

EBS REVIEW

**RISKS AND
RISK MANAGEMENT**

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Editorial

Risk and Risk Management

Mari Kooskora

This issue of EBS Review is dedicated to a crucial and sensitive subject. In this issue we discuss risk and risk management—how to manage risk and how to reduce the likelihood that something will go wrong to an absolute minimum.

The authors discuss the subject of risk from different perspectives, risks inherent in globalisation and innovation, financial and ethical risks, the risks involved in implementing new and innovative technologies, new auditing methods, and the risks of e-business and telework.

We live in a time of change. Everything around us continues to change very rapidly, and this brings new opportunities as well as new risks. Societies, organisations and people all face risks in everything they do. Nobody can ignore risk and make plans that guarantee that every thing will remain stable and unchanged. Globalisation and opportunities for innovation give us more choices but also bring new challenges as well as uncertainty. By taking risks people can develop and move closer to success, but careless risk-taking may sometimes lead to failure in both our personal and business lives.

The authors Gundar King, Bruce Finnie and Linda Gibson in their article, *Nothing Ventured, Nothing Gained*, discuss the risk of innovation and economic development. They take a closer look at our transition economies and claim that development and prosperity are synonymous with risk and that high levels of risk produce high levels of uncertainty. In transition economies, such as in the Baltics, all aspects of innovation and risk should be considered most carefully. New organisations have to be cautious as they innovate and expand; they must encourage a full awareness of managerial and technical developments worldwide, and take the initiative in developing close, mutually trustworthy relationships with international suppliers and

customers. The authors also stress the importance of ethics, emphasising trust, reliable partners, responsibility and integrity.

Mari Kooskora from Estonian Business School and Mari Meel from Tallinn Technical University discuss the ethical risks associated with globalisation and innovation. Innovation and globalisation present us with two quite different sides to the same coin. New technologies, the global business market and stiff global competition give us new challenges and opportunities, but they also bring severe risks that we do not fully realise and fail to acknowledge at first sight. In their article the authors discuss these topics using concrete examples from two global business cases—the *global* flower business and one of the most innovative enterprises in Europe, Elcoteq Network.

We are all glad of the overall increase in our economic welfare and standard of living. We can enjoy new possibilities: production has become more automated and products cheaper, choice is becoming wider and consumption is increasing, communication and information technology is extending its uses, and we can now travel more quickly and more conveniently. But we have to realise that all these benefits also have a negative side, which is not so insignificant at all. Globalisation and innovation also remind us of pollution and the potential for harm to the environment and the decreased health and safety of many world citizens. In order to survive and remain sustainable we have to incorporate environmental, cultural, economic as well as ethical considerations into business practices worldwide.

Aivo Adamson, of Hansabank, calls us to be innovative in the area of innovation risk management. In his article he presents his belief about the hidden risks in innovation and the issue of sustainabil-

ity, and shares what he has witnessed during the growth and expansion of the largest and strongest bank in Estonia and the Baltics. He analyses the risks that accompany too much innovation, and which can threaten businesses and their success. In conclusion he says: "Every new development implemented needs to be measurable and its outcome must be apparent both in terms of figures and soft factors. There must either be increased profit and improved access to services or the creation of new products that save time for the client or create new opportunities. When implementing internal changes there is a need to consider that support functions, mainly in the form of jobs, must decrease. If even one of these conditions is not satisfied then there is no point to the innovation."

As we all know the use of e-business is an ever growing and important aspect of business strategy. E-business is a definite part of the new *Information Age* and it is gradually becoming more integrated into the business processes of a wide variety of organisations. Mary Beth Klinger in her article *Managing Risk in E-business Initiatives*, reviews the revolution of e-business, its place in organisations today and the risks inherent in successfully managing an e-business initiative.

To minimise risk and optimise profit, the entrepreneur's managerial task is to select innovations that are both critical improvements and that involve risk that can be controlled with the available skills and resources. The starting point should be to establish a tolerable balance of innovation and risk with some reserves for unanticipated developments. Later in the product life cycle, this balance changes with competitive reductions in costs and prices, and an expansion in sales.

Krisi Pungas discusses internal auditing in public institutions. She asserts that an internal audit must analyse risk, and find the most economical and effective way to manage potential risks in an organisation or area in order to aid the achievement of the organisation's goals through a systematic and organised approach. The author points out that those responsible for an internal audit together with the management have to ascertain potential risks, analyse these and find the best way to manage them in order to protect the organisation by improving the organisation's activities and creating new values.

The author Madan Lal Bhasin from Cyprus describes how Economic Capital can help a financial institution to plan more efficiently for a rainy day. Risk is a cost and companies need to take this into account when evaluating their business performance. Economic capital is one way of quantifying the risks a business faces and ensuring there is enough capital to cover unexpected losses. It is vital for organisations but especially for financial institutions to have back-up systems in place in case of emergency. Financial services providers are, therefore, under increasing pressure to improve their risk-assessment schemes. Unfortunately, few have taken their processes, products and systems, and looked at them from a risk point of view. In his article, Dr. Madan describes Basel-II, the new framework intended to align regulatory capital requirements more closely with underlying risks and provide banks and their supervisors with several options for the assessment of capital adequacy.

There is a further article about Basel-II, by Ingrid Ulst and Rain Raa, which looks at SME lending in more detail and identifies the character of SMEs. The authors seek to define what prevents banks from lending to SMEs and examine typical SME credit risk. They discuss issues regarding the internal and external rating of SMEs and the pricing of credit to SMEs at present and according to the new Basel Accord, Basel II.

Eve Lamberg relates the belief in her article, *Changes in an Accounting Model*, that financial statements on the basis of historical cost served the bygone industrial era well, but have become obsolete and are no longer sufficient for evaluating companies in the information era. She claims that companies are aware that their accounting systems do not provide the information investors need. Reliance on financial statements has become insufficient for evaluating a company's ability to create future economic value.

The article by Aleksandras Vytautas Rutkauskas, Rima Tamošiūnienė and Irena Kucko from Gediminas Technical University, Vilnius, examines the origin and rapid development of mutual funds, discusses the main advantages and disadvantages and analyses management and risk issues. The authors' attention is focused upon the formation of an integral portfolio of assets and liabilities and the probability of the selection of different types of funds according to desired profitability and acceptable

risk. They arrive at a solution by determining the whole complex of possible portfolios, looking for an efficiency zone and selecting the optimal portfolio.

In his article, *Alternative Treatments in International Financial Reporting Standards*, Madis Jäger draws out different alternatives under the IFRS for recording events that affect financial statements. He looks through some alternatives to illustrate how different results arise from different accounting treatments and focuses on the manipulation of alternatives to maximise and minimise net profit when different accounting treatments are applied. In connection with the target of the manoeuvre and when using permissible accounting treatments, he analyses several indicators, including those used by the Estonian business newspaper, *Äripäev*, to rank enterprises based on different financial indicators.

Maris Zernand discusses *telework* and highlights the risks involved for individuals and organisations when implementing *telework*. In Spring 2003 she carried out a survey in order to discover the potential for implementing *telework* at the Estonian Business School. The survey investigated the employees' attitudes to *telework*, their willingness to implement an alternative way of working, and also the general level of preparedness. In conclusion she states that there are more positive effects of *telework* than negative, but the implementation of *telework* can only end in success if there is sufficiently thorough preparation. Such prep-work means the elimination of all risks. Certain risks affect individuals and others, the organisation. She also points out that not all employees are suitable for *telework*. People who do not have good self-discipline or fail to understand and remain cognisant of the principles of the management objectives can easily endanger the success of *telework*.

Kaire Põder takes a look at the topic of morality and ethics. In her article she asks whether the liberal arrangement of society is based on the single moral principle—that man is wolf to man—or is it, at least in Estonia, that people are entangled in a network of misconceptions regarding markets and classical liberalism? She discusses historical concepts, referring to Nobel laureates Hayek, Coase and others. She claims that ethical issues arise only when certain individuals or groups are enjoying a competitive edge while being sufficiently powerful to incline the trading conditions in their own

favour, the problem of ethics is due to a lack of markets rather than excessive market-centredness.

Due to the format of our journal, we certainly could not discuss all the various risks that surround us, and this was never our intention. But at least we can say quite honestly that we consider the topics covered in this issue important and hope you, dear readers, can find something interesting to discover. We would also like to express gratitude to our authors, editors and partners, and to everyone who has helped us prepare this issue.

Wishing you all a pleasant and rewarding read,

Mari Kooskora
Edito-in-Chief

Nothing Ventured, Nothing Gained

Gundar J. King, Bruce W. Finnie and Linda K. Gibson, *Pacific Lutheran University*

Innovation and Risk

All changes bring with them new opportunities and associated risks. The imminent accession of Estonia, Latvia, and Lithuania to the European Union leads us to review risks related to innovation that should be examined by all Baltic entrepreneurs. With innovation explored in issue 15 of the *EBS Review*, our aim is now to link innovation to the closely related issue of risk. Entrepreneurs always face a variety of risks. On the other hand, companies that overlook risk and make their future plans for a presumably stable, unchanging situation will almost certainly be overtaken by unexpected events and innovative competitors.

Risk does include the ever-present prospect of unexpected events beyond managerial control. With increased interdependency in the world, the incidence of such losses also increases. Invariably, catastrophic events—such as the terrorist attack on the World Trade Center in New York—lead to unanticipated, yet far-reaching, developments that result in unforeseen losses. And, these at least should be considered together with the assessment of other strategically important factors. Especially in international situations, the benefits of innovation, including entry into selected markets, should compensate the entrepreneur early on for the risk taken. The more comprehensive the company's international involvement, the greater the risk that needs to be considered (Kuratko and Hodgetts 2001).

But, gradual improvements to productivity in all fields (except administrative bureaucracy) are more common. Increased productivity, reflected in the lower costs of established goods or in the higher value of new products or services, should be seen as the dominant consequence of competitive changes in market economies.

Over time, all economic activity changes. Innovations to serve the market result in uncertain profit

or loss. To minimize risk and optimize profit, the entrepreneur's managerial task is to select innovations that are both critically important improvements and permit the entrepreneur to take on risk that can be controlled with available skills and resources. The starting point should be a tolerable balance of innovation and risk with some reserves for unanticipated developments. Later in the product life cycle, this balance changes with competitive reductions in costs and prices, and an expansion of sales.

In the Baltics, all aspects of innovation and risk should be considered most carefully. First, in a dynamic yet fragile transition economy that has very limited traditional capital resources, the financial aspects of risk have to be well understood—both losses and rapid expansion always have serious financial consequences. Second, for better or worse, organizations are stressed and organizational behavior changes in the transition to an information economy. These changes present their own risk, and they also require new technology, knowledge, and the skills for better management. Additionally, the need for a much stronger ethical foundation is paramount for Baltic progress (King et al. 2003).

Finally, both exporters and importers involved in international trade should give the highest priority to strategically important aspects of managerial decisions which impact risk. Our observations suggest that Baltic exporters usually do not expect to lower their real prices any time soon for any reason. They do not have a good understanding of the comprehensive nature of actions taken to increase productivity. Moreover, they do not give adequate weight to the necessity for maintaining and expanding employment—a grave concern among their workers and a serious social demand of their nations.

Long Term Trends in Economic Development

Any strategic planning should consider the long-term trends and changing importance of economic factors. In reflecting upon business and economic development in the Baltic states, we think about the roles and risks taken by innovative entrepreneurs, the intellectual power of knowledge seekers and users, and collegial managers who build strong teams to face new challenges in uncertain situations.

Economic Development Analysts

In reviewing analysts of economic change, we believe that the combination of ideas expressed by professors Joseph Schumpeter, Peter Drucker, Robert E. Lucas, Jr., and Francis Fukuyama represent key concepts relevant to economic development. Their ideas have not yet found their proper place in Baltic thinking, but a constructive future is unthinkable without them.

Schumpeter reminds us persuasively that progress is not a gradual, centrally planned process. Rather it is the uneven, disruptive stream of innovations demanded by the market, and the brutal destruction of obsolete products and services provided by outdated companies. Above all, it is an entrepreneurial function.

Adding another important consideration, Drucker keeps our focus on the pragmatic management of a company in the private sector as the chief source of economic progress. Further, Nobel laureate Lucas, stresses the paramount role of intellectual contributions as a previously neglected dimension of human capital. And, Fukuyama alerts us to the importance of social capital, expressed as commonly held values of cooperation and trust, to make investments in traditional and human capital effective.

Lacking application of these concepts, Baltic entrepreneurs can already see very expensive capital facilities unused. Every day, they feel the unproductive attempts at economic management by government agencies. They experience the dynamic force of young minds in business processes, but they also hear too often about the damage done by mistrust and corruption. We believe that the combined concepts of Schumpeter, Drucker, Lucas and Fukuyama are essential to success for Baltic managers planning to start or expand their companies. We

hope that these conceptually integrated actions will be international in scope. In this context, patterns and policies of international trade affect almost all firms in small countries. More than others, they have to seek new opportunities. More than others, they face new risks. To make these tasks easier, they should review the sweeping changes in the factors shaping economic activities. Most of all, this analysis should help these firms to position themselves well in the expected economic structure.

Baltic Economic Development

Taking a long look at the past we note two periods of rapid economic growth in the Baltics due to appropriate development strategies as well as favorable government policies. The first, absorbing existing engineering and business knowledge, is the rapid transition to an industrial economy before World War I. Not anchored in local traditions, this also leads to unresolved social problems and widely spread radical sentiments. The other is characterized by successful agricultural and industrial reforms, compatible with traditional values, skills, and land use in all three Baltic states in the 1920s.

In practice, all successes are the results of thoughtful and skilled innovation. In particular, economic efficiency is characterized by innovation. Thus, at first glance, it may seem that modern bricklayers in Riga are not much more efficient than those of ancient Rome. But, actually, innovations related to the construction industry show a long chain of applied knowledge in making construction materials; in the uses of new transportation and construction equipment; and in forming new teams of architects, engineers, artisans and bankers. As with all changes, we see opportunity explored and risks taken, successful growth and paralyzing inactivity, expected and unexpected losses.

Economic Development and Risk

Since innovation has been explored earlier, in issue 15 of the *EBS Review*, in this issue we want to examine the risks closely related to innovation and economic development. We believe that with nothing ventured, a company will gain nothing. In other words, we believe that companies that seek to avoid all risks will be passed by others. We believe competent managers and their associates can and should take risks appropriate to their knowledge and other strengths. We believe further that even

competent entrepreneurs may actually be unnecessarily vulnerable to important risks.

This is especially true of new companies entering new markets with new products or services. Relatively few new firms survive even in the most favorable circumstances. Very few new products capture the market share desired. Most firms experience serious difficulty in building aggressive yet cooperative teams as they expand. The most successful new firms usually have trouble financing expansion in the context of the sharp rise in sales during the life cycle of a new product.

The emerging market economies of the Baltic states have their own special obligations to increase productivity, since only higher productivity can assure full employment and support generous social programs. As they move beyond the simple trade of commodities and other raw materials, Baltic entrepreneurs must operate in an environment characterized by mutual trust. To reduce risk, they will prefer to deal with reliable parties, and they themselves must earn their own good and reputable name.

On the other hand, Baltic entrepreneurs must continue to expand sales to maintain employment of their increasingly more productive employees. And, to minimize their overall risk, they should first consider the general changes in the character of economic activity.

Changing Character of Economic Activity

Over time, economic activity changes fundamentally. Generally speaking, the trend is from a natural resource base focus toward the fullest engagement of intellectual resources and social skills. Opportunities and risks become increasingly complex.

Historical Overview

A simple way to track major long-term change is to identify the principal successful activity in a given historical period. We begin with our ancestors hunting and fishing to meet their daily needs. Given rich fishing waters and forests full of game, almost all hunters and fishermen do well. As the population increases and game is harder to hunt, economic life shifts to clearing and using land for farming. Farming skills and access to fertile land are characteristic of the new era. Only the

most skilled remaining hunters do well. The most rewarding activity of the new era is farming. Land is the source of wealth. As farm productivity increases, only larger or specialized farms prosper.

Economic activity then shifts to capital-intensive industrial production (including all business functions). Skilled artisans with minimal capital resources in their shops do well, but innovation favors the larger firm. Capital is the main source of productivity, and capital is the new wealth.

Today, the diffusion of new knowledge and technologies leads to new products and opportunities. Every day, we see new entrants offering goods that they previously did not know how to make and sell economically.

Paradigm Shifts

On the whole, we witness the development of innovative economies where valuable new information is now the most rewarding source of increased employment and wealth. In some ways, innovation changes all but the most primitive activities. We know that there remain very, very few successful hunters in the Baltics. We also observe increased productivity in fisheries at a declining rate and we find that manufacturing companies can do well in serving local markets only with the most productive combination of economic resources. Mediocre firms face gloomy futures, as entrepreneurs in less developed countries, such as China, fill established needs and seek new opportunities.

Paradigm shifts or major changes characterize all economic activity. Native hunters in Alaska use the most modern rifles and ammunition as well as powerboats to get around. Latvian farmers have begun to adopt industrial practices. Estonian manufacturers have learned to meet international quality standards. Lithuanians are now considering the social costs of pollution and ecological contamination. In all three Baltic countries, there is a shift away from traditional employment in mass production on the farms and in industry. Production subsidies from the government do not change these patterns. Expanded and advanced education permits more intensive and more effective exploitation of new opportunities. Success in all economic activities requires higher levels of general and specialized competence.

We conclude that fewer and fewer farmers and fishermen will be employed in the Baltic economies. With a shortage of capital and few natural resources, we also see no future whatever in marginal manufacturing. Success in the traditional textile industries is now linked more to fashionable designs than just low cost manufacturing. Generally, work in older industries is not impossible, but it does become more difficult and less profitable.

Strategic Choices

Strategic choices in the Baltics can minimize risks. Thus, the real issue is not the immediate elimination of farming or capital-intensive manufacturing. The fundamental tasks are finding new and appropriate opportunities for innovation and the assessment of related risks. Only the best will survive in traditional industries. Only the very good will be skillful enough to take advantage of opportunities presented by technical change and information diffusion in an increasingly competitive environment. Although it is easy to suggest that they pursue the paths that show the greatest promise, it is more prudent to ask that the opportunity chosen fit well with an entrepreneur's ability to take the attendant risks. The essential tasks not only involve value-based marketing, but should also match the core competencies required with the resources available.

As much as many of the Baltic entrepreneurs would like to be major innovators in the fields of new information technology, it is easier and less risky to be a supplier and follower of NOKIA than to be a leader in the information economy. This approach to innovation is the American pattern for rapid production increases in order to meet expanding demand. Major producers find partners and develop satellites to supply whole systems, subassemblies, parts and raw materials. The result is that the vertically integrated company yields to multilateral cooperation in horizontal networks across organizational and national boundaries. An important reason for this collaboration is the higher level of concentrations of knowledge in the West.

Multilateral collaboration is not a simple or easy process (Porter 1980). Interestingly, Porter, a close observer of the Baltic Rim area, advocates the formation of regional clusters of partnerships and alliances. One of his favorite examples of cluster building is the export activity among Estonian high technology firms. Such ventures advance

economic integration and encourage technical and higher education in the Baltics to stimulate innovation and a catching up with western neighbors. In this process, expectations and business engagements are raised gradually and more carefully.

To be the first mover in innovation calls for very high investments in human and social capital (Hitt et al. 1997). At this time, Baltic entrepreneurs should minimize their strategic risk by becoming second movers and followers. In this way, they can concentrate on quality improvements and leadership in focused cost reduction (Hitt et al.) to develop their competitive advantage. High quality requirements are now the minimum standard, and low costs and prices are extremely important in international competition.

A useful guide for the analysis of industries and strategic choices for companies is offered by Kuratko and Hodgetts (2001). They suggest that *high innovation*, high risk companies maintain innovation by organizing joint ventures, lowering operational costs and out-sourcing high cost functions.

In comparison, *high innovation, low risk* companies move quickly, protect innovation, and lock in investment with contracts and control systems. Relatively *low innovation, high risk* companies (typical of at least some Baltic manufacturers) have to increase innovation, reduce obvious risk, and use business plans for carefully controlled investments and the reduction of financial costs.

Least likely to become rich and famous are the allegedly *low innovation, low risk* organizations (easily found in Baltic agriculture and traditional industries) that accept few changes and little risk. They look forward to limited growth, if any. Because they are vulnerable to low-priced international competition, they seek government protection and subsidies. The latter is not a good long-term strategy in the EU, and their prospects are financially grim.

Evolution of Concepts Related to Risk and Return

Much of financial theory and practice focuses on the risk and return relationship, that is, the presumption that investors want to be compensated (with higher returns) for assuming higher levels of risk. This view is supported by the long-term ten-

gency for stock returns and risk levels to be higher than those found in the bond market, but the relationship may be far more complex than originally thought.

Size, Risk, and Return

New principles of portfolio diversification and risk minimization were developed in the 1950s. While intuitively appealing, these mathematic models were so arcane that few understood them. Consequently, the CAPM (Capital Asset Pricing Model), developed by Sharpe (1964), was immediately embraced by both academics and practitioners since it was straightforward and seemed to be testable. The existence of a link between risk and return is now, however, largely disregarded by academics and practitioners alike.

Nevertheless, over the past 70 years, the annual rate of return on small company stocks within the U.S. has greatly exceeded that of large firms. Between 1926-1996, the average rate of return on large company stocks was 12.7% (standard deviation = 20.3) versus small company stocks with a return of 17.7% (standard deviation = 34.1) (Ibbotson Associates 1997, 33). When arrayed into deciles over the period 1926-1994, the mean returns for the decile containing the smallest firms was double that for the decile containing the largest firms (Ibbotson Associates 1995, 135).

The field of finance has attempted to explain this "size effect" in terms of variation in the financial risk associated with firm size. Smaller firms have a greater risk of bankruptcy and less is known about them; thus, investors are less likely to be confident in them. However, Banz (1981) and Reinganum (1981) both found that small firms gave higher returns than large ones, even after adjustment for risk using CAPM. Basu (1983) also found that as company size rises, stock performance tends to deteriorate.

In Fama and French (1992), there is considerable evidence that the cross-sectional pattern of stock returns can be explained by characteristics such as size. However, β (beta), the traditional CAPM measure of risk, explains little of the variation in expected returns once the size of the firm is considered. And, more recently, Lakonishok, Schleifer, and Vishny (1994) again confirmed that smaller

firms generate higher than expected returns, regardless of risk.

Our Developing Thesis

That small firms are more risky and yield higher returns is not disputed. Our thesis is, however, that small firms are inherently more efficient since they are less bureaucratic; but, they are also prone to make devastating mistakes, thus explaining their higher risk/failure levels.

Common sense supports this view. Organizations have a life cycle, changing emphasis as they evolve. Entrepreneurs are by definition, less risk averse than bureaucrats. Conversely, bureaucrats adhere more closely to standard operating procedures and chain of command structures than do entrepreneurs.

As a result of the age of the firm, the level of experience, and the product cycle, entrepreneurs and bureaucratic administrators tend to behave differently since they are subject to different rewards and constraints. Therefore, an entrepreneurial error is the risk of assuming opportunity when none is present. Conversely, a bureaucratic error is the risk of rejecting opportunity when it is present. One type of error represents the price of optimism, whereas the other is the price of caution. Simply stated, entrepreneurs (as owners) must assume risk to be successful while bureaucrats (as agents) avoid risk to be successful and remain employed.

As organizations grow, both managerial overheads and complexities rise as secondary functions proliferate and absorb functions of primary units, leading to a systematic collapse of efficiency. At the same time, the increase in organizational complexity associated with increased depth provides more reliability by reducing the likelihood of entrepreneurial errors.

This shift in corporate emphasis, the result of changes in structure, is further associated with lower levels of ownership and freedom and higher levels of bureaucratic control. Firms become less entrepreneurial and more bureaucratic as they grow, resulting in lower levels of both risk and return. This aspect of the agency problem helps explain why most economic growth originates from small firms that have higher levels of risk and return. Accordingly, smaller firms have higher

levels of internal ownership and freedom to pursue opportunity, but at the expense of the greater risk associated with higher failure rates.

A Look at the Data

When looking at the experience of the United States, the Small Business Administration (SBA 2002) has reported that small businesses (fewer than 500 employees) provide two-thirds to three-quarters of net new jobs. Between 1989-1999, 95.6% of new firms were firms starting with fewer than 20 employees. Over the same period, these small firms accounted for 55.4% of employment expansion. Furthermore, these small firms employ 50% of workers and account for 45% of total payroll.

Pioneering empirical work by Birch (1987) revealed that small firms are responsible for most job creation in the United States. Other earlier seminal studies, such as those by Schumpeter (1950) and Schumacher (1973), also help. They contribute to a natural fascination with small business growth potential, especially among economic development agencies.

Yet, starting a business is very risky. Cooper, Woo, and Dunkelberg (1988) conclude that 50% to 71% of new firms fail or cease operations within five years. Similarly, Dunne, Roberts, and Samuelson (1988) estimate that 62% of startups exit the market within five years. SBA data (2002) indicate that this survival pattern remains relatively constant over time, and additionally suggest that firms with more than 50 employees have survival rates double those with fewer than five. Bad ideas and inexperience lead to excessive risk taking.

When using experimental games with actual participants, Camerer and Lovo (1999) found that overconfidence is an explanation for this high failure rate. Surveys of entrepreneurs also reveal a remarkable pattern of optimism. Cooper, Woo, and Dunkelberg (1988) found in a survey of nearly 3,000 people who had recently started a business that when asked about their chances of success, 81% thought that their chances were in excess of 7 out of 10. One third believed that their success was virtually assured, that is, 10 out of 10. Yet this level of optimism is in stark contrast to actual performance.

Agency Theory

Berle and Means, early theorists of control and ownership, argued that the separation of ownership and control was a problem in large public corporations. Decades later, Jensen and Meckling argued that when managers own less than 100% of a firm's stock they would act to increase their own personal wealth in ways inconsistent with the interests of the company.

However, in the world of Adam Smith's shopkeepers, ownership and knowing resource costs were key to their efficient use. The agency problem was not an issue with Smith, but survival was. The market system was not just a means of exchange, but a flexible framework for efficiently sustaining and maintaining society. Smith instinctively knew that money and self-interest together represent the bonding agent that keeps organizations from collapsing into chaos, institutional warfare over budgets, bureaucratic malaise, and corruption.

Control without ownership—the present model for large organizations—must evolve into responsibility with ownership, if they are to become cost conscious rather than cost oblivious. Only then will good ideas prosper and bad ideas fail. In many respects agency theory, and its associated control driven bureaucracy, helps explain the collapse of the Soviet Union. In other words, within a bureaucracy, there is often no connection between what you do and what happens to you—either good or bad. Consequently, very little happens.

Encouraging Ownership/Responsibility

According to Pfeffer and Veiga (1999), there is an “irrefutable business case... ..that the culture and capabilities of an organization, derived from the way it manages its people, are the real and enduring sources of competitive advantage” (p. 37). This advantage permits the generation of financial gains for the firm. They reviewed the many rigorous studies (e.g., Huselid 1995) conducted over the past 10-15 years and concluded that there are enormous financial benefits from implementing what has been variously called high involvement, high performance, or high commitment management practices that give employees more responsibility and “ownership” in decision-making.

Profit sharing or gain sharing—immediate rewards motivate best—and employee ownership promote

productivity and, perhaps more importantly, help increase employee trust. Without trust, nothing good happens.

The legacy of corruption and complacency is perhaps the most enduring and insidious aftermath of the Soviet Union. And, according to Taagepera (2002), the Baltics have been more sovietized than ever thought possible. Furthermore, if Western prosperity is the goal, the Balts will “have to revise their hard but uncooperative work habits, their attitudes toward foreigners, and relations between men and women” (Taagepera 2002, 243) which will create cultural strain. Taagepera argues persuasively that corruption resulting from the Soviet era represents a major obstacle to progress.

Similarly Shen (1996, 1997), in analyzing the reforms in the Ukraine and Romania, clearly reveals the demoralizing effects of bureaucracy on efficiency, freedom, and responsibility. His research also provides an instructive case analysis of how hierarchical structures simply do not support either organizations or societies and thwart both creative impulses and ambition, soon leading to domination and/or corruption as the only means of maintaining control. A “dependency syndrome” and its associated rigidity, passivity, and lack of courage are all the stepchildren of communism.

Mistrust stems from corruption and other acts that impede development and prosperity. When writing about the effects of corruption on development for *Transparency International*, Dudley (2000) reports that corruption diverts perhaps 30 percent of the billions of dollars spent annually for international development loans. AID money just disappears into the pockets of corrupt leaders or into bureaucratic organizations. Such losses also discourage further investment.

Corruption and Prosperity

When relating the *Heritage Foundation's* index of economic freedom (O'Driscoll et al. 2003) to *Transparency International's* index of corruption (2002), we find a significant correlation coefficient ($R^2 = .60$) for the 101 countries for which both scales were available. Using the same data, if one averages both indexes (corruption and economic freedom) and regresses that factor against country rank, the correlation coefficient is higher ($R^2 = .89$).

Although these international comparisons are not precise, they strongly suggest that countries with low levels of economic freedom or ownership and high corruption (e.g., Ukraine, Russia, Vietnam, Angola, etc.) have very limited prospects for western style prosperity. Conversely, those countries with high levels of freedom and low corruption (USA, UK, Hong Kong, etc.) have very high living standards. On average, the Baltics (2003) index of economic freedom ranks 23 out of 157 countries, or at the 86th percentile, which is very good. However, on the corruption index (2002), the same region scores 39 out of 102 countries, or at the 62nd percentile, which is not as good. Specifically, Estonia scores in the top 96th percentile on the economic freedom scale and in the top 72nd percentile on the corruption scale. Latvia is lower at the 79th and 49th percentiles, respectively. Lithuania's results are in between.

Lessons Learned

One of the United States' more colorful mountaineers had a habit of saying, “there are old climbers, and bold climbers, but no old bold climbers.” He instinctively knew how to minimize risk in a dangerous sport and died of old age rather than from a climbing accident. The same is true in business. Business ownership is risky, and many fail. But, the successes are worth the risk. In fact, the successes justify, if not necessitate, the risk. They also demonstrate the value of teaming with other firms and teamwork in general. Nothing ventured, nothing gained!

Money and self-interest together reduce agency—or state-run company—conflicts over budgets and bureaucratic malaise, while keeping organizations from collapsing into chaos. Control without ownership (the communist model) must give way to individual freedom with responsible ownership if nations are to advance.

When the United States rose to pre-eminence among world economies, its success was attributed to fertile farmland, abundant natural resources, and cheap labor resulting from immigrant labor. The Soviet Union, China, Brazil, and India had the same natural advantages, but all failed to capitalize on them. The power of individual freedom, private ownership, and limited government made the U.S. prosperous. People alone are at the center of development. Big government is not.

Government plays an important role. Enforceable property rights, capital accumulation, a moderate government, free trade, and investment in education might help, if cultural values will permit. The Baltics can rise to the next level of economic development.

Bureaucracies, driven more by rule rather than reason, nearly always systemically implode, due to a lack of meaningful consideration of human nature and the need for ownership to help ensure responsible and rational behavior. In other words, actions and consequences should be linked. Markets provide this essential link by both directing and simplifying activity and organizations. Consequently, development policy should be non-bureaucratic, understandable, and uniform—that is, not preferential to insider groups—and supportive of responsible private enterprise.

In summary, development and prosperity are synonymous with risk. And, high levels of risk, by definition, produce high levels of uncertainty. The jump from a socialist utopia to free-market economics takes nerve but also will, as the Estonian experience has shown, double profitability. Walton (2003) reports that Estonian companies' average rate of return in 2000 was over 11 percent versus Latvia, Russia, and China at 6 percent. These figures speak for themselves.

Conclusion

Our analysis suggests that the relatively small Baltic firms may offer important advantages to international partners, especially larger companies in the EU. Once the Baltic companies have gained international experience, they should excel in flexible operations with high quality and low cost performance.

The new, very small Baltic firm (e.g., less than 50 employees) must innovate and expand very carefully. A larger, experienced firm (e.g., 500 or more employees) most likely has already developed diversified partnerships and alliances with stronger innovators abroad. In both cases, the firms operate with insufficient equity in a fragile financial structure. Compared to other firms in the West, they probably take more risks than they should.

To minimize risks, the Baltic innovator should follow and build on the strengths of an experi-

enced and skilled company. This strategy should encourage maximal learning about managerial and technical developments worldwide in the chosen industry. Baltic firms should take great initiative in the development of close, mutually trustworthy relationships with international suppliers and customers. This will be the most effective way to balance innovation and risk to achieve sustained economic development for the region.

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A Discussion of the Ethical Risks of Globalisation and Innovation

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Abstract

Innovation and globalisation present us with two quite different sides of the same coin. New technologies, the global business market and stiff global competition give us new challenges and opportunities, but they also bring severe risks that we do not fully realise and fail to acknowledge at first sight.

We are glad of the overall increase in our economic welfare and standard of living. We can now enjoy new possibilities: production has become more automated and products cheaper, choice is becoming wider and consumption is increasing, communication and information technology is extending its uses, and we can also travel more quickly and more conveniently. But we have to realise that all these benefits also have a negative side, which is not actually all that insignificant.

Every decision we make, every action we take, every word we say includes risk. There is always a danger that something may go wrong, that the consequences of our decisions or actions might not be what we expected and that somebody might even get hurt. Ethics is very closely linked to risk. Ethical considerations help us reduce risk and improve the likelihood that the outcome will be as desired. Ethical considerations demand that we make sure that our actions have been carried out fairly. Has everybody had equal opportunity?

Globalisation and innovation also remind us of pollution and the potential for damaging the environment and the subsequent decreased health and

safety of many world citizens. In order to survive and remain sustainable we have to incorporate environmental, cultural, and economic as well as ethical considerations into business practices worldwide.

In this article we discuss the ethical risks and dangers of globalisation and innovation. We also look at global businesses, network allocation and the use of new technologies through two concrete examples of global business—the global flower business and one of the most innovative enterprises in Europe, Elcoteq Network.

The Benefits of Globalisation and Innovation

We can not argue against the benefits of innovation. Without innovation there is no development, no movement to the better, no implementation of new technology which facilitates human activity.

Innovation is important. According to Gundar King (2002) the real key to economic development is found in innovation. Without innovation, both exporters and importers can only offer minor improvements and unprofitable price reductions. With innovation, consumers benefit from an expansion of trade and producers have scope to put their ingenuity to work.

Innovation is closely linked to globalisation. Innovation leads to globalisation and vice versa. Thanks to innovative ideas and the implementation of new technologies globalisation has also

occurred before. According to World Bank surveys (2002) "... we are now facing the third wave of globalisation, and this wave is different from the former ones. This wave of globalisation is mainly global economic integration which occurs through trade, migration and capital flows". It is characterised by an increasing number of newcomers (developing countries) who have successfully entered the global trade market. Globalisation has given competitive advantage to many countries and societies around the world.

At the beginning of the 21st century, neither can we argue against the positive effects of globalisation. The world is becoming smaller—countries are moving closer together and people all over the world are becoming more able to effectively collaborate and communicate with each other. Globalisation is important—it is raising incomes in most of the world and intensifying competition, thus increasing production and consumption, giving people and businesses more choices.

Jean-Pierre Lehmann (2003) from the Evian Group has said about the goals of globalisation: "The ultimate goal of globalisation must be to seek as open a world economy as possible, composed of open societies, benefiting from greater material, social and cultural prosperity. Trade and investment have been and will remain the major drivers of globalisation. The obstacles that need to be overcome in order to achieve the goals are the trade barriers that exist, especially in respect to the access of developing countries to industrialised countries, and the administrative and policy impediments in the less *globalisation-oriented* developing economies".

Globalisation is a historical process that has offered an abundance of opportunities and rewards in the past and continues to do so today. The very existence of potentially large benefits makes the question of fairness in sharing the benefits of globalisation so critically important.

The Nobel laureate Amartya Sen (2001) has written: "Globalisation has much to offer; but even as we defend it, we must also, without any contradiction, see the legitimacy of many questions that the anti-globalisation protesters ask. There may be a misdiagnosis about where the main problems lie (they do not lie in globalisation, as such), but the ethical and human concerns that yield these questions call for serious reassessments of the

adequacy of the national and global institutional arrangements that characterise the contemporary world and shape globalised economic and social relations."

The central issue of contention is not globalisation itself, nor is it the use of the market as an institution, but the inequity in the overall balance of institutional arrangements, which produces a very unequal sharing of the benefits of globalisation.

The question is not just whether the poor also gain something from globalisation, but whether they get a fair share and a fair opportunity. There is an urgent need for reforming institutional arrangements, in addition to national ones, in order to overcome both the errors of omission and those of commission that tend to give the poor across the world such limited opportunities. Globalisation deserves a reasoned defence, but it also needs reform.

The World Becomes a Market Place—Competition Increases

Due to globalisation, innovation and industrialisation the whole world becomes a market place. Such a large market provides access to new ideas, allows important foreign investments into national economies, and enables a finer division of labour. A larger market widens the choice, and such a wider selection allows us to find the best businesses and products. A wider choice makes the competition more intense and thus spurs innovation.

This global competition makes us think constantly about innovation and change. In order to survive in this intense environment we have to find new ideas, mass-produce them as expediently as possible and make them as inexpensive as possible. Or as Tony Jackson (1998) suggests as the slogan for today's innovative businesses *Minimum Price – Maximum Quality*.

These requirements force businesses to think about networking and network allocation. Capital can now move between countries and single production facilities can serve many national markets. Containerisation and airfreight has made a considerable contribution to the speed of shipping allowing

countries to participate in international production networks. New information and communication technologies make it easier to manage and control geographically dispersed supply chains.

Network Allocation—Two Cases from the World of Global Business

The Global Flower Business

The location of today’s (big) corporations can be characterised by network allocation. This location principle is well illustrated by Vivienne Walt’s (2001) article, *Flower Trade*, published in National Geographic, on the international flower business.

Until the last decade cut-flower production worldwide was mostly carried out on the basis of family businesses, the same farms having cultivated flowers for generations. But now Americans alone spend nearly 15 billion dollars a year on flowers and plants—about four times more than one generation ago—at 30 000 florists and 23 000 supermarkets. For the first time, flower trading has become a colossal global concern given to cut-throat competition and political battles. Flower buying by consumers has even come to involve faceless corporations where business is done over the Internet.

Before the 1960s, and before high-tech coolers and refrigerators, the flower business was considered the *poor man’s opportunity*—anyone who had a little land near a city and a willingness to work could make a business. Now we can say that since the middle of 1980s local flower growers have been marginalised and 70% of all flowers sold are imported. The same trend is evident in the US as well as in Europe. The Netherlands is Europe’s (even the world’s) flower business brain—cut flowers (especially roses) reach Aalsmeer auction house mainly from Africa (Zimbabwe, Kenya and Israel, but already from India as well), and from there go on to Japan, Germany and the USA.

Despite businesses sprouting worldwide, the Netherlands exports more cut flowers than any other country. Here seven auction houses handle about 60% of the world’s total cut-flower exports and most of those pass through the Aalsmeer Flower Auction house, close to Amsterdam. Dutch competitors have built farms in Zimbabwe, Kenya, Israel and elsewhere. At the same time Dutch growers compete with small independent businesses popping up everywhere, aided by easy air travel and the Internet.

New technology and innovative methods have made it possible to transport fresh flowers from one continent to the other in several days. For example,

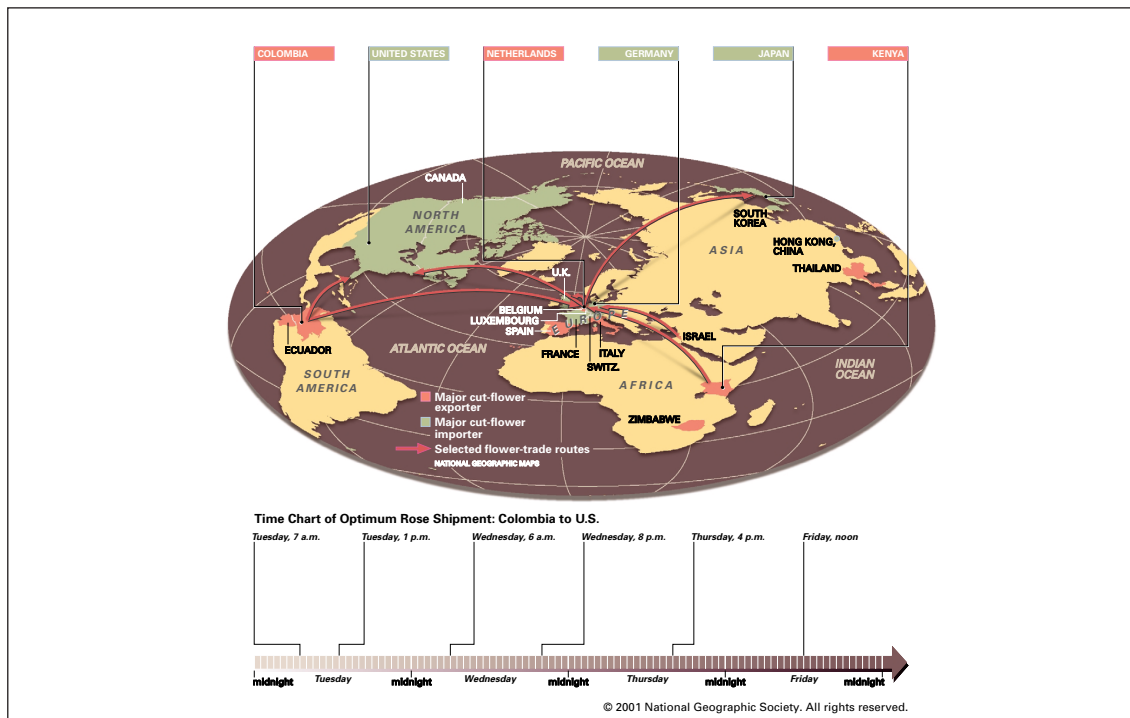


Figure 1. Map of Global Flower Business

we can describe the optimum rose shipment time for transporting fresh roses from Colombia (South-America) to the US (North-America) within 4 days (Walt 2001, 113, Figure 1):

Tuesday, 7 a.m. - Early morning roses are cut in the cool mountain air to avoid flower dehydration. Workers then move the flowers quickly to indoor cooling houses.

Tuesday, 1 p.m. - Workers classify roses based on stem length, shape, and colour. Then soak the stems in a water-chlorine solution to maintain vase life.

Wednesday, 6 a.m. - Roses are boxed and trucked - sometimes with refrigeration - to Bogotá Airport for the 3,5-hour flight to Miami.

Wednesday, 8 p.m. - Rose shipments arrive in Miami, where they undergo immediate inspection. From there, wholesalers transport the roses via truck, train or plane.

Thursday, 4 p.m. - Roses arrive at wholesale markets in major US cities and are put on display. There, customers such as retail florists and event planners buy in bulk.

Friday, noon - At journey's end roses adorn retail shop windows, ready to delight their final buyers. Once in a vase modern rose varieties can last about ten days.

Due to the fact that the world has become a market as well as a production place, governments can find themselves competing against each other to attract a single plant that will serve the market for an entire region or even the whole world. Governments are interested in retaining the trade, and so making donations and supporting local businesses is common.

Hoping to stave off the inevitable, private companies and the Dutch government have invested millions in research laboratories, where scientists find ways to lengthen a flower's vase life, keep it from bruising in transit on bumpy roads or strengthen its fragrance.

From a holistic, comprehensive business perspective, globalisation is the diffusion of technological and economic innovation and related cultural and political adjustments in the widest sense. In practice, these trends are by no means universally accepted; the older concept of international business is actually more accurate. In all countries of choice, international business has an emphasis on the marketing function (King 2001).

Some Concepts of Global Networking

There has been a lot of discussion about the positive sides of networking, for example, by Gunilla Bradley (2001, 1999). "There is a change taking place in the structure and quantity of the contacts and collaboration between people in work life, in private life e. g. in the residence area, and in the community as a whole. Electronic networks, electronic subcultures and electronic communities are emerging in work and private life with various functions. If technology is used in the proper way it could give us more time for human contact. More and more people could have access to the good life. The allocation question is *per se* an important research problem. Furthermore it can support the so-called 'weak' in the society.

Very few critical research studies have been done in this area, but those with the greatest impact include Robert Reich's 'Work of Nations' (1992) and David C. Korten's 'When Corporations Rule the World' (2001). In his work Korten argues, "The global economy has become like a malignant cancer, advancing the colonisation of the planet's living spaces for the benefit of powerful corporations and financial institutions. It has turned these once useful institutions into instruments of a market tyranny that is destroying livelihoods, displacing people, and feeding on life in an insatiable quest for money. It forces us all to act in ways destructive of ourselves, our families, our communities, and nature. This destructive process is driven by a combination of institutional forces and an extremist ideology of corporate libertarianism that invokes the theories of Adam Smith and market economics to advance policies that systematically undermine both the market and democracy."

Robert Reich (2001) also writes, "While the global economy has grown at an average rate of 2.3 percent a year during the past three decades, the gap between the best-off and worst-off countries (as measured in per capita gross national product) is 10 times wider now than it was 30 years ago. And with poverty comes disease—AIDS already has claimed the lives of 10 million Africans and is projected to kill 25 million more over the next decade—as well as the continued destruction of the global environment."

There are always two sides to the coin—positive and negative. In order to analyse the negative side we refer to stakeholder theory: under the term *stakeholder* we mean all individuals and organisations, as well as communities, states and countries, and even the environment—anyone (or anything) who might benefit or suffer from the activities of an enterprise.

Winners in the Short-term

If we take a look at stakeholders, as they are classified in the *Business Ethics Encyclopaedia* edited by Patricia Werhane (1997), then in our international flower business example, the main stakeholders are consumers, subcontractors, local small entrepreneurs, communities in other countries, shareholders and the environment.

At first sight, when viewing the industry from the perspective of the short-term and according to utilitarian principles, it seems that there are lots of winners:

- First, consumers: for them there are more beautiful flowers, because of the fresh mountain air and sun and these flowers are cheaper.
- Subcontractors (foreign employees): they have jobs and can increase their living standards.
- Foreign communities (in poor countries): unemployment decreases, more people can work and earn more money, they have the opportunity to live a better life, improvements can be made to health and education services.
- Shareholders: business is good and achieving healthy profit margins.

It seems that there are no losers—everyone is the winner. But let us not forget those small local entrepreneurs who will surely lose their livelihood. ‘There is no way the old, traditional family farms can compete with this global business’ (Walt 2001).

Losers in the End

When we take a look at world map (see Figure 1), it becomes increasingly clear that one loser in this whole situation is the *environment*. When we think about transport pollution alone (even considering only air transport) in connection with this business,

it seems unbelievable. And flowers are really only luxury products. Just imagine how much cleaner our environment could be if we could put an end to all that transport pollution.

What does all this mean? The central message here is that nobody counts the real cost in dollars. Of course we are not able to calculate the true price nor has any of the literature suggested how one could measure the pollution caused by transporting beautiful flowers. But we can offer one example, according to Friends of the Earth – Netherlands (Brakel 2001): ‘...if one human being is allowed to use 1 litre of CO₂ fuel in one day (this is the norm necessary to reach the year 2010, according to the plan for reducing the global warming effect) the person could drive (using the medium utility rate): 24 km by car or 50 km by bus or 65 km by train or 10 km by plane. From this we start to get a picture of the environmental pollution caused by planes’.

Proceeding from the Theory of Rights

If we go a step further and take a look at the same example from a deontological point of view, on the basis of the theory of rights then the right to safety is violated.

The same damage to the environment in a utilitarian sense also increases the threat to the safety of the environment.

In addition to local small entrepreneurs who are already at risk now there are subcontractors (small foreign producers) who are also at risk. It is clear, when we look at how rapidly the environmental conditions are worsening, that there are severe risks to people’s health and safety. Also, from descriptions of the global flower business we read that it is common for people involved in flower propagation in these poorer countries to complain of headaches, stomach pains and other ailments, many of which doctors and politicians blame on the use of chemicals in the greenhouses (Walt 2001).

As the positive effects of globalisation and innovation enable us to improve our infrastructure and standards of living and as incomes rise, concern for the environment also increases. If we consider that society’s awareness of pollution is increasing, it is very unlikely that air transport could remain as cheap as it is now for much longer. We must expect that pollution taxes will at some stage start having

a considerable impact and those small businesses in Colombia or Kenya will lose their competitive advantage (these are their future risks).

The international community also suffers from a safety risk as well as the risk that is peculiar to mono-cultural agriculture. In addition the flower business is actually entirely dependent on fashion. So it could actually be plausible, in the case of the cut-flower industry, that the benefits to society could be greater and the damage less if everyone side-stepped the global trend and continued as small local entrepreneurs. In our concrete case in Colombia, there is another great risk. If there was no *international* flower business, there could be an even more intense international trade in narcotics.

Environmental and economic sustainability requires a rethinking of both demand and supply perspectives. International businesses, large networks and global chains, must take cultural, economic and ethical issues into consideration even more carefully than smaller businesses and incorporate these into their business practices.

Elcoteq Network – an Innovative European Enterprise

We would now like to present another example that is closer to home, and which can even better or more precisely illustrate the two sides to the character of network allocation in an innovative enterprise.

Elcoteq Network could be called one of the most innovative enterprises in Europe. From the company's web-site we read: "Elcoteq Network Corporation is the largest European electronics manufacturing services (EMS) company and one of the global leaders in its field. The company focuses on communications technology products and customers. Elcoteq provides globally end-to-end solutions consisting of design, NPI, manufacturing, supply chain management and after-sales services for the whole lifecycle of its customers' products."

Elcoteq Network was founded in 1991, in a year of deep economic depression in Finland, as a company providing electronics manufacturing services (their main clients being Nokia and Ericsson). In the first year personnel numbered only 204 employees on average with net sales of 76.4m FIM. By 1997

net sales had reached 669.0m FIM and personnel 2,593 (Elcoteq Network 1997). Today the company operates on three continents, in 12 countries and has approximately 10,000 employees. Elcoteq's consolidated net sales in 2002 totalled 1,840m EUR. Elcoteq Network Corporation is listed on the Helsinki Exchanges. (Elcoteq Network 2003). The most considerable expansion took place last year, when the company opened new sites and factories in Europe, Asia-Pacific and America.

Elcoteq is organised as a network of subsidiaries according to the production in back-, front- and in-factories. A back-factory specialises in producing large series cost-effectively; a front-factory manufactures small and medium-size series providing also other value-adding services; an in-factory is a direct extension to customer operations.

In 1997 five of Elcoteq's six enterprises were located in Finland (front and in-factories) and the sixth one, in the capital of Estonia, Tallinn. The sixth factory was and still is today the back-factory for so called *routine work*—mass and large-series production which requires low-cost manual work. In 1997 1,654 employees worked there which made 64% of all Elcoteq's employees (Saat and Meel 2000).

The majority of these workers were and still are Russian-speaking women who do not know Estonian, the official language of the country, or any other languages (and who do not have a real choice in finding a job). The workers' in-factory training lasts three weeks, they receive a *piece-wage* and work in three shifts, including weekends when necessary. There is no trade union in the factory. The workers get the Estonian average salary, which is more than these workers could earn anywhere else. But while a worker in Finland earned an average of 7500 – 8000 FIM per month, their counterparts in Tallinn received only 1300 FIM in 1997 (Saat and Meel 2000).

Although the work is clean, it is intense and rather monotonous (workers are not required to work longer than 7,5 hours at one time because work of such intensity and focus could not be performed at any level of quality for a longer period).

Today there are also other sites in Europe, Asia-Pacific and America. There are NPI centres and volume plants in Pécs, Hungary; offices and design

centres in Überlingen Germany; Baden, Switzerland and St. Petersburg, Russia. The company has an NPI Centre in Beijing as well as sales and technical support centres in Hong Kong, China; Seoul, South Korea and Tokyo, Japan. Americas Elcoteq has a volume plant in Monterrey, Mexico and a sales and technical support centre in Dallas, USA (Elcoteq Network 2003).

Network Allocation – A Two-sided Phenomenon

Why do we talk about this innovative network allocation as being two-sided? We do so to provide an illustration that highlights modern-day principles for organising the work place. At the end of 1960s and the beginning of 1970s Ervin Schumacher in his book 'Small is Beautiful' formulated the principles of ethical work for the first time (Schumacher 1973). Proceeding from the Buddhist point of view he argued that a human being is not incarnated simply for vegetating but for development and perfection.

Therefore '... to organise work in such a manner that it becomes meaningless, boring, stultifying or nerve-racking for the worker would be little short of criminal, it would indicate a greater concern with goods than with people, an evil lack of compassion and a soul-destroying degree of attachment to the most primitive side of this worldly existence (Schumacher 1973, 53-57). Another function of work is the development of collectivity (teamwork) and only after that comes the production of material wealth.

This turned the western conception of work, as merely a means of subsistence, and our whole Christian work ethic, that man has sinned and has to be punished by doing hard work (which also formed the basis for Henry Ford's ideas of assembly lines and the division of work according to the product details), completely upside-down.

Modern management theory tends to see the organisation of work as a routine (for example using assembly lines) as something that is quite out of date and unethical; it is nothing more than the exploitation of workers in order to maximise the owners' profits. Current thinking demands that we minimise the dull assembly line work, making work creative and developing collectivity.

But as we now look at the modern innovative enterprise, it seems that it meets these demands from only one perspective. For the wealthy mother country, where the workforce is well educated and expensive, there exists creative meaningful work, but for the poorer country only the routine, dull work of mass-production. So we can say that here the rights for creative work are violated.

At the same time it has to be said that this kind of allocation is inevitable. If we consider the stiff global competition in the electronics industry, it is the only way to survive.

When we take a further look at network allocation at Elcoteq, we find an analogy with the global flower business. Here also network allocation puts the employees of the home country in danger as jobs are taken out of the country (there have been similar accusations about Elcoteq, as well as IKEA, the Finnish clothing and Norwegian shipping industries).

Winners and Losers

At first the workers in the poor country can be considered winners, although they are forced to do dull and monotonous work, they have been given the possibility to work and earn their daily bread. But even here the safety risk is not reduced. It is only lower during the period of economic growth and in cases where the living conditions in the poor country do not improve and salaries remain low enough to enable this poor country to compete against the workforce from other poor countries.

When, in 2001, there was a crisis in the electronics industry, around 1000 workers were fired from Elcoteq's Tallinn factory. On the whole it was a hidden reduction—at a fixed date contracts with certain workers were simply not renewed. In fact this was not ethical either, because other people hired several years before had termless contracts and these people would have received large redundancy packages. But the company decided to dismiss those workers who were often more capable and skilful because it was cheaper. Understandably, these people felt that they were not being treated fairly—why did the company have and use a regular staff evaluation system, when the results of this system were not consulted at all when it came to deciding who to lay-off and who to retain. The employees understood that the company

simply acted on the basis of egoistic short-term reasoning.

And of course, as we see, when the company performs poorly, then those that suffer the most are the poor and least secure among the stakeholders.

After this crisis new factories were built in Russia, Mexico and China because the labour there is even cheaper. The company managers then reported with great contentment that: “although the number of workforce increased by 53%, the cost of wages by only 45 %, because production took place in low-cost countries” (Kokk and Velder 2001).

Talking of the negative effects and risks of globalisation and innovation we can refer back to David Korten (2001, 1996), who claims that “Little of the growth of the past twenty years has improved the quality of human life. Most of the benefit has gone to the very wealthy and the remainder has been offset by the costs of resource depletion, social stress, and environmental health and other problems caused by growth. We have entered an era of jobless growth in which technology and reorganisations are eliminating good jobs faster than growth is creating them. The new jobs being created are often low paying, temporary, and without benefits creating an underlying sense of insecurity throughout society that deeply stresses the social fabric”.

Furthermore, many of the jobs provided by the conventional economy are based on unsustainable rates of resource extraction and are therefore temporary in nature. More than half of all international trade involves exchanges of the same goods, which suggests there is little or no comparative advantage involved. Free (unregulated) trade leads to competition for jobs forcing (poor) localities to reduce local production costs by suppressing wages and allowing maximal externalisation of environmental, social, and even production costs, which is both inefficient and highly damaging to the environment and social standards (Korten 2001, 1996).

What Can Be Done?

Our ethical analysis of these cases shows that the risks from innovative enterprises, global businesses and network allocation are primarily risks to safety and these risks impact stakeholders on very large scale.

What is clear from these cases and is characteristic to both of them is that the poorest, weakest and most vulnerable stakeholders suffer the most (sub-contractors and assembly line workers). Also, that one major loser in the long-term is our environment, affected if not also by other factors then at least by the growing transport flows.

But how can we reduce these negative effects and risks? This is always the ultimate task of ethical analysis. We think that our small country alone can not do much to improve the situation. We can try to keep the education and skills of our people at a high level (life-long learning, retraining, skill conversion which are all at a relatively low level today), increase the general awareness of ethical questions and talk about the risks we are facing and will continue to face tomorrow. Perhaps we can encourage people as members of society to acknowledge these problems and businesses to consider the consequences of their activities.

Enterprises do not exist in a vacuum – they are an important part of society and as such they are required to act morally and ethically. When it concerns the reasons for their decisions, managers are often referring to market economy. But market economy is just establishing the framework for market participants to act in it. In the sense of ethics, this framework can just be shaped by joint and responsible action of all parties involved. That means, existing problems and conflicts within the society cannot be got over by ignoring or disregarding them. Everybody has to take responsibility – no matter whether it is a private person, employer, politician or someone else.

Ethics in the sector of economy – as in other branches too – is going up or down and is living from the behaviour of every single person. A sensible attitude of all actors within a company can just be reached beyond the confrontation of ethics and economy.

Businesses have to accept responsibility for the consequences of their activities and make every effort to ensure that their decisions, recommendations, and actions function to identify, serve, and satisfy all relevant public entities: customers, organisations and society. Businesses should be aware of how their behaviour may influence or impact upon the behaviour of others in organisational relationships. They should not demand,

encourage or apply coercion to obtain unethical behaviour in their relationships with others such as employees, suppliers, or customers.

Companies are obliged to ensure the ethical treatment of their employees, customers, suppliers, shareholders and even the communities within which they operate. They are obliged to create a 'do-it-right' climate that emphasises core values such as honesty, fair-play, good service to customers, a commitment to diversity, and involvement in the community. Companies also have to make clear what actions they will take against unethical behaviour and establish a credibility that influences all decisions made in the company. (Elenurm and Kooskora 2002)

But when our country joins the EU, then there could be another option as well. Then we could all work together to force the global and international business community towards an integrated taxation system, whereby international businesses have a considerable responsibility towards the environment and the workforce in poorer countries. Practically all companies in EU countries already have a binding responsibility for the welfare of their own workers. There are various outplacement and replacement systems that involve funds that companies are obliged to contribute to and other similar projects for the re-orientation of labour. One of these projects is called SOCOSE. The project aims at the formulation of an integrated European model of outplacement and replacement counseling and aims at adding transparency to the process of dismissal from the perspective of the individual employees and to support the dismissed in coping with the situation and re-entering the labour market expediently (Kieselbach and Mader 2002).

Regarding the environment it seems likely that pollution taxes from transport will increase significantly in the future and air transport will become more expensive. Experimentation with and adoption of alternative energy sources may also once again become an interesting prospect, not only for the environmental movement, but also for big business.

Surely the most reasonable way out for the future is if information could be exchanged using computers, material goods could be produced locally and people and businesses take full responsibility for their activities. It also seems likely, in the light

of the risks currently confronting the planet, that at some stage the innovative ideas of the present (global business, network allocation) may soon also be history.

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The Risks of Innovation and Sustainability

Aivo Adamson, *Hansapank*

In this article I am not going to attempt to deliver some absolute truth, but I will simply present my own beliefs. I believe that 11 years of working in the Hansabank Group is a long enough period that I can share my experiences with others. When I first joined Hansabank less than 100 people worked there compared with today's figure, which is nearly 6000. The development stages, which I have experienced in this organisation, have helped establish the beliefs I am going to write about. The current society and its businesses are innovative and everything is moving in a direction that could only be called steady growth. At the same time innovation has its dangers which can be likened to the desire to manage businesses with the help of rocket science. The wonders of technology need to be utilised, but this needs to be done so in a sensible and controlled manner. If not then the steady development of the business can simply stop. With this article if I manage to provoke your thoughts about this or help you identify with some of these situations then I have achieved my aim.

* * *

Innovative, to be innovative the dictionary explains this with "to introduce or apply new methods, ideas etc." There is also the term *innovator* "someone who makes changes by introducing something new". Doesn't this sound nice and positive? Many companies use *just* these terms in their mission statements, business strategies and values.

For example Hansabank Group's own business philosophy (www.hansa.ee) states:

We believe that Hansabank Group's very strong performance and growing international recognition is the result of entrepreneurial spirit, openness to innovation, quality drive and high ethical standards.

As an another example we could take that of Nordea Group (www.nordea.com):

We are innovative. We explore our competencies and try out new ideas to improve existing services, create new solutions or meet new needs. We embrace new technology and are committed to excel through continuous improvement.

I could give many other such examples. Without being able to help himself a risk manager on reading such lines comes up with paranoid thoughts and questions. 'Does being innovative automatically mean being successful? Do we have to follow along with every new innovation which the various service providers and IT firms offer? Does innovation help increase the value of the business, the profit to the owners or the internal efficiency of the organisation? What will such an innovation mean for us in two to three years? Does innovation also mean comfort? Maybe it is not the right time to undertake such a change?

I will endeavour to analyse the risks that accompany too much innovation, and which can negatively influence businesses and their success.

The First Danger: From Simple to Complicated

Which would you prefer a TV remote control with ten buttons or thirty buttons? I dare say your answer will be ten. In the past, when selecting your TV channel, you had only one button to press, but now that technology has developed further you must first remove the cover from the remote, then press 'Menu', press the sub menu button 'Select Channel' and so on.

I am sure everyone can think of similar examples of this sort of thing from their own organisations. The

basic rule, that a simple system costs less than a complex one, is often broken. Things are done in a more complicated way and hence more expensively. Cost isn't the only consideration that suggests that complexity is a bad thing. A complicated system is hard to establish and it takes time. The retraining of personnel costs time and this increases qualification requirements. Running a complicated system and making improvements later can become significantly more expensive than it seemed in the beginning. In the end it can turn out that some small change in the law or, for example, the disappearance of the support for certain IT software or hardware can mean that the whole system has to be changed. In the end everything still comes down to money, whether directly or indirectly. The issue is whether money comes in or goes out.

Everything repeats in some form or other. The securities markets operate through highs and lows, in our personal lives there are ups and downs, in sport sometimes you attack other times you defend, and as with everything else in life innovations too have their set-backs. In today's economic community this means going back to basics.

The Second Danger: Too Much Reliance on Partners

As we all know, it is not possible nor is it efficient to do everything oneself (i.e. in-house). One innovative new trend is to have secondary tasks done outside the organisation, in other words, outsourcing. The success of this depends on three main factors: 1) does the market have other suppliers offering similar services; 2) does the market have other customers for similar services; and, 3) how many jobs can we afford to lose. We could add many other factors that need to be considered when outsourcing—flexibility of partners, security, cost, etc.—though these are actually connected with the above mentioned three principles.

So firstly, if the market does not have other such service providers and if something should happen to the one provider (e.g. bankruptcy) so that one link in the chain of the service we provide our customers breaks, then this is a risk to our own organisation and the likelihood of worsening results is considerable. We do not even have a back-up plan nor can a substitute be found anywhere.

Secondly, if we are the only customer on the market and if we are the only customer for the service provider then there is no point in looking for a synergy of expenses. The service simply becomes too expensive and we are just deceiving ourselves.

The third factor from the point of view of internal efficiency is of course the most important. On the basis of my experience, dare I say, simple solutions to this question have been successful for Hansabank in the past. I do not like integrals, mathematically complicated equations and flow charts drawn up through IT. In most situations I prefer to trust my sense of responsibility and intuition. Expenses associated with personnel, along with all the associated taxes, in general make-up 35-45% of all operational expenses. For example, ten workers whose wages together with taxes come to four million EEK per year cost the business and the owner approximately ten million per year. From this we can draw a simple conclusion—if buying the service from outside the organisation costs six million per year, for example, (even if we add 18% VAT this is still below 10m) then it would be sensible to outsource the given area of activity.

Recently, much has been said about intellectual capital and the great role that it plays in the value of a business. I agree with this, but if the company forgets its basic function and in trying to be a good employer starts to fulfil the aims of a state employment programme, then it will actually impact negatively on the effectiveness of the business.

The Third Danger: Freaks or Inventors

Have you ever counted how many positions in your organisation use the word *project manager*? Have you ever wondered what would happen if one of these projects along with its manager ceased to exist? ...Nothing! I cannot claim that project managers are not necessary at all. An enterprise has various projects that need to be realised but financial backing must be found for these and they must be in line with the business side of the enterprise because that is how the money comes into the business. I think the most dangerous include IT project managers, programmers and other positions requiring technical know-how. I have nothing against them, but there is great risk that these people are under supervised and can make decisions practically on their own.

Another risk is when these positions are located in various divisions throughout the entire company. It seems as though we have created a flexible organisation, given people freedom to make decisions about what to do and how to do it. Opportunities for proving oneself and peoples motivation should be ample. Looking at it from an entirely different viewpoint the situation can take on an entirely negative slant. Having been involved in a number of mergers in the Hansabank Group and having participated in many restructuring processes I can say that people always approach these from the principle of self-preservation. This is perfectly normal. An example is when programmers write programmes so that no one else understands them. There are three reasons for this.

- 1) "This is mine and I know all about it."
- 2) "I am irreplaceable." (hopefully there is nothing sinister behind this).
- 3) "Anyone taking over my position cannot claim that I have made the programme too complicated" (fear of appearing stupid).

Let us look at project managers. You have most likely come across that jolly *rocket ship*, the project board. Project managers from various focus areas gather round a large table and argue in an attempt to decide the priority of each project. They go on about budgets and deadlines and everything looks just great. Some projects are designated deadlines

of, say, 18 months; some demand discussion—"Why has this project exceeded its deadline by four months? There is talk of insufficient resources and jobs are made in the direction of the finance department. Someone wants to add a banner to the web site; "...it will take no more than two weeks." Sound familiar? Freak (read as inventor) may sound like a swear word, but in reality these people are true professionals and devotees and they need to be managed skilfully. But with lengthy projects and deadlines that are repeatedly pushed back the obvious question arises—does anyone actually need the results?

Too much freedom given to creative people can often result in the wasting of the company's financial resources. This situation can develop to such an extent that one day you discover your company has an entire inventor's office whose role is to test each new technical solution without having to justify it within the context of achieving the company's business goals, not to mention satisfying the customer's needs. Another characteristic of too much freedom is that workers start to create jobs for themselves—activities that, according to the company's business strategies and objectives, are not necessary. Sometimes crazy ideas can be tested on your children. If they buy at least part of your idea then you can be relatively sure that you are on the right track and the idea should be taken further.



Figure 1. Semaphor

Again, I do not want to say that such employees are not needed, quite the contrary. To recognise the best of the best, in my opinion, it is necessary to follow the principle that people who manage to make their position unnecessary or obsolete should be encouraged. These employees are orientated towards efficiency and are ready to change and adapt.

The Fourth Danger: Absolute Perfectionism

One of my good and close colleagues once said, "*perfection is the greatest enemy of success*" Firstly, I would like to claim that there is no such thing as an ideal organisation, solution, service or product. Secondly, there is no method with which all risks are eliminated. If you are going to set out to chase 100 percent perfection in a process and eliminate all risks you may as well close the business, take back your investment and sit at home. I agree that profit needs to be maximised and expenses need to be well managed (we are not talking about saving here). But what are the signs of absolute perfectionism?

Firstly, such a business can be recognised when the top manager endeavours at all costs to reach agreement with his subordinates in all things, so that everyone feels good and there are no problems. A dead fish starts rotting from the head. If the CEO allows such a situation to develop then the result is a vague grouping of many small kingdoms, which in the end comes into conflict with itself. Democracy is good, but overdoing it is not good for business. Especially if you consider that the economic community is cyclic and within the various cycles different management methods are required.

In other words, the business needs to be managed steadily, keeping in mind the various development cycles and external influences. A situation where everyone is satisfied with everything is not possible. Let us take wages or bonuses. Can you imagine an organisation where everyone was similarly satisfied with the wages or the system for bonuses, or where everyone ate hamburgers with chips for lunch? A company such as this is unthinkable and couldn't function. Excessive democracy creates excessive innovation.

Another indicator of a company trying to achieve too much perfection is that employees start to have their say about issues that do not concern them in areas outside their competence (it is common

that the opinion of other colleagues is intentionally sought in order to obtain an outsider's fresh assessment). This, of course, shows up their own inefficient use of time in their own departments. A different position should be found for such employees because they have already developed a certain attitude in their department and are now bored. Rotation can have a positive and progressive effect in an organisation, unleashing innovation in its best sense form. The employee can develop new ideas in their new position and does not need to deal with the search for new activities.

A third indicator of absolute perfectionism is when the employees strive to solve all processes or work related tasks using information technology. This can be done, but it will not reduce the required number of employees, it will not save time and changing people's habits takes years, and in the end customer service suffers (e.g. customer service becomes slower). So what is gained? It can also happen that, for example, that while the finance department sheds positions, the IT department creates new ones. So what has been the benefit of the changes?

In the IT business there are many jargon terms, aimed at big business, which are constantly changing and there are new complicated abbreviations and terms whose meanings change. In our organisation we have also endeavoured to implement the idea, which was popular a few years ago, of a paper free office. We have two meeting rooms furnished with computers and MS Outlook has the appropriate directories for routine meetings where it is possible to post the relevant documents.

Today I cannot claim that we have achieved much with this because reading through lengthy documents on paper is still easier than on the computer screen (but maybe this is just my problem). Our employees, however, still come to meetings, as before, with a hefty wad of paper, so a significant reduction in paper use is not actually apparent. On the positive side people can read e-mails during meetings and answer them promptly if necessary (but in a situation like this there may be a case for questioning the efficiency of the meeting). We have studied the options for establishing a system for managing documents, as used in many Estonian organisations, but found that the solutions on offer do not contribute anything more than another expense.

The fourth feature of absolute perfectionism is the regulation of anomalies on a large scale. Finding quick solutions for customer's problems is inhibited by such over-regulation. You could say that when there is no urgency there is no innovation. I will give you an example from Hansabank. A client made a complaint that a year ago on two occasions 21 EEK was mistakenly transferred to Eesti Telefon from his account. Instead of immediately transferring this amount back into his account the bank instigated an extensive internal investigation. For many days people from four departments dealt with this *problem*. How much did this cost us? What did it mean for the client? Overdoing procedures inhibits thinking and inventiveness. With such methods we achieve a situation where our employees merely become routine donkey-workers and those who are even slightly thinking people simply leave. Would you want to see your employees behaving like attendants on shift at Lenin's mausoleum? Hardly! That would surely be like the death of innovation.

In Conclusion

For a business to develop steadily it is necessary to be innovative. But one cannot forget that over-management of an organisation or relying too heavily on solutions drawn from the latest *rocket science* can cause stability to suffer. Every new development implemented needs to be measurable and its outcome must be apparent both in terms of the figures and the soft factors. There must either be increased profit and improved access to services or the creation of new products that save time for the client or create new opportunities. When implementing internal changes you need to consider that support functions, mainly in the form of jobs, must decrease. If even one of these conditions is not satisfied then there is no point to the innovation. Let us, therefore, be innovative in the area of innovation risk management.

Managing Risk in E-business Initiatives

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Abstract

For many organizations, the use of e-business is an ever growing and important aspect of their business strategy. This article reviews the revolution of e-business, its place in organizations today, and the risks inherent in successfully managing an e-business initiative. E-business is a definite part of the new Information Age and it is gradually becoming more integrated into the business processes of a wide variety of organizations.

The Internet has resulted in increased competition and more information dissemination to consumers from a wide variety of sources, but even so, the use of e-business offers most firms a considerable competitive advantage in their industry. Businesses can more efficiently and effectively service their customers through e-business and in turn customers return the favor through increased customer satisfaction, repeat purchases, and overall brand loyalty. More efficient supply chain relationships are also built between businesses through the reliance on e-business technology. In order to maintain their competitive advantage in the dynamic world of e-business, firms must continually reinvent themselves to renew the sources of their competitive advantage. For this, they must be dynamic and flexible and have an e-business strategy in place, which is congruent with their overall business strategy.

E-business success is largely characterized by understanding the firm's corporate and business objectives and being able to respond to the needs of the stakeholder. This strategy applies to both a bricks-and-mortar **establishment** with an additional e-business infrastructure as well as a company that conducts business solely online. The benefits and risks of utilizing an e-business strategy are discussed and the use of e-business as an effective technology tool in conducting business transactions with all stakeholders is the overriding theme.

Introduction

The use of electronic business within organizations is altering the performance of these organizations; some positively and some negatively. Certain organizational capabilities are necessary to effectively implement e-business processes. Those who have implemented e-business initiatives stress that the strategy involves much more than just doing business electronically and through a digital medium. It is also not a quick process. E-business typically follows an evolution from initial experimentation with a Web site or other Internet-related technology to the utilization of different computer technologies to compete more successfully or service customers more efficiently (Hackbarth and Kettinger 2000). Mainstream uses of e-business include buying and selling products over the Web, establishing an intranet to allow internal employees better access to information and knowledge within the organization, and/or having an extranet so that firms can be linked to their suppliers. According to Krovi (2001, 22) "E-business has completely transformed the way organizations do business". E-business is a relatively new phenomenon to the business landscape and an area in which many reputable market research firms have forecasted considerable growth in the years to come.

Organizational Performance and Risk in Managing E-business

For most businesses, the Internet has changed the way it communicates with its stakeholders and how they transact business. Most are attempting to integrate the Internet into key business operations and are struggling with how this should be done efficiently as well as how much the Web should be made a core part of their "traditional" business strategy (Thompson and Strickland 2001). Not everyone is succeeding. In fact, many have not yet started. Survey results by Business Intelligence (E-business Update 2001) showed that almost two-

thirds (64 percent) of businesses were at least 12 to 18 months away from implementing a technology infrastructure for e-business and 21 percent projected they would not have any e-business capabilities for at least another year.

For those who launched e-business initiatives, the results have been similarly discouraging. In an online survey by General Management Technologies, 46 percent of managers indicated that their organizations' e-business initiatives were "very unsuccessful" or "somewhat unsuccessful" (E-business Update 2001). According to the Gartner Group, 75 percent of all e-business ventures fail because of lack of technological understanding or because of poor business planning (Lord 2000).

Krovi (2001) asserts that the primary reason for the demise of dotcoms has been their refusal to focus on profitability and instead focus on brand building with the hope that over time, after reasonable consolidation in the industry, customers would recognize their business as the most prominent among the competition. This has not happened. Even with all the positive literature and research purporting the possibilities involved in engaging in e-business, almost everyone recalls the dot.com failures in 2000-2001 following the investment of billions of dollars by angel investors and venture capitalists in businesses associated with the Internet. At the height of the frenzy, money was being invested while ignoring basic concerns of profitability and growth. Without a focus on basic business principles and certainly profitability issues, many dotcoms could not sustain long-term growth. In early 2001, dot.com failures were averaging about 20 companies per month. In total, the burst of the Internet bubble left a loss of \$1.7 trillion in market value (Krovi 2001).

In order to move forward from the "dot.com bust", firms that wish to integrate their business strategy with an e-business initiative must realize first and foremost that electronic business is about "business" as much or more than it is about the "electronic" integration of business products and processes. Thus, any business that wishes to adopt an e-business strategy must first define and examine their underlying business strategy (Brache and Webb 2000). Barua, Konana, Whinston, and Yin (2001, 3) agree that "in trying to bring about e-business transformation, companies have generally focused too much of their attention on technology".

In other words, these authors argue that managers must take a more holistic view of technology, business processes, and e-business readiness throughout the value chain. To Barua et al., these are the drivers of e-business excellence.

In addition, Cullen (2002) advocates following a disciplined approach when applying e-business principles. The organization should first identify the opportunity and then examine potential solutions. Only then should e-business be integrated with current business processes and the firm must provide ongoing maintenance of the systems put in place (Cullen 2002). Having a road map and viable plan of action is important as planning can improve the probability of success as well as assist with strategic decision making specific to the organization.

For most converts to e-business, the overriding belief is that the Internet has the power to change the rules of business. In so doing, it offers limitless opportunities to develop a business and create wealth for the shareholders. While these statements are true, the development of an effective e-business strategy must be viewed by e-business managers with tempered opportunism and skepticism. A growing number of businesses see e-commerce as a useful business tool and are developing the strategy that goes along with e-business implementation. Some of the best known companies - 3M, Cisco, Texas Instruments, and Dell - are utilizing e-business capabilities to become fast, flexible, and integrative, with an overriding focus on customers, competition, teams, time, and process management (McCormack and Johnson 2001).

However, there is another camp of businesses that feel that the Internet is overemphasized and that e-commerce effectively promises much more than it delivers. Additional concerns regarding security problems, lack of resources, skepticism over profitability, and resistance from internal employees are also often expressed (Colman 2002). This group sees e-mail and the use of the Web as draining productivity rather than enhancing it due to the amount of time individuals spend using the technology. When pressured, this group will oftentimes put up a company Web site, however, their skepticism about this new technology has them spending and doing as little as possible, so the effect is understandably minimal.

In addition, many small to medium size companies still see the Internet as an information mechanism, similar to advertising in the yellow pages or sending out a brochure. They have yet to view e-business, especially from a business-to-business perspective, as an opportunity to expand into new markets or increase their own market share, achieve management efficiencies, streamline customer service, reduce inventory costs, and/or increase supply chain efficiencies (Eduard 2001).

As Kanter (2001) explains in her book, *Evolve*, a company is not transformed simply because it creates a Web site. Internet success is not about superficial add-ons, but rather a complete makeover of the business model and how to organize the work of the entire organization. According to Kanter (2001, 72), a successful e-business initiative “requires challenging traditional assumptions about relationships with customers, internal and external communication, decision making, operating style, managerial behavior, employee motivation and retention – and then defining a new way”.

Kanter’s views are equivalent to those of Brache and Webb. Each underscores the importance of effective management, leadership, and organizational dynamics. Firms need to decide on their overall market position, define their target market for their specific products, and determine which customer segments can be reached and which product lines can be sold, delivered, and/or serviced via the Web, as well as which cannot (Brache and Webb 2000). Business strategy is the order of the day, then technology; never the other way around.

In fact, Brache and Webb (2000) believe that an e-business strategy should be developed even prior to the underlying business strategy. In other words, as increased global competition has resulted in greater consumer buying power, an e-business strategy should be put in place following the formulation of an organization’s corporate strategy and should then be contained within the overall business strategy.

An effective business strategy is one that focuses on operational efficiency. A cost-effective e-business strategy should be designed and implemented with the goal of reducing operating expenses and increasing overall profitability. According to Moscovice (2001, 40), “reducing operating expenses and increasing profits are critical to the success,

even the continued survival, of companies heavily engaged in e-business”. Akin to operational efficiency are the strategic underpinnings as to why a company would choose to engage in e-business in the first place. Tobias (2001) advocates taking a strategic look at the business, and from that managers and corporate leaders must decide what is relevant and meaningful. In other words, what can e-business really do for a company? Is it really productive, for example, to enable companies to interact directly with suppliers and/or customers 24 hours a day, seven days a week? Will it improve profitability?

Based on this strategic overview, many companies are finding that the new e-business technology is transforming their business into one that is more efficient and faster than before. According to Tobias (2001, 132), “the impact of Web-based systems on business has been far deeper, more substantial and more strategic than most people would ever have imagined”. As the integration of e-business becomes more streamlined, there are several e-business initiatives that are becoming common for most organizations. The first and perhaps most popular is the use of the Web as an additional communications channel with customers. Many companies are establishing Web sites so that both existing and future customers can interact with the firm through another venue. Customers can obtain product information, make purchases, or resolve customer service problems (Thompson and Strickland 2001). Few would argue that the key word in Customer Relationship Management (CRM) is “relationship” as customers today seek out and demand quality products, 24/7 accessibility, no geographical boundaries, ease of ordering, quick delivery, and responsive service (Lord 2000).

E-business also has the potential to dramatically improve organizational performance in bricks-and-mortar companies from a business-to-business perspective. From its most simplistic aspect, businesses can use the Web to communicate and collaborate with their suppliers and distributors. The benefits of this streamlined communication effort, created through a tight supply chain network, means significant reductions in inventories and operating costs, often a firm’s most costly areas. By focusing on the value chain, companies can additionally analyze how certain activities are performed and perhaps see opportunities where some activities can be eliminated or bypassed altogether

due to the efficiency afforded by the use of the Web and e-business (Thompson and Strickland 2001).

According to Eric Blum, Director of Informix, "many dotcom companies failed because they didn't have an in-depth understanding of supply chain issues and other business fundamentals." (Townley 2000, 7). In a study on supply chain management, e-corporations, and business processes completed by McCormack and Johnson (2001, 34), the authors defined supply chain management as "the process of developing decisions and taking actions to direct the activities of people within the supply chain toward common objectives". The results of their research showed that business process orientation was a key factor in overall supply chain management. To McCormack and Johnson (2001, 38), "corporate survival in the Internet economy will depend both on the effectiveness of internal processes and their integration with supply chain partners and customers".

Frichol (2001) advocates that manufacturing businesses interested in using the electronic business-to-business approach should review their business objectives from the following two perspectives. First, the firm should question what is currently wrong with what the company is presently doing, and second, they should discern what new opportunities the company should pursue. These opportunities can include improving product quality, reducing costs, increasing revenue, and expanding into new markets.

Linking customers, suppliers, and partners with the organization through e-business technologies creates a more seamless and transparent value chain with stronger interconnectedness with these three stakeholders. The relationship with each can be strengthened through increased stakeholder satisfaction and better customer service. In turn, the firm can then additionally enjoy new sources of revenue (Hackbarth and Kettinger 2000). Unfortunately, in the new economy of today, a company's e-business initiatives are often dependent not only on their own efforts, but also on the readiness of their customers and suppliers to engage in electronic transactions. For example, Amazon.com was forced to build expensive warehouses and bricks-and-mortar distribution centers because publishers were unable to manufacture and ship the books the same day the order was received (Barua et al. 2001).

One key to building an e-business infrastructure lies in management support of innovative operational practices that emphasize flexibility and a willingness to adjust when necessary. Exceptional organizational performance is often the result of effective leadership and managers should consistently review both traditional and e-business measures to ensure that the company is on track. Barua et al. (2001) found that managers who were focused on tracking e-business measures, such as the percentage of an organization's total business transacted online, the percentage of goods purchased online from suppliers, those customers conducting business online, the number of new customers acquired online, and/or the percentage of customer-service requests completed online tended to additionally see increases in revenue, the gross profit margin, as well as return on assets and return on investment.

Use of E-business to Improve Organizational Performance

While the above section outlines who should use e-business and what tools are necessary before starting an e-business implementation strategy, this section details what an effective e-business initiative can do for a firm who is ready and able to take advantage of it. Forrester Research found that business-to-business sales conducted over the Internet are expected to reach \$1.3 trillion by 2003 and business-to-consumer sales \$100 billion by 2004 (Lord 2000). With expected revenue this high, most companies will want to expand from the traditional, bricks-and-mortar business model and develop an e-business plan in conjunction with their corporate objectives.

How is this most effectively done? In a study completed by the Internet Research Group and SRI Consulting in early 2000, it was estimated that U.S. companies spent \$153 billion on building their e-business infrastructure in 1999, and that by 2003, this figure is expected to increase to \$348 billion (Schuette 2000). After investing billions in an e-business infrastructure companies expect that investment to pay off. And for some companies it has. Dow Chemical's online ordering site is expected to process more than \$1 billion worth of orders, or about 3.5 percent of company sales. And GE Plastics currently has 60 percent of its \$6 billion per year sales online and anticipates having 75 to 80 percent of sales online within a few years

(Roberts 2002). These figures clearly show that for some organizations, e-business is already an important and ongoing part of their overall corporate strategy and financial revenue stream.

Yet even with these large amounts of money, either spent or earned, firms still seem to have trouble keeping up in the e-business arena with the level of innovation required. While e-business is transforming a variety of business processes, cultural concerns seem to represent the most difficult e-business issue that many organizations face. The company's internal structure may not be staffed or structured properly to allow an effective e-business initiative to grow and this problem, coupled with a fear of change, oftentimes means that some individuals are unable or unwilling to be truly innovative and entrepreneurial, two requirements for a successful e-business initiative (Schuette 2000).

E-business initiatives are often hindered by internal resistance from employees who are uncomfortable with change. Organizations intent on being innovative and creative must work on developing a learning culture which motivates existing employees but additionally attracts innovative individuals to the firm (Colman 2002).

In an online survey completed by General Management Technologies, only 38 percent of respondents reported achieving any degree of e-business success. Corporate culture was revealed to be a major conduit in achieving that success whereby the successful respondents reported that a shared vision (84 percent), employee empowerment (90 percent), and an entrepreneurial environment (74 percent) were all characteristic of their company's internal culture. Besides culture, other characteristics of e-business success included a clear strategy (59 percent), competitive and internal assessments (88 percent), brainstorming and innovation (85 percent), e-business model design (95 percent) and detailed implementation planning (90 percent) (E-business Update 2001).

In addition, as computer technologies increase, most organizations find themselves purchasing the various technologies in the hopes that it will make them faster, better or cheaper than their competitors. While e-business can offer some powerful solutions, instead of simply soaring to the top of the competition firms have had to deal with internal cultural issues as discussed above. The explosion

of the Web and e-mail technologies have enabled individuals to reach hundreds more people per day with the simple click of a mouse, yet most are not any more "connected" to people than before. In the book, *The Dance of Change*, the authors discuss how even with increased communication channels, the skills of social bonding have hardly increased at all in many organizations. As more and more people are contacting each other through this knowledge infrastructure, they have less and less chance to think or reflect (Senge, Kleiner, Roberts, Ross, Roth, and Smith 1999).

As firms focus on the use of e-business to improve organizational performance, they must pay attention to several different aspects. Corporate culture and the need to communicate and bond are important for employees within an organization. As we continue to work in firms that are being more interconnected and have a team orientation, we have new and different ways to stay in touch and each of us needs this interaction and communication.

Chowdhury (2000) is concerned that some firms may embrace the form of communication, which offers the most technology-based advantages, and pay less attention to our need for interaction and socialization. Technology cannot replace the need for human interaction and research has shown that much of the information managers receive comes through social processes and interpersonal contact with others. In addition, as the power shifts from the manufacturer and the dealer to the consumer, managers must be much more sensitive to personalization of products and services than was necessary prior to the Internet (Chowdhury 2000).

In her article, "Dotcoms Told to Go Back to Business Basics", Townley (2000, 7) states that "the bursting of the dotcom bubble shows that firms need to concentrate more on traditional business skills and less on technology if they want to succeed on-line". Firms interested in utilizing e-business to improve their organizational performance need to strategically re-analyze the way their business works. In other words, it is not enough to simply hire an "Internet" manager or add an E-business department. Organizations need to rethink the culture of the company and make people more accountable for the business fundamentals (Townley 2000). The technology of e-business is there to assist and help guide the initiative, but it is not the driving force.

Many firms make the mistake of acquiring the “latest and greatest” information technology to force their e-business strategy. The result, more often than not, is that problems do not get solved, and in fact, sometimes become worse because oftentimes the problem was not fully understood in the first place. Managers must fully understand the current state of their business as well as their strategic objectives for the next three to five years before applying an e-business initiative. In so doing, they can better realize one of the key promises of this new technology—new and additional ways of doing business. The Internet is evolving as a natural support to global, many-to-many communication, and collaboration (Frichol 2001).

As introduced above, business processes must also be redesigned and sometimes even re-engineered when adding an e-commerce component. Customers expect a company’s business and operational processes to support their online demands. Thus, when products ordered online do not arrive as promised, e-mail requests are not promptly returned, network systems fail, or order tracking is cumbersome, these same customers balk and it’s easily transparent to the consumer that the organization’s business processes are unable to handle the demands and expectations of its customers in an e-business environment. Jeff Bezos, founder of Amazon.com, described the changing business process orientation well when he stated, “in the offline world companies spend 70 percent of their resources on marketing and 30 percent on providing a good customer experience. In the online world it’s the other way round” (Earl 2000, 33).

And it’s not just in the business-to-consumer transactions where effective business processes are noticeable. In manufacturing, there is a growing trend for on-demand mass customization of products. The traditional “make some, sell some” model is being replaced by the “sell one, make one” approach (Frichol 2001, 42). An increased pace of change, shorter product life cycles, increased customer demands for shorter delivery lead times, more product sophistication, and growing international competitiveness has all brought about an increased need for more responsiveness and better coordination of all activities with the company’s supply chain (Frichol 2001). The use of e-business technologies can meet these new demands.

McCormack and Johnson (2001, 33) are convinced that “taking a business process orientation can result in a key competitive advantage in the supply chain and this new economy”. According to Bernard Teiling, assistant vice president of Business Process Integration at Nestle S.A., the old way of conducting business is out and the new emerging paradigm focuses on the integration of business partners and is centered on core processes. It is projected that future competition will increasingly occur between networks rather than stand-alone businesses. In the new economy, competition will exist between networks of companies in an e-supply chain (McCormack and Johnson 2001).

Using e-business to improve organizational performance involves “real strategy, real execution, real revenue and real profitability” according to Voon Seng Chuan, IBM’s managing director in Malaysia (Reasons to e-enable 2002). Drawing from his expertise with one of the largest manufacturing companies in the world, Chuan feels that the integration of technology with business is necessary because of the following four factors: e-business offers real business value (lower costs, increased margins, new markets), business transformation of core processes allows companies to be more efficient, services and constituent relationships are improved through the facilitation of e-business, and e-business greatly assists organizations in adjusting to and competing in the global marketplace (Reasons to e-enable 2002).

Organizational Capabilities to Effectively Implement an E-business Strategy

While the Internet is considered by some to be a radical invention, others feel that it is just one more channel of communication. Whichever side of the pendulum a manager finds him/herself; one must still understand the importance of this new technology. Companies need to alter their business strategy to take advantage of the Internet, when feasible. Common elements of successful e-business companies include the following five key characteristics. First, companies that succeed in e-business accept that they will succeed. They don’t just try the Internet; they jump right in or they don’t jump at all. They additionally accept that adaptation and change are a part of working with this new technology. Secondly, successful e-business firms are careful not to allow their e-business initiative to turn into a long term, low payoff project that then

gets no respect from the rest of the organization. Third, managers attempt to create excitement about the e-business initiative or dot.com startup within their firm and do so within the context of a large, stable company, with plenty of financial capital, a global reach, and the opportunity to affect change worldwide. Fourth, successful e-business companies share best practices across the organization and good ideas are always encouraged. And fifth, companies that succeed in the e-business arena have a Chief Executive Officer who leads the e-business effort and is committed to giving it his or her highest priority (Rifkin and Kurtman 2002).

Along with the above five elements of successful e-business companies is the importance of innovation in the organization's overall business model. According to Allard and Holsapple (2002, 24), "innovation is a catalyst for enhancing competitiveness in the e-business environment". While the traditional components of business remain the same, there is still an additional component to e-business that must be recognized; namely that e-business success oftentimes requires creativity, entrepreneurial acumen, and the flexibility to conduct business in different and innovative ways.

Utilizing e-business is a fluid, rather than a static process. As such, successful e-business companies must be flexible and able to adjust their strategy and their long term plans when necessary to accommodate changes in the external environment, be they opportunities or challenges. The market has transitioned from an atmosphere where large businesses could be competitive over small businesses just because of their size, to one where fast businesses now beat slow businesses (Thompson and Strickland 2001). Being quick, innovative, and flexible is no longer an option but a requirement to being competitive in the e-business arena.

Companies need to establish a clear strategic vision of e-business and its potential within the organization. Oftentimes, employees lack an understanding of the e-business initiative and what activities are required simply because upper managers have either not communicated their vision effectively or they too are not sure what needs to be done. Successful change efforts must take place at the top of the organization, receive upper management support, and then be trickled downward to the lower level employees. Upper level managers must focus not only on building an organization that has

the capacity for continuous innovation, learning, and change, but also on getting everyone within the organization to take responsibility for these dynamic efforts (Earl 2000).

Any company that wishes to be successful in e-business must stay current in respect to its technological expertise. E-business initiatives are expensive monetarily and extremely time consuming. An organization that tries to effectively implement an e-business strategy must be willing to not only pay the development costs, but also the maintenance costs to keep the company current in respect to its technological tools. If an organization is unable to do this internally, then it should consider outsourcing or developing a strategic partnership with another firm who can offer this expertise on a long term basis (Thompson and Strickland 2001).

Another very important aspect to implementing an effective e-business strategy is to focus on profitability. Many bankrupt dotcom firms neglected to do this and have paid a handsome price. In order to focus on the bottom line, companies need to understand who their target market is and what types of goods and services these customers tend to buy. This requires the use of innovative marketing techniques that not only reach the intended audience but also encourage purchases of the product (Thompson and Strickland 2001). Michael Grondahl, an analyst for U.S. Bancorp Piper Jaffray believes that "technology initiatives are an important contributor to the company's strong financial performance" because in addition to increasing revenue, the use of the Internet can also help provide improved service to suppliers and customers, which ensures repeat business (Smith 2001, 47).

Another organizational requirement when implementing e-business in a business-to-consumer paradigm is to focus on the trust factor. In addition to simple product guarantees, which are commonly done with any bricks-and-mortar company, for those venturing out onto the Web, secured Web site transactions and/or an alternative ordering process are important avenues when trying to build a relationship and sense of trust with the customer. In order to facilitate an exchange, trust is a necessary component. It not only enables a short-term exchange relationship but can additionally help to build a larger (and more loyal) customer base for the long term. Online merchants such as Amazon.com,

American Express, and Lands' End each have established guarantees to customers regarding security of their server software as well as protection against credit card fraud (Warrington, Abgrab, and Caldwell 2000).

Trust is also an important component in the business-to-business realm when attempting to network firms together in an e-supply chain. Trust occurs between people, not companies, and is established over time and after numerous successful interactions between individuals. Creating an environment of trust is incumbent among managers and leaders of companies in the supply chain and a critical success factor for implementing successful e-business processes throughout the networked e-corporation (McCormack and Johnson 2001).

In addition to trust with a company's external customers via the Internet, internal integrity and security within the organization is also critically important. Internal communication channels through the use of intranets require an internal infrastructure that can handle data consistency across computer systems, synchronization of databases, and compatibility of applications (Earl 2000). In utilizing e-business practices and in adapting the technology required, firms additionally expose themselves to security risks. E-business risk can be classified into four areas – information technology infrastructure, user identification and authentication, user privacy, and destructive computer programs (Moscove 2001).

According to Moscove (2001), a business risk is greater for a company engaged in e-business due to its increased reliance on technology and increased vulnerability to changes in that technology. With regards to an information technology infrastructure, this generally includes the hardware, software, and processes involved in daily operating activities. The risk for an organization that is heavily dependent on the Web, such as eBay, is that problems in infrastructure can cause costly interruptions in data flows and business transactions. When technological infrastructure problems occur, the storefront at ebay.com is effectively shut down until a solution is found, costing the company lost revenue (Moscove 2001).

Potential (for Bricks-and-Mortar Companies) to Engage in E-business

The potential for bricks-and-mortar companies to fully realize and engage in e-business is clear as the Internet has radically changed the way business is conducted. E-business allows organizations to be more competitive in their given industry by improving their overall operating strength through the use of technology (Cullen 2002). The use of the Web is now an accepted alternative to many aspects of business communication and order fulfillment, oftentimes at much reduced costs. For example, the use of e-business can lower promotional costs quite dramatically while allowing the organization to reach far more people much more easily. In a business-to-business exchange, transaction costs can be significantly reduced as well through the use of e-business technologies, with the end result being larger profits (Shook, Zhang, Braden, and Baldrige 2002).

As firms become more sophisticated in their use of e-business technologies, three overriding themes are emerging which will dictate to each company the potential for success in the e-business environment. The first aspect is the shifting of power from the manufacturer and distributor to the consumer. Because of the Web, consumers now have an abundance of information and use it to negotiate and transact business, wherever it is most advantageous for them, with little concern for geographical issues. Secondly, customers want products, which are unique and personalized to their specifications and are becoming less interested in purchasing mass produced products with no personal, distinguishable characteristics. Third, and equally important, customers want as much value for their money as possible and will reduce the role of intermediaries, such as dealers and distributors, if possible to get it (Chowdhury 2000).

According to Tom McGuffog, Director of E-business at Nestle UK, "It's not just about selling on-line or marketing on-line. The Internet enables you to share knowledge, refine processes, automate more processes, measure service, analyze what customers are doing and change products accordingly." (Townley 2000, 7). Bob Napier, Compaq's Chief Information Officer agrees and takes McGuffog's comments one step further when he says, "We see the definition of e-business as not just selling stuff on the Web or Webifying existing applications or

giving customers instant access to information. It's about having an interactive collaboration between Compaq and its partners" (Wagner 2001, 1).

As companies jostle for position in the e-business marketplace, the most effective are attempting to secure a sustainable competitive advantage that will allow them to continue to do business via the Web successfully. Whether this is through increased interactivity and enhanced customer collaboration and/or through improved internal processes and systems, the end result is the same—stronger financial performance and increased customer satisfaction. What more could an organization ask for?

Conclusion

As discussed above, e-business does have the potential to improve organizational performance within organizations. However, it cannot and does not transform an organization overnight, nor is it generally an easy process. For managers adopting an e-business initiative, it is best for them to view it as a complex, continually evolving matrix of potential e-business solutions that will involve many different functions of the business and affect employees, business processes, and relationships among departments throughout the firm, as well as supplier interactions outside of the business (Cullen 2002).

Utilizing e-business solutions and technologies is about managing risk and learning how to utilize new information and new technologies as the business changes and grows within its industry and the economy as a whole. As organizations become more adept at engaging in e-business, through the use of plans and processes and then the subsequent evaluation of its effects, firms worldwide will be using the Internet to enhance their corporate and business strategy. In addition, they will be participating in the economic globalization of organizations and countries as the global Internet combines with commerce to revolutionize the way business is conducted around the world (Shook et. al 2002). In this manner, the use of e-business may one day again become just "business" as the above ideas, concepts, and usage become commonplace within all organizations.

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Risk Assessment as Part of Internal Auditing in the Government Institutions of the Estonian Republic

Krisi Pungas, *Secretary to the Speaker*

Risk assessment is part of an internal auditing system mainly because one of the most important tasks of an internal audit is to analyse risks that may influence the effectiveness of an organisation's activities and then to find the most effective and economical method of managing them.

To understand this, the internal audit in general must be understood and only then can risk assessment in particular be observed. Therefore, the author will take a closer look at the concept and tasks of an internal audit in the beginning of the article and later deal with risk assessment and its importance in successful auditing.

Internal audit was defined by both the Board of the Institute of Internal Auditors (IIA) and the Estonian Government in § 92² section 1 of the law of the Estonian Government.

In June 1999 the Board of the IIA defined an internal audit adapted to the new requirements as follows: "an internal audit is an independent, impartial, assuring and consultative activity targeted at improving the organisation's activities and to create values. It helps to achieve the organisation's goals by using a systematic and organised approach designed to assess and improve risk management, control and the efficiency of the management culture".

The legislation of the Republic of Estonia defines internal audit as an activity designed to assess and analyse the existence of internal control in administrative state institutions and its efficiency and pertinence to the requirements set by legislation (§ 92² section 1 of the law of the Estonian Government).

Thus, the IIA definition of internal audit comprises all types of organisations and institutions, the law of the Estonian Government, however, defines internal audit more specifically in the context of administrative state institutions of the Estonian Republic.

The Audit Standards of the International Organisation of Supreme Audit Institutions (INTOSAI) state that an internal audit may also be described as a function comprising record-keeping and accounting as well as assessing all other procedures necessary for the existence of the organisation, such as structure, work methods, internal control and the provision of information to management.

Nowadays the objectives of internal audit are defined as follows:

1. to protect assets against ineffective usage, fraud or theft;
2. to monitor the true and accurate filling out of accounting documents and the timely preparation of reliable financial documentation;
3. to guarantee the conformity of the organisation's activities to its objectives and assess the level of achievement;
4. to assess the efficiency and quality of work operations;
5. to guarantee conformity to the law (Pass 1994,5).

Based on the INTOSAI Lima Declaration it can be claimed that an audit is not a goal in itself, but an inevitable part of a control system. Its aim is to point out early on any possible deviations from the requirements set and any violations of the principles of legal, economical, efficient and effective

resources usage. So that it would always be possible to take corrective measures, ensure that the people accountable take responsibility, obtain compensation or implement measures to avoid or at least to prevent these violations from happening again.

An internal audit is carried out in a number of different legal and cultural environments and in organisations with different objectives, sizes and structures both by people from inside and outside the organisation.

The objectives of an internal audit for each specific organisation are based on the goals set by the management and they cannot differ from the goals of the overall organisation.

The tasks of an internal audit, unlike the overall processes of an organisation, are similar for internal auditors in the public sector, as follows:

1. To analyse risks that may influence the effectiveness of an organisation's activities and its internal control system, and on the basis of this set priorities and draw up action plans.
2. To discover the management and control methods used in achieving the organisation's goals, to assess their success, economy and efficiency and express an opinion about their adequacy, reliability and relevance.
3. To inform the management of their observations and conclusions and if necessary to make recommendations for improving the situation, for developing the management and control methods or for implementing new ones.
4. To assure the management, as a result of the above-mentioned activities, that the management and control methods used in achieving the set goals and adding value are adequate and not superfluous (Koplimaa 2002, 35).

While the internal audit is aimed at improving the organisation's activities and creating value, the task of an internal auditor is to assess the risks that influence the activities of the organisation. Based on this, internal auditors determine their activities; assess the success, thrift and efficiency of methods used in achieving the organisation's goals; make relevant observations and conclusions and if necessary recommend improvements.

As a result of these activities the management is assured that the management and control methods used in achieving the company's goals are sufficient and not superfluous. It is worth pointing out, however, that internal auditors can only perform their role by giving professional advice to the leader of the organisation.

Thus, an internal audit in the context of Estonian administrative state institutions is a service operating within every government institution or state institution governed by it. Its aim is to assure the government, the respective minister, county governor or manager of an organisation that the management and control methods used are sufficient and economical and conform to the generally accepted standards and state legislation.

Since the main objective of auditing is to anticipate risks and qualitative mistakes in the internal control system, the internal audit has to aid the organisation in locating and assessing the main risk areas and help improve the risk management and control system.

Before auditing, the goals of an organisation have to be determined and the risks defined to see whether the set goals are attainable and whether their implementation guarantees the organisation's development. It is also necessary to define the vulnerable and high-risk elements of the system to which the auditor should pay special attention.

The term "risk" is defined by Government regulation No. 329 § 10 dated October 18, 2000 as follows: "risk is the danger that an event, activity or inactivity may cause the loss of money or profit to an organisation and jeopardise the successful fulfilment of its tasks".

As the primary goal of an internal audit is to anticipate risks, it assesses the internal control methods used in implementing objectives and managing risks and suggests improvements.

Therefore, the person responsible for assessing risks has to use a clear system which takes into account the organisation's goals. This means that before setting to work internal auditors define the organisation's goals and risks and afterwards assess the existing internal control elements.

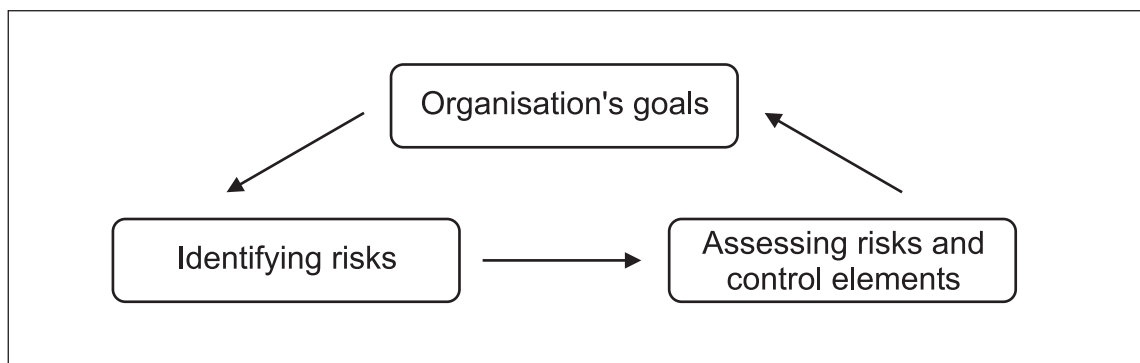


Figure 1. Scheme of risk assessment
Good Practice in Internal Auditing 2002, 4-3

One of the tasks of an internal audit is to find the most economically effective way to manage the possible risks in one organisation or area. So in order to define and assess risks the person responsible for the internal audit together with the management have to discover the answers to the following questions:

- What is the general risk level of the public sector?
- What kind of economic and physical damage have the public sector institutions and their employees been subjected to?
- What kind of economic and physical damage has the organisation and its employees under inspection suffered?
- What is the general objective of the organisation and the goals of its different departments and how is it possible to achieve them successfully?
- How do we define the security (safety) of an organisation, that is, who and what needs to be protected and from whom?
- Where and how can its employees damage the organisation?
- What are the priorities for the organisation's security?
- What is the order of these priorities and the reasons for such preferences?
- What general level of security has to be achieved as a result of implementing these methods?
- What kind of risks and control methods are acceptable to the leader of the organisation? (The Good Practice of Internal Audit 2002, 4-3)

Based on the answers to these questions the extent of acceptable risk is determined for each subject of the audit and the necessity, extent and frequency of the audit is assessed. The importance of risk assessment in preparing an audit should be pointed out. Why? Because the aim of an audit is to anticipate risks in an internal control system. In case we fail to anticipate risks and they still occur, the aim of the internal audit is to find the most economically effective way to manage different risks.

Risk assessment is closely connected with the above-mentioned IIA definition of an internal audit, which specifies that among other functions an audit is an assuring activity designed to improve the organisation's activities and to create value. Recognisable connections can be observed here since it is the result of risk assessment that assures the management that the managerial and control methods being used are sufficient and economical and that the system operates in the required way.

A strategic audit plan and an action plan for the year are drawn up in order to organise the auditing and to highlight the priorities defined from the process of risk assessment.

The strategic audit plan lists the areas of work for the internal audit, sets its medium and long-term targets as well as clarifying the strategic development trends for internal control and auditing.

The strategic audit plan has to focus on the priorities determined in the risk assessment, guarantee that they all be audited in order of importance and that the audit be in accordance with the means at its disposal.

The strategic internal audit plan should be based on the ministry's development and activity plan, because these documents reflect the areas of activity of the organisation and its long-term objectives. These plans provide the basis for planning the work of the internal audit unit by compiling the strategic plan.

The given document is important because it reflects the main areas of work and long-term objectives of the internal audit unit. A strategic plan that takes into account the present situation provides internal auditors with support for organising their work under the ministry's administration. Thus, the strategic plan helps to create a complete picture of the development trends of the internal audit and at the same time forms the basis for compiling its annual action plan.

The annual plan is drawn up according to the strategic audit plan. It has to be based on risk analysis and an assessment of the necessity of the audit made by the person responsible for the internal audit. The plan has to consider the strategic plan for the current year and the plans for further periods and to guarantee the continuity and sustainability of internal auditing in the organisation.

In drawing up both of these plans it is useful to rely on the organisation's own development and activity plan. An effective annual audit action plan relies, in addition, upon the above-mentioned documents and also on the action plans of each of the structural units, the vision of the internal auditor concerning the areas in need of auditing, discussions with management and the employees of the internal audit department and information gathered during previous audits.

Risk assessment is a part of internal audit and the lack of periodical risk assessment and management may be a major hindrance in carrying out an effective internal audit. So listed below are the possibilities for guaranteeing the effective implementation of an internal audit from the point of view of risk assessment.

Annual action plans for internal audits in government institutions have to be drawn up according to the results of risk assessment, as this is the basis for auditing. The first and foremost aim of an audit is to anticipate risks in the internal control system of an organisation.

In the absence of risk assessment it is impossible to determine the objective behind using one specific measure, the outcome and the final evaluation of the outcome—all this makes assessing the success of internal auditing difficult.

Risk assessment should not be performed by the internal auditors independently but in co-operation with the management (minister, chancellor, vice-chancellors) and the managers of different levels (heads of departments).

The management must plan, organise and lead the implementation of activities and provide a strong sense of security that the goals will be achieved. Internal auditors on the other hand assess the process of planning, organising and managing to find out whether there is a feeling of certainty about achieving the goals. If these units co-operate in risk assessment it is clear that success can be guaranteed at the highest possible level.

Good practice in internal auditing presents the idea that the internal audit annual action plan has to be drawn up on the basis of the strategic audit plan. Although this is true, it is not possible to compile a thorough and comprehensive action plan based solely on this document.

An internal audit annual action plan based solely on the internal audit strategic plan cannot cover all-important aspects. It should also rely on the results of the risk assessment, the vision of internal auditors concerning the areas in need of auditing, the development plan for government institutions, the activity plans of each of the structural units, discussions with the management and employees of the internal audit department and the information gathered from previous audits.

Therefore, risk assessment is one of many elements, but still a very important element of an internal audit since the aim of the internal audit is to manage risks, to assess control and to evaluate and improve the culture of the management process.

From the point of view of an organisation, it is important that an internal audit begins with risk assessment and drafts its plans on the basis of this assessment, to define the priorities of an internal audit and only after that can an effective and truly value-adding internal audit be carried out.

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Economic Capital and Risk Management

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Abstract: Risk can strike a business anytime, anywhere. It is vital for financial institutions to have back-up systems in place in case of emergency. Unfortunately, many of them have yet to implement even basic continuity plans, thus, it poses a significant risk to them. Financial services providers are, therefore, under increasing pressure to improve their risk-assessment schemes. Unfortunately, few of them have taken their processes, products and systems, and looked at them from a risk point of view.

In the past few years, economic capital systems have become increasingly important for decision-making in financial institutions. Risk is a cost and companies need to take it into account when evaluating their business performance. Economic capital is a way of quantifying the risks a business faces and ensuring there is enough capital to cover unexpected losses. The idea is not only to avoid going bankrupt, if you are hit by a series of disasters, but also to work out whether you are deploying your capital in the best possible way. The author describes here how Economic Capital Systems can help a financial institution to plan more efficiently for a rainy day. However, the idea of economic capital is spreading gradually even outside the banking sector.

Operational risk has always been with us, but the Basel Committee has put it back on the agenda. Basel-II will introduce for the first time, a risk-based capital charge for operational risk. There is a growing recognition that a thorough review is needed if it is to continue to deliver three key aims: first, ensuring financial service providers have a “reasonable” capital cushion to absorb losses; second, promoting the use of risk-based supervision; and third, encouraging a more level competitive playing field. The problem is that the majority of financial services providers tend to deal with risks on a piecemeal basis.

However, it is a cause of great worry that so many analysts and investors feel that risk reporting in financial institutions is not yet transparent enough. Rating agencies will also grade institutions in the near future based on their risk management policies and strategies. When organisations can understand where their main risks lie, they can hopefully make a sensible risk analysis and affect its control.

We live in an increasingly complex and volatile world—one that is difficult to predict and control. More than a year after the terrorist attacks on the World Trade Centre, millions of financial services providers throughout the world still have no continuity plans in place to keep their business running in the event of a major disaster. Sir Howard Davies, Chairman of the Financial Services Authority (FSA of UK), reminds the world: “The terrorist attacks of 11 September, 2001 highlighted the importance of continuity planning and crisis management... The crucial thing is to ensure the banks have got group risk management systems that are robust and make sense. That is our prime focus.”

According to FSA estimates, up to 40 per cent of the 11,000 firms it regulates have no back-up arrangements. Although most insurers and banks have contingency plans to cope with fire or power failures, the issue of information security—including disaster recovery, application availability and data security—have become more urgent since 11 September. The fact that many organisations have yet to implement even basic continuity plans poses a significant risk to the financial services industry.

Organisations have a right to assume that their managers are doing a good job. Recent events, however, have shown it is not something that can be taken for granted. For example, Arthur Anderson (one of the most renowned names in the accountancy world) was brought down by the unacceptable behaviour of one particular office. “A responsible organisation can no longer stand back and say, well, it has nothing to do with the Board—risk has to be man-

aged at grass-roots level. However, the Board has to define clearly what is acceptable and what is expected of its staff," opines David Breden (2002).

The Higgs Report is designed to improve corporate governance in Boardrooms to prevent another Enron or WorldCom-style scandal occurring in the UK. Its main thrust is "to increase the representation of non-executive directors in Boardrooms to 50 per cent, and prevent a chief executive of a company also becoming its chairman," concludes William Lumley (2003). This is to prevent an Enron-type situation occurring where too much power is invested in the hands of a charismatic CEO, answerable to no one. While many of the report's recommendations have been welcomed, there is concern about the cost of compliance.

In 2002 financial services companies across the world found themselves in the eye of a storm that threatened to obliterate many of the largest institutions. A roll call of dishonour that included Enron, WorldCom, Argentina and so on, all helped to create a crisis in confidence for the sector. However, few institutions have taken their processes, products and systems and looked at them from a risk point of view. As long as you know what, where, when and why the risks are, it does not matter by what nomenclature you call them. When organisations can visualise, as well as, understand where their main risks lie, they can also be expected to make a sensible risk analysis.

"In the past few years, economic capital systems have become increasingly important for decision-making in financial institutions. They are a way of quantifying the risks faced by a business and making sure there is enough capital to cover all expected and unexpected losses. The idea is not only to avoid going bankrupt if you are hit unfortunately by a series of disasters, but also to assess whether you are deploying your capital in the best possible way," summarises Chris Marrison (2002) in his classical book *"The Fundamentals of Risk Measurement."* The basic challenge is whether the real returns are large enough to justify the risks being taken. The present article seeks to share with the readers the innovative concept of economic capital. However, the idea of economic capital is spreading gradually even outside the banking sector.

Concept of Economic Capital

Economic capital is a simple idea but hard to put into practice, and that is why it has taken the best part of a decade to catch on. The idea initially emerged within individual business units as lenders tried to work out which loans gave the best returns, taking into account the risk of default. Trading departments began using similar ideas to work out the market risk of each asset or liability, and assess the expected returns accordingly. Economic capital is; thus, a way of quantifying the risks a business faces and ensuring that there is adequate capital to cover unexpected losses. Subsequently, other business lines have also started applying the concept of economic capital to take into account operational and business risks.

Different types of risks require different approaches to hedge them and this poses a major challenge. But when done systematically, economic capital can underpin investment decisions. Chris Matten (2000) highlights the utility of the concept as: "It is only in the last few years that some of the biggest financial conglomerates have realised that if they combine all the myriad risk-assessments, they can also work out the risk and capital requirements across the whole group. This helps formulate a rational strategy because they can compare the economic profit of each business unit more fairly, discounting the performance of high-yielding but risky sectors. It would also ensure that capital was being allocated efficiently, based on cost and benefit considerations."

Risk is just one side of the triangle for any economic capital system. To compare the performance of different business units, a company also has to take into account capital requirements and returns. Risk is also a cost and, therefore, companies need to calculate that cost to evaluate their business performance. The really hard part is combining all the myriad different risk calculations to provide an overview of the whole firm and its capital needs. Some companies simply add the figures together, while others have far more complex methods. That is why understanding economic capital is so essential to corporate decision-making.

Calculating a company's true return on capital, taking into account the risks, can give a much clearer picture of the company's strengths. Economic capital is a good way of allowing investors to

compare the risks and returns of each investment. That gives companies a real incentive to improve their disclosure and be more transparent in their reporting. It could also help to raise share prices, lower the cost of capital and increase the credibility of management.

Now, the regulators have also seized on the idea and they are trying to improve the rules for regulatory capital. For example, the Basel Committee on Banking Supervision, in particular, has long recognised that its existing capital requirements are increasingly out of kilter with banks' real risks. The Committee, therefore, attempts to "teach people working in the corporate sector about operational risk, and make them appreciate the dangers they would face if they did not behave in a particular rational way."

Proposed amendments (dubbed **Basel-II**, see **Appendix-1** for more details) would enable it to place more reliance on the banks' internal risk-assessment as a basis for determining a more appropriate level of minimum regulatory capital. Jeremy Scott, (2002), once again, asserts forcefully that: "The biggest impetus towards the adoption of economic capital comes from the pressure for higher returns in a financial service environment characterised by increasing volatility and competition. The upshot is that all financial firms, even small ones, are under increasing pressure to improve their internal risk-assessment systems." Unfortunately, it is an expensive and difficult task. Different business units face different risks and some of them are even hard to quantify and compare.

Why Economic Capital and How to Calculate?

According to Chris Marrison (2002), corporations use economic capital systems for four key reasons:

- To ensure a safe level of capital, guard against disasters, and meet regulatory requirements.
- To ensure that risks are being managed appropriately and assess whether insurance policies or risk controls are cost-effective.
- To ensure that the firm is not over-capitalised.
- To ensure that capital is being used efficiently to produce the best returns, assess strategy, and support decision-making.

For the majority of companies, safety and profitability are the two most obvious reasons to calculate economic capital requirements. In this context, Matten advises the financial services providers that: "Keeping too much capital in reserve robs a business of expansion funds, while the accurate calculation of risks and capital requirements can actually release idle capital. The whole group, in some cases, might be able to survive with less capital than the sum of the business units because some risks offset each other."

Many institutions use their economic capital systems to calculate economic profits so as to give them a clearer idea of risk-adjusted returns. The same economic capital calculations can also be used to decide whether to move into a new line of business or make an acquisition that may offer good returns. However, this is often hard to calculate because only limited data is available. Acquisitions or new ventures require a situational judgement, and therefore, it is made on the basis of general strategy, as well as, market knowledge. Even so, economic capital calculations increasingly underpin decision-making in big banks.

Until recently the complexity of economic capital systems deterred smaller banks from introducing them. That is changing now and economic capital models are gradually filtering down to smaller banks, particularly in the US and Canada. To illustrate, Chris Matten, succinctly puts it: "Many of these banks have been surprised to find that it is relatively easy for a smaller, less complex bank to adopt economic capital systems. Their structure is simple and they can license the latest technology—some have even been able to leapfrog the bigger banks, particularly in the way they compare risk across the company."

The idea of economic capital is spreading outside banking also. One reason is the growing number of banks that have merged with insurance firms to form bank-assurance groups. Scott, however, portrays a dismal picture in the following words: "The arguments in favour of economic capital systems have not swept the Board. There is still a large body of companies, investors and analysts who stick firmly to more traditional growth and margin measurements to guide their decision-making."

"Our value-based management (VBM) and economic profit strategy is leading the way for us to be

able to allocate capital more effectively,” observes the author in his article (2002) titled “*EVA: A Case Study of Godrej Group of Industries*”. This large manufacturing conglomerate and a leading FMCG market player, along with many other companies in India, have been attempting to focus on quantifying the economic value added/generated by different parts of the enterprise. Value added is important since it is the best measure of wealth created by a company. The “*First European Value Added Scoreboard*” has been published, by the DTI and Company Reporting.

The financial sector features prominently with the UK comparing well against the rest of Europe. The value added scoreboard contains four financial sectors: banks, insurance, life assurance and other finance (such as fund management). “The top 300 European companies by value added contain 59 from these financial sectors, contributing nearly 22 per cent of total value added (and over 21 per cent for the European top 500 companies),” Mike Tubbs (2002) sums up.

The key resource in the financial services industry is capital and its effective use. With capital adequacy rules in place, it is clearer that capital is the lifeblood of financial services companies. Capital is scarce and its availability is essential to being able to operate. With each asset requiring up to 8 per cent of its value to be backed by regulatory capital, using it in one place means it is not available to back activities elsewhere. However, in the VBM philosophy, it is the decision of *where* to apply the available capital which is vital. This is achieved by calculating the economic profit—a calculation that takes into account the cost of the capital consumed.

This view of profit goes beyond the simple profit and loss account and includes the cost of the capital consumed by a business unit. It helps to show where value is generated, where capital and resources are best used, and which areas need attention to bring them up to the required rate of return, based on the economic profit they generate. An accurate view of the usage of capital is, therefore, important to correctly calculate economic profits. In a nutshell, Dr. Tony Gandy observes: “In this sense, operational risk measurement can be a part of the movement towards the VBM form of management.” Equally, with more transparent requirements for operational risk capital, firms and business units in the organi-

sation will be encouraged to improve their activities to reduce the need for capital to cover these requirements.

Shareholders also need to assess the risks and rewards of their investments as they decide which stocks to select. There is evidence that banks and companies that fully disclose not just their results, but also their risks-adjusted results can help improve their share prices. In addition, there are several potential benefits to disclosing more information to shareholders and other stakeholders.

Industry research, however, shows that analysts and investors see capital management and return on risk-adjusted capital as key performance measures when setting share price valuations. It is, therefore, worrying that so many analysts and investors feel that most companies’ reporting is not yet transparent enough and does not give them all the information they need to analyse performance. This lack of information will lead analysts and investors to make judgements based on incomplete data. Without these figures, they will tend to rely on conservative assumptions that will, in all likelihood, undervalue the company.

Calculating a company’s true return on capital, taking into account the risks, can give a much clearer picture of the company’s strengths. Economic capital is a good way of allowing investors to compare the risks and returns of each investment. That gives companies a real incentive to improve their disclosure and be more transparent in their reporting. It could also help to raise share prices, lower the cost of capital and increase the credibility of management.

To calculate economic capital a company needs to quantify the risks it faces over a period that is relevant to management, by analysing what the potential losses could be as well as the profitability of a loss of that size. It also needs to take into account the risk appetite of the company’s owners and investors in order to decide whether they are prepared to take on high risks in exchange for high returns (see **Box-1**: “*Are You a Risk Taker?*”).

The key contributors to economic capital are credit risk, market risk, operational risk, insurance risk, and liquidity risk. These categories are, however, fluid and some companies add in several more—from reputation risk to legal risk. The real

difficulty lies not in categorising the risks, but in calculating them and doing it consistently.

Whatever the kinds of risks, there are two main points that need to be taken into account—volatility of returns and worst-case scenarios. Assessing both requires a judicious-mix of quantitative

and qualitative approaches. The data also has to be overlaid with judgements about the economic climate and consumer behaviour, as well as, the individual borrower's business model and management prowess, to predict how borrowers' are likely to behave in the future.

Box-1: Are You a Risk Taker?

Risk takers have a need to be *stimulated*. Therefore, the sensation of excitement associated with risky activities is appealing.

Risk takers need to have an *openness to experience*. This enables them to live happily with the uncertainty that is a normal part of risky decisions. People possessing this trait will, therefore, actively seek change, viewing life as one big experiment that should be grasped and experienced.

Risk takers have *low levels of neuroticism*. Too much neuroticism and too much sensitivity, both imply that you will not be resilient enough to cope with setbacks that occur when taking risks.

Risk takers *focus on themselves* rather than on others.

Risk seekers will *not be attracted* to working in an *environment* where there is a *high degree of control* placed upon them and where *conformity* is the accepted norm.

(Source: For more details, please refer to "*Addicted to Risk*" by Philip Linsley, published in *Financial World*, November 2002, p.41.)

Ten Rules For Financial Institutions Implementing Economic Capital

Jeremy Scott, Global Head of Financial Services, Price Waterhouse Coppers, suggested in 2002 the following ten rules for implementing economic capital for financial institutions:

Make sure that the whole management team is behind the project. Senior managers may easily grasp the benefits of finding out the company's economic capital requirements. However, divisional managers also need to know why risks are as important as returns.

Discuss the proposed system with regulators to check whether it will fulfil their expectations, particularly once the Basel proposals for bank regulation are implemented.

Be pragmatic. Data is critical to economic capital calculations, but *judgement and experience* are

equally *vital ingredients*. Do not wait for every last number to come in before setting up the framework. Once the system is set up and starts functioning, you can then make sure that you *constantly refine your calculations to make them as accurate as possible*.

Research what risk data is in the marketplace. Rating agencies, risk consultants and others are collating databases covering risks, especially operational risks, and are selling or pooling the information. So even if you have only a few years of data within your own company, you can *draw on the experience of others*.

Keep up with the latest thinking on risk-assessment methods. Some of the pioneers in economic capital systems were forced to develop methodologies as they went along. Now, there is a considerable body of knowledge, including standard methodologies and adaptable software, especially for credit and market risk.

Carry on educating managers, once your system is in place, and give them guidance so as to ensure that it works. Some companies even base bonuses on meeting economic capital targets. However, make sure that *managers understand why those targets are important*; otherwise you can simply build up resistance.

Think carefully about how far down the company you want the *system to spread*.

Ensure continuity. A common problem arises when only a few people understand the system and they subsequently leave the company. Make sure the *institutional knowledge does not disappear*.

Be transparent. *Internally*, make sure that your *methodology is comprehensible* to all the *key stakeholders* and that your internal communications on economic capital are clear. *Externally*, draw up a *consistent disclosure policy*. Educate analysts, investors and other stakeholders so they understand the figures you are publishing and what they mean for the company's strategy.

Economic capital systems work best when they are part of a *coherent decision-making process*, covering everything from strategy to investments and pricing. Stick to consistent *principles* when it comes to *measuring, managing and rewarding performance*.

Economic Capital and Regulation

Regulators are also working hard to catch up to the leading financial institutions in risk assessment and measurement. The first element of competence identified in the *Competency Framework for Internal Auditing (CFIA)*, global research published by the Institute of Internal Auditors, is "to develop understanding about the risks entailed by its functioning and context. In the scheme of risk management, the core task for internal auditing is to ensure that business risks are mitigated through an effective and cost-efficient internal control structure." In other words, internal auditors are expected to be out front in identifying risk and advising on effective risk management strategies.

Recently released guidance by the UK's *Turnbull Committee*, "*Internal Guidance for Directors on the Combined Code*," charges organisations with monitoring a wide range of business risks and places responsibility for risk management and risk

reporting on non-executive directors. Their guidance focuses on the requirements of the Board to identify and incorporate the sources and levels of risk taken by the organisation. "In order to increase the value for shareholders, there is a possibility that the organisation is exposed to risk, arising from either the internal or external environment. There is a need to ensure that the systems within an organisation are operating effectively and efficiently and the level of risk is properly identified and managed. Internal control is one of the principal means of managing risk, and the Board may need to adopt various devices to ensure its effective management," cautions Dr. Gin Chong (2000). These include transfer of risk to third parties, sharing risks, contingency planning and withdrawal from unacceptable risk activities.

"A fully integrated audit operation understands and strengthens the universe of risk management for the organisation and for the benefit of the company's stakeholders. Therefore, every progressive organisation should address the role of internal auditing as a key player in corporate risk management—by evaluating the organisation's risks, assessing risk during the course of engagements, and improving the risk management process," says Fernandes (2000). Some of the risk assessment processes that companies use to calculate their economic capital requirements could also help determine their regulatory capital needs, when the new banking regulations come into force in 2005 or 2006.

If and when the Basel-II Accord is implemented, three basic standards of measurement will be possible (see **Appendix-1** for more details). The simplest standard of measurement is the *Basic Indicators Approach*, the next, the *Standardised Approach*, offers more control over capital allocation by using simple risk categorisation measures. The most advanced system is known as the *Advanced Management Approach*. When employing the third, the company will need to have a comprehensive approach to measuring operational risks and a methodology for quantifying the amount of capital needed to cover the risks. This is the most expensive approach.

However, reactions to Basel-II Accord have been mixed. These include issues of the amount capital banks need against a wide variety of credit exposures; the nature of the supervisory interface and supervisory judgement; and the extent to which

disclosure of financial and other information provides an important adjunct, or even substitute for supervision. "Having opened all these issues up, closing them down in a coherent manner, which carries broad-range industry and supervisory support from across the globe will not prove easy," asserts Peter Vipond (2000) in his article "*Pandora's Box Opened*". A rule of thumb is that the bigger the outfit, the more well-placed they are to take on its proposals. However, smaller firms have the advantage of having a smaller risk portfolio. Thus, Basel-II has brought operational risk to the forefront of the debate. The process has focused attention undoubtedly on good and qualitative management.

The core problem is how to ensure that the rules are applied consistently. "The goal is to understand the risks faced, work to quantify those risks, but, most importantly, reduce them through creating effective risk-reduction strategies and frameworks to monitor adherence to standards," asserts the Basel Committee. According to IBM's Mike Brook: "If banks can demonstrate to the regulators that they have adequate measures in place to manage, monitor and mitigate operational risks, they will qualify for a lower capital charge, leading to significant cost savings," (Gandy 2002). However, this has proved complex and some companies are finding it an intuitively difficult concept.

Rating agencies are also important drivers. If a bank is penalised for its poor operational risk procedure, it will affect its standing in the market. David Breden, risk consultant at *HSBC's Operational Risk Consultancy Division*, warns about the implications: "Pillar 3 in the proposed Basel-II structure means that banks will have to publicise the approach they are using. An investor will feel safer working with a bank that is using an advanced risk measurement and control system, which in turn, will influence its share prices in the long-term." However, a number of people close to operational risk noted that ratings agencies are already taking a closer interest in this issue and developing strategies for further incorporating the way they view this risk (see **Box-2: "Rating Agency Moody's Perspective"**).

"One idea mooted is that financial institutions with a credit rating below AA- would be automatically weighted at 50 per cent, rather than 20 per cent if above. Those below BBB- would be at 100 per cent,

those below B- at 150 per cent, and those without a rating at 50 per cent. If these rating criteria were to be implemented, there would not be many institutions left in the UK at the top level. It will be interesting to see how financial institutions react to the proposal," observes Brian Donnelly (2001) in his article titled "*Capital Punishment*." The proposal has had a mixed reaction from the industry. Since the new Accord aims to enhance discipline, by making banks meet greater public disclosure obligations, it will have far-reaching implications, not only for a country's banks, but for the whole economy.

"Risk management best practices and risk mitigation solutions—with respect to business continuity and information security and privacy—will play an important role in this process," asserts Dr. Gandy. It is clear that the value that can be derived from adopting best practice in operational resilience requires the integration and cooperation of many different business functions and activities. It is an expensive and difficult task. Different business units face different risks and some of them are hard to quantify and compare. However, the resulting systems can completely change the way that companies think about their profitability.

Box-2: Rating Agency Moody's Perspective

1 . How do you see the landscape for banks' operational risk changing?

The US Sarbanes-Oxley Act 2002, introduced following the loss of confidence in the financial system will have widespread impact in the UK. Basel II will introduce, for the first time, a risk-based capital charge for operational risk. The involvement of rating agencies will have an important impact.

2. What are the important drivers for implementing operational risk?

The most important drivers are the commercial benefits not the regulatory capital charge; although, this has acted as an important catalyst. Other important drivers will include legislative changes and guidelines in the areas of corporate governance and accounting.

3. Are you going to change ratings to reflect the requirements of Basel?

Capital is not the issue. An increase in capital will not reduce risk and excess capital can reduce finan-

cial performance. There is a widely held misconception that an increase in the level of capital held by a bank will automatically lead to an improvement in the rating awarded. Capital is part of the regulatory tool kit, but only a small part. For most problems capital is not our preferred response.

4. Where will you get the numbers to measure banks?

This question misses the point. Operational risk is about good management—risk-based management. It is not about quantification—although quantification may have some part to play in the overall scheme.

Quantification enhances knowledge and understanding, enabling advancement of tools, techniques and methodologies. It exposes underlying tacit assumptions and tests empirical views concerning the size and importance of losses. It also leads to greater accuracy of control and resource allocation.

Truly effective operational risk management will continue to remain underpinned by qualitatively stronger elements, such as, solid corporate governance, a healthy risk culture throughout the organisation, effective operational risk management at all levels and tight procedure and controls.

5. As the Banks have been unable to measure operational risk, do you think your efforts may eventually be a catalyst for change?

We are aware that our assessment of operational risk may change the way banks view operational risk. Post-Enron, we are being asked to take a more forensic approach. Legislators and investors want us to look behind the issuers' financial accounting in order to discover the underlying economic reality.

Moody believes that operational risk is becoming increasingly central to fundamental analysis of a rated institution. We consider stability and quality to be key primary business indicators.

(Source: Adapted from "Operational Risk: Keep it Simple," by David Breden, Financial World, Dec. 2002, page 35)

Operational Risk Control

There is a common perception that good operational risk management means a lot of controls. "Good operational risk management means the right controls in the right place," suggests David Breden (2002). Controls should identify the risk, assess it and put in place a system that will alert us if those risks are going to occur. Now, every organisation has the ability to define its individual tolerance to operational risk in the same way it does for credit risk.

"UK banks are dedicating considerable resources to developing their expertise in this area, ahead of the introduction of a capital charge for operational risk under the Basel Committee's proposed guidelines for capital adequacy—due to be introduced in 2007," observes Henry MacNevin (2003). For UK banks, as for banks elsewhere, the accurate measurement of operational risk, to a point where statistical means can be implemented for determining an appropriate capital charge, remains a key challenge. In a nutshell, the UK has become pretty good at corporate governance (a big part of operational risk management) but we are not quite there yet.

In anticipation of Basel-II, the "Willis Business Risk Practice" surveyed a dozen financial institutions. Roger Hines (2001) summarises the findings of the study in the following manner: "Respondents felt that regardless of Basel-II, managing operational risk made common business sense. Priorities included reaching a common internal understanding and definition of operational risk, and positioning risk management properly within the banks, not just adding it on. Medium-sized banks assigned responsibility for operational risk to individual business unit managers, supported by staff with specific responsibilities, while larger banks located operational risk management in a central unit—typically a risk management unit or internal audit unit—in order to help and support it.

Without in any way neglecting the established roles of internal audit and insurance, a combined approach addressing all kinds of risk and including all specialities, was seen as the best way forward. Further issues included quantitative prediction and reporting and the need to locate loss databases and mathematical modelling into a sound structure.

Some banks were well advanced in their programmes while others were in the early stages.”

Since assuming full regulatory power towards the end of 2001, the Financial Services Authority (FSA) has found itself dealing with a series of extremely important matters. Sir Howard Davies, Chairman of FSA sums up the challenge in December 2002: “The FSA is at the forefront in the war against money-laundering, in efforts to toughen up the risk management strategies of UK financial services institutions, and the implementation of Basel-II...The increased role of the FSA might add an additional 1 per cent to our budget. It is measurable but it is not radical...We are satisfied with the progress British banks have made with risk management...”

The FSA has, moreover, indicated that it is strongly in favour of operational risk management and has been active in the development of the New Capital Accord (Basel-II). Henry MacNevin suggests that: “In addition to a capital charge for operational risk under Pillar 1 of the new Basel Accord, the FSA will seek to implement additional charges, where appropriate, under the supervisory review process of Pillar-2.”

Calculating operational risk for financial services providers, however, is more difficult. Some risks (such as fraud or terrorism) are large one-off events, for which it is hard to obtain sufficient data to build a model. The focus here, therefore, has to be on reducing the risks by increasing security or improving management control, as capital alone might not be adequate. The challenge to the FSA (and to the banking industry) is, therefore, to make sure operational risk management gets to the same position as credit controls and credit risk management is now.

Catastrophe or Cat Bonds are a recent development in investing circles. By floating such bonds for specific (extreme and remote) risks over limited time periods in defined geographic regions, insurers and re-insurers reduce risk by transferring it to investors. Julian Roberts (2003) reports, “These bonds have been used to mitigate the insurance and re-insurance risks of hurricane damage to property in Florida during the hurricane season”.

Even the most advanced banks admit that their systems are not yet fully developed. Banks with-

out such programmes should consider designing and launching an enterprise improvement or risk management programme in order to help meet their business objectives. They can then include operational risk within the programme, which will be examining processes anyway.

In order for successful operational risk management to function, it must be phased in over a period of time and involve everyone at all levels. More difficult is the position where initiatives have been tried but run out of steam. When charting the way forward there is a mass of sound advice available to your bank in the form of comprehensive and well-written books on risk management. However, the problem is one of selection and adaptation. But the task is getting easier all the time as technology evolves and understanding deepens.

Regulators are, at present, putting increasing pressure on all financial services providers to improve their risk assessments. With financial markets becoming more competitive and increasingly volatile, companies are under continuous pressure from stakeholders and shareholders to generate better or more certain returns. Economic capital is the only tool that allows managers to compare performance across the company and make the best investment decisions. The IMF has also recently undertaken financial sector assessment programmes that examine the extent to which countries are complying with the good practice standards of Basel.

Appendix-I

Basel-II Proposals: An Overview

Goals: The Basel Committee was established by the governors of central banks in the Group of Ten countries at the end of 1974. The Committee’s members come from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom and the United States. These countries are represented by their central bank and also by the authority with formal responsibility for the prudential supervision of banking business, where this is not the central bank. The present Chairman of the Committee is Mr. William J. McDonough, President and CEO of the Federal Reserve Bank of New York. The Chairman introduced the proposal, noting: “The new framework is intended to align regulatory capital requirements more closely

with underlying risks and provide banks and their supervisors with several options for the assessment of capital adequacy.” (Dr. Tony Gandy (2002).

This reflects changes in other markets where firms, with sophisticated risk management environments, are able to determine their own capital requirements, within set criteria, and to use a value at risk approach. Understanding of risk has spread throughout the financial services industry and the current basic indicators approach is a straitjacket for firms that have a much greater understanding of their risk situation.

Pillars: The proposed new *Accord* is split into *three pillars*. Each pillar has some impact on the operational resilience and risk structure of a financial services company.

Pillar-1: This is the core capital adequacy element of the Accord that replaces the 1998 Accord. Its aim is to provide a more risk-sensitive approach to allocating capital and to building capital reserves, allowing firms with an advanced risk framework to use internal measures for determining these reserves. The goal of the Basel Committee is that following the introduction of the new Accord “on average, neither raises nor lowers regulatory capital for banks, after including the new operational risk capital charge. Naturally, capital requirements may increase or decrease for an individual bank depending on its risk profile.” As a part of this pillar, operational risk would be one of the components of determining capital requirements. Originally, the committee believed this should represent 20 per cent of total capital. Since its review process, it has announced that this will be lowered.

According to a statement by the *Bank for International Settlements*: “The committee has concluded that the target proportion of regulatory capital related to operational risk, that is 20 per cent, will be reduced in line with the view that this reflects too large an allocation of regulatory capital to this risk as the committee has defined it. The committee is considering numerous other comments and suggestions related to operational risk.” In September 2001, it reduced the figure proposed to 12 per cent of regulatory capital as a result of studies carried out in its *Quantitative Impact Study (QIS)*.

Pillar-2: This part of the New Basel Capital Accord concerns “the procedures through which supervi-

sors ensure that each bank has sound internal processes in place to assess the adequacy of its capital and set targets for capital that are commensurate with the bank’s specific risk profile and control environment. This internal process would then be subject to supervisory review and intervention, where appropriate.” In this respect, financial services companies will need to prove their operational soundness. Each country currently operates using some form of Pillar 2-type regulations. This is now incorporated into the Accord at the global level.

Pillar-3: This pillar provides for more detailed guidance on the disclosure of capital structure, risk exposure and capital adequacy. This will mean more knowledge available for the markets and analysis companies to see where risks are high and what allowances a firm has made for them. This could be used to expose firms that are seen as less vigorous in their operational risk management.

Timetable: The first Accord was put in place in 1988 and allowed for a minimum standard for capital adequacy to be implemented across the globe. This, in turn, allowed for a standard method of viewing banks in different countries and offered a simple guide for the balance between the assets and capital with which an institution was operating.

In January 2001, the Basel Committee, consisting of regulators and central bankers from around the globe, issued a consultative paper calling for comments on its proposal. Comments were to be returned by May 2001, with a target for implementation by 2004. However, parts of the Accord proved controversial and the Basel Committee announced it would review a number of areas. Lucia Dore (2001) aptly sums up by saying, “The new Basel Accord aims to bring stability to the International Financial System, but will it merely bring confusion?” The first issue is the amount of capital to be allowed against operational risk. Many were concerned about the validity of quantifying the problem and, indeed, the level of risk it represented. Second, the amount of risk and capital attributed to SME lending. This was a major issue for a number of banks, given their exposure to this market, particularly in Germany.

Because of the comprehensiveness of the responses and the need for others in the industry to contribute, another round of industry comment was invited for early 2002 with the implementation of

the new Accord put back until 2005. In May 2002, it was announced that the final impact study would be published in October, with input from over 300 banks, and that the implementation would be put back to 2006.

Types of Risk: The Basel Committee has defined three kinds of risk, which are summarised below:

1. Credit Risk: This refers to the risk that the other party to a transaction will not fulfil its obligation (to repay a loan, for example). One sub-set of credit risk is “country risk”. Mr. Walter Wriston, a former chairman of Citibank, famously said: “Countries never go bust.” But the 1980s proved they could still default, obliging lenders to reschedule and restructure their loans at huge losses.

2. Market Risk: This concerns the possibility that market conditions will change in a way that is detrimental to the positions held by traders and portfolio managers. Changes in interest rates, foreign exchange rates, equity prices and commodity prices can all affect the value of a portfolio. Market risk refers to the sensitivity to such changes.

3. Operational Risk: Human error, system failures, insufficient capacity to handle peaks in transaction volume—all can expose an organisation to loss. Operational risk is often described as all the other risks not contained in the “traditional” risks of credit and market risks—the risks that credit and market specialist units could not quantify in the past. Operational shortcomings played a role in the collapse of Barings. Its management’s failure to segregate the front and back offices or reconcile the \$ 70 million-plus transferred from London to Singapore, allowed Mr. Nick Leeson to break the bank with his unauthorised trading.

Operational risk differs significantly from other risk areas. “Market and credit risk decisions largely reside in the hands of very few people, who are well trained, with good tools at their disposal and the necessary information to assess that risk. With operational risk, however, you do not know which cog is going to fail,” concludes David Breden (2002). If you examine cases where organisations have experienced spectacular losses they tend not to be caused by someone operating in a central unit. Rather they were geographically distant or involved in an operation that was not very profitable.

Operational risk pervades everything we do. It affects everybody from the chairman to the most humble employee in the most distant branch—you cannot link the size of the loss with the size of the operation. A common feature in many organisations that have sustained huge losses is that they were happy to place their faith in a person’s particular expertise and integrity. Equally, if these experts come from outside the banking world, they may have a different conception of “acceptable behaviour” or of “acceptable risks”. If these terms are not defined then the individual has no chance of appreciating what is important for the organisation.

The Choices: It is hoped that Basel-II will encourage institutions to move to a more sensitive method of measuring risk. It is proposed that the operational risk element follows the same path. *Three levels* are being proposed:

Basic Indicator Approach: The bank will be expected to hold a fixed percentage of capital to cover the operational risk it faces. The question facing the Basel Committee has been a percentage of what? While the original capital adequacy ratios were about controlling uncontrolled lending, thereby influencing credit risk behaviour, operational risk is not about the absolute level of assets. The indication being discussed and proposed is gross income, which is a better indicator of activity than total asset levels.

Standardised Approach: This is not dissimilar to an extended version of the categorisation of assets used in the current Accord. However, it looks instead at categorising the activities of institutions and the operational risk seen in each of the categories. In this case, capital requirements will be calculated on the gross income from each type of business (calculated as net interest income plus net non-interest income) and then modified by the “beta” factor. The beta factor would be different (ranging from b1 to b8) for each of the eight business activities identified by the Basel Committee. It may be assumed that the b value for payments and assessments will be higher than that for corporate finance, where operational risks are lower. This gives firms an opportunity to better reflect the types of business they do and give those with a weighting towards less risky activity a chance to reflect this in the capital allocated to operational risk.

Advanced Measurement Approach: Originally, the Basel Committee proposed that in order to allow institutions to build a more sensitive allocation, methodology should be based on a single approach—the internal measurement approach. In the September discussion paper, it was proposed that this be broadened to allow banks to continue working on their own operational risk and economic capital allocation strategies.

Their internal methodologies will be subject to a set of qualitative and quantitative standards set by the Basel Committee. The quantitative criteria will ensure that the basis of calculation is internally coherent. It will ensure that the risk management environment, the risk control efforts or the operational resilience environment are sound and monitored. The standardised approach will form a base line for the advanced measurement approach. However, under these proposals, banks will be able to reduce their operational risk-related regulatory capital by up to 25 percent.

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For additional information visit the IIA web site: <http://www.theiaa.org> or that of the IIA-UK at <http://www.iaa.org.uk>.

Risk Management - A Case Study

VIDEOTRONICS LIMITED

Madan Lal Bhasin

Abstract: Recent years have witnessed an increasing awareness in the corporate sector of the potential benefits to be gained by hedging interest and exchange rate exposures. Management of interest and exchange rate risk is a complicated and dynamic process. For companies to hedge effectively, it is important that they have a well thought out strategy.

The present case study describes a real-life business situation focusing on interest rate swap and fixed rate agreements as mechanisms in order to cover risks arising from both exchange rate fluctuation and interest rate fluctuation in international markets.

Videotronics Limited (a disguised name) is a public limited company involved in the manufacture of colour picture tubes and had a turnover of over \$150 million per annum. It had large foreign currency exposures in the form of imports of components and foreign currency loans.

In 1994, the company, availed of a foreign currency loan of 16.25 million USD from Industrial Finance Corporation, financed the purchase of sophisticated, state-of-art machinery from Japan. The loan carried a floating interest of LIBOR + 1.5 per cent. Repayment of this loan was slated to commence from December 1998 onwards in 10 half-yearly, equal instalments. Being a small loan by international standards, the company did not have any option but to go in for this floating rate loan, as no fixed rate loan was available.

Mr. Raj Singh, Financial Controller of Videotronics Limited, was concerned that the *foreign currency loans* of the company were exposed to *two types of risk*: (a) **exchange rate fluctuation risk**, and (b) **interest rate fluctuation risk** (as the loan carried a *floating interest of LIBOR + 1.5 per cent*). Furthermore, the London Inter-Bank Offered Rate (LIBOR), a key inter-bank money market interest rate, was subject to fluctuations.

The management of the company had taken the decision to cover its exchange rate fluctuation risk by entering into a *rollover contract* with its bankers. However, as the U.S. Presidential elections were approaching (assume that they were just about a month away), he became worried about their unhedged position regarding interest rate risk.

Mr. Singh discussed this problem with Finance Manager, Mr. Jai Kumar, who had already had some experience in the foreign exchange risk management field. Mr. Kumar agreed that something needed to be done immediately. He put forward his reasoning as follows: *"I think the time is ripe to hedge our floating rate by swapping it with a fixed rate. I reckon the six month LIBOR for Dollar (\$) loans has bottomed out, and I expect that interest rates will move further up in the very near future. I know many public sector and private sector companies that have entered into either Interest Rate Swap Agreements or Fixed Rate Agreements to take advantage of the prevailing lower interest rates. As the LIBOR has already started rising and is expected to rise further, we could make some savings by locking in at the prevailing swap rates."*

The Financial Controller asked the Finance Manager to look into the whole situation and submit his report, along with recommendations, as quickly as possible.

Jai Kumar immediately got in touch with his bank and updated himself with the recent developments, as well as, going through the current literature on the subject. He found that to cover interest rate risk, various products are available in the international financial markets, for example, Interest Rate Swaps (IRS), Fixed Rate Agreements (FRA), Caps and Bonds, Options, etc. However, he noted that at that time two popular products that were widely used to cover exchange rate and interest rate fluctuation risks were *Fixed Rate Agreements* and *Interest Rate Swaps*.

Jai Kumar, in his own flamboyant style, saw this as an opportunity to make a great saving in interest costs out of the transaction rather than just to hedge the interest rate risk. He, therefore, concluded that the Fixed Rate Agreement was not suitable because that facility was only available for a maximum of two six-monthly instalments. Because the loan in question was long-term, a fresh Fixed Rate Agreement would have to be entered into every year at a new interest rate, which would again depend on the prevailing LIBOR. He, therefore, felt that “*by entering into a Fixed Rate Agreement, the chances of making some gain (in the form of savings in costs) are very limited.*”

Jai Kumar then looked into the option of an *Interest Rate Swap*. Here, two parties would enter into a contract called a “swap transaction” for a specific period, wherein both exchange their servicing obligations with a counter party who has raised a loan in a different market or under different terms and conditions. Thus, the interest rate swap may either be from a fixed to a floating rate or a vice-versa. The interest rate swap was available for long periods, up to 10 years. “In a situation where interest rates are expected to rise,” an interest rate swap appeared to be a good instrument to Kumar for making a gain, besides providing an effective hedge. He, therefore, decided to explore this option further and called for *swap rates* from his bank. The bank quoted the following swap rates (as shown in **Table-1**):

Table-1: Quotation of Swap Rates by X Bank

Period	Swap Rate (applicable for the period of the swap from day one)
2 Years	4.07
3 Years	4.76
4 Years	5.29
5 Years	5.74
7 Years	6.29
10 Years	6.79

The above quotation for LIBOR, however, was subject to change on a day-to-day basis. The bank would charge the company approximately 10 basis points (this means 0.10 is to be added to the swap rate) as their margin, in addition to the above rates. The bank would either collect or pay the company the difference between the swap rate and the relevant LIBOR (the LIBOR is fixed six months in advance of the due date as per the payment schedule of the interest). The company would continue to pay Industrial Finance Corporation, LIBOR + 1.5 per cent on the due dates. Repayment of the loan would start from December 1998 and be finally repaid in 2003-04.

The bank advised the Finance Manager (Jai Kumar) to take a two-year Interest Rate Swap contract. However, the Finance Manager was not convinced by this advice and, therefore, decided to take a second opinion from a couple of consultants on the matter before finally making up his mind. At the same time, he shot an application to the Ministry of Finance to obtain approval of the swap transaction.

M/s. Forex Projections Associates, the first consultant, made the following recommendations:

1. “The break-even rate at which Dollar-LIBOR needs to rise over the next 2 to 3 years for the swap to be beneficial is enclosed (see **Annexure-1**). It may be noted that while in the case of the three-year swap, the rise every six months has to be 0.6742 per cent per annum, in the case of the two-year swap, it is lower at 0.5686 per cent.
2. With the United States (U.S.) economy expected to come out of recession in early 1998, we expect an increase in U.S. interest rates likely. **We, therefore, recommend that the two-year swap should be taken.**
3. Data from the U.S. continues to support a weak economy. The September employment data, however, is due next Friday, and if it is bad, there is some possibility of lower U.S. interest rates. We, therefore, suggest that you should wait for a couple of weeks before finalising the swap terms in order to benefit from a lower fixed rate (the basic economics of the swap will not change).”

Recommendations from the second consultant, M/s. Current Financial Services, in summary are:

1. "Preliminary investigation suggests that the rates offered to you by your bank are quite good.
2. With the current wild uncertainty in world markets, the upcoming U.S. elections, and the excellent rates prevailing now, we would suggest that you 'lock in', as early as possible.
3. The average six-month Dollar-LIBOR over the past two years has been 5.5 per cent, even though the U.S. economy continues to remain sluggish. Moreover, U.S. economic policies are disposed to inflation, and over the next four to five years, we would not be surprised to see rates touching 7 per cent.

Thus, we feel that you should go for a '**split hedge**'—doing some part for 2 years and the balance for 5 years. Go for it."

In a subsequent Fax, the same consultant, however, advised: "*For a 2-year swap to be profitable, U.S. interest rates have to rise as fast as they fell over the past 2 years. This is unlikely, since the U.S. recovery is likely to be slow (certainly over the front-end since world markets for their exports will not be growing rapidly) and since inflationary fears remain subdued. We would suggest only a partial swap—say, 2 million.*"

In the meantime, the company also received the approval of the Ministry of Finance.

Jai Kumar did some research of his own and came up with the conclusion that the U.S. economy was poised for recovery in early January 1998. With the new President designate to take office in January, the market was hoping for an increase in long-term interest rates. New government policies were expected to bring an increase in inflation through increased spending. To curb the inflation, interest rates would have to be hiked. Already, the market had started moving up in anticipation and once the new policies were announced interest rates would move-up further. He looked into the behaviour of the six-month LIBOR-Dollar Interest Rates.

The figures released by the U.S. government, so far, indicated that the economy had started recovering albeit in a sluggish manner. Due to recent developments in the U.S.A., the swap market had already moved up by 50 to 60 basis points. Ear-

lier, it was expected that US Federal Bank would announce a cut in interest rates, but it had not yet fulfilled expectations. No cut in interest rates was expected at that time; rather everyone expected the increase a little later.

Based on his own computations and the six monthly LIBOR rate trend, Finance Manager (Jai Kumar), concluded that an "Interest Rate Swap for a period of three years was suitable."

Finally, Jai Kumar submitted his report to the Financial Controller, containing all the above details with a suggestion that the Interest Rate Swaps should be entered into for three years. However, the Financial Controller promised to look into the entire matter and get back to him with his decision a little later.

Discussion Questions

1. What are 'Interest Rate Risk' and 'Exchange Rate Risk', and what are their types? What are the various techniques available for covering both categories of risks in the international financial markets?
2. Placing yourself in the situation described in the case, do you agree with the conclusions arrived at by the Finance Manager, and would you go for an Interest Rate Swap (IRS) for a period of three years? Justify your answer.
3. Do you think that Mr. Jai Kumar should have looked into the option of a Fixed Rate Agreement (FRA) in greater detail than he did? Why?
4. Suppose you were the Financial Controller, what additional factors would you like to consider so as to cover/overcome risks of exchange rate and interest rate fluctuations in the global context?

Basel II and Lending to SMEs: What Lies Ahead?

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Introduction

Sustainable economic growth is strongly related to the rate of enterprise creation and technical innovation. Enterprise creation depends to a large extent on the ease with which businesses can be started and financed. Small and medium-sized enterprises (hereinafter 'SMEs') form an essential part of the healthy economy and this form of entrepreneurship should be favoured and encouraged in all countries. However, SMEs face many difficulties both with start-ups and also with their ongoing business operations. One of the issues which has created most concern and discussion is lending to SMEs. Frequently financial institutions find it difficult to serve SMEs for several reasons and SMEs themselves do not ask for credit.

This paper aims at observing SME lending in more detail to identify the character of SMEs. We seek to define what prevents banks from lending to SMEs. We examine typical SME credit risk, discuss the issues regarding internal and external rating of SMEs and pricing of credit to SMEs at present and according to the new Basel Accord (hereinafter 'Basel II').

Although this paper attempts to cover the issues in general and looks at some aspects from the European Union (hereinafter 'EU') perspective, we also find the contents of the paper highly relevant for Estonia. According to the EU criteria set for SMEs, around 99% of enterprises in Estonia are SMEs (Basdevant and Kaasik 2002, 3). Thus, SMEs form the main market of enterprise customers for Estonian banks and Basel II implementations relating to SMEs will most probably be a serious concern for Estonian banks and supervisors. Typically Estonian SMEs are not highly stable but they are developing, and their development and growth trigger the need for financing. As the Estonian financial system is highly bank-oriented and capi-

tal markets are underdeveloped, bank loans will be a primary source of financing for SMEs.

At international level, credit risk issues have received great attention by regulators. The 1988 Basel Accord provides a set of advisory rules for the measurement of credit risk. The rules comprise the ratios of risk weighting and are today used in most countries. However, the best ways to measure, manage and mitigate risks are in fact derived from the banks' own best practice. It is also essential to distinguish between exposures for large companies and SMEs, because their structure, opportunities and also risks differ very much. Banks have their own credit risk rating systems in place, but are they adequate in relation to SMEs?

Basel II, which was introduced in 1996, aims to provide flexibility with respect to the treatment of loans to SMEs. However, the introduction of Basel II facilitates discussion on the adequacy of current pricing of credit to SMEs by financial institutions. In this paper we discuss the effect of Basel II rules on SME lending. We try to determine whether the current controversy about lending to SMEs and Basel II stems from overextended credit to SMEs on the part of the banks and the under pricing of risks related to the credit. We also seek to determine whether and in which aspects Basel II is to improve credit to SMEs and how the new rules affect the pricing of the risk by banks.

The paper consists of three parts. In the first part we seek to determine the character and typical financing of SMEs. We focus on the European Union framework, identifying how SMEs are defined and what the criteria are for such a definition of SMEs'. In the second part we discuss why banks might not want to lend to SMEs. We examine risk pricing through external and internal rating issues provided by Basel II and discuss the nature of credit risk in regard to SMEs. In the last chapter

we discuss the major problems of SME lending in relation to Basel II. We discuss how Basel II affects SME lending and whether the concerns about the current under pricing of credit to SMEs is grounded, and if so, whether it would help to bring the situation to an end. We seek to identify whether Basel II will improve credit risk pricing and allow greater financing possibilities for SMEs, and what the promises and pitfalls of Basel II might be.

SMEs and Loan Financing

The Character of SMEs

When it comes to discussion of key issues related to SME-loans, we need to start by defining SMEs. Understandings of the nature of an SME differ between countries, since they are dependent on a country's developments, traditions, system and economic state. The most common factors for SME definition are the number of employees, total assets and/or turnover. We have chosen to examine how SMEs are characterised within the EU.

There are 19 million SMEs in the EU representing around 99 % of all EU enterprises and employing more than 74 million people. These enterprises are a source of employment, innovation, entrepreneurship and growth. Small businesses have also become the backbone of economic development in the candidate countries. Today there are about 6 million enterprises, most of which are micro-sized. SMEs account for 72% of total employment. (European Commission Enterprise Directorate-General 2003, 14)

In the EU and also EEA wide, different characteristics for the definitions of SMEs are set by the European Commission (hereinafter 'the Commission'). A common EU definition of what constitutes an SME is crucial because it is used as a basis for decisions on funding in EU legislation. This means that the various categories of SMEs (micro, small and medium) have to be defined in a way that is economically fair, legally secure for the enterprises and easy to apply in administration procedures.

The Commission currently defines SMEs as enterprises with less than 250 employees and with either a maximum annual turnover of EUR 50 million or an annual balance sheet total not exceeding EUR 43 million. They also have to conform with the criterion of independence: those enterprises which

are not owned as to 25% or more of the capital or the voting rights by one enterprise, or jointly by several enterprises falling outside the definition of an SME. A small enterprise has fewer than 50 employees and reaches either a maximum annual turnover of EUR 7 million or a maximum annual balance sheet total of EUR 5 million. The micro-enterprise is further distinguished from other small enterprises as an enterprise of less than 10 employees. (European Commission, Recommendation 96/280/EC)

In addition to the Commission's view, some well-known credit guarantee providers have established criteria for the treatment of SMEs. Among those, we examined the European Investment Fund (hereinafter 'EIB'), a well-known financial institution promoting the financing of SMEs in the EU through its different products. Credit insurance and credit guarantee facilities of the EIB set credit insurance application criteria for eligible assets (i.e. SME loans) in the loan portfolios of banks.

Under those criteria, an enterprise qualified as an SME has to

- a) be established in the EU;
- b) have no more than 500 employees;
- c) have net fixed assets not exceeding EUR 75 million;
- d) be independent in terms of equity holding by companies not complying with SME definition—the shareholding of such companies should be less than 1/3 of its equity. (European Investment Fund 2003)

The current SME definition has been used for some time and is expected to change in the near future. It is clear that the current definition needs to be amended by taking into account economic developments and in order to fit the recent changes regarding different EU (state aid and funding) regulations. In May 2003, the Commission has adopted a new recommendation (2003/361/EEC) which will change the current definition as from 1 January 2005.

Consultations on the new definition have led to significant amendments to the definition, the main future changes in the definition relate to:

- a) an important rise in the financial thresholds for micro, small and medium-sized enterprises;

- b) a model for a more user-friendly declaration of enterprises;
- c) clearer typology of enterprises (“autonomous”, “partner”, “linked” enterprises) which makes it possible to grant partner enterprises much more favourable treatment than under the current regulations and therewith a revision of the criterion of independence;
- d) more favourable treatment of apprentices and students in professional training who benefit from an apprenticeship contract or training. (European Commission 2002, 7-8)

Typical Loan Financing for SMEs

The need for additional funds among SMEs is related to the economic and political situation. Investment is normally considered by SMEs when the business runs well and there is a further increase in demand expected in the future. Commercial lending to SMEs is the disbursement of loans from banks based entirely on commercial considerations and prudential banking principles. SME-typical credit can be divided into two major types of facilities depending on the purpose of the finance. Most commonly loans to SMEs are divided into either working capital loans or investment loans. The working capital loan is generally granted for shorter periods of time (6 months to 1 year) with the possibility of prolonging the facility. Working capital loans are frequently provided in the form of an overdraft within a certain limit of credit over a certain period (usually 1 month) and require repayment of the used credit limit and interest by the beginning of the following month.

Investment loans provide finance for a longer period of time (3 – 5 years) and are usually granted to the borrower either in one lump sum or several instalments. Investment loans usually require both the payment of interest and repayment of an agreed part of the outstanding facility within certain periods of time (e.g. on monthly basis, semi-annually, etc). By the end of the loan term, the whole principal should be repaid to the lender. Working capital loans are used to provide liquidity and support the daily business of an SME, while investment loans usually serve an expansion phase to finance an SME's investments in such things as real estate, machinery, etc.

The Foundations of Bank Lending to SMEs

What Prevents Banks from Lending to SMEs?

On the one hand, SME loans certainly provide banks with attractive profit margins on fairly reasonable transaction costs. Lending decisions among banks are driven by their profit expectations. The profit expected from an SME loan is usually determined by the bank's own costs of funding; transaction costs on the loan; interest, fees and follow-up business; and the anticipated credit risk (i.e. the expected likelihood that the SME fails to pay the interest and principal repayment either on time and/or completely). However, in addition to determining profits from loans to SMEs, some of the same determinants from a different angle can be seen as the factors, which also prevent banks from lending to SMEs. There are several weaknesses attributed to SMEs. We will now examine the main reasons why banks might be reluctant to lend to SMEs.

Transaction Costs

Transaction costs include all costs that are incurred to the bank with an SME-loan, including salaries, advertising costs and the costs of external expertise eventually required to evaluate the collateral of the loan. Usually the reason why banks might be reluctant to grant the loan due to transaction costs is the amount of the loan. (Asian Development Bank 2001, 7-8) A typical SME loan cannot be viewed in the corporate lending context. However, the usual rule for the estimation of transaction costs related to an SME-loan is – the smaller the loan amount, the higher the transaction costs of the loan for the bank. The cost of risk analysis is assumed to be too high in the case of SME loans and SME finance by nature is often considered an unprofitable segment of a bank's activity.

The Credit Risk of a Typical SME

The interest rate of a loan reflects the credit risk of a borrower. For certain reasons interest rates for SME loans tend to be higher than those in corporate lending. Higher interest rates for SME loans usually reflect the credit risk of a typical SME. SMEs are usually less capitalised; that is, they have an over-reliance on bank debt and low equity. SMEs are usually set up using the legal form which requires either lower stated capital (e.g. limited liability companies (GmbH) in Germany) or do not

require direct stated capital at all (e.g. limited partnership). On the one hand, a typical SME is found to be highly flexible - it can and also has to quickly adapt to changing market situations (Asian Development Bank 2001, 9). However, due to low capital intensity, a typical SME also has a higher expected likelihood of insolvency. Thus, banks might be reluctant to lend under circumstances where they will mainly be looking at the expected cash flow of an SME, but the expected gains from the loan are not high enough.

Insufficient Collateral

SMEs often have insufficient collateral, which blocks an SME's access to finance. SME's borrowing is usually aimed at expanding their business and funding time gaps in receiving income. Banks on the other hand have a duty to protect depositors' funds - this makes them averse to risk and they seek to protect themselves by requiring collateral. In addition to repayment ability and contribution to the purpose of the loan, SMEs need to support the loan with collateral. The collateral, however, has to be adequate and acceptable (sufficient and liquid) to the bank. On the one hand, it is often the case that SME borrowers do not have acceptable collateral and this is one of the reasons banks may refuse credit to SMEs.

This problem may be reduced by the use of several guarantees or guarantee funds aimed at SME loans, which provide risk sharing and allow SMEs to access finance (Rute 2002), although, in this case SMEs do incur additional costs in obtaining access to finance. On the other hand, another issue is again the transaction costs incurred by the banks. The transaction costs to borrowers in terms of information provision are generally high and this in turn may restrict access to finance even for those SMEs that *can* provide acceptable collateral.

The Information and Risk Management Systems in SMEs

There are several weaknesses related to information and risk management in SMEs that are quite relevant to the credit risk of SMEs. First, loans to SMEs very often lack a credit history. Modern credit scoring models advise statistical analysis of large amounts of data, both predictive (i.e. data available at the time of the credit decision/the time at which credit was granted to an account) and

performance data (i.e. data that is available in the period after the lending decision was made, reflecting the payments history). However, when there is a lack of credit history, credit scoring can not be exercised. (Dickens and Keppler, 4-5) Information asymmetry brought about by the absence of credit information on SMEs results in higher interest expenses for the sector.

Secondly, and also related to the rating of SMEs is the fact that SMEs are usually less capable of establishing and maintaining efficient information management systems. Mostly due to the associated high costs, SMEs have difficulties with the proper creation and maintenance of large amounts of data. There are also low transparency issues that matter, as owners fear the loss of their independence when disclosing data. Thus, they are not able to provide such data to the bank for credit risk evaluation and this results in the bank assuming a high credit risk to the SME concerned. We can identify two contradictory aspects regarding information management in SMEs.

On the one hand, it can be argued that there is little reason for SMEs to develop and exploit costly information management systems. Following this argument one can draw a simple example to understand such reasoning - it seems unlikely, that a family firm with 2-3 employees among the family members would in real terms ever benefit from investment in expensive information processing systems. On the other hand, there is a counter-argument that is linked to risk management issues in an SME.

SMEs tend to take risks without proper risk assessment, which can be the case either due to the lack of proper knowledge or information. Whatever the case is, we assume that SMEs seek to grow and develop. This can hardly be realised without proper internal management and information flows, which again relates back to risk management and proper risk assessment. The counter-argument relies on this turn of events and allows us to understand the following reasoning—as SMEs aim to grow, the establishment of proper information and risk management systems would in the longer perspective allow SMEs to benefit from their investment and help achieve the desired growth through better access to financing.

Rating and Risk Pricing of SME Loans in Basel II

Under the current Basel Accord approach, the weighted risk ratio in which capital is related to different categories of assets or off-balance-sheet exposures, weighted according to broad categories of relative riskiness, is the method for assessing the capital adequacy of banks. In the current framework, weights have been kept as simple as possible and only five weights are used - 0, 10, 20, 50 and 100%. In addition to the regulatory risk-weighting system, many banks themselves have established internal risk assessment systems for their loan portfolio, providing internal credit ratings for the borrowers. Those ratings provided by banks themselves on the loans to their borrowers are derived from the banks' knowledge of each particular borrower, the borrower's performance within credit facilities and other relevant information.

Banks also use credit ratings provided by external rating assessment institutions, but usually those ratings relate to larger companies. Usually most of the SME borrowers are not rated due to the fact that there is a lack of information and also because external ratings are costly. The most important problem in the current Basel approach is that the risk factor for companies is always 100%—this does not reflect the banks' point of view, whereby they prefer to differentiate the risk of loans according to the client's individual standing—and so companies with good standing pay for the risk of those with poor standing. (Reichling 2002)

Under the current regulatory framework, diversified assessments on loans have not been dealt with. As stated, banks have dealt with rating issues mainly on their own initiative to ensure the quality of their loan portfolios. The new Basel II, on

the other hand, provides more elaborate credit risk measurement methods. There are two basic approaches under the new framework—a standardised approach and an internal rating based approach (IRB). The IRB approach is based on the modern theory of loan portfolio management. The IRB approach has two variants—the foundation and advanced rating based approaches. They both need a certain input from the banks, which is the basis for determining the final risk weighting. (Basel Committee on Banking Supervision 2001, 13, 32-34)

As a method for calculating credit risk regardless of whether one uses either the standardised approach or IRB approach, Basel II deserves a high evaluation insofar that changes are made in weighting in response to asset risk characteristics. On the other hand, applying the stipulations of Basel II all the way through to small and medium-sized banks might lead to a credit crunch for many SMEs since they are the principal customers of these banks and could be assigned low credit ratings under the proposed system. We will now observe risk assessment and rating issues related to SME loans under those approaches.

Standardised Approach

The standardised approach is more risk sensitive than the current Basel Accord approach, but it is meant for less sophisticated banks. The standardised approach needs no input from banks, the rating defines the risk weight. Individual risk weights are to be set by a reference to a rating provided by an external credit assessment institution (agency). The standard risk weight for unrated claims on corporates is 100%. Under the standardised approach the risk weights of loans to corporates correlated to their credit rating are as follows:

Credit Assessment	AAA to AA-	A+ to A-	BBB+ to BB-	Below BB-	Unrated
Risk Weights	20%	50%	100%	150%	100%

Source: Basel Committee on Banking Supervision, 2001, p. 10

To describe how the standardised approach is put into practise, the following example can be drawn:
Credit amount = 10 000 EUR

Rating A: Capital requirement = 10 000 EUR x 50% x 8% = 400 EUR

Rating BBB+: Capital requirement = 10 000 EUR x 100% x 8% = 800 EUR

External Ratings

As stated, banks may use the credit assessment of external credit assessment institutions, which are objective, transparent and independent, and have strong credibility and international access. While the present Basel Accord provides risk weights of 100 % independent of the creditworthiness of enterprises, Basel II introduces risk weights which depend on a rating by recognised credit assessment institutions (external rating). A rating is a statement about the future ability of an enterprise to completely fulfil its obligations within the agreed time. The aim is to estimate the probability of default on the basis of intensive enterprise analysis. (Reichling 2002)

External ratings look at the quality factors, such as (Munsch 2002):

- a) management, management structure and personnel;
- b) objectives and product development;
- c) accounting, controlling and risk management;
- d) financial management;
- e) internal processes, production and technology;

- f) products, sales, marketing, market status, competition, customers and suppliers, etc.

In fact, external ratings are an alternative to the banks' own internal ratings. Banks only accept ratings from external credit assessment institutions that are approved by a supervision authority. The assumed result of externally priced credit risk is that companies with poor standing (higher risk) will have to pay higher interest rates than those with a reliable solvency.

However, external ratings are not in general a favourable condition for SMEs. Due to the cost of expertise, external ratings are mostly available for highly competitive SMEs. On the other hand, on account of increased risk attributes a good external rating is hard to achieve for SMEs. Thus, for SMEs it is not easy to get an external rating. External ratings are still only interesting for big enterprises, although in some countries rating agencies for SMEs have been initiated¹. For example, in 2001 the two rating agencies in Frankfurt had a special focus on the SME sector:

Rating agencies in Frankfurt

	Since	Focus	Cost of first rating	Analysts
Standard & Poor's	1992	all companies	50.000 Euro	19
Moody's	1991	all companies	50.000 Euro	8
Fitch	1999	all companies	35.000 Euro	2
EuroRatings	1999	SME's	from 9.000 Euro	7
GDUR	2001	SME's	from 2.000 Euro	-

Source: Landeszentralbank in Hessen, 2001.

We conclude that under the standardised approach the treatment of SME loans is still relatively inadequate for various reasons. Thus, two variants of the more sophisticated IRB approaches are being designed and introduced in Basel II.

Internal Rating Based Approach (IRB)

The implementation of Basel II will constitute a breakthrough for credit ratings, allowing banks to use recognised rating procedures to calculate the capital they need to set aside against the loans they

make. An efficient rating infrastructure with qualified experts will thus become a key competitive criterion among international financial centres. (Landeszentralbank in Hessen 2001)

The IRB approach involves *risk buckets*—with particular categories of exposure assigning a risk weight as in the current Basel Accord, but through a mapping from exposures to risk weights, it is based wholly or partly on the banks' own risk estimates. Under the IRB approach for corporate credits, banks will be permitted to separately

distinguish loans to SME borrowers from those to larger firms. Under the IRB approach, banks will be required to categorise banking-book exposures into six broad classes of assets with different underlying credit risk characteristics. The classes of assets are corporates, banks, sovereigns, retail, project finance and equity. The IRB allows banks to use their internal estimates of SME borrower creditworthiness to price their credit risk in the portfolio, the results of these estimates are then translated into estimates of a potential future loss amount. (Basel Committee on Banking Supervision 2001, 32-33)

It has been claimed that in the area of loans to SMEs, the approach where all businesses—large and small—are treated identically would ignore important aspects of the risks associated with SME lending. In the treatment of SME loans, banks may, under certain circumstances, treat the loans made to SMEs as retail loans under both the revised standardised and IRB approaches. In addition, under the IRB approaches, SME loans treated as corporate exposures will be assessed according to lower capital requirements than loans to larger companies with otherwise similar characteristics. (Basel Committee on Banking Supervision 10/2002, 6)

Under the IRB approach, SME loans receive more adequate risk pricing and they may be classified and treated under two categories—either as corporate or retail exposures. A corporate exposure is defined as a debt obligation of a corporation, partnership, or proprietorship. Exposures to corporates are characterised by the fact that the source of repayment is based primarily on the ongoing operations of the borrower, rather than the cash flow from a project or property. (Basel Committee on Banking Supervision 2001, 32) Additionally, banks that manage SME-related exposures in a manner similar to retail exposures can apply the retail IRB treatment to those exposures, provided that total exposure of the SME is less than EUR 1 million. The risk weights of such SMEs under the retail IRB approach are 75% instead of the current 100%. (Basel Committee on Banking Supervision 7/2002)

For corporate exposures the IRB comprises foundation and advanced methodologies for the estimation of risk components (there is no such distinction in the retail framework). In the foundation approach, a bank must internally estimate

the probability of default (PD) associated with a borrower grade, while relying on supervisory rules for the estimation of other risk components. Under the advanced approach banks may use internal estimates of three additional risk components: loss given default (LGD), exposure at default (EAD) and the treatment of guarantees/credit derivatives. Both IRB approaches have a far more diverse range of risk weights than that of the standardised approach resulting in greater risk sensitivity.

A bank's rating system allows for a separate assessment of SME borrower and transaction characteristics, providing for a meaningful differentiation of risk. A bank's rating system must have two dimensions. The first dimension must be oriented to the risk of borrower default. Separate exposures to the same borrower should be assigned to the same borrower grade, irrespective of any differences in the nature of each specific transaction. In addition, the bank must have a separate and distinct dimension, which takes into account transaction specific factors. A bank has a minimum of 6 to 9 borrower grades for performing loans, and a minimum of 2 grades for non-performing loans. A grade is defined as an assessment of borrower risk on the basis of a specified and distinct set of rating criteria. Each SME must be assigned a rating before any loan is originated. Borrowers are re-rated or reviewed by an independent credit unit at least on an annual basis. In addition, banks initiate a new rating if new material information on the borrower comes to light. (Basel Committee on Banking Supervision 2001, 46-54)

Ratings must be consistently applied throughout the entire banking organisation, including among credit officers, risk management and internal audit personnel (Martiny and Reinard 2002). In a best-practice risk rating system, the following consistent steps to an obligor rating might be involved (Mark and Crouhy 2001, 4):

- a) financial assessment of the borrower (initial obligor rating);
- b) analysis of managerial capability of the borrower;
- c) borrower's absolute and relative position within the industry (we see this as a difficulty for SME loans);
- d) review of the quality of financial information;
- e) review of country risk.

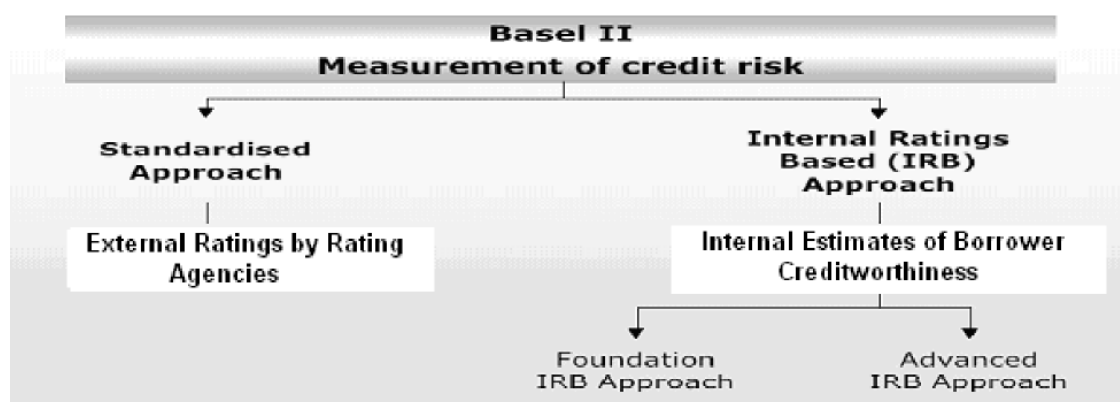
Internal rating includes several aspects of risk for banks (Munsch 2002):

- a) financial aspects: financial basis, liquidity, earnings situation, balance-sheet policies, comparison with business sector figures, creating score values by means of automatic reviews;
- b) company soft facts: market (competition, business sector, customers), management, production, inventories;
- c) credit line payment behaviour/experiences;
- d) integration of bank guarantees/bails
- e) group integration;

- f) standardised, fixed weighting of the rating factors.

The Effects of Basel II on SME Lending

Basically Basel II is only valid for international financial institutions and only has the character of a recommendation. However, the transformation into EU-legislation by directive shall be valid for all banks and security firms and shall be absolutely binding. As previously discussed, Basel II offers three different approaches to credit risk pricing:



Source: Reichling, 2002.

As a general consequence, we recognise that Basel II will lead to:

- a) a change in capital requirement regulations;
- b) profound changes to the estimation of creditworthiness and financing of SMEs;
- c) periodical adjustment of credit conditions subject to the rating;
- d) changes to the business policy of SMEs according to factors that influence the rating;
- e) the implementation of risk management systems; and,
- f) an intensification of the relationship between bank and enterprise.

One of the most important rationales for Basel II in relation to credit risk among SMEs has been the argument that under the present regulations banks might under-price SME loans and thus newer more appropriate risk pricing approaches would be necessary. In fact, it has been claimed that current under-pricing of SME loans has led to the need for new risk measurements. Indeed, as previously

examined, the current Basel Accord does not offer variations for adequate and proper risk pricing of SME loans. In the light of new risk pricing rules, one could argue that Basel II with its internal and external rating possibilities would allow greater risk sensitivity and more accurate pricing of SME loans. This would put an end to under-pricing the risks associated with SME loans and enhance risk management in banks.

Indeed, the new rules introduce a flexible framework of adequate and professional risk pricing, bind individual risks with capital requirements and create more incentive for banks to focus on risk pricing. However, we are in the opinion that all efficient, solid and success-oriented banks understand the need for adequate risk pricing without rules and regulations. We share the view that these banks have independently treated the risks of individual loans in their portfolio as adequately as possible and have created appropriate risk management systems.

Thus, for those banks Basel II credit risk implementation means that their ongoing practice will be turned into advisory rules, the only difference being that capital requirements will be tied to their risk pricing. On the other hand, for less advanced banks and banks in developing countries, Basel II will certainly introduce an enhancement of risk pricing and improve the current situation of underpricing the credit risk of SME loans.

We do not agree that all banks currently under-price the credit risk of SME loans and Basel II will introduce fundamentally new approaches to put an end to the current under-pricing. We favour the view, that current risk pricing depends very much on concrete institutions and their location. We believe, that many licensed and efficiently-run credit institutions in developed countries with strong traditions of prudential supervision, currently price the risks of SME loans as adequately as any other loan in their portfolio. Thus, they have proper credit risk management systems in place and Basel II will have less effect on them in these aspects. On the other hand, smaller, less advanced banks and banks in developing countries will evidently face many changes in their current credit risk policies and Basel II will have a significant impact on them. In general, Basel II credit risk measurement rules will influence both banks and SMEs, the major effect of Basel II will be examined as follows.

From the Perspective of the Banks

The major positive effect will be, as stated, that modern internal rating systems for banks will be developed in order to better estimate the credit risk of the borrower. Much of the banking industry would clearly like to move in the direction of setting capital charges for credit risk based on the banks' own internal models, though rating systems will be monitored by banking supervisors. Internal rating would create an intensification of the relationship between bank and enterprise, resulting in (Reichling 2002):

- a) intensive exchange of information between banks and SMEs;
- b) active participation by the bank in the assessment of the creditworthiness of SMEs;
- c) transfer of qualitative and quantitative information by SMEs;
- d) continued and permanent flow of information between banks and SMEs.

Additionally, the IRB approach is favoured by banks because (Mark and Crouhy 2001, 1-2):

- a) PD will be a very important parameter in credit decisions and will be determined through profound rating;
- b) PD determines the cost of capital which varies for individual risk pricing;
- c) banks can ask for more and detailed information;
- d) rating creates greater transparency; and,
- e) internal rating allows banks to calculate risk adjusted and risk adequate premiums.

On the other hand, Basel II might also have some drawbacks. We recognise the following potential negative effects of Basel II on banks (Reichling 2002):

- a) expenditures related to the establishment, implementation and maintenance of new appropriate risk measurement systems;
- b) the failure to make adequate allowance for the degree of reduction in risk exposure achievable by diversification;
- c) the possibility that Basel II would lead banks to restrict their lending, particularly if new capital requirements are introduced in deflationary conditions and downward pressure on their profits;
- d) the arbitrary and indiscriminating calibration of credit risks; and,
- e) prudential rules which translate higher credit risks during more difficult times into increased capital requirements, and thus more restrictive lending policies.

From the Perspective of SMEs

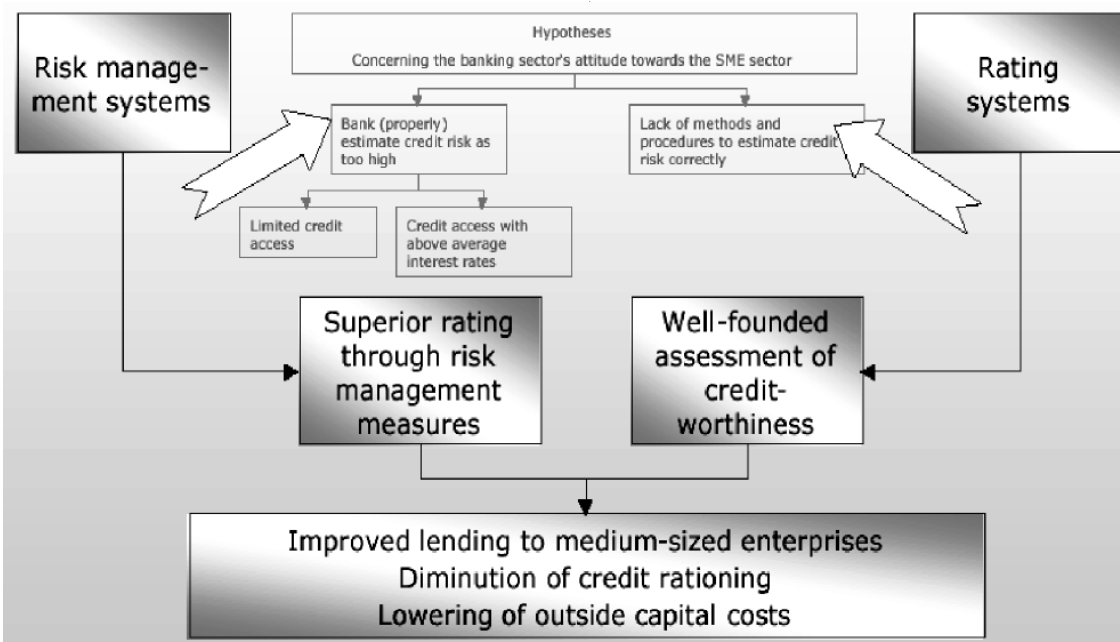
Positive Impacts of Basel II

From the SMEs' perspective, Basel II has raised several discussions. On the one hand, Basel II allows the concerns of SMEs to be taken into account. Basel II allows preferential treatment of SME loans—exposures to SMEs will be able to receive a lower capital requirement than exposures to larger firms with the same risk level (such a preferential treatment for SME loans is claimed to be justified, since portfolio and diversification effects in a bank's loan portfolio reduce the bank's risks). Secondly, the introduction of different rating systems for SME credits will allow greater financing possibilities for SMEs. (UEAPME 2003)

In relation to Basel II, SMEs will exercise more active risk management, whereby

- risk management and rating preparations will help to improve the rating of an SME;
- it is necessary to exercise measures to improve an SME's risk-return position to reduce debt capital costs;
- business policy orientation will be in accordance with the factors that influence the rating.

There will be facilitated credit access and decreased spreads for *healthy* enterprises. Additionally, SMEs will be able to signal their creditworthiness and to influence their rating through a consequent orientation of factors that aim at influencing the rating. (Reichling, 2002) To summarise the major positive effects on SMEs, we recognise that both the provision for internal ratings and the external-rating based approach under Basel II are expected to result in improved lending to SMEs according to following scheme:



Source: Reichling 2002

Drawbacks of Basel II

On the other hand, SMEs find that there are several potential drawbacks of Basel II that might worsen their financing conditions and have a negative impact. First, SMEs find that internal as well as external rating methods put more emphasis on financial ratios than on soft facts, which are very decisive factors for SMEs. The consequences could be worse rating results and increased credit costs. SMEs agree that Basel II will allow *good* firms to get better loan conditions, but *bad* firms will be punished by credit rationing or higher total financing costs for the big banks (Bank 2002), which will result in high spreads for SMEs with a poor rating.

European SMEs see Basel II as a threat for the European economy and SMEs in particular, because the elaboration of Basel II is assumed to

be firmly based on Anglo-American economic and financial structures, where credit financing accounts for only 5.4%. In Europe however 23.3% of the companies' accounts payable consist of loans. Consequently an increase in financing costs by Basel II will cause major competition drawbacks for European SMEs. The general view held by SMEs is that as financing terms become more difficult, better preparations are required for negotiations with banks. (European Commission, Enterprise Directorate-General 2002)

Additionally, SMEs see a threat in the *procyclical trap*—the strong focus on the creditworthiness of SMEs will enforce cyclical downtrends of the economy, since during these times creditworthiness and hence ratings will get worse and therefore the cost of capital as well as the regulatory capital for banks will rise. And finally, their last major concern is

that under Basel II the recognition of collateral is not sufficiently wide ranging (the catalogue of risk reductive collateral only covers financial securities like cash deposits, certain bonds/shares and gold, as well as certain types of residential and commercial property). (European Commission, Enterprise Directorate-General 2002)

Effects on Interest Rates

Generally, interest rates on loans depend on the estimation of creditworthiness reflected in credit ratings. Effects on interest rates will show a trend towards a risk-oriented margin spread. SMEs with a good rating will get advantageous credit conditions, transferring the cost reduction to their stakeholders. Consequently, risk premiums for SMEs with a good rating will decrease. SMEs with a poor rating, on the other hand, will get disadvantageous credit conditions and thereby transfer the cost disadvantage to their stakeholders. Consequently, on functioning capital markets, SMEs with a poor rating will obtain credits but with higher risk premiums. Effects on interest rates raise concerns especially in developing countries, as the proposed risks weights of the IRB approach are capable of leading to substantial increases in interest rates for lending to borrowers with low credit ratings, both within countries and internationally. (Reichling 2002)

Further Discussions

Related to the previously discussed potential negative implications of Basel II for SMEs, there are some important points that SMEs see as needing to be discussed further and possibly improved. They suggest a higher weighting of soft facts—such as personality and the engagement of the entrepreneur, good business plans or innovative product ideas—within the rating approaches in order to better imagine the operational reality. Additional special measures for new SMEs should be adopted in order to avoid any disadvantage for start up companies, which can't provide a proper rating history. (UEAPME 2003) Modifications within the rating approaches, which fully consider the particular cyclical trends; recognition of all other physical securities (objectively assessable, marketable securities); and the assignment of accounts receivable, unlisted and unrated bank bonds are among other desirable further changes. (European Commission, Enterprise Directorate-General 2002)

SMEs recognise the need for deleting the new criterion in the standard approach, which stipulates that an aggregate exposure to one counterparty can not exceed 0,2% of the overall regulatory retail portfolio. Applying this criterion would consequently discriminate smaller banks and SME customers of these banks, creating strong distortion of the competition in the banking sector. Obligations to banks should be set to the lowest possible minimum in order to avoid increased expenditures for banks due to highly bureaucratic new rules translating into higher financing costs for SMEs. (UEAPME 2003)

Conclusions

SMEs are of a specific nature, covering a variety of forms of entrepreneurship (micro-, medium-sized enterprises, etc.). The financing needs of SMEs are usually simpler than those of large corporates, but pricing SME credit is in many aspects more difficult and problematic. Thus, the credit risk posed by SMEs is usually assumed to be high. Because of high credit risk and transaction costs related to SME loans, banks are often reluctant to grant credit to SMEs under favourable conditions. Banks wish to be paid for such higher risks and they reflect their estimates via higher interest rates on SME loans. SME-typical credit risk reflects a strong dependence on debt financing and SMEs often lack adequate and liquid collateral. The other major negative SME-related factors, which affect bank lending to SMEs, are their lack of credit history, their lack of transparency and improper risk management and information systems. SMEs usually do not have external rating, due to the high costs and lack of information for obtaining such a rating.

The current Basel Capital Accord does not differentiate between different enterprises and their credit risk. One of the major concerns among regulators in adopting the new Basel II is that under the current approach banks under-price SME credit risks. Basel II is expected to eliminate that problem. Indeed, on the one hand, Basel II will introduce a variety of sophisticated risk management models, which use both external as well as the banks' own ratings.

On the other hand, those models are based on current best credit risk management practice among banks and we believe that at least the larger and

more efficient banks have their own risk management systems in place, with or without Basel II, in order to be able to maintain a credit portfolio of good quality. We agree that, although costly and complex for less advanced banks and banks in developing countries, Basel II will considerably enhance their credit risk management (and improve the pricing of SME credit risk in particular). However, we find that for larger and more advanced banks, which have multiple-grade credit risk management systems in place, the impact of Basel II will result mainly in credit risk related capital requirements.

Basel II will have an impact on both banks and SMEs. Banks will obviously highly favour their own internal rating based models, which allow a more thorough assessment of the credit risk of SMEs. On the other hand, we recognise that the establishment and maintenance of Basel II requirements might result in several forms of costs for banks. It is claimed, on the one hand, that SMEs will receive more appropriate treatment and therefore larger financing opportunities under Basel II. On the other hand, SMEs claim that ratings and interest rates will be beneficial only for *healthy* SMEs and that soft facts will receive too little attention.

Notes

¹ In the mid-1990s, initiatives for setting up rating agencies focusing on the SME sector in Germany proved to be rather successful. As global market leaders were considered to be inappropriate for assessing the credit standing of SMEs, this initiative also received political support in some federal states.

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Changes in an Accounting Model: Some Comments

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Abstract: This paper is written according to a belief that financial statements on the basis of historical cost served the bygone industrial era well, but have become obsolete and are no longer sufficient for evaluating companies in the information era. Rapid improvements to both information technology and transportation are resulting in a single global economy. Few business decisions can be made without consideration of international factors. Companies are aware that their accounting systems do not provide the useful information investors need. Reliance on financial statements has become insufficient for evaluating a company's ability to create future economic value.

The author would like to emphasise the fact that the current Estonian Accounting Act, entered into force 01.01.2003, is moving towards fair value accounting. The more perfect the market the more useful market values will be in measuring

income based on changes in the value of assets and liabilities. Under the real-world conditions in which accounting operates, market values need not exist for all assets and liabilities—a condition known as incomplete markets. Concepts are especially important in a world where the details are constantly changing. Students need an appreciation of the dynamics of accounting, because most students will forget procedural details within a short period of time. On the other hand, concepts should be remembered for a lifetime.

Introduction

Through the ages, mankind has developed three fundamentally different methods of wealth creation: agriculture, industry and information technology, see Figure 1. Each new wealth-creation method requires more sophisticated accounting information.

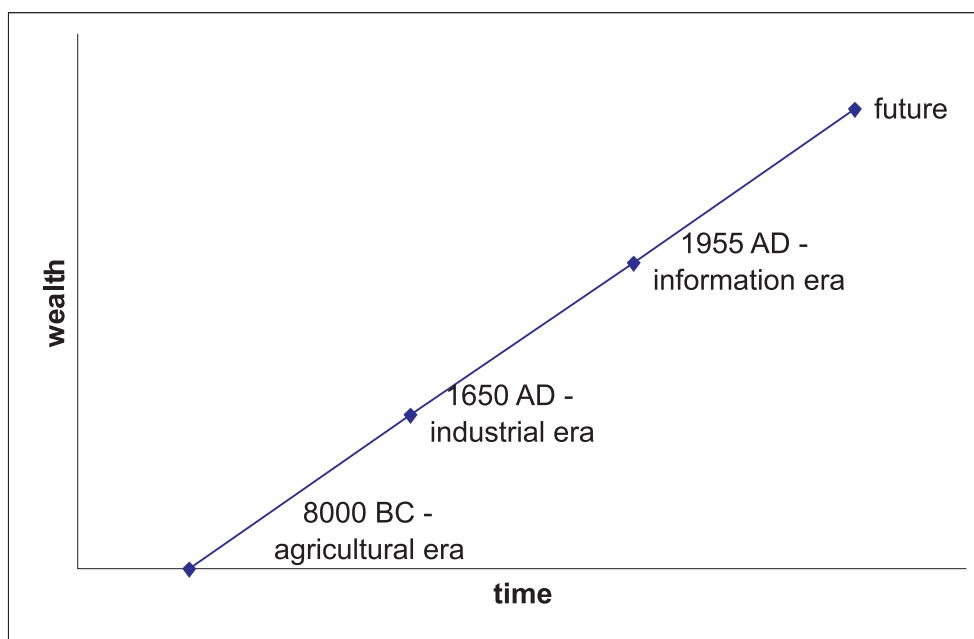


Figure 1: Methods of wealth creation (Source: Elliot, R. K. and Jacobson, P. D. 1991. p.57).

Prior to the existence of large-scale enterprises, if a measure of performance was needed, it was not uncommon for it to be arrived at by valuing assets and liabilities directly, computing the net asset position at two different dates and comparing one with the other to arrive at *economic income* (see Lamberg 2002, 30).

The emergence of large-scale enterprises in the nineteenth century and the consequent separation of ownership and management control created a need for financial statements for the purpose of accountability, that is, to ensure that managers rendered a reliable report of their activities to the owners. The historical cost accounting model focuses principally on tracking the cost of resources obtained and used by the business and on matching cost with the revenue realised by the business over time, that is accounting income. A balance sheet did not purport to show the realisable value of assets. The results were not a measure of the increase or decrease in wealth in terms of purchasing power.

Information technology permits companies to become more competitive by getting closer to their customers, improving the quality of goods and services supplied, providing a greater variety of product offerings, cutting their production cycle times, downsizing and operating as truly global enterprises.

Approaches to Income Accounting

Accounting for income is not merely an issue of reporting in a different format, but involves issues of recognition and with recognition, measurement. The recognition, measurement and reporting of income depend on the construction of an accounting theory and are important for the use of accounting information. There are just two approaches to theory construction.

There has been little discussion in accounting literature about the criteria for choosing an accounting model, which would best serve the needs of the users of financial information and guide standard-setters in choosing a preferred *accounting model*. For David Solomons *accounting model* means the body of accounting principles to be followed (Solomons 1995, 43).

Elliott and Jacobson have defined accounting model as the traditional financial statement, the balance sheet and the income statement, and the basis (concepts of accounting) on which they are prepared (Elliott and Jacobson 1991). Two approaches to calculating income according to an articulated accounting model are identified in Figure 2 (Belkaoui 1994, 189 - 190).

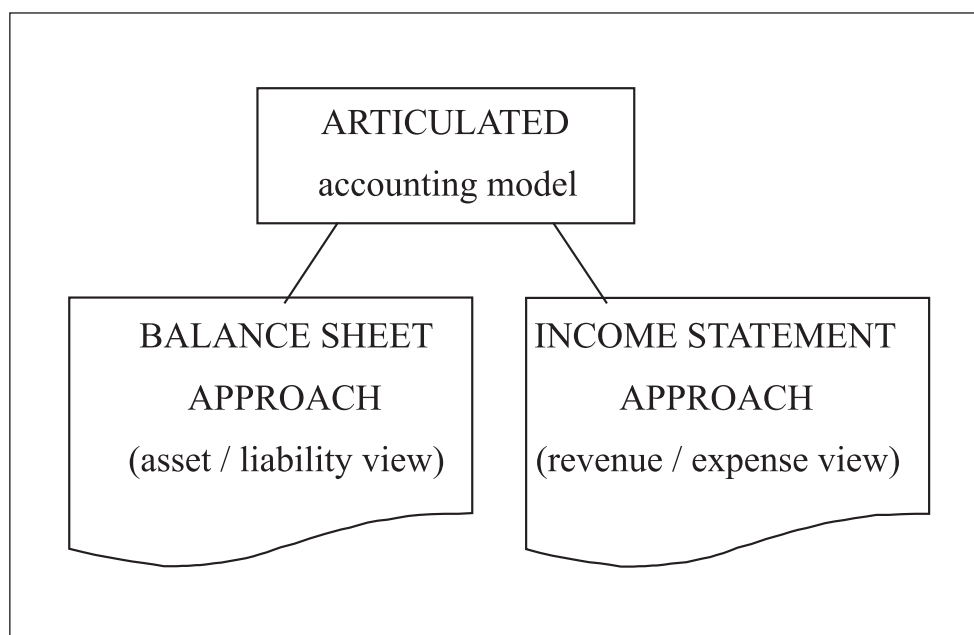


Figure 2: Accounting model

According to the Elliott and Jacobson definition, important aspects are a body of the basic elements of balance sheet and income statement to be included in the theoretical structure and accounting concepts.

Identifying and defining basic elements of financial statements may be provided by both the balance sheet approach and the income statement approach. Balance sheet elements describe amounts of resources and claims upon resources at a certain moment in time. Income statement elements describe amounts from the value creation process during a given period.

The Balance Sheet versus the Income Statement Approach

Being aware of the importance of objectives, the accounting profession has made various attempts to formulate the objectives of financial statements. Within a decade professional bodies were beginning to address questions of usefulness. Viewed now from the perspective of the information age, it is difficult to appreciate how far practice had moved with any real concern for usefulness.

The Study Group on the Objectives of Financial Statements (the Trueblood Committee of April 1971) at the *American Institute of Certified Public Accountants (AICPA)* published its findings in 1973:

The basic objective of financial statements is to provide information on which to base economic decisions (American Institute of Certified Public Accountants 1973).

This simple observation has had major implications for accounting theory and practice. In particular, we must now pay much closer attention to financial statement users and their decision needs, since under non-ideal conditions it is not possible to read the value of the firm directly from the financial statements (Scott 2003, 52).

Two years later, a discussion paper issued by the UK Accounting Standards Steering Committee (a forerunner of the ASB) began with the words:

Our basic approach has been that corporate reports should seek to satisfy, as far as possible, the information needs of users: they should be useful (Accounting Standards Steering Committee 1975).

The Financial Accounting Standards Board (FASB) began its efforts to develop a *conceptual framework* for financial accounting and reporting in November 1978 when it issued authoritative, broadly based guidelines spelling out the objectives of financial reporting in Statement of Financial Accounting Concepts No.1. The statement was not limited to the contents of financial statements: *Financial reporting includes not only financial statements but also other means of communicating information that relates, directly or indirectly, to the information provided by the accounting system—that is, information about an enterprise's resources, obligations, earnings, etc. ...* (SFAC1, paragraph 7).

The International Accounting Standards Board (IASB) believes that the *objective of financial statements* is to provide information about a business enterprise's financial position and meet the common needs of most users. The IASB recognises that business enterprises have a responsibility to society and not just to their owners. The ordering of financial statements may reflect the outcome of a political battle. The IASB's framework has been developed so that it is applicable to a range of accounting models and concepts of capital and capital maintenance.

The IASB's framework applies to the financial statements of all public and private sector business enterprises, where private investors play a much less important part in the economy than they do in the United States. The financial reporting needs of the public sector are more important and the objective of financial reporting in those countries outside the United States should reflect those needs. The purpose of setting accounting theories in countries other than the United States varies widely.

The current *Estonian Accounting Act* was established by a national law, which is supplemented by guidelines from the *Estonian Accounting Standards Board (EASB)*. The purpose of this act is to create the legal bases and establish general requirements for organising accounting and reporting in the Republic of Estonia pursuant to internationally recognised accounting and reporting principles (*Estonian Accounting Act*, paragraph 1).

David Solomons summed up several reasons for preferring a balance sheet approach (Solomons 1995, 45-46):

- Assets and changes in them are central to the existence and operations of business enterprises.
- Proponents of the matching view are forced to define revenues and expenses in terms of changes in assets and liabilities. Anthony defines revenues as “those additions to entity equity resulting from operating activities of the period that can be reliably measured” (Anthony 1983, 160) and he later says that “equities are thought of as claims against the assets” (p. 269).
- The FASB’s definition of revenues is unambiguous: *Revenues are inflows or other enhancements of assets of any entity or settlements of its liabilities (or a combination of both) from delivering or producing goods, rendering services, or other activities that constitute the entity’s ongoing major or central operations* (SFAC No.6, paragraph 78). This is the fundamental reason for taking the balance sheet approach. If there is not a strict relationship between the process of income determination and changes in owner’s equity, debits and credits are apt to creep into the income statement that do not represent real transactions or the effects on the enterprise of real events and conditions—items like charges for future maintenance, for example. This opens the way for income smoothing, which is probably why preparers tend to prefer the matching approach.

Conclusion

Instead of dwelling on questions of the existence of net income, accountants turned their efforts to making historical cost-based financial statements more useful. As a practical matter it seems impossible to prepare financial statements that are both completely relevant and completely reliable. Historical cost accounting is relatively reliable because the cost of an asset or liability to a company is usually an objective number that is less subject to errors of estimation and bias than are present value calculations. Unfortunately historical cost may lack relevance. While historical cost, market value and present value may be similar at the date of acquisition, market values and present

values will change over time as market conditions change. Nevertheless, accountants continue to use the historical cost basis of accounting for major asset types because they are willing to trade off a considerable amount of relevance to obtain reasonable reliability.

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The Formation of an Integral Portfolio of Assets and Liabilities for Mutual Funds Taking into Account the Risk

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Annotation

This article examines the origin and rapid development of mutual funds, discusses the main advantages and disadvantages and analyses management and risk issues. Attention is focused upon the formation of an integral portfolio of assets and liabilities and the probability of the selection of different types of funds according to the desired profitability and acceptable risk. A solution is arrived at by determining the whole complex of possible portfolios, looking for an efficiency zone and selecting the optimal portfolio.

Key words: mutual fund, diversification, investment portfolio, integral portfolio of assets and liabilities, efficiency zone.

Introduction

Under the conditions produced by globalisation where the spectrum of services and financial instruments is widening dramatically and competition between financial institutions is growing and mergers take place, the development of a financial system and its sensitivity to changes in global finance is a real problem for Lithuania. The object of the research for this article is mutual funds—one of the elements of a financial system, which belongs to the so-called other popular or alternative investment instruments. This institution is known in different countries as mutual funds, unit trusts or investment companies.

In Lithuania the equivalent of a mutual fund is a variable-capital investment company. The concept

of the mutual fund is rather new in Lithuania and comprehensible only to specialists of the financial market. That is why aspects of the mutual fund, its advantages and disadvantages as well as management and risk issues are discussed in the second part. The purpose of this article is to examine the possibilities for the formation of an integral portfolio of assets and liabilities, the selection of different types of mutual funds and achieving an optimal level of profitability and risk. This is achieved by determining the whole complex of possible portfolios, looking for an efficiency zone and selecting an optimal portfolio. The approach used includes an analysis and summary of research literature and stochastic and statistic modelling.

Mutual Funds – An Indirect Route to the Market

The problem of which stock or bond to select, when to buy, and when to sell have plagued investors for as long as there have been organised capital markets. Such concerns lie at the very heart of the mutual fund concept and in large part explain the growth that mutual funds have experienced. Many investors lack the time, know-how, or commitment to manage their own portfolios, so they turn to professional fund managers and simply let them decide which securities to buy and when to sell.

Basically, a mutual fund is a type of financial services organisation that receives money from its shareholders and then invests those funds on their behalf in a diversified portfolio of securities. An investment in a mutual fund really represents an ownership position in a professionally man-

aged portfolio of securities (Gitman and Joehnk 1998). When you buy shares in a mutual fund, you become a part owner of a portfolio of securities.

The developmental history of mutual funds reflects the growth of their importance in the economy. The founding of the Foreign and Colonial Government Trust in 1868 is often regarded as marking the beginning of modern day mutual funds. At its formation over 130 years ago Foreign and Colonial declared its intention “to give the investor of moderate means the same advantages as the large capitalists, in diminishing the risk in investing in foreign and colonial stocks, by spreading the investment over a number of stocks”.

However by that time investment trusts had been in existence in Holland for almost a century. In 1774 a Dutch merchant, A. Van Ketwich, invited subscriptions from investors to form an investment trust under the name Eendragt Maakt Magt (translated Unity Creates Strength), and in 1779 Van Ketwich started his second trust under the name Concordia Res Parvae Crescunt (Small Matters Grow by Consent). Eendragt Maakt Magt was liquidated in 1824, but Concordia Res Parvae Crescunt existed for 114 years until 1893, when it was officially dissolved.

The first open-ended investment company was started in Boston in 1924 and it is still in business today, as is the Foreign and Colonial Government Trust. By 1940 the number of mutual funds had grown to 68, and by 1980 there were 564. But that was only the beginning: the next 17 years saw unprecedented growth in the mutual fund industry, as assets under management grew from less than \$100 billion in 1980 to over \$4 trillion in 1997. Indeed, by 1997 there were more than 8500 publicly traded mutual funds in the US market (Gitman, Joehnk 1998). The fund industry has grown so much that it is now the largest financial intermediary in this country – even ahead of banks.

By the end of 1998, over \$8.6 trillion (\$8,600,000,000,000) was invested in over 30,000 open ended investment funds worldwide. This figure excludes the many hundreds of billions invested in closed-ended funds, the many “off-shore” investment funds and the so-called “hedge” funds. It also excludes funds from many emerging markets such as the countries of Central and Eastern Europe, Russia and Central Asia, which have

increasingly been developing domestic investment funds (Mutual Fund Fact Book 2001). It should be noted that the emergence of new products in the market stimulated tremendous growth of mutual funds both in number and assets in the 7th decade.

The attractions of mutual fund ownership are numerous. One of the most important is diversification: it benefits mutual fund shareholders by spreading holdings over a wide variety of industries and companies, thus reducing the risk inherent in any one investment. As the securities held move up and down in price, the market value of the mutual fund shares moves accordingly. And when dividend and interest payments are received by the fund, they too are passed on to the mutual fund shareholders and distributed on the basis of pro-rated ownership.

For example, if you own 1000 shares of stock in a mutual fund and that represents 1% of all shares outstanding, you will receive 1% of the dividends paid by the fund. When a security held by the fund is sold for a profit, the capital gain is also passed on to fund shareholders. The whole mutual fund idea, in fact, rests on the concept of pooled diversification.

Another appeal of mutual funds is full-time professional management, which relieves investors of the many day-to-day management and record-keeping chores. What’s more, the fund may be able to offer more talented investment expertise than individual investors can access. Besides, under the conditions of the modern information society large and complex information flows are often not comprehensible to an individual amateur investor, whereas mutual fund specialists understand investment problems better than such individuals (St Giles, Buxton, Alexeeva 1999).

Still another advantage is that most mutual fund investments can be started with a modest capital outlay. Sometimes no minimum investment is required, and after the initial investment has been made, additional shares can usually be purchased in small amounts. This factor is particularly relevant to a small investor who experiences considerably larger expenses when buying and selling a portfolio of securities independently, because in most markets contract expenses depend on size. Comparative security portfolio expenses experienced by a small investor usually exceed the expenses

of a large contract concluded by institutional investors by 5 – 10 percent. In addition, expenses depend on risk: the wider the diversification the more expensive the contracts and the higher the conditional use of mutual funds (St Giles, Buxton, Alexeeva 1999).

Another appealing characteristic is liquidity. Mutual funds are required by law to redeem shares on a daily basis, making mutual fund shares a very liquid investment. The price per share at which shares are redeemed is known as the net asset value (NAV). NAV is the current market value of all the fund's assets, minus liabilities, divided by the total number of outstanding shares.

Beside other positive characteristics, investor security should also be mentioned. Mutual funds must comply with laws and regulations; they have to disclose all information about their activities and any possible risks to existing and potential investors. Such laws protect investors from fraud and abuse.

The services that mutual funds offer also make them appealing to many investors: these include automatic reinvestment of dividends, withdrawal plans, and exchange privileges. Shareholders benefit from competition in the mutual fund industry. Over the past 20 years, this competition has produced substantially lower costs and an array of innovative investment products and services. So an investor can choose, from a great number of mutual funds available on the market, one that corresponds with his aims and at risk levels that are deemed acceptable. Finally, mutual funds offer convenience. They are relatively easy to acquire—the funds handle the paperwork and record keeping, their prices are widely quoted and it is possible to deal in fractional shares.

There are, of course, some major drawbacks to mutual fund ownership. One of the biggest disadvantages is that mutual funds in general can be costly and involve substantial transaction costs. Many funds carry sizeable commission charges. In addition, a management fee is levied annually for professional services provided, and it is deducted right off the top, regardless of whether the fund has had a good or bad year.

Yet, even despite all the professional management and advice, it seems that mutual fund performance over the long haul is at best about equal to what you

would expect from the market as a whole. Consistently beating the market is no easy task even for professional money managers.

Although a handful of funds have given investors above-average and even spectacular rates of return, most mutual funds simply do not meet those levels of performance. This is not to say that the long-term returns from mutual funds are substandard or that they fail to equal what could be achieved by using, say, a savings account or some other risk-free investment outlet. Quite the contrary: the long-term returns from mutual funds have been substantial (and perhaps even better than what a lot of individual investors could have achieved on their own), but most of these returns can be traced to strong market conditions and/or to the reinvestment of dividends and capital gains.

Organisation and Management

Mutual funds are highly regulated financial entities. Various functions—investing, record keeping, safe keeping, and others—are divided between two or more companies. Federal laws and regulations impose restrictions not only on mutual funds but also on their investment advisers, principal underwriters, directors, officers and employees. Virtually all mutual funds are externally managed. They do not have employees of their own. Instead, their operations are conducted by affiliated organisations and independent contractors.

Like shareholders of other companies, mutual fund shareholders have specific voting rights. These include the right to elect directors at meetings held for that purpose. Also, material changes in the terms of a fund investment advisory contract must be approved by a shareholder vote, and funds seeking to change investment objectives or policies deemed fundamental must seek shareholder approval.

A mutual fund is governed by a board of directors. These directors are responsible for overseeing the management of the fund's business affairs. Because mutual fund directors are, in essence, looking out for the shareholders' money, the law holds directors to a very high standard. They must exercise all the same care that a reasonably prudent person would take with his or her own business. They are expected to exercise sound business judgement, establish procedures, and undertake to oversee and

review the performance of the investment adviser, principal underwriter, and others that perform services for the fund.

The management company runs the fund's daily operations. During recent decades entire groups of mutual funds have formed mutual fund management companies, which control dozens of funds performing different purposes. Some of the largest groups include the Invesco group (41 funds, assets value over \$260 bn), Fidelity (290 funds) and Putnam (100 funds, assets value over \$370 bn). Other well-known management companies include Vanguard, T. Rowe Price, American Century and Dreyfus. Usually, the management firm also serves as an investment adviser.

The investment adviser buys and sells stocks or bonds and otherwise oversees the portfolio. Usually, three parties participate in this phase of the operation: (1) the money manager, who actually runs the portfolio and makes the buy and sell decisions; (2) the securities analyst, who analyses securities and looks for viable investment candidates; and (3) traders, who buy and sell big blocks of securities at the best possible price. A written contract between a mutual fund and its investment adviser specifies the services the adviser performs. Most advisory contracts provide that the adviser receive an annual fee based on a percentage of the fund's average net assets.

The distributor (principal underwriter) sells fund shares either directly to the public or through authorised dealers (such as major brokerage houses and commercial banks). The custodian physically safeguards the securities and other assets of the fund without actually taking a role in the investment decisions. To discourage foul play, an independent party (usually a bank) serves in this capacity.

The transfer agent keeps track of purchase and redemption requests from shareholders and maintains the records of shareholder accounts. The agent also calculates and disburses dividends, prepares and mails shareholder account statements as well as federal income tax information and other shareholder notices.

All this separation of duties is designed to protect the mutual fund investor/shareholder. Obviously, as a mutual fund investor, you will lose money

if your fund's stock or bond holdings go down in value. But that's really the only risk of loss you face because the chance of you ever losing money from fraud, scandal, or a mutual fund collapse is almost non-existent. Here's why: in addition to the separation of duties we have noted, the only formal link between the mutual fund and the company that manages it is a contract that must be renewed and approved by shareholders on a regular basis.

One of the provisions of this contractual arrangement is that the fund's assets—stocks, bonds, cash or other securities in the portfolio—can never be in the hands of the management company. As still another safeguard, each fund must have a board of directors or trustees who are elected by shareholders and are charged with keeping tabs on the management company and renewing its contract.

Aspects of Risk Management in Mutual Funds

Risk (a fundamental concept in investment theory and practice) in portfolio theory is described as the level of investment change and is calculated as a standard deviation of the market price (St Giles, Buxton, Alexeeva 1999). It is associated with unfavourable economic consequences and the probability of loss. But this is a unilateral view, because if risk were only associated with negative results, the investor's preparedness to invest and risk would be incomprehensible.

A more precise definition would be if we said that risk is synonymous with uncertainty. Uncertainty is not always negative in finance: beside the possibility of experiencing results that are worse than expected, there is also the probability of getting even better results than expected. Sometimes risk is not only linked to the probability of loss, but also includes other indications, for instance, the connection between risk and aim, in other words, possible losses when a set aim is not attained (Fabodzzi 1999). But probably the most precise definition of risk in connection with securities investments would be: the deviation of the securities' profitability from the expected result. It is clear from this definition that two variables describe the risk: the *possibility* of a deviation from expected results and the *probability* of this deviation.

The development of modern portfolio (MPT) theory over the last thirty years has helped us

understand the nature of risk and profit. Mathematical calculations are incomprehensible to most individual investors, but the general conclusions from MPT are simple enough.

The main principles (St Giles, Buxton, Alexeeva 1999):

Each security has a specific risk, which depends on the activity of the issuer, its position in the market and the competence of the head. This risk is not directly related to its position on the market but together with systemic risk, characteristic to the whole market, it is part of the risk of investing in securities.

Risk in relation to the management of securities depends on the number of securities. The risk for a portfolio consisting of one type of securities decreases considerably when the number of types of securities is increased to 25.

The first factor is rather difficult to understand. It is related to the mathematical analysis of profitability change over time. Anyway, investors perceive shortly afterwards, that securities with a high specific risk often do not attain their expected profitability. Only a beginner can naively believe, that securities with very high risk will give a high profit.

Actually, the risk on a profit unit of a small portfolio of risky securities is higher than the risk on a larger portfolio. The past experience of investors from developed countries, where there are no longer any illusions about high risk and high profit investments, has resulted in the growth of investments to mutual funds. Mutual funds, owing to their high levels of diversification, considerably decrease or even abolish the specific risk attached to securities investments.

Research has shown that the second factor is important because investors seek to decrease the risk more often than to increase the profit. The main reason for the success of mutual funds in the USA and Western Europe lies in diversification. The greater meaning this factor has in developing countries, where the specific risk of securities is usually higher, gives such diversification an even greater advantage.

Each security hides two components of risk: specific risk, characteristic only to that certain

security, and systemic risk, characteristic to all securities in a certain market. Specific risk reflects the specific characteristics of a company's activity, its position on the market, its financial stability and the quality of its management and so on. Systemic risk shows up in all security investments and the investor does not have any influence over this. It should be noted that according to the chosen investment instrument (stock, bond, bill or other) the structure of systemic risk could be different.

Taking into consideration, that investors do not tolerate risk, investments with high systemic risk have distinguished themselves with high expected profitability; and analogically, investments with low systemic risk will have a low expected rate of return. It is possible that an investment with a rather high level of general risk will have a relatively low expected profitability because of the relatively low proportion of systemic risk. On the contrary, investments with low general risk will have rather a high expected rate of return because the systemic risk forms the greatest part of the risk.

It is useful to analyse the cause and source of systemic and specific risk. Risk is related to fluctuations in expected income, which is closely connected to changes in market prices and dividend payments. Thus, risk-causing factors are the same factors that cause stock price changes or influence the level of paid dividends.

It is an important part of decision theory, and that is why a general precondition can be made, that the main influence on stock price change and the level of paid dividend has become changes in an enterprise's money flow. Consequently, the conclusion that can be made is that the risk of investing in the stocks of a certain company is related to changes in its money flow. The greater the uncertainty over the company's money flows the greater the risk the investor faces when choosing the stocks of that company.

Many factors influence the expected money flow of a company—management quality and employer-employee relations, the efficiency of its advertising campaigns and any scientific research performed by the company. More general factors include the rate of the sector's economic growth, the level of aggregate demand, changes in currency exchange rates, taxes, interest rates and so on.

There are two main groups of factors. Factors specific to the certain enterprise (e.g., scientific research), and factors that influence all enterprises in a particular economy (e.g., aggregate demand). The latter are the market or systemic risk factors, and the former, that only influence one specific enterprise, are specific risk factors.

The impact of factors that influence only one company can be diluted if the portfolio includes many shares of different companies. That is why it can be said that the impact of these factors is negligible and practically ignored in the market portfolio. This cannot be said about general economical factors that influence any company in a particular economy. That is why the group of general factors remains and has an analogical impact that cannot be avoided.

The fixed and variable costs ratio is very important to a company's expected money flows—the latter being greatly dependent on various macroeconomic factors. The fact that fixed costs play such a substantial role constitutes an additional source of risk, which already collides with the considerable systemic risk. When a company's turnover decreases and its fixed costs do not change, the company can find itself in an unenviable situation. If the company, whose incomes are sensitive to macroeconomic changes, has a low ratio of fixed and variable costs, then it can decrease the high systemic risk.

If the company's expected incomes are insensitive or less sensitive to macroeconomic changes, it cannot manage costs much, because in this case the costs ratio neither improves nor worsens the situation. Taking into consideration that investors seek to avoid additional risk, companies whose expected incomes are very sensitive to macroeconomics changes should be concerned that the ratio of fixed and variable costs is as favourable as possible and assists in decreasing the rather high level of risk.

Proceeding to the third part, it could be mentioned that at this time in Lithuania one fund of this type exists, variable capital investment company, *NSEL 30 indekso fondas*. The share of *NSEL 30 indekso fondas* is a portfolio of stocks in 30 of the largest Lithuanian companies (by market capitalisation) traded on the National Stock Exchange of Lithuania from official and current lists. If one invests in the Lithuanian stock exchange one can buy the

shares of each of the 30 companies by separate transactions.

However, if you buy a share in the *fund* you acquire a portfolio that includes all 30 companies. This way you diversify your portfolio (an investment that holds 30 securities in different companies and industries is likely to be less volatile than a less diversified portfolio composed of a smaller number of shares) and you save money on transactions (you only pay one fee for buying shares in the fund).

The NSEL 30 index is the indicator that reflects the value of the portfolio. The *fund's* investment portfolio is rebalanced quarterly to reflect changes in the composition of the NSEL 30 Index. The *fund* buys and sells securities only to rebalance its portfolio and in response to daily shareholder purchases and redemptions. This way the *fund's* portfolio is relatively inactive, thereby keeping the brokerage commissions and transaction costs to a minimum.

Selection of an Integral Portfolio of Assets and Liabilities for a Mutual Fund Taking Risk into Account

The definition of a mutual fund already characterises the main aspect of its activity – security portfolio management. A mutual fund portfolio is a set of differing types of assets, formed on the basis of asset types and a set proportional usage, used to seek a return. The simplest way to describe the portfolio is to indicate its structure, that is, to indicate one or another type of asset and the amount of it in the portfolio. Under the term *asset* we can also indicate the type of asset, that is, stock, bond and so on; or the amount of a certain asset, for example, two stocks, three bonds. Indeed, portfolio structure can vary—it might not only be an assets portfolio, but also a liabilities portfolio or a mixed portfolio (Rutkauskas 2002).

Portfolio theory is dedicated to solving the main problem each investor is faced with—how to invest capital and gain maximal return with minimal risk (Eng, Lees, Mauer 1995). This problem can be solved by determining the whole complex of possible portfolios, looking for an effective line and selecting an optimal portfolio for each investor.

So, under the term of portfolio we are not thinking about an investment set in general, but about a

structural collection, which reconciles investment portfolio possibilities for the investor or in this case the mutual fund's need for a return with risk management possibilities. Moreover, it is not enough to know one informative possibility for the investor; one should know all the possibilities, that is, the entire distribution of possibilities under a certain risk level (Rutkauskas 2002).

While forming a portfolio we have to use complex stochastic programming, statistical modelling and other methods.

The formation and management of a portfolio requires an operational evaluation and description of various possible portfolio conditions (also available on the efficient line) as well as the analysis of other characteristics. Portfolio decisions must be made while it is not possible to describe each separate asset, and thus a portfolio's potential for providing a return, with a single explanation, but with their probability distribution. Therefore average return is not the most suitable indicator for determining the condition of a certain portfolio. Average profitability refers to the general condition and potential for profit, still this is only one kind of potential, and an investor may be interested in the quartile of a certain level or other characteristics.

The structure of assets and liabilities in a mutual fund must guarantee the realisation of the fund's aims, that is, the growth of net asset value. In other words, the portfolio of assets and liabilities must guarantee a desirable return considering risk management possibilities.

In many modern manuals a geometric portfolio view is analysed by putting investment return, as

a random variable means, on the ordinate axis and their average standard deviation on the abscissa axis (Gitman and Joehnk 1998; Eng, Lees and Mauer 1995). This approach will also be used when analysing the integral portfolio, but not only will the means of random variables be shown on the ordinate axis, but also other functions of these possible variables (minimum, maximum, quartile, median).

The integral portfolio, which consists of the following three kinds of assets: I_1 ($a_1 = 0,150$; $\sigma_1 = 0,070$), I_2 ($a_2 = 0,035$; $\sigma_2 = 0,012$) and I_3 ($a_3 = 0,050$, $\sigma_3 = 0,017$); and the following three kinds of liabilities: I_4 ($a_4 = -0,100$; $\sigma_4 = 0,033$), I_5 ($a_5 = -0,090$; $\sigma_5 = 0,030$) and I_6 ($a_6 = -0,045$; $\sigma_6 = 0,015$), is analysed. The premise, that the possibilities for assets and liabilities are submitted to normal distributions, was used when forming this portfolio, and so *mean* (a_i) and *standard deviation* (σ_i) are specified in the brackets. The calculations were based on a portfolio formation and selection method by A. V. Rutkauskas.

The figures show mutual fund assets and liabilities portfolio sets, combining average, minimal, maximal and I, II, III quartile profitability portfolios (see Figures 1, 2). Portfolio images depend on the specifics of mutual fund activity, which predetermines that one type of *asset* (also *liability*) forms almost all or a very large part of all *assets* (*liabilities*). Liabilities or the negative investment portfolio-set takes the shape of a mirror or reverse portfolio-set image. Keeping clearly perceivable geometry, it enables the choice of the optimal mutual fund liabilities portfolio for analysis separately from the assets portfolio.

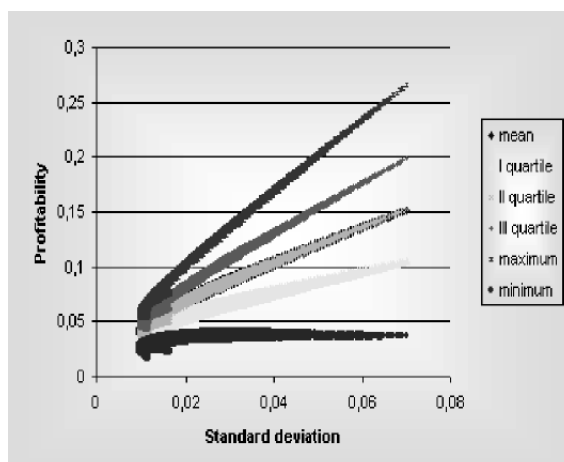


Figure 1. Assets portfolio set

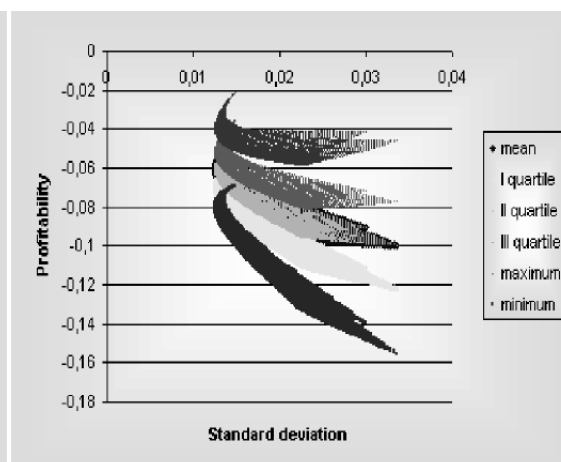


Figure 2. Liabilities portfolio set

Minimal and maximal profitability sets mark the lower and upper limits of sets accordingly, as well as the worst and the best possibilities. All possible assets (and liabilities) portfolio image sets are usually called criteria sets. A criteria set is a set of images, not portfolios, and on the surface is geometrically reflected as a set of points (Kasimov 1998).

The aim of the investor is to choose an optimal portfolio, that is, the best according to its investment characteristics. The criteria for choosing the optimal portfolio have to be based on the main investment characteristics: average portfolio profitability and risk, which is determined as a dispersion or standard deviation (Kasimov 1998).

An investor only follows the evaluation of the profitability and risk of a portfolio when selecting, and that is why the criteria set is very important to the investor. It determines limits of the efficiency of the investor's choice. Portfolios with images

of the criteria set limit are very important for the investor. Two criteria complicate the selection of an optimal portfolio, since improving one criterion often worsens the other.

The portfolio is called effective if there is no better portfolio according to one of these criteria. Efficiency characteristics can be analysed graphically. Images of effective portfolios belong to the edge of the criteria set. Effective portfolios from possible portfolio sets form the effective line of this set, and their whole complex forms the effective zones of a criteria set (see Figures 3, 4).

The maximal points of active portfolio sets geometrically form effective lines, and minimal points accordingly form the efficiency zone of a passive portfolio set. The arrangement of minimum, maximum and quartile effective lines shows that when risk (average standard deviation) grows, the distribution of the portfolio's possibilities and probabilities changes noticeably.

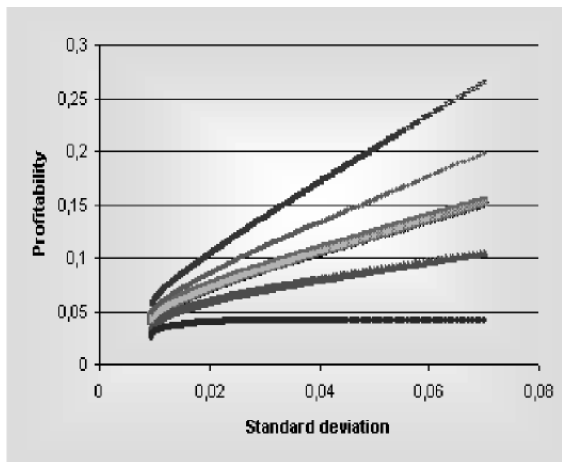


Figure 3. Assets portfolio efficiency zone

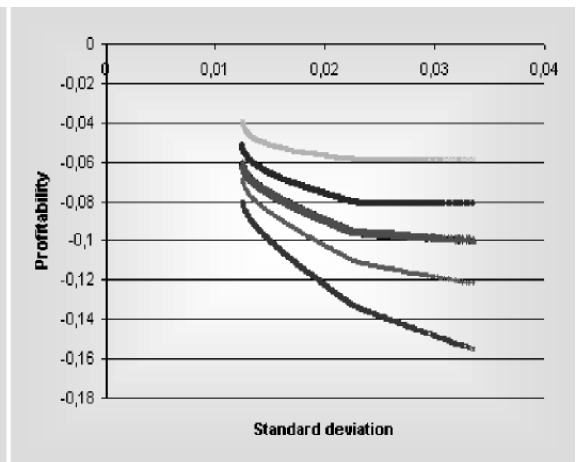


Figure 4. Liabilities portfolio efficiency zone

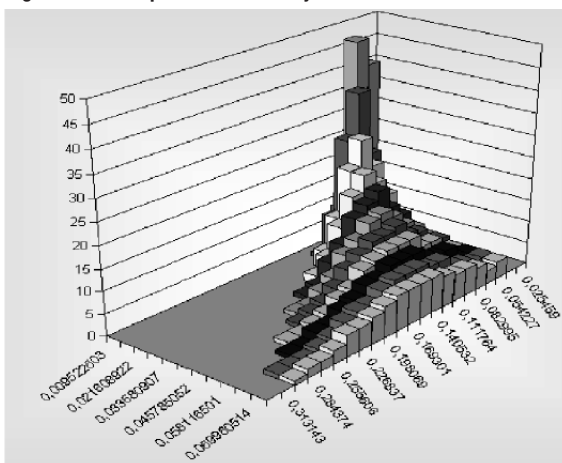


Figure 5. Spatial view of an assets portfolio efficiency zone

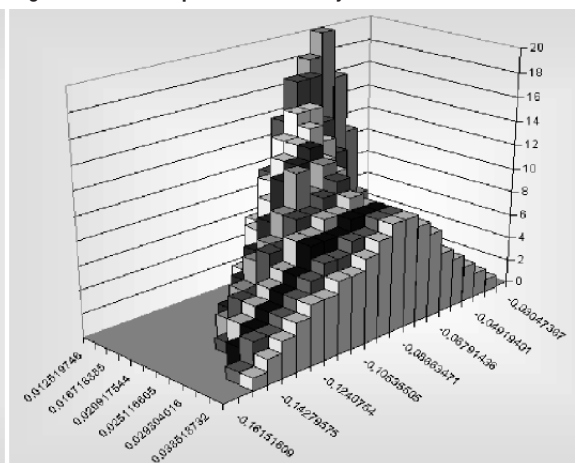


Figure 6. Spatial view of a liabilities portfolio efficiency zone

The third coordinate is necessary if we want to disclose the change in the distribution of a portfolio's possibilities and probabilities geometrically. A spatial view of the efficiency zone helps us to understand the influence of separate investment dispersion forms on the general dispersion form of the portfolio's possibilities, as well as evaluate the influence of liabilities, when constructing an integral portfolio of assets and liabilities. Risk is put on the abscissa axis, profitability possibilities on the ordinate, and potential probabilities on the coordinate axis when presenting spatial views.

While the level of risk is rather low (0,0095), possibilities of assets profitability are distributed between values 0,0255 and 0,0686, their probability is rather high; the probability of a value 0,0542 event is 0,46 (see Figure 5). When the level of risk is high (0,0699), the value of profitability possibilities has a considerably wider spectrum (0,0542 – 0,2988), but the probability of an event is low; the probability of an event when values have a spectrum of 0,1405 – 0,1837 is 0,08. So, as the risk grows, the spectrum of possible profitability values becomes wider and their probability – lower. The same tendencies can be observed when analysing a spatial view of a liabilities portfolio efficiency zone (see Figure 6).

The task of the manager of an integral portfolio of assets and liabilities is to choose such a portfolio that will optimise the investment and debt structure according to chosen criteria. Optimisation criteria should be based upon the maximisation of the portfolio's usefulness, according to the distribution

of profitability possibilities in the portfolio and the indicator of this distribution—risk, which reflects profitability possibilities distribution.

A geometric image of a mutual fund integral portfolio shows (see Figure 7), that the logic of its use should be similar to classical investment portfolio logic. An integral portfolio takes one or other geometric shape because it is formed from a peculiar composition of assets and liabilities portfolios. Note that an integral-portfolio set image is more like a classical-assets-portfolio set image than a liabilities-portfolio set image. On the coordinate surface the integral-portfolio set is located between assets- and liabilities-portfolios sets, that is, lower than the assets-portfolio set but higher than the liabilities-portfolio set. The integral-portfolio set is not quite complete, the portfolio requires more precise description.

A study of an integral portfolio of assets and liabilities in a mutual fund is analysis that could probably provide one with a chance of interpreting in a new way or even supplement classical portfolio results, but such analysis also requires a lot of time, knowledge and powerful computers. Some peculiarities of an integral portfolio in a mutual fund are revealed when comparing it with a classical investment portfolio. Apexes of a possible portfolio set in a classical portfolio match with the basic investment coordinates—standard deviation and mean. Integral portfolio apexes, for example if a portfolio is described using standard deviation and mean interaction, match with the coordinates of the sum of assets and liabilities pairs.

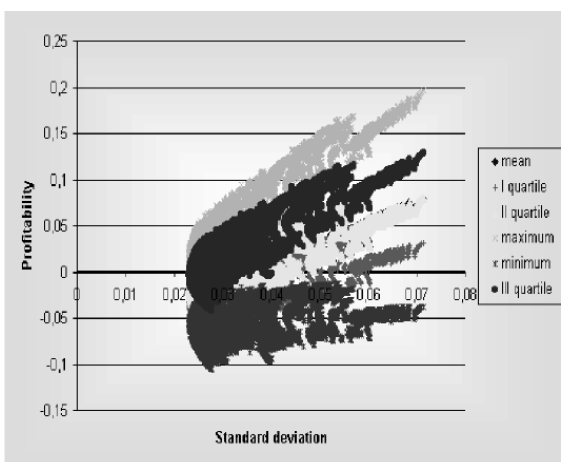


Figure 7. An integral portfolio of assets and liabilities set for mutual fund

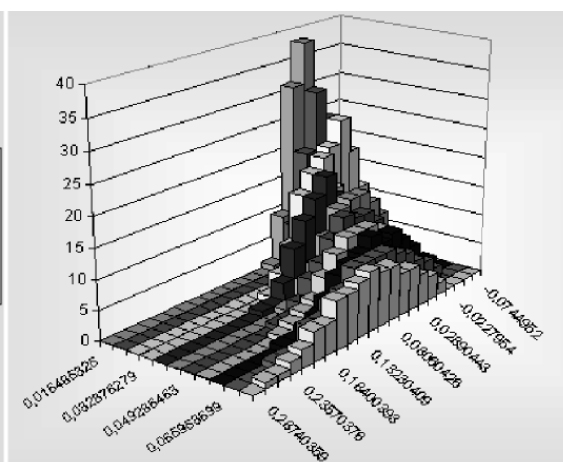


Figure 8. Spatial view of integral portfolio of assets and liabilities efficiency zone

The spatial view of an integral portfolio confirms the same tendencies as the separate views of portfolios of assets and liabilities. While the level of risk is low (0,0165), we have a narrow spectrum of values of low profitability (from - 0,0228 to 0,0461) and the probability of an event is high (the probability of value - 0,0056, from the above-mentioned spectrum, is 0,38). While the risk is high (0,0711), the spectrum of the value of profitability possibilities is considerably wider (from - 0,0056 to 0,2702), but the probability of an event is lower, the probability of a value of 0,1151 from this spectrum is 0,1. As the risk grows from 0,0165 to 0,0711, that is, 4,3 times, the spectrum of values expands 4 times and the probability decreases 3,8 times. Comparing the narrowest and the widest spectrums, the lower limit of the spectrum increased from - 0,0228 to - 0,0056, that is, 4 times, and the upper limit of the spectrum analogically from 0,0461 to 0,2702, almost 6 times.

The efficiency zone of the integral portfolio (see Figure 9), as with the efficiency zones of the separate assets and liabilities portfolios, shows an entire

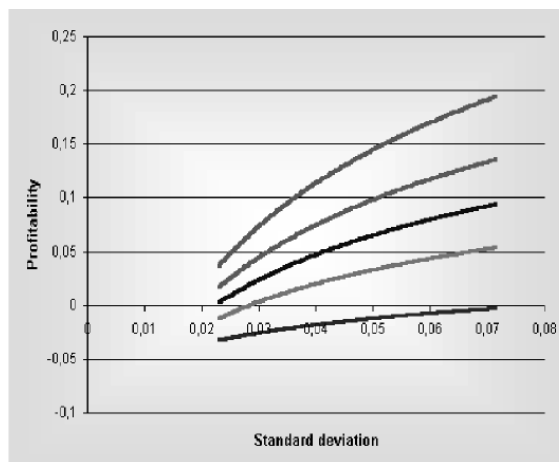


Figure 9. Integral portfolio efficiency zone indifference

complex of efficiency lines describing minimal and maximal efficiency limits.

The last task is the selection of an optimal portfolio for the individual investor or in this case for a mutual fund from the possible portfolios set—this means the selection of a portfolio from what is available on the efficiency line. Portfolio theory does not analyse investments in an impartial environment, but takes into account the utility of the investor or in this case the mutual fund.

We should understand that there is no single optimal portfolio for all investors, everyone chooses a portfolio that corresponds to his needs and position regarding risk and profitability. This *position* is an expression of the utility function. Modern portfolio theory uses an indifference curve—a projection of the utility function on the surface. This concept comes from consumption theory where it describes the combination of two goods, which are equally useful to the user and defines the combinations of profit and risk, which are equally acceptable to the investor (Rutkauskas 2002).

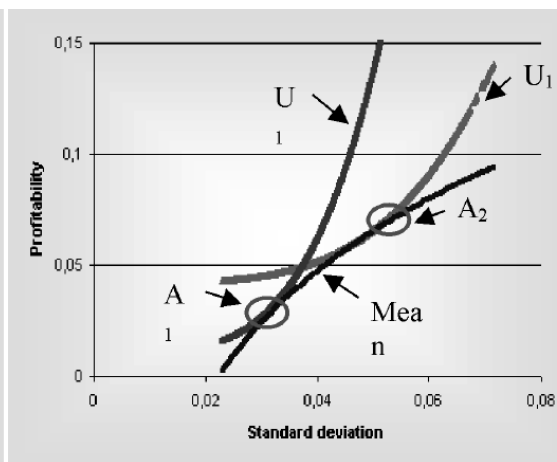


Figure 10. Average efficiency line and curve

Mutual funds with different indifference curves choose different optimal portfolios; this is illustrated in Figure 10. Curve U_1 corresponds with the indifference curve of a bond fund (low risk and current revenue seeking mutual fund) and curve U_2 with the indifference curve of an *aggressive* growth fund (highly speculative, seeking capital appreciation). Curve *Mean* is the curve of average profitability efficiency. Curves U_1 and U_2 come into contact with it at points A_1 and A_2 .

Classical portfolio theory describes the optimal portfolio as the point at which the utility function comes into contact with the efficiency curve. So, the optimal portfolio of a bond fund corresponds with point A_1 , where profitability is 0,0390 and risk 0,0347, which also expresses the integral portfolio of assets and liabilities, formed from three kinds of assets in such proportions: $I_1 - 0,0435$; $I_2 - 0,07$; $I_3 - 0,495$ and three kinds of liabilities: $I_4 - 0,135$; $I_5 - 0,165$; $I_6 - 0,7$. Point A_2 corresponds with an optimal portfolio of assets and liabilities

for an aggressive growth fund, the portfolio's profitability is equal to 0,0703 and its risk equal to 0,0513, it is formed from three kinds of assets in such proportions: $I_1 = 0,675$; $I_2 = 0,195$; $I_3 = 0,13$ and three kinds of liabilities: $I_4 = 0,02$; $I_5 = 0,235$; $I_6 = 0,745$. So, while initial conditions are the same, a different portfolio is chosen for mutual funds that have different utility functions.

Conclusions

The basis of economic development and one of the most important factors conditioning the growth of the standard of living is an efficiently operating finance system. That is why it is important to improve the activity of the finance system, while expanding the network of financial institutions and one of the largest financial intermediaries in the world—the mutual fund.

1. Mutual funds can help harmonise the national securities market and balance foreign, small and institutional investor activity.
2. Mutual funds would attract more participants to the market, the liquidity of securities would be guaranteed, this would further attract foreign investors and help revive the national securities market.
3. Mutual funds would induce saving and slow down the dangerous growth of consumption.
4. As a result of mutual funds the largest proportion of local capital would be accumulated and directed towards the Lithuanian economy.

Taking into account the increasing influence of risk and uncertainty upon the results of investment activity and the increasing means for risk management, reports and other information should be organised according to pragmatic guidelines in order to facilitate the most reasonable decisions.

1. The specific objective of financial institutions and also mutual funds is the management of the general efficiency of assets and liabilities, which requires the means for making decisions about the integration of profitability and risk.
2. Such a study of an integral portfolio of assets and liabilities for a mutual fund involves analysis which could probably provide an opportunity for new methods of

interpreting or even supplementing classical portfolio results, but it also requires a lot of time, knowledge and powerful computers.

3. The study of an integral portfolio of assets and liabilities for a mutual fund and the analysis of a spatial view of the efficiency zone allow us to affirm that when risk grows, the spectrum of possible profitability values gets wider and their probability decreases. The integral portfolio's low level of risk guarantees a narrow spectrum of low values for profitability and a high probability. As the risk grows 4,3 times, the spectrum of values widens 4 times and probability decreases 3,8 times. By comparing the narrowest and the widest spectrums, the lower limit of the spectrum increased 4 times and the upper limit, almost 6 times.
4. A dependence exists from the investor's position in regard to risk and optimal portfolio characteristics. The suggested method for the selection of an integral portfolio of assets and liabilities for a mutual fund allows one to take into account the requirements and position in regard to risk of different types of funds. The analysis of the utility functions of different types of mutual funds, and more precisely, the analysis of their indifference curves shows that while initial conditions are the same, these funds chose different optimal portfolios.
5. This method for the selection of an integral portfolio of assets and liabilities for mutual funds can be used in the formation of an integral portfolio of assets and liabilities for mutual funds (and other financial institutions, which lend and borrow) by:
 - determining the whole complex of possible portfolios
 - looking for efficiency zone
 - selecting the optimal portfolio in order to achieve optimal results corresponding with desired profitability and acceptable risk

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Alternative Treatments in International Financial Reporting Standards

Madis Jääger, *Price WaterHouse Coopers*

Financial statements are prepared and presented for external users by many enterprises around the world. Although these financial statements have a similar target and outlook, differences occur due to significant factors influencing the financial reporting environment. The International Accounting Standards Board (IASB) is committed to narrowing these differences by seeking to harmonise regulations, accounting standards and procedures relating to the preparation and presentation of financial statements.

The users of financial statements including investors, employees, suppliers (and other trade creditors), lenders, customers, government and the public, expect the financial statements to show a true and fair view of the financial position, performance and changes in the financial position of an enterprise. Also it should meet the common needs of most users. However, to harmonise the regulations to be applied in most of countries, several alternative treatments can be used to meet local accounting requirements. In some cases this situation serves as a significant impediment to comparing or even understanding an enterprise's financial position truly and fairly.

Alternative treatments under the International Financial Reporting Standards (hereinafter IFRS) permit transactions to record events by choosing the method considered to best present a fair view of the financial situation of an enterprise. When making choices between these alternatives the management of an enterprise can unknowingly manipulate records resulting in the financial figures giving an inadequate statement of the enterprise's financial position.

In the following the author draws out different alternatives under the IFRS to record events that affect financial statements. In this study the author

will go through some alternatives to illustrate how different results arise from different accounting treatments. The study deals with standards that were in effect from January 1, 2002.

The author focuses on the manipulation of alternatives to maximise and minimise net profit when different accounting treatments are applied. In connection with the target of the manoeuvre using permissible accounting treatments, the author analyses several indicators including those used by the Estonian business newspaper, *Äripäev*, to rank enterprises as follows: net sales, increase in net sales, net profit, increase in net profit, net profit margin on sales, and return on assets (ROA); as well as certain parameters to describe the business. In order to understand the situation more clearly, two scenarios are played out, *prices will go up and prices will go down*.

Manipulation in Bond Accounting

Under this section the author focuses on regulations where the financial asset could be treated as a held-to-maturity or available-for-sale bond emphasising an initial intention to classify when purchasing a financial asset. In addition the bond is recognised on the basis of *trade date vs. settlement date* accounting.

Despite the explanation in the International Financial Reporting Standard IAS 39, the classification of financial assets is uncertain and the categorisation is made on the assumption of an initial intention and the standard does not refer to reclassification if the initial purpose of the asset changes. In order to offer a different categorisation of bond for the purposes of a comparison it is assumed that in one case the bond is considered as *being held until it matures* and in the other case the initial purpose was *to sell the bond within six*

months, but afterwards it was decided not to sell the bond and instead hold it until maturity. To include initial recognition of the difference the *held-to-maturity* bond is recorded under settlement-date and the *available-for-sale* bond under trade-date accounting.

The trade date is 30 December 20X0 when accounting refers to recognition of the bond to be received and liability to pay for it on its trade date. On that day the bond and liability are recorded and on the settlement date cash is paid and the liability is settled. The difference is illustrated as follows:

	Settlement date accounting	Trade date accounting
30 December 20X0		
Bond	--	47,541
Liability	--	47,541
02 January 20X1		
Bond	47,541	47,541
Liability	--	--

To give a clearer view it is assumed that at the end of 20X0 a company is established and share capital of 70,000 is recorded in accordance with cash that has a balance of 70,000. The scenario for the following movements is on condition that market prices increase. On 30 December 20X0 the company commits to buy a bond that has a purchase price of 47,541 and is settled on 02 January 20X1. Data for the following explanations used is:

Maturity value	50,000
Nominal rate	10%
Matures in years	3
Interest paid semi-annually	2,500

Market rate	12%
Purchase price	47,541

Fair value of bonds, market rate 13%	
31.12.20X1	47,413
31.12.20X2	48,635
31.12.20X3	50,000

The purchase price of the bond is calculated on the basis of the market rate at 12% whereas the nominal rate is 10%. Interest is paid semi-annually and the date of maturity is 01 January 20X4. To make corrections to available-for-sale bond accounting we assume that the market rate has changed from 12% to 13%, so that the fair value of the bond is lower than the amount calculated on the basis of 12% amortisation.

When analysing differences in financial statements after recording the purchase, the amount of cash resulting from different accounting treatments that do not influence cash flows is the same, because the interest rate is fixed and the amount of cash received is constant. The balance sheet total differs during the year 20X0 as a result of settlement-date and trade-date accounting. It is the author's opinion that the accounting treatment used should be disclosed to facilitate a more precise understanding of the source of the greater amount of total assets.

As movements in market prices adjust the book value of the available-for-sale bond, there is no misleading information about the current financial position of the enterprise. On the other hand, the book value of the held-to-maturity bond does not follow market prices and when selling the bond before it matures, added revenue or loss is recorded in the income statement.

When analysing net profit (see Figure 1), there are drastic differences as the held-to-maturity bond creates a constant increase in net profit, whereas the available-for-sale bond results in a faster increase rate during 20X2 and lower increase rate during 20X3. The total amount of net profit generated is the same, but the moment of earning differs when the alternative under IAS 39 is used.

When prices decrease and it is clear that the bond is sold at a premium the situation of movements in net profit is controversial. In this example the nominal rate of the bond is again 10%, but the market rate

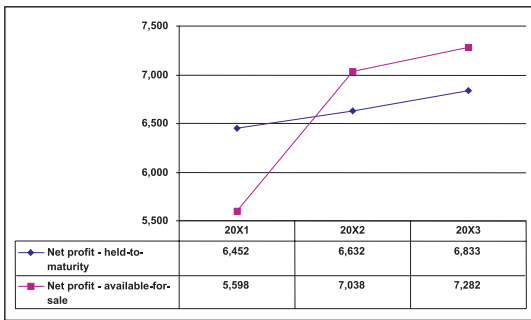


Figure 1 The bond is sold at a discount and the fair market rate is higher than the market rate at the date of purchase (the author’s calculations)

has decreased to 8% and the correction to an after-market rate is one percent lower showing the value of 7%.

In Figure 2 the net profit as a percentage of total assets shows that the held-to-maturity bond results in a more effective management of assets. As the bond premium is discounted constantly, the rate of net profit generated compared to total assets shows a higher efficiency than the available-for-sale bond in the subsequent years.

In conclusion, manipulation using bond recognition does not create extra profit, but facilitates the recognition of the profit either earlier or later. To give external users of financial statements an impression of a rapid increase of net profit during the year 20X3 when prices are increasing (first scenario), we can initially recognise the bond as a held-to-maturity bond and after one year convert it to an available-for-sale bond. In that case the 20X1 net profit shows a value of 6,452 and in 20X2 of only 6,184. This is mainly the result of loss of fair value corrections as the base value was adjusted from a face value of 50,000 to 48,635.

Since during 20X3 the available-for-sale bond creates a net profit of 7,282, such an increase of net profit is as fast as possible. Altogether, the total amount of net profit generated in the first scenario is 19,917 and cash received from interest payments does not depend on the methodology used to account for the bond. That is why it does not matter which of the alternatives are used when the bond is held until it matures. When selling the bond earlier, both alternatives have the same final result. Again profit earned during certain periods can be

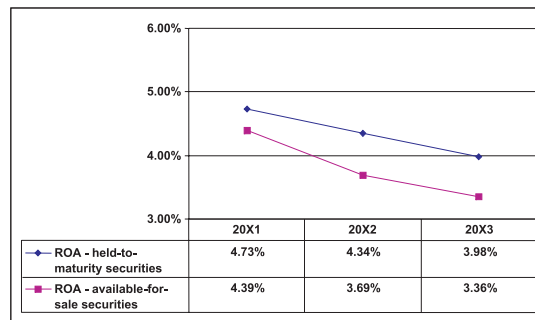


Figure 2 Bond is sold on premium and fair value market rate is lower than market rate at the date of purchase (the author’s calculations)

manipulated, but as a whole, a constant net profit is generated.

Possible Ban for LIFO

While *FIFO* and *LIFO* cost formulas provide the most varied results in inventory accounting, the author analyses the influence of financial statements leaving out the seldom used *specific identification method* and the *weighted average cost method*, which actually gives a result that is almost an average of the *FIFO* and *LIFO* methods, and in special conditions using the *simplified measurement of cost method*.

Again, two scenarios—when purchase price of inventories and selling price of finished products increase and decrease—are played. Since with bond accounting the correlation between scenarios involving increasing and decreasing prices was negative, we may expect the same situation to occur. But is it so simple?

On 31 December 20X0 a company was established by making a short-term loan of 152,720 from which 100,000 was transferred to a cash account. The rest was used to acquire inventory as well as issue share capital of 10,000. So, the final balance of inventory at year-end 20X0 was 62,720. As the number of items in the inventory when starting the business was 1,280, the average price of one unit is 49.00.

Changes in the purchase price of inventories have been presented below and have a strict correlation to finished product selling price. That is, if the purchase price of inventory increases Y%, so does the price of the finished goods. To simplify calculations it is assumed that to produce one unit of finished goods, a unit of inventory is converted.

Change in price of purchase	20X3	20X2	20X1	20X0
Growth rate	125%	117%	105%	100%
Purchase price	61.11	57.11	51.45	49.00

Actual units	20X3	20X2	20X1	20X0
Beg. balance	1,095	1,240	1,280	0
Purchased	5,789	5,578	5,649	0
For conversion	5,712	5,723	5,689	0
End. balance	1,172	1,095	1,240	1,280

Value of inventories	20X3	20X2	20X1	20X0
Beg. balance	53,655	60,760	62,720	0
Purchased	353,749	318,557	290,641	0
For conversion	353,749	325,662	292,601	0
End. balance	53,655	53,655	60,760	62,720

Units sold	5,712	5,723	5,689	0
Selling price	75	70	63	60
Net sales	427,401	400,209	358,407	0

There is no defective work and the entire output of the factory is sold. The base price for purchasing inventory was already as calculated 49.00, but for selling the finished goods the author assumes a base price of 60.00, this helps the calculation of prices for the periods 20X1 to 20X3.

Data for the following explanations for the calculation of inventory when prices increase is as follows:

When theoretically analysing the balance of inventories, the FIFO method shows a higher value, while cash received and paid is the same for both alternatives. However, net profit differs as permissible alternatives are applied. When prices increase and the FIFO method is applied, it generates a higher value of inventory. To balance total assets and total liabilities and equity, net profit should increase.

In the LIFO scenario the result is controversial. In the following, base data is used to prepare financial statements in order to apply the LIFO method.

When looking at Figure 3 using the LIFO method, net profit for the year 20X3 decreases while prices continue to go up. This is due to the higher rate of the original cost of the finished product. That is why the net profit margin is lower than when the FIFO method is applied: 19.36% with the FIFO method in 20X3 and 17.23% with the LIFO method respectively.

When market prices go down, selling prices also decrease. The algorithm for the calculation is the same, substituting a growth rate of 105% with a reduction rate 95%, 117% with 85% and 125% with 79% respectively. The LIFO method shows greater

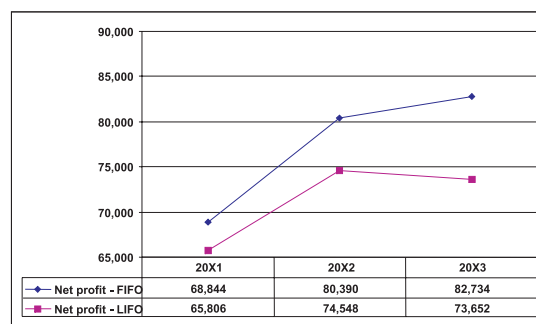


Figure 3 Net profit analysis when prices go up (the author's calculations)

net profit resulting from a lower original cost of finished product.

However, when there is an increase in market prices, differences in net profit according to the alternative methodology continues increasing, but in the case of prices going down, net profit in subsequent years stabilises and reaches the same level.

In countries where the LIFO method is allowed, it is widely used to decrease net profit and pay less income tax. As market prices in the world show a growth trend, it provides greater profits despite the fact that during some periods an increase is substituted with a decrease.

When looking at the scenario for dropping market prices, there are controversial movements in net profit margins (see Figure 4) resulting from a use of the LIFO method to show greater net profit and lower balance of inventories. Anyhow, if this upward price trend continues, the LIFO method will result in lower profits, while in the other sce-

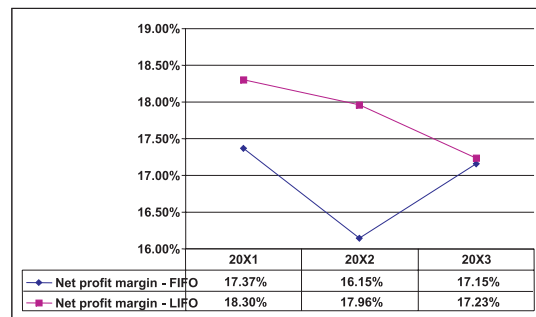


Figure 4 Net profit margin analysis when prices go down (the author's calculations)

nario, the difference to net profit when either of the alternatives is applied is not so drastic.

In conclusion, with continuing price growth, the LIFO method allows a lower net profit to be shown. To have even greater effect the company must try to hold the inventory balance at an optimum level to show as low a balance as possible. This gives signals to the auditors who, in the auditing process, also analyse inventory turnover.

When there are items that are not used for production, they should be written off from the balance sheet. As this is only a treatment for calculating the balance of inventory, there is actually no slow-moving inventory and for correction purposes the LIFO liquidation process is applied. So, for internal reporting the FIFO method is usually applied and for income tax reporting the LIFO method is used.

In the USA the LIFO method is allowed and used mainly for tax reporting. In parallel, the FIFO method is used for preparing financial statements for owners, management and so on and to get the

interest of potential investors. The main effect of the LIFO method the payment of less income tax and that is why authorities are trying to eliminate the LIFO alternative indicating the fact that accounting should not be influenced by tax rules. As an alternative a company that uses LIFO for tax purposes, should also use LIFO for financial statements.

The Nature of Upward Revaluation

The author will now discuss the revaluation process of fixed assets and investment property. However, revaluation is not recorded in the same way as in these situations. There are principle differences.

The IAS 16 declares that property, plant or equipment should be recorded in historical cost less accumulated depreciation or any accumulated impairment losses. As an alternative a class of property, plant or equipment can also be revalued. Similarly investment property under IAS 40 can be recorded using the cost model (depreciating from

Revaluation is used	Fixed asset IAS16	Investment property IAS 40
Reflected in market rate	Yes	Yes
Depreciation is subtracted	Yes	No
Surplus reserve is created	Yes	No
Expense from depreciation	Yes	No
Revenue from revaluation is credited directly to the income statement	No	Yes

historical cost) or fair value model. The difference is illustrated as follows:

In the case of property, plant or equipment, accounting shows only expenses resulting from depreciation, whereas investment property is held at a revalued rate and no depreciation is subtracted. So, the revaluation process for assets of a different nature result in a controversial score—in one case the loss is generated from depreciation and in the other case profit is made from the initial revaluation, where it is directly credited to the income statement. In answer to the question concerning

which transaction corresponds to the revaluation in property, plant or equipment, it is credited to revaluation surplus and no income is recognised.

Under IAS 16, an element of the revaluation surplus must be transferred to retained earnings in each period, being that part of the depreciation charge in respect of the revaluation uplift on the asset. Thus, the additional depreciation is systematically treated as realised, in line with the depreciation expenses, over the estimated remaining life of the asset at the date of revaluation. When the asset is sold or scrapped, the balance in the revaluation reserve in

respect of that asset is transferred to retained earnings, as at that point it is a realised gain.

When depreciation is subtracted, it has been argued that depreciation may be avoided because an entity can maintain the asset so that its fair value is maintained at a level similar to that at which it was purchased. This argument fails on two grounds. The primary effect of maintaining an asset will be to increase its economic life, but a programme of maintenance will not affect the asset's residual value at the end of its economic life. Secondly, charging depreciation on property, plant and equipment is primarily an exercise in allocating cost or carrying value, not an attempt of valuation.

When disposing an asset, IAS 16 requires that it should be eliminated from the balance sheet. This is also required when an asset is permanently withdrawn from use and has no future economic value. Any gain or loss arising, being the difference between any disposed proceeds and the carrying amount, will be recognised in the income statement. Thus any element of revaluation reserve, while possibly being transferred to retained earnings by inter-reserve transfer, will not pass through the income statement.

Whether it is a question of revaluing an asset or not, the results should be analysed beforehand. In the case of property, plant or equipment, upward revaluation results in a higher proportion of total assets consequently resulting in greater depreciation expense.

As a revaluation surplus reserve is created directly to the equity section, choosing revaluation only results in more expenses; in addition, the reserve is transferred to retained earnings not influencing the income statement. On the other hand, when dealing with investment property and the fair value model is applied, the result of revaluation is income, whereas when applying the cost model, depreciation is subtracted and income is substituted with expenses in the income statement (see Figure 5).

When analysing the opposite scenario when prices decrease and an asset should be revalued downward, the classification of an asset does not matter. When it is property, plant or equipment, no reserve to equity section is generated and the expense is directly debited to loss. With investment property the situation is the same. When keeping an asset

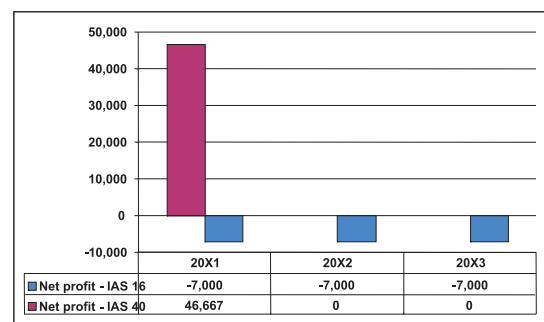


Figure 5 Revaluation result when different treatment is applied (the author's calculations)

in historical cost less accumulated depreciation, the question of impairment arises. That is why in case the net realisable value of an asset is lower than its book value, the asset should be impaired under IAS 36 and the loss recognised in the income statement.

Maximising Net Profit

The author has covered three areas separately and found that there are quite substantial differences in financial statements when alternative treatments are applied. However, the author came to the conclusion that in bond accounting it does not matter whether held-to-maturity or available-for-sale accounting treatment is applied; total net profit for the period when the bonds are finally disposed or sold is the same.

The only difference is in the proportion of net profit earned. In inventory accounting the conclusion is that the FIFO method results in higher profits when prices go up and there should not be any differences when prices decrease in the case of property, plant or equipment or investment property. Now all three areas will be compounded to understand the total effect when particular treatments are chosen to manipulate net profit.

From previous calculations when maximising net profit, available-for-sale, FIFO and fair value alternatives are applied. For the revaluation process the author has chosen investment property to illustrate the impact on financial statements. Looking at the longer perspective if prices have an upward trend, then the author plays the increasing prices scenario. In order to maximise net profit or minimise loss in controversial scenarios when prices decrease, the held-to-maturity and LIFO method should be applied. The matter of whether to use the fair value

or cost model depends on fluctuations in market prices and making predictions does not provide any reliable conclusions.

The author analyses the results from different perspectives of primary valuation criteria where enterprises are ranked by Estonian business newspaper, Äripäev. For the following conclusions the author has used base data presented in previous sections.

Net sales and the increase rate of sales are commonly used to gain the first impression of an enterprise. The amount of sales enables us to conclude the size of the business. When the company is able to show substantial increases in sales, it gives signals to investors and other interest groups of a potentially fast growing company.

In the current situation in Figure 6 we see that sales have continued to increase, however the increase rate drops. When looking at the aspect of sales

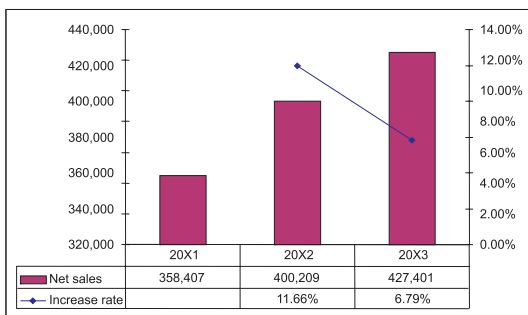


Figure 6 Net sales and increase rate in net sales when FIFO or LIFO method is applied (the author’s calculations)

when different accounting treatments are applied, the conclusion is that in the current study the only source information that has an impact on sales is selling the production.

As there are no variables that have an influence on the amount of sales, the figure illustrates both situations, when trying to maximise or minimise the net profit. That is why these two indicators (from the six covered) for ranking enterprises, have no influence on the final result of the ranking.

Net profit and the increase rate of net profit enables us to make conclusions about the efficiency of the company. When looking at the background of these indicators, information should be added due to gaining a complete understanding of the business process. When making lots of investments or there

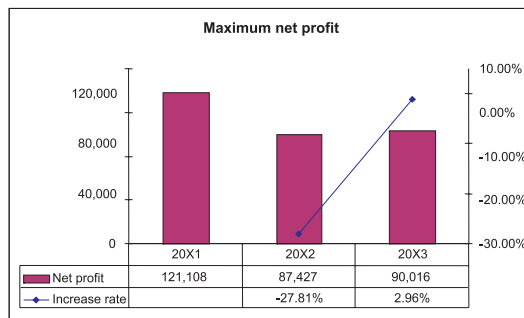


Figure 7 Accounting treatments to maximise net profit are applied (the author’s calculations)

being other variables that have an impact on net profit, it can lead to erroneous conclusions. However, net profit and the increase rate of net profit are considered to be important to investors who expect dividends to be paid based on the financial results for the year.

Also they are one of the most important indicators in maximising the value of the enterprise.

In the case of maximising net profit we see in Figure 7 that the level of net profit has decreased significantly—by almost a quarter from the level of 121,108. The main influence on this phenomenon is the revaluation of investment property. If there were no revaluation process resulting in the extra profit of 46,667, there would have been a continuous increase in net profit. In addition, the level of net profit generated is higher when the investment property influence is left out. The second reason for this is the ‘more expensive’ inventory used for production when the LIFO method is applied.

Despite the fact that prices increase and it should be clear that greater profits will be made, Figure 8 shows that the level of net profit has dropped during 20X3. While there is controversial movement in the increase rate of net profit, due to an initial revalua-

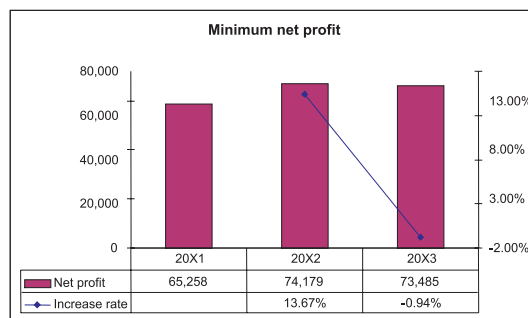


Figure 8 Accounting treatments to minimise net profit are applied (the author’s calculations)

tion done in 20X1, it may be concluded on the basis of the increase rate that when choosing treatments to minimise net profit, it appears to be more successful than in the controversial situation.

On the other hand, 20X3 shows results where the impact of revaluation is no longer effective. When eliminating the influence of revaluation, the increase rate for 20X1 in maximising the alternative chosen would have been 17.44% (profit from revaluation for 20X1 is eliminated), which is higher than 12.35% (adjusted by the elimination of the depreciation expense).

In conclusion, revaluation plays the key role in profit analysis. When the fair value model is applied the result of greater net profit for 20X1 is guaranteed and no expense from depreciation is subtracted in the following years. When looking at signals of the fluctuation of the level of net profit and not disclosing the previous impact of the fair value model, the enterprise leaves the impression of a worse financial year, which is actually not true and does not give a fair view to the end users of the financial statements. That is why it is the author's recommendation that the company disclose information when revaluation is applied to assure equal understanding for all parties to whom financial statements are presented.

Net profit margin on sales (hereinafter net profit margin) is another indicator for ranking companies according to their activity. This includes the previously mentioned net profit that was significantly influenced by revaluation and the impact of net sales.

As mentioned above, net sales are not influenced by any other factors that are dealt with in this study except the base data generated by the author, which is similar to both scenarios. That is why net profit

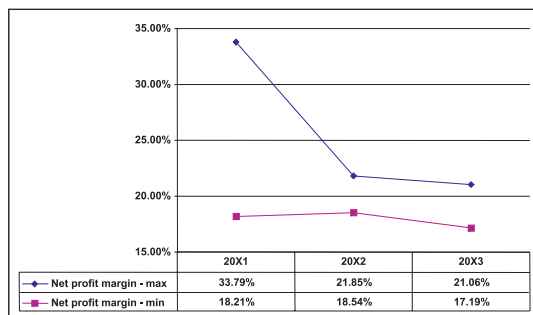


Figure 9 Net profit margin fluctuation when different alternative treatments are applied (the author's calculations)

margin has the same characteristics as the movement of net profit, while net profit margin is calculated by dividing net sales by net profit.

As in net profit analysis, implementing the fair value model plays an important role when looking at Figure 9. There is a drastic decrease in 20X2 after earning profit from a revaluation in 20X1 resulting from the lower level of the net profit generated.

When following the same algorithm for eliminating the impact of revaluation, the picture looks more similar to both situations. As in 20X1 when maximising net profit, the margin is 33.79% corresponding to 20.77% when the impact of investment property is eliminated. From the perspective of minimising net profit, figures result in 18.21% and to 20.16 % respectively. An increase in the net profit margin in the latter alternative is caused by the effect of a depreciation expense resulting in



Figure 10 Return on assets depends on the average total assets and net profit for the year (the author's calculations)

higher net profit. The same conclusions apply to net profit margin analysis and the previous section about net profit and it is the author's estimation that this continues in the following conclusions.

Return on assets (ROA) is the last of the indicators Äripäev uses to rank enterprises. In the following figure (Figure 10) it can be seen that return on assets in 20X2 and 20X3 are almost at the same level showing the value of approximately 22% in 20X2 and 18-19% in 20X3 respectively. The sharp drop during 20X2 when maximising net profit is again due to a revaluation that generated extra profit in 20X1. So, to get better overview from the behaviour of ROA the author has eliminated the influence of investment property.

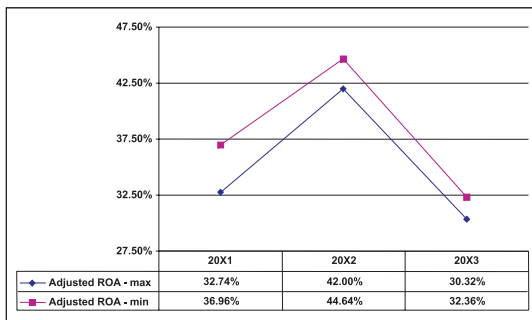


Figure 11 The adjustment of eliminating revaluation converges the percentage of return on assets in different manipulation (the author's calculations)

In Figure 11 it can actually be seen that the percentage of ROA is higher when trying to minimise net profit when extra profit from revaluation and depreciation expenses are left aside. An alternative treatment in inventory accounting when the FIFO or LIFO method is applied results in a different percentage of total assets—net profit earned stabilises the effect of maintaining the balance. However, there is no strict correlation with ROA when looking only at inventory accounting. It is interesting to note that when one only involves inventory in ROA calculation, FIFO shows a higher rate than LIFO. When bond and inventory are compounded together, the maximising net profit scenario shows a lower ROA than the minimising scenario. This means that bond has in this case greater impact over inventory accounting.

When ROA is calculated on the basis of only one year, the results may differ substantially. As herein ROA is calculated taking into account the average of total assets for the year, it is materially influenced by trade-date accounting (bond recognition) where in 20X0 total assets amounted to a greater value when the bond was recognised against liability.

Summary

To meet worldwide acceptance of local accounting standards, the IFRS leaves several choices to be made when preparing and presenting financial statements. Indeed, alternative treatments in the IFRS create the opportunity for the adoption of standards in many countries, but there are indefinite clauses in most of the regulations.

The objective that has been considered throughout this thesis was the influence on net profit when

alternative treatments given under the IFRS are applied. It may be concluded that the most influential factor in these alternatives was revaluation under investment property. Where upward revaluation is possible, it generates net profit and increases the owners' equity allowing the payment of dividends or facilitating applications for bank loans.

As another example, in inventory accounting as prices have a tendency of going up, the LIFO method shows the higher cost of goods sold resulting in a lower net profit. In order to pay less income tax, enterprises report their income on the basis of the LIFO method and for owners, investors, management and so on, on the basis of the FIFO method. So, in countries where the LIFO method is permissible authorities are taking action to ban this alternative explaining that the method is used only for tax reporting. It is the author's opinion that in the near future the elimination of the LIFO method will become topical.

A weak point of the balance sheet is that it presents the financial position of an enterprise on that exact date and no dynamic information, except comparative data from previous years, is disclosed. This fact could be material when recognising a financial asset on the trade or settlement date. The latter alternative records the asset and the liability when the transaction itself has not yet been settled. It allows balance sheet totals to increase resulting in inefficient management of assets when calculating the return on assets.

Points put forward for consideration include the fact that all these indicators were profit based and did not take into account other ratios. For example, when there are alternatives applied in inventory accounting, different ratios may be calculated to provide a position concerning the efficiency of managing the production process. However, previously handled models were designed to be as simple as possible and that is why providing estimates for other areas of management efficiency are complicated. While the acid test has, in addition, the components of prepayments and short term liabilities that were not dealt with in this study, this test was left aside. Indeed, when thinking about the research that could be continued, other factors may be added and the impact of alternative treatments could be analysed from other points of view.

There are many alternatives, not illustrated in this study, that could demonstrate the result if different alternative treatments under the IFRS are applied. In the IFRS there are many standards that concern group accounting if consolidation should be involved. However, the author has only pointed out certain possible choices and concentrated on certain areas of accounting. Indeed, these could have equally been substituted for the alternatives illustrated above. So, in conclusion there are many more alternatives to be illustrated and the comparative analysis can be done in more detail.

As financial statements are prepared and presented for external end-users around the world, they should have a similar target and outlook. With the rise in globalisation, “you need a common language for accounting and financial reporting purposes that will make it easier to make comparisons among companies,” says Andersen Partner, Jeannot Blanchet. The IASB believe that the adoption of International Accounting Standards will have a significant impact over the years. The quality of financial statements will be improved and there will be an increasing degree of comparability. The credibility and consequently the usefulness of financial statements will be enhanced throughout the world. But referring to the information in this study, for example, for accounting of inventories or investment property, in the author’s opinion the current position of the IFRS in certain areas can be misleading and following the IFRS does not guarantee a one-hundred-percent true and fair view of financial statements.

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International Accounting Standards (2001)
Accounting Standards Committee

The Risks and Management of Telework

Maris Zernand, *Estonian Business School*

The emergence and application of information technology has empowered knowledge-based workers and has changed management methods. These developments have made alternative work arrangements possible. Information technology and dynamic global market forces have enabled the temporal and geographical dispersion of organisations and members, making it possible to work at any time and anywhere. As the creation, storage, transfer and management of information has become the source of a knowledge-based competitive advantage, organisations no longer need to be located in one central place. As organisations can be divided into subparts in different geographical locations, the people as the members of the organisation can locate themselves away from the employer's ordinary premises. Flexible working methods create new opportunities but in some cases this way of working can also be a threat or a possible weakness for the organisation.

There are a number of terms for working away from the usual workplace. Possible variants include telework, telecommuting, distance work, remote work, e-work or homework. Some common features of these allow us to consider them as the complete or partial use of information and telecommunication technologies to enable workers to gain access to their labour activities from distant and remote locations. In the current article the term used to describe this phenomenon is telework

By definition telework is counted as the European version of the equivalent term which is telecommuting. (Salomon 1998) The telecommuting concept was coined by Nilles et al. (1976) almost 30 years ago. While still not a widely practised work pattern, telecommuting is likely to expand. There are a number of trends, which accommodate and support its diffusion. Most notable are the restructuring of the business environment where sub-contracting to professional services becomes a common pattern, particularly in information indus-

tries; the growing availability of affordable new information technologies (NIT); and, of course, the increasing transport congestion experienced in many urban and suburban areas.

The studies of telework have indicated a rapidly growing interest in adopting it among companies. The main task in preparing for implementing telework in an organisation is to weigh up the possible advantages and disadvantages. The greater relative importance of the disadvantages or risks does not necessarily constitute the final barrier for this new work style. Most of these risks are actually manageable.

The advantages and disadvantages of telework are viewed in regard to three main points: its effect on individuals, the organisation and society.

Risks for Individuals

The results of the survey by Thompson et al (1998) suggests that individuals are concerned about issues pertaining to career advancement, reduced interaction and the loss of personal workspace as a result of teleworking. Individuals are also concerned that they will miss out on peer interaction, which is critical for their professional development. Furthermore, individuals fear that the loss of workspace may imply a loss of control and power in the office. In addition, they may believe that their reduced physical presence at the office will affect their promotional opportunities.

Risks for Organisations

Mills et al. (2001) describes the main advantages of telework and they also describe the disadvantages in their article. They are:

- Cost inefficiencies
- Security risks
- Diminished corporate culture
- Managing out-of-sight employees

Despite the potential benefits, operating efficiencies can be lost when equipment or services are distributed across many locations instead of one central location. Setting up remote workstations can resist high costs for the multiple technical facilities.

As a company, which generally connects their internal networks through the Internet to customers, suppliers, partners, and their own employees, it increases the risk that secure information will be leaked to the wrong individuals.

Corporate culture can also be jeopardised if employees are not in the primary workplace. Telecommuters may find themselves becoming “strangers” to the office regulars. This also raises some management problems. Managing out-of-site employees may imply the need for a great deal more communication than when everyone is in the office.

The survey by Thompson et al (1998) indicates that the main problems for organisations include data and system access security, supervision and management of teleworking employees and accountability for repairs or maintenance of equipment in the homes of employees. These results are linked to and contingent for the surveyed organisation in Singapore. It has the traditional belief that employees need to be physically present in the office to be supervised and so superiors need to adapt to new ways of managing subordinates who telework.

Some objections to telework from the companies include (Fortier 2003):

- If we let you do it, we will have to let everyone do it.
- Telework is too new and we are not ready for it.
- I need my staff here where I can see them.
- Telework can not work here—it would break up the team.
- Teleworkers will goof off and not be as productive.

As Candee (2000) says developing a telework program can be a frustrating exercise for an IT department, which must consider issues such as security, capacity, and user support. But these issues are better managed if the organisation’s information technology (IT) gets involved early in the process. Successful programs involve the IT department as

a key player in the development of a formal program.

Telework may also negatively affect the social network of the workplace, and thereby pose other challenges for managers. For example, telework can negatively impact those who remain in the workplace by disrupting teamwork. Managers may find it difficult to create team synergy and to overcome the absence of informal, interactive learning. Sometimes, formal, scheduled meetings are not enough. When employees work off-site, they miss the learning that occurs informally, spontaneous-learning that cannot be scheduled.

Other challenges or barriers relate to coordinating and organising work. One barrier has to do with how organisations distribute tasks between teleworkers and office workers. Although empirical studies rarely report the effects of telework on the reorganisation of tasks for employees, academic opinions were largely divided into two schools of thought (Chapman et al. 1995) The first of these recommended that teleworkers given an enlarged job with high levels of control, autonomy, and responsibility might show better performance and satisfaction.

On the other hand, other studies suggested the adoption of principles of task structuring and the clustering of responsibilities in order to assign structured and repetitive tasks and make teleworkers more productive. However, depending on the level of electronic linkage at an organisation, for example, accessibility to an Intranet, such clustering of similar tasks may not necessarily constitute an essential condition for effective work coordination and control. Profound technological advancement is literally allowing virtual work to be more productive in many cases, even for communication-intensive tasks.

Another challenge relates to the teleworker’s availability. When teleworkers take advantage of flexibility in scheduling their work, they may be unavailable to work with peers and customers who keep ‘nine to five’ business hours. This may pose a challenge to, for example, virtual product development teams in multinational or export oriented companies. In some organisations, telework programs have progressively evolved into an established organisational structure. In other organisations, attempts to establish the flexible

work system failed or were abruptly terminated, often due to a lack of employee response.

The acceptance of telework by an organisation or its workers may be contingent on its compatibility with existing organisational norms. A telework program that fits into current organisational cultures, procedures, and value systems may have a higher chance of success. Major resistance to a telework program often comes from middle managers, primarily because they perceive that supervision and coordination will become more difficult and that their workloads will be increased by having to manage teleworkers appropriately. Naturally overcoming the concerns of middle managers and gaining their support may be critical to success. (Pérez et al. 2002)

Risks for Society

Salomon (1998) points out the following in his critical article about telework: "Paradoxically reducing private costs by adopting telecommunicating may result in increasing social costs, if for example, telecommuters abandon public transport." It is difficult to state whether that threat is presented also in Estonia, because we experience such a low level of improvement to a public transportation that cannot respond the expectations of consumers.

Salomon sees this as one threat of popularising telework in the interests of decision-makers in the NIT industry, in the interests of human resources managers or other parties. At the same time it has less relevance for transportation or environmental planning.

It is mentioned in the same article that the literature on telecommuting, mostly in popular and trade journals, but also in academic studies, abounds with a list of promises that can or should be realised through its adoption. Repeatedly, the following three beneficiaries are mentioned: the transportation sector (reduced congestion and pollution); the business sector (reduced costs, larger labour pools) and society-at-large (greater flexibility, more opportunities for mobility-limited groups, cleaner environment). Less often mentioned, but clearly of interest, is the business sector, which may have a vested interest in promoting various aspects of the 'information society' (Salomon 1998).

Estonian Business School as an Example

To discover the potential for implementing telework at Estonian Business School, a survey was disseminated in spring 2003. In addition previous research results were also analysed. The main survey investigated the employees' attitudes toward telework, their willingness to implement an alternative way of work, and also the general level of preparedness. Fifty-three respondents from 108 employees at EBS voluntarily completed the web-based questionnaire. The attitudes concerning the advantages and disadvantages for employee and employer were evaluated on a five-point Likert scale. When considering the advantages, a higher rating indicated a good result and when considering the disadvantages a lower rating indicated a more positive rate.

The block of questions about attitudes concerning the disadvantages of telework for employees resulted in a general rate of 2,92. The most critical item for the employees was the loss of peer interaction (avg. 3,60). Although the members of the organisation valued independence, they felt the need for a special environment for their development and colleagues are an essential element in the creation of this. A similarly important factor was the possible problems with access to information (avg. 3,59). Compared with other factors in this block, the respondents were not afraid of the possible increased workload (avg. 2,39) or the loss of a workplace (avg. 2,39).

The block of questions about attitudes concerning the disadvantages for the organisation regarding employees scored a general rating of 1,48, which was the lowest.

There were imperceptible differences between the responses to this block of questions. Less than other risks, it was expected that the public image of the organisation would be adversely affected since clients and the community might display some scepticism. Although the block of questions concerning disadvantages to the organisation included the lowest number of questions, not many additional remarks were included. Among comments that were added there was the risk of chaos without the certainty of rules and the possibility of a sense of exasperation in the absence of informal communication.

Conclusion

The results of the author's review of relevant literature show that there are more positive effects of telework than negative. But implementing telework can end in success only with sufficiently thorough preparation. The prep-work means the elimination of all risks. Certain risks affect individuals and the organisation. Not all employees are suitable for telework. People who do not have good self-control or cannot understand and remain cognisant of the principles of management objectives can easily endanger the success of telework.

Organisations who are implementing telework are faced with an aggravated middle management. This is the main reason why numerous organisations still delay the implementation of telework. Such a new working style can cause the splintering of the organisation. The various risks of telework influence organisations differently but all these risks are manageable.

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Our Fatal Conceit

Kaire Põder, *Estonian Business School*

Is the liberal arrangement of society based on the single moral principle—that man is wolf to man—or is it, at least in Estonia, that people are entangled in a network of misconceptions regarding markets and classical liberalism? Economics has the unusual role of showing people how little they in fact know about things they believe they are able to plan.

The Evil of a Money-Centred World

Now that our society has spent ten years in the transformation from a planned economy to a market economy, the phrase “excessive liberalism” is being heard more and more often in the media. This phrase is being used in a variety of contexts from describing Estonian trade policy to the current pension fund system. For many, *excessive liberalism* means a lack of restrictions *ergo* the free market.

It seems that the way markets work is becoming more and more understood as follows—on the one side there are consumers on the market who pursue *things*, and on the other side there are producers who pursue *profit*. Such a world, which is centred on *things*, is thought to be wasteful, inciting consumption and is not, to coin a recent buzzword, *sustainable*.

The given approach is temptingly critical of society, but it distorts reality too much—when only the thirst for profit and the propagation of the values of consumption are seen in a liberal society, the anticipatory nature of the problems associated with free-choice are not understood or there is no desire to understand. How much and for whom? What is right and fair? Such questions can only arise when such a market-centred distribution mechanism is disregarded.

These allegations of an excessive market-centredness can partly be accounted for by historical criticisms of business *per se*, and naturally do not only pose a problem for Estonians and other post-Soviet peoples. However, there remains quite a lot negativity towards business, or earning a profit

in general, that still lingers on in this *positively transforming* society. Mediating or doing business, whether we want it or not, is regarded as something second-rate or even despicable. Such resistance cannot be explained using rational or even ideological argument; there is something more mysterious and archaic to understanding it (Hayek 1997, 139-146). Eric Holler once remarked “The hostility, in particular of the scribe, towards the merchant is as old as recorded history.”

What is not understood is feared or despised. Earning a profit, especially when it occurs not because of one’s physical efforts but as a result of trading, has been considered exploitation¹. Trading, be it considered real work or not, not only brings an increase in the trader’s wealth but also in the collective wealth, and not so much because of muscular but intellectual effort. If the previous sentence remains unclear, then one’s understanding of the trading and mediating process is probably to some extent erroneous; or, one has not completely understood the way markets work.

The Market Loses the Ethics Problem

Explaining the operating principles of the market seems redundant for many, or perhaps it seems like repeating something that everyone already knows in present-day *successful* Estonia. At the same time, people are quick to admit that an understanding of how the market functions cannot provide the practical skills or knowledge that will result in success or more income. I, however, dare to doubt both the overall understanding and the impracticality of the concept (the latter to a lesser extent though).

People are led by ideas even when they do not admit it. As far as understanding market functions, Hayek (1997, 139) has written: “The overall contempt with which intellectuals tend to regard the whole subject is preventing them from understanding. [...] an understanding of the said, however, signifies that the individual has become free.” What is it then that the market provides that is not considered worth understanding; or, what is it that is ignored, most probably, because of the fear of

a market-related “risk”? The question that is even more intriguing concerns *becoming free*—becoming free from who or what and what would such freedom provide?

The market does not bring together buyers and sellers physically, nor does it teach us how to sell and to whom; on the contrary, it gives us reason to think according to the “theory of moral sentiments”. (Adam Smith’s “The Theory of Moral Sentiments” is the basis for classical theory of economics.)

What does that mean? The market mechanism does not only determine prices and quantities as understood from economics textbooks, but it does more, or perhaps would be more appropriate to say that the market does something completely different. If there is competition on the market, it provides society with several other “good things” that people tend to forget: cost effectiveness (which means keeping average production costs to a minimum), distribution efficiency (which means Paretian efficiency) and minimising the conflict of differing ethical values. While the first two can be found in traditional or orthodox treatments of economics, the latter has remained hidden primarily in the writings of moral philosophers.

The minimisation of costs was a typical objective in the planned economy—to find a production volume that would minimise average expenses and enforce pricing based on the costs. Technically the administrator’s task here, which belongs to applied mathematics can, unfortunately, only be solved on paper. Without such an administration it is the competition that forces producers to lower prices (increase volumes) to the extent that would minimise average expenses.

Writing it all down, I hear a sceptic’s voice: “How many flawless competition markets have survived to this day?” and “the model only talks about long-term results (whereas in reality we are always in the present day, in other words, at an operational level)”. I do not wish to claim that the model is a perfect description of reality, but that often we have quit counting on competitive markets and replaced the markets too easily with an administrator.

According to Vilfredo Pareto Paretian efficiency describes a division on the market where it is not possible to make one party “happier” without making the other party “unhappier”. Basically, this

means that the division is efficient when all profits gained from the mediation have been depleted. Given that all transactions are strictly voluntary, both parties in the transaction need to value the transaction. Hence, such a voluntary distribution is a game of positive amounts. This is true only (and definitely only) when the initiative for the transaction comes from both sides. Forceful distribution can also be a game of positive (but also of the zero or negative) amounts, this, however, is not a complement of Paretian efficiency, as taking forcefully away from someone (e.g. through taxation) does not increase his happiness in any way. To put it another way, this movement is in fact away from the division in Paretian efficiency.

And finally, orthodox economics has also forgotten to include in basic textbooks the operational principle of competitive markets (Buchanan and Tullock 1962). The faultless operation of competitive markets reduces the problem of ethics to a minimum—when the market as an institution works flawlessly, the single seller or buyer has no control over trade conditions. Ethical issues arise only when certain individuals or groups are enjoying a competitive edge while being sufficiently powerful to incline the trading conditions in their own favour. Hence, the problem of ethics is due to a lack of markets and not excessive market-centredness. The latter is an idea that is slow to take root. Any administration that is used to *treating* the *inadequacies* of the liberal arrangement of society is, in fact, poisoning the liberal order, not treating it.

Drug Addiction, Prostitution and Daily Deceit

Every person has his or her own moral rules that to a large extent establish the criteria for human behaviour. For instance, most of us consider selling our labour to companies to be absolutely normal, whereas selling a woman’s body to a man is regarded immoral. Most economists consider selling their labour to universities moral, whereas selling *themselves* to a political party is considered immoral. Do the above sentences not make us question the consistency of our moral concepts?

Based on the above examples it could be said that the human being does not behave rationally nor decide between “good” and “evil” on the basis of rational thought. Even if it is mathematically so, we could say that there is nothing wrong with the two

previous examples as long as we do not, with our own principles, prevent other people from acting upon their principles. We could say that he is actually corrupting himself through his own choices; nevertheless, I value freedom of choice and since it does not damage others, I cannot put restrictions in place according to my own moral rules.

What happens when we talk about, instead of “selling oneself”, for instance, the excessive use of drugs and alcohol, smoking or any other activity whereby the individual’s free choice can affect my activities or even my welfare. Naturally, there would be no great difference between the first and the second problem if drugs were as accessible as alcohol (in which case they would be bought and sold freely, which would decrease their price considerably and limit drug-related crime).

Orthodox *welfare theory* states that the problem that exists when someone finds themselves in a position, through production and/or consumption, where they can influence someone else’s welfare and is a problem of external factors.

According to welfare economics such problems are solved in the manner of Pigou (1932)—through the intervention of the public sector. For such problems, taxation (and very seldom also subsidisation) is considered a more *liberal* intervention, whereas legislative prohibition is deemed a stricter form of control. In Eastern Europe, not to mention in the *industrial west*, we have been led by the Pigou way of thinking in solving such problems for around three-quarters of a century. We are used to the fact that the state regulates, for instance, smoking, alcohol consumption and prostitution, not to mention drug use; and people who decide to increase their *happiness* through involvement in such activities are fined or punished. What is so bad about that?

The first argument worth discussing is whether such control could eventually expand to cover an ever-increasing number of freedoms. When we start looking, we will find a growing number of activities that somehow affect the *happiness* of our fellow citizens. For instance, we may find the existence of houses that are structurally or architecturally unsuitable, or the destruction, for some reason or other, of green areas, disagreeable. We are disturbed by our neighbour’s barking dog or their children, we are disturbed by the habit people have of using mobile phones on public transport, we are

disturbed by the boss’s habit of shaking hands with his male and not with his female colleagues, etc. The list is far from complete, but comprises the first things that come to mind and these, undoubtedly, are very subjective. The Pigou solution sounds reasonable—let us prohibit and impose fines. If we do it for prostitution and the public consumption of alcohol and tobacco, we should also do so in a thousand and one other areas.

The other fact that we do not often acknowledge to ourselves is that everything has a price. Prohibition and following up on cases of trespassing costs something. Are we willing to pay for the control of these external factors and if so how much? My own experience has shown that moral principles become *less strict* as soon as there is a price tag attached to them. How much are we willing to pay for banning prostitution? How much we are willing to pay for the boss to cease greeting his male colleagues by shaking their hands? If the decision about whether to pay for banning such activities is not within our area, but has been already made by someone else in advance, then all that is left for us to do is give up a part of our income or property. Could the problem not be solved in such a way that everybody decides about payment or non-payment based on their *level of conviction* and his or her moral principles? Could rights and prohibitions also be transferable if there was a market for them?

The market-centred solution that was offered over 40 years ago by Ronald Coase (1960) turned the former traditional understanding about the issue of external factors upside-down. The market-centred solution requires a clear definition of the ownership right and the right to buy and sell ownership rights. As always, market-centred solutions result in Paretian efficiency, in other words, we would be dealing with the positive-amounts game. On the marketplace I would be able to pay those who do not like smoking and buy myself the right to smoke. In such a case, the external factor caused by me would not be paid for by all taxpayers (including non-smokers), but only by me.

Corruption among Public Officials

Dictionaries define a Leviathan as “the sea monster epitomising evil”. Thomas Hobbes was the first to use the expression to describe a state overpowering the individual in 1651. Three hundred and fifty years later a lot of people use the term when they

are trying to draw attention to dangers arising from the growing public sector that is reaching out its tentacles everywhere.

Even though the term Leviathan is not widely used in Estonia, issues concerning the ethics of politicians and the nature of the public sector in a broader sense are real, especially when one considers the local government elections in autumn 2002 and the *Riigikogu* elections in spring 2003.

The emergence of such issues is apparently an inevitable process and can be explained to a large extent by the rent-seeking behaviour (Põder 2002, 50-51) of the society and its politicians. In addition to the typical rent-seeking behaviour currently abroad in society and the public sector, the process that has been labelled in the media as the *alienation of society* is also interesting. This expression is 100 percent Marxist in content.

In the Estonian context, the term could be defined as—the confrontation of *societal structure*, as created by the ruling political and business elite, and the concept of the *rule of law*—causing the typical voter to believe that what is superior to him or her (the state and the economy) is not dependent on his or her decisions. The definition clearly implies that if today's *super structure* was changed, we would have much happier voters and a more democratic society, in which there would be less bureaucracy, less rent seeking and less corporatism. Even though I consider any movement away from the principle of the *rule of law*² a serious problem, I believe that many media leaders misunderstand the model of mass democracy or have not especially bothered to understand it.

In a democratic system we feel like members of the government whether we want to or not (which is a prerequisite for citizenship and the bourgeois concept); we fulfil standards that we have not composed ourselves and we even agree to confiscation (what else is taxation than confiscation of property). Therefore I agree with J. Buchanan (2002) that even if we eliminated all the inadequacies of the public sector, for instance, and placed all political forces on an equal footing, which would end rent seeking and corruption, the government and the state would still remain a Leviathan.

When we talk about controlling and limiting the state (the Leviathan), we are not talking about any-

thing other than ourselves. Arising from our conceit, we get this idea that we have something that gives us the right to rule over others, which needs to be controlled and only then can we talk about fighting the Leviathan. As long as we keep chasing the *bad guys*, the *stupid* and other *wrongdoers* within the public sector without changing our understanding of the functioning of the markets and ourselves, we will be chasing the wind.

Conceited Man

Economics in the 20th century, which has combined the engineering or solution-centred approach with eugenics, has not changed economics from a theory of values into a science, but replaced the moral problems as well as the issues concerning the societal arrangement of individuals with equal opportunities and freedoms with an area that could be described using the question—how can people be better made to stand for the interests of the state? (Levy and Peart).

In the 19th century, a political way of thinking, which spread *en masse* and entered the area of economics in the 20th century, could be described generally as follows—there are two kinds of people: those who divide people into two and those who do not. The *dividers* substantially dominate here because the *non-dividers* would not even dream of such a way of thinking. In the 19th century people were divided into the whites and the blacks, whereas the latter were not sufficiently competent to decide on issues such as how much they would like to work, how many children to have or how much they should save up for their old age.

Later the world talked about the Jews in the same tone. Today we believe that economic competence differs from group to group—it especially differs according to social class (sometimes also according to nationality, age group or race). Society needs to decide for *them*. Sidney Webb (1910) called such an approach, “social engineering”.

Even though the economic theory of the second part of the 20th century has, to a large extent, discarded the influences of eugenics, one's ability to make decisions concerning one's welfare differs, and has retained (or returned to) the analytical approach of behavioural incentives, we have not *in the least* been released from the idea of social engineering. Some of us even claim that thanks

to education social classes in the previous society were non-existent and today's inequality regarding the acquisition of education results in an increasing need for *social engineering*.

In 1940 Hayek wrote: "We all know that knowledge cannot create new ethical values; all the education we can give the people would not result in the similar views on moral issues which are necessary for an informed organisation of social relationships (Hayek 2002, 92)."

Even if our intentions about the *socially unequal* were good it would be of little help. We all know the way that is paved with good intentions. Even the idea that we know what is *good* for someone is conceited in nature. It is natural that this view is shared by politicians, without such a conceit they would give up their aspirations to power. Rather unusual, however, is the thought that such views are also shared among the scientific community by scientists who agitate for the *scientific* organisation of society (Hayek 2002, 148-149).

Here it is Estonian professors of political science who first come to mind, followed by numerous so-called scientific experts (from a variety of national institutions whose names usually include the epithet of "advisory" or "strategic"). And once again, it is difficult to express oneself better than Hayek did more than half a century ago. What is conspicuous about the scientific experts is their *intolerance of mind*, the characteristic impatience of experts towards the incompetent and contempt against everything that in accordance with some scientific plan was not organised by the "best brains" (Hayek 2002, 142-156).

We have the faith that science is competent enough to deal with any issue including the moral. Moreover, it seems to me that even the organised capitalists often hit the same conceited road having been used to solution-centred thinking and making suggestions concerning the national distribution of resources that would result in a more *optimal* and scientifically grounded use of resources.

In the opinion of one conceited person, others approach the questions that contain moral assessments in the wrong way, irrationally or unscientifically. Questions about social choices, however, always contain values. Only an understanding of our own conceit can free ourselves, whom we

consider rational beyond any doubt, from further efforts on the road to *social engineering*. Hence freeing oneself from conceit is in fact what classical liberalism means.

Notes

¹ The Marxist approach has been referred to here.

² It is interesting even how the English term "rule of law" should be translated into Estonian and to what extent the Estonian societal structure attaches importance to the principle of the rule of law. The area clearly needs a separate treatment and will not be regarded in this article.

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