aspect of the managing process in every society and in every economic unit. This, on one hand, means that e.g. the usefulness and effects from the output of some economic unit have to be evaluated and identified and on the other hand, this information has to affect the managing decisions regarding the lodging of resources and the spending of such resources. The information manages or very strongly influences the managing decisions in reaching the internal goals of the company or satisfying the external requirements. This is where the functionality of the accounting information is deprived from and as a system of figures it has to be built up based on the actual usage of these figures.

In market economy, managing an economic unit can be described as financial control through market: only those companies survive who are able to generate profit from the sales of competitive products or services and who are able to "satisfy" different collection orders of the creditors. The role and ability of the state in controlling the economic units is minimized, its instruments are administrative means (laws) with what to regulate entrepreneurship, incl. tax systems, financial systems, judicial systems etc, which all conceal a controlling function in them. All vertically and horizontally directed managing processes are surrounded with certain rules and regulations with this.

The management of the company always pursues toward some economic efficiency, which is a moving force in some shape or form. The reason for using the accounting data is the ability to strengthen and direct all the aspirations to achieve economic efficiency, whereas recording the company's economic activities in certain accounting and mutually tied internationally accepted data system enables to additionally formulate more concrete goals and requirements. The management of the company is responsible for its welfare and it has to observe the economic efficiency of the economic unit and its ability to unconditionally satisfy the external claims and generate enough money for that purpose. In market economy, it is extremely important to optimize the company as a kind of subsystem from the viewpoint of managing and delegate the power and responsibility that comes with it as well as build up the information system of accounting. This is the responsibility task of the top management, i.e. build up the structure of the activities, to recruit and control this organization consisting of people. The accounting data here is of significant importance and this especially from the viewpoint of the effectiveness of the managing decisions.

## **Accounting information as means of communication**

Accounting information is a basis when making decisions for its users (decision makers), whereas it can be used in many ways in decision making. Financial data, for example, gives managers, shareholders, creditors, trade unions etc. an overview of the directions of profits and expenses. At the same time, from the viewpoint of the manager, these financial data can be associated with the goals of ones own success of private persons. The managers might regard changes in stock prices, incomes and level of expenses from this kind of perspective. At the same time, financial data help to increase the overall level of knowledge.

In management hierarchy, the accounting information can be characterized as vertical means of communication which simplifies the delegation and the financial data will find usage in discussions between employers and employees. This way the top managers will forward their decisions and requirements to the subordinates and the financial data are an important means for presenting the actual results of the economic activities. This same applies to the shareholders: big (majority) shareholders might strongly affect the work of the board and the council of the company and the personnel selection of the management. This opportunity unfortunately is missing for small shareholders but they can use the information when buying and selling the bonds. The availability of the accounting information and other data regarding the company is also different: the knowledge of the shareholders included in the company, especially on higher management levels, is usually much broader compared with the shareholders not working in the specific company who, for the lack of internal information and general data, are in most cases unsatisfied. Therefore the flow of information is unequal.

Accounting information can also be considered a horizontal means of communication between both the subunits inside the company and the external parties. An example of inside coordination is the information flow between distribution, production and sales departments, and as an example of the aspect of the final sales price of a product. Financial data are used when communicating and negotiating with suppliers, buyers-consumers, state institutions, credit institutions and trade unions. At the same time these accounting figures can affect the activities of the mentioned parties, e.g. a bank uses the actual financial data of the company when granting it a loan, trade unions, on the other hand, may use such information as a supporting material to their arguments in negotiations with employers.

## **The role of analysis in integrating the financial data**

The economic efficiency of a business unit is achieved through an analysis based on financial data and decision activities. An analysis based on financial data is a very important part in the total controlling process. Many of the "aware" shareholders search actively for additional information regarding the companies of interest to them through different channels, including the company itself. Usually the people using the accounting information do not pay too much attention to the accounting principles used, their reliability and interpret the received information according to their habits. The previous knowledge and the skills of interpreting the accounting information certainly differ between the shareholders and the managers. The top managers pay quite a lot of attention to the accounting principles (e.g. evaluation of inventory) used in the company as, in their opinion, this ensures the greater extent of reliability of the financial data despite the fact that the actual economic strength of the company is substantially independent from the accounting method in use.

There is a tendency of comparing the financial data with some comparison figures or norms, e.g. budgets, previous periods, similar companies etc. The analysis of actual figures based on these comparison figures and an explanation is psychologically very important. The profit figure disclosed and estimated previously, which actually has turned out to be lower, may strongly influence the share prices. All kinds of significant variations compared with the budget influence the activity plans inside the company. Comparison norms are changing measures: what was considered as unrealistic last year may well be realistic the next year. Therefore each one has a need to convince oneself and others to discuss and analyze, be informed and inform others.

The financial data are presented in the financial statements systematically and in complex. The company may, in difficult times, change the external financial information about itself as positive as is possible in the given situation. The control methods of the auditor, in that case, reduce the "ignorance" of the external user about the condition of the company. Unfortunately, this "ignorance" in real life can hardly ever be completely "removed". Based on experience it can be said that a company tends to use a more conservative type of financial statements during better times than in difficult times. This points to the meaning of reliability: the trust between the different levels of the company's managing hierarchies, between the shareholders and the management, between the lenders and the borrowers, between buyers and sellers etc.

In the existence of trust the economic system functions quite well, in the opposite case additional control mechanisms and control organs are needed and created which have a negative effect on the functions of the already existing economic systems. Incorrect financial data or their excessive differences from the comparison data may cause a decrease of reliability in the company. Therefore, the usage of and trust in the accounting information influence each other.

### **Auditing the financial statements**

An evaluative review of the financial statements by the auditor is especially important from the viewpoint of the information process of the whole company. Based on experience it can be said that in most cases the users of financial statements pay little attention to the auditors' report that is addressed to the owners (shareholders) and the management letter meant for the board of the company. An auditor is a professional who performs an independent review of the financial statements. When preparing his/her opinion, the auditor usually had to follow the main principles indicated below.

- An auditors' report has to indicate that the company's financial statements are composed based on the accepted accounting principles, i.e. that the statements are in accordance with the international accounting standards or current accounting law and judicial acts in connection with it (e.g. in the Estonian Republic).
- An auditors' report must disclose matters and fields where these principles were not followed during the fiscal year under review compared with the previous period.
- The financial data in the financial statements are adequate with actual data if the opinion does not state otherwise.

- In summing up, the opinion formulated in the auditors' report has to consider the whole statement or a reference on those that an opinion cannot be expressed. If an opinion cannot be expressed then a cause for that must be indicated. In any way the auditor has to evaluate the review carried out precisely.

In some cases the auditor cannot clearly express an opinion regarding some financial figure in comparison with the standard. In such cases opinions regarding matters of such fields have to be fixed as specific notes. We will present some of the notes below.

- Uncertainty regarding some matter that, for example, appears in the future after the emergence of relevant evidence. In the note, the auditor has to take into consideration the probable material loss. If the loss amount is insignificant, the note is not needed, in the opposite case, a note is required.
- Changes in accounting principles that make the financial data incomparable and are significant in their number. This kind of note will illustrate the essence of the change.
- Certain pressure upon specific matters, e.g. significant transactions of the business entity with branches. This kind of explanatory information presented in a note is very important for the user.

In some cases the auditor has to issue a qualified, negative opinion or even refuse to express any kind of opinion at all. The auditor will give a qualified opinion if the extraction review is limited for some reasons or influenced by some matters or restrictions and the auditors' report is not in accordance with the accounting principles and therefore, the conclusions are inadequate. A negative auditors' report will be given on the financial statements which inadequacy is so relevant that an opinion of the independent auditor as a specialist is not justified. The auditor will refuse expressing an opinion when there is not enough information available. The auditor will also have to express an opinion on whether the business entity is able to operate in the near future ("going concern"). If there is such doubt, then the auditors' report will include a note regarding the potential problem. Therefore, an opinion expressed in the auditors' report of an independent auditor and the management letter will include very useful and valuable information for potential information users which, unfortunately, simply was ignored by many users in our republic.

## Literature

1. International Accounting Standards. Framework for the Preparation and Presentation of Financial Statements. International Accounting Standards Committee, 1999.
2. Burgess Science Press, London, 1999, 1287 p.
3. The European Accounting Review, 1995-1999. European Accounting Association.
4. Generally Accepted Accounting Principles. The Estonian Accounting Board, 1998, 555 p.
5. Miller GAAS Guide, 1995, 978 p.
6. Auditors' reports and management letters issued by the auditing company Arthur Andersen Estonia, 1994-1999.

## Summary

Each information user will determine what kind of accounting information is useful and important for him/her, besides, this decision is influenced by many factors, as well as the decision what he/she has to make. The information user also has to choose methods what he/she will use in the decision process, evaluate and analyze the information available to him/her and also the information received additionally and his/her own ability to process this information in order to predict the end result based on the past, present and future events or to affirm or correct owns expectations and hopes. The importance of the accounting information in such cases is very often indirect and many influences will appear during a longer period.



## KULUARVETUSE TÄIUSTAMISE PROBLEEME RAVIASUTUSTES

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Tatu Ülikool

Eesti tervishoiusüsteemi reformimisega on kaasnenud olulised muudatused raviasutuste majandamisel. Aastast 1992 mindi üle kohustuslikule ravikindlustussüsteemile, kuna tsentraliseeritud ja eelarvelistel jaotusmehhanismidel põhinev tervishoiusüsteem oli end ammandanud ning ei sobinud üleminekul turumajandusele. Raviasutuste endine totaalne riigieelarveline rahastamine asendus õigusega ise kavandada oma ravi- ja finantsmajanduslikku tegevust. Erinevalt äriettevõttest ei saa raviasutused oma tegevuses toimida iseseisvalt. Nende ravi- kui ka finantsmajanduslik tegevus sõltub siiski olulisel määral kehtivast ravikindlustussüsteemist, sest raviteenuste müümisel lähtutakse riigi poolt kehtestatud hinnakirjast ning haigekassadega sõlmitud lepingutest. Praegu on Eesti raviasutused (riigi- ja munitsipaal) 90-95 protsendi ulatuses rahastatud haigekassadega sõlmitud ostu-müügilepingute kaudu.

Käesolevaks ajaks on Eestis tekkinud olukord, kus patsiendid sooviksid rohkem tarbida raviteenuseid ning meedikud neid pakkuda. Paraku tuleb raviteenuseid osutada haigekassadega sõlmitud lepingutega ettenähtud mahtude piires. Ühest küljest on raviasutused saanud võimaluse kavandada oma tegevust, kuid teisest küljest teravnend finantsprobleemid ei võimaldada hoida ravitegevuses saavutatud tulemusi või neid veelgi parandada. Sellest tingituna püütakse kujundada tervishoiusüsteemi, mis ei oleks liiga kulukas, kuid võimaldaks kõigile ühiskonnaliikmetele nende nõudmistele vastavaid raviteenuseid.

Ravitegevuse rahastamise ja raha kulutamise hindamisel on täita tähts roll kuluarvestusel. Efektiivne kuluarvestuse süsteem võimaldab jälgida raviteenuste osutamisel tehtavaid kulusid, hinnata nende otstarbekust ning otsida vajadusel lahendusi vastavate kulude kokkuhoiaks või ettepanekute tegemiseks raviteenuste tariifide korrigeerimiseks.

Viimastel aastatel on raviasutuste kuluarvestuse süsteem oluliselt edasi arenenud. On kõrvaldatud vajakajäämised, mis tulenesid eelarvelise raamatupidamise põhimõtete kasutamisest arvestuse korraldamisel. Selliste arvestusprintsipiide nagu tekkepõhisuse, tulude ja kulude vastavuse, olulisuse järjekindlam rakendamine on taganud senisest õigema kulude arvestamise ja nende kontrollimise. Samuti on toimus liikumine kuluarvestuse üldistelt eesmärkidelt spetsiifilisemate eesmärkide suunas. Lähiaastail piirdus kuluarvestus ainult raviasutuse tasandiga, siis nüüd on lisandunud kulude arvestamine nende tekkekohtade lõikes. Vastavalt osutatavate raviteenuste ja kulude vaheliste põhjuslike seoste loomisele moodustatud kulukeskused (kliinik, osakond, abiteenistus jm.). Samuti on otsitud lahendusi kaudkulude jaotusaluste kindlaksmääramiseks ja nende kasutamiseks kaudkulude põhjendatud jaotamiseks kulukeskustele. Ühtset seisukohta antud küsimuses pole välja kujundatud, seetõttu on kaudkulude jaotamisel kasutusel erinevad jaotusalused. Oluliselt on täiendatud kasutatavat kulukontodesüsteemi.

Täiustunud kuluarvestuse süsteem võimaldab saada kuludest analüütilist ülevaadet, kuid selle info kasutamisele juhtimisotsuste vastuvõtmisel pööratakse vähe tähelepanu. Kindlustamaks

raviasutuse arengut on vajalik kulude igakülgne analüüs, millest peaks välja kasvama raviasutuse majandamiskava, mis määraks ravitegevuse arengusuunad ja vastavad mahud.

Loodud eeldused võimaldavad üleminekut arvestuse täiustamise järgmisse etappi, mis peaks toimuma vastutuspõhise arvestuse suunas. Vastutuspõhise arvestuse rakendamine seostab tulud ja kulud nende eest otseselt vastutavate allüksuste (keskuste) juhtidega. Seega eristab vastutuspõhist arvestust traditsioonilisest arvestusest erinev rõhuasetus andmete kogumisele. Vastutuspõhine arvestus nihutab rõhuasetuse andmete kogumisele selleks, et määrata allüksuste juhtide vastutus eelarvestatud ja tegelike kulude eest. Eelarve on raviasutuse majandamise keskpunktiks. Teades raviasutuse eelarvet, on juhtkonna ülesandeks jälgida, et raviasutuse majandamine püsiks eelarve piires. Majandamine vastavalt kinnitatud eelarvele iseloomustaks juhtkonna pädevust raviasutuse juhtimisel.

Vastutuspõhise arvestuse rakendamine eeldab eelarvestamise täiustamist. Käesoleval ajal suhtutakse raviasutustes eelarve koostamise formaalselt. Huvi kaasajastatud eelarvesüsteemi vastu on tõusnud seoses vajadusega täpsemalt määratleda saadavaid tulusid ning tulude saamiseks tehtavaid kulusid. Koondeelarvest peaks kujunema raviasutuse eesmärke kajastav detailne plaan nii ravi – kui ka majandustegevuses. Koondeelarve koosneb tegevus- ja finantseelarvest. Tegevuseelarvet on raviasutustes koostatud juba riigieelarvelise rahastamise perioodil, kuid rahastamise allikate muutumine ja kuluarvestuse täiustumine on tinginud vastavaid muudatusi ka eelarve koostamisel. Tegevuseelarve komponentideks on raviteenuste müügi-, ravi- ja administratiivkulude eelarved, mille alusel kujundatakse kasumiaruande. Lähtudes on tegevuse spetsiifikast, tegutseb raviasutus kasumitaotluseta ning ei sea oma eesmärgiks kasumi maksimeerimist. Vaatamata sellele, tekib tal majandamise käigus tulek kas kasumina, kui saadud tulusid kasutatakse säästlikumalt või kahjumina, kui tuludest ei piisa ravitegevuse kulude katmiseks.

Raamatupidamise seadusega kehtestatud kasumiaruande skeemide kasutamisel ei ole raviasutustel välja kujunenud ühtset lähenemist. Kulused süstematiseeritakse lähtuvalt kuluelementidest vastavalt kasumiaruande skeemile 1 kui ka funktsionaalse tunnuse järgi skeemile 2. Kulude liigitamine lähtuvalt kasumiaruande skeemist 1 ei ole õnnestunud lahendus. Raviteenuste omahinna väljatoomise seisukohalt oleks otstarbekam kulud süstematiseerida ravi- ja perioodikuludeks. Ravikulud hõlmaksid raviteenuste osutamisel tehtavaid kulusid, perioodikuludena tuleks käsitleda kulusid ravitegevuse organiseerimisele, teenindamisele ja juhtimisele.

Eelarvestamine algab raviteenuste müügi eelarvest, mille koostamisel lähtutakse eelmistel perioodidel osutatud raviteenuste mahust ja tendentsidest raviteenuste nõudluses. Nimetatud eelarve mahud nõuavad kooskõlastamist haigekassadega, kes käsutavad ravikindlustuse raha ning vastavalt selle mahule saavad osta raviteenuseid oma piirkonna patsientidele. Kooskõlastatud müügieelarve on aluseks kulueelarvete kujundamisele. Nende koostamise üldkasutatavamaks ja lihtsamaks lähtepunktiks on möödunud perioodi kulude taseme kasutamine. Seega tegeldakse eelarvestamisel eelkõige tulevaseks perioodiks kulude oodatavate muutuste määramisega, s.o kulude kasvuelarve koostamisega. Teiseks võimaluseks oleks nullbaasiline eelarvestamine, kus kulude summat tuleks uuesti määrata ning põhjendada. Nullbaasilise eelarvestamise põhimõtte rakendamist alustas rahandusministeerium riigiasutuste 2000. aasta eelarvete koostamisel. Nimetatud põhimõtte rakendamine kulude eelarvestamisel võimaldaks korrastada ressursside kulutamist ka raviasutustes.

Käesoleval ei praktiseerita raviasutustes finantseelarve koostamist, mille komponendidena käsitletakse kapitali eelarvet, milles kajastuvad investeeringud ja nende rahastamine, eelarvelist bilanssi ja rahavoogude aruannet.

Eelarvestamise protsess ei piirdu ainult koondeelarve koostamise ja vastuvõtmisega, vaid jätkub eelarve jälgimisega. Perioodiliste aruannete koostamine tulude ja kulude kohta peab välja tooma korrigeerimist vajavaid ebatäpsusi. Eelarve operatiivset täiendamist võivad tingida ühelt poolt muutused raviteenuste nõudluses, teiselt poolt – majanduskeskkonnas. Aruannete sisu ja tähtaegade määramisel tuleks lähtuda erinevate juhtimistasemete juhtide infovajadusest. Kõrgema taseme juhid, kes tegelevad rohkem perspektiivsete eesmärkide kavandamisega ning vähem kontrollimisega, vajavad üldisemat infot ning harvem. Madalama juhtimistaseme juht vajab operatiivseks tegutsemiseks detailsemat infot ning sagedamini, märkamaks varakult tähelepanu väärivaid lahknevusi eelarvestatust.

Vastutuspõhises arvestuses lisandub kuludele tunnus nende kontrollitavuse kohta allüksuse juhi poolt. Kulude kontrollitavust ei saa hinnata absoluutselt. Kulude kontrollitavus sõltub juhtimistasemest ja ajategurist. Ei ole olemas absoluutselt kontrollitavaid ja mittekontrollitavaid kulusid. Pigem võib tõdeda, et teatud kulusid on raskem kontrollida. Allüksuse juht ei tarvitse eelarves esitatud kõikide kulude suhtes kontrolli omada. Vastutuspõhise arvestuse rakendamine eeldab küsimuse lahendamist kulude valiku kohta, milliseid neist tuleks kajastada konkreetse allüksuse eelarves. Kontrollimatute kulude puhul on erinevaid lahendusvariante, kuid rohkem eelistatakse seisukohta, kus teatud osa kontrollimatutest kuludest tuleks jaotada allüksusele, et juht pööraks ka sellistele kuludele tähelepanu. Niisugust lähenemist tuleks rakendada kulude puhul, mida allüksuse juht saab kaudselt mõjutada. Vastutuspõhise arvestuse rakendamisel on oluline, et allüksuse eelarvetes kui ka aruannetes eristatakse kontrollitavad kulud kontrollimatutest.

## Kasutatud kirjandus

1. Haldma, T., Karu, S. Kuluarvestuse süsteemi loomine ettevõttes. Rafiko & AT Audiko, Tartu, 1999.
2. Lääts, K., Peets, P. Vastutuspõhine arvestus – üks controllingu juurutamise eeldusi organisatsioonis. Rafiko, Tartu, 1999.
3. Alver, J., Reineberg, L. Kulude liigitamine. – Raamatupidamis uudised. 1998, 8.
4. Lääts, K., Peets, P. Kulud vastutuse seisukohalt. – Raamatupidamis uudised. 1999, 4, 5.
5. Drury, C. Management and Cost Accounting. 4th ed. International Thomson Publishing, 1996.

# DIE VERWENDUNG DER BILANZKENNZAHLEN BEI STATISTISCHEN FRÜHERKENNUNG VON UNTERNEHMENSKRISEN

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## Allgemeines

Asymmetrische Informationsverteilung auf dem Kreditmarkt<sup>1</sup> bedingt eine Situation, wo die Geschäftsbanken nicht mehr in der Lage sind Kreditkunden mit guter Bonität von den bonitätsschwachen zu unterscheiden. Möglicherweise kann die verschärfte Konkurrenz unter den Banken für diese Entwicklung beigetragen haben, wonach die Banken auch um die Gunst der Kreditkunden mit niedriger Bonität buhlen und dadurch den Marktteilnehmern immer steigende Risikobereitschaft signalisieren. In solchen Situationen bedienen sich die Banken und die Versicherungsunternehmen den neuen Frühwarnmodellen, um die negativen Auswirkungen der asymmetrischen Informationverteilung zu verringern.

Jedoch verfügen die statistischen Ämter und andere Institutionen nicht über die notwendigen Vergleichsdaten der gesunden- und Krisenunternehmungen .

Die Einstufung des Unternehmens als potentiell "gefährdet" oder "gesund" hängt meistens von der subjektiven Einschätzung des jeweiligen Analysten ab. Mag sein, daß eine Unternehmung nach einem Merkmal als Gesund und nach einem anderem als Krisenunternehmen eingeschätzt wird.

Mit dem Einstieg in die Problematik der Unternehmenskrise und der anschließenden Analyse über die Verwendung der Bilanzkennzahlen als Informationsquelle bei der statistischen Früherkennung der sog. Krisenunternehmen (Estland) wurden in diesem Vortrag die thematischen Schwerpunkte gesetzt. Diese Forschungsarbeit verwendet die üblichen Methoden der Bilanzanalyse und der Insolvenzforschung und überprüft mit Hilfe der statistischen Hypothesentests die aufgestellten Thesen.

Da sich die eingängige Methodik und Theorie der Unternehmenskrisen noch in einem Entwicklungsstadium befindet, wurden für die statistische Hypothesenprüfung zwei vereinfachende Annahmen getroffen:

- 1) Der Zustand, der sich als Unternehmenskrise bezeichnen lässt, ist identifizierbar;
- 2) Die Unternehmenskrise widerspiegelt sich in den Bilanzkennzahlen.

## Begriff Unternehmenskrise

Um die statistische Analyse durchführen zu können sollte zuerst der zentrale Begriff "Unternehmenskrise" definiert werden. Die Definition "Krise" ist ausschlaggebend für den Auswahlprozess, der den gewünschten Umfang der Krisenunternehmen (unter Beachtung der spezifischen Merkmale und Ausprägungen der Krise, die eine Einstufung des Unternehmens erlaubt) abgrenzt.

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<sup>1</sup> Stiglitz (1972)

Gegenwärtig gibt es keine einheitliche Krisendefinition und –theorie. Es empfiehlt sich nicht von einer Unternehmenskrise im engerem Sinne, sondern von einem Krisenprozess, bestehend aus verschiedenen Stadien, zu sprechen<sup>2</sup>.

Mehrere veröffentlichten Forschungsarbeiten und Diskussionspapieren zufolge wird üblicherweise von einem 4 Stadien Modell ausgegangen<sup>3</sup>:

- 1) Normalzustand oder "Nicht-Krise"
- 2) Latente Krisensituation
- 3) Manifeste Krise
- 4) Insolvenz

In der vorliegenden Arbeit wurde die Gruppe der Krisenunternehmungen von manifesten und insolventen Unternehmen gebildet, d.h. die Unternehmen die sich für Insolvent erklärt haben oder sich öffentlich in der Krise zu sein gestanden haben.

Tabelle 1

**Informationsquellen bei der Krisenanalyse**

Krisenstadium	Informationsquelle
Normalzustand	- Bilanz, Medien, Börsennachrichten
Latente krise	- Medien
Manifeste krise	- Bilanz, Medien, Börsennachrichten
Insolvenz	- Bilanz, Medien, Börsennachrichten

Die Gesamtheit der Krisenunternehmungen wurde zusätzlich um Unternehmen erweitert, die sich in dem Liquidationsprozess oder Zwangsvollstreckung befanden und öffentlich ihre Schwierigkeiten bekanntgegeben haben. Zu den Gesunden Unternehmen gehörten alle anderen Unternehmungen ausser Krisenunternehmen .

Tabelle 2

**Anzahl der Krisenunternehmen vs. "gesunde" Untenehmen**

Analysezeitraum	Krisenunternehmen	"gesunde" Unternehmen
1994 <sup>4</sup>	5	34
1995	15	71
1996	13	70

<sup>2</sup> Hauschildt 1988, S.12.

<sup>3</sup> Krystek (1987).

<sup>4</sup> Die Auswahl der Krisenunternehmungen im Zeitraum von 1994-1995 ist äußerst problematisch- die Gesamtheit der gefährdeten Unternehmungen könnte auch wegen sog. Kinderkrankheitensyndrome und externer Transformationsprozesse (wirtschaftspolitische- und regulative Umwelt,privatisierung usw.) verzerrt sein./Autor/

## Arbeitshypothesen

Klassische Krisenanalyse mit Hilfe der Bilanzkennzahlen wirft einige Probleme auf. Vor allem fehlt es an einem direkten Zusammenhang zwischen dem Kennzahlenwert und dem Insolvenzzzeitpunkt. Jede Bilanzkennzahl widerspiegelt retrospektive und in einem gewissen Zeitpunkt geschehene Ereignisse.

Deshalb unterliegen die Analysten der Gefahr, mit Hilfe der ihnen vorliegenden Bilanzkennzahlen immer eine subjektive Entscheidung treffen zu müssen.

Daraus resultierend könnte bei der isolierten Betrachtung der Kennzahlen die gegenseitige Abhängigkeit außer Acht bleiben.

Grundlage für die statistische Analyse bildeten die primären Bilanzkennzahlen und als Vergleichsmethode die Methode des Betriebsvergleichs.

In der Ausgangslage fanden folgende Aspekte Berücksichtigung: Erstens wurden die Kennzahlen a priori klassifiziert, zweitens sind die Kennzahlen mit bester statistischer Güte<sup>5</sup> respektive in jeder Kennzahlengruppe entlehnt.

Das Ziel der Kennzahlenanalyse war die Identifizierung der Kennzahlen mit bester Klassifikationsgüte.

Tabelle 4

### Arbeitshypothesen

Kennzahl	H <sub>0</sub>	H <sub>1</sub>
Gesamtkapitalrentabilität	$X_1 = X_2$	$X_1 < X_2$
Cash-Flow Eigenkapitalrentabilität	$X_1 = X_2$	$X_1 < X_2$
Cash-Flow Gesamtkapitalrentabilität	$X_1 = X_2$	$X_1 < X_2$
Umsatzrentabilität	$X_1 = X_2$	$X_1 < X_2$
Cash Flow Umsatzrentabilität	$X_1 = X_2$	$X_1 < X_2$
Durchschn. Zahlungsziel der Kunden	$X_1 = X_2$	$X_1 < X_2$
Durchschn. Zahlungsziel der Kreditoren	$X_1 = X_2$	$X_1 < X_2$
Eigenkapitalquote	$X_1 = X_2$	$X_1 < X_2$
Dynamische Schulden tilgungskraft	$X_1 = X_2$	$X_1 < X_2$
Current Ratio	$X_1 = X_2$	$X_1 < X_2$

<sup>5</sup> Altman (1967), Hauschildt (1987), Grenz (1987).

In der einleitenden Analyse wurde unterstellt, daß jede gesunde Unternehmung und Krisenunternehmung gewisse Eigenschaften besitzt, mit Hilfe denen diese zwei Grundgesamtheiten sich voneinander trennen lassen..

Um die Schwankungen der Kennzahlenwerte zu begrenzen, wurden die Kennzahlen so dimensioniert, daß jeder Kennzahlenwert innerhalb des Wertebandes 0:1 bleibt.

Die Grundgesamtheit besteht aus zwei Gruppen: gesunde Unternehmungen und gefährdete Unternehmen.

Die Zusammenstellung der Grundgesamtheit war mit diversen Schwierigkeiten behaftet:

- Erstens Die Trennlinie zwischen gesunden und gefährdeten Unternehmungen ist unscharf;
- Zweitens Zu den Krisenunternehmungen könnten auch solche Unternehmungen gehört haben, die eigentlich nicht gefährdet waren;
- Drittens Die Anzahl der sog. Krisenunternehmungen war im Vergleich zur Anzahl der gesunden Unternehmungen zu gering;

### Ergebnisse

Bei der statistischen Analyse fand der Ansatz der Hypothesenprüfung von Mann-Whitney Anwendung.

### Ergebnisse der Statistischen Hypothesentests Analysezeitraum 1994- 1996

$p < 0.001$	****
$0.001 < p < 0.01$	***
$0.01 < p < 0.05$	**
$0.05 < p < 0.1$	*

#### 94 Man-Whitney

	STATISTICA	SISA
Gesamtkapitalrentabilität	**	**
Umsatzrentabilität	**	***
CFROE	H <sub>0</sub>	H <sub>0</sub>
Durchschn.Zahlungsz.der Kunden	H <sub>0</sub>	H <sub>0</sub>
Eigenkapitalquote	*	**
Durch.Zahlungsziel der Kreditoren	H <sub>0</sub>	H <sub>0</sub>
Dynamische Schuldentilgungskraft	H <sub>0</sub>	*
Current Ratio	***	****
CFROI	**	**
CF Umsatzrentabilität	**	***

#### 95 Man-Whitney

	STATISTICA	SISA
Gesamtkapitalrentabilität	****	****
Umsatzrentabilität	****	****

CFROE	***	***
Durchschn.Zahlungsz.der Kunden	****	H <sub>0</sub>
Eigenkapitalquote	***	****
Durch.Zahlungsziel der Kreditoren	****	H <sub>0</sub>
Dynamische Schuldentilgungskraft	****	****
Current Ratio	****	****
CF ROI	****	****
CF Umsatzrentabilität	****	****

96 Man-Whitney

	STATISTICA	SISA
Gesamtkapitalrentabilität	****	****
Umsatzrentabilität	****	****
CFROE	****	****
Durchschn.Zahlungsz.der Kunden	H <sub>0</sub>	H <sub>0</sub>
Eigenkapitalquote	***	****
Durch.Zahlungsziel der Kreditoren	**	H <sub>0</sub>
Dynamische Schuldentilgungskraft	****	****
Current Ratio	****	****
CF ROI	****	****
CF Umsatzrentabilität	****	****

1994-1996

Man-Whitney

	STATISTICA	SISA
Gesamtkapitalrentabilität	****	****
Umsatzrentabilität	****	****
CFROE	****	****
Durchschn.Zahlungsz.der Kunden	****	H <sub>0</sub>
Eigenkapitalquote	****	****
Durch.Zahlungsziel der Kreditoren	****	H <sub>0</sub>
Dynamische Schuldentilgungskraft	****	****
Current Ratio	****	****
CF ROI	****	****
CF Umsatzrentabilität	****	****

Für die Kennzahlen Gesamtkapitalrentabilität, Umsatzrentabilität, Cash-Flow Gesamtkapitalrentabilität und Cash-Flow Umsatzrentabilität wurde Alternativhypothese auf dem Niveau 0,01-0,05 festgelegt.

Fast über alle Betrachtungszeiträume hinweg blieben die Zahlenwerte der Rentabilitätskennzahlen der Krisenunternehmen mit einem erheblichen Abstand über -oder unterhalb der Vergleichswerte. Sowohl die hohe statistische Aussagefähigkeit als auch die Qualität dieser Kennzahlen ließen auch solche Ergebnisse erwarten.

Bei der Kennzahl Kreditoren-und Debitorenumschlagsdauer deckten die Werte im Betrachtungszeitraum und machten deshalb eine Null-Hypothese erforderlich. Die Kennzahl



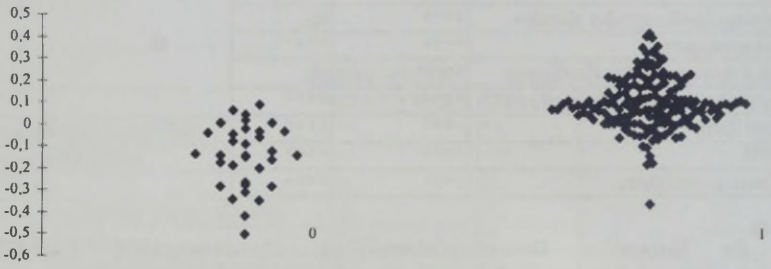
Eigenkapitalquote zeigte zufriedenstellende Trennschärfe über alle Perioden. Dynamische Schuldentilgungsdauer wies, im Unterschied zu anderen Perioden, für das Jahr 1994 keine Trennschärfe auf. Interpretationsspielraum der CF eigenkapitalrentabilität kann unter Umständen mit erheblichen Schwierigkeiten behaftet sein da der Nenner und der Zähler des Bruches negative Werte annehmen können und somit positive Rentabilität zeigen (gilt ebenfalls bei marginal kleinen Bruchwerten). Die Liquiditätskennzahlen waren sehr Aussagekräftig über alle Perioden hindurch.

Tabelle 5

**Signalkraft der Kennzahlen**

gute trennschärfe	schwache trennschärfe
Gesamtkapitalrentabilität	Durchschn.Zahlungsziel der Kreditoren
Umsatzrentabilität	Durchschn.Zahlungsziel der Kunden
Cash-Flow Umsatzrentabilität	Cash-Flow Eigenkapitalrentabilität
Eigenkapitalquote	
Dynamische Schuldentilgungskraft	
Cash-Flow gesamtkapitalrentabilität	
Lühiajalise maksevõime kattekordaja	

**Gesamtkapitalrentabilität  
Kennzahlenwerte 1994-1996**



Zeichn. 1.

**Literaturverzeichnis (gekürzt)**

1. Altman, E. I. The Prediction of Corporate Bankruptcy: A Discriminantanalysis. Dissertation. University of Los Angeles, 1967.
2. Argenti, J. Corporate Collapse the Causes and Symptoms. London, 1976.

3. Baetge, J., HuB, M., Niehaus, H.-J. Die Statistische Auswertung von Jahresabschlüssen zur Informationsgewinnung bei der Abschlussprüfung.-Die Wirtschaftsprüfung, 1986, 39 Jg., S. 605-613.
4. Beaver, W. H. Financial Ratios as predictors of Business Failure.Unpublished Ph.D dissertation, Graduate School of Business, University of Chicago, 1965.
5. Bellinger, B. Gegenwartsfragen der Unternehmung: offene Fragen der Betriebswirtschaftslehre. Wiesbaden: Gabler, 1961, S. 251.
6. Fleege-Althoff, F. Die notleidende Unternehmung. Band 1: Krankheitserscheinungen und Krankheitsursachen. Stuttgart, 1930.
7. Gabele, E. Die Einfuehrung von Geschaeftsbereichsorganisationen. Tübingen: Mohr, 1981, 436 S.
8. Goldbeck, K. J., Wahlen, H. J., Gauer, H. Der Berater bei Analyse und Abwehr bei Insolvenzgefahren: Anleitungen, Formblätter zum Ablauf in d. Praxis. Bonn: Stollfuss, 1983, 166 S.
9. Grenz, T. Dimensionen und Typen der Unternehmenskrise. Frankfurt am Main, 1987.
10. Hauschildt, J. Krisendiagnose durch Bilanzanalyse. Hrsg: Hauschildt, J., mit Beiträgen von Gemünden, H. G., Grenz, T., Hauschildt, J., Krehl, H., Rösler, J., Köln, 1988, 261 S.
11. Hofmann, W. Handbuch des gesamten Kreditwesens. Frankfurt a. M.: Knapp, 1965.
12. Holzberg, B. Das Lagerverhalten industrieller Unternehmen – Bonner Betriebswirtschaftliche Schriften, Band 6, Bonn, 1980.
13. Höhn, R. Das Unternehmen in der Krise: Krisenmanagement und Krisenstab. Bad Harzburg: Verl. Für Wiss., Wirtsch. und Technik, 1974, S. 158.
14. Jensen, M. C., W. Meckling. Theory of Firm: Managerial Behavior, Agency costs, and Ownership Structure. - Journal of Financial Economics, 1976, Vol. 3, pp. 305-360.
15. Kallas, K. Raamatupidamisarvestuse rahvusvaheline kooskõlastamine. Tallinn: Külim, 1997, lk 71
16. Karp, M. Finantsraskustes ettevõtjate krediteerimine. TTÜ Arvestuse ja maksunduse aktuaalsed probleemid. – Konverentsimaterjal, 1997.
17. Keiser, H. Betriebswirtschaftliche Analyse von Insolvenzen bei mittelständischen Einzelhandlungen. Köln: Westdt. Verl., 1966.
18. Kitvel, E. Rahandussuhtarvude süsteem. Tallinn: 1998, lk 48.
19. Kitvel, E. Risk analysis. Discussion paper. - Riga, 1999.
20. Krystek, U. Unternehmungskrisen. Wiesbaden, 1987.
21. Le Coutre, W. Krisenlehre für die Unternehmensführung. – Das Geschäft, 1926, 4 Jg, Heft 4 und 5.
22. Lehtinen, J. Financial Ratios in International Comparison.Validity and Reliability. University of Vaasa, 1996, pp. 137.
23. Leker, J. Fraktionierende Frühdiagnose von Unternehmenskrisen. Verlag Dr. Otto Schmitt KG, 1993, 379 S.
24. Lev, B. Financial Statement Analysis. Englewood Cliffs, New Jersey: Prentice Hall, 1974.
25. Lüneborg, K. Konstruktion und Tests statistischer Verfahren im Rahmen der Kreditwürdigkeitsprüfung anhand der Jahresabschlüsse der kleiner und mittlerer Unternehmen. Dissertation, Bochum, 1981.
26. Mereste, U. Statistika üldteooria. Tallinn: Valgus, 1975.
27. Müller, R. Krisenmanagment in der Unternehmung. - Kölner Schriften zur Betriebswirtschaft und Organisationsion, Band 5, Frankfurt am Main: Grochla, E. 2. überarbeitete und erweiterte Auflage, 1986.
28. Pankrotiseadus. Riigi Teataja 1992, 31, 403.
29. Parring, A-M. Statistilise andmetöötluse algõpetus. TÜ Kirjastus, 1997, 405 lk.

30. Perlitz, M. Epirische Bilanzanalyse. – Zeitschrift für Betriebswirtschaft , 49 Jg., 1979, S. 835-848.
31. Raamatupidamise seadus. Riigi Teataja I 1994, 48, 790.
32. Raamatupidamistoimkonna Juhendid.
33. Rahvusvahelised Arvestusstandardid I vihik. – Rahandusministeerium, 1996, lk 65.
34. Raubach, U. Früherkennung von Unternehmenskrisen. Frankfurt am Main: 1983.
35. Riebell, C. Praxis der Bilanzauswertung. 3. Auflage, Stuttgart: Deutscher Sparkassenverlag, 1979, 440 S.
36. Rosendale, W. M. Credit Departement Methods- Bankers Magazine, 1908, pp 183-184.
37. Röthig, P. Organisations und Krisenmanagement. – Zeitschrift für Organisation, 1976, 45. Jg., S. 13-20.
38. Schneider, D. Allgemeine Betriebswirtschaftslehre. 2.Auflage, München: Oldenbourg, 1985.
39. Stiglitz, J. E., Weiss, A. Credit Rationing in Markets with Imperfect Information. - American Economic Review, 1981, Vol. 71, June, pp. 393- 410.
40. Sepp, J. Institutsiooniökoonoomika. – Tartu: TÜ Kirjastus, 1997, lk 172.
41. Taffler, R. J. Empirical Models for the Monitoring of UK Corporations. – Journal of Banking and Finance, 1984, Vol. 8, pp. 199-227.
42. Vensel, V., Aarma, A. Statistika teooria põhikursus. Tallinn: Külim, 1996, lk 211.
43. Verband der Vereine Creditreform e.V., Neuss, 1982 .
44. Ariseadustik. Riigi Teataja I 1995, 26, 355.
45. Walters, A. Corporate Credit Analysis. Euromoney Publ. PLC, 1991.
46. Witte, E. Die Unternehmenskrise. – Anfang vom Ende oder Neubeginn ?in: Unternehmenskrisen. – Ursachen, Frühwarnung, Bewältigung. Hrsg.: Schnellinger, W., Bratschitsch, R., Stuttgart, 1981.
47. Zmijevski, M. E. Essays on Corporate Bancruptcy, Dissertation, State University of New York, 1983.

### **Zusammenfassung**

Ausgehend von der Theorie der asymmetrischen Informationsverteilung und vom "adverse selection"- Ansatz wurde unterstellt, daß die auf Basis des Jahresabschlusses errechneten Finanz- und Liquiditätskennzahlen für einen externen Betrachter das zentrale Entscheidungskriterium darstellen. Mit der Hauptthese – es liegen Abweichungen in den ermittelten Kennzahlenwerten zwischen Krisenunternehmen und "gesunden" Unternehmen vor – hat der Autor die Analyse über die statistische Güte der unterschiedlichen Bilanzkennzahlen eingeleitet. Die erfolgte statistische Beweisführung mittels einer Profilanalyse und Hypothesenkontrolle konnte teilweise die Aussagefähigkeiten der zentralen These untermauern. Einigen Kennzahlen, insbesondere den Produktivitäts- und Rentabilitätskennzahlen, konnte eine gute Signalfunktion bestätigt werden<sup>6</sup>. Im Unterschied dazu vermag das Ergebnis über die Aussagefähigkeit der intensitätskennzahlen eine kritischere Betrachtung.

Ungeachtet der guten Trennschärfe einiger Bilanzkennzahlen ist eine generelle Früherkennung der Unternehmenskrise mit diversen Schwierigkeiten behaftet:

- Es fehlt an einer einheitlichen Theorie der Unternehmenskrisen;

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<sup>6</sup> Perlitz (1979), Perlitz (1980), Altman (1984), Zavgren (1983), Zmijevski (1983), Altman (1984), Taffler (1987) - Quelle: J.Hauschildt (1988).

- Mangel an objektiven Entscheidungsmerkmalen;
- Gesetzliche Bewertungsspielräume in der Bilanzerstellung;
- Unterschiedliche Erfassungsmethoden der Zahlenmasse und statistische Fehler können die Aussagefähigkeit der Kennzahlen verzerren.

Ungeachtet der kritischen Aspekte bei der Kennzahlenanalyse kann eine vertiefende Krisenanalyse weiterhin neue Aspekte und Aussagen hervorbringen und somit als Grundlage für weitere Arbeiten dienen.

- Vergleichsweise frühere Identifizierung potentiellen Unternehmenskrisen;
- Die Bilanz ist eine preiswerte Informationsquelle<sup>7</sup> und die Bilanzanalyse ein standardisierter Prozeß;
- Erhöhung des Sanierungspotentials.

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<sup>7</sup> Grenz (1987).

## FINANCIAL STATEMENT ANALYSIS RELATED TO CREDIT RISK MANAGEMENT

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Successful Credit risk management is one of the most important key to advanced and profitable banking in the World, as well in the Latvia. The emphasis of the thesis is based on EUROMANY, Chase Manhattan Bank and our research in the banking operations in Baltics.

Financial Statement Analysis is important issue for credit risk management. Because of very complicated links between balance sheet, profit and loss statement and existing and planning cash-flow there has to be some complex approach for obtaining necessary information to make credit decision. And this link is **Ratio analysis**.

Ratio analysis in very various ways is done in almost all credit institutions all over the world. The main point in ratio analysis is to build system of financial indicators, who allows to make the right credit decisions and be sure that company will continue to operate on ongoing basis.

With ratio analysis the rating system might be build. Ratio analysis model includes: liquidity ratio, activity ratio, profitability ratio and leverage ratio.

Ratio analysis is the most advanced model to asses the companies financial position and possibilities to repay obligations. Model who is disclosed below is based on Chase Manhattan Bank's information, analysis theory and Baltic banking market experience.

Our ratio model consists from following parts:

1. As it was told above, *liquidity ratio* is one of the analysis model ratios and has important lever on it. Liquidity ratio shows us companies possibilities to cover current liabilities with current assets. Of course there might be different approach and more conservative analysts will say that current assets includes only cash and accounts receivable. It means, that inventory is not counted because of problem – it still has to be sold. So we get quick liquidity ratio.

Generally liquidity ratio system gets point's from 1-5

2. Second important ratio is so cold *leverage ratio* who shows how much shareholders have invested own capital in company in compare with total debts. We can say, tat it determinates the use of borrowed funds. Financial institutions are mainly using this ratio from total debts deducting all other positions except liabilities to credit institutions. Leverage ratio includes indicator – times interest earned which measures how fare earnings can decrease without embarrassing the companies activities. As bigger earnings before income tax are as better it meats interest payments to financial institution. Of course leverage between earning before income tax and interest might be comparable among companies in one ore many industries.

Generally leverage ratio system gets point's from 1-4.

3. *Profitability ratio* shows how efficiently company works covering costs and obtaining profit or loses. This is very important ratio for companies shareholders and for creditors, because it influence dividends and cash flow. Generally this ratio shows how companies management can ensure shareholders wealth growth. Analysing this ratio we have to focus on quality and trend. This ratio includes several important indicators. Gross profit margin measures profitability of the productions process or shows or prices to consumers seated by management where the right once. Net profit margin meanwhile shows all income who has left after all taxes are paid and expenses maid comparing to net sales. In the same time there is other indicator – profitability of costs – showing if administration has the right marketing, salaries and administrative policy. By same cases high marketing expenses might increase shareholders value.

Net margin ratio measures the percentage of each sales currency unit remaining after all expenses and taxes are covered.

Profitability ratio includes some more well known indicators like return on assets, return on equity and dividend payout ratio which are analyzed in above mentioned model but we will not discuss because of limited scope of work.

Generally profitability ratio system gets point's from 1-3

4. *Activity ratio* also cold asset management ratio determines how efficiently a company utilizes its recourses. Activity ratio includes indicator - average collection period showing amount of time company can convert accounts receivable in cash. There are internal and external factors influencing collection period.

Inventory turnover measures how much times inventory on the balance sheet are sold in one year period and shows as management sales activity. Analyzing this indicator it is very important to be aware that by covering short term obligations company has to sell some inventory.

Fixed asset turnover represents the efficiency of companies use of fixed assets by operating activities it means by sales. Other words fixed assets decrease a cash flow. It is important to by analyzing this indicator to divide fixed assets in two parts – production assets and other. In this way efficiency of production assets might be recovered.

Working capital is a general measure of companies liquidity and represents a margin of protection short term creditors are looking for. Working capital means excess of current assets over current liabilities. Working capital turnover measures how many times in one year period working capital has turned over in compare to sales volume. Working capital turnover analysis shows whether the company has temporary or structural problems.

Generally activity ratio system gets point's from 1-2.

The sum of all 4 ratios mentioned above aloud us to obtain final figure and as bigger it is as company's financial situation is better and company is more liquid.

Of course there are as well subjective as well objective factors, having influence on above mentioned ratio model because different industries might have different Debt/Equity ratio

(Transport, Finance - 10%, building, production - 30% etc.). In the same time different liquidity ratios are in sales and in production industries. Different is turnover of inventory in food ore metal industries. And all above mentioned ratio priority and proportionality might be very various in different regions and even in different banks in one country.

Ratio analysis depends up to financial institutions risk policy and strategic targets to be fulfil.

Developed practice is showing that financial institution loan contracts are supplemented with some important ratios. In case that those ratios are getting worth, companies are obliged to improve them or repay the loan beck to credit institution.

It is very important to discuss companies cash flow: quality, reliability and trends by making the final loan decision while our opinion can't be made only on ratio analysis.

In the same time additionally to ratio analysis by Credit risk management so cold PRISM model is used (Prospective, Repayment, Intention, Safeguards and Management).

Managing credit risks all financials have to bee compared with industries financials in the same region. Ratio trends in period more then one year are showing the stability of companies growth, profitability and companies abilities to recover long and/or short term liabilities.

## LEASE TRANSACTIONS IN LATVIA

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A lease is an agreement whereby the lessor conveys to the lessee the right to use an asset for an agreed period of time in return for a payment or a series of payments.

Leasing as a financial form exists in Latvia since 1993 and now many firms and privates are using leasing companies provided services. Total number of lease transactions are growing up year by year. Cars and trucks are the most popular lease objects in Latvia.

Theory of economic usually lease transactions describes as two-sided economical relationships between lessor and lessee, but in practice the situation is different. Lease transactions are directly influenced at least by five economical elements:

1. Manufacturer ( or company who deliver the goods)
2. Buyer (lessee)
3. Lease company (lessor)
4. Insurance company
5. Bank

For the manufacturer lease is a great opportunity to increase amount of sold production, and that's why manufacturer play's so important role in lease transactions. Relationships between these three economical elements are not always based on principles of free competition. Lessor and manufacturer have common interests, the first one – to gain more contracts and the second – to sell more production. Therefore lessor and manufacturer make a deal (secret) of cooperation. Manufacturer will encourage clients to choose services of certain leasing company, but the lessor could provide lower percentage. In such case manufacturer get's possibility to sell more production and the lessor make's more contracts and also gain's monopoly position in this market segment.

Winner from such cooperation is also lessee, because it gets lower percentage. Sometimes manufacturer, to sell more production pays to lessor if it provides percentage beyond the market value. So, we surely can say that manufacturer may have great influence on lease transactions.

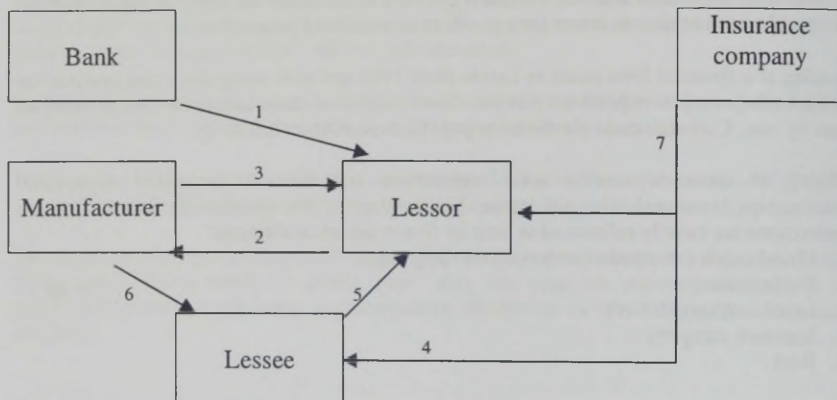
Many leasing companies have rule to insure a lease object, to make a lease contract. There are similar situation with insurance companies as in the case of manufacturers. Lessors usually advice clients to insure lease object in certain insurance companies. And as a reward from theses insurance companies lessor gets commision (usually 10% from total amount client has payed). Of coure, such advices are not provided in categorically form to client, but usually client have not special demands for insurance companies (if only percentage is in market value). Therefore it is relatively easy to maintain that lessee insure lease object in lessor's desired company.

The fifth's element, what also has influence on lease transactions is bank. As we know, the leasing companies get credit's from banks to buy lease objects. Therefore banks also can directly influent leasing transactions. Good example for such influence was financial crises in



Russia. Many banks lost great amount of money in Russian government securities and they had a shortage of finance resources and therefore credit percentage grow up. This immediately influenced situation for leasing companies. They also increased percentage and had not enough money to finish some big projects.

Let's look a scheme of typical lease transaction:



1. Leasing company gets a credit from a bank
2. Lessor pay`s to manufacturer for lease object
3. Lessor becomes owner of lease object
4. Lease contract between lessor and lessee
5. Leasing payments regarding to contract
6. Manufacturer deliver lease object to lessee
7. Insurance of lease object

Not in all cases this scheme will be the same. For example, if bank and lessor are one company than we must delete stage Nr.1, or another case is if manufacturer and lessor are one company etc. This scheme also changes in the case of international lease transactions, because foreign investors can demand government guaranties. Anyway there always will be two elements in this scheme – lessor and lessee.

From the mentioned above, we can make conclusion that lease transactions interacts different kinds of bussines, what makes lease transactions rather complicate. In spite of mentioned problems companies and privates still use services provided by leasing companies, because sometimes it is the only way to get rights to use desired equipment.

## THE DISTRIBUTION OF INFORMATION IN INCOME STATEMENT

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An effective financial statement analysis involves obtaining information from financial statements. Income statements summarize the events and transactions that produce revenues on selling a product or providing a service, as well as the events and transactions that result in expenses. Unlike the balance sheet, which reflects the financial soundness on the firm as at a particular point in time, the income statement summarizes the recent operating performance of firm during a given period of time, usually a quarter or a year.

When analyzing the income statement, one of the key analytical activities involves the identification of both recurring and nonrecurring income or loss, as well as the nonoperating items. Financial decisions should be rested largely on the basis of the expectations for the future, i.e., the ability to continue business, the ability to pay dividends, the ability to provide prospectively innovative products, and the ability to repay incremental interest and principal in the future.

What kind of additional information a financial analyst needs and how to guarantee the comparability between different formats of income statement - these are main issues, which will be discussed in the following paper.

1. In net sales (in Estonian Income Statement regarded as Other Revenues) the sum of subsidies must be indicated separately. By means of this information, the financial analysts will be able to estimate the objective profitability of business lines and to make decisions about whether to continue these business operations or not. According to European Statistics, the subsidies to a product or a manufacture are added to net sales, but at the same time, they are indicated separately. The lack of this information (such as in Estonian Income Statement nowadays) may lead to taking wrong steps in accounting of profitabilities of these business lines. Since the subsidies are liable to change over a year's time, disregarding these facts is likely to bring about inaccurate managements decisions.

2. In Income Statement, both types of operations should show the distribution of expenditures. In European Union, the Four Directives allow four formats for income statement. In Estonia, Accounting Law (Chapter 20, Article!) allows two formats for income statements, in which the results are presented as follows:

- By the type of expenditure (in Income Statement format 1 - all salaries and wages shown as personnel expenses);
- By the type of operation (in Income Statement format 2 - all salaries and wages are distributed as the cost of the good sold, the marketing and the administrative expenses).

According to Estonian Accounting Law (Ch. 35, Art. 6) selling expenses, administrative expenses and interest expenses are regarded as periodic expenses and are charged to income. These expenses are not included under the inventory value in the balance sheet, and, therefore, they are not part of the cost of the goods sold in Income Statement format 2. Every Estonian enterprise must account periodic expenses separately from cost of product. Consequently, the Estonian Statistics Committee gave publicity to this information and required the distribution of

expenses in annual statistical report is presented by two principles simultaneously. It seems to be desirable to require a separate report of expenses by the type of operation in an appendix to the Annual Financial Statement, provided that the enterprise use Income Statement format I (2, p. 3).

2.1. The distribution of periodic expenses shall be shown in accordance with the generally acknowledged and internationally accepted headings.

In Estonian Annual Report the periodic expenses are divided into the following headings:

- Marketing Expenses;
- Administrative Expenses and General Expenses;
- Other Operating Expenses;
- Financial Expenses;
- Extraordinary Expense.

However, this distribution of marketing, administrative and general expenses does not make a distinction between these and the research and development expenses, which are the best indicators for estimating prices of securities and business value.

2.2. The other expenses shall be distributed by operations, investing and financing activities.

Estonian Accounting Law allows the foreign exchange gains and losses to be presented in two ways (3, p. 77):

- As other revenue of operations and other expenses, when transaction gains and losses occur on foreign currency receivables and payables;
- As financing activities in financial income or expenses, when gains and losses relate to subsidiary and associated companies and other short and long-term financial assets.

The existing U.S. and IASC GAAP suggest these gains or losses be reported in the income statement in the period in which the gain or loss arose.

Although accounting recognition is given immediately to changes in fair marked value of foreign exchange of a foreign currency - denominated receivables and payables, the recognition of cost and revenue increases due to changing prices will be postponed until realized in actual transactions.

Under FASB Statement No. 95 (4, p. 4.08-4.09) the effect of exchange rate changes on cash balance held in foreign currencies, is reported in statement of cash flows as a separate part of reconciliation of the change in cash and cash equivalents during the period.

So, gains and losses on receivables and payables include revenue and expenses to operating activity, but their amounts are determined by financial crises and the position of the capital markets in the world.

Therefore, the analysts, in order to understand whether the operations are profitable or unprofitable, come upon difficulties in managing or financing policies for classification of all the gains and losses from the changes rate of currency into external financing. (5, p. 4-24).

Thus, in Estonian enterprises should report these foreign exchange gains and losses separately from receivables and payables, as without the information about internal and external factors, the financial analyses return on net sales, equity and business valuation are meaningless.

2.3. All non-cash transactions must be classified and reported in the operating expenses.

In general, there are three types of non-cash transactions associated with operating expenses and revenues:

- Allowances for doubtful receivables;
- Value adjustments (write-downs) of non-current and current assets;
- Depreciation of non-current assets.

According to Estonian Accounting Law (Ch. 34, Art. 2) and the guidelines and pronouncements drafted by Estonian Accounting Board (3, p. 122-123), the doubtful account receivables may be charged to the period's income in two ways:

- As an allowance for doubtful accounts, when managers, on the basis of the collection experience estimates the amount of probable debt as sufficient to cover the possible losses.

These allowances for uncollectible account as a contra-active account of the receivable account are shown in balance sheet in active as deducted from accounts and notes receivables.

- As write-down uncollectible hopeless accounts without allowance. In this case the analysts has no information about amounts of these write-downs of uncollectible accounts. At the same time, the receivables in balance sheet are overly optimistic, and fail to indicate the actual true situation.

Thus, financial analysts need also information about write-down uncollectible accounts, which should be reported as footnotes or in a separate item in the Income Statement. One of the best solutions to this problem would be that all Estonian enterprises use only the first method, i.e. the allowance for doubtful accounts.

According to Estonian Accounting Law, value adjustments (write-down) to current and non-current assets, and depreciation, are recorded by the total amount only in the Statement Income format 1. In Estonia Cash Flow Statement is not required as the main format of the Annual Report; it may be added as appendix. Therefore, in order to make a well-informed financial analysis, that analyst needs, at minimum, the following baseline information: the balance sheet, the income statement, and the cash flow statement. Thus, without a cash flow statement being presented, the analyst needs requisite skills for purpose of developing a statement. This is not impossible in Estonia, provided that the firm used the Income Statement format 2.

It is widely recognized that many forecasting methods of business valuation such as discounted cash flow methods are based on the cash flow statement and on the future expectations. Thus, in spite of a different format and style of presenting the annual report, in Estonia, similarly to all of the leading countries of the world, three basic financial statements will be required in the future: the balance sheet, the income statement and the cash flow statement.

The Income Statement provides a valuable source of information for the financial managers, working within the firm, as well as the investors, prospective investors and their advisers outside the firm. It is likely that managers will have access to information other than of a public access. The distribution of the additional information and the way in which it will be derived, are not

very expensive, but it is essential that the legal and accounting policies agree each other. This paper concentrated on some problems that may be resolved in the future and are important both for internal as well as external financial analysts.

## References

1. Estonian Accounting Law, 1994.
2. Financial Key Ratios 1996, Statistical Office of Estonia, Tallinn, 1998.
3. Hea raamatupidamisetava, EV Raamatupidamise Toimkond, 1998.
4. Willams, J. R. GAAP GUIDE 1995, Harcourt Brace & Company, 1995.
5. Palepu, Bernard, Healy. Business Analysis & Valuation, South-Western College Publishing, 1996.

## SOME VIEWPOINTS ABOUT THE ESTONIAN BALANCE SHEET'S CONFORMITY TO THE EUROPEAN ACCOUNTING DIRECTIVES

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The European Union is currently being enlarged by the transition countries of the Baltics and Eastern Europe. It is essential for all of these countries to analyse their national laws and make them to the compliance with requirements of the

European Communities. One part in this process is reorganisation of local accounting rules according to the European Accounting Directives. On the morrow of the reemancipation period Estonia has shown good progress by establishing Accounting Law, taking into account some principles of the European directives and the standards issued by the International Accounting Standards Board. Now, on the way to the European Union, there are only some fields, that need special examination about the conformity to the European Accounting Directives. One of these fields is Estonian balance sheet.

In the Republic of Estonia legal entities shall use the balance sheet format and valuation criteria prescribed in the Estonian Accounting Law, that came into effect on January 1995. For the credit institutions and insurance undertakings there are established special guidelines for the drawing up and presentation their balance sheets, including the guideline for presentation of the consolidated balance sheet, required from the credit institutions.

By the Fourth Council Directive of the European Communities the annual accounts, the balance sheet among them, shall be drawn up clearly and in accordance with the provisions of this Directive.

Does the Estonian balance sheet correspond to these requirements?  
What changes should be made to avoid the contradictions?

These are the subjects of this article, where the first part presents the brief overview about the special attention needing points of the provisions concerning the balance sheet, the second part compares them with the Estonian balance sheet and the last part looks at some points, that should be realized in the process of the Estonian balance sheet's adaptation to the European Accounting Directives.

### 1. Which has to be the Member State's company's balance sheet?

By the Fourth Council Directive the balance sheet:

- has to be one of the documents, that constitute the annual accounts (Art. 2 § 1),
- has to be drawn up clearly and in accordance with the provisions of this Directive (Art. 2 § 2),
- has to give a true and fair view of the company's assets, liabilities, financial position and profit or loss (Art. 2 § 3).

For the presentation of the balance sheet the Member States:

- shall prescribe one or both of the layouts prescribed by Articles 9 and 10 of this Directive; if a Member State prescribes both, it may allow companies to choose between them (Art. 8 of the 4-th Directive);
- shall take into account, that:
  - 1) the items in the balance sheet prescribed in Articles 9 and 10 must be shown separately in the order indicated,
  - 2) a more detailed subdivision of the items shall be authorized provided that the layouts are complied with,
  - 3) new items may be added provided that their contents are not covered by any of the items prescribed by the layouts (Art. 4 § 1 of the 4-th Direct.);
  - 4) the balance sheet items that are preceded by Arabic numerals may be combined where:
    - a) they are immaterial in amount for the purposes to give a true and fair view or
    - b) such combination makes for greater clarity, provided that the items so combined are dealt with separately in the notes on the accounts (Art. 4 § 3 of the 4-th Directive).

Such subdivision or new items or combination may be required by the Member States.

- may permit companies which on their balance sheet dates do not exceed the limits of two of the three following criteria:
  - 1) balance sheet total: ECU 2 500 000
  - 2) net turnover: ECU 5 000 000
  - 3) average number of employees during the financial year: 50

to draw up abridged balance sheets showing only those items preceded by letters and roman numerals in Articles 9 and 10, disclosing separately the information required in brackets in D (II) under "Assets" and C under "Liabilities" in Article 9 and in D (II) in Article 10, but in total for each. (Art. 11 of the 4-th Directive)

- shall require any undertaking governed by its national law to draw up consolidated accounts (including the consolidated balance sheet) if that undertaking (a parent undertaking) is connected with another undertaking(s) by any kind of conditions prescribed by the Seventh Council Directive. (Art. 1 of the 7-th Directive)

## **2. What in the layout of the Estonian balance sheet may be in conflict with the provisions of the Directives?**

Comparing the layout of the Estonian balance sheet with the layouts prescribed by Articles 9 and 10 of the Fourth Council Directive, we can see some differences. Some of them are permitted, some are not.

### **The non-permitted differences on the side of assets:**

1. The most significant difference, that attracts attention, lies in the items' order. The items of the assets in both of the permitted layouts are arranged in order of growing liquidity: they begin from fixed assets and end with current assets. In the Estonian balance sheet format the assets are ordered on the contrary: they lie in order of falling liquidity beginning from item of cash and bank and ending with fixed assets. The same liquidity order exists within the current assets and within the fixed assets, where the fixed assets' order begins from item of long-term financial assets and ends with intangible assets. This fact is in complete conflict with Article 4 of the Directive, that requires the items to be shown separately in the order indicated.
2. Another remark with regard to the assets concerns the items preceded by roman numerals in the permitted layouts. The Estonian balance sheet format doesn't provide to present the total amount of debtors (receivables), but requires straightly showing elements of that, subdividing them in one's turn. The item of debtors is the subitem (II) of current assets in the permitted layouts. The Directive permits combinations only with these balance sheet items, that are preceded by Arabic numerals in the prescribed layouts. This may be one point of the nonconformity. On the other hand, the existing more detailed subdivision of the items in the Estonian balance sheet format is permitted.
3. Depending on decision, whether let the items "Accrued income" and "Prepaid expenses" to be contained among the debtors or let them stay separately, then in last case they have to be shown as letter "E" after the item "Cash at bank and in hand".
4. In the Estonian balance sheet format the item "Own shares" lies among the capital items. By both of the permitted layouts the item "Own shares" has to be shown under the assets, dividing it into the fixed assets and into the current assets, depending on the basis of allocation. Under the capital items is permitted to show only "Reserve for own shares".

### **The non-permitted differences on the side of liabilities and owners equity:**

1. The order of the items on the side of liabilities and owners equity in the Estonian balance sheet format is similar to the layout prescribed by Article 10, where the current liabilities and noncurrent liabilities are divided into separate groups and the items of capital and reserves lie in the end. The difference is with the layout prescribed by Article 9, where the items are arranged on the contrary.
2. The Estonian balance sheet format provides to present the item "Provisions for liabilities and charges" as two separate items, one in consists of the current liabilities and the other in consists of the noncurrent liabilities. The permitted layouts provide to show that as only item beside of the creditors.
3. The Estonian balance sheet format provides to show the item "Payments received on account of orders" only among the current liabilities, not under the noncurrent liabilities, where in the layout prescribed by Article 10 this item is provided to show in the both.
4. Similarly, the item "Accruals and deferred income" is shown in the Estonian balance sheet format as only subitem of the current liabilities and not shown among the



noncurrent liabilities. By the layout prescribed by Article 10 this item has to be shown whether among the both of the liabilities or as separate item after "Provisions for liabilities and charges".

5. In case of following the layout prescribed by Article 10 there has to be added to the Estonian balance sheet format the items "Net current assets" and "Total assets less current liabilities".

### **3. What should be realized adapting the Estonian balance sheet to the compliance with the European Accounting Directives?**

Taking into account the requirements of the Fourth and Seventh Directive of the European Communities and above mentioned remarks, it is clear, that some changes should be made. In this process there is necessary:

- to make choice between the layouts prescribed by Articles 9 and 10 of the Fourth Council Directive or to choose both of them. After choosing, the current Estonian balance sheet format has to be adapted to the compliance with the choosed layout using permitted options.
- to take into account on the using options permitted by Directives the practice of the countries joined with the European Union, where the countries have followed nearly exactly the standard layouts using only some few options. This point is very important for result of the harmonization process within the European countries.
- to give for smaller companies the possibility to draw up abridged balance sheets.
- to require to draw up consolidated accounts from all undertakings, that are connected with another undertaking(s) by any kind of conditions prescribed by the Seventh Council Directive.

### **References**

1. The Fourth Council Directive of the European Communities.
2. The Seventh Directive of the European Communities.
3. Hea raamatupidamistava. The Estonian Accounting Board, 1998.
4. Järve, V. Finantsarvestus. Tartu 1998 (lk 91).

### **Summary**

The transition countries of the Baltics and Eastern Europe, which candidate to become the Member State of the European Union have to make their national laws to the compliance with the Directives of the European Communities. Among of these Directives are the Accounting Directives that must be followed. One field, that needs special examination of the conformity to the European Accounting Directives in the Estonia is the Estonian balance sheet.

This article presents the special attention needing points from the provisions of the Directives concerning the balance sheet. The second part examines the differences between the Estonian balance sheet format and layouts prescribed by the Fourth Council Directive, getting out some of the noncomfortable points. The result of this brief examination is the fact, that the

Estonian balance sheet needs some changes to be made. Which it will be look like finally, that depends on choice from permitted layouts and used options.

The article draws the attention to the necessity to take into account in process of the adaptation the practice of the other countries joined to the European Union, where the balance sheets are formed nearly exactly like standard, that to become to the result of the harmonization, that in one's turn is one of the main trends in accounting at the turn of the century.

## **APPENDIX 1**

### **LAYOUT OF THE BALANCE SHEET**

(prescribed by the Article 9 of the Fourth Council Directive)

#### **Assets**

##### **A. Subscribed capital unpaid**

(unless national law provides that called-up capital be shown under "Liabilities").

##### **B. Formation expenses**

(National law may also provide for formation expenses to be shown as the first item under "Intangible assets").

##### **C. Fixed assets**

###### **I Intangible assets**

1. Costs of research and development, in so far as national law permits their being shown as assets.
2. Concessions, patents, licences, trade marks and similar rights and assets
3. Goodwill, to the extent that it was acquired for valuable consideration.
4. Payments on account.

###### **II Tangible assets**

1. Land and buildings.
2. Plant and machinery.
3. Other fixtures and fittings, tools and equipment.
4. Payments on account and tangible assets in course of construction.

###### **III Financial assets**

1. Shares in affiliated undertakings.
2. Loans to affiliated undertakings.
3. Participating interests.
4. Loans to undertakings with which the company is linked by virtue of participating interests.
5. Investments held as fixed assets.
6. Other loans.
7. Own shares

##### **D. Current assets**

###### **I Stocks**

1. Raw materials and consumables.
2. Work in progress.
3. Finished goods and goods for resale.
4. Payments on account.

**II Debtors** (Amounts becoming due and payable after more than one year must be shown separately for each item.)

1. Trade debtors.
2. Amounts owed by affiliated undertakings.
3. Amounts owed by undertakings with which the company is linked by virtue of participating interests.
4. Other debtors.
5. Subscribed capital called but not paid (unless national law provides that called-up capital be shown as an asset under A).
6. Prepayments and accrued income (unless national law provides for such items to be shown as an asset under E).

### **III Investments**

1. Shares in affiliated undertakings.
2. Own shares
3. Other investments.

### **IV Cash at bank and in hand**

#### **E. Prepayments and accrued income**

(unless national law provides for such items to be shown as an asset under D (II) (6)).

#### **F. Loss for the financial year**

(unless national law provides for it to be shown under A (VI) under "Liabilities").

### **Liabilities**

#### **A. Capital and reserves**

##### **I Subscribed capital**

(unless national law provides for called-up capital to be shown under this item. In that case, the amounts of subscribed capital and paid-up capital must be shown separately).

##### **II Share premium account**

##### **III Revaluation reserve**

##### **IV Reserves**

1. Legal reserve, in so far as national law requires such a reserve.
2. Reserve for own shares, in so far as national law requires such a reserve.
3. Reserves provided for by the articles of association.
4. Other reserves.

##### **V Profit or loss brought forward**

##### **VI Profit or loss for the financial year**

(unless national law requires that this item be shown under F under "Assets" or under E under "Liabilities").

#### **B. Provisions for liabilities and charges**

1. Provisions for pensions and similar obligations.
2. Provisions for taxation.
3. Other provisions.

#### **C. Creditors**

(Amounts becoming due and payable within one year and amounts becoming due and payable after more than one year must be shown separately for each item and for the aggregate of these items.)

1. Debenture loans, showing convertible loans separately.
2. Amounts owed to credit institutions.
3. Payments received on account of orders in so far as they are not shown separately as deductions from stocks.
4. Trade creditors.
5. Bills of exchange payable.
6. Amounts owed to affiliated undertakings.

7. Amounts owed to undertakings with which the company is linked by virtue of participating interests.
8. Other creditors including tax and social security.
9. Accruals and deferred income (unless national law provides for such items to be shown under D under "Liabilities").

**D. Accruals and deferred income**

(unless national law provides for such items to be shown under C (9) under "Liabilities").

**E. Profit for the financial year**

(unless national law provides for it to be shown under A (VI) under "Liabilities").

**APPENDIX 2**

**LAYOUT OF THE BALANCE SHEET**

(prescribed by Article 10 of the Fourth Council Directive)

**A. Subscribed capital unpaid**

(unless national law provides that called-up capital be shown under L. In that case, the part of the capital called but not yet paid must appear either under A or under D (II) (5)).

**B. Formation expenses**

As defined by national law, and in so far as national law permits their being shown as an asset. National law may also provide for formation expenses to be shown as the first item under "Intangible assets".

**C. Fixed assets**

**I Intangible assets**

1. Costs of research and development, in so far as national law permits their being shown as assets.
2. Concessions, patents, licences, trade marks and similar rights and assets
3. Goodwill, to the extent that it was acquired for valuable consideration.
4. Payments on account.

**II Tangible assets**

1. Land and buildings.
2. Plant and machinery.
3. Other fixtures and fittings, tools and equipment.
4. Payments on account and tangible assets in course of constructions.

**III Financial assets**

1. Shares in affiliated undertakings.
2. Loans to affiliated undertakings.
3. Participating interests.
4. Loans to undertakings with which the company is linked by virtue of participating interests.
5. Investments held as fixed assets.
6. Other loans.
7. Own shares

**D. Current assets**

**I Stocks**

1. Raw materials and consumables.
2. Work in progress.
3. Finished goods and goods for resale.
4. Payments on account.

**II Debtors**

(Amounts becoming due and payable after more than one year must be shown separately for each item.)

1. Trade debtors.
2. Amounts owed by affiliated undertakings.
3. Amounts owed by undertakings with which the company is linked by virtue of participating interests.
4. Other debtors.
5. Subscribed capital called but not paid (unless national law provides that called-up capital be shown as an asset under A).
6. Prepayments and accrued income (unless national law provides for such items to be shown as an asset under E).

### **III Investments**

1. Shares in affiliated undertakings.
2. Own shares
3. Other investments.

### **IV Cash at bank and in hand**

#### **E. Prepayments and accrued income**

(unless national law provides for such items to be shown as an asset under D (II) (6))

#### **F. Creditors: amounts becoming due and payable within one year**

1. Debenture loans, showing convertible loans separately.
2. Amounts owed to credit institutions.
3. Payments received on account of orders in so far as they are not shown separately as deductions from stocks.
4. Trade creditors.
5. Bills of exchange payable.
6. Amounts owed to affiliated undertakings.
7. Amounts owed to undertakings with which the company is linked by virtue of participating interests.
8. Other creditors including tax and social security.
9. Accruals and deferred income (unless national law provides for such items to be shown under K).

#### **J. Provisions for liabilities and charges**

1. Provisions for pensions and similar obligations.
2. Provisions for taxation.
3. Other provisions.

#### **K. Accruals and deferred income**

(unless national law provides for such items to be shown under F (9) or I (9) or both).

#### **L. Capital and reserves**

##### **I Subscribed capital**

(unless national law provides for called-up capital to be shown under this item. In that case, the amounts of subscribed capital and paid-up capital must be shown separately).

##### **II Share premium account**

##### **III Revaluation reserve**

##### **IV Reserves**

1. Legal reserve, in so far as national law requires such a reserve.
2. Reserve for own shares, in so far as national law requires such a reserve.
3. Reserves provided for by the articles of association.
4. Other reserves.

##### **V Profit or loss brought forward**

##### **VI Profit or loss for the financial year**

## ARVESTUSE INFOSÜSTEEMI TÄIUSTAMINE EESTI ETTEVÕTETES MAJANDUSTARKVARA PAKETI ABIL

Ester Kõrgesaar  
Tartu Ülikool

Eesti majandus on viimase aastakümne jooksul väga palju muutunud. Suur osa ettevõtetest on jõudnud arenguetapini, kus turu leidmise küsimused hakkavad lahenema. Teravaks probleemiks aga on kujunenud igapäevase töö, sealhulgas arvestustöö korraldamine nii, et kasvava konkurentsi tingimustes turul püsima jääda.

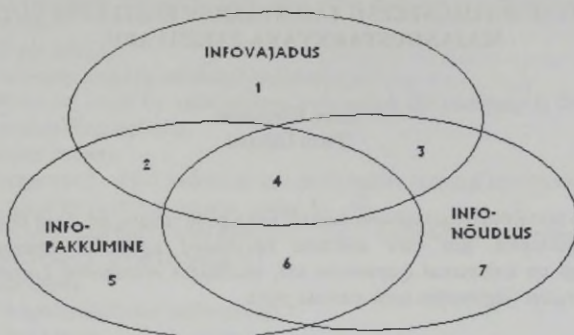
Ettevõtte edukuse üheks oluliseks näitajaks on hästi funktsioneeriva infosüsteemi, sealhulgas arvestuse infosüsteemi olemasolu. Õigete juhtimisotsuste vastuvõtmiseks on vaja objektiivset informatsiooni ettevõtte kõigi tegevusvaldkondade kohta. Registreeritud info on juhtimise alus.

Ettevõtte infosüsteemi ülesandeks on infovoogude koordineerimine ja optimeerimine ehk **infovajaduse, infonõudluse ja infopakkumise** võimalikult ulatuslikum katmine kõigis ettevõtte tegevusvaldkondades. Infosüsteemi kvaliteet ehk hästi funktsioneeriva infosüsteemi olemasolu sõltub sellest, kui hästi kattuvad vajadus info järele, info nõudmine ja selle pakkumine.

- **Infovajadus** – kasutajatele vajalik info
- **Infonõudlus** – kasutajate poolt nõutav info
- **Infopakkumine** – kasutada olev ehk pakutav info

Joonisel 1 on kujutatud kolm informatsiooniprotsessi elementi. Sõltuvalt sellest, kuidas on need kolm elementi omavahel seotud, tekivad järgnevad võimaluste kombinatsioonid:

- 1 – info, mida vajatakse, kuid ei pakuta ega nõuta
- 2 – info, mida vajatakse ja pakutakse, aga ei nõuta
- 3 – info, mida vajatakse ja nõutakse, aga ei pakuta
- **4 – info, mida vajatakse, pakutakse ja nõutakse – kolme elemendi ühisosa**
- 5 – info, mida pakutakse, aga ei vajata ega nõuta
- 6 – info, mida pakutakse ja nõutakse, aga ei vajata
- 7 – info, mida nõutakse, aga ei pakuta ega vajata



Joonis 1. Informatsiooniprotsessi elemendid.

Infovajadus, infopakumine ja infonõudlus ei lange täielikult kokku. Selleks, et saavutada nende elementide võimalikult suurem ühisosa, tulebki igas ettevõttes luua hästi funktsioneeriv ja kõigi taseme juhte rahuldav infosüsteem.

Arvestuse infosüsteem on üheks osaks suuremast infosüsteemist (lisaks juhtimise, tootmise, marketingi, personali infosüsteemidele). Klassikalise arvestuse infosüsteemi eesmärgiks on koguda, töödelda ja esitada infot, mis on seotud finantstehingutega.

Tänapäeva nõudmistele vastavat infosüsteemi, sealhulgas arvestuse infosüsteemi on võimalik luua ainult arvutite abil. Arvestuse korraldamine arvuti abil nõuab omakorda majandustarkvara kasutamist.

Ettevõttele sobiva majandustarkvara valik ei ole lihtne. Majandustarkvara valikuprotsess kogub ettevõtte informatsiooni erinevate infotehnoloogia müüjate ja nende poolt pakutavate toodete kohta. 1999. aasta kevadel Tartu Ülikooli majandusteaduskonna tudengite poolt läbiviidud küsitlus näitas, et sageli on selles protsessis võimalik kasutada ainult erialase kirjanduse ja tuttavate abi. Kahjuks ei ole meil kuigi palju erapooletuid ja kompetentseid spetsialiste, kes võiksid ettevõtjaid majandustarkvara valimisel aidata. Samuti ei ole paljude eesti ettevõtete juhid veel aru saanud sellest, mis on infosüsteem, arvestuse infosüsteem ja milline on arvestuse infosüsteemi osa ettevõtte üldises infosüsteemis.

Majandustarkvara valimisel on mitmeid erinevaid võimalusi. Üheks võimaluseks on luua programm konkreetsele ettevõttele lähtudes tema vajadustest. Teine võimalus on osta valmis standardne majandustarkvara pakett, mille valmistamisel on lähtutud laiasest kasutajate hulgast. Valmiskujul on sobivat majandustarkvarapaketti suhteliselt raske leida. Seetõttu on tarkvaraspetsialistide poolt välja töötatud terve rida valikukriteeriumeid, mis aitavad ettevõtteid sobiva paketi otsimisel.

Üldtuntud kriteeriumideks on funktsionaalsus, süsteemi võimalused, paindlikkus, laiendatavus, integratsiooniaste, kasutajasõbralikkus, avatus, dokumentatsiooni kvaliteet, klienditoetus, müüja stabiilsus, arenemisvõime, koostis ja loomulikult hind ning tasuvus.

Tarkvarafirmade ja nende klientide kogemus näitab, et sageli nõuab majandustarkvara töölerakendamine ettevõtte senise arvestusalase töö ümberkorraldamist. See on tingitud eelkõige suurematest võimalustest informatsiooni töötlemisel ja analüüsimisel. Muidugi ei ole välistatud, et nende suuremate võimaluste tekkimisega saab ettevõtja aru vana arvestus-süsteemi vigadest.

Viimastel aastatel võib täheldada tendentsi, et paljude firmade juhid kannatavad andmete külluse keskel tõsist infonälga. Infosüsteemi loomise peamine probleem ei ole mitte tehnilist laadi, vaid see, missugune ja millises vormis info tuleb erinevate probleemide lahendamiseks ja millistele info kasutajatele kättesaadavaks teha. Viimastel aastatel on tekkinud vajadus täiuslikuma informatsiooni järele. Seda põhjustab nii tugevnev konkurents, kiiresti muutuv ärikeskkond, piiratud ressursid kui ka ettevõtluse üha kasvav keerukus. Otsustajad ehk juhid peavad hakkama saama lühema aja ning väiksemate ressurssidega.

Mujal maailmas ja ka Eestis tegeldakse üha enam majandusinfosüsteemide arendamisega. Mõned aastad tagasi iseloomustas rahvusvahelist majandustarkvara turgu programmide ja nende müüjate rohkus. Viimastel aastatel on aga olukord muutunud. Väikesed majandustarkvarafirmad on kadunud ning põhiline osa turust on koondunud üksikute suurte tarkvarafirmade kätte.

Majandustarkvara turu kontsentreerumisest tingituna toimub ka toodete standardiseerumine. Enamus maailma majandustarkvarafirmasid teeb suuri investeeringuid, et toota universaalset tarkvaraprogrammi, mida saaks müüa paljudes riikides.

Klientide jaoks on see positiivne nähtus, kuna suured rahvusvahelised ettevõtted suudavad tagada usaldusväärsuse ja toodete kõrge kvaliteedi. Loomulikult on sellised programmid võrreldes Eestis toodetutega ka kallimad ning seetõttu suudavad neid endale osta keskmised või suured ettevõtted.

90ndatel aastate alguses ei suutnud välismaise päritoluga standard-tooted Eestis kohalike programmidega konkureerida. Viimasel ajal aga võib märgata, et üha rohkem ettevõtteid jõuab oma arengus sellise etapini, kus olemasolev infosüsteem ja kunagi ostetud väike raamatupidamisprogramm ei rahulda enam praeguseid vajadusi. Tavaliselt on sellistel ettevõtetel ka piisavalt ressursse, et koos olemasoleva arvestussüsteemi täiustamisega muretseda endale uus ja tunduvalt kallim majandustarkvarapakett. Vajadus selleks on tingitud klassikalise finantsarvestuse infosüsteemi laienemisest ka juhtimisarvestuse valdkonda.

Majandustarkvara standardiseerumisele aitab palju kaasa tehnoloogia uuenemine. Majandustarkvara tooted teevad läbi suuri tehnoloogilisi muutusi.

Asudes valima ettevõttele sobilikku majandustarkvara, tekib hulgaliselt küsimusi. Senine kogemus näitab, et ettevõtte võib endale sobiva majandustarkvara valikule kulutada mitmeid kuid ning lõpuks valitus ikkagi pettuda. Kõik tarkvara valijad ei suudagi ise otsustada, milline pakett tema firmale kõige paremini sobib. Seetõttu tuleks pöörduda professionaalse nõuandja poole.

Kuni pole professionaalset abi, ostetakse majandustarkvara intuitsiooni järgi. See võib aga viia vale valikuni. Kui selline tõsiasi selgub tagantjärele, lähevad kulutused tehtud vea parandamiseks mitu korda suuremaks kui paketi ostuhind.



Majandustarkvara pakettidel on palju nimesid. Erinevate firmade tootetuvustustes kohtab järgnevaid nimetusi:

- raamatupidamisprogramm,
- raamatupidamistarkvara,
- raamatupidamispakett,
- raamatupidamissüsteem,
- finantsprogramm,
- finantsmajandusinfosüsteem,
- majandusinfosüsteem.

Enamik nimedest viitab raamatupidamisarvestusele. Samal ajal hõlmab termin "majandustarkvara" enamat – logistikasüsteeme, majandusanalüüsi programme, telepanganduse programme.

Majandustarkvara on aluseks ettevõtte majandusinfosüsteemile ja raamatupidamistarkvara on üks osa sellest.

Majandustarkvara rakenduste all mõistetakse sageli eelkõige finantsarvestus-süsteemi programmi, mis võimaldab kokku panna igakuiseid bilansse ja kasumiaruandeid, teha kuluanalüüsi ja saada infot tasumisele kuuluvate maksu- ja muude võlgade kohta. Tegelikult oleks õigem nimetada sellist abivahendit raamatupidamisprogrammiks, mille juurest majandustarkvarani selle sõna paremas tähenduses on veel pikk maa.

Enamik Eesti ettevõteteid ja organisatsioone on maailma mastaabis väikesed või keskmised. Sellest tulenevalt on kohalik majandustarkvaraturg küllalt piiratud võimalustega. Eesti majandustarkvarafirmad on võrreldes Ameerika ja Euroopa firmadega umbes 10–15 aastat maha jäänud. Halb on sealjuures see, et puuduvad pikaajalised arenduskogemused, hea aga see, et alustatakse uemalt tehnoloogiliselt platvormilt.

Viimase kümne aastaga on kujunenud olukord, kus on selgelt eristunud grupp kodumaiseid ja grupp välismaiseid tarkvaratootjaid, kes on haaranud enda kätte enamuse turust.

### **Pakutavat majandustarkvara võib jagada mitmeti.**

#### **1. Päritolu järgi:**

- kodumaised (*SAF, ROOL, MERIT, EEVA, TAAVI, VERP, RV-SOFT, RAAMA*);
- välismaised (*HANSA, SCALA, SOLOMON, CONCORDE, EXACT, OSCAR*).

#### **2. Hinna järgi:**

- odavad paketid,
- keskmise hinnaga paketid,
- kallid süsteemid.

#### **3. Kasutajate suuruse järgi:**

- väikefirmadele – odav, lihtne (võimaldab sageli ainult finantsarvestust);
- keskmise suurusega firmadele – keerulisem, erinevate koostisosadega;
- suurfirmadele – kallid, keerulised (suured, terviklikud süsteemid).

## Margus Tammeraja iseloomustab eesti majandustarkvaraturgu järgnevalt:

- 1) väikeste ja keskmiste sektoris (paketid alla 100 000 krooni) on standardiks Windows-versioon ja siin võimutseb Hansa Business Solutions AS oma Hansa-seeria toodetega;
- 2) korralike ressurssideta ei toimu tõsisit tootearendust – selle sektori uued tooteversioonid ei sisalda midagi uut (hoolimata mitme Eesti firma ponnistustest oma vana DOS-versioon *Windows*’-i tõsta);
- 3) edukamad on olnud spetsialiseeritud pakettide pakkujad – Taavi Palk, mis on seotud enamiku Eestis laialtlevinud pakettidega, on “kuum” toode;
- 4) keskmiste ja suurte sektoris (paketid hinnaga üle 100 000 krooni) on “jāme” ots välismaise rakenduste käes – *Concorde, Exact, Scala, Solomon*, mõned Soome programmid.

Erinevatel andmetel on Eestis tegutsevad majandustarkvarafirmad müüinud oma programme 8000–9000 ettevõttele. Siia lisanduvad tellimuste alusel loodud infosüsteemid ja suhteliselt tagasihoidlik piraatkoopiade kasutajaskond (hinnanguliselt ca 20–25% kasutajatest).

Ettevõttele sobiva majandustarkvara valik on aeganõudev ja vastutusrikas protsess. Iga majandustarkvara valiv ettevõtte peab kõigepealt endale selgeks tegema vead olemasolevas arvestussüsteemis ning soovivad eesmärgid. Alles seejärel on võimalik seda täiustada ning välja selgitada selleks kõige sobilikum majandustarkvara pakett.

## Kasutatud kirjandus

1. Gelinas, U. J. Jr., Oram, A. E., Wiggins, W. P. Accounting Information Systems. Boston PWS-KENT, 1990, 926 lk.
2. Haldma, T. Turumajandusele vastava arvestussüsteemi loomine firmas. Majandusteadus ja majanduspoliitika Eesti Vabariigis. Ettekannete teesid ja artiklid. Tallinn, 1994, lk 116–119.
3. Haldma, T. Ettevõtte finantstulemuste kujundamine. Majanduspoliitika teooria ja praktika Eesti Vabariigis. Artiklid ja ettekannete teesid. Tallinn, 1995, lk 17–20.
4. Scierenbeck, G. Grundzüge der Betriebswirtschaftlehre. München, 1989, 687 lk.
5. Tammeraja, M. Majandustarkvara Eestis. Artikkel CD-ROM-il, 1997.
6. Tammeraja, M. Tootearendus – majandustarkvarafirma edu võti. [<http://www.tammeraja.ee/edu.html>]. 20. september 1999.
7. Tammeraja, M. Majandusinfosüsteem – kasulik investeeering või rahakulu. [<http://www.tammeraja.ee/mis.html>]. 20. september 1999.
8. Tammeraja, M. Mis vahe on raamatupidamis- ja majandustarkvaral? [<http://www.tammeraja.ee/mis.html>]. 20. september 1999.
9. Tammeraja, M. Suurfirmadel on lihtne valida majandustarkvara.-Äripäev, 09.09.1998.
10. Wilkinson, J. W. Accounting and Information Systems. 3rd ed., New York, John Wiley & Sons, Inc., 1991, 1226 lk.

# DEVELOPMENT OF ACCOUNTING INFORMATION SYSTEM BY BUSINESS SOFTWARE IN ESTONIAN COMPANIES

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## Summary

Well functioning information system outlines an indicator of the successful company. Accounting information system is one part of whole companies' information system. For today's requirements appropriate accounting information system can be implemented only by computer and business software. Choosing appropriate software is a time consuming and responsibility involving process. There is not enough neutral and competent specialist, who could help the company to choose suitable packet. The main problems for the companies are mistakes in existing information - and accounting systems. Therefore, in order to develop and improve current information systems is needed analyse of the present systems.

# ANALYSING AND USING CASH FLOW STATEMENTS

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## Introduction

In any firms' main purpose is to earn profit but many profitable firms, especially those growing rapidly, may sometimes find themselves in the situation they have no cash to pay suppliers, employees and other creditors. (Stickney, 1996, p 19) Although the firm might earn big profits it's possible, that due to the liquidity problems it will soon face bankruptcy. That is the reason, why it is so important to use accrual based statements- balance sheet and income statement- in conjunction with the statement of cash flows.

## History

The cash flow statement is rather new financial statement, but has evolved quite lot since introduced. Most of the basic progress on this financial statement occurred in the United States, where during the 1950s and early 1960s a variety of formats and concepts were experimented with. By the mid-1960s the most common approach in the United States was that of the reporting the sources and applications (or uses) of funds. This reporting didn't became mandatory until 1971, when Accounting Principles Board (APB) released Opinion No.19, "Reporting Changes in Financial Position", which for the first time required a flow of funds statements for each period in which an income statement was presented. Still APB did not specify the definition of funds that firms should use and the majority of firms used net working capital as their definition of funds.

In November 1981, the Financial Accounting Standards Board (FASB) issued an Exposure Draft of a proposed concepts Statement, "Reporting Income, Cash Flows; and Financial Position of Business Enterprises". This Exposure Draft discussed the role of a funds statement and guidelines for reporting components of fund flows, concluding that reporting fund flows should focus on cash rather than on net working capital.

In November 1987. The FASB issued Statement of Financial Accounting Standards No. 95, "Statement of cash Flows". It requires companies to present a statement of cash flows that classifies cash receipts and cash payments according to whether they result from operating, investing, or financing activities. (Hackel, K. L., Livnat, J., 1996, pp71-75)

In Estonia the statement of cash flows became a component of complete financial reporting with the Estonian Accounting Law in 1995.

## The importance and usage of the statement of cash flows

The primary purpose of the statement of cash flows is to provide information about cash receipts and cash payments of an entity during a period. A secondary purpose is to provide

insight into the investing and financing activities of the entity. The statement of cash flows should help investors and creditors assess

- The ability to generate future positive cash flows;
- The ability to meet obligations and pay dividends;
- Reasons for differences between income and cash receipts and payments;
- Both cash and noncash aspects of entities investing and financing transactions.

Cash flows are the connecting link between investing, financing and operating activities.

The information received from the statement of cash flows gives valuable data of cash flows in the past, which enables analyst predict future. So the statement of cash flows helps

- to assess the past performance of the firm in generating, planning and controlling the actual cash inflows and outflows;
- to assess the entities' probable future cash inflows, outflows and net cash flows, including its ability to meet future obligations and to pay dividends;
- to determine the value of a firm's securities.

So as said before the statement of cash flows provides valuable data for both operating and strategic management.

### **Cash flow analysis – free cash flow**

Analysts use a number of different approaches to analyse cash flow data. Lately the most popular approach is FREE CASH FLOW ANALYSIS. Free cash flow is the very intuitive concept; it focuses on the amount of cash flows that owners of a business can consume without reducing the value of the firm. When a firm is able to generate more cash flows from its ongoing operations than are needed to remain in business, the firm has free cash flows. There is no unique definition of a Free cash flow, the most common one is pre- tax income minus capital spending.

There is no way one could underestimate the importance of free cash flows because these are the sources to pay dividends to the owners or make reinvestments to insure the further growth of the firm.

There are six aspects that must be taken into consideration in analysing the firm's free cash flow:

- Cash flow from operations before investment in working capital and interest payments, to examine whether or not the firm is able to generate a cash surplus from its operations; Its important that the firm should have a steady surplus from operations before investments in working capital and interest
- Cash flow from operations after investment in working capital to assess how the firm's working capital is being managed;

- Cash flow from operations after interest payments to assess the firm's ability to meet its interest obligations;
- Free cash flow before dividend payments to assess the firm's financial flexibility to finance long term investments internally;
- Free cash flow after dividend payments to examine whether or not the firm's dividend policy is sustainable;
- Net cash flow after external financing to examine the firm's financing policies,

Cash flow analysis helps to find answers to the following questions regarding the firm's cash flow dynamics:

- How strong is the firm's internal cash flow generation? Is the Cash flow from operations positive or negative? If it is negative, why? Is it because the company is growing? Is it because its operations are unprofitable? Or is it having difficulty managing its working capital properly?
- Does the company have the ability to meet its short-term financial obligations, such as interest payments, from its operating cash flow? Can it continue to meet these obligations without reducing its operating flexibility?
- How much cash did the company invest in growth? Are these investments consistent with its business strategy? Did the company use internal cash flow to finance growth, or did it rely on external financing?
- Does the company have excess cash flow after investing in capital investments? Is it a long-term trend? What plans does management have to deploy the free cash flow?
- Did the company pay dividends from internal free cash flow, or did it have to rely on external financing? If the company had to fund its dividends from external sources, is the company's dividend policy sustainable?
- What type of external financing does the company rely on- equity, short- term debt, or long- term debt? Is the financing consistent with the company's overall risks? (Palepu, K. G., Bernard, V. L., Healy, P. M., 1996, pp 4-21- 4-24)

Using free cash flow analysis is not always so simple in Estonia. There are different reasons for that: one of them is low technological leverage, a lot of work is made by hand. It's very difficult to forecast free cash flows under these circumstances. The free cash flow is very unstable and unforecastable. Still there can get some important information in assessing cash flows like these.

In international enterprises the assessing the firm's value and operations the free cash flow analyse method gives much better overview, they have quite a remarkable technological level and also the net profit hasn't got the greatest importance of the cash flow structure. The ability to manage the working capital is usually also better in international enterprises.

## Conclusion

Cash flow analysis helps the analyst to examine the firm's performance and its financial condition, given the strategy and goals. Even though a firm might make big profit, it could have some liquidity problems and here a cash flow analysis can help to see them. It's not right to use only ratio analysis or only cash flow analysis examining firms financial performance- they supplement each other. Before one begins any analysis of a firm, whether it is a cash flow analysis, ratio analysis, credit analysis, investment analysis, or any general financial statement analysis, it is very important to become familiar with the firm's economic environment, which is reflected on three levels- macroeconomic developments, industrywide events and firm-specific attributes.

Free cash flow analysis is considered one of the best models in analysing a firms financial condition. It helps to find answers to many questions, like how strong is the firm's internal cash flow generation, is it having managing its working capital properly, does the company have the ability to meet its short-term financial obligations, such as interest payments, from its operating cash flow, what plans does management have to deploy the free cash flow, did the company pay dividends from internal free cash flow etc. Free cash flow analysis shows how the firm financing itself and whether or not its financing patterns are too risky.

## References

1. Hackel, K. L., Livnat, J. Cash Flow and Security Analysis, 2<sup>nd</sup> ed., IRWIN, 1996.
2. Palepu, K. G., Bernard, V. L., Healy, P. M. Business Analysis & Valuation. Using Financial Statements. South- Western College Publishing, 1996.
3. Stickney, C. P. Financial Reporting and Statement Analysis. A Strategic Perspective. 3<sup>rd</sup> ed., The Dryden Press, 1996.

# TAX AUDITING – THE NORMAL PART OF ACCOUNTING

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## I Substantial conflict between taxpayer and tax administrator

It is wellknown fact, that a taxpayer and tax officer are never friends. Knowing the essence of taxing it is normal. For a taxpayer the tax sum that he/she has to pay is always too big and for a tax officer it might always be much bigger.

Somebody said that Government is the instrument which costs. And it is true – every government needs resources for existing. And the most popular way for getting those resources is taxation, all over the world.

Besides the inconvenient need to pay money without getting back anything, there are some other unpleasant circumstances that make taxation and extra tax audit nasty for taxpayers. Without a doubt, taxpayers dealing with tax fraud do not like any contact with tax agency. But there are a legion of honest taxpayers panickally afraid tax audit, because they do not exactly know what does it mean and what kind of rights they have, and, above all, they are beliving all kinds of horrific stories that are being told. Surely it is a direct profit for tax consultants.

But as matter of fact - tax auditing is the normal part of accounting. There is no need for being afraid. It might be even useful - taxpayer will be more assured. Taxpayer will learn from mistakes he/she has already done or will get certain knowledge that his/her accounting is really perfect.

## II The audit mechanism

### 1. Types of audit

- a) *regular audit* – means that the taxpayer is to be audited since he/she has not been audited in the period of time during which auditing was prescribed. This applies mostly to legal persons.
- b) *irregular audit* – is carried out when the suspicion about the tax offence has arisen; when the data presented in the declaration are too big or too small; when the auditing is necessary for checking the information received from the third parties etc.
- c) *special audit* – means that an object to be audited is one type of taxes or transactions with one certain business partner; one specific deal or even only one account. Often the VAT special audits are carried out in Estonia by tax inspectors specialising in this area. Special audits were first introduced in the beginning of 1996. Although special audits should be carried out in a short period of time (2-3 days in average) there have been many cases when these are performed in a month. This is caused by difficulties in getting information from the third parties (especially the banks).



## 2. Selection of objects to be audited

An audit formally begins after an order given by the corresponding local tax agency (leading) official. Such order presumes the existence of necessary preliminary information which is usually given, either orally or in a written form, by a tax inspector dealing with the taxpayer and his/her files. A special programme was launched recently in order to combat tax evasion. A software application enables to select the most likely tax offenders and other taxpayers to be audited on the basis of certain criteria – for example, field of activity, amount of turnover, amount of tax arrears, irregular submission of declarations, date of previous audit, date of opening of business activity, the amount of VAT to be refunded etc. Taxpayers to be audited are selected by the head of audit department or a concrete auditor/ inspector by his/her proxy. A tax officer for a specific audit is assigned by the head of audit department. If a tax officer finds it difficult to remain neutral in relation to the audit object, he/she is obliged to inform the head of department who then usually assigns another officer.

Part of the audits are carried out on the basis of information received from the third parties: in the cause of auditing third parties, from other tax agencies or on the basis of occasional information, on the basis of competitor's complaints. The role of this information is more important at the local level. Although the share of audits based on that kind of information is not big, it has proved to be the most useful information for selecting objects to be audited. The biggest number of tax offences are discovered as a result of it and the largest amount of taxes are collected per capita.

## 3. Stages and procedures of audit

a) *planning* – a tax officer receives a task to carry out an audit which is signed by the local tax agency director or deputy director. The task to be assigned is presented by the head of audit department. Before starting an audit the tax officer informs the head of audit department about the results of the analysis performed on the basis of preliminary information. A tax officer then gets a delimited task with a defined object to be audited, a period and estimated time of audit etc. The task may be modified and the period of audit may be extended if problems arise during the course of audit (for example, getting information from third parties) or additional circumstances appear. Together with the head of audit department the tax officer may reduce the volume of an audit, if it appears that a detailed audit is going to be a waste of time.

The first contact for the purpose of informing the taxpayer is usually made by the phone before the beginning of an audit. A written notice about the audit to be performed is sent to the taxpayer via registered mail or is handed over against a signature to the taxpayer's representative. A tax officer must introduce himself during the first contact, agree with the taxpayer about the beginning and the period of an audit as well as to give the taxpayer the office phone number to be contacted. The needs of a taxpayer are taken into account as much as possible. The taxpayer is also informed about the documentation needed in order to guarantee a smooth process of an audit.

A prescription is issued after reaching an agreement on audit procedures that has to include the name of a taxpayer, a personal code or a registry code, an address, the number and date of a prescription and the list of required documentation. The taxpayer is generally informed

about the area and period to be audited simultaneously with informing about the audit, however, when issuing of specific information undermines the aim of an audit, the taxpayer has to be informed at least about the calendar year and the type of tax to be audited.

Taxpayer's attention is likewise turned to the fact that all the required persons would be available at the time of audit. Preliminary work done with the existing information by a tax officer plays an important part in a correctly performed audit.

Acquiring necessary documentation is one of the critical stages in an audit. It is not a rare occasion when the tax officer simply can not think of asking all the documentation. The taxpayers have come to a number of tricks for making the analysis of documentation more difficult: poor-quality documents as well as bills and cheques for very small sums are presented to the auditor.

b) *information about the taxpayer* – preliminary information about the taxpayer can be received from the tax administration database and taxpayer's personal files. There is a separate file for each taxpayer in the corresponding tax agency where all the documentation is saved. A file gives an overview about the activities of a taxpayer, including the (business) name, registry (or personal) code, account number(s), legal address, address of locality, information about the management (legal persons), the name of an accountant, statute (in older files), certificate of a business register. The file also includes all the declarations and accounts submitted by the taxpayer, taxpayer's correspondence, applications etc. to the tax agency and tax agency's responses. In addition, information and documentation on earlier audits, audit reports, prescriptions etc. When the taxpayer is going to be audited the file goes to the use of a tax officer, assigned to audit this taxpayer.

Taxpayer's card (legal persons) includes a code of register, name of business, address, the name of director/head and an accountant, telephone number, date of register in the tax agency, date of register as a subject for VAT (when subject to VAT), name of a tax inspector dealing with the corresponding taxpayer and his office number.

The database also has dated information about the taxpayer's declarations, payments made, the amount of tax arrears, the amounts of prescribed additional taxes to be paid in. There are three corresponding software applications - one for registers, one for personal accounts and one for the value added tax.

All data in Tax Authority database can be searched, viewed and printed out. Either a code of register or a (business) name has to be entered to view the data.

There is a connection with the Customs Board database (on export and import). This enables to view and print out information on taxpayer's export and import operations in the defined period of time, both in a summary and as a list of customs declarations.

It is also possible to view and print out information about the payment of social taxes (including health insurance taxes).

Unfortunately there is no connection to the databases of banks. If needed, the required data can be received via written requests, however, these often get late answers. The same applies to the data from the Motor Vehicle Register Centre, Citizenship and Migration Board and the Statistics Board.

If a tax officer receives all the above information already before going to the place of audit then it is more or less clear who is dealt with and what should be checked more carefully. Unfortunately such preliminary gathering of information is not always done due to the shortage of time or overload of work. And it does not have the same effect afterwards.

c) *the audit process* – auditing begins with interviewing the taxpayer, if possible at the place of audit. In order to guarantee the secrecy of information, an interview is conducted without the presence of any outsiders. As a rule, a tax officer asks a number of questions at the first meeting that forms the basis for getting an overview about the nature of a business, activities, future plans, existing and planned volume of realisation and production, the company founders, main business partners and management. This is done in order to guarantee a smooth and pleasant customer service from the part of tax agency.

Often conflicts and misunderstandings arise, since the taxpayer thinks that the officer asks questions out of personal interest or in order to undermine the business. The majority of tax officers refer to nervous and tense relations between the tax inspectors, whose task it is to ensure the payment of taxes, and the entrepreneurs, who have to manage a business. Of course, an audit has an influence on a daily work of taxpayer, adding workload on the book-keeper(s) and management.

Audits are carried out both outside the office and in the office. *Outside audit* is carried out at the place of taxpayer's business activity. Sometimes it happens that the latter coincides with the connected physical person's place of residence. Office audit is usually applied in such cases but if necessary the audit is performed at the place of residence. Third parties (banks, other state organisations etc.) are often contacted during an audit in order to get information for checking the correctness of book-keeping or for reconstructing the taxpayer's net income. Outside audit requires profound knowledge of tax laws, auditing and its various techniques. Auditing of other adjacent businesses may likewise be carried out. Outside control is performed by auditors not by inspectors. Outside control is usually limited to checking the correctness of submitted declarations and observing that declarations correspond to the legally prescribed norms. This may include checking the correctness of assessing tax exemptions etc. Outside control is carried out by inspectors and sometimes also by officers. Tax agency may request the presentation of documentation to the tax inspector's office only in cases when the audit can not be carried out at the premises of a taxpayer. A written protocol about handing over and reception of documentation is then presented in two copies, listing all files and individual pieces of documents that have been previously numbered and stamped by an auditor. As a rule, a tax officer may not request the presentation of documentation the absence of which may inhibit taxpayer's current operation.

d) *the scope and structure of audit in relation to taxpayers* – the scope of audit is dependent on the type of audit and the number of taxpayers. The share of special audits (in their peak year) constituted about 60 % of a total number of audits.

As represented above, the tax audit is just a job with its concrete procedures and rules. There is nothing to avoid or afraid, if the accounting is existing in legal form. But there are many misconceptions disturbing the businessmen and their accountants.

### III The main misconceptions among (Estonian) taxpayers

#### 1. Misconceptions, promoted by tax consultants

- a) the tax officer does not know anything. He/she is dangerous, because of having rights and not having brains. Officer's behavior depends on his/her frame of mind.
- b) for tax inspector and for tax officer the taxpayer is always fraud and always guilty
- c) every entrepreneur has to nourish and cover more and more civil servants and pay for their stupidities
- d) taxpayer may do whatever not forbidden by law, but civil servant may do only things that are allowed
- e) tax officer is never compassionate, understanding or pardoning
- f) tax officers often demand unabstemious things and apply sanctions, paralysing taxpayer's business
- g) tax officers are always ready to infringe the constitutional rights of taxpayer
- h) Tax officers are unfair, treating similar cases differently
- i) Estonian Law on Taxation is discriminating - the whole risk and responsibility is directed to taxpayer and all rights to tax authority, without any responsibility
- j) If taxpayer is harmless for tax agency and too weak to protect him-/herself in court, he/she will get tax order like "...we know, you have debt, dispatch payment or soon you will be worse off..."

And so on. All those contentions are populist and out of context. Unfortunately our tax administration does not yet have power to avoid such kind of claims, or even to answer them publicly.

#### 2. Misconceptions, thought out by painstaking accountants.

The more correct expression would be not misconceptions but baseless fears. There are many accountants and book-keepers, who are always doubting and are always afraid that they are doing their accounting not in a right way. Besides - they rapaciously accumulate all points mentioned in last chapter. They fall ill when they hear that tax officer will come to audit. The most frequent fears are:

- a) miscalculation
- b) wrong interpretation of law
- c) wrong documents

Those 3 points, if to add above mentioned "facts" will completely spoil the normal relations between book-keeper and tax officer.

#### 3. Potential solutions

The tax authority has to extend the audibility of its basic rules. Since, at present time, all or almost all teaching related to taxation, comes from tax consultants. Tax authority does not familiarise its aims, action, rights or even taxpayer's rights. Some little booklets can not help against lots of thick books from other side. Every tax officer has to teach taxpayers, has to take off their gratuitous fears. Certainly it is too much to expect calm, friendly understanding in case of unloyal demand, if such is already existing. But it is always possible

to solve even extreme problems in a polite way, without affecting the health of simple working people.

## Literature

1. Sootla, G., Kasemets, K., Künnapuu, S. Local and Regional Tax Administration in Estonia. Tallinn University of Educational Sciences. Tallinn, 1998.
2. Vallaste, V. Suhted Maksuametiga. Tallinn, 1998.
3. Arvestuse ja maksunduse aktuaalsed probleemid. Tallinna Tehnikauilukool. Majandusarvestuse Instituut. Tallinn, okt 1997.
4. Riigi Teataja III osa. Riigikohtu lahendid. 1998-1999.
5. Presently active Estonian tax legislation.
6. The audit acts 1997-1998 of Tallinn Local Tax Office for Legal Entities.

# MANAGEMENT ACCOUNTING CHANGE IN FINNISH SMALL TECHNOLOGY COMPANIES

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## 1. INTRODUCTION

Changes in management and production systems during the last decades have been dramatic. Due to intense global competition, advanced technology, and enchanged consumer expectations especially manufacturing and technology companies have moved to adopt new philosophies and techniques (see Green and Amenkhienan 1992: 58). In spite of the well-known productivity paradox, that is the lack of compatibility between accounting and technology, changes have emerged also in management accounting systems along the introduction of new management tools. These new tools for example include just-in-time (JIT), flexible manufacturing systems (FMS), computer-integrated manufacture (CIM), total quality management (TQM), time-based management (TBM), business process re-engineering (BPR), activity-based cost management (ABCM), and balanced scorecard (BC).

Lukka and Shields (1999:33) state that management accounting both as an organisational practice and an academic discipline appears to be in rapid, and sometimes discontinuous change. Many organisations are attempting to change their existing, or implement new and innovative, management accounting practices. Furthermore, they say that since a starting point in accounting change research is what practitioners are currently doing and trying to do, the relevance of the topic is almost guaranteed (Lukka and Shields 1999: 34). This study also concentrates on the topic of MA change. *Briefly, the objective is to describe accounting change in Finnish small technology companies on the basis of a survey.*

There are a number of accounting change studies on Finnish companies. However, the majority of these studies are case approaches with organizational perspective (see for example Partanen 1997, Pellinen 1997, and Hyvönen 1999). In Finland, there are only a few surveys of management accounting change. There are surveys but usually they are concentrated on a specific tool, like cost accounting or balanced scorecard. For example, Lukka and Granlund (1994) carried out a comprehensive questionnaire study in Finnish manufacturing industry on cost accounting practice. Their study showed that the new product costing methods have not yet made their breakthrough in Finland. However, about one third of the respondents reported that they are either currently implementing, or at least considering activity-based costing (ABC).

Laitinen (1995) carried out a more general survey on MASs and identified three different types of MAS user. Large industrial firms utilized modern tools more frequently than the other types. Malmi (1998) prepared a survey on the use of balanced scorecard. His findings show that oldest versions of BC were implemented in 1995. Most of the models were only a few years old. All the studies referred above to, deal with larger companies.

*The objective of this study is to describe MA change in Finnish small technology companies on the basis of a postal questionnaire.* Because of the special nature of technology companies it is expected that significant changes in the MASs have emerged in spite of the small size.

Although the evidence is from Finnish companies, the results may have a more general meaning, too. This is because there is a global tendency for MAS designs and general ideas to converge which also holds for Finnish companies (see Granlund and Lukka 1998). Moreover, there are propositions that MA practice is converging across nations and diverging across industries (see Shields 1998). The paper is organized as follows. The introductory section shed light on the background of MA change study. The second section presents the questionnaire and data. The empirical results are considered in the third section. Finally, the main findings are summarized in the last section.

## 2. EMPIRICAL DATA

### 2.1. Questionnaire

The questionnaire was developed to include the most important background variables proposed in the literature to explain MA change, variables describing change in MAS, and variables related to the causes for change as reported by the respondents. In all, the form of questionnaire included 13 background variables.

Libby and Waterhouse (1996) for example classified MASs in five broad classes: planning, controlling, costing, directing, and decision-making systems. *In the present study only four classes will be used.* The first class is consisted of fifteen managerial calculations that broadly cover the areas where these kinds of quantitative calculations are used. Cost accounting systems are included in the second class of nine different systems. The third class deals with eight control systems and, finally, the fourth class with performance measurement systems at five levels. These classes are presented later in the context of analysing the results.

Libby and Waterhouse use a three-year period for their change analysis. However, in the present study we apply a *five-year period* that better covers the period of recent accounting innovations in Finland (for example ABC and BC). In every class of system, the change is measured using the following scale:

*E = The system is not used at all*

0 = No change

1 = A small change

2 = A moderate change

3 = A considerable change

4 = Total revision

*U = New system*

The idea of using the code "U" on the scale is that helps us to differ between situations where an old system is totally revised (4) and where a new innovation is introduced (U).

Besides the background variables and MASs change also the reasons for change were asked in the questionnaire. In the questionnaire a typical scale of one-way importance for an effect was not applied. *Instead of that the idea was to separate between the factors that have speed up and slowed down the change process.* Therefore the factors were in two classes symmetrically defined as speeding up and slowing down factors of change. Thus in both classes there are positive (speeding up) and negative (slowing down) counterparts for each of the factors. In all, both classes include twenty closed alternatives and one open alternative for

the factors (for the list of factors see Table 4 below). The change factors are classified in six classes: information needs, changes in technology and environment, willingness to change, resources for change, objectives for change, and external requirements.

## 2.2. Sample of companies

The sample of companies used in this study, was originally made by The Statistical Bureau of Finland on the basis of a questionnaire on the R&D costs spent by the companies. All the companies below 500 employees and having spent costs on R&D in 1996 were taken into the sample. *The Bureau did not set any lower limit for the costs whereas for example OECD uses the limit of 4% of net sales for a company to be a high tech firm.* For the present purpose, technology company can be defined as a company that systematically develops, produces, or uses new technological skills and spend money on R&D. Thus a technology company may be either a *manufacturing* or a *service* company. The final sample extracted by the Bureau consisted of 1000 small technology companies. The questionnaire described above was addressed to the managing director.

The questionnaire was sent to the companies in spring 1998. Out of 1000 companies in the address list dated 1996, 129 had moved or failed and could not be reached by post. Moreover, 12 of the companies reported that the nature of their activities has changed so much that it is no use to reply the questionnaire. Therefore, the final sample was 859 small technology companies. Only 93 or 10.8% of the companies responded to the questionnaire. It may be obvious that the results are positively skewed: those companies that have implemented new MA tools, are more willing to response than others.

Table 1 presents background information from the companies replied the questionnaire. The table shows that about 66% of the companies are manufacturing firms while the rest of them (34%) are service companies. The sample companies are very small so that the average size is only 65 employees. On an average the profitability as measured by long-term rate of return and the rate of growth are at a good level. The median rate of export is 18% telling about the importance of international affairs. However, the average per cent of R&D expenditure in net sales is only 3.5 that is below the OECD limit for high tech companies. Note that eighty out of 93 companies are either stand-alone companies or independent members of a group of firms. More than 80% of the sample companies are concentrated on customized products. The level of competition is usually either moderate (46%) or high (47%). The number of decision-making levels is typically low that is natural for small technology companies.

(TABLE 1 ABOUT HERE)

## 3. EMPIRICAL RESULTS

Table 2 shows the average values and standard deviations for the variable measuring change in MASs on the scale from 0 to 5. First, from managerial calculations the most significant changes have happened in *cost, short-term profitability, and pricing calculations* (Panel 1). Second, clearly the largest changes in cost accounting systems have emerged product costing (Panel 2). These results may imply that a prominent change in product cost calculations has taken place and, consequently, affected profitability and profit calculations that use product cost information. The smallest changes have happened in environmental and human resource



calculations. Note that 12% of the companies have a new cost calculation system and that 7% have totally revised the old one (see the last columns of the table). For the short-term profitability calculations the percent figures are 4% and 15%, respectively. In addition, about 15% of the companies have a new system for quality cost accounting. In control systems, the quality management has indeed been exposed to the largest changes which is consistent with the result above (Panel 3).

In performance measurement systems, the largest changes have emerged at whole organization as well as activity and process levels (Panel 4). About 10% of companies have a new performance measurement system at whole organization level and 10% have totally revised the old system. Table 3 presents the average values and standard deviations for the summary measures of MA change that are calculated summing up the variables measuring change in each class. Furthermore, there is a summary measure, total system change (TSC), that measures change over all the four classes. These measures cannot be directly compared with each other because the number of MASs are different for the classes. Therefore also the change variable averaged for the number of MASs in the class is presented in the last column. There are no large differences in change intensity between the classes. However, the averaged variable is the highest for the change in performance measurement systems (PMC).

(TABLE 2 ABOUT HERE)

(TABLE 3 ABOUT HERE)

The means and standard deviations of the slowing down and speeding up variables are presented in Table 4. *Clearly the most significant slowing down factor for MAS change is the inadequacy of time of employees to change projects (Panel 1).* The average value of this factor is 2.226 or between moderate and considerable effects. In addition to that, also contentment with the existing systems and staying of the leaders of the company as the same have a significant slowing down effect on MAS change. So there seems to be a shortage of important catalysts and facilitators for change. *The most important speeding up factors are firstly catalysts: need to improve productivity, profitability, and financial control (Panel 2).* In addition, change of the information needs of the management is a significant catalyst. As a facilitator, good willingness of the organisation to make changes has also an important role in MAS change. (Note that the postal questionnaire was accompanied by several company visits to support interpretation. These visits showed us things that are consistent with the results above: due to rapid growth the management in small technology companies is usually too busy for any MA change projects although they are willing to do so and recognize the need to improve the company's productivity and economic performance.)

(TABLE 4 ABOUT HERE)

#### 4. SUMMARY OF RESULTS

The objective of this study was to describe MA change in Finnish small technology companies on the basis of a postal questionnaire carried out in 1998. The number of respondents for the survey was only 93 so that the results are preliminary. The results show that, from managerial calculations, the most significant changes have happened in cost, short-term profitability, and pricing calculations. Furthermore, largest changes in cost accounting systems have emerged product costing. So the results imply that a prominent change in product cost calculations has taken place and affected profitability and profit calculations that

use product cost information. In control systems, the quality management has been exposed to the largest changes. In performance measurement systems, the largest changes have emerged at whole organization as well as activity and process levels.

The most significant slowing down factor for MAS change is the inadequacy of time of employees to change projects. However, also contentment with the existing systems and staying of the leaders of the company as the same have a significant slowing down effect on MAS change. Followingly, there seems to be a shortage of important catalysts and facilitators for change. The most important speeding up factors are firstly catalysts: need to improve productivity, profitability, and financial control. And the change of the information needs of the management is a significant catalyst, too. When considering facilitators, good willingness of the organisation to make changes has also an important role in MAS change.

## References

1. Granlund, M. & K. Lukka. It's a Small World of Management Accounting Practices. *Journal of Management Accounting Research*. 10. 1998, 153-179.
2. Green, F. B. & F. E. Amenkhienan. *Accounting Innovations: A Cross-Sectional Survey of Manufacturing Firms*. Cost management. Spring. 1992, 58-64.
3. Hyvönen, T. *Organisaatiomuutos ja laskentajärjestelmä*. Tutkimus case-yrityksen laskentajärjestelmän muutosprosessista. University of Tampere. School of Business Administration. A1: 45. Tampere. 1999.
4. Laitinen, E. K. Management Accounting Systems (MAS) in Three Types of Finnish Firms: Challenges for Management Accounting. *The Finnish Journal of Business Economics*. 4. 1995, 391-414.
5. Libby, T. & J. H. Waterhouse. Predicting Change in Management Accounting Systems. *Journal of Management Accounting Research*. 8. 1996, 137-150.
6. Lukka, K. & M. Granlund. Cost Accounting Practice in Finland. The 17th Annual Congress of the European Accounting Association. Venice, Italy. 6-8 April 1994.
7. Lukka, K. & M. D. Shields. Innovations in Management Accounting Focus. *Management Accounting (UK)*. March. 1999, 33-34.
8. Malmi, T. *Toimintolaskennan & Prosessien kehittämisen liittäminen Balanced Scorecardiin*. Unpublished presentation in Helsinki Softech Fair. 3.9.1998.
9. Partanen, V. *Laskentatoimen muutos ja organisaatiokulttuuri*. Case: toimintolaskennan implementointi. Publications of the Turku School of Economics and Business Administration. D-3. Turku, 1997.
10. Pellinen, J. Unfolding a Management Accounting System Change. *Jyväskylä Studies in Computer Science, Economics and Statistics*. 39. Jyväskylä, 1997.
11. Shields, M. D. Management Accounting Practices in Europe: A Perspective from the States. *Management Accounting Research*. 9. 1998, 501-513.

**TABLES**

**TABLE 1. Background information of sample companies (N=93).**

**PANEL 1. Means, medians and fractiles.**

	Mean	Lower quartile	Median	Upper quartile
Net sales (MFIM)	62,09	6,75	16,50	44,25
Number of employees	64,99	15,00	30,00	50,00
Number of accountants	2,43	1,00	1,50	3,00
Average 5-year growth rate in net sales	27,05	7,00	15,00	25,00
Average 5-year return on investment	55,07	6,50	18,00	33,50
Percent of export in net sales	27,93	3,00	18,00	50,00
Percent of R&D cost in net sales	8,41	1,50	3,50	10,00
Percent of accountants in employees	6,02	2,44	5,26	8,33

**PANEL 2. Percentage distributions.**

**Independence of company:**

	Number of firms	Percent of firms
Not a member of a group of firms	63	67,74
Independent member of a group of firms	17	18,28
Dependent member of a group of firms	5	5,38
A group of firms	8	8,60
<b>In total</b>	<b>93</b>	<b>100,00</b>

**Main industrial category:**

Manufacturing	61	65,59
Service	32	34,41
<b>In total</b>	<b>93</b>	<b>100,00</b>

**Main strategy:**

Mass production to many customers	13	14,13
Mass production to a few customers	3	3,26
Customized products to many customers	33	35,87
Customized products to a few customers	43	46,74
<b>In total</b>	<b>92</b>	<b>100,00</b>

**Level of competition:**

Low competition	7	7,61
Moderate competition	42	45,65
High competition	43	46,74
<b>In all</b>	<b>92</b>	<b>100,00</b>

**Number of decision-making levels:**

Small number	49	52,69
Moderate number	38	40,86
High number	6	6,45
<b>In all</b>	<b>93</b>	<b>100,00</b>

**TABLE 2. Change in Management Accounting Systems (MAS).****Scale of the change:**

No change or system not used at all	0 (E = System is not used at all)
Small change	1
Moderate change	2
Considerable change	3
Total revision of system	4
New system introduced	5

**PANEL 1. Managerial calculations.**

	Mean	Standard deviation	Percent of responses:		
			E	4	5
1. Cost calculations	2,226	1,603	5	7	12
2. Pricing calculations	1,925	1,408	5	10	5
3. Production calculations	1,247	1,523	35	5	5
4. Marketing calculations	1,226	1,526	36	4	8
5. Personnel budget calculations	1,172	1,404	29	3	4
6. Short-term profitability calculations	2,011	1,550	9	15	4
7. Long-term profitability calculations	1,699	1,607	16	9	7
8. Short-term financial calculations	1,892	1,492	7	9	6
9. Long-term financial calculations	1,559	1,521	16	7	4
10. Short-term investment calculations	1,409	1,583	20	8	6
11. Long-term investment calculations	1,387	1,482	25	5	6
12. Profit centre profitability calculations	1,355	1,755	41	5	9
13. Non-financial performance calculations	1,204	1,612	28	6	9
14. Environmental calculations	0,527	1,372	76	3	6
15. Human resource calculations	0,516	1,129	65	3	3

**PANEL 2. Cost accounting systems.**

1. Product costing
2. Customer costing
3. Project costing
4. Cost center cost accounting
5. Activity-based costing
6. Target costing
7. Quality cost accounting
8. Environmental cost accounting
9. Life cycle costing

Mean	Standard deviation	Percent of responses:		
		E	4	5
<b>1,914</b>	1,698	5	9	13
1,677	1,746	23	9	11
1,742	1,648	13	9	9
1,409	1,596	21	11	5
1,000	1,602	44	5	9
0,817	1,444	57	5	5
1,462	1,839	35	8	15
0,527	1,380	76	5	6
0,785	1,566	71	5	8

**PANEL 3. Control systems.**

1. Production control system
2. Logistic control system
3. Quality management
4. Time-based management
5. Activity-based management
6. Business Process Re-engineering
7. Continuous improvement of processes
8. Integrated performance measurement
9. Benchmarking

Mean	Standard deviation	Percent of responses:		
		E	4	5
1,656	1,772	25	10	10
1,538	1,742	31	9	7
<b>2,387</b>	1,800	17	11	19
1,032	1,557	42	6	6
0,946	1,556	48	4	9
1,473	1,868	40	9	12
1,828	1,730	22	6	12
1,226	1,662	43	4	10
1,495	1,773	37	5	12

**PANEL 4. Performance measurement.**

1. Individual employee level
2. Team or cell level
3. Activity and process level
4. Profit centre level
5. Whole organization level

Mean	Standard deviation	Percent of responses:		
		E	4	5
1,387	1,668	26	7	10
1,366	1,756	33	10	10
<b>1,828</b>	1,698	18	9	10
1,473	1,704	30	5	11
<b>1,957</b>	1,635	6	10	10

**TABLE 3. Means and deviations of the summary measures for change.**

	Mean	Standard deviation	Mean / # of MASs
Managerial calculations change (MCC)	21,355	15,591	1,424
Cost accounting change (CAC)	11,333	10,749	1,259
Control systems change (CSC)	13,581	11,249	1,509
Performance measurement change (PMC)	8,011	6,616	1,602
Total system change (TSC)	54,280	39,762	1,428

**TABLE 5. Means and standard deviations for the slowing-down and speeding-up factors of change.**

**Scale of effect:**

No effect at all	0
Small effect	1
Moderate effect	2
Considerable effect	3
Conclusive effect	4

**PANEL 1. Factors that have slowed down the change in MAS.**

	Mean	Standard deviation
<b>INFORMATION NEEDS</b>		
1. Contentment with the existing systems	1,634	1,317
2. Staying of the information needs of the management unchanged	1,118	1,232
3. Staying of the organisation structure of the company unchanged	1,366	1,381
4. Staying of the leaders of the company as the same	1,430	1,314
5. Staying of the strategy of the company unchanged	1,376	1,310
<b>CHANGES IN TECHNOLOGY AND ENVIRONMENT</b>		
6. Staying of the production technology of the company unchanged	1,258	1,224
7. Staying of the competition unchanged or diminishing	0,892	1,047
8. Staying of the market unchanged or diminishing	0,968	1,088
<b>UNWILLINGNESS TO CHANGE</b>		
9. General unwillingness of the organisation to make changes	1,280	1,246
10. Unwillingness of the management to make changes	0,935	1,041

**RESOURCES FOR CHANGE**

- 11. Weak availability of the suitable new methods (for example ABC)
- 12. Weak availability of the suitable new software
- 13. Difficult availability of the expertised employees
- 14. Difficult availability of the budget allowances to change projects
- 15. Inadequacy of time of employees to change projects

**OBJECTIVES FOR CHANGE**

- 16. No clear need for the improvement of the profitability
- 17. No clear need for increasing the productivity
- 18. No clear need for intensifying the financial control
- 19. No clear need for reducing employment

**EXTERNAL REQUIREMENTS**

- 20. No demands from outside the company to change

**OTHER**

- 21. Some other factor

1,097	1,180
1,258	1,215
1,258	1,179
1,194	1,163
<b>2,226</b>	<b>1,269</b>
0,989	1,184
0,892	1,108
0,968	1,098
1,043	1,242
0,355	0,803
0,151	0,675

**PANEL 2. Factors that have speeded up the change in MAS.**

**INFORMATION NEEDS**

- 1. Discontentment with existing systems
- 2. Change of the information needs of the management
- 3. Change of the organisation structure of the company
- 4. Change in the leaders of the company
- 5. Change of the strategy of the company

**CHANGES IN TECHNOLOGY AND ENVIRONMENT**

- 6. Change of the production technology of the company
- 7. Tightening of the competition
- 8. Expansion of the market

**WILLINGNESS TO CHANGE**

- 9. Good willingness of the organisation to make changes
- 10. Good willingness of the management to make changes

**RESOURCES FOR CHANGE**

- 11. Good availability of the suitable new methods
- 12. Good availability of the suitable new software
- 13. Easy availability of the expertised employees
- 14. Easy availability of the budget allowances to change projects

Mean	Standard deviation
1,957	1,318
<b>2,194</b>	<b>1,385</b>
1,602	1,453
0,892	1,246
1,194	1,218
1,086	1,080
1,656	1,238
1,763	1,280
1,613	1,053
<b>2,043</b>	<b>1,179</b>
0,925	1,045
0,946	1,046
0,742	0,896
0,871	0,969

15. Adequacy of time of employees to change projects

0,925	1,106
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**OBJECTIVES FOR CHANGE**

16. Need for the improvement of the profitability

2,161	1,424
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17. Need for increasing the productivity

2,269	1,360
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18. Need for intensifying the financial control

2,151	1,351
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19. Need for the reducing of the labour

1,000	1,260
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**EXTERNAL REQUIREMENTS**

20. Demands from outside company to change

0,774	1,162
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**OTHER**

21. Some other factor

0,774	1,162
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## MAJANDUSANALÜÜSI EESMÄRKIDE JA ÜLESANNETE TEISENEMINE 20. SAJANDI LÕPU EESTIS

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Majandusarvestus, sealhulgas majandusanalüüs on ettevõtete juhtimissüsteemi oluline koostisosa ja alus ratsionaalsetele juhtimisotsustele. Liberaalse turumajanduse tingimustes edu tagamiseks kasvab ettevõtjatel vajadus oma tegevuse igakülgse majandusliku analüüsi järele. Vaatleme, millised muutused analüüsitegevuse sisu on kaasnenu Eesti ärikeskkonna järskude muutustega viimase kümne kuni kahekümne aasta jooksul.

Majandusanalüüsi üldise eesmärgina on alati nähtud ettevõtte tegevuse majandusliku efektiivsuse tõstmise võimaluste leidmist. Sotsialismi tingimustes oli sellel eesmärgil küll deklaratiivne iseloom, sest ettevõtetel puudus konkreetne omanik ja juhtkond ei olnud efektiivsuse tõstmiseks piisavalt motiveeritud. Majandusanalüüs taandus siis pigem plaani täitmise kontrollimise vahendiks ning arvukatest normatiividest hälbimise põhjuste selgitamiseks. Koos turumajandusele üleminekuga ja omandisuhete muutumisega sai ka analüüsitegevus uue sisu. Samas tekkis Eestis 90-ndate alguses hulgaliselt väikesi ettevõtteid, kus puuduvad analüüsi kogemused ja oskused. Mõnedes suurettevõtetes on probleeme analüüsitegevuse kohandamisega muutuva ärikeskkonna tingimustele.

Majandusanalüüse võib lähenemisnurga järgi liigitada strateegilisteks ja taktikalisteks, retrospektiivseteks ja prognoosivateks, finantsmajanduslikeks ja tehnilis-majanduslikeks jne. Igal analüüsilüüsil on täita oma spetsiifilised ülesanded. Analüüsiliikide valik sõltub nii ettevõtte omanikest, juhtkonnast, ettevõtte arengufaasist kui ümbritsevast ärikeskkonnast ja selle muutumise kiirusest. Eelmistel kümnenditel oli domineerivaks taktikaline retrospektiivne analüüs kusjuures keskenduti peamiselt tehnilis-majanduslikele probleemidele, viimase kümne aasta jooksul on toimunud olulised muutused.

Vastavalt sellele, kas analüüsi käigus käsitletakse ettevõtte arengu seisukohalt olulisi fundamentaalseid probleeme, ettevõtte seoseid väliskeskkonnaga ja pikemat ajaperioodi või jooksivaid probleeme, võib jaotada analüüsid strateegilisteks ja taktikalisteks.

Loomulikult ei saa alahinnata taktikalise analüüsi tähtsust ettevõttes jooksvate olukordade muutustele reageerimisel ja tegevuse parandamise konkreetsete reserve/võimaluste väljaselgitamisel, kuid kestva edu saavutamiseks on vaja 1) tegelda õigete asjadega ja 2) teha neid asju õigesti. Strateegiline analüüs peaks andma vastuse küsimusele, milline on ettevõtte potentsiaal, konkurentsipositsioon ja kas ettevõtte tegutseb õiges suunas. Korralik strateegiline analüüs on aluseks ettevõtte arengustrateegia väljatöötamisele. "Valede asjade õigesti tegemine" ei kindlusta ettevõtjale edu.

Paljude ettevõtjate viga seisnebki selles, et tegeldakse harjumuspärase toodanguliikidega, analüüsimate seejuures turu vajadusi, konkurentsi ning enese tugevaid ja nõrku külgi, võimalusi ja riske vastaval tegevusalal. Seega on muutunud majandamistingimustes vaja rohkem tähelepanu pöörata strateegilisele analüüsile, millega luuakse alus ettevõtte pikaajalisele edule.

Strateegiline analüüs kujutab endast loovat protsessi, mille käigus ettevõtte strateegilise seisundi määratlemisel jõutakse ühistele seisukohtadele ja luuakse ühtsed väärtushinnangud. Ettevõttes peaks saama fikseeritud strateegiline liin, mille järgimine on kohustuslik kõigile töötajatele ja mille raamides igauks on sunnitud analüüsima oma tegevuse otstarbekust ja tulemuslikkust. Tippjuhtkond jälgib ainult ettevõtte kui terviku tulemuste kujunemist, annab hinnanguid arengutasemele ja -tendentsidele ning koolitusvajadustele. Kiiresti muutuva keskkonna konkreetsetele tingimustele vastava parima hetkelahenduse peavad ühtse arengustrateegia raames leidma täitjad ise.

Seega ei tohiks vähendada ka taktikalise analüüsi jaoks kulutatavat aega, sest osa ettevõtjaid kasutab oma igapäevatoos hulgaliselt ebaratsionaalseid töövõtteid, mis kokkuvõttes muudavad tegevuse ebaefektiivseks. Analüüsi arvelt kokku hoitud aeg kulutatakse mõttetule rabelemisele sageli mitmekordselt, kusjuures võimalik majanduslik efekt jääb saavutamata. Eriti on see probleemiks väikeettevõtetes, kus omanik ise peab tegelema absoluutselt kõige alates tegevuse planeerimisest kuni kõige lihtsamate ja töömahukamate tööoperatsioonideni. Ettevõtjad ei tunneta sageli veel vajadust kaasata analüüsitegevusse vastava ala konsultante ega arenda ennast piisavalt erialasel täiendõppel.

Vastavalt sellele, kas analüüsil kasutatakse eelmiste perioodide tegelike andmeid või üritatakse opereerida tulevaste perioodide ligikaudsete näitajatega, võib analüüse jagada retrospektiivseteks ja prognoosanalüüsideks.

Stabiilse arengu korral on võimalik ratsionaalseid juhtimisotsuseid vastu võtta ka ainult eelmise perioodi tegelike tulemuste põhjal. Muutuvates majandamistingimustes õigete juhtimisotsuste vastuvõtmiseks ei piisa ainult minevikunäitajate arvestamisest, vaid arvesse tuleb võtta võimalikke muutusi ärikeskkonnas lähitulevikus. Piltlikult võib erineval lähenemisel teostatud analüüsi põhjal juhtimisotsuste vastuvõtmist võrrelda auto juhtimisega. Retrospektiivne lähenemine võrdub olukorraga, kus autojuhi otsused tehakse tagaaknast või tahavaatepeeglist avaneva vaate põhjal, samas kui prognoosanalüüs põhineb esiaknast avaneval vaatel.

Eelmiste perioodide andmetele tugineva analüüsi juures kerkib üles analüüsi operatiivsus probleemistik. Kui ettevõtte raamatupidamisarvestus on mehhaniseeritud ja algdokumendid sisestatakse vahetult pärast tehingute toimumist, siis on isegi retrospektiivse analüüsi baasil võimalik vastu võtta adekvaatseid juhtimisotsuseid, sest ajavahemik olukorra muutusest analüüsini ja korrigeeriva tegevuseni ei ole pikk. Juhtimises oleks sel juhul võimalik rääkida reageerivast käitumisest. Kui aga ettevõttes suudetakse koostada eelmise aasta aruanne järgmise aasta juuliks ja vahepeal puudub selge ülevaade majanduslikust olukorrast, siis niisugusel juhul võrdub retrospektiivne analüüs tõelise tagantjärele tarkusega.

Eraldi käsitlemist nõuab ka analüüsi sügavuse küsimus. Ettevõttes on võimalik: 1) piirduda ainult raamatupidamisaruannetest saadavate andmetega ja jälgida olulisemate kvantitatiivsete tulemusnäitajate dünaamikat võrreldes varasemate perioodidega, 2) arvutada mitmesuguseid suhtarve firma majandusliku olukorra ja tegevuse efektiivsuse põhjalikumaks hindamiseks ja 3) avada tulemusi mõjutavad põhjuslik-tagajärgsed seosed, leida tulemuste halvenemise konkreetset põhjust ning kavandada tegurite muutmise kaudu tulemuste parandamise abinõud. Ettevõtteid, kus toimiks kõiki kolme taset süsteemselt ühendav analüüsiskeem, on Eestis suhteliselt vähe.

Sisuliselt sama probleemistik avaneb majandusanalüüside liigitamisel finants- ja tehnilis-majanduslikeks analüüsideks. Kaasaegse finantsanalüüsi meetodika oma paljude rahandussuhtarvudega jõudis Eestisse mõned aastad tagasi ning pole veel juurdund paljude ettevõtjate analüüsipraktikasse. Rahandussuhtarvude abil on võimalik anda mitmekülgne hinnang ettevõtte finantsseisundi ja tegevuse tulemuslikkuse kohta, leida nõrgad kohad finantsseisundis ja reservid, mida võiks edaspidi ära kasutada. Põhjalikumad järeldused, muutuste põhjused ja konkreetsed abinõud olukorra parandamiseks avatakse finantsanalüüsiga seostatud tehnilis-majandusliku analüüsi käigus. Paljudel väikeetevõtjatel puudub finantsuhtarvude iseseisva interpreteerimise oskus.

Põhimõtteliselt võib analüüsil eristada kahte lähenemisviisi – formaalset ja tunnetuslikku. Puhtalt formaalsel lähenemisel osatakse küll arvutada mitmesuguseid majanduslikke näitajaid ning võrrelda neid üldiste hindamiskriteeriumidega, kuid ei nähta protsesse mõjutavaid tegureid ning nende muutmise kaudu tulemuste parandamise võimalusi. Puhtalt tunnetuslikul tasemel tegutsetakse sisetunde või vaistu järgi, teadmata, millised on reaalsed majandusnäitajad. Pikaajalise ja tagasilöökideta edu saavutamiseks on vajalik nii analüüsimeetodite tundmine kui majandusprotsesside tunnetamise oskus. Ainult sellisel lähenemisel võime loota ka rahvusvahelise konkurentsis püsima jääda.

Majandusanalüüsi konkreetsete ülesannetena praeguses muutuv asu ettevõtluskeskkonnas tuleks nimetada turu hindamist ning ettevõtete rahastamiseks tarvilikke investeeringute tasuvusarvutusi ja rahavoogude analüüsi. Seoses tehnoloogia uuendamise vajadusega on päevakorral alternatiivsete tehnoloogiate võrdlev analüüs. Kasumi suurendamiseks oleks tarvilikud omahinna, kulude ja tasuvuspunkti analüüsid ning müügitulemuste hindamine. Rahvusvaheliste korporatsioonide jaoks hädavajalikud rahandusteooriad ei oma umbes 95 protsendi Eesti ettevõtete jaoks praktilist tähtsust.

Kokkuvõtteks tuleb nentida, et seoses majandamistingimuste kiire muutumisega ei saa Eesti ettevõtetes hakkama harjumuspäraselt tegutsedes. Iga juhtimisotsust tuleks vaagida majandusliku otstarbekuse seisukohast, kasutades selleks majandusanalüüsi mitmekesiseid vahendeid. Vaba turumajanduse tingimustes jäävad püsima ainult need, kes suudavad tegutseda tulemuslikumalt. Otstarbekama tegutsemise võimaluste avastamise võti on aga regulaarne ja igakülgne majandusanalüüs.

## Kasutatud kirjandus

1. Kubr, M. Management consulting: A guide to the profession. – Geneva, 1986.
2. Mereste, U. Majandusanalüüsi teooria. – Tln.: Valgus, 1984.
3. Rünkla, J. Ettevõtte finantsseisund, konkurents ja strateegia. – Külim, 1996.
4. Ward, K. Strategic Management Accounting. – GB M & A Thomson Litho, 1993.

# CHANGING OBJECTIVES AND TASKS OF ECONOMICAL ANALYSIS IN ESTONIAN IN THE END OF THE 20<sup>TH</sup> CENTURY

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## Summary

In relation to the transition to market economy both the role, purposes and tasks of an economical within a company have changed considerably. During the socialist period analytical activities often had just a formal purpose. The main focus was on retrospective approach, analysis was just seen as a mean used to check whether the plans were fulfilled there was really no need for a strategic analysis, as the business environment was rather static.

Changing property relations and quickly transforming business environment ask for a strategic process of analysis to be initiated within a company, as long-term success can only be achieved by considering the string and weak points of a company and market opportunities provided. Strategic approach also offers the opportunity to solve current problems on a more efficient basis.

Inevitably, retrospective approach must be replace by a approach aimed at future prospects, as there will be less and less time left for reacting to the ongoing changes. To perform a deep analysis of the financial-economical and business situation one most have a good knowledge of various methods of analysis a good sense of relations between different economical parameters. Only in such a way the objective of the economical analysis – find ways to increase economic efficiency of a company – can be achieved.

## ПОЛИТИКА УЧЁТА НЕМАТЕРИАЛЬНЫХ АКТИВОВ, СОЗДАНЫХ САМИМ ПРЕДПРИЯТИЕМ

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Многие предприятия для обеспечения стабильности конкурентоспособности своей продукции на рынке и в целях способствованию дальнейшему развитию предпринимательской деятельности, значительные средства вкладывают в исследовательскую работу и работу по развитию, а также ежегодно всё большее количество предприятий обращают внимание на защиту своего интеллектуального имущества и регистрируют в Правлениях по Патентам свои изобретения, образцы дизайнов и товарные знаки. Вместе с тем, в бухгалтерском учёте актуальным становится вопрос об условиях включения в финансовые отчеты нематериальных элементов, созданных самим предприятием. Существуют два различных способа включения затрат по созданию данных элементов в бухгалтерский баланс: признать активом в составе нематериальных активов или непосредственно включить в часть расходов отчёта о прибылях и убытках.

Включение в состав активов нематериальных элементов, созданных самим предприятием, оправдано только тогда, если эти элементы соответствуют критериям признания активов. Сравнение в Международных бухгалтерских стандартах, в Соединенном Королевстве и США, принятых критериев признания активов дано в следующей таблице.

Таблица 1

### Критерии признания элемента хозяйственной операций активами предприятия

№ п/п	КМБС [1]	СК [2]	США [3]
1.	возможно, что любая, с данным элементом <u>связанная будущая экономическая выгода поступит предприятию</u> .	существуют достаточные доказательства о существовании элемента (включая соответствующие доказательства о поступлении <u>будущих доходов</u> );	элемент воплощает <u>экономическую выгоду</u> , которую хозяйственная единица <u>получает от использования данного элемента в будущем</u> .
2.	элементы имеют <u>себестоимость или стоимость, которую можно достоверно оценить</u> .	элемент может быть <u>оценен в денежном выражении с достаточной достоверностью</u> .	элемент <u>должен быть измеримым, существенным и достоверным</u> .

Кроме того, в отношении признания нематериальных элементов активами, МБС № 38 “Нематериальные активы” предусматривает ещё дополнительные условия для данных в таблице критериев: элементы должны быть идентифицируемыми, должны находиться под контролем предприятия и должны соответствовать другим, в дальнейшем в тезисах указанным, критериям.

Подытоживая принятые в международном масштабе критерии признания активов, можно сделать вывод, что при оценке признания нематериальных элементов активом,

необходимо учитывать степень достоверности стоимости данных элементов, возможность получения экономической выгоды в будущем от использования данных элементов, их отделяемость от других активов предприятия и существование контроля предприятия.

В международном масштабе не принят однозначный подход к признанию нематериальных элементов, созданных самим предприятием, статьей актива баланса. Требования 4 директивы Европейского Сообщества, рекомендации Международного бухгалтерского стандарта и существующие в Латвии правила, относящиеся к капитализации в балансе нематериального элемента, созданного внутри предприятия, сравнены в следующей таблице.

Таблица 2

**Сравнение политики капитализации нематериальных элементов, созданных самим предприятием**

Статьи нематериальных активов	4 директива ЕС “О годовых отчетах компаний определенных видов”	МБС № 38 “Нематериальные активы”	Латвия		
			Экономическая литература	Финансовый учёт	Налоговый учёт
Исследовательские затраты и затраты по развитию	допускает, но приоритет имеет национальное законодательство каждого государства	исследовательские затраты - не допускает  затраты по развитию - допускает частично (при выполнении соответствующих условий)	допускает частично (в зависимости от формы деятельности предприятия)	допускает	не допускает
Концессии, патенты, лицензии, товарные знаки и подобные права	допускает, но приоритет имеет национальное законодательство каждого государства	допускает частично (при выполнении соответствующих условий)	не допускает	не допускает	не допускает
Нематериальная стоимость предприятия ( <i>goodwill</i> )	не допускает	не допускает	не допускает	не допускает	не допускает

Во всех рассматриваемых документах одинаковый подход наблюдается по отношению к не включению в актив баланса нематериальной стоимости предприятия (*goodwill*), созданного самим предприятием. Основой подхода является факт, что стоимость данного элемента не возможно оценить достоверно и её не возможно контролировать, так как предприятие не может длительное время контролировать своих работников -

они могут изменить своих работодателей, а также клиенты предприятия могут выбрать других партнеров по сделкам и т.п.

4 директива Европейского Сообщества “О годовых отчетах компаний определенных видов” допускает признание статьей актива баланса исследовательские затраты, затраты по развитию, а также концессии, патенты, лицензии, товарные знаки и подобные права и активы, возникшие на самом предприятии, в то же время указывая, что в данном вопросе приоритетом является национальное законодательство каждого государства.

В соответствии с рекомендациями МБС № 38 “Нематериальные активы”, созданные внутри предприятия нематериальные активы, находящиеся в стадии исследования, не могут быть признаны статьей актива баланса, так как нет уверенности в том, что в результате исследований предприятие в будущем получит экономическую выгоду. Таким образом, допускается, что исследовательские затраты включаются в результат финансовой деятельности сразу после их возникновения. Немного отличается подход, установленный Международным стандартом, к нематериальным активам, возникшим на самом предприятии в результате работ по развитию. Полученные в результате этого нематериальные активы могут быть признаны статьей актива баланса только тогда, если предприятие может доказать соответствие всем указанным критериям:

1. существует техническая возможность комплектации актива для его использования для собственных нужд предприятия или продажи;
2. существует намерение завершить актив для удовлетворения собственных нужд предприятия или продажи;
3. существует способность, умение использовать актив для удовлетворения собственных нужд предприятия или продажи;
4. известно, что актив в будущем создаст поток экономической выгоды, т.е. предприятие может продемонстрировать, что существует рынок реализации продукта, или может доказать целесообразность актива, если он будет использован для удовлетворения собственных нужд предприятия;
5. на предприятии существуют адекватные технические, финансовые и другие ресурсы для завершения актива и использования для удовлетворения собственных нужд предприятия или продажи;
6. возможно достоверно оценить расходы, связанные с созданием актива в стадии развития.

Исследуя условия признания нематериальных активов, созданных в результате работ по развитию, в составе статей актива баланса предприятия, можно сделать вывод, что данные шесть условий включают в международном масштабе критерии признания элемента активом. Однако, так как использование или продажа нематериальных активов созданных данным способом, связана с соответствующей степенью неопределенности, то для ограничения риска, Международным стандартом предусмотрены дополнительные условия.

Необходимо заметить, что в большинстве случаев на практике сложно выполнить все условия признания нематериальных активов, созданных в результате работ по развитию. В отдельных случаях могут быть достоверно оценены расходы по развитию самим предприятием созданного нематериального актива. Например, на основании системы учета расходов предприятия, часто возможно оценить расходы по персоналу и другие расходы, возникающие при разработке предприятием нематериальных активов.

Однако, в большинстве случаев, расходы по развитию нематериального актива, созданного самим предприятием, не могут быть оценены с высокой степенью достоверности. Например, расходы по деятельности, в результате которой предусмотрено создать или поддерживать товарный знак специфического продукта, могут включать в материальном выражении неопределяемые факторы - улучшение общего настроения персонала предприятия и поддержание или улучшение имиджа самого предприятия.

Американские ученые признают, что расчет стоимости нематериальных активов, созданных самим предприятием, связан не только с трудностями оценки этих активов, но и с трудностями самого расчета. Свою точку зрения американские ученые основывают на том, что, например, в результате исследовательских работ и работ по развитию предприятия, может быть создано несколько патентов, но несмотря на это, стоимость каждого патента можно определить по методам оценки, однако общий результат зависит от распределения общих расходов предприятия. Поэтому, по мнению американских ученых, существует возможность получения неадекватной оценки [6].

Как следует из сравнительной таблицы, в Латвии в большинстве случаев признание в статье актива баланса созданных самим предприятием нематериальных активов не разрешено, исключения составляют исследовательские затраты и затраты по развитию, которые для нужд финансового учёта могут быть признаны активом.

В экономической литературе Латвии непризнание активом прав интеллектуального имущества, созданных собственными силами предприятия, обоснована следующим образом: “Разрешение включить в нематериальные вложения патенты и товарные знаки разработанные внутри предприятия, дает возможность искусственно увеличить объем нематериальных вложений, поэтому в Латвии это не разрешено”. [7]

Из нынешней редакции ст.18 закона “О годовых отчетах предприятий” и рекомендаций Латвийских экономистов следует, что круг объектов интеллектуального имущества, включаемых в статью баланса “концессии, патенты, лицензии, товарные знаки и подобные права” практически сужается до одного объекта - “лицензия”. Данная точка зрения может быть обоснована тем, что лицензия является юридической основой передачи (продажи) производственного интеллектуального имущества и авторских прав другим физическим и юридическим лицам, которая оформляется лицензионным договором. Так, например, на основании лицензионного договора передаются (продаются) права пользования товарным знаком или патентом на изобретение или образец дизайна.

Хотя ст.18 закона “О годовых отчетах предприятия” прямо это не определяет, но она предусматривает предъявление только таких лицензий, за которые предусмотрена только единовременная уплата, т.е. лицензионные договоры, в которые включена конкретная договорная сумма. Если оплата договора установлена только в виде процентов от фактической реализации с ним связанной продукции или объема производства, то данная сумма на момент приобретения лицензии не известна, и вместе с тем не может быть включена в бухгалтерский баланс.

Из существующей в Латвии законодательной базы следует, что в бухгалтерском балансе не раскрываются патенты на изобретения или образцы лизайна полученные



самим предприятием и зарегистрированные товарные знаки. Значит, при получении предприятием регистрационного свидетельства своего товарного знака или патента на свое изобретение или образец дизайна, в бухгалтерии никакая запись не производится.

Однако использование прав интеллектуального имущества, разработанных и зарегистрированных самим предприятием, дает поток экономической выгоды в будущем, поэтому не включение в бухгалтерский баланс патентов на изобретения или образцы дизайнов и товарных знаков не допустимо.

При учете в балансе нематериальных активов, созданных собственными силами (патентов, товарных знаков), существует проблема - по каким критериям определить стоимость этих активов. По мнению авторов, основой определения стоимости данных нематериальных активов должны служить существующие на предприятии циклы разработки данных активов.

Анализируя создания на предприятии патента на изобретение и образец дизайна, товарного знака в рис. 1 и 2. показаны главные циклы разработки этих активов

По мнению авторов, на основании схемы, включенной в рис.1. стоимость патента на изобретение, созданное самим предприятием, образуется за счёт следующих элементов:

1. заработная плата работающих, участвующих в разработке патента на изобретение и обязательные платежи работодателя по социальному страхованию (разработка проекта изобретения, выполнение экспериментальных работ, изготовление макета продукта и нескольких готовых продуктов, испытания продукта);
2. стоимость основных средств, приобретенных для разработки конкретного патента, износ основных средств, используемых при разработке, (выполнение экспериментальных работ, изготовление макета продукта и нескольких готовых продуктов - экспериментальные стенды, измерительные установки, инструменты, соответствующие детали и т.п.);
3. стоимость материальных ценностей, использованных в результате разработки (выполнение экспериментальных работ, изготовление макета продукта и нескольких готовых продуктов - различное сырье и материалы);
4. расходы по выполненным другими юридическими и физическими лицами работам и услугам (разработка проекта изобретения и экспериментальная работа - расходы по консультативным услугам; представление изобретения Правлению по Патентам - расходы по юридическому оформлению и т. п.);
5. часть общих расходов предприятия.

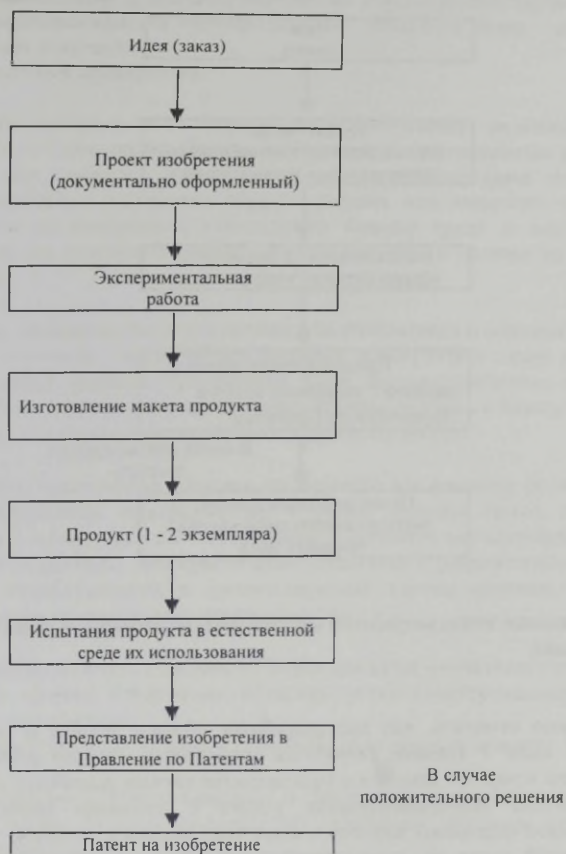


Рис. 1. Главные этапы разработки патента на изобретение на предприятии и его регистрации.

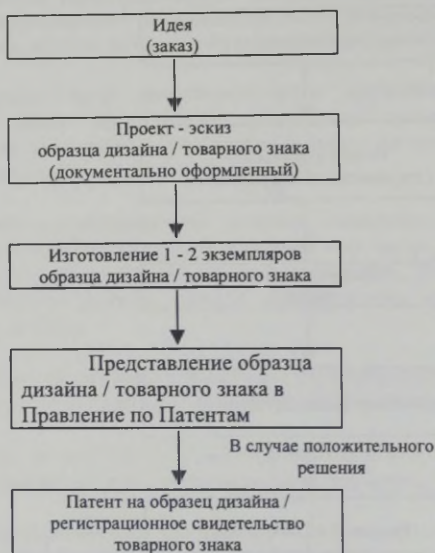


Рис. 2. Главные этапы разработки образца дизайна / товарного знака на предприятии и регистрации.

Необходимо отметить, что ход разработки образца дизайна и товарного знака на практике схож с этапами разработки изобретения. Главное различие – на этапах разработки товарных знаков и в большинстве случаев разработки образцов дизайнов, не включена экспериментальная работа с готовыми проектными эскизами, изготовление отдельных макетов и испытания образцов дизайнов, товарных знаков в естественной среде их использования, так как в результате разработки проектов данных объектов, которая главным образом происходит “на бумаге”, изготавливаются 1-2 готовые экземпляры, которые вместе с соответствующей документацией представляются Правлению по Патентам. Так как резких различий между разработкой патента на изобретение и образец дизайна и товарного знака нет, то и элементы, образующие их стоимость, идентичны:

1. заработная плата работающих, участвующих в разработке патента на образец дизайна или товарного знака и обязательные платежи работодателя по социальному страхованию (разработка проекта образца дизайна / товарного знака, изготовление нескольких готовых экземпляров);
2. стоимость основных средств, приобретенных для разработки конкретного объекта (главным образом для разработки образца дизайна), износ основных средств, используемых при разработке (изготовление нескольких экземпляров образца дизайна / товарного знака);
3. стоимость материальных ценностей, использованных в результате разработки (изготовление нескольких готовых экземпляров);

- расходы по выполненным другими юридическими и физическими лицами работам и услугам (разработка проекта образца дизайна / товарного знака - расходы по консультативным услугам);
- часть общих расходов предприятия.

Однако, необходимо заметить, что стоимость разработки патента на изобретение во многих случаях будет существенно больше по сравнению со стоимостью разработки образца дизайна или товарного знака. Данная ситуация объясняется тем, что по сравнению со стоимостью разработки образца дизайна или товарного знака, при разработке патента на изобретение используется больше труда и материальных ценностей, а также эта разработка требует больше времени и состоит из большего количества этапов.

Один из составных элементов стоимости патентов на изобретения и образцы дизайна и товарных знаков упомянут - часть общих расходов предприятия. Сразу возникают вопросы, какие общие расходы предприятия было бы целесообразно отнести к стоимости разработки данных объектов и пропорционально какому базису включить часть общих расходов в стоимость разработки конкретного объекта.

По мнению авторов, такие общие расходы предприятия как расходы по отоплению помещений и потреблению электроэнергии, а также расходы отдела снабжения предприятия, если у лабораторий по исследованию и развитию нет отдельного отдела снабжения, и другие расходы, непосредственно связанные с разработкой патента и товарного знака, осуществленной в соответствующий период времени, было бы приемлемо включить в стоимость разработки объектов.

На основании проведенного исследования, в Латвии для нужд финансового учёта было бы целесообразно принять следующую политику учета нематериальных активов созданных внутри предприятия:

- исследовательские затраты - включить в расходы того периода времени, когда они возникли;
- затраты по развитию - капитализировать в балансе, и в аналитическом учете предприятия данные расходы разделить по отдельным объектам развития и программам разработки;

Если по окончании отдельных работ по развитию полученный результат материализуется в виде зарегистрированного патента или товарного знака, и если предприятие считает, что выполняются критерии признания активом, включенные в МБС № 38 (предприятие имеет техническую возможность комплектации актива, цель завершения актива и возможность его использования, а также адекватные ресурсы для использования приобретенных прав интеллектуального имущества для удовлетворения внутренних нужд или продажи; известно какая экономическая выгода от использования или продажи данных прав будет в будущем; возможность достоверно оценить расходы по разработке данных прав), то соответствующие расходы по развитию проекта и программе разработки, вместе с расходами по юридическому оформлению образуют стоимость интеллектуального имущества созданного самим предприятием, которую допустимо включить в статью баланса *Кошчешии, патенты, лицензии, товарные знаки и подобные права* с соответствующим наименованием.

Однако, если по окончании отдельных работ по развитию полученный результат не высказывается в форме зарегистрированного интеллектуального имущества, то

накопленные расходы по данной разработке незамедлительно включаются в расходы отчетного периода.

3. Концессии, патенты, лицензии, товарные знаки и подобные права - капитализировать в балансе только такие права интеллектуального имущества, которые зарегистрированы в Правлении по Патентам и соответствуют включенным в МБС № 38 критериям признания активом.
4. Нематериальная стоимость предприятия (*goodwill*) - не признавать нематериальную стоимость созданную внутри предприятия отдельным объектом учета.

### Использованная литература

1. Framework for the Preparation and Presentation of Financial Statements.
2. Financial Reporting Standards № 5 Reporting the Substance of Transaction.
3. Statements of Financial Accounting Standards № 5, 6.
4. ЕС 4 директива О годовых отчётах компаний определенных видов.
5. IAS 38 Intangible Assets.
6. Хендриксен Э. С., Ван Бреда М. Ф. Теория бухгалтерского учета. Москва. Финансы и статистика. 1997. 547 стр.
7. J. Benze. Finansu grāmatvedība. Auditorfirma "Grāmatvedis". Rīga, 1995, 287. lpp.

## ВНУТРЕННИЕ АУДИТОРСКИЕ ПРОВЕРКИ И АУДИТОРСКИЕ КОМИТЕТЫ В ЭСТОНСКОЙ РЕСПУБЛИКЕ

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Нынешнее развитие нашей республики на таком этапе, где для успешного развития фирмы, кроме хорошего желания, необходимы знания и понимания о глобальных процессах и о процессах внутри фирмы. Неправильные расчёты рано или поздно приведут к экономическим трудностям. Для избежания такой ситуации необходимо на всех предприятиях, организациях и инстанциях создать эффективный внутренний контроль. Внутренний контроль обеспечит уверенность собственника, третьего лица, администрацию в хорошо функционирующей структуре. Внутренний контроль охватывает всю деятельность предприятия и организации; является независимым контрольным органом, который подчиняется представителю собственника или совету предприятия. Руководитель внутреннего аудита предьявляет совету один раз в квартал результаты внутреннего контроля. Часто проблемы выявленные внутренним контролем, не обсуждаются в совете из-за нехватки времени. Это в свою очередь вызвало на больших концернах, в банках создание аудиторского комитета, который собирается раз в месяц. Целью аудиторского контроля является предьявление заказов внутреннему контролю, согласование планов, анализ результатов внутреннего контроля, функции комитета и функции совета должны быть чётко разграничены. Это позволяет эффективнее внедрить предписания внутреннего контроля, которые отвечали бы требованиям и потребностям собственника. Чтобы согласовать функции комитета и отдела внутреннего контроля (аудита), необходимо внутреннему аудитору понять требования комитета.

Требования комитета следующие:

- квалифицированные аудиторы;
- ориентация на решение проблем;
- престиж предприятия;
- престиж руководства;
- юридическая ответственность

Аудитор должен видеть в лице комитета равноправного партнёра, который поддерживает действия аудитора и не стоит в оппозиции. В Эстонской Республике созданы аудиторские комитеты только на больших предприятиях. Причина в том, что в концернах, на предприятиях отсутствуют аудиторы, которые отвечали бы этому понятию. Фактором, влияющим на уровень проведения внутреннего контроля, является отсутствие квалифицированных аудиторов и их соответствующее обучение. Также отсутствует аттестация аудиторов, которая обеспечила бы лицензированных аудиторов и требовала бы соответствующего уровня их. Очевидно это проблема скорого времени.

Аудиторский комитет является "удлинением руки" аудитора, но нельзя забывать то, что комитет часто состоит из представителей разных областей экономики и поэтому аудитор представляет свои проблемы и планы коротко и сконцентрированно. В настоящее время аудитор не должен выполнять техническую работу, он является

одним членом администрации. Аудитор должен быть партнёром высшего руководящего состава (комитета), а также партнёром действующего руководящего состава (правления). Такое партнёрство вызвано следующими причинами:

- быстрый рост организации;
- решения принимаются высшим руководящим составом, а также действующим руководящим составом;
- система иерархии подчинения заменяется сетевой системой
- внедрение коллегиального стиля управления;
- потребность аудитора в расширении своей поддержки

Для оперативной и эффективной работы аудитора, а также для укрепления престижа предприятия, необходимо для больших предприятиях Эстонии создать аудиторские комитеты.

## References

1. Simmons, M. *Internal Auditing and Audit Committee*, 1995.
2. Courtemanche, G. *Audit Management and Supervision*, John Wiley and Sons, 1989.
3. *Krediidiastutuste seadus, Riigi Teataja*, 1999.

OF THE STUDY MATERIALS PROVIDING STUDENTS  
WITH INDEPENDENT WORK IN THE ACCOUNTING PRACTICALS

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As observed while carrying through the accounting practicals, longer exercises (the so-called from-balance-to-balance exercises) tend to consume considerably more time than other assignments. During practicals, the principles of the double entry accounting system will be introduced to the students, and they will learn to indicate the flows and account balances, as well as to compile the statements of account and of balance position. Yet there are some exercise questions that appear as more problematic for the students, such as making entries of the cost of capital assets on the balance sheet, calculating the actual cost of the goods manufactured, calculating the actual unit cost of goods realized, material valuation and other questions connected with miscellaneous business transactions. Practical experience has shown that these students that fail to settle some occasional single question are likely to fail also in solving the exercise as a whole (tests or home assignments).

The above-mentioned observations gave the authors the idea to compile a specially designed study material for solving the Accounting exercises. This material helps the students to improve their skills in dealing with the so-called "complicated questions", whereas there is no need to write the entire exercise concurrently from balance to balance. In the spring of 1999, such study material was published under the title "*Majandusarvestuse aluste lühiülesanded ja testid*" ("*Short Exercises And Tests For The Introductory Course In Accounting*") by the Tallinn Technical University Publishing House. The publication includes short exercises and selection-based tests on various issues covered in the Introduction to Accounting course. As the student's independent work is regarded as the objective of this study material, there are correct answers and commentaries provided in the key-section at the end of the booklet. Thus, the user will be able to check the correctness of his test or exercise answers himself. The material can be well made use of by the student for the purpose of revising various questions discussed in the Introduction to Accounting course. Furthermore, the study material provides the means for the student to prepare for examinations – and even more so in case of the test-format examinations -- as it gives the student a better chance to become adjusted to the characteristics of tests (selection-based tests).



## УЧЁТ АССИГНАЦИЙ В БЮДЖЕТНЫХ УЧРЕЖДЕНИЯХ

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Исходя из международных стандартов учёта и отчётности и четвёртой директивы ввропейского Союза с 01.01.1998 года в бюджетных учреждениях Эстонской Республики действует новый план счетов и с кассового принципа учёта перешли на принцип возникновения сделки. В связи с этим радикально изменился учёт утверждённого для учреждения бюджета.

По кассовому принципу учёта утверждённый бюджет не отражался на бухгалтерских счетах, по принципу возникновения сделки бюджет отражается на бухгалтерских счетах.

Принцип возникновения сделки в учёте бюджета имеет свои недостатки и преимущества.

Недостаток:

- большой объём работы.

Преимущества:

- прозрачность бюджета
- объективность отражения результатов;
- организация учёта расходов на объективной основе;
- лучшие возможности контроля;
- лучшая основа планирования.

Бюджет учреждения составляют ассигнации из государственного бюджета.

Министерство Финансов Эстонии в объяснениях плана счетов не даёт понятия ассигнаций. В общем, можно сказать, что ассигнации - это суммы, предназначенные для определённой цели. Ассигнации с точки зрения учёта можно подразделить на три группы:

1. Ассигнации для основной деятельности учреждения.
2. Ассигнации для инвестиций.
3. Ассигнации для дальнейшего перечисления другим учреждениям или физическим лицам (пособия, пенсии, социальная помощь и т.д.)

Ассигнации в виде утверждённого бюджета учреждения отражаются по трём вышеуказанным группам, с использованием следующих счетов:

- 1711 "Расчёты - утверждённый бюджет"  
В дебете счёта показывают утверждённые ассигнации бюджета для основной деятельности и инвестиций, а также изменения в бюджете.
- 1719 "Расчёты - в части средств бюджета текущего года"  
В кредите счёта показывают суммы расходов, оплаты которых из утверждённого бюджета, иными словами, кредитовый оборот этого счёта показывает использование бюджета, учитываемого в дебете счёта 1711.

- 1741"Расчёты по перечислениям - утверждённый бюджет"  
В дебете счёта показывают ассигнации, подлежащие дальнейшему перечислению. Эти ассигнации учреждение не может использовать для покрытия расходов по хозяйственной деятельности.
- 1749"Расчёты по перечислениям - средства бюджета текущего года"  
В кредите счёта показывают суммы перечислений. Кредитовый оборот этого счёта показывает использование бюджета, учитываемого в дебете счёта 1741.
- 1747"Расчёты по перечислениям - средства, которые перечисляют в следующий бюджетный год"
- 1791"Переходное сальдо" В дебете счёта показывают средства для основной деятельности и для инвестиций, которые перечисляют в следующий бюджетный год.
- 3011"Доход из бюджета" В кредите счёта отражаются суммы утверждённого бюджета для основной деятельности.
- 3019"Обратное перечисление дохода из бюджета" В дебете счёта отражается сумма, на которую уменьшают доход, отражённый в кредите счёта 3011. Доход уменьшают при закрытии бюджета основной деятельности на счёте 1711 в конце текущего года, при условии наличия неиспользованных сумм бюджета в текущем году.
- 3020"Доход от целевого финансирования основного имущества" В кредите счёта отражается сумма утверждённого бюджета для инвестиций.
- 7411"Ассигнации, подлежащие выплате" Это доходный счёт, в кредите которого отражается сумма бюджета по перечислениям.
- 7419"Обратное перечисление ассигнаций, подлежащих выплате" В дебете счёта отражается сумма, на которую уменьшают доход, отражённый на счёте 7411 в кредите. Доход уменьшают при закрытии бюджета на счёте 1741 в конце текущего года, при условии наличия неиспользованных сумм бюджета в текущем году.

Необходимо отметить:

- наименование счетов громоздкие;
- содержание наименования счетов часто непонятно;
- большое количество счетов для отражения ассигнаций

Далее приводятся проводки по учёту ассигнаций. Приведённые проводки не относятся к учёту ассигнаций в Государственной Кассе и в отделе финансов местного самоуправления.

Проводки.

1. Утверждён бюджет учреждения для основной деятельности.  
Дебет 1711 Кредит 3011
2. Утверждён бюджет учреждения для инвестиций.  
Дебет 1711 Кредит 2210"Целевое финансирование имущества"  
Счёт 2210 является счётом обязательств. У учреждения возникает при утверждении бюджета инвестиций обязательство приобрести основное имущество. По закону государственного бюджета учреждение может использовать целевое финансирование только после отчисления необходимых сумм со стороны государственной кассы.
3. Утверждён бюджет учреждения по ассигнациям в части перечислений.  
Дебет 1741 Кредит 7411

5. Приобретение основного имущества за счёт бюджета.  
Дебет Основное имущество Кредит 1719 и параллельная проводка:  
Дебет 2210 Кредит 3020  
Доход от целевого финансирования показывают в момент приобретения основного имущества и на сумму приобретения. Это позволяет следить за обязательствами по целевому финансированию. Начисление износа основного имущества производится в течении срока службы имущества. В отчёте о результатах деятельности учреждения доход от целевого финансирования показан по остаточной стоимости основного имущества. В учёте дохода от целевого финансирования есть разногласия между Службой бухгалтерского учёта и Министерством Финансов. Служба бухгалтерского учёта рекомендует доход от целевого финансирования показывать по частям в течении срока службы основного имущества. В результате этого, в отчёте о результатах деятельности учреждения доход от целевого финансирования 0, что неправильно отражает доход в учреждении.
6. Учреждение перечисляет ассигнации другому учреждению, например местному самоуправлению.  
Дебет 7511 "Перечисление ассигнаций местному самоуправлению" Кредит 1749  
Счёт 7511 является расходным счётом.
7. Учреждение получило деньги для выплаты ассигнаций окончательному потребителю денег, например физическому лицу.  
7а) Деньги получили: Дебет 1920 "Банк" Кредит 1749.  
7б) Деньги выплатили: Дебет 7771 "Пособия физическим лицам" Кредит 1920 "Банк".  
Счёт 7771 является расходным счётом.
8. В конце бюджетного года уточняют использование бюджета на основную деятельность и на инвестиции. При наличии неиспользованных средств счёт по бюджету закрывают.  
уменьшая при этом доход. Дебет 3019 Кредит 1711.
9. Учреждение имеет на бюджетном расчётном счёте в банке средства на основную деятельность, которые можно использовать в следующем бюджетном году.  
9а) Закрывают бюджетный счёт, уменьшая при этом доход.  
Дебет 3019 Кредит 1711
- 9б) Параллельная проводка: Дебет 1791 Кредит 2410 "Краткосрочное обязат. государству"  
Счёт 2410 показывает, что у учреждения есть обязательство перед государством;  
Фактически учреждение не должно перечислять деньги государству. Учреждение имеет право эти деньги использовать в следующем году.
10. Учреждение имеет в конце бюджетного года неиспользованную сумму по инвестициям и которую можно использовать в следующем бюджетном году.
- 10а) Закрывают бюджетный счёт. На счёте 2210 остаётся обязательство.  
Дебет 1791 Кредит 1711
11. В конце бюджетного года уточняют использование бюджета по перечислениям. При наличии неиспользованных средств счёт по бюджету закрывают, уменьшая и доход.  
Дебет 7419 Кредит 1741
12. Учреждение имеет на бюджетном расчётном счёте в банке средства, которые можно перечислить в следующем году.  
12а) Закрывают бюджетный счёт, уменьшая при этом доход.  
Дебет 7419 Кредит 1741
- 12б) Параллельная проводка: Дебет 1747 Кредит 2410

Очень важен со стороны государства контроль за использованием утверждённого бюджета. С этой целью Министерство Финансов приняло постановление №2 от 12.01.98г. где утверждены классификаторы доходов и расходов государства. Классификаторы расходов подразделяются:

- расходы по экономическому содержанию - это артикулы расходов;
- расходы по административному распределению - это источники расходов;
- расходы по сфере действия.

Исходя из вышеуказанных классификаторов, учреждение показывает в проводке также артикуль расходов, источник расходов и сферу действия. Постановлением Министерства Финансов № 121 от 31.12.98г. утверждены 8 правил счетов. Правила определяют обязательные реквизиты по дебету, кредиту и сальдо всех счетов. Обязательные реквизиты могут быть:

- артикуль расходов;
- источник расходов;
- сфера действия;
- источник доходов.

Затруднения возникают при определении источника и артикуля расходов в учреждениях на всех уровнях. Классификатор доходов и расходов не содержит инструкции по его использованию. В результате этого государство может получить неадекватную информацию о расходах учреждения и в целом по государству.

Для упрощения учёта и получения государством достоверной информации для оценки достигнутой цели учреждения, исходя из выполнения утверждённого бюджета, необходимо:

- В наименовании счёта должно чётко отражаться содержание счёта. Это требует изменения наименований целого ряда счетов.
- Дать информацию о необходимости составления параллельных проводок.
- Дать информацию об использовании классификаторов доходов и расходов.

#### **Используемая литература**

1. Eelarveliste asutuste raamatupidamise korraldamise eeskirjad. Määrus nr 5 26.01.98. a.
2. Riigieelarve klassifikaatorid. Määrus nr 2 12.01.98. a.
3. Aastaaruande koostamise, esitamise ja kinnitamise eeskiri ja aruandevormid. Määrus nr 119 31.12.98. a.
4. Kontojuhiste kinnitamine. Määrus nr 121 31.12.98. a.

## ABOUT SOME PROBLEMS OF EXPENDITURE RECORDS AND CALCULATION OF COST VALUE IN AGRICULTURAL ENTERPRISES

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Getting information about the costs of the firm is intrinsic for every manager. Today, when there is dense competition in most sectors of production and service, the information achieved from calculation costs has particularly important part in finding out possibilities for cost saving and in planning prospects.

In the process of expenditure recording the costs of production or services, costs related to marketing and management of the firm are set. Information gained is used in evaluation of the results of performance, formation of prices and in making decisions about management of a firm. In terms of management the rapidity of gaining information is often even more important than the preciseness of the data.

Despite the constant decline in computer prices and the variety of accounting software, accounting in most of the agricultural enterprises is still done manually, for what reason the process of collecting, registration and systematization of data and drawing up a record is very long-dated. It seems that many accountants of agricultural enterprises are not very interested in automatization of the accounting, because they are afraid of losing their jobs because of introduction of computers. In introducing computers and accounting software, managers of agricultural enterprises could get information more operatively about income and expenditure of several primary and secondary branches of production (e.g. plant cultivation and repair shop), types of production (e.g. milk cattle raising and young cattle breeding); actual and budgetal expenditures could be easily compared, deviation of costs ascertained. Real advantage of a computer is also the possibility to observe daily the liabilities against buyers and liabilities to contractors. It is especially important in case of having a lot of firms to square accounts with. So the emergence of hopeless debtors can be avoided and also the due dates of settlement with contractors can be observed. Using the computer, record-keeping of reserves is notably less labour-consuming. In agricultural enterprises, where the nearest bank office is dozen of kilometres away, in case of having a computer it is possible to make payments or watch incomings via internet or telebanking without leaving one's desk. Thus wider introduction of computers in agricultural enterprises would make accountant's work easier and would give an opportunity to the managers to get more operatively information about business results.

The costs of a production enterprise consist of production costs and of periodic costs. Production costs consist of direct and overhead production costs. Direct production costs are raw materials, intermediate products and details directly spent on products; technological fuel, electricity, water, steam; basic and additional salary and social costs of production workers (1, p.43). Overhead production costs are costs with no direct relation to cost objective. Overhead production costs are divided between cost objectives and direct costs, direct salaries or some other characteristic proportionally. From conversations with some accountants of agricultural enterprises and from reading the training reports and diploma works it has become clear that in some firms the costs related to depreciation of cattle raising premises is regarded as overhead production costs even in case when there are for example separate cattle-sheds for milk cattle and young cattle and relevant sum could be put directly to the direct costs of relevant cattle

group. Taking the depreciation of production premises as overhead production cost also in case of cattle breeding is apparently prompted by the example of listing depreciation of production premises and other costs related to the production premises as a constituent of overhead production costs in a book "Ettevõtte raamatupidamine" (*Accounting of an enterprise*, p 43) by E. Linnaks. For finding as exact production cost price as possible, the cost, in case of its being directly related to certain cost objective, should be put to the direct production costs. If both milk cattle and young cattle would be held in one and the same cattle-shed, it would be right to divide the depreciation of the cattle-shed between cattle groups and usable area in square meters proportionally. Costs that are not substantially related to cost objectives, should be collected first to the account of overhead production costs and then divided between cost objectives and either total amount of direct costs or direct salary or other characteristics proportionally. In other branches of production (e.g. furniture-industry), where fabrication of different kinds of production takes place in the production premises, depreciation and other costs related to production premises (security, repairs, etc.) are regarded as the overhead costs of production, while the products are chosen as the cost objectives. The more exactly the costs are determined between the cost objectives and the more exactly the cost value of one product unit can be found, the more exactly the profit/loss of sale of every single product type can be pointed out and rate of return of producing different products can be analysed.

In Soviet times all the agricultural enterprises used unanimous calculation methods of agricultural production cost values. Today the enterprises can elaborate their own calculation methods of cost values, which are given in the accounting bylaws. Common calculation method of cost value of production of milk cattle is as follows: the cost of manure is subtracted from the total sum of costs of milk cattle raising and then 90% of the rest of the costs is regarded as the production costs of milk and 10% as production costs of calves. After that the costs given to milk are divided by the quantity of milk produced and the costs given to calves is divided by the number of calves. Results achieved give us the cost value of one unit of milk and one calf. Very surprising was to hear about calculation method of cost value of milk cattle of an agricultural co-operative in Jõgevamaa, in which case the cost of manure was subtracted from the total costs of milk cattle raising and the sum of the rest of the costs was divided by the quantity of milk produced, which gave us the cost value of one unit of milk; calves were taken into stock at zero value. According to the principle of first cost in drawing up a report the assets should be taken into stock in their actual first cost, at zero value only donated assets can be taken into stock. According to the mentioned calculation method of cost value of production of milk cattle of abovementioned agricultural enterprise in Jõgevamaa the cost of young cattle and fatlings in balance sheet would also be inaccurate.

In addition to that, from reading many training reports and course papers of students it has become clear that in some agricultural enterprises the manure produced by the cattle is not taken into stock in money terms. Although the value of manure is rather small in money terms, this incidental output should still be taken into stock in accountance. So the followance of first cost principle would be guaranteed. Manure should be taken into stock either

- by possible realisation price or
- by value, that would equate the cost of stable manure and the production costs of removing and storing manure (depreciation of technical devices of removing of manure and manure storages, production costs for storage and removing of manure). The cost of stable manure could be calculated in a method, by which the active substance of manure and active substance in a mineral fertiliser are taken as a basis. (2, p. 80).

The production of grain growing is grain and short straw. To calculate a cost value it is necessary to divide the costs related to grain growing between grain and short straw. One way of calculating the cost value of grain is the transformation of quantity of production to conditional production, through which the percentage of primary and secondary production is determined by relevant coefficients (grain 1.0, short straw 0.08). That is in turn the basis for division of total sum of costs between the types of production proportionally. But in recent years in agricultural enterprises has began to spread methodics, according to which short straw is not taken into stock in money terms, but the whole sum of production costs of grain is put to production costs, short straw used as fodder for cattle and litter is therefore not put to the costs of cattle breeding. So the principle of first cost is violated.

Thus the right to determine the calculation methods of cost values in one's own has in some enterprises led to a situation, where the calculation methods are at variance with the basic principles of accounting. Resultant from that is the fact that the training days for accountants of agricultural enterprises should be organised, where specialists dealing with the problems of calculating cost values of agricultural products, taking into account also the methods of calculation of cost values of other countries, would give some advice to introduce the economically reasonable calculation methods for cost value in agricultural enterprises.

## References

1. Linnaks, E. Ettevõtte raamatupidamine. Tallinn: Külim, 1994, 174 lk.
2. Vitkin, V. Põllumajandusettevõtete raamatupidamine, II osa - käitiskulude ja käitistulude arvestus (käitistraamatupidamine). Eesti Agraarökonomika instituut, Saku, 1999, 94 lk.

## ÜBER DIE STEUERN IN ESTLAND IN DER ERSTEN UNABHÄNGIGKEITSPERIODE

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Die Provisorische Regierung Estlands hatte zu Beginn ihrer Tätigkeit eine fast völlig leere Kasse (1). Man sollte Auslands- und Inlandsanleihen aufnehmen und ein Steuersystem aufbauen. Für das Finanzjahr 1918/19 verabschiedetes Einkommen-steuergesetz war noch unvollständig. Aber das am 12. April 1920 verabschiedete Einkommensteuergesetz blieb mit einigen Änderungen schon für längere Zeit gültig.

Laut dem Einkommensteuergesetz wurden besteuert alle natürliche und juristische Personen, die innerhalb Estland Einnahmequellen hatten. Vom Lohn der Arbeiter und der Angestellten wurde die Einkommensteuer monatlich bei dem Arbeitgeber abgezogen. In Privatunternehmen waren diese Abzüge für den Arbeitgeber verbindlich, wenn die Anzahl der Mitarbeiter (angestellt mind. für einen Monat) zehn übertrat. Ursprünglich bildete der Steuersatz 5% des Lohnes. Später hat der Finanzminister den Prozentsatz für jedes Jahr neu festgelegt und darüber wurde in "Riigi Teataja" Bescheid gegeben (4).

Aktiengesellschaften, Aktienverbände, GmbH-s und Kreditinstitute wurden nach dem Pauschalertrag besteuert, wobei die Einnahmen von außerhalb Estlands mit einberechnet wurden.

Besteuerungsfrei waren die von der Staatskasse und den Selbsverwaltungen unter-haltene Einrichtungen, ebenso die von den Bildungs-, Kunst- und Wohlfahrtsgesell-schaften unterhaltene gemeinnützige Einrichtungen und Hilfskassen der Arbeiter (4).

Ab Jahr 1924 wurden besteuerungsfrei auch kooperative Einrichtungen, wenn der steuerpflichtige Gewinn unter 120 000 Mark im Jahr war. Abgesehen von der Höhe des Einkommens sollten Molkereigenossenschaften keine Ertragsteuer zahlen. Auch wurde die Einkommensteuer von keinerlei Renten (5), von den einmaligen Erblässungen, von dem Einkommen für Verkauf des Vermögens (bei Personen, die keine Geschäfte trieben) und von den Schuldenrückzahlungen abgerechnet.

Von dem Ertrag waren auch Abzüge erlaubt, wie z.B. Unkosten beim Bekommen, Sparen, Versichern und Amortisation des Ertrags; Schuldzinsen; Zahlungen an Renten-, Kranken- und Bestattungskassen sowohl für den Steuerzahler selbst als auch für seine Familienmit-glieder; mit einem Gesetz, Testament, Gerichtsurteil oder Notariatsakt begründete periodische Zahlungen; Zwangszahlungen an Versicherungskassen ohne Beschränkung der Summen und freiwillige Zahlungen an dieselbe Kassen nicht über 10 000 Mark im Jahr (4 und 5).

Gewöhnlich hat der Familienhaupt zu seinem Einkommen auch die der Frau und der minderjährigen Kinder gerechnet. Doch waren auch Ausnahmen zugelassen.

Bei natürlichen Personen lag die Besteuerungsfreigrenze in den Städten und im Flecken Nõmme für Verheiratete bei 90 000 Mark und für Ledige bei 60 000 Mark und in den Ortschaften für Verheiratete bei 60000 Mark und für Ledige bei 40 000 Mark.



Außerdem waren erlaubt Abzüge für Familienmitglieder, die unter 17 (bei Schülern unter 20) oder über 60 Jahre alt waren; wenn aber ihre Arbeitsunfähigkeit verifiziert war, dann im beliebigen Alter (4 und 5).

Ab 16.12.1924 wurde gestaffelte Einkommensteuer eingeführt, die laut der entsprechenden Tabelle zwischen 5% und 36% liegen konnte. Steuersummen unter 200 Mark wurden nicht genommen.

Bei den Einkommen unter 200 000 Mark konnte die Einkommensteuer laut der Bitte des Steuerzahlers bis um die Hälfte ermäßigt werden, wenn der Letzte es nachweisen konnte, daß er selbst oder sein Familienmitglied an einer Krankheit oder wegen eines anderen Unfalls leidet. Ebenso konnte der Steuerzahler eine Steuerermäßigung beantragen, wenn sein Einkommen im Vergleich zu dem Jahr vor dem Rechnungsjahr durch irgendwelche unglückliche Vorfälle zurückgegangen war.

Als Besteuerungsgrundlage diente das System der Steuererklärungen. Für berichtspflichtige Unternehmen galt eine Besteuerungsgrenze: die Steuersumme durfte 25% des besteuerten Ertrags nicht überschreiten und der nach dem Abzug der Steuer gebliebener Gewinn durfte nicht weniger als 5% des Grundkapitals betragen.

Der staatliche Gewerbesteuer bildete sich von der Grundsteuer (Patentsteuer) und von der Zusatzsteuer (Gewerbeertragsteuer). Die Grundgewerbesteuer wurde beim Lösen der Gewerbeerlaubnis gezahlt. Zur Steuerbemessung wurden die Handelsunternehmen in sechs und Industriebetriebe in acht Kategorien unterteilt. Die Schiffe wurden nach der Motorkapazität, die Segelschiffe nach der Deckenfläche besteuert.

Zusätzliche Gewerbesteuer. Außer der Grundgewerbesteuer sollte ein Unternehmen, die Transport- und Hausiergeschäfte ausgeschlossen, eine zusätzliche Gewerbesteuer zahlen, die sich aus Gewerbekapitalsteuer und Gewinnsteuer zusammensetzte. Die Kapitalsteuer bildete 1% des Grundkapitals. Die Gewinnsteuer wurde vom Reingewinn in Prozenten gerechnet. Den Prozentsatz hat der Finanzminister für jedes Jahr neu festgelegt.

Staatliche Immobiliersteuer in Landkreisen galt für Boden, Gebäude, Fabriken und Werkstätten mitsamt ihrer Einrichtungen, die den Besitzern Einkommen versicherten. Das Einkommen wurde durch periodische Taxationen festgestellt.

In Städten und Flecken betrug die Immobiliersteuer 8% des durchschnittlichen Reingewinns, der laut den gültigen mieten oder Pachtzinsen festgelegt wurde.

Erbchaftssteuer wurde am 08. Mai 1920 eingeführt (6). Als Steuerfreibetrag galt laut dem Gesetz 3000 Mark. Der Steuersatz war abhängig vom Verwandtschaftsgrad. Für Verwandte des 1. Grades waren es 2-12% laut dem Erbewert; 12% von der Erbe im Wert von 4 Millionen und höher. Für Verwandte des 2. Grades entsprechend 6-20%, des 3. Grades 12-32% und für Verwandte des 4. Grades und für Erben der Seitenlinie 24-50%; 50% von der Erbe im Wert von 4 Mio. Mark und höher.

Der Übergang von dem russischen Rubel und der deutschen Mark auf die estnische Mark und dadurch festgelegte ziemlich hohe Kursdifferenz bei der Umbewertung der Immobilien waren die Gründe, warum Immobilien zu hoch besteuert wurden. Diesen Fehler hat man mit den späteren Gesetzen zu verbessern versucht (3).

Grundbuchsteuer wurde mit dem Gesetz vom 08. Mai 1920 eingeführt (6). Der Steuersatz bildete 6% des Immobilienwertes und wurde vom Notar beim Verfassen der Akten eingefordert.

Steuern vom Geldvermögen: es gab Folgende:

1. Steuer von 5%. Diese Steuer galt für
  - Einkommen von den Prozentpapieren
  - Erträge von den Girokonten und anderen Sparkonten
  - für die Schuldzinsen, die der Gläubiger bekommen hat
2. Steuer von den Girokonten (Kontokorrent) 0,396%

Stempelsteuer. Für alle Unterlagen waren 2 Steuerarten vorgesehen:

- 1) Steuer für Urkunden, die einer Privatperson von Staatsbehörden gegeben wurden;
- 2) eine proportionelle Steuer von der Summe des Akts oder Vertrags.

Kesselsteuer – diese Steuer wurde nach der Erwärmungsfläche des Kessels wie folgt festgelegt:

- 1) für einen Kessel mit der Fläche bis zu 200 Quadratfuß 6 Mark pro Quadratfuß;
- 2) für einen Kessel von 201-1000 Quadratfuß 4 Mark pro Quadratfuß;
- 3) für einen Kessel von über 1000 Quadratfuß 2 Mark pro Quadratfuß.

Mit Hilfe dieser Steuer wurden die Kosten der Überwachungseinrichtungen der Dampfkessel getragen.

Warensteuer galt für alkoholische Getränke, den Spirit, das Malz, die Preßhefe, für Tabak und Tabakwaren, Streichhölzer, Zucker, Tee und Erdölprodukte.

Verkauf des Sprints und Wodka war Monopol des Staates und davon erhaltene Erträge gingen direkt in die Staatskasse. Für Selbstverwaltungen und Wohlfahrts-einrichtungen war es erlaubt, eine Steuer bis zu 15% des Spiritpreises zu nehmen.

Dank der organisierten Steuerpolitik konnte die Wirtschaft des Staates schon nach 1921 auf eine gute Grundlage gestellt werden (1).

Der Beitrag der Steuern im Staatsbudget ist in der folgenden Tabelle dargestellt:

Art des Ertrags	1925		1926 /1927	
	Mio. Mark	% des Gesamtertrags im Budget	Mio. Mark	% des Gesamtertrags im Budget
Direkte Steuern	680,7	9,2	706,2	9,0
Indirekte Steuern	1910,7	25,7	2029,2	25,9
Monopol	1014,4	13,6	1060,0	13,5
Staatsvermögen und Unternehmen	3304,2	44,5	3162,0	40,3

Von den während des Freiheitskrieges aufgenommenen Auslandsanleihen konnte man den aus Finnland bekommenen Kredit schon 1921 zurückzahlen. Ende 1925 war die von der Regierung Frankreichs als Kriegsrüstung erhaltene Schuld, mit dem Grundwert von 13.145.304,57 Frank, endgültig beglichen. Der von der britischen Regierung stammende Kredit sollte in 30 und der von den USA erhaltene Kredit in 62 Jahren abgelöst werden.

Zum Begleichen der Auslands- und Inlandsanleihen wurden 2,7% des Staatsbudgets im Jahr gebraucht. Im Jahr 1930 sollte es bis auf 5,1% im Jahr steigen. So können wir sehen, daß der Staat nicht allzusehr mit den Auslandsanleihen belastet war und daß die Steuerlast der Bevölkerung auch nicht zu schwer war.

### Literaturverzeichnis

1. Eesti maa, rahvas, kultuur. Tartu, 1926.
2. Riigi Teataja nr 24, 1919.
3. Riigi Teataja nr 63/64, 1920.
4. Riigi Teataja nr 78, 1922.
5. Riigi Teataja nr 149, 1924.
6. Riigi Teataja nr 67/68, 1920.

## EESTI VABARIIGI MAKSUDEST PÄRAST ESIMEST ISESEISVUMIST

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Eesti Ajutine Valitsus alustas oma tegevust peaaegu täiesti tühja kassaga (1). Tuli võtta välis- ja siselaene ning asuda maksusüsteemi rajamisele. 1918/19 maksuaastaks kehtestatud tulumaksuseadus oli veel puudulik ja ebauhtlane (2) Kuid 12. aprillil 1920. a kehtestatud tulumaksuseadus (3) jäi mõningate muudatustega kehtima juba pikemaks ajaks.

Tulumaksu seaduse järgi maksustati kõik füüsilised ja juriidilised isikud, kellel Eesti piirides oli tuluallikaid. Tööliste ja teenistujate palgast peeti tulumaks kinni igas kuus tööandja juures. Eraasutustes oli see kinnipidamine tööandjale kohustuslik ainult siis, kui teenistujate vähemalt kuuks ajaks palgatute) arv oli üle kümne. Esialgu oli maksu suuruseks 5% palgast. Hiljem aga määras protsendi igaks aastaks rahandusminister, kuulutades sellest Riigi Teatajas (4).

Aktiaseltsid, aktsiaühingud, osa- ja krediidiühingud maksustati kogu tulu järgi, sealhulgas ka see, mis saadi väljaspool Eestit.

Maksustamisest olid vabad riigikassa ja omavalitsusasutuste poolt ülalpeetavad asutused, samuti hariduslike, kunstiliste ja heategevate seltside poolt ülalpeetavad asutused, millel polnud ärilist iseloomu, ja tööliste abikassad (4).

1924. a kuulusid maksudest vabastamisele ka ühistegelikud asutused, kui maksustatav tulu oli alla 120 000 marga aastas. Tulu suurusest olenemata olid tulumaksust vabastatud ühispimatalitused. Samuti olid tulumaksust vabastatud igat liiki pensionid (5).

Maksustamisel ei võetud arvesse ühekordseid päranduslikke tulusid, tulu varanduse müügist (isikutel, kes ei ajanud äri), ka võlgade tasumisest saadud summad. Saadud tulust lubati mahaarvamisi, nagu kulud tulude saamisel, alalhoidmisel, kindlustamisel, amortiseerumisel, võlgade pealt makstud protsendid; maksed pensioni-, haige-, ja matusekassadele nii maksumaksja kui ka tema perekonnaliikmete eest; perioodilised maksed, mis põhjendatud seadusega, testamendiga, kohtuotsusega või notariaalpepinguga; sunduslikud maksed kindlustuskassadele summat piiramata ja vabatahtlikud maksed samadesse kassadesse mitte üle 10 000 marga aastas (4 ja 5).

Üldreeglina arvas perekonnapea oma tulude juurde ka naise ja alaealiste laste tulud. Kuid olid lubatud ka erandid.

Füüsiliste isikutel oli maksuvaba tulusumma linnades ja Nõmme alevis abielulistele 90 000 marka ja vallalistele 60 000 marka ning kohtades abielulistele 60 000 marka ja vallalistele 40 000 marka.

Peale selle oli lubatud mahaarvamisi perekonnaliikmete heaks, kes kuni 17 aasta (kooliõpilased kuni 20 aastat) või üle 60 aasta vanad, kui aga oli tõestatud nende töö võimetus, siis igasuguse vanuse korral (4 ja 5).

1924. a 16. detsembrist oli üle mindud progressiivsele tulumaksule, mida määrati vastava tabeli järgi viiest protsendist kuni kolmekümne kuue protsendini. Maksu alla 200 marga ei võetud.

Tulude puhul kuni 200 000 margani lubati maksumaksja palvel maksu alandamist kuni 50 protsendini, kui viimane tõestas enda või oma perekonnaliikme kannatamise haiguse või mõne õnnetusjuhtumi tõttu. Ka võis maksumaksja taotleda maksu alandamist, kui võrreldes maksuaastale eelnenud aastaga oli mingite õnnetute juhtumiste tõttu tema tulu vähenenud enam kui 25%.

Maksustamise aluseks oli deklaratsioonisüsteem. Aruandvate ettevõtete kohta oli kehtestatud maksustamise piir: maksu suurus ei tohtinud ületada 25% maksustavast tulust ja maksu mahaarvamisel üle jäänud kasu ei võinud olla alla 5% põhikapitalist.

Riiklik ärimaks koosnes põhimaksust (patendimaks) ja lisamaksust (puhaskasumaks).

Põhiärimaks maksti äritunnistuse lunastamisega ja maksumäära kindlakstegemiseks liigitati kaubanduslikud ettevõtted kuude ja tööstuslikud ettevõtted kaheksasse järku. Laevadelt võeti maksu mootori võimsuse järgi, purjelaevadelt tekipiinna ruutsülla järgi.

Linna ja alevivalitsustel oli lubatud põhiärimaksule lisada oma tarbeks veel kuni 100% arvestuslikule maksusummale.

Lisaärimaks. Peale põhiärimaksu tuli ettevõttel, välja arvatud veo- ja kandekauplused, maksta lisaärimaksu, mis koosnes kapitalimaksust ja kasumimaksust. Kapitalimaksu võeti 1% põhikapitalist. "Kasuprotsendimaks" arvestati puhaskasust (kasumist) protsentides, mille suuruse määras rahandusminister igaks aastaks eraldi.

Riiklikud kinnisvarade maksud maakondades kehtestati maadele, hoonetele, vabrikutele ja töökodadele ühes neis olevate sisseadetega, mis omanikele sissetulekut andsid. Viimase määramiseks viidi läbi perioodilisi hindamisi.

Linnades ja alevites võeti kinnisvaramaksu 8% keskmisest puhastulust, mis määrati kinnisvaralt saadud üüri või rendimaksude põhjal.

Pärandusmaks. Kehtestati 8. maist 1920 (6). Seadus nägi ette maksustamise alamääraks 3000 marka. Maksu suurus sõltus pärijate sugulusastmest. Esimese astme sugulastele 2-12% vastavalt päranduse väärtusele. 12% päranduse pealt väärtusega 4 miljonit marka ja üle selle. Teise astme sugulastele vastavalt 6-20%, kolmanda astme sugulastele 12-32% ja neljanda astme sugulastele ja kõrvalistele pärijatele 24-50%. 50% päranduse pealt väärtusega 4 miljonit marka või üle selle.

Üleminek vene rublalt ja saksa margalt eesti margale ja seoses sellega kehtestatud küllalt kõrge kursivahe kinnisvarade ümberhindamisel oli põhjuseks, miks kinnisvara sattus liiga kõrge maksustamise alla. Seda viga püüti hilisemate seadustega parandada. (3).

Kinnistusmaks kehtestati 8. mai seadusega 1920 (6). Maksu määraks oli 6% kinnisvara väärtusest ja see nõuti sisse notari poolt aktide tegemisel.

Maksud rahaliste kapitalide pealt: rahaliste kapitalide pealt olid ette nähtud järgmised maksud:

1. 5% maks. Seda võeti
  - protsentpaberite tulude pealt,
  - jooksvate arvete ja teiste protsenti kandvate hoisummade tulude pealt,
  - laenude pealt saadud protsendidelt.
2. Maks jooksvatelt arvetelt (kontokorrent) 0,396%.

Tempelmaks. Kõigi dokumentide jaoks oli ette nähtud kaks maksuliiki:

1. maks mitmesuguste tunnistuste pealt, mis anti eraisikuile riigiasutuse poolt,
2. proportsionaalne maks akti või lepingu summast.

Katlamaks. Seda maksu võeti katla soojenduspinna eest järgmiselt:

1. kuni 200 ruutjala suuruselt katlalt 6 marka ruutjala kohta,
2. 201 kuni 1000 ruutjala suuruselt katlalt 4 marka ruutjala kohta,
3. üle 1000 ruutjala suuruselt katlalt 2 marka ruutjala kohta.

See maks läks aurukatelde järelevalveasutuse kulude katteks.

Aktsiisimaksud. Aktsiisimaksu võeti alkohoolsete jookide, piirituse, õlle valmistamiseks kasutatud linnaste pealt, presspärmil, tubaka ja tubakasaaduste, tuletikkude, suhkru, tee ja naftasaaduste pealt.

Piirituse ja viina müük oli riigi monopol ja sellest saadav tulu läks otse riigile. Omavalitsuse ja heategevate asutuste kasuks oli lubatud võtta maksu kuni 15% piirituse hinnast.

Tänu korraldatud maksupoliitikale suudeti juba pärast 1921. aastat riigi majandus seada kindlale alusele (1).

Maksud osast riigieelarvesse annab ülevaate järgmine tabel:

Tulu liik	1925. a		1926/1927. a	
	mln mk	% eelarve üldtulust	mln mk	% eelarve üldtulust
Otsesed maksud	680,7	9,2	706,2	9,0
Kaudsed maksud	1910,7	25,7	2029,2	25,9
Monopol	1014,4	13,6	1060,0	13,5
Riigivarandused ja ettevõtted	3304,2	44,5	3162,0	40,3

Vabadussõja ajal võetud välislaenudest suudeti Soomest rahas saadud laen tasuda juba 1921. aastal. Prantsuse valitsuselt sõjavarusena saadud laen, mille algsumma oli 13 145 304,57 franki tasuti lõplikult 1925. a lõpul. Briti valitsuselt saadud laenu tasumine jäi 30 aasta peale ja Ameerika Ühendriikidelt saadud laenu tasumine 62 aasta peale.

Välis- ja sisevõla tasumiseks kulus riigieelarvest 2,7% aastas. 1930. aastast alates pidi see tõusma aga 5,1 protsendini aastas. Seega näeme, et riik ei olnud välislaenudega ülemääraselt orjastatud ja rahva maksukoormus ei olnud neil aastatel ülemääraselt raske.

#### **Kasutatud kirjandus:**

1. Eesti maa, rahvas, kultuur. Tartu, 1926.
2. Riigi Teataja nr 24, 1919.
3. Riigi Teataja nr 63/64, 1920.
4. Riigi Teataja nr 78, 1922.
5. Riigi Teataja nr 149, 1924.
6. Riigi Teataja nr 67/68, 1920.

## FINANCING FIRM'S GROWTH AND INVESTMENTS

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Estonian agriculture needs investments to improve the technology of farms and agricultural firms. The key question of technological innovation and firm growth is financing. The choice of investment financing is central to the economic performance of firms.

The objective of this paper is to analyse firms' financial decisions according to investment decisions. Issues at stake include the following: how do the respective roles of different sources of financing vary with the development of firm, what is the role played by outside equity and debt in the financing of investments. The aim is to find if outside equity or debt is the financing choice of some positive net present value projects and also to look to this problem from investor's point of view, under what circumstances the outside investors are willing to hold debt or equity. Capital structure decisions have been extensively studied in the corporate finance literature. This article investigates the entrepreneur's decision whether to seek debt or equity financing in equilibrium.

This investigation relies on previous studies and theory of capital structure. The study has been provided using the data of large agricultural firms. Expert research method and monographic sources were used to find out the major constraints in obtaining financing and to research different reasons for investing in agricultural businesses.

In practice sometimes the business can run short of capital for fertilisers, livestock and feed by investing too large a proportion of available capital in long-term assets such as machinery and buildings. This point is particularly important for these firms, starting farming with limited capital. Capital investments to long-term assets assist or maintain production, but are of little use by themselves. It helps to increase profits by reducing costs. In some cases production is impossible without at least some investment in equipment and buildings, but this should be kept to a minimum where capital is scarce.

If firm has short of money, it can reduce problems with obtaining debtor-in-possession financing. The majority of firms can finance their realised growth using conventional amounts of short-term financing. Short-term credit appears to be more important than long-term credit in relaxing financing constraints on the growth of firms.

Firms have been interpreted be financially constrained if they are observed to have a high correlation between long-term investment and internal financing. (Kaplan, Zingales 1996)

Firms that can finance themselves from retained earnings are minimally affected by constraints to finance potentially profitable investments, whereas firms, whose financing needs exceed their internal resources, may be severely constrained.

Lamont (1997) has studied the determinants of firms' investments. They find that investment is positively correlated to internal cash flow, and that this link is stronger for firms experiencing greater barriers to external finance.



The firm's maximum rate of growth that can be financed internally is estimated. According to hypothesis that the less developed market and financial intermediaries, the higher cost of external financing assume environment, where market and financial intermediaries' level is over average.

There are three assumptions about the relation between the growth rate of the firm and the need for investment funds. If assuming that the required total investment increases in proportion to the firm's growth on sales; the profit rate per unit of sales is constant and the economic depreciation of assets equals that reported in the financial statements, external financing need is given in following general equation:

$$EFN_t = g_t * Assets_t - (1+g_t) * Earnings_t * b_t$$

where  $EFN_t$  is external financing need at time  $t$ ,  $g_t$  is firm growing at  $g_t$  per cent a year,  $b_t$  is the proportion of the firm's earnings that are retained for investment at time  $t$ . Earnings are calculated after interest and taxes (8). On one hand, if return on capital of firm tends to be lower, more external financing is required to fund equivalent rates of growth but on the other hand, increased access to investment capital affects the profits of firms and thus their ability to self-finance.

It has become obvious that majority of analysed firms grows at rates that exceed those that can be internally financed only and thus require some form of external financing.

A firm's external financing need depends on the magnitude of its internal cash flows relative to its investment opportunities. If the firm has sufficient market power or faces high demand, it may be able to generate sufficient cash flow to finance investment internally. Less profitable firms are more likely to grow at rates that require them to obtain long-term credit or equity. It is easier for firms to raise long-term capital with financing investments by long-term external debt and equity.

Most of the theoretical analyses endogenizing the financial contracts obtain debt as the optimal source of outside finance. This is at odds with the use, in practice of outside equity financing. Outside equity can be used along with outside debt.

The studies have been provided to implement the optimal financial contract using real instruments e.g. debt and equity. In some cases, firms have too little internal cash flows to undertake investments; the optimal contract can be implemented by a combination of debt and equity. Also equity financing plays an important role for young firms with large ability to switch to riskier investments.

The next step establishes whether the entrepreneur would choose debt, outside equity, or a mix of the two, provided that there is a demand for both. It turns out that in addition to debt, outside equity or a mix of the two can be used. The preference depends on cash flow volatility. If the cash flows are more volatile, the entrepreneur issues outside equity.

Internal cash flow of the firm must be larger than a minimum level for financing to be granted. From investors' point of view, they hold outside equity only if they are confident that their cash flow claim will be honoured in the future. When internal cash flow of the firm

is large the outside investors when investing money to the firm do not receive a large fraction of the revenue, because their investment is limited.

The theories do not offer qualitative advice about the amount and maturity of debt that a firm should issue in different environments. When borrowing to invest in a depreciating asset, full repayment should be planned within the expected life of the asset. Unlike outside equity, equilibrium debt contracts have a prespecified maturity shorter than the life of the physical assets. Thus investors practice maturity matching: they match the maturity of the optimal debt contract with the life of the physical assets and the maturity of the equity contract with the life of the company's real options.

Investors avoid shedding any repayment at the end of the economic life of the project and beyond. They match the maturity of the debt contract with the life of the assets rather than with the continuation prospect of the project. Investors match the maturity of the optimal debt contract with the life of the assets so that the longest-term debt they are willing to hold is one period shorter than the economic life of the project. Thus, the maturity of the equilibrium debt contract is shorter than the economic life of the project. Investors are willing to hold debt with maturity of one period and outside equity with unlimited life. In contrast, they match the maturity of outside equity with the continuation prospects of the project.

Projects that can raise debt can also raise outside equity. When investors are willing to hold both debt and outside equity, the manager has the choice of which security to issue for financing the firm. He is indifferent between issuing debt and issuing equity when there is demand for both and chooses the type of financing that maximises his expected payoff. He may as well issue either one or a mix of the two as long as he gets all rents from the project.

With fixed investment decisions, non-firm claimants must be present for capital structure to affect firm value and growth.

## Conclusions

The majority of firms can finance their realised growth using conventional amounts of short-term financing. Short-term credit appears to be more important than long-term credit in relaxing financing constraints on the growth of firms.

Majority of analysed firms grows at rates that exceed those that can be internally financed only and thus require some form of external financing.

Equity financing play an important role for young firms with large ability to switch to riskier investments because the maturity of the equity contract with the life of the company's real options. Agricultural firms mostly use debt financing. Financing with outside equity is used only in very limited extent.

The important development in the future should be more scientific approach to capital structure management in order to use effectively the possibilities of obtaining financing for investments.

## References

1. Põllumajandussektori poolaasta majandusaruanne 08.09.1999. Informatsiooni ja tulupoliitika büroo.
2. Põllumajanduse ja maaelu finantseerimine 1999 [www.server.ee/~mai](http://www.server.ee/~mai)
3. Biais, B., Casamatta, C. Optimal leverage and aggregate investment, *Journal of Finance* LIV 4, 1999.
4. Barnard, C. S. *Farm Planning and Control*. 1992, 50-77.
5. Fluck, Z. Optimal Financial Contracting: Debt versus Outside Equity, *The Review of Financial Studies* 11, 1998, 383-418
6. Kaplan, S. N., Luigi Zingales. Do investment-cashflow sensitivities provide useful measures of financing constraints, *Quarterly Journal of Economics* 112, 1996, 169-217
7. Lamont, O. Cash-flow and investment: evidence from internal capital markets, *Journal of Finance* LII, 1997, 83-109
8. Demircug-Kunt, A., Maksimovic, V. Law, finance and firm's growth, *Journal of Finance* LIII 6, 1998.
9. Opler, T., Titman, S. Financial Distress and Capital Structure, *Journal of Finance* L, 1995.

## Summary

The choice of investment financing is central to the economic performance of firms. In this article the roles of different sources of financing investments are analysed.

Firms that can finance themselves from retained earnings are minimally affected by constraints to finance potentially profitable investments. Outside equity financing is important to young growing firms. The combination of debt and equity depends on the investment, volatility of the cash-flows and firm's futures' prospects.

## ПРОБЛЕМЫ АНАЛИЗА ИСПОЛЬЗОВАНИЯ МАТЕРИАЛОВ

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Важное значение для повышения эффективности производства, снижения материалоемкости продукции имеет анализ расхода материалов на предприятиях.

При анализе расхода материалов необходимо:

- Во-первых, дифференцированно отражать зависимость расхода материалов от объема производства и других факторов с целью определения опытно-статистических средних величин расхода материалов. Они используются как исходная база при планировании расхода материалов, которое дополняется одновременно обоснованным нормированием расхода материалов. Это позволяет получать информацию для дальнейшего снижения расхода материалов путем систематического сравнения достигнутого уровня расхода по отдельным изделиям.

При опытно-статистическом нормировании расхода материалов необходимо особенно учесть то, что применяемые расчеты средних величин расхода не отвечают требованиям по следующим причинам: такие расчеты не учитывают динамику расхода материалов при приросте выпуска продукции; они не позволяют сделать точный краткосрочный прогноз расхода материалов, а также получить нормативные величины расхода материалов в случае, если необходимо учесть при этом многие действующие факторы. Исходя из этого, для расчета опытно-статистических величин необходимо применять регрессию и корреляцию.

- Во-вторых, периодически изучать соблюдение запланированного расхода материалов, для чего успешно может использоваться индексный анализ.

Отклонения фактических величин расхода от плановых, как положительные, так и отрицательные, исследуются по факторам влияния. При этом определяется влияние на расход материалов отклонений в выпуске продукции по объему и ассортименту. Затем производится дифференцированный анализ расхода наиболее важных основных материалов. И здесь должна быть обеспечена тесная связь анализа расхода материалов с анализом издержек производства, так как 50% снижения издержек приходится на экономию материалов.

При использовании регрессионного и корреляционного анализа для отражения расхода материалов в зависимости от выпуска продукции исходят из того, что расход основных материалов ( $y_i$ ) изменяется не строго пропорционально изменению объема производства ( $x_i$  – фактор). Между этими двумя величинами имеется функциональная связь:

$$y_i = f(x_i) + \Delta_i = Y_i + \Delta_i,$$

где  $\Delta_i$  – величина прироста расхода материалов;  
 $Y_i$  – величина регрессии.

При исследовании величин расхода основных видов материалов, выраженных в эквивалентных количествах выпуска продукции, возможно определить функцию регрессии, в которой коэффициенты регрессии ( $b_{yx}$ ) представляют собой статистически обоснованные нормы расхода материалов, которые можно распространить на нескольких производствах.

Выражением степени связи между объемом производства и расходом материалов является коэффициент корреляции ("r"). Одновременно  $r^2 = B$  – мера определенности, выраженная в процентах и представляющая меру надежности плановых расчетов ( $1 - B = U$  – мера неопределенности – величина допуска регрессионной оценки).

Изучение линейной связи между объемом продукции и общим расходом материалов может быть заменено анализом связи между объемом продукции и специфическим расходом материалов ( $Y$ ). Методически здесь нет существенных различий, только для этой нелинейной регрессии необходимо выбрать соответствующий тип функции. Лучше всего для отражения этого процесса использовать гиперболическую функцию

$$Y' = \alpha_{yx} + \frac{b_{yx}}{x_i}$$

Линейная же функция выглядит так:

$$Y_i = \alpha_{yx} + b_{yx} x_i$$

С помощью регрессионного анализа должна быть найдена прямая уравнения. Линия регрессии аналогично взвешенной средней арифметической должна содержать одномерный ряд свойств, т.е. сумма отклонений эмпирических данных от величины регрессии должна быть равна нулю:

$$\sum y_i - \sum Y_i = \sum (y_i - Y_i) = 0.$$

И одновременно сумма квадратических отклонений эмпирических данных от величины регрессии должна быть минимальной:

$$\sum (y_i - Y_i)^2 = \min.$$

Этими заданными условиями определяются значения уравнения для постоянных регрессии ( $\alpha$  и  $b$ ). Из первых частных уравнений путем преобразования получаем значения уравнения для постоянных регрессии ( $\alpha$  и  $b$ ).

$$b_{yx} = \frac{\sum x_i y_i - \bar{y} \sum x_i}{\sum x_i^2 - \bar{x} \sum x_i} = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sum (x_i - \bar{x})^2};$$

$$\alpha_{yx} = \bar{y} - b_{yx} \bar{x}.$$

Для оценки степени соответствия величины регрессии эмпирическим данным, кроме визуальной оценки дисперсионного поля, используется прежде всего коэффициент корреляции ( $r$ ) и мера определенности ( $B$ ) с известными свойствами:

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 \sum (y_i - \bar{y})^2}}$$

$$B = r^2 \cdot 100.$$

Сравнение эмпирических данных с величиной регрессии ( $Y_i$ ), а также со средней величиной ( $\bar{y}$ ) можно осуществить, используя уравнение

$$B = 1 - \frac{\sum (y_i - Y_i)^2}{\sum (y_i - \bar{y})^2} = 1 - U,$$

где  $U$  – мера неопределенности.

В качестве меры неопределенности ( $U$ ) выступают все простые линейные функции или не полностью учитываемые факторы влияния, которые практически действуют всегда (различное мастерство рабочих, различные типы машин, разные материалы и т.п.). С одной стороны, высокая степень систематических помех была бы доказательством того, что кроме уже учтенных имеются еще и другие существенно влияющие факторы. Они должны быть выявлены путем специального логического анализа или учтены с помощью сложных функций.

Это исследование должно предшествовать расчету и является составной частью корреляционного анализа. Результат такого анализа выражает точность (границы, допуски) прогнозируемых величин ( $Y_i \pm U$ ).

Строгое разграничение между зависимыми и независимыми переменными необходимо потому, что регрессия  $x_i = a_{xy} + b_{xy}y_i$  получается не путем преобразования  $Y_i$ , а как результат нового условия минимизации:

$$\sum (x_i - X_i)^2 = \min.$$

Обе линии регрессии пересекаются в точке ( $\bar{x}; \bar{y}$ ) и образуют угол (регрессионные «ножницы»), который тем больше, чем меньше связь между анализируемыми факторами, так как  $b_{yx} = r^2/b_{xy}$ .

При расчете планового расхода материалов в соответствии с плановым объемом производства по каждому виду изделий используется следующее уравнение регрессии:

$$Y_{ij/plun} = [\alpha_{ysj/plun} + (b_{ysj/plun} x_{ij/plun})] \pm [U(\%)\dots], \text{ при этом:}$$

$$\alpha_{yx/plan} = \left(1,00 - \frac{d}{100}\right) \alpha_{yx};$$

$$b_{xy/plan} = \left(1,00 - \frac{d}{100}\right) b_{yx},$$

где  $d$  – процент снижения расхода материалов.

Определенной интрес может представлять и обратный расчет, например, какое количество продукции может быть выпущено при имеющихся запасах материалов или в течение какого времени могут еще использоваться имеющиеся материалы:

$$x_i = \alpha_{yx} + b_{yx} y_i.$$

Для определения удельного расхода материалов по каждому изделию ( $y'_i$ ) в зависимости от количества изделий линейная регрессия не может быть использована. Поэтому необходимо выбрать такую функцию, которая бы наилучшим образом отражала действительное соотношение между величинами, включая предельные соотношения (при наибольших и наименьших партиях изделий). Для этого линейная функция  $Y_i = \alpha_{yx} + b_{yx} x_i$  делится на  $x_i$ , в результате чего получается гиперболическая функция.

Определяем коэффициенты регрессии из следующих уравнений:

$$b_{y'x} = \frac{n \sum \frac{y'_i}{x_i} - \sum y'_i \sum \frac{1}{x_i}}{n \sum \left(\frac{1}{x_i}\right)^2 - \left(\sum \frac{1}{x_i}\right)^2};$$

$$\alpha_{y'x} = \frac{\sum y'_i \sum \left(\frac{1}{x_i}\right)^2 - \sum \frac{1}{x_i} \sum \frac{y'_i}{x_i}}{n \sum \left(\frac{1}{x_i}\right)^2 - \left(\sum \frac{1}{x_i}\right)^2}.$$

Для определения коэффициента корреляции используется формула общего коэффициента корреляции:

$$R = \sqrt{1 - \frac{\sum (y'_i - Y'_i)^2}{\sum (y'_i - \bar{y}'_i)^2}}.$$

Применение гиперболической функции предпочтительнее, нежели линейной, что подтверждает сравнение коэффициентов корреляции.

### Использованная литература

1. Анализ эффективности затрат на управление в производственно хозяйственных организациях. Под. ред. С. Е. Каменниера. Москва: Финансы и статистика, 1981, 238 с.
2. Сиськов В. И. Корреляционный анализ в экономических исследованиях. Москва: Статистика, 1975, 166 с.
3. Журко В. Ф., Пантелеев В. Д., Рябинин Б. А. Оперативный экономический анализ в управлении производством. Москва: Финансы и статистика, 1983, 231 с.
4. Bader, H., Fröhlich, S. Mathematik für Ökonomen. Verlag Die Wirtschaft Berlin, 1987, 382 pg.
5. Förster, E., Rönz, B. Methoden der Korrelations und Regressionsanalyse. Verlag Die Wirtschaft Berlin, 1979, 301 pg.
6. Paas, T. Kvantitatiivsed meetodid majanduses. Tartu Ülikool, 1997, 265 lk.

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### Summary

Using empirical-statistical standardisation of material costs has to be considered that commonly used average costs do not reflect material utilisation objectively. Average costs do not take into account cost behaviour on the fluctuation of production, do not enable exact prognoses and correct standards of material costs, when is needed to consider several factors. Specifying material costs by using regression and correlation is possible to avoid these problems. Regression- and correlation analysis underlies mainly on the idea that there is no proportional change in material costs ( $Y_i$ ) and in changes of production volume ( $X_i$ ). Linear relations between production volume and material overhead can be replaced with appropriate non-linear regression function analysis between production volume and specific material costs ( $Y_i$ ). Studying these processes is best to use hyperbolic function.



# PÕLLUMAJANDUSTOETUSTE ARVESTUS JA MAKSUSTAMINE

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## Sissejuhatus

Põllumajanduse ja maaelu toetamine on olnud erinevate riikide majanduspoliitikas tähtsal kohal. Eesti Vabariigis makstakse põllumajanduse ja maaelu toetamiseks otsetoetusi ning toetusi sisenditehinna vähenduseks. Lisaks sellele, on välja töötatud mitmesugused riiklikud toetusprogrammid, mis peaksid aitama tõsta põllumajanduse efektiivsust ja tootlikkust. Toetusi on võimalik taotleda nii äriettevõtetel kui ka füüsilisest isikust ettevõtjal. Saadud toetuste arvestamise meetodid on toodud Eesti Vabariigi Raamatupidamise Toimkonna juhendis "Valitsuselt saadud sihtfinantseerimise arvestus". Antud juhendis käsitletakse tegevuskulude, varadega seotud toetuste, finantsabi ja kustutatava laenu arvestust. Lahendust vajavad aga mitmed toetuste arvestuse ning maksustatava tulu selgitamisega seotud probleemid.

Artiklis käsitletakse Eesti Vabariigis praegu ja tulevikus antavate toetuste liike, antud toetuste mahtusid, toetuste arvestuse korda, toetuste arvestuse ja maksustamisega seotud probleeme ning esitatakse mõningad võimalikud lahendused.

## Põllumajanduse ja maaelu toetamine Eestis 1998. aastal

Põllumajanduse ja maaelu toetuste süsteemi Eesti Vabariigis võib tinglikult jagada järgmiselt:

1. Otsetoetused põllumajandusele.
2. Sisendite hinna vähenduseks toetused.
3. Üldised toetused jm riikliku programmid.

Eesti 1998. aasta põllumajanduse ja maaelu toetused ning riigieelarves 1999. aastaks kavandatud toetused on esitatud tabelis 1. Paremaks võrdluseks on toetused väljendatud tuhandes eurodes. Eesti ametlik kurss 1 EUR = 15.645 EEK.

1998. aastal maksti kolme liiki otsetoetusi: piimalehma otsetoetusi, teravilja otsetoetusi ning ebasoodsatest ilmastikutingimustest tekitatud kahjude hüvitisi.

Vabariigi Valitsuse 30. detsembri 1997. a määrusega nr 265 kinnitati 1998. aastaks põllumajandustootjatele otsetoetuste maksmise kord millega määrati ka taotlejatele esitatavad kriteeriumid ja toetuste maksmise korralduskuludeks 2% eraldatud vahenditest. Otsetoetuste administreerimisega tegeleb Tartus asuv Põllumajanduse Registre ja Informatsiooni Keskus.

1998. a maksti teravilja otsetoetust tera- ja kaunvilja, rapsi, rüpsi ning seemnelina kasvatajatele. Teravilja otsetoetuseks kujunes 406,1 EEK teraviljapinna ühe hektari kohta. Kokku sai toetusi 7574 teraviljakasvatajat teravilja kogupinnaga 290 837,9 ha. Toetuse saajatest oli füüsilisi isikuid 6996 ning juriidilisi isikuid 578 (Eesti põllumajandus 1998, lk 85).

Piimalehma otsetoetuse suuruseks kujunes 817 krooni lehma kohta. Kokku sai toetusi 1392 loomaomaniku lehmade koguarvuga 85 624. Toetuse saajatest oli füüsilisi isikuid 1117 ning juriidilisi isikuid 275 (Eesti Põllumajandus 1998, lk 87).

Tabel 1

Põllumajanduse ja maaelu toetused Eestis 1998...1999 (tuh EUR)

	Toetuste liigid	1998	1999
<b>A</b>	<b>Turuhinna toetus</b>		
<b>B</b>	<b>Otsesed toetused*</b>	26645.4	15016.0
	<i>Piimalehma otsene toetus</i>	4472.8	5750.8
	<i>Teravilja otsene toetus</i>	7667.7	7667.7
	<i>Emiste otsene toetus</i>		191.7
	<i>Noor- ja lihaveiste otsene toetus</i>		1278.0
	<i>Ute otsene toetus</i>		127.8
	<i>Kahjude hüvitamine</i>	14504.8	
<b>C</b>	<b>Sisendite hinna vähendus</b>	13584.7	19533.5
	<i>Intress</i>	1278.0	1278.0
	<i>Kapitalitoetus</i>	3322.7	6389.8
	<i>Kindlustustoetus</i>		511.2
	<i>Noore taluniku toetus</i>		223.6
	<i>Väiketootja loomapidaja toetus</i>		639.0
	<i>Lupjamine</i>	894.6	1278.0
	<i>Aktsiis, transport</i>	5686.9	7603.8
	<i>Maaparandussüsteemide korrashoid</i>	1629.4	1405.8
	<i>Laenugarantii</i>	773.2	204.5
<b>D</b>	<b>Üldised toetused</b>	10460.1	10306.7
	<i>Uurimine, koolitus ja konsultatsioon</i>	594.2	619.8
	<i>Tõuaretus</i>	722.0	722.0
	<i>Tauditõrje</i>	147.0	178.9
	<i>Infrastruktuuri toetused</i>	7488.8	7297.1
	<i>Turuuuringud</i>	172.5	172.5
	<i>Muud riiklikud programmid</i>	1341.9	1316.3
<b>E</b>	<b>Muud toetused (maksud)</b>	1916.9	2108.6
	<b>Toetused kokku</b>	52607.0	46964.9

Allikas: EV Põllumajandusministeerium

\* toetuse summas sisaldub ka toetuse administreerimiskulu

1999. aastaks kavandati ka põllumajanduse struktuuri muutvate toetusabinõude rakendamist (noor- ja lihaveistetoetus, emistetoetus, utetoetus, väiketootja toetus, noore põllumajandus-

tootja toetus). Kahjuks on riigieelarve alalaekumise tõttu kahe viimase toetuse rakendamine peatatud.

Põllumajanduse tulutoetuseks loetakse ka põllumajandustöödel kasutatava mootorikütuse aktsiisimaksu tõusu hüvitamist. Hüvituseks kujunes keskmiselt 131,24 krooni külvipinna hektari kohta. Kokku sai hüvitist 12 401 taotlejat. Toetuse saajatest oli füüsilisi isikuid 11 704 ning juriidilisi isikuid 697 (Eesti põllumajandus, lk 88).

Lisaks on Eestis finantseeritud ka toetuse vormis põldude lupjamist happelistel muldadel. Sel juhul esitatakse taotlus kohalikule maaparandusbüroole ning tasutakse taotleja poolt omafinantseerimise osa töö teostajale. Ülejäänud osa tasutakse töö teostajale riigieelarve vahenditest.

Ettevõtlike riikliku toetuse seaduses on sätestatud kapitalitoetus, milleks loetakse investeringutoetust ja intressitoetust. Segadust tekitab mõistete kasutamine. Näiteks Vabariigi Valitsuse kehtestatud kord "Kapitalitoetuse andmise kord ja tingimused" (RT I, 1998, 41/42) reglementeerib sisuliselt investeringutoetusi. 1998. aasta riigieelarve seadusega oli kapitalitoetuseks ette nähtud 52 miljonit krooni, mis jaotati maakonniti vastavalt haritavale pinnale. 1998. aastal laekus 571 avaldust kapitalitoetuse saamiseks, neist rahuldati 457 avaldust ehk 80,2%. Keskmiselt esitati maakonnast 38 taotlust.

Intressihüvituse maksmise aluseks on Eesti Vabariigi rahandusministri, põllumajandusministri ning Eesti Panga presidendi 1992. aastal kinnitatud juhend "Põllumajandustootjate krediteerimise korra kohta". Nimetatud juhendi alusel hüvitati 1998. aastal põllumajandusega tegelevatele ettevõtetele pikaajalistelt laenudelt arvestatud intresse sihtasutuse Põllumajanduse ja Maaelu Krediteerimise Fond (PMKF) kaudu.

Maaelu Laenude Tagamise Sihtasutus (tuntud ka kui Garantiifond) loodi 1997. aastal pakkumaks lisatagatise põllumajandusettevõtjatele ja maapiirkonna ettevõtjate. Garantiifondi tagatise abil on 1998. aasta detsembri lõpu seisuga väljastatud laene kogumahus 42,2 miljonit krooni ja heaks on kiidetud veel laene 5,2 miljoni krooni väärtuses. Garantii maht 1998. aastal oli kogusummas 24,4 miljonit krooni. 1998. aasta mais registreeriti põhikirja parandus, mis võimaldab Garantiifondil tagada lühiajalisi laene ning faktooringuid.

Eestis on olulise tähtsusega ka riigieelarvest finantseeritavad riiklikud programmid ja arengukavad. Põllumajanduse ja maaelu riiklikke programme finantseeritakse nii Põllumajandusministeeriumi kui ka Siseministeeriumi eelarvetest.

Eestis rakendatud toetuste süsteem on küllaltki paindlik, kuid arvestades Euroopa Liiduga liitumise raamistikku, tuleb välja töötada meetmete ja nende administreerimise ühtne skeem. Praeguse skeemi kohaselt tegeleb toetuste administreerimisega mitmeid organisatsioonide ning toetused on hajutatud. Põllumajandusministeeriumis on ettevalmistamisel Põllumajandusturu korralduse seaduse eelnõu, millega sätestatakse vastavalt maaelu toetused ja põllumajandustoetused.

Põllumajandusministeeriumis on koostamisel Maaelu Arengu Kava (MAK), mis kavatsetakse Valitsusele esitada veel käesoleval aastal. Nimetatud kavas tuleb süstematiseeritult esitada põllumajanduse ja maaelu arengu meetmed Euroopa Liidu liitumiseelsete abirahade taotlemiseks. Liitumiseelse abi andmiseks on välja töötatud kaks programmi. 1998-2000

aastal PHARE kaudu rahastatav Spetsiaalne Ettevalmistav Programm (*Special Preparatory Programme, SPP*) ning aastatel 2000-2006 Põllumajanduse ja Maaelu Arendamise Programm (*Special Assistance Programme for Agriculture and Rural Development, SAPARD*) (Euroopa Liidu Struktuurifondid, lk 42).

### **Toetuste arvestus ja maksustamine**

Eelnevas osas käsitlust nähtub, et põllumajandustoetuste maht Eestis on piisavalt suur ning toetuste saajateks on nii füüsilisest isikust ettevõtjad kui ka äriühingud. Toetuse saajatel on tekkinud probleeme toetuste kajastamisel nende raamatupidamisarvestustes ning tulumaksuga maksustamisel.

Eesti raamatupidamise seaduses ei käsitleta otseselt toetuste arvestust. Küll aga on Eesti Vabariigi Raamatupidamise Toimkond välja andnud juhendi "Valitsuselt saadud sihtfinantseerimise arvestus", mis on kinnitatud toimkonna istungi protokollilise otsusega nr 11-2 (RTL 1997, 207/208). Nimetatud juhendis on toodud soovitusi äriühingutele ning avalik-õiguslikele juriidilistele isikutele, sihtasutustele, mittetulundusühingutele ning riigi- ja omavalitusasutustele. Välja on jäänud üks rühm raamatupidamiskohustuslasi - ettevõtlusega tegelevad füüsilised isikud. Nemad peaksid toetuste arvestuses kajastamisel lähtuma rahvusvahelisest raamatupidamise standardist nr 20 "Riiklike toetuste arvestus ja kajastamine" (RRS 20, kehtib alates 1984. aastast).

Valitsuselt saadud sihtfinantseerimise liigid on raamatupidamise toimkonna juhendi kohaselt:

- 1) tegevuskulude finantseerimine,
- 2) põhivara finantseerimine,
- 3) finantsabi,
- 4) mitterahaline toetus,
- 5) kustutatav laen.

Käesolevas artiklis on vaatluse all kahe esimese sihtfinantseerimise liigiga seotud probleemid.

Tegevuskulude sihtfinantseerimine ei ole ette nähtud põhivara soetamiseks vaid kulude kompenseerimiseks või varude tootmiseks või soetamiseks. Põhivara sihtfinantseerimine antakse põhivara soetamiseks või ehitamiseks.

Põllumajandustoetuste liigitus tegevuskulude ning põhivara sihtfinantseerimiseks on esitatud tabelis 2.

Keerukas on liigitada intressihüvitisi, sest tegemist ei ole tegevuskulude vaid finantskulude kompenseerimisega. Tinglikult võib aktsiisihüvitist lugeda tegevuskulude sihtfinantseerimiseks, ehkki kompenseeritakse aktsiisimaksu tõusu põllumajandustootjale.

## Põllumajandustoetuste liigitamine

Sihtfinantseerimise liik	Põllumajandustoetused
Tegevuskulude finantseerimine	<ul style="list-style-type: none"> <li>• Piimalehma otsene toetus</li> <li>• Tera- ja kaunviljade rapsi, rüpsi ning seemnelina otsene toetus</li> <li>• Noor- ja lihaveiste otsene toetus</li> <li>• Emise otsene toetus</li> <li>• Ute otsene toetus</li> <li>• Ikaldustoetus</li> <li>• Kindlustustoetus</li> </ul>
Põhivara sihtfinantseerimine	<ul style="list-style-type: none"> <li>• Kapitalitoetus</li> <li>• Noore põllumajandustootja toetus</li> <li>• Väiketootjate toetus</li> </ul>

Mõningad põllumajandustoetused on sellised, millele ei ole võimalik omistada põhjendatud väärtust (näiteks tasuta tehniline või turualane konsultatsioon ning garantiide andmine). Sellisteks ettevõtjale kaudset kasu andvateks toetusteks on Eestis lupjamistoetus, nõuandetoetus ja laenu tagatised (-garantiid).

RRS 20 kohaselt tuleb riiklikud toetused kajastada tekkepõhiselt vastavate arvestusperioodide tuludes, milliste juurde kuuluvad toetusega seotud kulud kui on kindel, et (1) täidetakse nendega kaasnevad tingimused ning et (2) vastav toetus saadakse. Kusjuures toetuse saamine ei ole lõplik tõendus, et sellise toetusega kaasnevad tingimused on täidetud või täidetakse. Laekumise alusel toetuse tuluna registreerimine on lubatud ainult juhul, kui ei ole võimalik kasutada muud alust finantseerimise perioodide vahel jaotamiseks.

Riiklike toetuste kajastamisel arvestuses on levinud kaks käsitlust: kapitalist lähtuv ja tulust lähtuv lähenemisviis. Kapitalist lähtuva lähenemisviisi korral toetus krediteeritakse otse omakapitali, tulust lähtuva lähenemisviisi korral kajastatakse toetus ühe või mitme perioodi tuludes. Kapitalist lähtuva lähenemisviisi argumendid on järgmised:

1. Riiklikud toetused on finantseerimine ning seetõttu tuleks need kajastada ka bilansi passivas. Kuna ei eeldata tagasimaksmist, tuleks krediteerida omakapitali.
2. Kuna riiklikud toetused ei ole teenitud oma tegevusega siis neid ei tule kajastada kasumiaruandes. Toetusi võib vaadelda kui riigipoolset stiimulit ettevõtluse arendamiseks.

Tulust lähtuva lähenemisviisi argumendid on järgmised:

1. Kuna riiklikud toetused ei tule omanikelt, siis ei tohi neid kanda otse omakapitali hulka vaid kajastada vastavate perioodide kasumiaruannetes.
2. Riiklikud toetused on harva põhjendamatud. Toetuse saaja peab vastama kehtestatud tingimustele ja täitma vastavad kohustused ning seetõttu tuleb kajastada toetusi tuludena arvestades tulude ja kulude vastavuse printsiipi.
3. Kuna tulu- ja muud maksud kujutavad endast tuludest mahaarvamist, on loogiline kasumiaruandes käsitleda ka fiskaalpoliitika vahendiks olevaid riiklikke toetusi.

RRS 20 ja Eesti juhendis eelistatakse tulust mahaarvamise lähenemisviisi. Saadud sihtfinantseerimist kajastatakse tuluna või kohustusena ja ei kirjendata omakapitali kontodel. Kui sihtfinantseerimisega on seotud mitu tingimust, siis jaotatakse sihtfinantseerimise summa nende tingimuste vahel.

Tegevuskulude sihtfinantseerimise puhul on raamatupidamiskohustuslasel teada, millise aruandeperioodi kulusid kompenseeritakse ja valitsuselt saadud summad kajastatakse tuluna kompenseeritava kulu tekkimise perioodil. Riiklik toetus, mis saadakse juba tekkinud kulude või kahjude eest tuleks kasumiaruandes registreerida erakorralise tuluna perioodil, mil see toetus saadi.

RRS 20 määratleb kaks võimalust (meetodit) tuludega seotud toetuste arvestamiseks. Üks võimalus on kajastada saadud toetused muude ärituludena kas nende hulgas või eraldi liigendusena. Alternatiivne võimalus on saadud toetuste mahaarvamine nendega seonduvatest kuludest. RRS-is loetakse mõlemad võimalused aksepteeritavaks. Eesti vastava juhendi kohaselt kajastab äriühing aruandeperioodi tegevuskulude sihtfinantseerimist kasumiaruande rühmas 1 juurdelisatud kirjel *Dotatsioon riigi eelarvest või Dotatsioon kohalikust eelarvest* ning seega ei tohi toimuda kuludest mahaarvamist. Tegevuskulude kompenseerimiseks saadud sihtfinantseerimine kajastatakse kasumiaruandes tuluna, sõltumata sellest, kas aruandeperioodil kajastatud kompenseeritavad kulud ületavad, võrduvad või on väiksemad kui saadud toetus. Tekkepõhist arvestust pidav füüsilisest isikust ettevõtja võib seega valida talle sobiva arvestusmeetodi, avalikustades selle kindlasti raamatupidamise aastaaruande lisas. Kassapõhist arvestust pidav ettevõtja võib samuti valida talle sobiva arvestusmeetodi, kuid kuna tal ei ole kohustust koostada majandusaasta aruannet ning raamatupidamise sise-eeskirju, tekib probleem kus ja kuidas ta registreerib saadud toetused ja nende arvestusmeetodi. Autorite arvates võiks ka füüsilisest isikust ettevõtja koostada raamatupidamise sise-eeskirjad, mille üks osa hõlmab toetuste arvestamise korda.

Probleeme tekib ka tegevuskulude sihtfinantseerimise kajastamisel toodangu omahinnas. Kasutades erinevaid arvestusmeetodeid, on võimalik toodanguühiku omahind näidata suuremana või väiksemana. Kõigile toetuste saajatele laienev raamatupidamistoimkonna juhend võiks määrata omahinna arvestamise meetodi toetuste saamise korral.

Varadega seotud toetuste arvestamiseks on kaks võimalust. Esimese võimaluse rakendamisel käsitletakse toetust edasilükatud tuluna, mis kajastatakse kasumiaruandes vara kasuliku eluea vältel proportsionaalsete osadena. Teise võimaluse kasutamisel arvatakse toetus maha vara soetusmaksumusest ning toetus kajastatakse kasumiaruandes vähendatud kulumisummadena. Toetustega kaasnevad harilikult olulised raha liikumised, mis tuleb rahavoogude aruandes kajastada nii saadud toetusena kui ka investeringuväljaminekuna eraldi ridadel.

Raamatupidamise toimkonna juhendi kohaselt võetakse äriühingus põhivara sihtfinantseerimine algselt arvele kohustusena bilansirühmas 21 *Pikaajalised eraldised* juurdelisatud kirjel *Põhivara sihtfinantseerimine*. Siis, kui soetatakse ettenähtud põhivara objekt, võetakse soetatud objekt arvele ostuhinnas, millest arvatakse maha saadud toetus. Amortisatsiooni arvutab äriühing soetatud põhivaralt kehtivate normide kohaselt. Esimest käsitletud meetoditest on lubatud Eestis rakendada ainult avalik-õiguslikel juriidilistel isikutel, sihtasutustel, mittetulundusühingutel ning riigi- ja omavalitsusasutustel. Äriühingutele kehtestatud korda ei saa pidada kõige õnnestunumaks, sest sageli võib kaasneda toetustega ka nende tagasimaksmise kohustus. Tagasimaksmise hetkel oleks

esimest meetodit kasutades võimalik bilansist leida varaga seotud kohustuse jääki ning ühtlasi oleks ka kasumiaruandes tagatud tulude ja kulude vastavuse printsiibi rakendamine. Teise meetodi rakendamise korral tuleb toetuse tagasimaksmise korral teha abiarvestusi (nt selgitada tagasimakstav osa, tagasimakstava toetuse osa võrra suurendada vara soetusmaksumust, korrigeerida amortisatsiooniarvestusi). Füüsilisest isikust ettevõtja võib jälle rakendada RRS 20 ning lähtuda tegevuskulude sihtfinantseerimise arvestuse juures soovitatust.

Riikliku toetuse tagasimaksmisel tuleks seda arvestada kui arvestusprognoosi parandust. Tuludega seotud toetuste korral tuleb eelkõige kasutada bilansi kohustustes kajastatud edasilükatud tulude vähendamist, nende puudumisel aga debiteerida tulusid. Tulude debiteerimine ei tähenda, et tagasimaksmise aastal esineb kasumiaruandes tuludes miinusmärgiga rida, vaid korrigeerida tuleb toetuse saamise aasta ja sellele järgnevate aastate aruandeid. Varaga seotud toetuse tagasimaksmise korral tuleb suurendada vara bilansis kajastatud soetusmaksumust. Täiendav amortisatsioon, mis oleks toetuse puudumisel arvestatud, debiteeritakse koheselt tulusse.

RRS 20 ja Raamatupidamise toimkonna juhendi kohaselt tuleb riiklike toetuste osas raamatupidamise aastaaruande lisa avaldada järgmine informatsioon:

- 1) riiklike toetuste puhul rakendatud arvestuspõhimõtted, sh finantsaruannetes kajastatud esitusmeetodid;
- 2) finantsaruannetes kajastatud riiklikud toetused ja nende maht ning viited teistele riikliku toetuse vormidele, millest ettevõtte on saanud otsest kasu (varaobjektide nimetus ja soetusmaksumus või milliste kulude kompenseerimiseks sihtfinantseerimine saadi);
- 3) arvestuses kajastatud sihtfinantseerimisega seonduvad täitmata tingimused jm ettenägematud asjaolud.

Põllumajandustoetuste maksustamisel on oluline toetuste seadusandlik baas. Põllumajanduse ja maaelu toetused on Eestis sätestatud Ettevõtluse riikliku toetamise seaduses, Põllumajandussaaduste turu korraldamise seaduses ning konkreetse aasta Riigieelarve seaduses. Selline killustatus ei anna kompaktselt ülevaadet toetuste seadusandlikust baasist ning Eestis on seetõttu olnud põllumajandusettevõtjatele probleemiks millised toetusabinõud on tulumaksuvabad, millised mitte. Tulumaksuseadus sätestab, et seaduse alusel makstavad või Vabariigi Valitsuse poolt kehtestatud korras makstavad toetused ei kuulu maksustatava tulu hulka (Eesti maksude aktuaaltekstid '99, lk 103). Seaduslikust baasist tulenevalt mootorikütuse aktsiisihüvitus kuulub maksustatava tulu hulka, kuna ta on hüvitis mitte toetus.

Tegevuskulude sihtfinantseerimise toetused kajastatakse üldreeglina muude ärituludena kasumiaruandes. Tuludeklaratsioonis tulevad nad seetõttu kajastada kui maksustatava tulu vähendamised, v.a aktsiisihüvitis.

Kui põhivara sihtfinantseerimise võrra on vähendatud põhivara soetusmaksumust, siis mingeid korrigeerimisi tuludeklaratsioonis teha ei tohi. Kui aga põhivara sihtfinantseerimine on kajastatud kohustusena, mida kantakse aruandeaasta kasumiaruandesse muude ärituludena, tuleb antud aasta tuludeklaratsioonis vähendada maksustatavat tulu näidatud summa võrra.

## Kokkuvõte

Eestis rakendatud põllumajandustoetuste süsteem on küllaltki paendlik, kuid arvestades Euroopa Liiduga liitumise raamistikku, tuleb välja töötada meetmete ja nende administreerimise ühtne skeem. Praeguse skeemi kohaselt tegeleb administreerimisel mitmeid organisatsioone ning toetused on hajutatud. Põllumajandusministeeriumis on ettevalmistamisel Põllumajandusturu korralduse seaduse eelnõu, millega sätestatakse maaelu toetused ja põllumajandustoetused.

Põllumajandustoetuste maht Eestis on piisavalt suur ning toetuste saajateks on nii füüsilised isikust ettevõtjad kui ka äriühingud. Toetuse saajatel on tekkinud probleeme toetuste kajastamisel nende raamatupidamisarvestuses ning tulumaksuga maksustamisel.

Eesti raamatupidamise seaduses ei käsitleta otseselt toetuste arvestust. Küll aga on Eesti Vabariigi Raamatupidamise Toimkond välja andnud juhendi "Valitsuselt saadud sihtfinantseerimise arvestus", mis on kinnitatud toimkonna istungi protokollilise otsusega nr 11-2 (RTL 1997, 207/208). Nimetatud juhendis on toodud soovitusi äriühingutele ning avalik-õiguslikele juriidilistele isikutele, sihtasutustele, mittetulundusühingutele ning riigi- ja omavalitusasutustele. Välja on jäänud üks rühm raamatupidamiskohustuslasi - ettevõtlusega tegelevad füüsilised isikud. Nemad peaksid toetuste arvestuses kajastamisel lähtuma rahvusvahelisest raamatupidamise standardist nr 20 *Riiklike toetuste arvestus ja kajastamine* (RRS 20, kehtib alates 1984. aastast).

## Kasutatud kirjandus

1. Eesti maksude aktuaalteksid '99, E.Roose&Co, Tallinn, 1999.
2. Eesti põllumajandus 1998. Tallinn, 1999.
3. International Accounting Standards, 1998.
4. EV Raamatupidamise Toimkonna juhend "Valitsuselt saadud sihtfinantseerimise arvestus", protokolliline otsus nr 11-2 (RTL 1997, 207/208).

## AGRICULTURAL SUPPORT MEASURES: ACCOUNTING AND TAXATION ISSUES

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### Summary

Subsidies and support for agriculture in Estonia have been established in national Act for Support to Entrepreneurship, Law of Agricultural Product market Organisation, and State Budget law for a specific year. The supports can be divided as: direct agricultural support measures, support paid to decrease prices of inputs, support of general character and other national programs. Such a fragmentation does not give a compact picture of legal basis for providing subsidies and for this reasons Estonian agricultural entrepreneurs have often



problems making a distinction between taxable and tax-free support measures. Considering the framework for European Union accession we need to develop a common scheme for the measures and their common administration.

Estonian Accounting Board is published a guideline "Government Grants" (pronouncement 97/11-2, RTL 1997, 207/208) which is in accordance with IAS 20 "Accounting for Government Grants and Disclosure of Government Assistance".

## АНАЛИЗ ПРОБЛЕМ УПРАВЛЕНЧЕСКОГО УЧЕТА, ИНТЕРЕСУЮЩИХ БУХГАЛТЕРОВ ЛАТВИЙСКИХ ПРЕДПРИЯТИЙ

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Вопросы управленческого учета еще является нововведением в Латвийской бухгалтерской практике. Литературы по управленческому учету мало. Но интерес к возможности использовать подходы управленческого учета для информационного обеспечения руководства возрастает.

Возрастание интереса объясняется:

1. Снижение норм рентабельности в связи с возрастанием конкуренции
2. Снижение реальных норм рентабельности в связи с улучшением налоговой администрации (сокращается возможности уклонения от уплаты налогов)
3. Освоен финансовый учет и бухгалтеры проявляют любопытство к новым идеям

Исследование проведено в нескольких этапах:

1. Анкетированы студенты Латвийского Университета, работающие бухгалтерами, экономистами (работают около половины всех студентов в основном по специальности)
2. Анализ дипломных работ студентов Резекненской Высшей школы, Латвийского Университета и Латвийского Сельскохозяйственного университета.
3. Анкетирование членов ассоциации бухгалтеров Латвии после семинара по калькуляции себестоимости
4. Личные консультации бухгалтеров и студентов.

Эти группы наиболее заинтересованы в повышении уровня своего образования. Анализ этих данных не представляет информации об интересах латвийских бухгалтеров в целом, а интерес наиболее заинтересованных групп.

Характеризуя наиболее заинтересованного бухгалтера можно сказать, что он работает в ООО (67% всех респондентов), средний оборот предприятия 1,1млн. Лат (курс 1лат - 0,58 долара США) и средняя численность рабочих немного превышает 80 человек и он занимает пост главного бухгалтера (70% респондентов).

Нетто оборот и количество рабочих очень колеблются. Нетто оборот, начиная с 20000 латов и кончая 5300000 латами, таже количество работающих колеблются от 2 до 570 человек. Также нетто оборот на одного работающего колеблется в очень больших пределах от менее ,чем 7000 лат до почти 60000 лат. Это объясняется деятельностью предприятия. Наименьший оборот на работающего -на предприятии, занимающимся бухгалтерскими услугами. На этом предприятии наибольшую часть издержек составляет зарплата консультантов. Наибольший оборот на работающего в торговых предприятиях.

На этих предприятиях очень небольшая доля всего дохода составляет добавленная стоимость.

В анкетах были заданы вопросы о нынешних или возможных объектах калькуляции себестоимости и о целях калькуляции себестоимости.

Все объекты калькуляции автор подразделил на две группы: продукты - 33%, услуги - 55% респондентов. 12% респондентов не сформулировали ответ в этой группе наверное были преподаватели специальных учебных заведений а также другие интересующиеся.

Продукты очень разные, начиная с производства рыбных консервов, пилорамы, строительство, производство одежды и кончая калькуляцией стоимости блюд в общественном питании. В этой группе калькуляцией себестоимости занимаются большинство предприятий.

Очень разнообразна группа предприятий услуг. В нее входят общественные транспортные предприятия, которые рассчитывают себестоимость своих маршрутов, предприятия, дающие информационные, юридические, рекламные услуги, которые не рассчитывают себестоимость часа своей работы, но очень заинтересованы в таком расчете и кончая торговым предприятиям, которым расчет себестоимости в классическом виде не интересуется.

Большинство респондентов (64%) считают целью калькуляции себестоимости-ценообразование. В этом особо заинтересованы бухгалтера новых предприятий, которые работают в недостаточно развитом рынке- сколько стоит один час работы специалиста, какую цену требовать за отработанный час работы специалиста.

28% респондентов ответили, что целью калькуляции себестоимости является расчеты рентабельности продуктов. В основном рынки с ценообразованием типа спрос и предложение (деревоперерабатывающие предприятия, предприятия, производящие продукты питания и т.д.) и задача руководства контролировать, чтобы себестоимость была ниже рыночной цены.

Наименьшая группа (8%) из ответивших на этот вопрос ответили, что расчет себестоимости нужен как информация для принятия управленческих решений.

Интересную информацию для оценки заинтересованности бухгалтеров можно получить ,анализируя оценку бухгалтеров семинара по себестоимости. Семинар охватил только основные принципы калькуляции себестоимости. Как пригодность семинара оценили участники видно из первого рисунка.

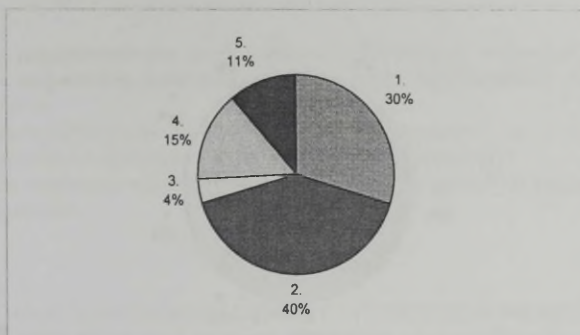


Рисунок № 1. Оценка пригодности семинара.

1. – Семинар пригоден для практического применения.
2. – Семинар пригоден и частично будет использоваться на практике.
3. – Семинар непригоден, на практике решаются задачи более высокого уровня.
4. – Семинар пригоден и может использоваться на практике
5. – Семинар пригоден для повышения своего уровня образования
6. – Семинар полностью не пригоден. Ни один респондент не выбрал этот ответ.

То, что идеи, изложенные на семинаре признали полностью годным для использования на практике больше четверти всех респондентов и только 4% ответили, что решают задачи более высокого уровня, свидетельствует о низкой информированности латвийских бухгалтеров. В основном бухгалтера, которые на практике решают проблемы управленческого учета, работают на совместных предприятиях и управленческому учету обучены хозяевами. Этим бухгалтеров интересуют вопросы очень высокого уровня, например, что делать с большими отклонениями от планированных накладных расходов, система учета нормативных затрат, анализ отклонений.

Какие вопросы управленческого учета в целом интересуют бухгалтеров можно судить по ответам на вопрос: в семинарах на какие темы они бы еще хотели участвовать. Было предложено 8 тем и 9<sup>а</sup> ответ -больше семинаров не надо. 22% опрошенных бухгалтеров признали, что больше не хотят ничего слышать об управленческом учете. Остальные “голосовали” за одну или больше тем.

Распределение интересов показано на рисунке № 2

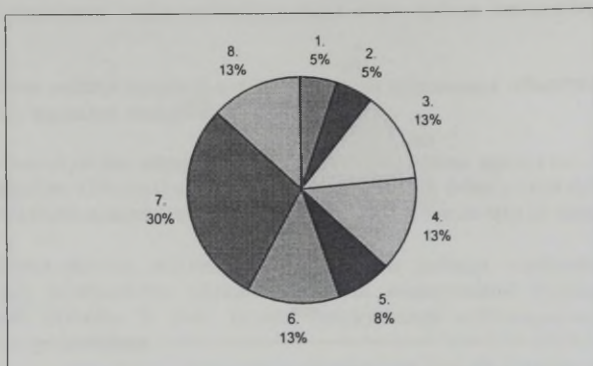


Рисунок № 2. Распределение интересов по темам управленческого учета.

1. – Учет прямых издержек
2. – Распределение накладных расходов.
3. – Учет нормированных и ненормированных потерь
4. – Распределение общих издержек на связанные продукты
5. – Система учета полных и переменных издержек
6. – Система учета издержек ABC
7. – Анализ издержек для принятия решений
8. – Система учета стандартных издержек.

Как видно из рисунка, тема “лидер”-анализ затрат для принятия решений.

Важность интерпретации информации о затратах подтверждается также и в личных беседах (консультациях) с бухгалтерами.

Другим важным источником оценки интересов бухгалтеров является анализ бакалаврских и магистровских работ. В Латвийском Университете примерно 15% (8%-17%) всех работ - на темы управленческого учета, и видна небольшая тенденция по увеличению доли тем управленческого учета. Так как в Латвийском Университете большинство студентов последнего курса работают по специальности, то темы заключительных работ отображают интересы уже работающих бухгалтеров.

В Резекненской Высшей школе и в Латвийском Сельскохозяйственном университете работающих студентов сравнительно мало и соответственно мало работ, посвященных управленческому учету (от 1 до 3 работ в год, что составляет от 4 до 10%).

Если бакалаврские работы по управленческому учету делить на подгруппы, то примерно половина посвящена управленческому учету в целом, вторая половина - расчету себестоимости.

## **Выводы**

1. Интерес к управленческого учету в Латвии постепенно возрастает. Основные причины - возрастание конкуренции, уменьшение возможностей отклонения от уплаты налогов.
2. Особо актуализируются вопросы расчета себестоимости услуг, но по этому вопросу мало разработанных примеров - задач для обучения бухгалтеров.
3. Также очень актуальны вопросы интерпретации бухгалтерской информации для принятия решений.

## **THE ANALYSIS OF MANAGEMENT ACCOUNTING PROBLEMS: THE VIEW BY LATVIAN BUSINESS ACCOUNTANTS**

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### **Annotation**

The results of two surveys as well as the theses of graduate students of Economics (masters, bachelors) are analysed in the report. The most essential concern of Latvian accountants relates to cost analysis for decision making. The new established service enterprises are the most interested about methods of cost calculation for services.

## ПРОБЛЕМЫ УЧЕТА НАЛОГА НА ДОБАВЛЕННУЮ СТОИМОСТЬ НА ПРЕДПРИЯТИЯХ ЛАТВИИ

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Распространение налога на добавленную стоимость (НДС) можно считать наиболее важным событием налоговой политики зарубежных стран в 70-80-е годы. Изобретение налога принадлежит французскому экономисту М. Лоре, который в 1954 году предложил ввести новый вид налога - НДС - в качестве альтернативы налога с оборота. В 1967 году была разработана специальная директива Европейского Экономического Сообщества (ЕЭС), которой установили введение НДС для стран-членов ЕЭС до 1972 года. В Латвии НДС введен с 1 мая 1995 года.

НДС является важнейшей составной частью налоговых систем 42 государств. На долю этого налога приходится в среднем 13,8 % налоговых поступлений бюджетов стран и 5,5% валового внутреннего продукта (ВВП). В Латвии НДС в 1998 году составил 20% от доходов государственного бюджета и 9% от ВВП.

НДС относится к многоступенчатым налогам. Базой для налогообложения НДС в рамках всей экономики является ВВП за вычетом налоговой суммы инвестиций, с учетом экспорта и импорта. Для предпринимателя базой налога является добавленная стоимость - стоимость, которую предприниматель добавляет к стоимости сырья, материалов или к стоимости тех товаров и продуктов, которые он приобрел для создания нового изделия или услуги.

Для расчета суммы НДС можно использовать один из четырех методов. В Латвии для расчета налога на добавленную стоимость к уплате в бюджет применяется четвертый - косвенный метод вычитания или зачетный метод по счетам. В виде формулы это будет:

$$RO - RJ = \text{НДС}, \quad (1)$$

где R- ставка налога  
O- сумма поступлений за проданную продукцию  
J- стоимость произведенных для этого затрат.

Сумма к уплате в бюджет это разница между суммой налога, полученной с суммы дохода от реализации или оказания услуг и суммой налога, уплаченной при оплате затрат, связанных с получением данного дохода. В Латвии сумму налога, которая уплачена за полученные товары и услуги называют предналогом, и она показывается по дебету (Д) счета по расчетам с бюджетом. Предналог - это сумма НДС, которая уплачена за товары и услуги, полученные для обеспечения хозяйственной деятельности. В законе Латвийской Республики "О налоге на добавленную стоимость" отмечено, что это платеж:

- за товары и услуги другому плательщику НДС;
- за импорт товаров на таможене;
- от получателя услуг, оплачивая услуги для иностранцев;

- компенсация крестьянским хозяйствам.

Всех предпринимателей Латвии можно разделить на две группы: плательщики налога и неплательщики налога. Причем это деление предпринимателей республики производится только на основании того, зарегистрировался или нет этот предприниматель в налоговой инспекции, как плательщик НДС. Основанием для регистрации предпринимателя как плательщика НДС служит вид предпринимательской деятельности и ее объем. Все предприниматели могут заниматься:

- только деятельностью, облагаемой НДС;
- только деятельностью, необлагаемой НДС;
- одновременно деятельностью, облагаемой и необлагаемой НДС.

Если плательщику НДС его нетто-доход (нетто-оборот) от деятельности, подлежащей налогообложению достигнет 10 тысяч латов за последние 12 месяцев его работы, тогда он должен регистрироваться как плательщик налога. Для крестьянских хозяйств этот рубеж нетто-оборота 30 тысяч латов. Только плательщики НДС имеют право на выделение из состава расходов уплаченных сумм НДС и уменьшить платежи в бюджет на сумму предналога.

Ставка НДС в Латвии 18% от стоимости облагаемых сделок. Освобождение от налога применяется в двух формах: отсутствие ставки и нулевая ставка. Разница между ними состоит в том, что при нулевой ставке последний продавец имеет право на предналог, а при отсутствии ставки такого права нет и обычно он перекладывает налог на конечного потребителя. В Латвии, также как и в странах ЕЭС нулевая ставка установлена на все экспортные товары и международный транспорт. Для применения нулевой ставки важную роль играет место оказания услуг или поставки товаров.

Не смотря на то, что закон “О налоге на добавленную стоимость” в Латвии действует уже пятый год, его применение на практике вызывает проблемы. Это связано с тем, что предприниматели по разному понимают сущность налога и применение отдельных норм.

Для предпринимателей невыгодный принцип реализации (дохода). Согласно этому принципу НДС уплачивается в бюджет до получения реальных денег, если отгрузка товаров или оказание услуг не происходит одновременно с получением денег. Предпринимателям выгоднее было, если разрешили платить НДС в бюджет через три месяца в случае, если деньги не получены.

Согласно действующим правилам, плательщик обязан уплатить НДС в бюджет за отчетный период в двух случаях:

- если оказаны услуги или поставлены товары и выписан счет по налогу;
- если вознаграждение за поставку товаров или оказание услуг получено до поставки товаров или оказания услуг.

Если брать во внимание требование предпринимателей и уточнить понятие “доход”, тогда возникла бы проблема прогнозировать оптимальный период времени для расчетов между деловыми партнерами. При этом существует риск не получить платежи налога в бюджет, несмотря на то, что товар поставлен или услуга оказана.



Противоречие возникает к отношению вознаграждения (авансового платежа), когда налог в бюджет должны уплатить по мере поступления денег. Но высчитывать предналог разрешено только после получения товаров или услуг и произведения оплаты поставщику.

Проблема возникает при расчете размера предналога, если фирма занимается деятельностью, облагаемой налогом и необлагаемой налогом. Если плательщик исползует только часть из поставленных ему товаров и оказанных услуг, чтобы осуществлять, облагаемые налогом сделки, тогда по этой части можно производить отчет предварительно уплаченного налога. Эту пропорцию определяют по следующей формуле:

$$\text{Проп.} = \frac{AV}{KV} \times 100\%, \quad (2)$$

где Проп.- пропорция (часть) облагаемых сделок;  
AV- сумма облагаемой стоимости без НДС;  
KV- общая сумма сделок без НДС.

Исходя из (2) формулы часть необлагаемых сделок получим от 100 % минусую пропорцию облагаемых сделок. Определяя сумму предналога дана возможность манипулировать. Такая возможность возникает потому, что законом не запрещен общий учет или отдельный учет определения предналога. Каждый предприниматель может определять налог как ему выгоднее, используя следующие варианты учета:

1. Фирма не ведет учет расходов, которые обеспечивают облагаемые и необлагаемые сделки, тоест фирма не знает структуры предналога. В этом случае неотчисляемый налог находят, используя пропорцию необлагаемых сделок. Предналог находят как разница.
2. Фирма учитывает НДС, который уплачен за облагаемые сделки (купленные товары). От общей суммы уплаченного предналога отнимают НДС, который уплачен от стоимости облагаемых сделок. Пропорцию необлагаемых сделок применяют только к остаточной сумме предналога. Этот вариант рекомендуется применять если продажа товаров происходит в одних помещениях.
3. Фирма учитывает НДС, уплаченный за товары и услуги, которые использованы для обеспечения облагаемых и необлагаемых сделок. Неотчисляемый налог будет та сумма предналога, которая уплачена за услуги для обеспечения необлагаемых сделок.
4. Фирма учитывает товары и услуги, использованные только для обеспечения необлагаемых сделок. Неотчисляемый налог совпадает с суммой предналога как в третьем варианте.
5. Фирма отдельно учитывает товары, которые необходимы для обеспечения облагаемых и необлагаемых сделок и услуги, которые необходимы для обеспечения обоих видов сделок. Неотчисляемый налог будет сумма предналога, которая уплачена для обеспечения сделок (отделно учтенная) и та часть предналога для обеспечения обоих видов сделок, которая определена, используя пропорцию необлагаемых сделок.

По мнению автора, многообразие возможностей определения неотчисляемого налога можно оценить позитивно. Это заставляет предпринимателей заниматься планированием налога. Больше всего в бюджет приходится платить НДС, используя первый вариант, но при этом не требуется вести детализированный учет.

Предпринимателям не всегда выгодно продавать недвижимое имущество. Законом "О налоге на добавленную стоимость" предусмотрено освобождение продажи недвижимого имущества от уплаты НДС. Эта норма не применяется для неиспользованного недвижимого имущества после завершения строительных работ.

При продаже новопостроенных строений и сооружений (в течении одного года после завершения строительных работ или реконструкции) налог начисляют по ставке 18% от стоимости реализации.

По другому начисляется налог, если строение продается в течении 10 лет (после завершения строительных работ или реконструкции). В этом случае цена реализации указывается без НДС, но продавец начисляет НДС от остаточной стоимости и платит налог в бюджет. Начисленную сумму НДС в бухгалтерском учете отражают как непредвиденные расходы.

Следующая проблема - это учет экспорта и применения % ставки. Больше всего ошибки допущены при оформлении документов. Документальным доказательством при экспортных сделках (вывоза товаров или продукции из Латвии), служат таможенная декларация для экспорта, где в строке "экспортером" указано Латвийское предприятие, которое продало товары или продукцию. Предприниматели не всегда уделяют внимание оформлению документов и в результате применяется 0% ставка налога, когда должны применять ставку налога 18%. Например, продавая товары иностранному покупателю на территории Латвии или посреднической фирме для экспортирования.

Вторая часть этой проблемы связана с транспортными услугами. Критерии применения ставки НДС к стоимости транспортных услуг для перевозки товаров является вид поставки (экспорт или импорт). Графически это отражено на рисунке 1.

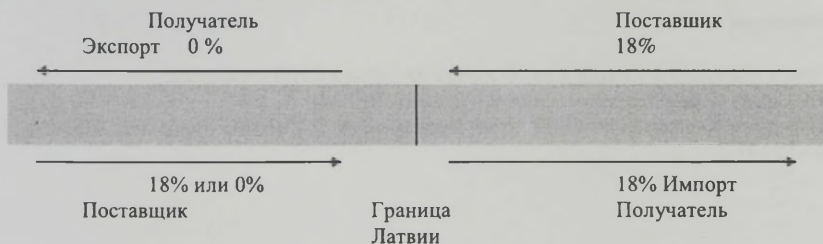


Рис. 1. Применение ставки НДС для транспортных услуг.

При экспорте товаров, проделанное автомашинной расстояние по внутренней территории Латвии, облагается налогом по ставке 18%, а за границей по ставке 0%.

При импорте товаров все проделанное автомашиной расстояние облагается по ставке 18%, но есть и отклонения. Ответ должны искать в правилах доставки товаров и в сумме таможенной стоимости товара. Это относится на проезд до границы Латвии. Возможны два варианта:

- если правилами доставки товаров предусмотрено, что расходы по доставке отнесены за счет покупателя, тогда транспортные услуги облагаются налогом по ставке 0%;
- если правилами доставки товаров предусмотрено, что расходы по доставке включены в цену товара, тогда транспортные услуги облагаются налогом по ставке 18%.

Эти условия не относятся на транзитные перевозки (применяется ставка НДС 0%).

Международные пассажирские перевозки, проделанные в иностранных государствах, облагается ставкой налога 0%, а перевозки, проделанные на внутренней территории, облагается ставкой налога 18%. Для расчета НДС критерием является время перевозки или проделанное расстояние.

Начиная с 1 июля 1999 года изменен порядок учета сделок с лесоматериалами. НДС за доставку бревен и пиломатериалов, если поставщик и покупатель лесоматериалов зарегистрированы как плательщики налога, в бюджет будет платить получатель лесоматериалов. В связи с изменениями в законе “О налоге на добавленную стоимость” введено новое приложение к декларации о НДС. Новый порядок учета НДС относится только для плательщиков НДС. Цель этих изменений двойственна:

- укрепить контроль за движением лесоматериалов;
- освободить государство от необходимости возмещать предналог из бюджета экспортирующим фирмам.

Каждое изменение предусмотрено с определенной целью, но не всегда эта цель достигнута. Усложняя учет налога на добавленную стоимость, возникают новые проблемы бухгалтерам фирм. В результате взимания НДС становятся дороже и неэффективнее, то есть не соблюдаются критерии налогов.

## Литература

1. Закон Латвийской Республики “О налоге на добавленную стоимость”.
2. Ежемесячный бюллетень статистики Латвии, 1999 год.
3. Налоги и налогообложение Под ред. Русаковой И. Г.- Москва: Финансы, ЮНИТИ, с.175-191.

## VALUE ADDED TAX ACCOUNTING IN LATVIAN COMPANIES

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### Summary

Value Added Tax (VAT) exists in 42 countries in the world. It was introduced in Latvia on 1 May, 1995 and formed 20% of state budget incomes and 7% of GDP in 1998.

The nature of VAT and tax application rules in Latvia are considered in the report. When applying VAT the problems arise related to different understanding of the VAT basic nature and application of particular norms by entrepreneurs.

The problems in VAT accounting for Latvian entrepreneurs are related to disadvantageousness of applying income (sales) principle, pre-tax repayment, real estate sales, export accounting and wood accounting. Applying more complicated VAT accounting procedure, the tax collecting expenses arise and it becomes inefficient.

## PROBLEMS OF AUTOMATION OF ACCOUNTING IN ESTONIA

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In the final decade of the 20th century the development of information technology has stepped up also in our country. Estonia now also has the opportunity say a word in the field of information technology. A datasystem can be non-automatic, half-automatic or fully automatic. In order to be successful in information technology the system should be carefully planned. The planning of the system should start from ascertaining the necessary information. Problems accompanied by accounting are associated with the procurement of computers the training of workers, as well a purchase or creation of software systems. Large companies can develop data processing systems that are ordered or purchased within the framework of special projects; however small and medium-sized enterprises prefer to purchase ready software packets.

There is a possibility for Estonian firms to use over 40 programs of accounting developed by different software companies. It's really a problem, how make entrepreneurs decide on an accounting program, which would be most suitable for their needs. All information about programmes gets only from producers and sellers praising everyone own programmes.

The most of the accounting programmes make possible to keep business transactions on an accrual basis. The most popular programmes among Estonian firms are made in Estonia. They are cheaper than imported programmes and useful for small- and medium-size enterprises. They are Dos-Based operation, simple and quick. They have in detail payroll modules. The most popular programmes are SAF, Raama, VERP, Taavi etc.

Imported programmes are also favourable due to their multilingual, Windows-Based operation and they have in detail purchase and sale modules. The most popular programmes are Hansa and Scala from Sweden, Oscar and Unikko from Finland, Solomon from America.

To assess the fitness of an accounting program the attention must be given to four important factors.

1. Functionality. Accounting software must be able to achieve the tasks, which it is provided.
2. Compatibility. If it is not for a special application, it should be compatible standard programs, which are in wide use and of longer lasting application.
3. Reliability of manufacturer. Buyers are making a long-time investment. For their confidence, they should be able to see a successful financial track record.
4. Price. Sometimes this factor is given too much importance (weight). In so far as accounting software goes, successful users know that the real value of software is in the amount of time it saves and convenience it brings to the workplace. This while competitive pricing is important, a more expensive product, which will earn its keep in the office, will well received.

Consumers often don't know all possibilities about concrete program to use automation of accounting. In the introduction of the accounting software attention must be given to next problems.

1. The preparing a suitable chart of accounts for the appropriate program.
2. The program should have a so-called generator of statements that makes it possible to change descriptions of reports and adjust it to the chart of accounts.
3. For entering and using permanent data codes should be build up systematically.
4. Those initial documents that are necessary for most entrepreneurs are available in the program as pre-prepared forms.
5. Accounting can be considered automatic only when an automatic composing of records is used. To this end, different options are available in different programs.

The future client should get acquainted with accounting software by using Internet or asking demo's directly from the producer or seller.

The accounting software is a tool for a smart and experienced user. It should allow those who are required to keep accounts to fulfil the basic requirements of accounting. There are three important factors in making use of accounting software: time, quality and money. In the automation of the accounting works, the primary aim is first qualitative changes in the accounting, which is followed by a reduction of bookkeepers.

For the present in Estonia accounting is mostly half-automatic. As the time goes on the accounting system turn to be more and more automated.

## АНАЛИЗ ФИНАНСОВОЙ СБАЛАНСИРОВАННОСТИ ПРЕДПРИЯТИЯ

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Анализ финансовой сбалансированности предприятия представляют собой сложный и противоречивый комплекс проблем, который в экономической (даже англоязычной) литературе еще мало разработан. Прежде всего будем исходить из тезиса, что никакой оптимальной финансовой сбалансированности не существует, есть только финансовая сбалансированность предприятия при определенном приемлемом для него уровне риска. В предпринимательство инвестируют свои деньги различные инвесторы. Следовательно, необходимо постоянно учитывать их риски. Инвестиции и функционирование предприятия базируется на принципе: чем выше риск, тем выше доход и наоборот, чем меньше риск, тем меньше доход. Промежуток (разница между наименьшим и наибольшим уровнем риска), в котором предприятие делает свой выбор, прежде всего обусловлен практическими расчетами. В сущности, мы имеем дело с возможно широкой диверсификацией и иммунизацией рисков. В данной статье мы рассматриваем разные виды рисков, которые в обобщенном виде представляют собой экономическую категорию риска.

Рассматривая риски и финансовую сбалансированность, выдвинем на первый план бизнес-риск, т.е. риск предпринимательства или предпринимателя. Этот риск дефинируется как опасность того, что доход предприятия будет ниже ожидаемого (запланированного), причинами чего могут быть выбранная стратегия деятельности, решения руководителей, отклонения расходов от намеченных, неопределенность спроса и конкуренция. Перечисленные проблемы, в сущности, взаимосвязаны с выбранными для реализации бизнес-планами, точнее реализуемыми проектами и их финансовыми параметрами (внутренняя доходность, текущая стоимость и др.). Значит, в данном случае в целях достижения финансовой сбалансированности необходимо дифференцировать проектные риски в процессе бюджетирования капитала. В случае концерна это может даже удасться. Труднее в случае предприятия, специализированного на производстве одного вида продукции.

**А. Сбалансированное развитие предприятия.** В экономической практике сбалансированное развитие предприятия достигается в течение десятилетий. Важную роль в этом процессе играют постоянный анализ и планирование сбалансированности. Как подчеркивалось выше, сбалансированное развитие охватывает многие связанные с работой предприятия аспекты, но центральной проблемой все-таки остается достижение финансовой сбалансированности, т.к. по своему характеру финансы пронизывают предприятие горизонтально. В сущности это означает, что сбалансированность есть наиглавнейшее условие достижения успеха в бизнесе. Исходя из этого, при планировании финансовой сбалансированности дополнительная денежная потребность предприятия связывается с ростом планируемого объема продаж продукции, чистой прибыли, дивидендов и т.д. Далее наше внимание будет обращено именно на эти проблемы, при этом мы будем базироваться на данных средних по размеру эстонских предприятий, чьи акции котируются на Таллиннской бирже (Норма, Калев,

Раквереский мясокомбинат, Эстико и др.). В данном исследовании нас прежде всего интересует теоретико-методологический аспект проблемы, поэтому имея ввиду коммерческие тайны предприятий, мы не будем ссылаться на конкретное предприятие.

Подчеркнем, что при анализе и планировании финансовой сбалансированности предприятия исходят из многих показателей: коэффициент задолженности, отношение рыночной цены акции к прибыли (P/E), отношение заемного капитала к собственному (D/E), доход на акцию (EPS), дивиденд на акцию (DPS) и др. В условиях стабилизации экономики эти показатели становятся все более стабильными и их мы возьмем как константу для разработки дальнейших направлений развития.

Далее приведем основные модели, используемые при финансовом планировании, с пояснением соответствующих символов. Ясно, что использование каждой модели предусматривает творческий подход пользователя при точном разграничении каждого фактора. Особенно это касается той части имущества и обязательств, которая изменяется вместе с увеличением или уменьшением объема продаж. Рассмотрим эти проблемы подробнее на примере следующих ситуаций, в которых имеются ввиду средние по размеру предприятия Эстонии.

#### Финансовое планирование: отрезки деятельности, связи и модели:

Связь	Формулы, модели и символы
Определение дополнительной внешней потребности в денежных фондах (AFN):	$AFN = \left(\frac{A^*}{S}\right) \Delta S - \left(\frac{L^*}{S}\right) \Delta S - (MS_1)(1-d) =$
Увеличение объема продаж за счет имеющихся резервов ( $S_{cap}$ )	$S_{cap} = \frac{S}{\text{коэффициент действия льготного использования имущества и мощностей}}$
	$S, S_1$ и $\Delta S$ = продажа, планируемая продажа и рост продажи продукции в соответствующем периоде; $A^*$ и $L^*$ = имущество и задолженность, возрастающие вместе с продажами продукции; $d$ = коэффициент выплаты дивидендов; $M$ = прибыльность деятельности;
Прогнозирование запасов и дебиторской задолженности с помощью линейной регрессионной модели ( $y$ ):	$y = a_0 + a_1 x$ , где $a_0 = \frac{(\sum x^2)(\sum y) - (\sum x)(\sum xy)}{n \sum x^2 - (\sum x)^2}$ $a_1 = \frac{n \sum xy - (\sum x)(\sum y)}{n \sum x^2 - (\sum x)^2}$
	$x$ = продажи; $a_0$ и $a_1$ = соответственно свободный член равенства и корректирующий коэффициент продаж
Расчет коэффициента корреляции ( $r$ ):	$r = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}}$
Планируемая чистая прибыль (NI):	$NI = (EBIT - I)(1 - T)$ $I$ = ставка процента $T$ = ставка налога



Далее можем приступить к рассмотрению одной компактной ситуации, которая обнажает срез исследуемых проблем сбалансированности. Для этого прежде всего приведем в форме таблицы принципы, взятые в качестве предпосылок. При этом предположим, что обособленная сбалансированность является условием финансового успеха предприятия.

Имеются следующие синтетические данные о деятельности средних по размеру Эстонских предприятий за последний год (тыс. крон):

Сокращенный отчет о прибыли:

Реализация продукции	2000
Производственные затраты	1100
Амортизация	400
Проценты	300
Налоги	68
<b>Чистая прибыль</b>	<b>132</b>
Дивиденды	44

Сокращенный баланс:

Оборотное имущество	500	Краткосрочные обязательства	165
Основное имущество	1150	Долгосрочные обязательства	535
		Собственный капитал	550
		Нераспределенная прибыль	400
<b>Имущество</b>	<b>1650</b>	<b>Обязательства + собственный капитал</b>	<b>1650</b>

- Какой потребуется объем внешнего финансирования, если объем реализации у предприятия в следующем году будет 2 200?
- Составить плановый баланс и показать возможные источники покрытия AFN. Охарактеризовать их.
- Какого процента роста может достигнуть предприятие прежде, чем ему понадобится дополнительное внешнее финансирование?
- Насколько уменьшится потребность во внешнем финансировании предприятия, если рост продаж будет равен нулю ( $g=0$ )? Объяснить приведенные расчеты с помощью рисунка.
- Рассчитать процент роста предприятия за счет внутренних источников финансирования (*sustainable growth rate*).
- При каком коэффициенте выплаты дивидендов процент роста за счет внутреннего финансирования равен 12 процентам ?

Ход решения приведем в порядке ответов на вопросы.

(1)

$$\begin{aligned}
 \Delta FN &= \left(\frac{1650}{2000}\right)(200) - \left(\frac{165}{2000}\right)(200) - \left(\frac{132}{2000}\right) - (2200)\left(1 - \frac{44}{132}\right) \\
 &= (0,825)(200) - (0,0825)(200) - (0,966)(2200)\left(1 - \frac{1}{3}\right) = 51,70;
 \end{aligned}$$

(2) Сокращенный плановый баланс предприятия:

Оборотное имущество	500(1,1)=550	Краткосрочные обязательства	165(1,1)=181,5
Основное имущество	1150(1,1)=1265	Долгосрочные обязательства	535
		Собственный капитал	550
		Нераспределенная прибыль	400 + 96,8
		AFN	51,7
<b>Всего:</b>	<b>1815</b>	<b>Всего:</b>	<b>1815</b>

Так как коэффициент задолженности в прошлом году был  $(165+535) / 1650 = 42,4\%$ , то сохраним его без изменения на следующий год. Благодаря высокой доле прибыли в доходах предприятия (*profit margin*), равной 6%, нераспределенная прибыль увеличилась на 96,8. Таким образом, всю AFN нужно покрыть ссудами. Тогда новым коэффициентом задолженности будет  $(181,5 + 535 + 51,7) / 1815 = 42,3\%$ , т.е. прежний коэффициент задолженности практически сохранится.

(3) Уравняем ранее приведенную модель с нулем:

$$\left(\frac{A^{\bullet}}{S}\right)S_0g + \left(\frac{L^{\bullet}}{S}\right)S_0g - M(S_1)(1-d) = 0$$

Далее найдем, какого процента роста ( $g$ ) может достичь предприятие до того, как ему потребуется дополнительное внешнее финансирование:

$$\left(\frac{1650}{2000}\right)2000g - \left(\frac{165}{2000}\right)2000g - \left(\frac{132}{2000}\right)(2000)(1+g)\left(1 - \frac{44}{132}\right) = 0$$

$$1650g - 165g - 0,066(2000)(1+g)(0,667) = 0$$

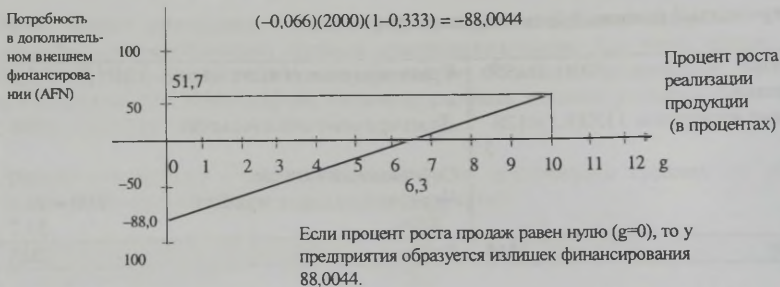
$$1396,96g = 88,044 \quad g = 6,3\%$$

Таким образом, предприятие может достичь прироста в 6,3 процента без дополнительного внешнего финансирования.

Данный показатель не является максимальным процентом роста за счет внутренних источников финансирования (*sustainable growth rate*), т.к. коэффициент D/E изменяется. В данном случае у нас увеличилась нераспределенная прибыль, но не ссуды.

Теперь найдем, насколько уменьшится потребность во внешнем финансировании, если процент роста продаж будет равен нулю ( $g=0$ ).

(4) Потребность в дополнительном во внешнем финансировании (при  $g=0$ ) найдем, исходя из связи:



(5) Процент роста за счет внутренних источников финансирования ( $g^*$ ) определяется по формуле:

$$g^* = \frac{M(1-d)(1+D/E)}{A/S - M(1-d)(1+D/E)} \quad \text{или} \quad g^* = \frac{ROE(1-d)}{1 - ROE(1-d)}$$

или реже просто как  $g = ROE(1-d)$ .

$$g^* = \frac{(0,066)(1-0,333)(1+0,737)}{0,825 - (0,066)(1-0,333)(1+0,737)} \quad g^* = 10,21\%$$

$$ROE = \frac{132}{950}; ROE = 13,89\%; \quad g^* = \frac{(0,1389)(1-0,33)}{1 - 0,1389(1-0,33)}$$

$$g^* = 10,2\%$$

Относительно низкий коэффициент выплаты дивидендов (0,33) и коэффициент имущество / реализация в будущем даст хороший процент роста.

(6) В данном случае искомой величиной является d, таким образом

$$0,12 = \frac{(0,066)(1-d)(1+0,737)}{0,825 - (0,066)(1-d)(1+0,737)} \quad 0,12 = \frac{0,1146 - 0,1146d}{0,825 - (0,1146 - 0,1146d)}$$

d = 29,6%.

Ответы на поставленные вопросы будут следующие: (1) 51,70; (2) имущество = 1815; (3) g = 6,3%; (4) 88,0; (5)  $g^* = 10,2\%$ ; (6) 29,6 %.

Используя вышеприведенную методику, мы исследовали финансовую сбалансированность предприятий промышленного сектора, котирующихся на Таллиннской бирже, которая будет достигнута в 1998 году. Результаты были неожиданно похожими, т.е. объем деятельности предприятий опережал рост их имущества на 3-5 процентных пункта. Следствием является значительный рост платежеспособности и ликвидности. В то же время переход на более высокий уровень риска обеспечивает этим предприятиям рост чистой прибыли на 15-20 %. С таким положением можно согласиться, но ясно, что при финансовом планировании на следующий год необходимо сделать очень большие корректировки, в направлении снижения уровня риска.

При исследовании данной проблематики необходимо иметь в виду, что для прогнозирования каждого элемента оборотного имущества имеются свои модели и методы, но для определения АФН мы использовали обобщающие расчеты (учитывали то обстоятельство, что с ростом объема продаж пропорционально растет и имущество). В дальнейшем все-же необходимо для определения каждого элемента применять соответствующие специфические методы, но конкретный пример будет касаться производственных запасов. Между прочим, та же методика используется и для прогнозирования дебиторской задолженности.

**Б. Сбалансированность отдельных элементов оборотного имущества.** Теперь рассмотрим из актива баланса только одну статью – производственные запасы – и попробуем найти сбалансированную потребность на следующий период. Еще раз подчеркнем, что проблемой является достижение сбалансированности между отдельными статьями оборотного имущества, т.к. деньги, высвобождающиеся из-под запасов, поступают в качестве свободных денег на банковский счет предприятия.

Предположим, что за последние пять лет уровень продаж и производственных запасов предприятия составлял соответственно ( в тыс. крон): в 1992 году 2058 и 387; в 1993 году 2534 и 398; в 1994 году 2472 и 409; в 1995 году 2850 и 415; в 1996 году 3000 и 615. Используя простую регрессионную модель (*simple linear regression*) требуется спрогнозировать потребность в производственных запасах на 1996 год, если запланированные продажи составляют 3 300. Найти коэффициент корреляции между запасами и продажами.

Ход практических расчетов следующий.

Обозначим продажи  $x$  и запасы  $y$ , составим уравнение:

$$y = a_0 + a_1x$$

с помощью которого найдем  $a_0$  и  $a_1$ . Для большей наглядности составим таблицу:

x	y	x <sup>2</sup>	xy	(x - $\bar{x}$ )	(x - $\bar{x}$ ) <sup>2</sup>	(y - $\bar{y}$ )	(y - $\bar{y}$ ) <sup>2</sup>
2 058	387	4 235 364	796 446	-524,8	275 415,04	-57,8	3 340,84
2 534	398	5 421 156	1 008 532	-48,8	2 381,44	-46,8	2 190,24
2 472	409	6 110 784	1 011 048	-110,8	12 276,64	35,8	1 281,64
2 850	415	8 122 500	1 182 750	267,2	71 395,84	-29,8	888,04
3 000	615	9 000 000	1 845 000	417,2	174 005,84	170,2	28 968,04
12 914	2 224	33 889 804	5 843 776	$\bar{x}$	535 524,8	$\bar{y}$	36 668,8

$$a_1 = \frac{5(5843776) - (12914)(2224)}{5(33889804) - 12914^2} = \frac{498144}{2678020} = 0,186$$

$$a_0 = \frac{(33889804)(2224) - (12914)(5843776)}{5(33889804) - 12914^2} = -35,7$$

$y = -35,7 + 0,186(3\ 300) = 578$  является прогнозируемым запасом. Это достоверная величина. Коэффициент корреляции найдем с помощью формулы:

$$r = \frac{30333 + 2284 + 3967 - 7963 + 71007}{140132} = \frac{99628}{140132} = 0,71.$$

Ответ будет следующий: планируемой величиной запасов является 578 ЕЕК, а коэффициент корреляции изменений запасов и объема продаж равен 0,71.

Аналогично планированию запасов, с помощью линейной регрессионной модели осуществляется и планирование дебиторской задолженности.

**В. Долгосрочные источники финансирования и риски.** Далее, обратившись к пассивами баланса предприятия, исследуем платежный риск, а также кредитный и инвестиционный риск с точки зрения инвестора т.е. владельца облигаций.

Пусть у эстонского инвестора будет облигация с 12,8 %-ым купоном, чья номинальная стоимость равна 1000 кронам, доходность 12 % и срок обращения до погашения 5 лет. Предположим, что инвестор желает держать эту облигацию 4 года, при этом ее доходность снизится до 9 %. Нас интересует, иммунизирован ли процентный риск? Исследование ситуации показывает следующее.

Рассчитаем дюрацию облигации (D):

$$\frac{1(0,8929)(128) + 2(0,7972)(128) + 3(0,7118)(128) + 4(0,6355)(128) + 5(0,5674)(1128)}{(0,8929)(128) + (0,7972)(128) + (0,7118)(128) + (0,6355)(128) + (0,5674)(1128)} = \frac{114,29 + 204,08 + 273,33 + 325,38 + 3200,14}{114,29 + 102,04 + 91,11 + 81,34 + 640,03} = \frac{4117,22}{1028,81} = 4 \text{ года.}$$

Год	Денежный поток	Стоимость в конце четвертого года (12 %)	Стоимость в конце четвертого года (9 %)
1.	128	$128(1,12)^3 = 179,83$	$128(1,09)^3 = 165,76$
2.	128	$128(1,12)^2 = 160,56$	$128(1,09)^2 = 152,08$
3.	128	$128(1,12) = 143,36$	$128(1,09) = 139,52$
4.	128	128	128
5.	1128	$(1128 / 1,12) = 1007,15$	$(1128 / 1,09) = 1034,86$
	<b>Итого:</b>	<b>1618,90</b>	<b>1620,22</b>

Так как дюрация ценной бумаги равна сроку предполагаемого хранения ее, то процентный риск иммунизирован (несмотря на снижение процента реинвестирования с 12 % до 9 %).

Таким образом, в данном примере процентный риск иммунизирован.

Проанализировав вышеприведенную ситуацию, можем приступить к портфелю ценных бумаг, а также к исследованию сбалансированности кредитного учреждения. Далее приведем следующий пример с банком развития.

Г. Риски и портфель ценных бумаг, а также сбалансированность коммерческого банка. Имущество, обязательства и дюрации банка развития следующие (тыс.ЕЕК):

Имущество			Обязательства		
	Рыночная стоимость	Дюрация		Рыночная стоимость	Дюрация
A.	35 000	0	A.	400 000	0
B.	500 000	3 мес.	B.	300 000	1 год
C.	275 000	6 мес.	C.	200 000	10 лет
D.	40 000	2 года	Собственный капитал:	100 000	
E.	150 000	14.8 года			
<b>Всего:</b>	<b>1 000 000</b>		<b>Всего:</b>	<b>1 000 000</b>	

Нас интересует, иммунизирован ли в данном случае процентный риск? Для этого выполним прикладные расчеты, т.е. найдем дюрацию имущества и обязательств.

$$\text{Дюрация имущества} = 0(35/1000) + 0,25(500/1000) + 0,5(275/1000) + 2(40/1000) + 14,8(150/1000) = 2,56 \text{ года};$$

$$\text{Дюрация обязательств} = 0(400/900) + 1(300/900) + 10(200/900) = 2,56 \text{ года}.$$

Процентный риск иммунизирован, если действует следующее равенство:

$$\frac{(\text{Дюрация имущества})(\text{Рыночная стоимость имущества})}{(\text{Дюрация обязательств})(\text{Рыночная стоимость обязательств})} =$$

В данном случае необходимо увеличить дюрацию обязательств или сократить дюрацию имущества или же выполнить то и другое вместе. Уменьшим дюрацию имущества:  $2,56 (900/1000) = 2,3$  года, используя формулу:

$$\text{Дюрация имущества} = \frac{(\text{Дюрация обязательств})}{(\text{Рыночная стоимость обязательств}/\text{Рыночная стоимость имущества})}$$

Таким образом,  $263 \times 1000 \text{ млн.ЕЕК} = 2,56 \times 900 \text{ млн.ЕЕК}$

Итак, для иммунизации процентного риска нужно сократить дюрацию имущества до 2,3 года.

И в заключение. Анализ и планирование финансовой сбалансированности предприятий в настоящее время еще не нашли широкого применения на предприятиях Эстонии. Вероятно, одной из причины является то обстоятельство, что с вышеприведенной методикой эстонский читатель может ознакомиться, лишь используя англоязычные источники, и то, что эти источники еще недостаточно представлены. Пожеланием автора данной статьи является скорейшее использование этой методики на практике, ведь от этого зависит результативность и коммерческий успех работы предприятий Эстонии в целом.

## Литература

1. R. C. Higgins. Analysis for Financial Management. 3th Ed. Printed in the United States of America, 1992.
2. S. A. Ross, R. W. Westerfield, J. F. Jaffe. Corporate Finance. 3rd Ed. Printed in the United States of America, 1993.
3. S. A. Ross, R. W. Westerfield, J. F. Jaffe. Corporate Finance. Student Problem Manual. Prepared by Robert C. Hanson. Printed in the United States of America, 1993.
4. В. Раудсепп. Углубленный анализ платежеспособности предприятия. Новости бухучета № 7 (22), с. 40-45, 1997 (на эст. яз.).
5. В. Раудсепп. Многовариантность в анализе и планировании оборотного капитала предприятия. Новости бухучета № 1(24), с. 15-196 1998 (на эст. яз.).
6. В. Зирнаск, К. Лийкане. Деньги, банки и финансовые рынки. Части 1 и 2. Coopers&Lybrand. Таллинн, 1996.

## ETTEVÖTTE FINANTSTASAKAALU ANALÜÜS

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### Kokkuvõte

Ettevõtte finantstasakaal on äriedu saavutamise lahutamatuks osaks. Artiklis uuritakse ettevõtte finantstasakaalu saavutamise aluseid, aga samuti käibevara elementide pikaajaliste allikate ja riskide ning väärtpaperiportfellide tasakaalustamise võimalusi. Meetodite kasutamisel võetakse aluseks eesti ettevõtete andmestik ning nende varal tuuakse välja põhilised järeldused. Kirjutises püütakse saavutada ennekõike meetodite suurem rakenduslikkus Eesti tingimustes.

## SOME PROBLEMS THAT OCCUR AT THE VERIFICATION OF THE ASSETS

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In different publications several authors have dealt with problems that occur at the verification of assets for the financial year under review. The auditor's task is to verify the reasonableness and security of the accounts according to the principle of conservatism. Most often assets do not appear in the accounts at their current value but at their original cost. On the other hand, according to the Law of Accounting of the Estonian Republic, the yearly account has to show properly assets, liabilities and equities as well as the results of economic activity of all the subjects to accountability. Therefore, floating assets should be verified on the balance sheet according to which is lower, the original cost or the net realisable value. When verifying fixed assets it is important to see whether the net realisable value of a fixed asset is constantly lower than its residual value. In that case the fixed asset has to be shown on the balance sheet at its realisable value. In practice, when verifying figures on the balance sheet, a very subjective approach is used as the difference between the depreciation of fixed assets, original cost of floating assets and net realisable value is described in costs. The problem for the auditor is how to find out the real realisable value of an asset.

Apart from doing the required annual audit of the financial year the auditor can also perform other tasks. One of the most frequently occurring tasks is checking the value of non-monetary payments and giving their (the auditor's) opinion whether they correspond to the requirements of the Business Law. The regulations for doing it must be fixed in the Memorandum and Articles of a corporation or a partnership. A non-monetary payment can be any item or pecuniary right that has real value in money. In case of a corporation the valuation of a non-monetary payment has to be checked by the auditor. In case of a partnership the valuation has to be checked by the auditor if the cost of a non-monetary payment exceeds 40.000 EEK or if all the non-monetary payments together form more than half of the share-capital. Together with the people carrying out valuation the auditor is responsible for incorrect valuation. Therefore, the auditor is naturally interested in finding out the real cost of an item or pecuniary right, which is, according to the Business Law, the average local market price. It has to be possible to later sell a non-monetary payment. If it turns out that a non-monetary payment, valued at a certain price and verified by the auditor, has no real value, then the valuator(s) and the auditor have to take the responsibility.

Before verifying a valuation of a non-monetary payment the auditor faces several problems, e.g.:

- \*who could and should be the experts carrying out valuation
- \*which sources could give the average local market price of an item
- \*who has to establish any third parties' rights concerning a given non-monetary payment

The circle of people who can value non-monetary payments is not legally regulated in Estonia. It has to be organised by the board of directors. In practice sometimes an item used for non-monetary payment is valued by its owner. The valuator can not be a shareholder, a partner nor someone connected to them. From the auditor's point of view the problem is how



much one can trust valuations carried out by rather occasional people. At the same time the auditor lacks expertise and possibilities to carry out market research to find out the average local market price of each particular object.

The average local market price for most assets should be established by the Institute of Market Research. The author's opinion is that having the average local market price would help to verify whether a non-monetary payment, depending on the condition of a given item, has been valued fairly. So far it has been possible to use the data by the Institute of Market Research when valuating light motor-cars.

In addition to that there also stays the problem who and how should establish any third parties' rights at objects used as non-monetary payments. According to the Business Law a shareholder or a partner has to inform about it. A corporation might not be interested in something they will not really have in their possession. When real property is used for non-monetary payment information on it can be obtained from real estate registers, but in case of floating assets it is quite hopeless to find that kind of information (unless the partner or shareholder gives it).

An ethical problem may rise when an object that is used for making a non-monetary payment has been prior to that taken on lease or is being used under a contract by the same corporation or partnership; according to the contract the lessee or the user is not paying rent, but only pays for repairs (if necessary) or carries out betterment of the given object. In the first case the tenant can regard the sums spent on repairs as costs. In the second case, before the lease agreement ends, the tenant can regard the sums spent on repairs and betterment as depreciation. This is how a shed can become a workshop. The object of lease belongs to the lessor. When this object is valued now its average local market price is much higher than it was at the beginning of the lease and the lessor uses it to make a non-monetary payment (in order to obtain shares)

When paying for shares, e.g. a shareholder's claim on the partnership or corporation can be considered as non-monetary payment if it does not affect the businesses' or their creditors' interests. According to the Business Law the claim must be valued as non-monetary payment. In practice when valuating a claim it (the claim) has to be proven in writing. The average local market price is of no help here. The question is who should value the claim. According to the Business Law the auditor has to verify this.

The problems mentioned above require a lot from the auditor and bring along high audit risks.

## **Bibliography**

1. Eesti auditeerimiseeskiri. Tallinn, 1996, 36 lk.
2. Millichamp, A. H. Auditing. – TP Publications. Aldine Place, London W12 8AW, 1996, 564 lk.

## TAX PLANNING AND TRANSACTION COSTS

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### Introduction

The purpose of this short article is to investigate the impact of non-tax costs on successful tax planning activities. Implementation of tax-minimizing strategies may introduce significant costs along non-tax dimension. These non-tax costs can arise in form of higher transaction costs, increasing level of risk or possible conflicts between agent and principle (agency costs). Due to these costs some "holes" in the tax law are not as serious problems as they seem to be at a first glance. This article will explore more deeply one possibility to lower taxpayers' tax liability given by the current Estonian Income Tax Law, namely so-called tax-selling or "wash sale". The purpose of "wash sale" is to realize capital loss in order to reduce tax liabilities in given year. This article will show that in spite of missing restrictions in Estonian tax legislation to engage in creating "paper losses"; a successful tax-planner should not use such an opportunity without proper analysis of all its consequences. Transaction costs (and especially bid-ask spread) are probably most serious costs associated with "wash sale". Therefore this article will also give a short overview of different transaction costs in Estonian capital market focusing on bid-ask spreads. The article is organized as follows. It begins with a very short review of essence and types of tax planning. Next section investigates possibilities to create losses through "wash sale" under current legislation in Estonia. The last section describes different types of transaction costs and presents some data about the size these costs in the Tallinn Stock Exchange.

### Tax Planning Activities

We have to make a clear distinction between tax planning and tax minimization. The goal of tax minimization is simply reduce taxes. Effective tax planning on the other hand requires the planner, in making investment and financing decisions, to consider not only explicit taxes (taxes paid directly to taxing authorities) but also implicit taxes (taxes that are paid indirectly in the form of lower before-tax rates of return on tax-favored investments (Scholes, *et al.* 1992, p. 2). It also requires the planner to recognize that taxes represent only one among many business costs, and all costs must be considered in the planning process (*Ibid*, pp. 2-3). There are several types of tax planning (*Ibid*, pp. 15-19):

1. Converting income from one type to another. Tax liabilities are often affected by whether income is classified as:
  - Capital gain, interests, dividends or ordinary income
  - Having been earned domestically or abroad

For example under current Income Tax Law dividends are not considered as taxable income for Estonian residents. Interest income is taxed at ordinary tax rate (26%) with a few

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<sup>1</sup> The author is grateful to Kristi Kolk and Eva Palu from Tallinn Stock Exchange.

exceptions (for example interests paid by State Compensation Fund to its bondholders are not considered as taxable income for natural persons). Capital gain is taxed with ordinary income tax rate 26% but only after this gain is realized. Even though Estonian income tax legislation is not so complex as in many other countries, it includes some possibilities for tax planning activities.

2. Shifting income from one time period to another. If tax rates are constant or declining over time, taxpayers prefer to delay the recognition of income. If tax rates are increasing over time, it pays to accelerate the recognition of income unless interest rates are very high. Taking account the time value of money, it is obvious, that paying taxes tomorrow is better for taxpayer than doing it today. There are several possibilities how to shift income from one period to another in Estonia. Tax legislation gives the taxpayer the right to choose between different inventory valuation methods (FIFO versus weighted average method) to determine the cost of securities sold, to choose the right time for the capital gain realization or postpone taxes via so called tax selling.
3. Shifting income from one pocket to another. Estonian income tax system is based on proportional tax rate and therefore shifting income from one pocket to another is not so acute problem as in countries where there is progressive tax system. Under progressive tax system high tax-bracket taxpayers would prefer to have their income earned through a tax-exempt pension fund rather than on personal account (all other things being equal). They also prefer to have their income earned by their low tax-bracket children, or by their low tax bracket business (located in a low-tax foreign jurisdiction) rather than earned by themselves. In Estonia there are also enough wealthy persons and corporations who use firms in tax havens to lower their tax liabilities.

Shifting income from one time period to another seems to be relatively easy task. Next section investigates positive and negative aspects of so-called wash sale.

### **An example of wash sales**

As a general rule, capital gain is not recognized for tax purposes unless realized through a sale or exchange. Consequently, there is a tax incentive for taxpayers to continue holding appreciated assets while selling those that have gone down in market value (Rice 1993, ch.5, p. 27). However, if tax incentives are not strong enough, investors usually act vice versa. This is based on so-called disposition effect: a marked reluctance of investors to realize their losses. Odean (1998) studied trade records for 10000 individual investors and shows that investors are much more likely to sell the stock that went up (Kahneman, *et al.* 1998, p. 60). Still in some cases there is an incentive for taxpayers to create "paper losses" by the sale and immediate repurchase of those assets that have decreased in value. Such an operation is called "wash sale".

"Wash sales" are defined in the tax law of the United States as situations in which the taxpayer both sells and purchases substantially identical stocks or bonds within 30 days (Rice, 1993, chapter 5, p. 27). The purchase may either follow or precede the sale as long as both occur within 30 days of each other.

In several countries, including the United States, losses from “wash sales” are not recognized for tax purposes. This means that the investor’s position must probably be exposed to a nontrivial degree of risk for a 30-day period to permit the deduction of the capital loss. There is not such restriction in Estonia. At the same time, incentive for create “paper losses” is smaller in Estonia than in the United States. Capital loss limitations prevent taxpayers from offsetting excessive amount of ordinary income with capital losses. The current restriction in the United States is 3 000 USD per year for individuals with any unused losses allowed to be carried forward indefinitely to be used against future gain (Scholes, *et al.* 1992, p. 114). In Estonia capital losses cannot be used against ordinary income. For taxpayers with no capital gain there is no incentive to create “paper losses”. However for a person, who have realized capital gain there is much stronger incentive to engage in “wash sale”. There is a possibility that investor who in total did not make any capital gain during her lifetime, still had to pay taxes. Let’s assume, that investor has common shares of two different companies (A and B) in her portfolio. In this year she sold common shares of one company (A) and realized substantiate amount of capital gain. The market price of company B’s stocks is lower than at the time of purchase. Investor hopes that market value of this investment will rise in the future. Therefore she decides not to liquidate this investment. It means that in this year, she has to pay taxes on realized capital gain. However, security market is a risky place and expectations may fail. The price of company B shares may never reach the level at which investor made her purchase.

The reason, why taxpayers want to create tax losses, is to lower their tax liability in a given year. However, “wash sale” only shifts income from one period to another. Sometimes in the future, investors still will have to pay these taxes. Therefore the usefulness of creating tax losses depends partly on the length of investment horizon and partly on the expected rate of return. When investment horizon is long enough (i.e. the date of final sale of securities used in creating tax losses will be far in the future) and level of interest rates are high, creating tax losses may be quite an attractive possibility. Otherwise, it is questionable whether positive aspects cover the costs.

A lot of investors in Estonia have very short-term objectives and they act as speculators. In 1997 the ratio of turnover in TSE to total market capitalization was ca 1.3 and in 1998 1.25 (Estonian Securities Markets Yearbook 1998, p. 31). Because free-float is substantially smaller than total market capitalization, there must be many investors with investment horizon less than a year (Sander 1998, p. 100).

The first negative aspect of “wash sale” is increasing level of risk. Most investors are considered to be risk-averse; they don’t want to take risk unless they get compensation for it. Obviously, the risk associated with creating “paper losses” depends on the length of time period between the sale and the repurchase of securities, expected rate of return and standard deviation of expected rate of return. The next table will show risk and return characteristics of some Estonian companies.

Table 1

**Risk and return characteristics for a sample of Estonian companies<sup>2</sup>**

Company	Daily mean return	Daily standard deviation	Annualized mean return	Annualized standard deviation
Hansabank	0,046%	4,378%	11,52%	69,63%
Union Bank of Estonia	0,014%	4,661%	3,46%	74,14%
Tallinn Department Store	-0,059%	2,902%	-14,95%	46,16%
Optiva Bank	-0,398%	6,076%	-100,77%	96,65%
Norma	-0,107%	4,270%	-26,97%	67,91%
Saku Brewery	0,012%	3,563%	2,94%	56,68%
Estiko	-0,112%	5,221%	-28,46%	83,04%
Kalev	-0,054%	6,022%	-13,79%	95,79%
Tallinn Pharmaceutical Plant	-0,355%	6,734%	-89,78%	107,11%

In emerging stock markets risk is usually much bigger than in stock markets of developed countries. For example in the United States estimates of the standard deviation of monthly stock returns vary from 2 to 20 percent per month during the 1857-1987 period (Schwert, 1992, p. 28). Standard deviation of daily return can in emerging capital markets sometimes exceed the standard deviation of monthly return in developed capital markets. The main conclusion is: the risk associated with "wash sale" could be quite big even though in Estonia investors do not have to wait 30 days before all transactions can be completed. Unfortunately, increasing level of risk is not the sole consequences of creating "paper losses". Investor must trade to create capital loss of such kind and with trading transaction costs arise.

### Transaction costs

When some strategy requires selling and/or buying securities, transaction costs will arise. Analysts commonly distinguish between two major components of trading costs: explicit costs and implicit costs. The main explicit cost is the commission paid to the broker for execution. It is usually 0.5 percent of market value per one transaction for stocks quoted at Tallinn Stock Exchange (i.e. 1 percent per round-trip transaction). There are also some fixed charges, but they are quite small (ca 100 EEK) relatively to average size of one transaction. In 1998 the average size of a trade in Tallinn Stock Exchange was ca 380 000 EEK. A year before it was ca 170 000 EEK (Estonian Security Markets Yearbook 1998, p. 31). Implicit costs are much more difficult to measure. There are three sorts of implicit trading costs: bid-ask spreads, price impacts and opportunity costs.

To main liquidity Tallinn Stock Exchange among other organized exchanges use market makers. Market makers stand ready to buy or sell whenever the public wishes to sell or buy. They buy at the bid price and sell at a higher ask price. This trading model, called as quote-driven Dealer Market System is the main trading model at TSE and requires that a security have at least two recognized dealers (market makers), who are obliged to give bid and offer quotations on a continuous basis. The other model (order-driven Public Order Book) is used for transactions with less liquid securities (which have less than two recognized dealers).

<sup>2</sup> Based on a time period 09/16/96-02/05/99

That the percentage bid-ask spread is related to the stock's liquidity is well established in the literature. Estimates of the quoted spread in the United States stock markets as a percentage of the stock price vary widely, from less than 0.5 percent for the most liquid stock to the 4-6 percent for the most illiquid stocks (Keim *et al.* 1998, pp. 51-52).

Unfortunately quoted bid-ask spread may be imprecise estimate of true cost of transacting with market maker. Usually the "true" spread often referred to as the "effective bid-ask spread" is smaller than quoted spread, because trades are sometimes executed inside the quotes spread. Besides both the bid and ask prices have a systematic tendency to rise (fall) following a buy (sell) order, so true round-trip trading costs are less than quoted spread suggests. (*Ibid.*, p. 52)

In Estonian Stock Market quoted spreads are bigger than in United States. For most liquid stock listed in the Tallinn Stock Exchange quoted spreads are around 1-2 percent but for some illiquid stock in the over-the-counter market spread may be even 20-30 percent. Next table will show quoted average bid-ask spreads for a sample of stocks listed in TSE.

Table 2

**Bid-Ask Spreads Based on Best Bid/Ask Quotations for a Sample of TSE Stocks during 6/2/97-3/5/99 \***

Company	Average Quoted Spread	Minimal Quoted Spread	Maximal Quoted Spread	Modified Average Quoted Spread <sup>3</sup>
Saku Brewery	5,287%	-25,656%	100,000%	4,946%
Tallinn Department Store	2,838%	-1,282%	9,677%	2,779%
Estiko	9,681%	-1,887%	66,667%	9,268%
Tallinn Pharmaceutical Plant	3,019%	-9,412%	50,000%	2,774%
Kalev <sup>4</sup>	8,030%	-8,140%	1134,57%	7,022%
Norma	2,364%	-10,791%	8,738%	2,324%
Optiva Bank	2,041%	-48,148%	10,000%	2,010%
Union Bank of Estonia	1,923%	-59,333%	8,750%	1,886%
Hansabank	1,318%	-6,897%	8,280%	1,281%

\* - Information about best bid/ask prices was received from Tallinn Stock Exchange (TSE)

Large trades whether executed by one big or by many successive orders may move market prices. Such behavior is especially acute in small and relatively illiquid stock exchange as TSE. Although conceptually simple, the price impact is difficult to measure because price that would prevailed had the trade not occurred, is not observable. In United States market impact of a large block trades for stocks with market capitalization less than \$25 million in 1983 often exceeded 15 percent (Keim, *et al.* 1998, p. 53). Madhavan and Cheng (1997)

<sup>3</sup> Modified average spread was calculated by eliminating from time series all negative values (Negative spread indicates that there is some arbitrage opportunities. Obviously such opportunities must be very short-lived) and all values belonging to the top 1% (The cases of big positive bid-ask spreads are short-lived too).

<sup>4</sup> Includes time period from 6/2/97 to 5/15/98.

examined 21 000 block trades in the DJIA 30 stocks and found relatively small price impacts, 1.5% – 1.8% (*Ibid*).

The final component of implicit transaction costs is the opportunity cost associated with missed trading opportunities. These costs arise because some orders are filled only partly or they are executed with a delay, during which the price moves in wrong direction for investor. Unfortunately, researchers usually don't have sufficiently detailed data to compute opportunity costs of this kind.

## Conclusions

Estonian Income Tax Law includes several "holes" which allow taxpayers to reduce their tax liability. But first investors should examine whether other costs in non-tax dimension arising due to use of such "holes" are small enough as compared with benefit in tax dimension. In Estonia law does not prohibit creating "paper losses" through sale and immediate repurchase of securities. However, increasing level of risk and quite big transaction costs, make this opportunity unacceptable in many cases. The presence of such costs facilitates the work of policy makers.

## References

1. Estonian Security Markets Yearbook 1998, 65 p.
2. Kahneman, D., Riepe, M. W. Aspects of Investor Psychology. – *Journal of Portfolio Management*, 1998, Vol. 24, No. 4, pp. 52-66.
3. Keim, D. B., Madhavan, A. The Cost of Institutional Equity Trades. – *Financial Analysts Journal* 1998, Vol. 54, No. 4, pp. 50-69.
4. Rice, S. J. *Introduction to Taxation*. 1994 edition. South-Western Publishing Co. 1993.
5. Sander, P. *Kapitali struktuuri valik ja laenukapitali maksueelis*. Unpublished MA dissertation, Tartu 1998, 137 p.
6. Scholes, M. S., Wolfson, M. A. *Taxes and Business Strategy: A Planning Approach*, Prentice-Hall, Inc. 1992, 616 p.
7. Schwert, G. W. Why Does Stock Market Volatility Change Over Time? – Schwert, G. W., Smith, C. W. Jr. *Empirical Research in Capital Markets*. McGraw-Hill, Inc., 1992, pp. 28-66.
8. Tulumaksuseadus – Riigi Teataja I osa, 1998, nr 9, art 111.

## MAKSUDE PLANEERIMINE JA TEHINGUKULUD

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### Kokkuvõte

Eesti Vabariigi Tulumaksuseadus jätab investoritele mitmeid võimalusi vähendamaks tulumaksukohustust teatud aastal. Siiski ei kujune mitmed neist nn “aukudest” seadusandluses praktikas suureks probleemiks, kuna nende kasutamine toob endaga kaasa muid kulusid nagu näiteks riskitaseme suurenemine, tehingu- või agentuurikulud. Käesolevas artiklis analüüsiti lähemalt väärtpaberite müüki maksude vähendamise eesmärgil (*wash sale*). Tegemist on strateegiaga, mille puhul investor teostab selliste väärtpaberite müügi, mille turuhind on väiksem nende soetusmaksumusest realiseerides niiviisi kahju vara võõrandamisest ning seejärel taastab oma esialgse positsiooni ostes sama ettevõtte väärtpaberid tagasi. Saadud kahju ulatuses saab investor vähendada maksustamisele kuuluvat kasu vara võõrandamisest. Erinevalt näiteks USA seadusandlusest, kus väärtpaberite müügi ja tagasiostmise vaheline ajavahemik peab ületama 30 päeva, puuduvad Eestis seadusesätteid, mis raskendaksid sel moel tulude edasikandmist järgmistele maksustamisperioodidele. Eestis võib sellistele tehingutele aga olulisteks takistusteks kujuneda aktsiahindade suur volatiilsus, millest tingituna positsioonide taastamine võib minna kulukamaks kui algselt arvati ning tehinguga seonduvad kulud (eriti ostu- ja müüginoteeringute erinevus). Need mittemaksunduslikud kulud ei võimalda sageli investoritel maksuseadusandluses esinevaid puudusi ära kasutada.

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<sup>5</sup> The author is grateful to Kristi Kolk and Eva Palu from Tallinn Stock Exchange.



## USES OF LABOUR FORCE - AN ANALYSES

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From the point of view of efficient management of a company, it is important that labour costs would not raise quicker than productivity. In order to study efficiency level of existing labour force we have analysed whether investments into technology really did raise the net sales per employee.

Estonians have to improve their productivity before their salaries can achieve European Union level. Therefore is essential to invest into fixed assets. According to financial key ratios, plant, equipment and other fixtures on average number of employees increased during 1996 by 1,42-1,56 times on average and by 1,35-1,40 times on average in 1997. Yet in 1997, half of the more successful companies had plant, equipment and other fixtures in value per employee of 58 430 kroons, which is tens of times less than in the high technology sector. This seems to indicate an higher weight on manual labour in Estonian companies, which explains why the ratio of labour costs to net sales is much higher in comparison to developed countries.

In 1997 in all analysed business sectors the productivity increased by 33% on average. It is positive that the averages in all this sectors' medians and 3-rd quartile were at least two times higher as compared with consumer price index. It is evident that domineeringly the raise of productivity per employee were higher than labour costs. In 1997 according to financial key ratios the raise of labour costs declined. In 1997 labour costs per employee rose depending on quartile 1,16-1,21 times but during 1996 1,23-1,25 times (Chart). It is positive that the spending power of consumers also rose because the wages increased more than consumer price index.

While analysing the changes in plant, equipment and other fixtures and productivity we found out that the number of plant and equipment increased more rapidly than productivity. It means that it created good assumptions for raising of productivity in the future.

After analysing different sectors the author have concluded as follows:

- The highest increase of net sales per employee was in transport sector -the increase of plant, equipment and other fixtures 1,35-1,57 times caused the raise of net sales per employee 1,58-1,62 times. But the labour costs increased depending on quartile between 1,20-1,24 times. The increase of productivity in transport sector is a good example of how good conditions for free enterprise influenced positively development of this sector. It is significant fact that the transport sector is almost privatised and there are few monopolies in this field.
- In electricity the labour costs and productivity increased equally because in this field there are a lot of monopoly enterprises which makes possible to pay higher bonuses. Due to this fact the companies of this sector are not interested in an efficient management.
- In wholesale and retail trade the economic growth in 1997 is evident. But there are a lot of black economy in those fields because in 1997 31,8% employees got minimum wages or less and 25% earned 1001-2000 kroons per month.

- In real estate and business activities were also the significant increase of productivity and also the labour costs rose more than in transport field. The major reason for this increase is the attempt to keep employees in this field because in 1996 the increase of wages in this sector was the smallest after fishing. It is also possible that good economical situation in 1997 allowed employers to pay more official salaries.
- In mining the increases of labour costs and net sales per employee were in the same level. Therefore it is essential to pay attention to efficient management but because the low competition in this sector it is not necessary at the moment.
- In construction the 25% of top companies could not to increase their productivity as much as before. Smaller and medium size enterprises became more efficient. The reason may be that there were not so much new big buildings to construct as in 1995 and 1996 but a lot smaller reparations to do. If this trend will continue in the future there will be free capacities in this sector. If it is not possible to export this capacities, the unemployment will raise in construction sector.
- In the manufacturing it is essential to observe the labour costs because at certain level of wages the production will be transferred to other countries. It is very important especially in manufacture of textiles and machinery. It is positive that when in 1996 the productivity and wages rose in the same level in this field but in 1997 the situation improved. Due to three year employment liability of privatisation and because of big fines there were no possibilities for decreasing labour costs.
- In absolute figures low-qualified personnel and black economy cause the lowest level of wages in agriculture and hotels. At the same, in agriculture labour costs from net sales exceeded 1,5-2 times on average, which is explained by high weight on manual labour and low development of agricultural industry.
- Hotels can improve their productivity through main target markets as Finland, Sweden, Russia and Latvia. Long-term relationship development with the current clients should be one of the main goals to achieve in this sector. It will make the hotels earn more from the same clients.

The author thus recommends to companies not to save at the expense of investments as in most sectors the competitiveness of exports greatly depends on the level of plant, equipment and other fixtures.

And next, from the point of view of efficient management of a company, it is important that salaries are used to stimulate increases in productivity.

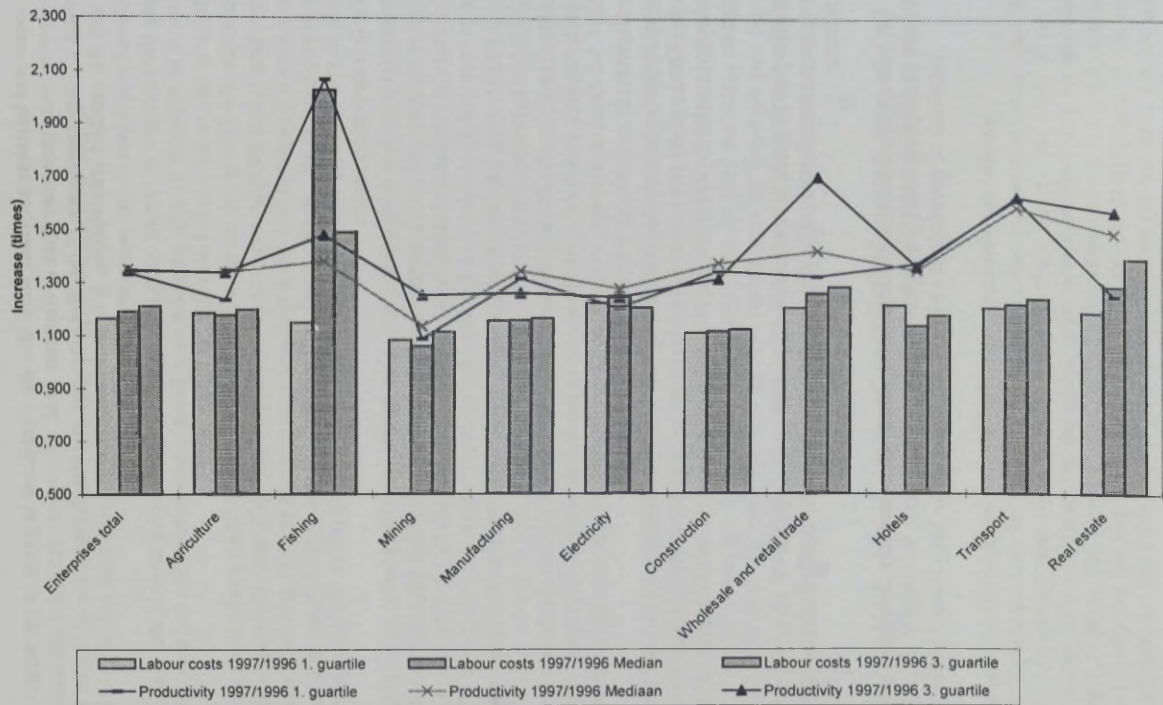


CHART 1. The comparison of employees production and labour costs, times

# ACCOUNTING PERSPECTIVES AND DEVELOPMENT OF A ESTONIAN AGRICULTURAL INFORMATION SYSTEM

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## Accounting perspectives

Accounting and financial reporting provide the informational infrastructure for public finance. Different country's have established different structures of informational systems. Some of the more important differences between public-sector and private-sector accounting and financial or marketing reporting can be attributed to the unique environment in which country, state and local government operate.

Governmental-type vs. business-type activities. Most government services are financed through taxes and intergovernmental revenues. Although beneficiaries of tax-financed services are typically taxpayers themselves, there normally is no direct relationship between what an individual taxpayer is asked to pay and the cost of the services received by that same taxpayer. When a service receives a significant portion of its funding through user charges, it can be referred to as a "business-type activity". When a service is largely funded through nonexchange revenues (e.r. taxes), it can be called a "governmental-type activity". Traditionally, the type of financial information desired for governmental-type activities has not been the same as for business-type activities.

Interest in a governments business-type activities has centered on the cost of providing services, and the degree to which this cost is being recoveries through user charges. This interest in cost and cost recovery is shared by private-sector accountants involved with profit-making enterprises. Many groups and individuals need reliable information on a governments activities and finances. A sound accounting system must meet the basic informational needs of all these interested parties. Management needs accounting information for planning purposes, and to ensure and demonstrate compliance with legal restrictions. Lawmakers need accounting information to aid in allocating scarce resources and to monitor management's compliance with their directives.

To meet the basic information needs of all these various user groups, external reporting for state and local governments provides much more detail than external reporting in the private sector. It is not intended to give an all embracing discussion on the intricacies of the principles of accounting and finance but to provide sufficient knowledge for the marketer to be aware of the financial implications of decision making, and aid in the following activities of marketing:

- an assessment of how well marketing strategy is working;
- an evaluation of alternative marketing activities;
- the development of future marketing plans, and;
- controlling marketing activities.

## Development of a Estonian Agricultural Information System

Development of a Estonian Agricultural Information System as “governmental-type” and “business-type” accounting activities. In a comprehensive restructuring process such as is currently underway in Estonia, both policy makers and entrepreneurs need timely and adequate information and analyses to take the required decisions. To support the decision-making process, basics information will be provided by different information and administration systems. Estonia besides their importance for national agricultural policy design and monitoring. To support the decision-making process, basics information is provided by general agricultural statistics, the Economic Accounts for Agriculture (EAA) and Farm Accountancy Data Networks (FADN) and Market Information Systems (MIS) and Integrated Administration and Control System (IACS) (Graph 1).

Stepwise improvement of agricultural information system in Estonia need to elaborate a long-term strategy for the development of the respective systems. Starting with the current institutional and technical situation and in consultation with the major users of the systems the role of agriculture statistics is to monitor agricultural activities and to provide reliable information for:

- policymakers (“governmental-type”);
- the agricultural sector (suppliers, farmers, producing organizations, processors, traders) “business-type”;
- Agricultural Trade Chamber and other producers organizations;
- extension services;
- institutions for research and education;
- EU, FAO, OECD and other international organizations.

Agricultural statistics system will have been implemented by the Statistical Office of Estonia and the major elements of agricultural statistics are:

- register of agricultural holdings (farm register);
- agricultural census (resources of production);
- land and crop production statistics;
- livestock production statistics;
- farm structure surveys;
- price statistics.

The major objectives of the Economic Accounts for Agriculture (EAA) are:

- to provide a systematic overview on the agricultural sector;
- to inform on the income generated by the agricultural sector;
- to provide directly comparable results between EU member states and new applicant country's;
- to contribute to the EU integration process.

Output the EAA results in:

- up-to-data information and forecasts;
- important indicators for economic analyses, policy formulation and decision making;

- support for negotiations between policymakers, administrators at both national and international level.

The major goals of a Farm Accountancy Data Networks (FADN) are:

- to provide reliable data on costs and returns at farm level;
- to give insight into the income developments for different categories of farms at national and regional level;
- to provide a database for economic analyses of different options in agricultural policies;
- to support the policy making process and negotiations for accession to the EU.

FADN outputs:

- accountancy data;
- net farm income;
- business analyses.

The statistical situation will improve when the EAA and FADN system will have been implemented by the Estonian Institute of Agrarian Economics. For example 400 family farms and 150 farm enterprises are scheduled to be included in this FADN system. 50 family farms and 50 agricultural enterprises were included already on a voluntary in 1997. Very preliminary results for 1996 show that arable and mixed farms were doing best, which may result from the strong increase in producer price of cereals. Concerning arable production, the labor income was in 1996 approximately 6 825 ECU at private family farms (utilised agricultural area 44 hectares with 1,9 annual working units). In comparison, the income per annual working unit at agricultural enterprises was 2 934 ECU. These farms had a utilised agricultural area of 781 hectares with 33,8 annual working units. These preliminary FADN results show that the profitability of pork farms was strongly negative in 1996. The income in the field of dairy was 4 520 ECU at private family farms with 16,4 cows, 27,1 hectares of utilised agricultural area and 3,3 annual working units. At agricultural enterprises, the profitability per annual working units was approximately 60% of the level at private family farms.

The main objectives of Market Information System (MIS) is to create market transparency. For agricultural producers market transparency means that they have better access to markets and better opportunities to trade their products in the market. For traders and processing industry market information is of significant importance for their efficient operation. MIS objectives is to continuously provide a transparent view on agricultural markets and thus:

- strengthen the position of the national agro-food sector on domestic and foreign markets;
- support the agricultural and food sector in the transformation process;
- contribute to the EU integration process and stimulate the use of EU quality standards.

Market information is an influential factor for helping private farmers acquire better returns for their produce. There is (statistically) significant evidence that if they use market

information on a regular basis, there is a high probability of receiving higher prices. Market Information System a viable and integrated system is operating if:

- markets reports are regularly published for major commodity groups;
- a technical network with linkages to both data providers and users of information has been established;
- the institution has been accepted by market participants, administration and foreign MIS agencies.

The major objectives of the Integrated Administration and Control System (IACS) are:

- to provide a system computer-based database;
- aid applications;
- integrated control system;
- alphanumeric identification system for land parcels;
- registration and identification system for animals.

Integrated Administration and Control System output:

- national or EU aid for producers;
- supervision;
- control and;
- implementation of the Common Agriculture Policy (CAP).

These information and administration systems are also explicitly demanded by the EU Commission for its administrative and strategy purposes regarding current and future member states. Consequently, they serve a candidate country like Estonia also as a means for preparing EU membership, besides their importance for national agricultural policy design and monitoring.

Other question is that the state of Estonia is in a negotiations process with the European Union in a situation where there is no agreed short-term or long-term agricultural development strategy. Running for membership in the EU on the basis of the Treaty on the European Union Estonia has accepted the main goals and means of the Union without any reservations. In Estonia's agricultural negotiations for joining the European Union it cannot negotiate for agricultural policy but has to unconditionally accept the set demands.

Estonia's joining the European Union is clearly at variance with the Constitution of the Republic of Estonia. Consequently, everything taking place in Estonia today in connection with the accession to the European Union is an anti-constitutional activity. State Assembly and Government of the Republic of Estonia have operated in a situation where the accession to the European Union is being considered as a finally decided step and that without consulting with the people. Accession to the European Union and the accession process are directly contrary to the paragraph one of the Constitution. It is also contrary to other paragraphs since the Constitution stipulates the basis and boundaries for the activities of legislative, executive and judicial authorities that has to be harmonised. At the same time the Constitution forbids concluding any foreign treaties that are in contradiction with the Constitution. It is not clear in Estonia, whether the joining with the European Union will support or ruin our agriculture as a special branch of economy. But Estonia need own a governments business-type activities like agricultural information system and it is not dependent we willing unite with EU or not.

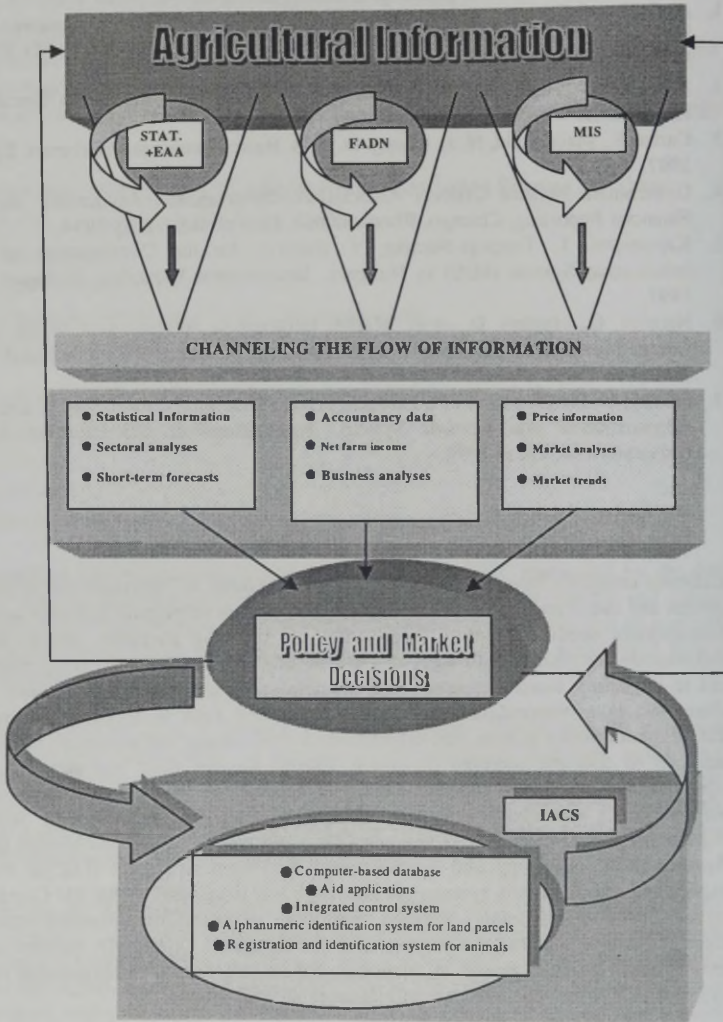
## References

1. Agricultural Situation and Prospects in the Central and Eastern European Countries. Estonia. European Commission Directorate General for Agriculture (DG VI) Working Document. June 1998.
2. Böse, Ch. Agricultural Information System for Policy and Market Decisions. ASA International Workshop Budapest: 1997.
3. Carter, S., Macdonald, N. J., Cheng, D. C. B. Basic Finance for Marketers. FAO. Rome: 1997.
4. Government Finance Officers Association. Governmental Accounting, Auditing and Financial Reporting, Chicago, Illinois 60601, First printing, May 1994.
5. Kapronczai, I., Tunyogi-Nechay, V. Strategy for the Development of a Market Information System (MIS) in Hungary. International Workshop Budapest Budapest: 1997.
6. Nikolov, G., Hughes, D., *et al.* Market Information Services as a Means to Improve Competitiveness of the Food Sector: the Case of Bulgaria. International Workshop Budapest: 1997.
7. Silberg, U. Development of a Estonian Agricultural Information System and Integrated Administration and Control System. Transactions of the Estonian Agricultural University 196. Tartu: 1998.

## Summary

Different country's have established different structures of informational systems. Many groups and individuals need reliable information on a governments activities and finances. Management needs accounting information for planning purposes, and to ensure and demonstrate compliance with legal restrictions. Lawmakers need accounting information to aid in allocating scarce resources and to monitor management's compliance with their directives. In a comprehensive restructuring process such as is currently underway in Estonia, both policy makers and entrepreneurs need timely and adequate information and analyses to take the required decisions. Estonia besides their importance for national agricultural policy design and monitoring. To support the decision-making process, basics information is provided by general agricultural statistics, the Economic Accounts for Agriculture (EAA) and Farm Accountancy Data Networks (FADN) and Market Information Systems (MIS) and Integrated Administration and Control System (IACS). These information and administration systems are also explicitly demanded by the EU Commission for its administrative and strategy purposes regarding current and future member states. It is not clear in Estonia, whether the joining with the European Union will support or ruin our agriculture as a special branch of economy. But Estonia need own agricultural information system and it is not dependent we willing unite with EU or not.





Graph 1 Agricultural Information System

## CAUSES AND DIRECTIONS OF CHANGES IN COSTING SYSTEMS IN POLISH ENTERPRISES DURING 1991-1999

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In the early years of the transformation of Polish socio-economic system the majority of academic accountants were engaged in work on the alteration of the accounting law in conformity with the European Union solutions (Directives), Western European countries practice and International Accounting Standards. The co-operation between the academic community and the Accounting Section of the Ministry of Finance resulted in the development and promulgation of new legal regulations concerning accountancy and the auditing profession (Decree of Finance Minister of 15 Jan. 1991 on the Principles of Accounting, Law Gazette 1991 No 10 and 1992 No 96; Accounting Act of 24 Sept. 1994, Law Gazette 1995 No 121). The new regulatory context of business activity in Poland created a need for a new type of information for management purposes as well as for consulting services. Such services were supplied by newly formed consulting firms, employing in large part academic accountants. One of the first such companies was Towarzystwo Gospodarcze RaFiB in Lodz, co-operating mainly with the Accounting Department and the Department of Organisation and Management of the University of Lodz. This company made possible the establishment of close contacts between practice and theory (professional and academic circles), which were non-existent under the former economic system.

In the first half of the '90s, this co-operation was the only source of information about the situation in the accounting practice of Polish enterprises and current directions of change. As a result of the collaboration between researchers from the Accounting Department of the University of Lodz and the RaFiB company a number of projects were carried out in 38 Polish enterprises. These projects involved evaluation of cost accounting systems currently applied in these enterprises and design of new costing systems frequently supported with MRP II type information systems. The relevant information on the enterprises in question is given in tables 1 and 2.

Table 1  
Enterprise size by the number of employees

Number of employees	Number of enterprises
under 800	6
from 801 to 2000	22
above 2000	10
total	38

Source: TG RaFiB z o.o.

Enterprises by industries/types of activity

Industry/type of activity	Number of enterprises
chemicals	7
metallurgy	7
power	6
textiles	4
food – processing	2
paper	2
pharmaceuticals	1
media	1
research institutions	1
other	7
total	38

Source: TG RaFiB z o.o.

This paper aim to present preliminary results of research conducted in the area of causes and directions of changes in cost accounting systems and management accounting in Polish enterprises. The authors' decision to undertake research in this field was motivated by vast experience accumulated by them during the performance of consulting work as well as lack of such research in our country.

The research work aimed at identification of causes and directions of changes in costing and management accounting systems was based on the analysis of 78 cases. Information on 38 enterprises was collected in the process of research carried out directly by the authors, whereas material on 17 companies was obtained through interview, and on further 23 enterprises which had implemented changes in costing systems – from information materials provided by consulting firms. All observations included in the study were based on research conducted in the years 1991-1999.

The research shows that changes in cost accounting systems implemented in Polish enterprises in the 1990's were made at varying rates and were caused by various reasons. The causes lay mostly in the changing business environment. They differed in intensity and scope of affect they had on the enterprises. Some of these causative factors had an intentionally limited scope and resulted only in changes in cost accounting of enterprises in one specific branch, like the energy law enacted in 1997. The causes identified in the process of the research were many and various. The research work carried out in Polish enterprises and the findings of survey studies suggest that main reasons that have so far induced enterprises to modify their cost accounting and management accounting systems are the following:

- changes in the regulatory context (i.e. the Accounting Act, Environment Protection Act, legal and structural changes in the energy sector),
- increased competition and market globalisation,
- recession on Eastern markets (Russia, Asiatic countries),
- raised quality standards (introduction of ISO series 9000 norms),
- ownership changes (privatisation, restructuring, National Investment Funds),
- operation of enterprises on the stock exchange (the Warsaw Stock Exchange),

- development and widespread use of modern information technologies (software, hardware),
- implementation of advanced manufacturing technology,
- increased professionalism of managers,
- formation of a new profession – experts in management accounting and controlling,
- development of specialist publications market,
- development of university and non-university type education for accounting practitioners and managers.

The above reasons have to a varying extent prompted various enterprises to implement changes in their cost accounting systems and to apply management accounting concepts. Current directions of changes are the following:

1. mixed cost accounting systems are being developed (mostly multi-step marginal costing also allowing to identify manufacturing costs for financial reporting purposes and for other purposes, e.g. costs of quality connected with ISO standards implementation, environmental costs, logistics costs and costs of other functions),
2. cost budgeting systems are being developed on the basis of traditional full costing, with modified cost centres structure,
3. modern cost accounting systems are being implemented in a number of enterprises mainly with foreign capital (i.e. Activity Based Costing - Anga Uszczelnienia Mechaniczne Sp. z o.o.; Target Costing - Thomson Polkolor Poland).
4. costing subsystems, e.g. accounting for costs of quality for ISO purposes are being implemented, parallel with the traditional full costing system (without relationships between the systems).

Activity Based Costing and Target Costing are often used by companies implementing advanced technology in the planning stages as a guide for strategic decisions (i.e. pricing, introducing new products, new designs and processes). An increasing (but still low) number of Polish companies are implementing ABC. It is obvious that companies using ABC as well as companies not using ABC apply contribution approach and incremental cost analysis to support decisions. Well known advantages of using ABC do not question the usefulness of using contribution approach especially for short run decisions. The similar argumentation can be made in relation to marginal costing, which is viewed by Polish managers as a good tool to control the overall income of the company. The important thing about marginal costing in relation to ABC is that it is less expensive and it eliminates the danger of manipulating income by altering production schedules (as we know the danger is real in traditional absorption costing as well as in ABC).

It is evident that some Polish companies implement ABC, contribution analysis and marginal costing at the same time. They are using these approaches together with standard costing, target costing, capital budgeting techniques and so on. The combination of these techniques, using „different costs for different purposes” is the only possible solution for costing systems of Polish companies wishing to compete in global market. We believe that more and more Polish managers feel it no longer necessary to be either in the ABC accounting camp or the traditional accounting camp – they know that to achieve success they have to implement and use a wide variety of management accounting tools. Problems arise even in the case of companies which have implemented (or are implementing) new costing techniques, i.e. ABC. It is widely known that implementation of good ABC is not an easy task and many problems could appear. We can implement an ABC but are we sure that we picked the right drivers?, are we sure the relationships between cost drivers and activities

are meaningful?, are we sure that the data required to operate the system could be collected on a regular basis to monitor driver-cost relationship?. If the answer to above questions is negative, we have a system we call ABC and we do not have satisfactory information either for operational or strategic decisions.

Other directions of changes (1, 2 and 4) are characteristic of enterprises which are not implementing advanced technology and where operational management dominates. The scope of changes introduced by mixed systems of cost accounting (direction 1) makes possible to a greater extent the development of management accounting in these enterprises. This direction of change is typical of enterprises characterised by: technological backwardness (at the level of '60s and '70s), simple organisational structures suited to the realisation of the traditional functions of an enterprise, a still low proportion of fixed costs in total enterprise costs (about 30-40%), lack of strategic management.

The type of changes presented in 1, 2 and 4 has been caused by such factors as introduction of ISO standards, increased competition, better knowledge of management and management accounting among the employees and managers, entering the stock exchange by the enterprises and legislative changes. These factors have also made it necessary to implement the ABC system (direction 3) in enterprises making use of new production and information technologies and characterised by a high level of managerial expertise in strategic management (this concerns mostly companies with foreign capital). In enterprises implementing ABC the research found all the causes identified as effecting changes in costing systems. In most cases under study it has been found that a greater number and stronger impact of causes influenced the scope of changes carried out.

The picture of what is management accounting practice in Polish companies is somewhat confused however because there are a lot of companies whose costing systems for managerial purposes are the same as for financial reporting purposes, which is to say they are very poor. These companies (especially small and medium sized) have not implemented so far techniques like budgeting, marginal costing or contribution analysis, not to mention Activity Based Costing or Target Costing.

There are also companies which have tried to implement these methods but have not succeeded because of a lot of barriers at the implementation stage. The most common impediments include:

- lack of experience in enterprises in the area of developing cost accounting principles (under the former system such principles were developed and implemented by industrial associations and institutes),
- insufficient awareness on the part of financial – accounting staffs of the need to make radical changes in the existing cost accounting system so as to ensure relevant information for business planning and control purposes,
- reluctance of financial accounting and finance department professionals for fear of losing their competencies and weakening their position in a firm,
- obstructing by the management of internal business units of the formulation of clear-cut rules of responsibility (fear of responsibility),
- reluctance to perform the control function and unwillingness to evaluate the performance of business units and their management,
- weak co-operation and lack of understanding between the technical and economic personnel,

- insufficient resources for financing the purchase and implementation of modern information technologies, which is indispensable for proper incorporation of new cost accounting systems.

On the basis of conducted research the following general conclusions can be formulated:

- in spite of several years of systematic changes in Polish economy, enterprises are still more concerned with meeting the needs of external reporting than with satisfying information needs of internal users, which is one of the determinants of enhancing the performance of Polish enterprises in the period of transition to market economy (this results from the lack of autonomy in decision making of enterprises under the former economic system and strong subordination of enterprises to central government bodies due to legal regulations of that period affecting not only annual reporting but also cost accounting);
- during the period 1991-1999 could be observed an intensification in the introduction of changes starting from 1995, when the impact of most factors causing these changes grew stronger, the principal factors being increased competition and globalisation of markets and more recently, the crisis in Eastern countries;
- changes implemented in cost accounting form the foundation for the development of management accounting, but because of the lack of specialists in this area this development is still too slow;
- small and medium enterprises set up in the '90s by Polish capital show the least interest in modernising their costing systems; they use the traditional cost accounting system adequate only to the purposes of financial accounting.

The research carried out makes it possible to establish a general tendency: changes in Poland's economic system have forced modifications in costing systems applied in Polish enterprises.

### Bibliography

1. Jaruga, A., Sobańska, I., Sochacka, R. *Metody Kalkulacji. Koszty. Ceny. Decyzje / Methods of Calculation. Costs. Prices. Decisions / PWE, Warszawa, 1991.*
2. Sobańska, I., Wnuk, T. *The Development of Management Accounting in Enterprises Operating in Poland in 1990 s., Ryga, January 1999.*
3. Sobańska, I. *Tendencje rozwoju rachunku kosztów w Niemczech / Development of Cost Accounting in Germany / Wydawnictwo UŁ, Łódź, 1997.*
4. Sobańska, I. *4-ta dyrektywa EWG i sposób jej implementacji w prawie narodowym / 4th European Union Directive and of its Implementation/, [w:] Nowe standardy rachunkowości i sprawozdań finansowych. Materiały Konferencyjne, TNOiK, Łódź, 1990.*
5. *Decree of the Finance Minister of 15 Jan. 1991 on the Principles of Accounting, Law Gazette 1992, No 96.*
6. *Accounting Act of 24 Sept. 1994, Law Gazette 1995 No 121.*

## PÕLLUMAJANDUSRAAMATUPIDAMISE MÕNINGAID PROBLEEME

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Põllumajanduslike majandusüksuste raamatupidamise korraldamise aluseks on Eesti Vabariigi Raamatupidamise Seaduses sätestatud nõuded. Põllumajandusega tegelevad raamatupidamiskohustuslased on äriühingud (osauhingud, aktsiaseltsid jt) ja füüsilisest isikust ettevõtjad – talupidajad. Raamatupidamise seaduse § 2 lg 8 järgi lubati kehtestada talupidajatele eraldi raamatupidamisjuhendid. Neid aga välja ei töötatud ning 1998. a suvel võeti see säte seadusest tagasi. Põllumajandustootmise eripära arvesse võtvate raamatupidamisjuhendite puudumine on takistuseks korraliku taluraamatupidamise sisseseadmisel. Taludes kasutatakse paljudel juhtudel kassapõhist raamatupidamist, pidades seda lihtsamaks ja vähem aeganõudvamaks. Talupidajaid juhendavad raamatupidamise korraldamisel taluliitude nõustajad-konsulendid. Tekkepõhiselt raamatupidamist korraldavad talupidajad kasutavad põllumajanduslikes äriühingutes olevaid arvestusregistreid ja arvestuse põhimõtteid. Loodetavasti hakatakse edaspidi enamikes taludes arvestust pidama tekkepõhiselt.

Põllumajanduslikes äriühingutes peetakse arvestust tekkepõhiselt, võttes arvesse Raamatupidamise Seaduses sätestatud ning Raamatupidamise Toimkonna juhenditega soovitatut. Kontoplaanid on erinevad. Paljudel juhtudel kasutatakse põllumajandusettevõtetele 1987. a kehtestatud kontoplaani. Raamatupidamist arvuti abil tehes on aluseks kasutatava programmiga kaasnev kontoplaan.

Käsitsti tehtava arvestuse korral on kasutusel žurnaal-orderi või žurnaal-pearaamatu süsteem.

Teiste rahvamajandusharudega võrreldes moodustavad põllumajanduslikus majandusüksuses omapärase materiaalse vara rühma loomad. Kauaaegses praktikas on loomad jaotatud kahte rühma. Materiaalse põhivara hulka on arvatud tööhobused ja suured täiskasvanud produktiivloomad. Samaselt muu materiaalse põhivaraga on amortisatsiooni arvatud tööhobustelt. Täiskasvanud suuri produktiivloomi ei ole arvatud amortiseeritava materiaalse põhivara hulka. Väikesi täiskasvanud produktiivloomi (karusloomad, küülikud), igas vanuses kodulinde, mesilasperesid ning noor- ja nuumloomi on aga arvestatud materiaalse käibevarana. Raamatupidamise seaduses ja Raamatupidamise Toimkonna juhendites ei ole sätestatud loomade bilansis kajastamise korda. Põllumajandusministeeriumi juurde moodustatud maakondade praktikutest koosneva raamatupidamise metoodika komisjoni soovitusel on praktikas toimitud nõnda, et tööhobused ja suured täiskasvanud produktiivloomad näidatakse bilansis materiaalse põhivarana muu inventari, tööriistade, sisseseade ja muu vara hulgas. Materiaalse käibevara hulka arvatavad noor- ja nuumloomad, väikesed täiskasvanud produktiivloomad, kodulinnud ja mesilaspered on bilansis arvel lõpetamata toodanguna.

Üheseid soovitusi selle probleemi lahendamiseks pole seni leitud. Mitmed autorid soovivad arvata kõik loomad käibevara koosseisu, teised soovivad lülitada bilanssi loomade näitamiseks omaette kirje. Selleks, et saada varade struktuurist võrreldavat ülevaadet, tuleks see probleem lahendada vabariigi tasemel. Mainimist väärib ka asjaolu, et tulumaksu arvutamisel ei keelata ostetud põhikarja loomi arvata maksuamortisatsiooni arvutamisel II grupi põhivara hulka ja seega arvutada neilt ka maksuamortisatsiooni.

Raamatupidamises neilt amortisatsiooni ei ole senini arvatud. Probleeme on ka loomade hindamisel. Soetusmaksumuse printsiibist lähtuvalt võetakse varad arvele nende soetamise momendil tegelikus soetushinnas, väljaminekud nende tekkimise momendil tegelikus väärtuses. Kuidas määrata aga sündinud noorloomade soetusmaksumus, vajaks täpsustamist. Senises praktikas on valdavalt kasutatud kokkuleppelisi hindu. Nii näiteks arvutatakse ühe sündinud vasika soetushind, jagades lüpsikarja pidamiskulud kindla suhtega piima ja sündinud vasikate vahel. Mitmed teoreetikud on aga avaldanud arvamust, et sündinud noorloomad tuleks arvele võtta 0-väärtusega, sest nendel ei ole soetusmaksumust. Ka oma noorkarjast põhikarja viidavate loomade hindamise metoodika vajaks kooskõlastamist. Teatavasti võib materiaalselt põhivara hinnata alla, kui selle realiseerimismaksumus on piisavalt madalam jääkväärtusest. Vastupidisel juhul võib põhivara ümber hinnata rahandusministeeriumi poolt määratud korras. Produktiivloomad saavad aga täiskasvanuks alles põhivara koosseisus ja seetõttu tuleks nende põhikarja viimisel fikseeritud soetusmaksumust suurendada vähemalt esimesel kahel aastal pärast põhivara koosseisu arvamist.

Põllumajandusliku majandusüksuse bilansis ei kajastata õigesti st reaalkväärtuses ka mitmesugust muud materiaalselt põhivara. Hooned, mis on ehitatud 15-20 aastat tagasi, on üldjuhul arvel tunduvalt odavamalt nende realiseerimismaksumusest. Paljudel juhtudel on põllumajanduses kasutusel masinad ja seadmed, mis on moraalselt vananenud ja ka füüsiliselt kulunud. Praktikas toimitakse erinevalt nende kajastamisel raamatupidamisregistrites ja aru-annetes. Arvestades asjaolu, et sellisel varal puudub jääkmaksumus, on osa majandusüksusi kandnud vara maha materiaalse põhivara hulgast ning näitavad need aruande lisades.

Teisel juhul on kulunud vara arvel nii raamatupidamises vastaval kontol kui ka vastaval vara kirjel bilansis.

Raamatupidamise seaduses sätestatud olulisuse printsiibist lähtuvalt võib väheolulisi objekte arvestada lihtsustatud viisil. Nimetatud sätte rakendamine raamatupidamises seisneb selles, et raamatupidamiskohuslane kehtestab oma raamatupidamise sise-eeskirjades üle ühe aasta kasutamiseaga vara maksumuse piiri, millest odavamad loetakse väheolulise maksumusega põhivaraks ning nende maksumuse võib kanda kuldesse lihtsustatud viisil. Põllumajanduses väheneks seetõttu bilansis oluliselt materiaalse põhivara maksumus.

Käibevara, sh ka noor- ja nuumloomad hinnatakse Raamatupidamise seadusest lähtuvalt kas soetusmaksumuses või neto realiseerimismaksumuses. Põllumajanduslikes majandusüksustes on tootmishinnad enamasti kõrgemad neto realiseerimismaksumusest ning senisest enam tuleks praktiseerida nende allahindamist aasta lõpul.

Kauba, toorme, materjali ja valmistoodangu lõppjäagi hindamisel kasutatakse põllumajanduslikes majandusüksustes kaalutud keskmise soetushinna meetodit. Laoarvestuse perioodilist süsteemi kasutatakse harva. Reglementeerimata on ka ostetud ja omatoodetud seemne ning sööda bilansis kajastamise kord.

Eelpoolloetletud probleemidele lahenduse leidmine ja ka kulude arvestuse ning omahinna kalkuleerimise ühtlustamine aitaks kaasa põllumajanduslike majandusüksuste raamatupidamise olukorra parandamisele.

## **Kasutatud kirjandus**

1. Raamatupidamise seadus. Riigi Teataja I 1994, 48, 790



# PROBLEME IN DER LANDWIRTSCHAFTLICHEN BUCHFÜHRUNG

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## Zusammenfassung

In der landwirtschaftlichen Buchführung sind folgende Probleme zu lösen:

1. Die Ausarbeitung einer die Besonderheiten der Landwirtschaft beachtenden Buchführungsdirektive.
2. Die Bestimmung der Aufzeichnungsordnung von Tieren in der Bilanz.
3. Die Bestimmung der Bewertungsordnung des materiellen Anlagevermögens.
4. Die Vereinheitlichung der Berechnungsordnung der Anschaffungskosten von Jungtieren.

# РАЗВИТИЕ РАСЧЕТНОЙ СИСТЕМЫ ЭСТОНИИ

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## 1. Введение

Конец нынешнего столетия можно охарактеризовать как переходный период от общества обслуживания к информационному обществу. Это означает, что главными силами развития экономики являются ресурсы, технология обработки и качество информации. В связи с этим деньги потеряли большую часть своего материального содержания и превратились в информацию, характеризующую платежеспособность и богатство их владельца. Современные виды денег в форме расчетных денег, банковских карточек и интернет-денег являются очень мобильными и удобными в использовании, но они требуют новых форм и методов учета и контроля за денежными операциями.

В настоящей статье анализируется развитие системы расчетов в Эстонии за период после денежной реформы в июне 1992 года. Особое внимание уделяется вопросам изменения структуры и технологии расчетов, а также проблемам контроля и предотвращения правонарушений в системе электронных расчетов. Основными источниками информации являются публикации центрального банка и текущей прессы республики.

## 2. Развитие наличноденежного оборота

20 июня 1992 года в Эстонии началась денежная реформа, которой закончилась эпоха рубля и которая ввела в обращение новую валюту – Эстонскую крону. Реформа произошла в условиях гиперинфляции, экономического кризиса и ненадежной банковской системы. В такой обстановке население и предприятия предпочитали использовать наличноденежные сбережения и расчеты. Из таблицы 1 видно, что доля наличноденежных сбережений в кронах в Эстонии возросла к декабрю 1992 года до 30% от общего объема. Кроме того, население и предприятия имели в своем распоряжении довольно крупные суммы иностранной валюты. По оценкам экспертов, уровень долларизации в Эстонии весной 1992 года достигал 60%.

Таблица 1  
Структура сбережений в кронах в 1992 году (%)

	01.07	01.10	01.12
Наличные деньги	18,54	28,26	30,05
Вклады до востребования	78,12	66,09	62,62
Прочие вклады	3,34	5,65	7,33
<b>Итого</b>	<b>100,00</b>	<b>100,00</b>	<b>100,00</b>

Источник: Годовой отчет Банка Эстонии за 1992 год

Объем наличных эстонских крон в обращении возрастал до 1998 года, а затем начал сокращаться ввиду стабилизации экономики и внедрения современных форм расчетов на базе банковских карточек и безналичных расчетов. Как видно из таблицы 2, эмиссия наличных эстонских крон из года в год сокращалась вплоть до негативных цифр в 1998 году.

Т а б л и ц а 2

**Объем эстонских крон в наличном обращении**

Дата	Общий объем (млн.кр.)	Среднемесячная эмиссия в периоде (млн.кр.)
21.06.1992	593	-
31.12.1992	1226	105
31.12.1993	2730	125
31.12.1994	3512	65
31.12.1995	4337	69
31.12.1996	4987	54
31.12.1997	5439	38
31.12.1998	5391	-4

*Источник:* Годовые отчеты Банка Эстонии за 1995 и 1998 гг.

Наряду с расширением сферы использования других форм и видов расчетов, сокращению потребности в эстонских кронах способствовала и либерализация инвалютной регуляции. Закон об иностранной валюте, принятый в связи с денежной реформой, был полностью отменен к концу 1994 года. С этого времени граждане и предприятия могут иметь, ввозить и вывозить инвалюту без ограничений.

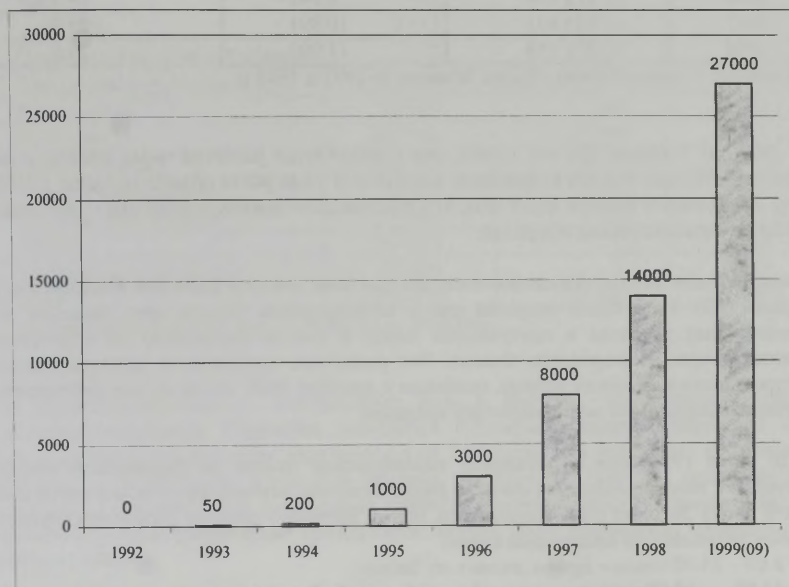
### 3. В Эстонии приветствуется современная инфотехнология

В Эстонии на самом высоком уровне приветствуется быстрая интеграция в информационное общество. Выражением этого является, например, программа «Прыжок тигра», связанная с обеспечением всех школ и волостей компьютерами с возможностью использования системы Интернет. Один из инициаторов этой программы и автор «Тура тигра» Линнар Вийк в 1999 году получил главный международный приз в области инфотехнологии «The Global Bangemann Challenge».

К концу 1996 года на каждые 10 000 жителей Эстонии приходилось 54,6 пользователей Интернета и половину из них составляли школы. По этому показателю мы находились среди постсоциалистических стран на втором месте после Словении (The Baltic Times, с. 16). В этот период к сети Интернет было подсоединено лишь 3 000 компьютеров, а летом 1999 года к сети Интернет было подсоединено уже 27 000 компьютеров и в этом отношении Эстония опережает даже Италию и Францию (см. рис. 1).

Азарт в использовании новой инфотехнологии выражается и в ускоренном росте количества мобильных телефонов. В Эстонии их насчитывается уже более четверти миллиона. При таком отношении населения к новой инфотехнологии и банкам не трудно внедрять новые формы расчетов. Уже в декабре 1993 года, когда Эстонские

банки были еще очень маленькие и неопытные, большинство из них стало участниками системы электронных международных расчетов S.W.I.F.T. В декабре того же 1993 года Таллинна банк выпустил первые Эстонские банковский карточки. Он также является первым банком в Прибалтике и во всей Восточной Европе, который обнаружил Интернет. В мае 1996 года Форексбанк внедрил пакет обслуживания "Forex Direct". Вслед за ним Сберегательный банк Эстонии предложил пакет «Pangamet» (Electronic Bankin, с. 45–47).



Источник: Коррап, с. 3.

Рис. 1. Количество компьютеров в Эстонии, подключенных к сети Интернет (на конец года).

#### 4. Развитие структуры и объемов безналичных расчетов

В настоящее время при Банке Эстонии работает расчетный клиринговый центр и большинство межбанковских безналичных расчетов проводится через него. В свое время Сберегательный банк Эстонии пытался создать свой расчетный центр, но эта идея не нашла одобрения среди других банков и потеряла свою актуальность в связи с объединением Сбербанка с Ханзабанком. Клиринговый центр Банка Эстонии регистрирует только те расчеты, который проводятся через него. Кроме того, расчеты осуществляются между клиентами одного банка внутри этого банка, а также напрямую электронным путем.

## Расчеты через Банк Эстонии за период 1993 – 1998 гг.

	Итого (млн.кр.)	сумма	Количество расче- тов (тыс. шт.)	Средний размер одного платежа (тыс. кр.)
1993	100 459		---	---
1994	105 814		3 903	27,1
1995	149 326		6 217	24,0
1996	212 249		8 749	24,3
1997	323 831		10 891	29,7
1998	331 158		11 097	29,8

Источник: Годовые отчеты Банка Эстонии за 1993 и 1998 гг.

Из таблицы 3 видно, что как сумма, так и количество расчетов через центральный банк до 1998 года быстро возрастали. Умеренный темп роста объема расчетов в 1998 году объясняется прежде всего тем, что объединение банков значительно увеличило объем внутрибанковских оборотов.

В клиринговом центре постоянно совершенствовали систему расчетов. Например, с 1 апреля 1993 года были закрыты счета коммерческих банков для хранения их обязательных резервов в центральном банке и сальдо перенесено на корреспондентские счета коммерческих банков. Это увеличило возможности маневрирования ресурсами коммерческих банков, особенно с декабря 1993, когда начала действовать система однодневных межбанковских кредитов.

С 20 июля 1994 года возможности коммерческих банков по управлению своими ресурсами, находящимися на счетах в Банке Эстонии, улучшились, так как расчетный центр Банка Эстонии стал использовать новую систему - систему двойного клиринга, осуществляемого по следующей схеме:

- 1) 8.00 – 14.00 часов – прием данных от банков;
- 2) 14.00 – 15.00 часов – первый межбанковский зачет, после которого банкам передается информация об остатке или недостатке денег на их расчетных счетах для завершения расчетов;
- 3) 15.00 – 17.00 часов – операции денежного рынка (банки предлагают или берут друг у друга однодневные кредиты для завершения расчетов);
- 4) 17.00 – 19.00 часов – окончательный межбанковский зачет.

Как уже было сказано, через расчетный центр Банка Эстонии проходят не все потоки расчетных денег. Поэтому для получения полной картины об объеме и структуре расчетов с июля 1998 года коммерческие банки стали представлять отчеты об объеме всех видов расчетов. Данные о расчетах за 1998 год представлены в таблице 4.

Таблица 4

## Расчеты в Эстонии по видам с февраля до конца декабря 1998 года

	Оборот (млн.кр.)	Количество расчетов (тыс.шт.)	Средний раз- мер платежа (кр.)
Наличноденежные расчеты	9 821	2 485	4,0
Безналичные расчеты, в т.ч.:	1 111 861	32 975	33,7
• Чеки	491	24	20,8
• Карточки	2 415	5 344	0,5
• Прямые платежные поручения	975	109	9,0
• Платежные поручения, в т.ч.:	1 083 178	27 497	39,4
□ Постоянные	12 340	480	25,7
□ На бумаге	367 251	11 695	33,1
□ Телебанковские	482 383	13 077	36,9
□ Телефонобанковские	5 239	986	5,3
□ Интернет-банковские	6 913	1 255	5,5
□ SWIFT	189 052	5,1	36 968
• Неопределенные виды	24 801	3,1	8 073
<b>ИТОГО</b>	<b>1 121 682</b>	<b>35 460</b>	<b>31,6</b>

Источник: Годовой отчет Банка Эстонии за 1998 год.

Как видно из таблицы 4, лидирующую роль в расчетах по-прежнему играют платежные поручения. Структура платежных поручений совершенствуется и все большее количество клиентов отказывается от традиционных бумажных платежных поручений в пользу более удобных и дешевых телерасчетов. Частные лица и малые предприятия предпочитают телефонные расчеты и расчеты через Интернет, а более крупные и специализированные предприятия больше всего используют специальные услуги телебанка.

Из года в год чековые расчеты сдают свои позиции в пользу платежей банковскими карточками. Банковские карточки стали использовать с 1994 года, их количество быстро росло и в 1998 году достигло оптимума (см. таблицу 5).

Таблица 5

## Выдача банковских карточек в Эстонии и пункты их использования в период 1994 – 1998 гг. (тыс. шт.)

	1994	1995	1996	1997	1998
Местные дебетовые	5,0	108,2	381,3	406,1	292,3
Международные дебетовые	-	9,0	42,7	186,3	386,1
Местные кредитные	-	-	-	0,1	-
Международные кредитные	-	2,3	9,6	14,9	19,2
<b>Итого карточки</b>	<b>5,0</b>	<b>119,5</b>	<b>433,6</b>	<b>607,4</b>	<b>697,6</b>
Банковские автоматы	5	140	230	427	490
Пункты оплаты карточками	20	250	1200	2153	2586

Источник: Годовой отчет Банка Эстонии за 1998 год.

Из таблицы 5 видно, что в Эстонии преобладают местные банковские карточки. Для увеличения доли иностранных карточек банки недавно начали выпускать комбинированные карточки, в которых соединены банковская карточка и международный студенческий билет. Поскольку большинство студентов пользуется студенческим кредитом, то можно предположить, что этот вид карточек поможет увеличить количество иностранных карточек. Начиная с 1997 года, большинство банковских автоматов находится в перекрестном пользовании. Например, в конце 1998 года из 490 автоматов 433 давали возможность клиентам разных банков получать деньги и совершать расчеты.

Конечно, расчетная система Эстонии еще далека от совершенства. В 1998 году продолжилась разработка соответствующих требований Европейского Союза к системе платежей и расчетов. Предполагается, что к концу 2000 года в Эстонии будет ВНЕДРЕНА система платежей, состоящая из двух подсистем: 1) системы брутто-расчетов, работающей в режиме реального времени (Real Time Gross Settlement), предназначенной для крупных и срочных расчетов и 2) системы нетто-расчетов (Designated Net Settlement) для розничных расчетов. Система брутто-расчетов реального времени начнет действовать не позднее 2001 года.

Много работы требуется также для снижения рисков новых видов расчетов и для повышения расчетной дисциплины участников расчетов. Совет Банка Эстонии еще в 1992 году одобрил требование совершать расчеты в банке в течение 48 часов с момента сдачи документов до зачисления денег на счет получателя. Но опрос, проведенный фирмой Intrum Justitia осенью сего года, показал, что платежи запаздывают на 14 дней после срока платежа по вине плательщика и что растут неплатежи. Хотя наше положение лучше, чем в Великобритании, Бельгии, Италии и Португалии, но оно вдвое хуже, чем в Северных странах (Raudjalg, с. 11). Причину низкой платежной культуры опрошенные видят во всеобщем кризисе морали, который оказывает влияние на слабую деловую культуру.

## **5. Необходимо повышать безопасность новых видов расчетов**

Новые виды расчетов не являются полностью безопасными и надежными. Так, нередко возникают нарушения в работе банковских автоматов. Особенно большие последствия имела неисправность компьютерной системы 24 июня 1997 года, которая привела к прекращению работы Таллиннской биржи ценных бумаг и крупнейшего эстонского банка Ханзабанк. Сбой системы начался в 11.30 и продолжался до конца дня. На день раньше из-за компьютерной неисправности прекратили работу Франкфуртская биржа и региональная биржа Германии. 21 июля 1997 года по той же причине на два часа позже предусмотренного началась торговля на Франкфуртской бирже. Компьютерная система Ханзабанка не работала также 20 – 21 сентября 1999 года (Reivart, с. 13).

Чаше, чем неисправность техники, наблюдается мошенничество с помощью банковских карточек. Общий ущерб от мошенничества в среднем достигает 2% от объема платежей. В Эстонии распространены три схемы обмана: 1) копирование кода карточки в пункте платежа и использование его для снятия денег со счета с помощью поддельной карточки, 2) снятие денег со счета одновременно из конторы банка и вторично из автомата с учетом того, что информация запаздывает, 3) выдача карточек

по под-дельным документам работниками карточного центра. Например, в июле - августе 1999 года с помощью скопированных карточек VISA, выданных Ханза-банком, 72 раза совершались расчеты в Испании, Англии, Германии и Швейцарии на сумму 479 000 крон. Также во время смены терминалов в Юхисбанке банк понес на миллионы крон ущерб из-за повторного снятия денег (Joosu, с. 1).

## 6. Выводы

Расчетная система Эстонии развивается очень быстро, постоянно растет доля новых видов более современных, удобных и дешевых форм расчетов. Развитие расчетной системы Эстонии форсируют как всеобщее положительное отношение к внедрению новой инфотехнологии, так и конкуренция банков за привлечение клиентов. В процессе внедрения новых видов и методов расчетов контрольные и охранные системы еще не соответствуют требованиям. В будущем необходимо уделять этим вопросам больше внимания, а также приучать клиентов аккуратности и осторожности.

## Использованная литература

1. Годовые отчеты Банка Эстонии за 1992, 1993 и 1998 гг.
2. Electronic Banking in Estonia. – The Baltic Review, 1996, Autumn (11).
3. Joosu, T., Berendson, R. Kaardipettus tühjendab pangaarved. – Eesti Päevaleht, 21. september, 1999.
4. Kõrnan, V. I-hüpe ahvatleb Eestisse välisinvesteeringuid. – Äripäev, 13. september, 1999.
5. Raudjalg, I. Euroopa maksekultuur on Euroopa keskmine. – Postimees, 21. september, 1999.
6. Reivart, A. Hansapanga tarkvara tõrkus ligi ööpäeva. – Eesti Päevaleht, 22. september 1999.
7. The Baltic Times, 1997, March 20–26.



## DEVELOPMENT OF THE PAYMENT SYSTEM IN ESTONIA

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### Summary

The more the society dives into information society, the more the money that exists in a form of information will replace the cash. Therefore a modern payment and settlement system means mainly receiving monetary information, its saving and delivery to a new consignee.

The modern money in a form of electronic securities, bankcards and the Internet money are related to the risks quite different from the former ones. Whereas the main purpose of banking is to brokerage the transactions of big properties between the owners then it is especially important to avoid risks and overcome them. Therefore the information systems of banks need to be very reliable, safety and qualified to avoid mistakes and errors.

Bank of Estonia began collecting data on payment statistics in 1998. According to the data more and more bank clients prefer more convenient and cheaper telebanking to the traditional paperbased credit order. Private persons and small companies prefer telephone and Internet banking services, while larger companies opt for specialised telebanking products. In 1998, Bank of Estonia continued elaborating the new payment and settlement system complying with the European Union requirements.

## STRATEGIC COST MANAGEMENT

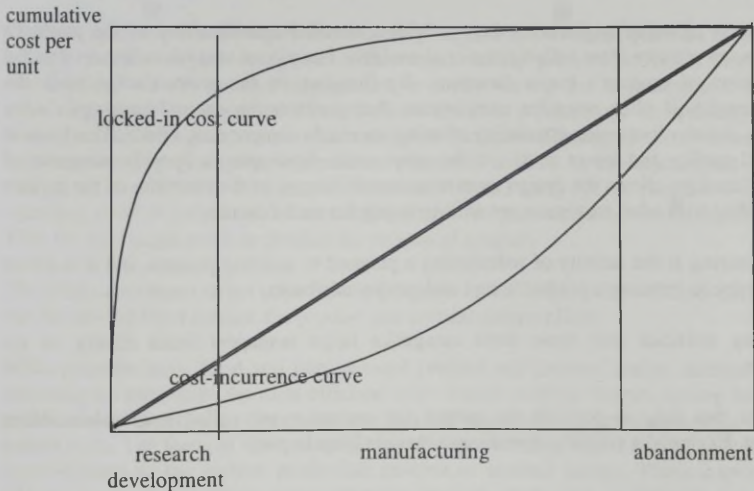
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Business environment go through many changes during last several years. Firms have to face stronger competition in an environment that requires increasing attention to rapidly changing markets, changing technology and increasing consumer demands. Changing global business conditions have forced many business to become more competitive. With prices determined by marketplace, products whose costs are too high to yield reasonable profits are dropped from productions or are targeted for cost reductions. Product life cycles are generally shorter, placing pressure on product design and process engineering to help ensure low cost and immediate profits.

Engineering in the new business environment coordinates design with manufacturing. Design and manufacturing have to meet required costs. Engineers start with market research of features consumers want and then design products that both meet customers needs and are easy to make.

A widely accepted rule is that 80 % of a product's costs are committed, or lock in, during the product design stage. During this time, planners choose the product design and design the process that organisation will use to make product. During the product manufacturing phase, most of the product costs have been committed and the focus is cost containment. It was reason for developing new tool of management accounting - **target costing**.

We can distinguish between locked-in costs and cost incurrence. Cost incurrence occurs when a resource is sacrificed or used up. Locked-in costs (designed-in cost) are those costs that have not yet been incurred but that will be incurred in the future on the basis of decision that have already been made.



The graph emphasises the wide divergence between the time when costs are locked in and the time when costs are incurred. For example, at the end of design stage, costs such as direct materials, direct manufacturing labour, direct machining, and many manufacturing, marketing, distribution and customer-service overheads are all locked in.

Target costing is a cost management tool that planner use during product and process design to drive improvement efforts aimed at reducing the product's future manufacturing costs.

Target costing is a method of determining what the cost of product should be based on estimated selling price less desired profit. Target costing is deployed at a time, the product and process design phase, when design choices can have a maximum impact on a product's cost. The biggest opportunity to reduce costs generally comes during the design phase. The major tools that can help planners reach their target cost objectives are tear down analysis, value engineering and reengineering.

**Tear down analysis** is a process of evaluating a competitor's product to identify opportunities for product improvement. In tear down analysis, the competitor's product is taken apart piece to identify the product's functionality and design and to make inferences about the process that made the product. Tear down analysis provides insights into the cost of the product and suggest the relative advantages or disadvantages of the competitor's approach to product design.

**Value engineering** seeks savings by means such as simplifying materials specifications, increasing output for a given level of input, reducing number of part, reducing labour tasks and enhancing the interaction between workers and equipment. Value engineering achieves its assigned target costs in two ways:

1. Identifying improved product designs (or even new products that may meet functionality in different ways) that reduce component and manufacturing costs while not sacrificing functionality
2. Eliminating unnecessary functions that increase the product's cost and complexity.

The process of value engineering begins with a detailed specifications of the product's functions, an activity often called functional analysis. Functional analysis results in detailed specification of product's major functions. By focusing on the product's functions, the design team will often consider components that perform the same functions in other products, thereby increasing possibility of using standards components, which often leads to increased quality and lower costs. At the same time, developing a specific statement of product functions allows the design team to compare the cost of the functions of the product it is building with what customers are willing to pay for each function.

**Reengineering** is the activity of redesigning a planned or existing process, and it is driven by the desire to improve a product's cost and quality attributes.

Separating activities into these three categories helps managers focus clearly on the customer.

Activities that help to provide the output for customer are called **real value-adding activities**. Example: a grinding operation in making bicycle part.

Activities that add no value from the customer's perspective but are required by the organisation are **business value-adding activities**. Example: keeping payroll records for production workers.

Activities that are neither required by the customers nor the organisation are called **non-value-adding activities**. Example: moving inventory from one location in a factory to another.

Activities that decrease value for customers are called **negative value-adding activities**. Example: rejects, waste, complaints.

Above all, target costing is a tool that promotes and facilitates communication among the members of the cross-functional team that is responsible for product design. The team members include representatives from design, process engineering, purchasing, manufacturing and marketing. Some organisations, include representatives from their suppliers on the design team.

Target costing is customer oriented, it begins with an estimate of the product's price, which reflect the product's functions and attributes and competitive forces in the marketplace. One approach that planners have used to describe customer requirements is the notion of value, which is the ratio of functionality to the price paid by the customer. Organisations increase customer value by increasing the product's functionality while holding the price constant or by reducing the price while holding functionality constant.

The input to the target costing process is a market price-product functionality vector to which the product's planning process must conform. Target price reflects a set of product functions that the product must deliver to the customer. There are two critical elements here. First, the customer, or more generally the market, defines the price that will be paid for the product and its designated functions. Second, to the extent that there is a market for the same product with different functions.

Once the product price – functionality - quality targets have been set, planners then subtract a target profit or target margin from the target selling price. This target profit is the contribution that the product is expected to make toward the organisation's business-sustaining costs. The target profit is calculated direct as a percentage from sailing price or determined according target rate of return on investments. The target rate of investment is target operating profit that an organisation must earn divided by invested capital. Invested capital can be defined as total assets (fixed and current) using for the product. Total target operating profit is calculated as invested capital mile percentage of return on investment. Then the total target profit is divided the volume of product.

The residual between target price and target profit is the target cost, which is the focus of and the driving force behind, the product and process design efforts.

When planners have fixed and implemented product and process design, interest turns to operating the process in the most efficient way - kaizen costing. Kaizen costing focuses on organisation's attention on things that managers or operators of an existing system can do to reduce costs. The focus of the cost reduction efforts driven by kaizen costing is incremental improvements to the current production process or product design. These improvements take the form of developing improved setup process, improving machine performance to

reduce waste, increasing employee training and motivation to encourage employees to identify and implement the incremental daily changes that can improve cost and quality performance.

The importance of target costing is that it provides a management tool that coordinates and focuses attention on the process of cost reduction of the future products. The importance of kaizen is that focuses attention on the activity of improving the efficiently of existing production systems.

Some observers criticise both target and kaizen costing on the grounds that they often place huge stress on employees. Some organisations have responded to this charge and to the effect of using target and kaizen costing techniques by lowering their performance expectations.

Reduction of costs means great effect in case it eliminates wasting, spoilage, non-value added activities. There is danger here that cost reduction reasons decreasing of quality or performance.

Other problems concern with long time of research and development. At the end of long development for example target price have not to valid or purchase price of some inputs can be changed. Trying to rich target cost can on the other hand extend the development and increase development costs. Then we have question weather more expensive research and development gives higher profit in future.

Estimation of target price is very important but also very difficult process. If target price is too high market need not accepts it. Than company should cut the target price and that means decreasing of margin.

Besides target price it is necessary to estimate future volume of sale. Production costs consist of fixed costs and variable costs and average fixed cost are depended on the volume of production and volume of sale. In case that planned and real volume of products will differ there will be difference between actual cost and target cost. Because of target costing can be divided to target variable costing and target fixed cost and target margin.

Every costing creates before beginning of production is inexact. Some of costs can be forgotten or some savings can be find later during production.

### **Life cycle costing**

Target costing can be coupled with what is known as **life-cycle costing**. In contrast with traditional methods, where product costs are calculated for only the current period, life-cycle costing plans for costs over all phases of a product's service life.

**Product life cycle** is a model depicting the stages through which a product class passes. Those stages are development, introduction, growth, maturity and decline. An important stage ignored by the traditional costing is the development stage. Costs, sales and profits for a single product at each of these life-cycle stages differ.

**Life cycle costing** is the process of estimating and accumulating costs over a product's entire life. Life cycle costing is particularly important in environments in which there are large planning and development costs or large product abandonment costs.

There are two purposes of life cycle costing. First, life cycle costing helps to develop a sense of the total costs associated with a product in order to identify whether the profits earned during the active, manufacturing, phase will cover the costs in the development and decommissioning phases. Life cycle costing often will identify products that are no longer profitable when their decommissioning costs are factored into the product evolution process.

Second, life cycle costing helps to identify the planing and decommissioning costs during the product and process design phase in order to control and manage costs in that phase.

Life cycle costing begins with estimation of product life cycle. The second step is estimating of volume of sale, price and revenue during life cycle. Third, cost budget for the whole life cycle have to be prepare. Final step is calculation of profit, cash flow and other indexes.

Since the cost or expenditures and revenues or income concern with differ time period, it is necessary to discount expenditures and incomes.

Focusing on life cycle costs and profitability requires a change in the accounting treatment of costs. For financial statement purposes, costs incurred during the research and development stage must be expensed in the period. However, the research and development costs that result in marketable products represent a life cycle investment rather than a period expense. Capitalisation and product allocation of such costs would provide better long-range profitability information and a means by which to determine the cost impact of engineering changes on product design and manufacturing process.

### **Conclusion**

1. New business environment forces many firms to change their approach to cost management. Since most of products costs is locked-in during product design stage, new tools of management accounting - target costing and life cycle costing - were developed.
2. **Life cycle costing** is an approach to costing that attempts to determine a product's cost over its entire life cycle including the design stage, the manufacturing stage and the postmanufacturing stage.
3. **Target costing** is a tool that organisations use to focus attention on, and to manage process of, product and process design. Because most of the opportunities to improve cost performance are at the design stage, target costing is a particularly important tool in the organisation's attempt to improve its profitability. The objective of the target costing is to achieve a product and process design that allows the company to meet a profit target at price customers are willing to pay.
4. **Kaizen costing** focuses on improving an existing process. The role of kaizen costing is to direct the continuous improvement of process cost performance.

## References

1. Horngren, Ch. T., Bhimani, A., Foster, G., Datar, S. M. Management and Cost Accounting, Prentice Hall Inc. Europe, 1999.
2. Kaplan, R. S., Atkinson, A. A. Advanced Management Accounting, Prentice Hall Inc., 1997.
3. Brandon, Ch. H., Drtina, R. E. Management Accounting – Strategy and Control, The Mc Graw-Hill Companies, Inc., 1997.

## АНАЛИЗ РАЗВИТИЯ РЫНКА ЦЕННЫХ БУМАГ В ЭСТОНИИ

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В отличие от англо-американской модели финансовой системы, базирующейся на превалировании рынка ценных бумаг, финансовая система Эстонии традиционно следует континентально-европейской модели. Это означает, что основу развития финансовой системы составляют банки. Рынок ценных бумаг в Эстонии не получил достаточно широкого развития в силу ряда причин объективного и субъективного характера. Целью настоящей работы является показать основные проблемы, мешающие более динамичному развитию этой части финансового сектора экономики.

### Становление рынка

После восстановления независимости Эстонии, начало приватизации государственной собственности и первый банковский кризис 1992 – 1993 г.г. и последовавшие за ним банкротства коммерческих банков дали толчок к развитию рынка ценных бумаг. В начале 1993 года можно было инвестировать кроме депозитов в привилегированные акции банков, долговые обязательства предприятий и в акции первых инвестиционных фондов, деятельность которых законодательно еще не была урегулирована. С 1994 года началась открытая продажа акций приватизированных предприятий, создан центральный депозитарий ценных бумаг. 1995 год отмечен началом развития вторичного рынка ценных бумаг. Первыми торгуемыми акциями стали акции Hansa-rank и Tallinna kaubamaja и первая серия облигаций Компенсационного фонда. Также состоялось учреждение (1995) и начало функционирования Таллиннской биржи ценных бумаг (1996).

Анализ развития рынка ценных бумаг на данном этапе показал, что рынок развивался по сути стихийно, в условиях практически полного отсутствия законодательной базы и возможности получения постоянной и достоверной информации об эмитентах и ценных бумагах участников рынка. Это создало благоприятные условия для появления значительного числа непрофессиональных участников рынка и нарушения прав инвесторов. Основным документом, гарантирующим защиту инвестора, стали принятые в 1993 году «Закон о рынке ценных бумаг» и «Правила выдачи государственных лицензий профессиональным участникам рынка».

### Текущий этап развития

Период 1997-1998 г.г. характеризовался быстрым развитием вторичного рынка государственных облигаций, а также облигаций местных предприятий и внешних инвесторов. Структура инвесторов изменилась в сторону превалирования иностранных инвесторов, преимущественно из Финляндии, Латвии, Австрии и Великобритании. 1997 год был также был ознаменован биржевым кризисом. В результате обвала цен индекс TALSE упал на 65% до отметки 90,74. Самой критической точкой было 87 пунктов. Капитализация рынка снизилась на 53% (7,1 млрд.EEK), составив к



к концу 1998 года 9,5% к совокупному продукту. В результате этого рыночная стоимость многих котировавшихся на бирже в основном списке предприятий упала, и они перешли в дополнительный список. Общее число предприятий, котировующихся на бирже, в 1998 году снизилось с 28 до 25. Отчасти это было связано с имевшими место в финансовом секторе объединениями и с инвестициями внешних инвесторов. Доля иностранных инвесторов за год увеличилась с 42 % до 45 %. Изменения в составе стратегических инвесторов заставили некоторые предприятия ходатайствовать о прекращении котировки на бирже. Разрешение было получено только одним предприятием после уплаты компенсации мелким акционерам.

Оборот рынка ценных бумаг в 1998 году составил 33,8 млрд ЕЕК (1997 – 34,1 ЕЕК). Оборот биржи 13,3 млрд. ЕЕК (1997 – 21,8 млрд. ЕЕК). Всего капитализация рынка ценных бумаг к концу 1998 года снизилась до 15,3 млрд. ЕЕК (1997 – 27,6 млрд. ЕЕК). Несмотря на то, что биржевой оборот уменьшился, первичный рынок был активнее, чем в предыдущие годы. В центральной депозитории было зарегистрировано 170 эмиссий облигаций общей стоимостью 5,6 млрд. ЕЕК (1997 – 5,3 млрд. ЕЕК). Проблемы на международных финансовых рынках привели к повышению процентной ставки и в среднем она составила по облигациям 14% (1997 – 10%). Эмиссия акций увеличилась в 2 раза. Зарегистрировано 34 эмиссии на 3,2 млрд ЕЕК. Наиболее крупные: *Ühispank GDR* 709 млрд. ЕЕК и *Hansapank* 1,5 млрд. ЕЕК по требованию *SWEDBANK*, как одного из главных инвесторов. В 1998 году в центральной депозитории было зарегистрировано эмиссий акций 124 предприятий, 145 эмиссий облигаций, из которых 67 были эмиссии коммерческих бумаг и 12 облигации Компенсационного фонда. К концу 1998 года на Таллиннской бирже было котировано: 6 акций в основном списке, в том числе 3 банка, 19 акций в дополнительном списке, в списке фондов – 2 акции, в списке облигаций – 9 серий облигаций Компенсационного фонда и на свободном рынке приватизационные ценные бумаги.

### **Регулирование и надзор за рынком ценных бумаг**

В настоящее время с регулированием рынка ценных бумаг в Эстонии, сложилась ситуация, когда существует биржа, которая сама утверждает правила проведения сделок и сама же осуществляет надзор за их проведением, но функционирование самой биржи как составной части инфраструктуры рынка, лишь частично регулируется законами. Единственными документами, регулирующими деятельность биржи, являются принятое 9.01.92 г. постановление правительства №6 «Временная инструкция по регулированию деятельности биржи» и постановление правительства и Банка Эстонии от 17.01.92 №51 «Регулирование работы бирж ценных бумаг», которые на сегодняшний день явно устарели.

Аналогичная ситуация и с центральным депозитарием ценных бумаг. Его деятельность регулируется постановлением правительства №374 от 14.10.94 «Об учреждении центрального регистра ценных бумаг Эстонии». Этим постановлением обязали министерство финансов заключить договор с центральным депозитарием о содержании регистра. Таким образом, центральный депозитарий – это по существу саморегулирующаяся организация со своим регламентом. И биржа, и центральный депозитарий обращают внимание государственных органов и правительства на

необходимость усиления роли инспекции по ценным бумагам в деле защиты интересов инвесторов и скорейшем принятии закона о бирже.

На практике надзор за рынком ценных бумаг и осуществлением сделок возложен на инспекцию по ценным бумагам. О том, насколько эффективна ее работа, свидетельствуют данные проверки Госконтроля. Основными упущениями являются:

- отсутствие глубокого анализа рынка ценных бумаг, экономической деятельности посредников, эмитентов и биржи, а также обзора развития рынка.
- отсутствие обзора деятельности посредников, т.к. инспекция не предпринимала решительных шагов для получения отчетности от эмитентов, управляющих инвестиционными фондами и профессиональных участников рынка по причине отсутствия утвержденного министром финансов порядка затребования отчетности
- отсутствие контроля за открытыми эмиссиями
- недостаточное взаимодействие с центральным депозитарием, коммерческим регистром и банковской инспекцией. До 1997 года отсутствовало какое либо взаимодействие между инспекцией по ценным бумагам и банковской инспекцией. Взаимодействие между Центральным депозитарием, биржей и коммерческим регистром хотя и существовало, но было недостаточным.
- снисходительное отношение к нарушителям закона. В случае обнаружения нарушений инспекция ограничивается лишь предписаниями, зачастую забывая указать на последствия их невыполнения, хотя этого требует закон. Основными нарушениями, особенно среди инвестиционных фондов, являются превышение нормативов инвестирования, выдача за счет средств фонда кредитов, слабость или полное отсутствие внутреннего контроля. Экономическая ответственность за нарушения сводится к назначению незначительных штрафов без прекращения деятельности нарушителя, что входит в компетенцию инспекции. Это приводит к тому, что нарушения продолжают даже в том случае, когда фонду уже было сделано предписание или назначен штраф.
- работники инспекции имеют недостаточную профессиональную подготовку и опыт работы, но несмотря на это инспекция не занимается обучением кадров.

В слабости форм и методов контроля виноваты не только инспекция по ценным бумагам, но и правительство, которое за последние 4 года не установило порядок контроля за профессиональными участниками рынка ценных бумаг. По этой причине контрольные рейды инспекции по ценным бумагам осуществляются с ведома контролируемых, что нельзя считать нормальным явлением.. Подтверждением этого являются и случаи использования внутренней информации в спекулятивных целях.

Недостатки в работе инспекции, с одной стороны, частично связаны со слабой урегулированностью рынка ценных бумаг. С другой, рынок подвержен влиянию со стороны банков, деятельность которых контролируется банковской инспекцией. У

инспекции по ценным бумагам нет права контролировать деятельность банков на рынке ценных бумаг. Согласно «Закону о кредитных учреждениях» банковская инспекция не имеет права афишировать данные, полученные в ходе инспекции, и передавать их в инспекцию по ценным бумагам. Вследствии этого инспекцией ценных бумаг контролируется лишь незначительная доля рынка, около 20 %. В настоящее время банки являются основными посредниками в сделках с ценными бумагами (80- 85 % биржевого оборота), они же основные эмитенты (70 -75 % капитализации рынка) и инвесторы на рынке ценных бумаг. К тому же инвестиционная деятельность страховых обществ все больше связана с инструментами рынка капиталов. Таким образом, имеет место взаимопереплетение рынков, услуг и инструментов.

## **Защита инвестора**

Надзор за рынком ценных бумаг и защита интересов инвестора должны основываться на прочных законах. В настоящее время их в удовлетворительном виде не существует. Мнения по этому вопросу порой прямо противоположны. По мнению инспекции по ценным бумагам, Таллиннской биржи и крупнейших посреднических фирм можно заключить, что некоторые проблемы с защитой интересов инвестора имеются, но они вполне разрешимы. С точки зрения инвесторов, особенно внешних, степень защиты можно определить как очень слабую, что подтвердилось в период биржевого кризиса осенью 1997 года. Несомненно слабое законодательное регулирование рынка ценных бумаг и слабый надзор - это основные проблемы, мешающие защите инвестора. Если в Финляндии защитой инвестора на рынке ценных бумаг активно занимаются органы защиты потребителя, то в Эстонии это отсутствует. Закон о защите потребителя в сфере банковского, страхового бизнеса и рынка ценных бумаг неопределен, т.о. инвестор не может его использовать для возмещения ущерба.

Защита инвестора может быть активной и пассивной. **Пассивная защита** - это общие правила торговли на бирже (установленные биржевым регламентом), законы, касающиеся ценных бумаг и их рынков, различные нормативы доверия к посредникам рынка ценных бумаг. Цель этих всех документов – уравнивание инвесторов, исключение нечестной конкуренции и спекуляции, а так же страхование рисков. **Активная защита** заключается в использовании инвестором данных ему прав и исполнении обязанностей. Инвестор реализует их через торговые приказы, отданные маклеру для совершения сделки и использование деривативов. Отданный приказ инвестор может менять до тех пор, пока маклер не выполнит его в точности с пожеланием инвестора.

Правительство и Банк Эстонии должны взять на себя устранение ряда пробелов в плане защиты инвестора путем учреждения **единой организации по финансовому надзору**, которая должна объединить инспекции по банкам, страховым учреждениям и ценным бумагам. Поскольку инспекция по ценным бумагам и страховая инспекция находятся в ведении министерства финансов, а банковская инспекция в ведении Банка Эстонии, идет полемика о статусе подчинения новой организации. Оба ведомства хотят возгласить новое учреждение. Альтернативный вариант представляет из себя частный орган надзора. Сторонники этого варианта за то, что участники рынка сами установливали правила поведения и вытеснения «согрешивших». Однако,

это создаст опасность коррумпирования и отсутствия государственной ответственности, что осложнит работу органа. Мировой опыт показал, что такой орган может работать в любой форме.

В связи со слабостью инспекции ценных бумаг руководство Таллиннской биржи намерено создать **независимую комиссию по надзору** за сделками с ценными бумагами по аналогии с котировочной комиссией. Руководство биржи постоянно совершенствует правила торговли, чтобы уменьшить вытекающие из специфики торговли колебания цен и манипуляции. В 1998 году было решено измерить, в течение какого времени дилер даст лучшую котировку и каков будет объем сделок. В этой области планируется ввести минимальные ограничения. На свободном рынке, где торговля осуществляется на основе книги заказов, решено, по примеру Финляндии, ввести принцип сравнительной цены. Сравнительная цена – это средневзвешенная цена трех последних сделок. Цены последующих сделок могут колебаться в пределах, установленных биржей.

### Дальнейшее развитие рынка ценных бумаг

Основными направлениями дальнейшего развития рынка ценных бумаг являются совершенствование законодательства, надзора и рыночного механизма. Упорядочению рынка ценных бумаг будут способствовать также новые поправки к Закону о рынке ценных бумаг о защите малого инвестора, об обязательствах перед инвесторами уходящего с биржи эмитента. Новый закон ставит целью установление «прозрачности» рынка ценных бумаг. Достаточно подробно представлены разделы, касающиеся надзора за рынком, а также сделок на основе внутренней информации. Новым является дополнение о деятельности инвестиционных фондов и требования адекватности капитала.

В 1998 году, получившие сертификат ISO 9001, Стокгольмская и Копенгагенская биржи подписали договор об образовании единой биржи северных стран *NOREX (Nordic Exchange)*. Первым шагом является намерение с помощью новой торговой системы *SAX 2000* возобновить торговлю датскими акциями на Стокгольмской бирже. Из *NOREX* –а будет создана пятая по объему в Европе биржа, которая будет котировать акции ведущих корпораций Северных стран. Аналогичные тенденции наблюдаются и в странах *БЕНИЛЮКС*. Амстердамская, Брюссельская и Люксембургская биржи собираются внедрить новую *Benelux* биржу, с единой торговой системой. Германия и Австрия планируют создание единой Восточно-Европейской биржи, которая разместится в Вене.

Таллиннская биржа очень быстро развивается в направлении создания **единой Балтийской биржи** с возможным дальнейшим объединением с биржей *NOREX*. Первым шагом на пути к этому является формирование единого биржевого списка с Рижской и Вильнюсской биржами и информирование о колебаниях цен в режиме реального времени с помощью Интернет. Проблемой являются разные системы торговли на Рижской и Вильнюсской биржах. Приоритет будет отдан электронной дилерской системе торгов, используемой в Эстонии, поскольку она хорошо себя зарекомендовала, способствуя росту оборота и капитализации рынка. В перспективе это должно облегчить объединение с *NOREX*.

**В заключении** следует отметить, что повышение эффективности функционирования рынка ценных бумаг зависит от многих факторов, в частности, макроэкономических тенденций развития страны, что определяет экономическую активность участников рынка, а также:

- совершенства методики контроля и анализа отчетности эмитентов и участников рынка
- информирования профессиональных участников рынка об изменениях в законодательстве
- надзора за деятельностью ближайшего окружения эмитента
- контроля за рынком деривативов
- оценки эффективности инвестиций инвестиционных фондов
- усиления взаимодействия всех органов надзора за рынком ценных бумаг.

### **Использованная литература**

1. Väärtpaberiinspektsiooni tegevuse järelkontrollimine. Peakontrolöri 16. Detsembri 1998. a otsus nr 30-13/102 – <http://www.sao.ee/Est/Tulemus/Otsus98/3/vaartpaber.html> - 30.09.99. a.
2. Väärtpaberituru seadus. – RT I 1993, 35, 543, täiendused 1996, 1997, 1998.
3. Krediidiasutuste seadus, 9. veebruaril 1999. a – RT I 1999, 23, 349.
4. Väärtpaberite börside töö reguleerimise kohta. – Valitsuse määrus, nr 51, 1992.
5. Börside tegevuse reguleerimise ajutine juhend. – Valitsuse määrus nr 6, 1992.
6. Väärtpaberituru kutseliste osaliste tegevuslitsentsi taotlemise, välja andmise ja tühistamise kinnitamine. – Valitsuse määrus nr 107, 1997.
7. Eesti Panga bulletin <http://www.ee/epbe/bylletaan98/>.
8. Estonian securities market yearbook 1998.

## **ANALYSIS OF DEVELOPMENT OF SECURITIES MARKET IN ESTONIA**

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### **Summary**

The Estonian securities market is fairly young compared to those of the traditional market economies. After regaining independence, have started process of development of securities market. During this comparatively short time, securities market has gone through several transition-period difficulties. Currently, main problems of Estonian securities market are imperfection of legislation, insufficiency of investor's protection and supervision. Currently, due imperfection of legislation base, infrastructural companies, like Tallinn Stock Exchange, establish their own rules of trade. Weakness of Securities Inspectorate is also one of the problem on Estonian securities market. This has been illustrated by State Control's controlling. Further development of Estonian securities market belongs to process of integration with other stock exchanges in Baltic States and NOREX system.

# BANKING AUDIT IN NORDIC COUNTRIES

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## Introduction

Bank regulation is based on the philosophy that is essential to the national interest that the banking system be sound, so as merit complete and continued public confidence. As a result, banks are subject to strict governmental regulation and supervision. Banks have to present their auditing results to financial authorities. So the banking audit is one part of supervision. Nowadays one main trend in banking market is the internationalisation process of banks. Banks have to consider with differences among countries where they act. Although auditing principles are internationally harmonised, there can be differences among monetary authorities and their requirements. Estonian banking market is influenced by Nordic banks. That's why it is worthwhile to investigate their banking audit and supervision.

The aim of this paper is to compare audit and supervision systems in Estonia and Nordic countries. Author also tries to stress on the uniqueness of bank audit.

## Uniqueness of bank audit

Auditing is a systematic process of objectively obtaining and evaluating evidence regarding assertions about economic actions and events to ascertain the degree of correspondence between those assertions and established criteria and communicating the results to interested users. (Ricchiute 1982, p. 2)

Several characteristics of the operations and business of banks are unique to the industry and require the auditor's consideration in assessing risks, determining the audit strategy, and performing auditing procedures. Some of the more important characteristics are (O'Reilly *et. al.* 1993, p. 775)

- A bank's assets are highly negotiable and liquid. Thus they are subject to greater risk of loss than are the assets of other businesses.
- Banks are subject to substantial regulatory reporting requirements that sometimes go beyond GAAP (*Generally Accepted Accounting Principles*). Information needed to satisfy these reporting requirements must be anticipated in planning the audit.
- Banks frequently have complex internal control structures that provide substantial independent review of transactions.
- Banking is on of the more technologically advanced industries, and traditional "manual" audit techniques may be ineffective or inefficient. Determining the need for and coordinating the work of different specialists who may be involved in the audit may be complicated task.

The AICPA industry audit guide, *Audits of Banks*, issued in 1983, provides guidance on specialised accounting principles and reporting practices for the banking industry and on auditing procedures applicable to banks.

Banks are exposed to a variety of inherent risks that are unique to the industry. Banks face three main types of risks.

- Credit risk is a risk that borrower may not repay the loan. The decision to grant a loan is based on the credit information available at the time the loan is made. As economic and other factors change, however, the borrower's ability to repay the loan may also change. A principal risk factor for certain banks is excessive concentration of loans by type of entity. Another credit risk faced by banks relates to "due from" accounts, which are amounts due from other banks for check clearing. The risk concerns the financial viability of the other banks. The auditor should apply the same procedures to these accounts to evaluate their collectibility as are applied to the bank's loan portfolio.
- Interest rate risk relates to the sensitivity of earnings to changes in interest rates. Banks assume interest rate risk as a basic function of accepting deposits and making loans, and derive income for undertaking this risk.
- Liquidity risk refers to bank's need to have funds available at all times to repay fully maturing liabilities on a time basis. Banks have suspense accounts that relate to processed transactions that cannot be identified. The auditor should analyse suspense accounts on a regular basis to ensure that they clear on a timely basis.
- Banks face additional inherent risk from investment activity and dealing with options. The auditor should ascertain whether those types of transactions are hedges or speculations and whether it is necessary to recognise the related risk currently by marking the accounts to market.

Unlike other businesses, banks traditionally close their books daily and release their earnings results soon after year-end. Therefore, it is often important that the audit be completed quickly. This requires extensive planning and co-ordination. The audit program for a bank often provides for substantive procedures to be performed throughout the year, with update at year-end. The auditor should ensure that the professional standards on early substantive testing are met.

Another significant factor in determining the audit strategy in the banking industry is the efficiency of testing control structure policies and procedures and thus reducing to a significant extent the amount of substantive testing.

Banks generate considerable analytical information for regulators and others that may be useful to the auditor in the planning stage. The auditor should become familiar with the types of analytical information contained in monthly reports to the board of directors.

### **Banking audit in Estonia.**

Banking audit is regulated mainly by Law of Credit Institutions (LCI) (*Krediiasutuste seadus*) and by Accounting Law (*Raamatupidamisseadus*).

According to *Law of Credit Institutions* banks in Estonia have to present annual reports, which are controlled by the auditor and must follow the CAAP. As a appendix the auditor gives his opinion about :

- bank's actual value of assets,
- depreciation of assets,
- financial soundness,

- internal audit,
- safety of information systems.(LCI §93)

The auditor must have sufficient knowledge and be trustable. (LCI §94)

Supervision of all credit institutions in Estonia is done by Estonian Bank through Financial Supervision Authority (FSA) (*Pangainspeksioon*). Estonian Bank has right to issue acts for better supervision (Eesti Panga Seadus, §17). FSA have supervising control over :

- Estonian commercial banks,
- Branches of Estonian commercial banks acting abroad,
- Branches of foreign banks working in Estonia. (LCI §97)

Credit institutions have to present public reports to central bank in each quarter of the year and annual reports, which must be audited

FSA participates in international co-operation. FSA also controls mergers and acquisitions of banks. Mergering banks must be audited and FSA decides whether the merge is approved or not.

FSA has right to insist special audit if FSA has an information that accounting reports are not clear or have distortions with reality. (LCI §102)

The auditor must immediately inform FSA if there are factors that cause

- Illegal activity of banks,
- Potential danger for bankruptcy of the bank or its branch.

### **Banking audit and supervision in Finland and Sweden**

The Financial Supervision Authority, which operates in connection with the Bank of Finland supervises the Finnish banks.

The supervision system in Finland and Sweden are quite similar, therefore we analyse it them together.

The Swedish Riksbank is accountable for oversight and the Financial Supervisory Authority for supervision. This means that the Riksbank is primarily concerned with the development of a system or a market, while the FSA considers the situation in each institution as well as the system's overall stability. But as the dividing line between these two functions is blurred in practice, it is important that these two authorities co-operate closely. (Bäckström 1999)

The duties of the Financial Supervision Authority shall include (Act on the ... 11.06.1993):

- to ensure that the supervised entities operate in accordance with Acts and decrees, the regulations and guidelines issued by authorities and their own Articles of Association, bylaws or regulations;
- to issue regulations to the supervised entities concerning the observance of the applicable regulations, and to issue guidelines that are necessary for purposes of supervision to the supervised entities, to their associations and to other entities operating in the financial markets;



- to inspect supervised entities as often and as thoroughly as is required for purposes of supervision;
- to direct and supervise the activities of the savings bank inspectorate and the cooperative bank inspectorate;

The Financial Supervision Authority shall be entitled to obtain from the auditor of a supervised entity all such information, documents, other records and copies in the possession of the auditor as concern the supervised entity and as are necessary for the purpose of supervision, as well as copies of the memoranda and minutes prepared by the auditor and of other documents concerning the activities of the supervised entity which have originated in connection with the audit.

Auditors of supervised entities shall likewise report to the Financial Supervision Authority any fact and decision of which they become aware while performing their duties in an undertaking belonging to the consolidated group of a supervised entity or in an undertaking which exercises control as referred to in section 22 b of the Accounting Act over a supervised entity or over which a supervised entity exercises such control.(Act on the ..., 1993)

Auditors acting in good faith shall not be involved in any liability for any financial loss that may result from measures taken in compliance with this section.

In order to clarify a matter which is pertinent for the purpose of supervision, the Financial Supervision Authority may appoint one or several auditors to perform a special audit of the activities of a supervised entity.

The Financial Supervision Authority shall determine the fee that is to be paid out of the funds of the supervised entity to a person performing a special audit. The Financial Supervision Authority shall be liable for payment of a fee that is not collectible from the supervised entity.

## References

1. Act on the Financial Supervision Authority., 11.06.1993.  
[[http://www.rata.bof.fi/english/in\\_brief/wf\\_act.html](http://www.rata.bof.fi/english/in_brief/wf_act.html)]
2. Bäckström, G. U. Riksbank and the financial system. Speech in Swedish Economics Association. 25.02.1999 [http://www.riskbank.com]
3. Eesti Panga Põhikiri,  
[<http://seadus.ibs.ee/seadus/aktid/epn.o.19960903.8.19960904.11.p3.html>]
4. Krediidiasutuste seadus,.  
[<http://seadus.ibs.ee/seadus/aktid/rk.s.19990209.30.19990701.html>]
5. O'Reilly, M., Hirsh, M. B. Montgomery's Auditing, 11<sup>th</sup>ed., John Wiley & Sons, 1990, 1150 pp.
7. Ricchiute, D. N. Auditing: concepts and standards. South-Western Publishing Co., 1982, 542 pp.

## Summary

Banking audit is closely connected to supervision of bank system. Banks have to report to the monetary authorities about their activities and reports must be prepared by auditors.

Banking audit is quite unique due to the speciality of bank industry. Banks face three main types of risks which are credit risk, interest rate risk and liquidity risk.

Banking audit requires extensive planning and co-ordination to complete it quickly.

Banking audit in Estonia is regulated mainly by Law of Credit Institutions and by Accounting Law. Regulating acts in Estonia and in Nordic countries are mainly quite similar, the difference is mainly in duties and independence of FSA.

# PRINCIPLES OF THE DISTINCTION OF CAPITAL AND REVENUE EXPENDITURE IN PUBLIC SECTOR<sup>1</sup>

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## Background of the problem

Within the context of financial management the word 'capital' has gained by now a technical meaning, which is relatively easy to understand – whole quantity of assets less liabilities owned by a person or business equals capital. But it is worth looking at some antecedents of this word.

By the common-sense view 'capital' is some large sum of money which, because of its size, is worth extra consideration before spending or investing. The literature of the nineteenth and early twentieth centuries is full of reference to 'property' or 'capital' as the means of ensuring a comfortable existence (and considerable power/respect), not by spending it but by investing it wisely. (Jones, p. 37). Karl Marx regarded capital as the means of preserving a major class distinction. Capitalists invested their money (at a risk to themselves) in providing opportunities (e.g. factories) for labor to produce goods, which could be sold at a profit. By Marx capitalists paid wages to the labor force but at a rate which enabled them to keep a proportion of the profits and thus live off their investments. The 'surplus value', i.e. in Marxian terms the proportion of the profits earned by the labor force, which was not paid to them, was 'alienated' from them by the capitalists. The concept of 'surplus value' contributed to economic theory and practice. By the time Marx and his successors it had finished with it 'alienation' of capital had become an economical and political concept in Soviet Union and other socialist countries.

Such considerations may help us to understand why the word 'capital' was excluded from economic literature in Soviet Union in 1920s and property of capitalists was expropriated. After the war new occupied Baltic republics and also socialist Eastern European countries were forced to follow the same theoretical and practical scheme of economy. Capital staged a comeback in Estonia in late 1980s and early 1990s in connection with privatization and transition to market economy. Capital is considered as a major force for the private sector of the economy and its proper use is increasingly important also for the public sector. But nobody can design the optimal institutional arrangement ahead of its implementation. It has to be achieved through experimentation in markets and self organization to create the appropriate private and public institutions. Privatization comes first (Eliasson, p. 46). That is why there is suspicion in Estonian public sector concerning word 'capital' and more business-oriented approaches to financial management of public property.

The history of implementation of internationally accepted standards of financial accounting is not very long in Estonia. In 1994 was admitted law of accounting (RT I 1994, 48, 790), where several terms — assets, liability, capital, revenue, expenditure, transaction were described. All accounting rules were described from the viewpoint of private business, less attention was paid to public sector. Until January 1<sup>st</sup>, 1995 in public sector of Estonia were

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<sup>1</sup> This paper is supported by grant no 2384 of Estonian Scientific Foundation

implemented regularities established by decree Ministry of Finance of Soviet Union in 1987 for accounting in budgetary organisations. New order inaugurated in 1995 by Estonian Ministry of Finance for budgetary units exchanged a little the understanding of the word 'capital' in public sector of Estonia. Only recently there are attempts to introduce internationally accepted accounting principles in public sector of Estonia.

New law of state budget (RT I 1999, 55, 585) introduced the term 'governments accounting' That is accounting of assets, capitals and liabilities of the government. Special strain of Estonia is that accounting in public sector is in competence and regulated by rules of Ministry of Finance.

### **Government revenue and expenditure**

Implementation of special rules makes it very difficult to report data for international government finance statistic. Pages of Estonia in publication of the IMF Government Finance Statistics Yearbook 1997 contain a lot of ellipsis (...) what indicates absence of data.

On the other hand financial management in government institutions and especially in municipalities is not possible if there is lack of proper information about transactions and also managers, who could understand content of financial statements.

The principal characteristics of government finance transactions are: (1) whether transactions involve government receipts or payments; (2) whether the transactions are repayable (involving past or future assets or liabilities) or nonrepayable; (3) whether nonrepayable transactions are capital (more than a minimum amount and designated for use in a production process for more than one year) or current; (4) whether repayable transactions involve changes in financial assets or liabilities of the government; (5) whether repayable transactions are undertaken for liquidity (financing) purposes and involve changes in government liabilities or are undertaken for other purposes that involve changes in government assets.

Revenue covers all nonrepayable government receipts other than grants. Grants are defined as unrequited, nonrepayable, noncompulsory receipts from other governments or international organisations (Government...p. ix)

General government expenditure includes all nonrepayable payments by government, whether for current or capital purposes. Expenditure and lending minus repayments consisted in Estonia 22 634,5 million EEK in 1997 ( Government...1997, p. 41). That is about 34-35% of GDP of Estonia, what indicates on the 'small government' of Estonia. Among countries of European Union the lowest rate was in 1997 in Ireland (35,4%) and highest in Sweden (63,4%) ( Government...1997, p. 44). Total revenue and grants consisted in 1997 21623,1 million EEK (33% of GDP). And so overall deficit was -1011,3 million EEK (-1,6% to GDP). From EU countries the highest deficit was in Greece (- 4,0% of GDP, EU criteria 3,0%), Denmark and Ireland had general government surplus. So we can say, that in international comparison Estonia looks good, but we do not have data about operating and financial results of municipalities and also ministries.

Total expenditure of government consists from current or revenue expenditure, capital expenditure and lending minus repayments. Such a data have to be represented for every government organization, statements do not consist such an item.

### **The measurement of government budget deficit**

By the common-sense view the deficit is government expenditure minus government revenue. But many economists believe that an accurate assessment of the government's budget deficit requires accounting for the government's assets as well as its liabilities. In particular, when measuring the government's overall indebtedness, one should subtract government assets from government debt. Therefore, the budget deficit should be measured as the change in debt minus the change in assets (Mankiw, p. 437).

Certainly, individuals and firms treat assets and liabilities symmetrically. When a person borrows to buy a house, we do not say that he is running a budget deficit. Instead, we offset the increase in assets (the house) against the increase in debt (the mortgage) and record no change in net wealth. Can we treat the government's finances in the same way? Is it to good purpose, or possible at all? If there were conceivable a government or municipality bankrupt we have to treat the government assets analogously to business firm assets, but it is not the case in Estonia today.

### **Cash or accrual accounting method**

An accounting method is the set of rules regularly used by an institution to determine how and when income or expenditure will be reported. The practice of accounting transactions in public sector provides for use a lot accounting methods. The primary methods used however are: 1) Cash Method; 2) Accrual Method; 3) Hybrid Method.

Accruals convention is the convention whereby revenue and costs are accrued (that is recognized as they are earned or incurred, not as money is paid or received), matched with one another so far as their relationship can be established or justifiably assumed, and dealt with in the profit and loss account of the period to which they relate (Millichamp, p. 483).

Estonian government uses cash method. That is method based on payments. Payments data represent the best ready approximation of the flows of funds and resource; they avoid problems of valuing resource flows; they correspond most closely with other financial statistics; and they constitute the basis on which most governments keep their accounts (A Manual., p.31). Not all of these advantages apply also to cash data for the components of government operations. It does not suit very well for operation involving inventories. In USA public institutions in some instances may use a hybrid method, which involves treating some items on the cash method and others on the accrual method.

The preference for payment-based data for reporting government operations contrasts with statistics on business, which should be an accruals basis so as to measure an enterprise's net worth and income and provide cost data necessary for pricing goods and services to put on sale. Because such concepts are generally not applicable to government and a full knowledge of liabilities accruing to and from government is not possible, accrual data on government operations are appropriate only for partial and supplementary purpose. (A

Manual, p. 33). The net worth of an enterprise at any time is calculated as the sum of the value of all its stocks: accrued liabilities receivable, accrued liabilities payable, inventories, fixed capital assets, land, intangible assets, cash and deposits, financial assets and debts. Changes in these stocks are generated by the flows of accruing liabilities, goods and services, money, and fixed-term and other contractual obligations. Net worth, income and costs must include accruals of liabilities if they are to serve the needs of business.

The accrual of most liabilities to government occurs as the result of transactions in which the government does not directly participate, such as the earning of income by taxpayers or the sale of taxable goods and services. Such accruing liabilities are reported to government only when tax returns are filed or tax liabilities are paid. Similarly, many government liabilities to others accrue under law as a result of developments in which governments do not directly participate, such as unemployment or disability. So an important part of accruing liabilities cannot be included in any government accounting system. As result, the full measurement of accrued liabilities and of the related business accounting concepts of net worth, income, and total accrued costs cannot be carried out for government (A Manual, p. 33-34)

An accrual-method institution will include an item in revenue when the 'all events test' is satisfied. According to the all-events test, this occurs when: (1) The right to receive income is fixed; (2) The amount to be received is reasonably determinable. And accordingly an accrual-method institution will include an item in expenses, when generally the following criteria are met: (1) The liability must be certain; (2) The amount of the liability must be reasonably determinable; (3) Economic performance must have been received.

In order to clarify the distinction between capital and revenue, it is necessary to distinguish between sources of finance, i.e. where the money is coming from, and expenditure, i.e. to what purpose the money is applied.

### **Current expenditure**

*Current expenditure* in principle refers to expenditure on goods and services which are consumed within the standard accountancy period, usually one year. Obvious examples are wages and salaries and services bought, such as cleaning or training, interest payments, subsidies and other current transfers to households, and to nonprofit institutions and also transfers abroad.

### **Capital expenditure**

Capital expenditure in principle refers to money spent on major items, which have a life-cycle longer than the standard accountancy period (usually one year), expenditure that provides a long term benefits. Obvious examples are land, building, vehicles and plant of various sorts. It is usual to draw an arbitrary limit at some figure (in Estonia limit in public sector is 10 000 EEK), below which expenditure counts as revenue even though the items purchased may last for some time. It is worth noting that the public sector usage is to some extent at variance with the conventions of private sector accounting. Public sector 'revenue' is comparable to the private sector's 'working capital', while public sector 'capital expenditure' is comparable in large part to the private sector's 'expenditure on fixed assets'. (Jones, p. 43).

In other countries term 'working capital' is used to characterise operations in public sector, in Estonia not yet.

### **Current revenue**

Current revenue refers to the income required to finance current expenditure. Commonly the great majority of this is derived from central and local taxation (in Estonia in 1997 over 90%). Other sources are entrepreneurial and property income, administrative fees and charges, fines and forfeits and other non-tax revenue.

### **Capital revenue**

Capital revenue has government from sale of fixed capital assets, sale of stocks, sale of land and intangible assets (growing forest stock and wood) is the sources of finance for capital expenditure. The main source of public sector capital finance in most countries is considered to be borrowing (Jones, p.37). Such borrowing necessarily incurs capital charges (e.g. interest) for the borrower and the proper method of accounting for such capital charges is the major feature of current debate within the public sector.

In Estonia due to strict budgetary policy borrowing is not considered to be the main source of finance for capital expenditure and part of revenue income is used as source in capital expenditure budgets.

### **Capital budgeting and capital expenditures budget**

A budget procedure that accounts for assets as well as liabilities is sometimes called *capital budgeting*, because it takes into account changes in capital (Mankiw, p. 438). For example, suppose that the government sells one of its office buildings and uses the proceeds to reduce the government debt. Under capital budgeting, the revenue received from the sale would not lower the deficit, because the reduction in debt would be offset by the reduction in assets. Similarly, under capital budgeting, government borrowing to finance the purchase of capital good would not raise the deficit. The major difficulty with capital budgeting is that it is hard to decide which government expenditure should count as capital expenditure.

In recent years Tallinn and Tartu implemented in their budgetary proposals separation of capital expenditures budgets from basic budget (revenue budget). It allows overview, what are sources of capital expenditure and in which purpose they are used. But some principles of budgeting and also accounting to not allow fairly present financial results of application of public funds and capital expenditure and revenue budgets.

### **Financial statements**

The financial development of the firm during the year is described by balance sheets, profit statement cash flow statement. Analogous statements in public sector are balance sheets,

income statement and source and application of funds statements.<sup>2</sup> The relationship between these documents have to be as follows:

*Income statement*

Revenue

- Costs

= Result of the year

The income statement is a summary of the year's operations and shows the extent to which they have affected the amount of proprietary capital, and how the change in proprietary capital has come about. This change can also be found on the balance sheet.

*The balance sheet* shows the financial situation of government or government unit and how this situation has changed during the year. The asset side or employment of capital (Liquid assets; Debtors and inventories; Fixed assets) shows how e.g. the municipality has utilized the capital at its disposal. The capital side or capital employed (Loans and credits, Proprietary capital; Result of the year) shows how the required capital has been acquired. *Proprietary capital* is the municipality's own capital, consisting of proprietary capital brought forward from the preceding year plus/minus the result of the year. *Loans and credits* may be short-term liabilities attributable to the day-to-day operations, maturing within one year after expiry of financial year under review. Long-term loans are long-term liabilities for the financing of fixed assets, maturing later than one year after expiry of the financial year under review.

*The source and application of funds statement* shows operations, investments, borrowing, etc. have affected liquidity. Liquidity is the term not used yet in Estonian public sector. Liquidity is the ratio of current assets to current liabilities, indicating the capability to settle debt in a timely manner. Another unknown term in Estonia is 'solidity'. Solidity is the ratio of proprietary capital to total assets, i.e. the level of internal financing (Annual..., p. 25).

In Estonia instead of income statement exists the statement of fulfilling the budget, which does not allow to define the financial result of the year.

### **The necessary connections between capital expenditure and revenue budgets**

It is becoming more widely perceived within the public sector, that capital expenditure should be seen to contribute in some way to the effectiveness of the use of the revenue budget.

Every item of capital expenditure implies change to the associated revenue budget:

1. The chances are that the capital finance was borrowed, in which case the revenue budget must bear the annual cost of servicing the debt, i.e. paying interest charges and making provision for paying back the borrowed money.
2. The item bought will probably depreciate, i.e. lose its resale value on a year-by-year basis over a period of time, and this depreciation should be shown in appropriate accounts of the organization concerned. There are exceptions to this rule which provide accountants with a few problems. Land and buildings, for example, may 'appreciate', i.e. gain in resale value, and this appreciation may or may not be at a rate faster than the

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<sup>2</sup> To describe difference in statements we used Annual Report 1995 of the City of Uppsala.



basic rate of inflation. This problem should not be seen out of proportion. Depreciating assets are far more common.

3. The item concerned will usually require maintenance in order to keep its utility.
4. The item concerned is intended to be used and so will require staff time and materials, e.g. a van will require a driver and fuel.
5. The item concerned may yield an income, which contributes to the totality of revenue income, e.g. a leisure center will attract a considerable income from charges to users.

Due to this municipalities need not only one-year budgets, but also middle-term financial plans consisting both capital and revenue budgets forecasting. Capital expenditure budget were in this case like medium-term local investment program analogous to public investment program implemented on central government level.

### **Medium-term public investment program**

Before 1995 the government of Estonia did not have public investment program (PIP) because it did not have enough resources available for investments to justify the effort. But in 1994 Estonia was in position to initiate such program. A good public investment program will help assure that scarce public funds are used only for the highest priority projects. It will provide an agreed basis for refusing additional requests for funds that have not been budgeted and will help the government mobilize external funding for the program.

The public investment program should not be confused with the annual budget. The PIP provides a framework for planning and developing good investments projects, while the annual budget provides a commitment to undertake these projects and an authorisation for ministries and agencies to commit funds for such activities. The analysis of *future operating cost* requirements is particularly important for public sector investments because public sector investments are often not self-financing – a major reason, of course, that they have to be done by the public rather than the private sector. Of particular concern are investments in schools and health services. Such services are quite labour intensive, and their staffs tend to command relatively high salaries. In addition, medical facilities require ongoing expenditures on expensive supplies and equipment to function effectively. Heating and other energy costs are also a particular burden because of Estonia's Nordic climate. If the government cannot afford to supply the budgetary resources that will be required in the future, the facilities should not be constructed today. The analysis of recurrent costs, which has to be done in the context of the total government budget, may lead to the conclusion that the total size of the public investment program should be curtailed so that adequate recurrent budget funds are available for operating and maintenance costs.

The government will reject projects that are not consistent with the nation's strategic objectives for public investment, leaving only those projects that seem to have promise to be included in the public investment program. Once the PIP process has been under way for two or three years, new projects that meet this strategic criteria will generally first appear in the outermost year of the three-year PIP.

## The place of capital controls in managing a public sector

Capital costs differ from operating costs in a number of ways. First, they represent investments at a single point in time, often at the beginning of the program, rather than annual sums like operating costs.

The Estonian public sector has played and continues to play a major part in capital formation, i.e. spending on relatively permanent assets. There is direct ownership of a significant proportion of the housing stock, schools, colleges and universities all have substantial buildings and, in the form of equipment ranging from personal computers to elaborate scientific apparatus, a good deal of expensive capital assets.

It is thus apparent that for any government a set of tensions exist on the matter of public sector capital formation. There is a drive as in other countries so in Estonia, which is based on the economic theory of Keynes, to invest in the public sector in order to stimulate economic recovery and growth.

On the other hand, it can be argued that the capital borrowed by governments for public sector investment is not available for investment in the private sector which, it has been argued, makes better use of its capital assets. It is therefore better in the long term to allow the private sector to develop without artificial stimulation. This argument is logically separate from (although often run together with) the idea that if an economy is revitalized at too great a rate then inflationary pressures built up which have unfortunate effects on the value of the currency and make for difficulty in exporting and consequent negative effects upon the balance of payments. Estonia exercises strict budgetary policy and government expenditure (both revenue and capital) are under strict limitation of central government. From budget cuts of recent years suffer all sector of government affairs and especially investment programs.

Governments can control public capital expenditure in a number of ways:

1. Where the expenditure is directly funded by government, as for example on the military and other affairs in competence of central government, then direct capital control is possible.
2. Where the expenditure is incurred by a quasi-autonomous authority such as local government, then central government can control gross spending, by a series of authorizations, perhaps organized by 'program', for example environment protection, housing or transport.
3. Alternatively to this control of spending, government could control the source of capital finance, by setting limits to the amount of borrowing either from the government itself or directly from the capital market.
4. More dramatically, government can reduce the size of the public sector by privatizing enterprises (electricity, water, railway).

As a matter of fact, all such control possibilities have been and continue to be used by government in Estonia. In West countries it is becoming much harder to incur capital expenditure. Those wishing to do so having to demonstrate need and/or potential for saving/income generation. Additionally, other methods of financing the expenditure, e.g. by savings or by sale of existing assets, have to be considered before borrowing is sanctioned. (Jones, p. 39). It were useful for Estonian local governments to implement income generation plan, but by now there is lack for incentive for such a work.

The government will prepare a new annual budget each year. Although approaches vary, the best method of moving forward from one year to the next is to roll the previous year's budget into the present budget so that all relevant data are in one document. Under this approach, the expenditures approved in the capital expenditure for the prior year have presumptive right to be included in the new budget with full funding for all remaining years of implementation.

Estonian public investments program is some times called 'repair program' as it consists mostly from the cost of repairs of roofs of schools and other public buildings. In principle Public investments program should include any project involving the purchase or transfer of capital assets and cover all government capital expenditures, including physical investments and financial investments. The latter may be in the form of equity investments or net lending, regardless of whether this is financed by current savings, domestic borrowing, or foreign borrowing.

Government and social services are particularly difficult to evaluate using rate of return analysis because they commonly have no market price (for example, coast guard services, fire protection, and primary education). In other cases, the market price for such services reflects social priorities rather than economic costs (for example, subsidized charges for health services and higher education).

Instead of trying to make rate of return analysis work by creating weighted shadow prices, it is generally better to allocate resources across sectors in the public sector investments program, on the basis of agreements on a national economic strategy, and on the relative priority for public investment in each sector in terms of strategic national objectives. The consensus building process should include an assessment of the current state of public of public services in each sector, the need for improved services, and the best approach to providing such services. Once a consensus has been developed on the relative priorities across sectors for public and for private investment, rates of return can be used to help choose the most cost-effective way to attain the goals in each sector, such as the delivery of education to a given number of children.

## Conclusions

There is a big difference between accounting and financial statement principles of governments units in Estonia and Western countries. This paper makes on overview of terms related to word 'capital' in budgets and financial statements of government and especially municipalities in Estonia. In Sweden a municipality is a geographically delimited administrative body and a legal subject in much the same way as a limited company, an association or a foundation and municipal operations can be run in the form of limited companies or foundations. In Estonia Ministry of Finance establishes special rules of accounting operations and financial statement for municipalities and other government units. These rules do not respond to internationally accepted standards of accounting and it makes difficult reporting of international comparison of Estonian government finance. Lack of adequate and understandable information is one reason, why financial management in public sector of Estonia is so underdeveloped.

## References

1. A Manual on Government Finance Statistics. International Monetary Fund. 1986.
2. Annual Report 1995 of City of Uppsala. Uppsala: The City of Uppsala Executive Office.
3. Government Finance 1997. Statistical Office of Estonia, 1998.
4. Government Finance Statistics Yearbook. International Monetary Fund, 1997.
5. Jones, B. M. Financial Management in the Public Sector. London: McGraw-Hill, 1996.
6. Mankiw, N. G. Macroeconomics. New York: Worth Publishers, 1992.
7. Millichamp, A. H. Foundation Accounting, 2<sup>nd</sup> Ed. London: DP Publications Ltd, 1989.
8. Raamatupidamise seadus, RT I 1994, 48, 790.
9. Riigieelarve seadus, RT I 1999, 55, 585.

# THE SUCCESS OF COMPANY MERGERS AND ACQUISITIONS

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## Introduction

After Estonia gained its independence privatization has taken place and lots of small companies have been created. They have grown and now it is time to merge their resources, processes and responsibilities to become more effective. Last year many Estonian companies especially banks merged. Most of the mergers were horizontal to get a larger market place and to eliminate duplicating processes. But not only Estonian companies merge. There exists a trend in the world that bigger companies become even bigger and bigger through mergers. The author of this article tries to analyze whether it is profitable to merge or not and whether all mergers are successful or not.

## Main reasons why companies merge

In 1998 there was a trend that if there was a rumour about two companies merging the stocks of these two companies rose incredibly. Investors try to buy the future value of the company in the stock market. What are the reasons through which the future value of the company increases? The main reasons why companies merge are the following:

- Economical competition.

Through mergers there will be less companies in the market, which is better for companies but not for customers. If there are less competitors in the market it is easier to dictate the prices and other conditions in the market. At the same time becoming bigger helps to stand up against big foreign companies.

- Growth of the company.

In a fast developing country or a fast growing industry most companies grow very fast also. It is possible to differentiate inside and outside growth. Outside growth means growth through mergers.

- Increasing the value of the company.

It is reasonable to merge if two companies together are worth more than the same two companies separately. For calculating free cash flow it is possible to measure the future increasing value.

- Increasing the market share.

Two companies within the same industry can rise their market share through a merger and usually it also increases the turnover and net income of the companies. If there are not so many competitors in the market it is possible to raise prices and earn more profit through this. Through the vertical merger a company acquires another company who can distribute the production of the first company.

- Cost reductions.

A new company can operate more effectively than two separate companies. Elimination of double operations can reduce costs. Usually increasing volume of production reduces fixed costs. Administration, management, selling and marketing costs to net sales should decrease also. If a seasonal merger (one company operates in winter and the other in summer) takes place it helps to manage resources more effectively.

- Combining taxes.

Companies who don't earn any profit don't have to pay any income tax. The other company who earns profit can use the loss of the other company to reduce its own profit.

- Replacing inefficient management with an effective one.

Sometimes the key point is inefficient management that has made wrong management decisions or is just not motivated enough.

### The success of mergers

There are lots of reasons why two companies should merge but how successful mergers are generally? There are lots of studies about the mergers but almost none of them mentions whether mergers succeed or fail in reality. How is it possible to say that one merger is successful and another isn't? The answer depends on how one defines success and failure.

It is possible to differentiate short and long term impact. Short-term studies involve movement of stock prices of the two companies. These studies have found that target share prices rise following merger announcements, whereas acquirer share prices stay about the same. Target share prices go up in anticipation of successful offers that will involve payment of premiums to shareholders who tender their shares to the acquirer.

There have been different studies about long-term after-merger position and they all are different depending on the definition of success.

Table 1 shows the results of mergers depending on different definitions of success.

Table 1

#### Results of mergers

Term of success	Result
Eventual liquidation, sale of the unit	under 20% fails
Inability to reach significant growth in net income or return on equity	over 80% fails
Technological fit	16% fails
Return on equity compared on NYSE level	44% below
Return on assets compared on NYSE level	75% below
Inability to earn back equity capital	61% fails
Significant growth in net income compared on nonacquires	60%

As we can see the results depend on the definition of success.

In the author's opinion the key terms for definition of success are the following:

- return of equity and
- company's position compared to companies within the same industry.

According to the table 1 it is possible to say that in the reality many mergers don't succeed but as we already mentioned before in theory it seems reasonable to merge. What are the reasons why mergers don't succeed?

### **The reasons of failure**

The main reasons of failure are:

- poor and slow postmerger integration;
- overestimating of synergies;
- overbidding;
- conflicting corporate cultures;
- poor experiences;
- poor due diligence.

The process of changing owners of the company is very complicated. Usually if there is a decision within the owners to sell their shares they want financial results of the company to look better. For that reason they can use special accounting policy like smaller norms of the amortization, they don't invest so much anymore and also they can take out the dividends. The due diligence must be very accurate to get to know the real picture of the company to be acquired.

There can be competition between two or even more companies to acquire the other company. In that case the price of the company to be acquired may be overbidded.

Sometimes it happens that synergy is overestimated. In reality it is quite difficult and complicated to integrate two companies because of the different corporate structures and poor experiences. Already before the merger it has to be decided what kind of subsidiaries it is reasonable to close, how many workers it is reasonable to keep, what kind of technology it is reasonable to use and how to integrate those. To integrate the resources, processes and responsibilities of the two companies, there has to exist an integration plan to obtain the main goals of the merging companies. It has to include the targets, how the integration of resources, processes and responsibilities helps to obtain these targets, the priorities and the time- schedule. There also has to be feedback about the integration plan.

### **Estonia's disparities**

In Estonia it is quite difficult to analyze the mergers:

1. Estonia regained its independence in 1991 and in 1992 the new accounting law was adopted. It means that it is very difficult to compare companies financial reports before and after that period.
2. There were many companies who started its business during that period. The first years after the establishment usually don't give an actual picture of the performance of the company.

3. Estonian economy hasn't been stable because of the transferring period. In 1997 there was a big step to increase but in 1998 there was a big drop because of the Russian crisis.
4. Most of the mergers took place in 1997. Probably a two- year period is too short to get an objective view about the influence of the merger to the companies.
5. Estonia is a very small country and that's way there are many outside indicators (for example Russian crisis) that can influence our economy and without eliminating these indicators it doesn't give a true picture about the success of the mergers.

## Conclusion

It is possible to conclude that there is no one-way approach to whether mergers are successful or not for it depends on the definition of success. Mergers should be successful in general but there are many indicators through what it is easy to fail. The most important thing is a well- planned and quick integration after a merger.

It is very important to analyze the post-merger situation of the company to succeed because mergers get more and more popular in the world.

## References

1. Block, S. B., Hirt, G. A. Foundations of Financial Management. 6<sup>th</sup> ed., Irwin, 1992, 693 p.
2. Hickman, K., Hunter, H., Byrd J. Foundations of Corporate Finance. West Publishing, 1996, 565 p.
3. Kitvel, E. Rahandussuhtarvude süsteem. Tln, TTÜ, 1998, 46 lk.
4. Lajoux, A. R. The Art of M&A Integration: a guide to merging resources, processes and responsibilities. McGraw-Hill, 1998, 439 p.
5. Raud, N. Pangandustrend: suurem on parem? – Ärielu, 1998, nr 6, lk 6.
6. Ross, S., Westerfield, R., Jordan, B. Fundamentals of Corporate Finance. Irwin, 1993, 868 p.
7. Weston, J. F. Financial Management. Irwin, 239 p.