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Summary of the Doctoral Thesis

**LONG-LIVED NON-FINANCIAL ASSET
MANAGEMENT WITHIN THE SYSTEM OF
CORPORATE GOVERNANCE**

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Sub-discipline: business management

Scientific supervisor:

Dr.oec., Professor

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The dissertation has been written in English, contains an introduction, three parts, conclusions and suggestions, a list of bibliographic references - a total of 250 pages and five annexes. The list of bibliographic references contains 327 literature sources.

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I hereby confirm that I have developed this dissertation, which has been submitted for review to Promotion Council of RISEBA for the acquisition of a doctoral degree (*Ph. D.*) in economics and business management. The dissertation has not been submitted to any other university for the acquisition of a scientific degree.

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6 April 2022

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INTRODUCTION

Topicality of the research

Due to nowadays global economic situation many companies worldwide to survive in the global marketplace are forced to develop different strategies to create company's value and increase its performance indicators. Companies try to increase its value via income, market value, value added activities to its products and services, and even knowledge-based management. **Tangible and intangible assets owned by companies are involved in this value creation process as very important elements** (Poenaru, Halliburton, 2011; Woodruff, 1997; Garanina, 2009; Knowledge Management, 2000/2001). Furthermore, to gain competitive advantage is one of the key goals and challenge not for a company as such, but also for its long-lived non-financial asset management process.

Today in various businesses **long-lived non-financial assets are one of the most significant items in the company's balance sheet** – ones being used for more than one accounting period ensuring company's basic business operations and also ones basically generating the profit (IAS 16, IAS 38). Furthermore, during the period of 11 years (from year 2007 to year 2017) the average proportion of long-lived non-financial assets is 41,77% from balance sheet value of Latvian companies listed on Baltic stock exchange. This proportion has been increased from 38% in year 2007 up to 55% in year 2017 (Kozlovska, 2015; Kozlovska and Kuzmina-Merlino, 2019). This can be accounted as a very positive trend proving the companies perform significant capital investments, therefore, the ones do have significant influence and contribution for the growth of the economy of the Republic of Latvia (Kozlovska and Kuzmina-Merlino, 2019). Accordingly, **significant part of company's value including its stock price is connected to the balance sheet positions related to companies' long-lived non-financial assets**. Furthermore, cash flows of these companies and its shareholders' personal incomes have been **significantly influenced by the efficiency these assets have been used, managed during economic activities performed**. Therefore, there is significant impact of efficient long-lived non-financial asset management process on company's future successes, market value, share price, profit maximization, etc. Efficient management process of these assets is crucial aspect of improving company's operational performance ranging from financial management to maintenance helping companies to come out of survival mode, become successful and even thrive (Metka, 2015; Sidney, 2009; McNeeney, 2005; Roggi, Giannozzi, 2015).

As a result, long-lived non-financial asset management is mutual collaboration between both types of company's stakeholders – internal and external. This **collaboration and relationship between management and shareholders of public companies has been regulated by the corporate governance**. The main objectives of the corporate governance are also key factors influencing its control mechanism – transparency, growth, leadership, social responsibility, trust, strong protection of assets and shareholders of the company (Henze, 2010). Furthermore, according to agency theory principal and agent have different access to information – principal does not know what agent does and which information agent has. Focal point of agency theory is relationship between both – principal and agent (Podrug N., Filipovic D., Milic S., 2010). Therefore, one of the most important functions corporate governance can play – to ensure the quality of financial reporting process and decrease possible asymmetries of information among all parties (Cohen et al., 2004; Madahan, Pankaj, 2015). Therefore, company's financial accounting and reporting processes at the highest level is one of key characteristics for qualitative corporate governance and efficient management of long-lived non-financial assets accordingly. Nevertheless, company's stakeholders addressed and potential benefits from considering stakeholders in accounting explained **only few researches exist investigating stakeholder theory perspective in accounting (Hörisch J., Schaltegger S., Freeman R.E.)**. Moreover, there is even link between stakeholder theory and resource-based theory's model of profit appropriation – suggestion to develop stakeholder theory of strategic management (Barney J.B., 2108).

Nevertheless, there are various local and international accounting and reporting rules, regulations, standards developed for accounting and reporting of long-lived non-financial assets many of them are still not complete providing legal rights company's management and other interested parties to manipulate with information relating these assets in publicly available financial statements/ annual reports (Talnagiova and Cerna., 2011; Pinto, 2013; Dvořáková, 2009; Schvirck and Giasson, 2008; Crisan, 2012; Kuzmina and Kozlovska, 2012; Kozlovska, 2015; Barth et al., 2001; Ilincuta, 2013; Jackson, 2008; Birky and Grimstad, 2013; Butler and Crawford, 2011; Zucca, Campbell, 1992; Trottier, 2013; Komissarov, et al., 2014; Bond et al., 2016; Wang et al., 2015; Chen and Cheng, 2014; Shimen et al., 2009). In the process of decision-making process toward financing and possible future investments in these assets it is important **information available is transparent, fairly reflecting real situation in the company** with possible basic risks especially in case the large proportion of these assets in company's balance sheet.

Company's management recognizes that there are real economic benefits to be gained from a well-managed disclosure policy (Madhan and Panakj, 2015). Therefore, **transparent company's accounting and reporting policies of long-lived non-financial assets within the system of corporate governance plays significant rule in the management process of these assets, and the most important – company's performance and future value.** Moreover, company's corporate governance rating is positively related with informativeness of stock price. Good firm-level governance enhances the quality of firm-specific information, prevents managers from self-serving activities, underpins benefit conducting informed trading, significantly influences company's choice of financing policy, and stronger corporate governance have stronger impact on company's corporate financial performance, corporate sustainability performance (Lu, 2020; Yu, 2011; Vivek et al., 2014). **Furthermore, it leads to the necessity to evaluate the need to develop the framework for long-lived non-financial asset management within the system of corporate governance ensuring one of the corporate governance key principle – “disclosure and transparency”. This will lead to increase of companies' performance indicators as well as** having significant positive impact on company's future performance, successes, **corporate governance index, potential shareholders' interest about Latvian stock market accordingly** especially in conditions of economic depression. Furthermore, developed framework will ensure that not only company's management, but also shareholders and other stakeholders will be able to follow, control, manage and plan company's long-lived non-financial assets in the most efficient way.

Taking all the mentioned aspects into consideration, there is significant necessity for such a framework that is developed based on investigation of the latest scientific researches and existing practices applied by Latvian companies listed on Baltic stock exchange within the system of corporate governance. As result the author's developed framework for management of long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange within the system of corporate governance will ensure transparent, reliable and in accordance with respective laws and regulations information in ones' financial statements/ annual reports. Accordingly, this will lead to the most efficient and effective financial and investment decision making processes performed not only by company's management, but also shareholders (existing/ potential) and other stakeholders. Furthermore, this will influence companies' performance indicators, value creation, competitive advantage as well as behaviour of investors and other stakeholders, respective security prices and companies' ability to get additional finance accordingly.

The object, the subject and hypothesis of the research

The object of the research is Latvian companies listed on Baltic stock exchange.

The subject of the research is management of long-lived non-financial assets within the system of corporate governance in accordance with corporate governance principle “disclosure and transparency”.

Basic research questions (RQ):

RQ1: What ensures transparency of financial information reflected in financial statements/ annual reports of listed companies?

RQ2: What are the most problematic issues in the practices of Latvian listed companies listed on Baltic Stock Exchange processes for long-lived non-financial assets accounting, reporting and management within the system of corporate governance? To what extent existing methods used to prepare financial statements/ annual reports are in accordance with the corporate governance principle “financial transparency”?

RQ3: Does information relating long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange shows/ proves that these assets and management of these assets do have any impact on companies’ performance?

RQ4: Does corporate governance have any impact on the corporate performance of Latvian company listed on Baltic stock exchange? Is it possible to measure this impact and how? Is there any relation between “voluntary” corporate governance and corporate performance of Latvian companies listed on Baltic stock exchange?

RQ5: What is/ are necessary to be improved or implemented in the management process of long-lived non-financial assets within the system of corporate governance of Latvian companies listed on Baltic stock exchange to ensure at the same both – the highest level of company’s performance and transparency of the information that could be usable for various analysis and decision making processes performed by all stakeholders?

The hypothesis of this research is stated as follows: there is a direct long-lived non-financial asset management impact on performance of Latvian companies listed on Baltic stock exchange.

The research aim and main tasks

The main goal of the research – based on study of long-lived non-financial asset management process assess topicality of long-lived non-financial asset management, develop long-lived non-financial asset management framework and make suggestions how to ensure transparent long-

lived non-financial assets accounting (internal)/reporting (external) processes within the system of corporate governance.

In consideration of the main goal, the research intends to accomplish the following **tasks**:

1. Based on the review of academic literature and corresponding rules and regulations ascertain the meaning and role of efficient management process of long-lived non-financial assets owned by listed companies within the system of corporate governance and its impact on company's performance;
2. Identify, analyse and critically evaluate existing practices for the corporate governance principle "disclosure and transparency" in management process of long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange within the system of corporate governance to determine issues of manipulation activities relating accounting and reporting processes of these assets;
3. Develop the method how to identify and measure the impact of corporate governance on the financial performance of Latvian companies listed on Baltic stock exchange;
4. Develop the framework for company's accounting and reporting processes of long-lived non-financial assets as a managerial tool for management of these assets and usable by company's internal and external stakeholders within the system of corporate governance;
5. Provide conclusions and recommendations for improvement of the management process of long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange within the system of corporate governance or any other long-lived non-financial assets intensive organization by application the framework to ensure at the same time both – the highest level of disclosure and transparency and company's performance accordingly. Furthermore, also key prerequisites how to implement this framework in the most successful way for all company's stakeholders – internal and external.

Research methods

In the research process generally accepted qualitative and quantitative scientific research methods were used, for example: the analysis of management science literature and regulatory documents, monographic method, content analysis, case study method, survey method, correlation analysis, descriptive and inferential statistics, different methods of financial analysis had been applied – benchmarking or industry analyses and trend analyses by use of various different financial ratios as well as common-size financial statements/ annual reports analyses. It was done by use of various mathematical tools (averages, percentages, ratios) and rank test, among others. Calculations performed by use of computer program *Microsoft Excel*.

Limitations of the research:

1. The object of this research – Latvian companies listed on Baltic stock exchange (from the year 2007 to year 2021 total number of companies was changing in all three lists of Baltic stock exchange);
2. Only long-lived non-financial assets excluding intangible asset – goodwill – have been studied: tangible and intangible ones;
3. Period from year 2007 to year 2021;
4. Quantitative research results are based on the author's developed survey delivered to 28 Latvian companies listed on Baltic stock exchange (responded 25 companies) as well as on various calculations performed based on the secondary data – the author's collected data from publicly available information at official website of Nasdaq Riga (www.nasdaqbaltic.com);
5. Based on fact that companies in different situations must prepare and apply different mandatory reports also different terms used within the research, but with the same meaning for management of long-lived non-financial assets owned by listed companies within the system of corporate governance – company's mandatory reporting document to its shareholders documenting it's all activities as well as finance per particular reporting period (e.g. (financial reports (financial statements, consolidated financial statements), annual reports, consolidated annual reports);
6. Taking into account that the object and goal of the research is the description of management process for long-lived non-financial assets is general, not specified for the one particular company, there is not any information provided in the doctoral dissertation relating calculations of possible costs to implement the author's developed framework for accounting and reporting processes of long-lived non-financial assets owned by Latvian listed companies within the system of corporate governance;
7. Corporate governance discussed only in the context related to long-lived non-financial asset management. Issues relating financial management of long-lived non-financial assets have been considered only through the prism of one of the most important corporate governance principles “disclosure and transparency” – performance and financial situation;
8. Taking into account the object and goal of the research the description of management process for long-lived non-financial assets is general, not specified for the one particular company; also, there is no information relating calculations of possible costs to implement

the author's developed framework for management of long-lived non-financial assets of Latvian listed companies within the system of corporate governance;

9. Only field of management – more precisely financial management of the company – has been considered within the structure of corporate governance (see figure 1.1.);
10. Issues relating financial management have been considered only in relation to long-lived non-financial asset management of Latvian companies listed on Baltic stock exchange.

Research period:

- Theoretical part – period from 1960-s up to the present time;
- Practical part – the data from year 2007 to year 2021.

The thesis presented for defence:

1. Based on industry in average long-lived non-financial assets constitutes large (at least 40% and above) proportion of company's balance sheet value, and thus recognition and measurement as well as management of these assets do have significant impact on company's performance.
2. Filling gaps through implementation of additional provisions in relevant rules and regulations governing accounting and reporting of long-lived non-financial assets will ensure higher transparency in public disclosures as well as increase of "voluntary" corporate governance index and performance results of Latvian companies listed on Baltic stock exchange.
3. Management methods of long-lived non-financial assets must ensure one of the most important elements of corporate governance – "transparency". This in turn will increase companies' disclosure quality and improve companies' performance.
4. Implementation of the framework for accounting and reporting processes of long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange within the system of corporate governance does have positive direct impact on company's performance.

The theoretical and methodological basis

The theoretical and methodological components of this doctoral dissertation are based on various scientific articles and researches published mainly by foreign scientists because of very limited researches done in this area by local ones. These documents were available in different data bases, specialized literature of management science, including accounting and reporting. Also, in materials of scientific seminars and conferences, respective rules and regulations of the

Republic of Latvia and relating documents, as well respective international ones toward company's long-lived non-financial asset management within the system of corporate governance. Also, scientific publications and researches relating work done by various institutions regulating accounting and reporting of company's long-lived non-financial assets were used.

To complete defined tasks of this doctoral dissertation, scientific publications and institutional documentation, rules and regulations relating company's long-lived non-financial asset management within the system of corporate governance (accounting, reporting, evaluation, impact on company's performance and value, corporate governance). Sources within the literature review for empirical studies include: EBSCOHost, Scopus, SpringerLink, Thomson Reuters Web of Science, Wiley Online Library, Emerald, Science Direct, etc. Following authors were studied:

- Long-lived non-financial asset management: Amadi-Echenfu J.E., Jaggi B., Tsui J., Metka R., Sidney S., McNeeney A., Roggi O., Giannozzi A., Zhang J-M., Wang S.-H., Chen R., Zhong W.-W., among others;
- Corporate governance – Lu L.W., Madahani P. M., Mahanti R., Dissenayake D.H.S.W., Johan S. and Zhang M., Keasey K. and Wright M., Păcală A., Palea V., Keasey K., Thompson S., Wright M., Morck R.K., Sternberg E., Cohen J., Krishnamoorthy G., Wright A., Yu J., Vivek M., Young J.C., Myungsoo S., among others;
- Rules and regulations for company's long-lived non-financial assets – Barth M. E., Cram D. P., Nelson K.K., Gordon E.A., Hasting N.A.J., Hsu H.-T., Burton F.G., Jermakowicz E.K., Trottier K., Seetharaman A., Balachandran M., Saravanan A.S., Kuzmina I., Kuzmina-Merlino I., Kozlovska I., Vecerskiene G., Jankauskiene K., Valanciene L., Sitnikova V.A., Devalle A., Tarca A., Choi F.D.S., Kulchev K., Evans L., Pawan K., Gupta V.K., Habib A., Domeika P., Ilincuta L., Jackson S.B., Roggi O., Giannozzi A., Dvořáková D., Talnagiova V., Cerna L., Pinto I., Rodriguez-Perez, G., Slof, J., Sola, M., Torrent, M., Vilardell, I., Brînză D.E., Bengescu M., Vehmanen P., El-Tawy N., Abdel-Kader M., Mauriello J.A., among others.

Scientific significance and novelty of the research

Theoretical significance of the research stems directly from the scientific novelty of the research. The author using original approach developed the framework for long-lived non-financial asset management within the system of corporate governance of Latvian companies listed on Baltic stock exchange. This research provides the approach that includes accounting

and reporting processes of long-lived non-financial assets in accordance with corporate governance principle “disclosure and transparency” controlled not only internally by side of company’s management, but also externally – by side of any other company’s stakeholder. Furthermore, increasing significance of the average proportion of long-lived non-financial assets from company’s total balance sheet value for Latvian listed companies on Baltic stock exchange – from 38% in year 2007 up to 55% in year 2017, but for some companies even up to 97% – strengthen the theoretical significance of this research (Kozlovska, 2015; Kozlovska and Kuzmina-Merlino, 2019). By use of this approach the author proves that the developed framework allows any company’s stakeholder to control the management of long-lived non-financial assets that does have impact on company’s performance and financial situation. Furthermore, this accordingly influence company’s stakeholders’ decisions, stock market and economy of the Republic of Latvia. The conducted research comprises the following scientific novelties and theoretical significance:

1. Proved the statement not investigated ever before – the significance of corporate governance from the perspective of its principle “disclosure and transparency” within the management process of long-lived non-financial assets owned by listed companies.
2. Identification of issues, problems as well as ascertained and proved influencing factors of the direct long-lived non-financial assets and its management impact on performance of Latvian companies listed on Baltic stock exchange within the system of corporate governance from the perspective of the corporate governance principle “disclosure and transparency” that was not investigated ever before.
3. Within the empirical research based on analysis of economic literature and scientific publications very significant number of existing researches have been analysed, and thus identified the most problematic issues in the management process of long-lived non-financial assets during its whole life cycle (from the acquisition to disposal/ renewal). There were not any similar researches done ever before in the prism of the whole life cycle period of long-lived non-financial assets. Furthermore, issues identified during this research proves that it is legally allowed and possible to manipulate with the information in accounting and reporting processes of long-lived non-financial assets within the system of corporate governance. Moreover, also there were not any similar researches identified investigating this issue from the perspective of management of long-lived non-financial assets within the system of corporate governance of listed companies regarding perspective of the corporate governance principle – “disclosure and transparency”.

4. Identified gaps in local and international rules and regulations governing accounting and reporting processes for company's long-lived non-financial assets during its whole life cycle, and thus proposed additional provisions in the rules and regulation to remove these gaps. In addition, this will allow to ensure the corporate governance principle "disclosure and transparency" and will eliminate any possible manipulative activities by side of company's management and other stakeholders to reflect real situation in the company and its performance indicators accordingly.
5. Developed "voluntary" corporate governance index for Latvian companies listed on Baltic stock exchange. Moreover, mutual relation between this index and performance of Latvian companies listed on Baltic stock exchange has been proved. There are not any similar indexes developed or investigated as well as researches relating long-lived non-financial asset management within the system of corporate governance of Latvian companies listed on Baltic stock exchange done ever before.
6. Investigated and defined information necessary to be ensured by the following elements of decision making processes relating long-lived non-financial asset management of listed companies within the system of corporate governance – transparent accounting and reporting processes for these assets during its whole life cycle (including all activities from its initial acquisition/ development to its disposal/ renewal). There are not any similar researches done ever before.
7. Developed the framework as a managerial tool for the efficient and transparent long-lived non-financial asset management of Latvian companies listed on Baltic stock exchange within the system of corporate governance or any other long-lived non-financial assets intensive organization as well as define key steps for the implementation and evaluation processes for this framework applicable by all stakeholders – internal and external. There are not any similar researches or frameworks in this perspective done ever before.

Practical significance of the research

The framework for accounting and reporting processes for the management of long-lived non-financial assets of Latvian companies listed on Baltic stock exchange within the system of corporate governance developed as a direct result of this the doctoral dissertation. There are not any similar researches done ever before, and this framework can be applied to business life:

1. The framework for accounting and reporting processes for the management of long-lived non-financial assets of Latvian companies listed on Baltic stock exchange within the system of corporate governance is easy applicable as well as practically useful for any company's stakeholder – internal or external one. The author of this dissertation has developed

practically applicable framework steps for every stage of the life cycle of long-lived non-financial asset within the system of corporate governance: acquisition or development, usage or utilization, maintenance and renewal or disposal.

2. Since accounting and reporting policies affect as balance sheet, profit or loss statement as company's performance the author of this dissertation has developed also evaluation forms for each step of this framework. Evaluation forms consist of 6 key parts and includes author's developed relevant management processes as well as empirically measurable indicators with the goal to evaluate results from development and implementation of the framework for long-lived non-financial assets management within the system of corporate governance. Furthermore, the form also will ensure that author's developed framework will provide definite direction and guidance on the transparent, reliable and in accordance with respective laws and regulations for accounting and reporting processes of long-lived non-financial assets of Latvian companies listed on Baltic stock exchange within the system of corporate governance.
3. The company owing long-lived non-financial assets does have significant advantages from the application of the author's developed framework for long-lived non-financial asset management processes within the system of corporate governance (increased indicators of company's performance, value, "voluntary" corporate governance index, market share, growth, productivity, etc.). The framework is systematized, as a part of company's coordinated business strategy according with laws and regulations as well as shareholders' and other stakeholders' interests. Since, nowadays the measurement of these assets is being accounted as one of the most important areas of financial accounting company's management and shareholders or other stakeholders applying this framework will be ensured that company's long-lived non-financial assets are being recognized, measured, managed in the most efficient and transparent way, in accordance with respective accounting and reporting regulations.
4. The result and recommendations of this research can be applied not only by Latvian companies listed on Baltic stock exchange, but any other long-lived non-financial assets intensive organization worldwide as well by any stakeholder or practitioners of financial statements/ annual report analysis. Asset management process can differ among companies because of different companies, cultures, objectives and even languages. Nevertheless, management of long-lived non-financial assets within the system of corporate governance includes many different steps. In most of these steps the precise accounting and reporting information relating long-lived non-financial assets is essential and even critical in steps of asset management:

1. Strategy and planning of asset management;
 2. Asset management decision making;
 3. Life cycle delivery;
 4. Asset information;
 5. Organization and people;
 6. Risk and review.
5. Recommendations stated by the author of this doctoral dissertation will give significant contribution not only to stakeholders of Latvian companies listed on Baltic stock exchange, but also to the stock market and economy of the Republic of Latvia. Because more transparent and reliable financial accounting and reporting processes for long-lived non-financial asset management within the system of corporate governance of Latvian companies listed on Baltic stock exchange will lead to more transparency in public disclosures that will increase potential shareholders' interest about Latvian stock market and as a result also the stock exchange market capitalization proportion to GDP of the Republic of Latvia will be increased.
6. Theoretical studies about evaluation and management of company's long-lived non-financial assets within the system of corporate governance can be used as teaching guides for institutes of higher education and other professional institutions for auditors, accountants, managers, financial controllers, and analysts.

Approbation of the most relevant results

Key results of the research the author has been presented to a wide range of persons/ organizations – stakeholders of Latvian listed companies on Baltic stock exchange:

Management and shareholders of Latvian companies listed on Baltic stock exchange, Nasdaq Riga, sworn auditor, Big Four Audit companies, European Court of Auditors, Ministry of Finance (Republic of Latvia), expert from the field of Corporate governance, development of the program/ platform (patent, planned to be developed in the next stage of this research).

The main results of the empirical research published in the following scientific publications:

1. Kozlovska I., Kuzmina-Merlino I., Linkage between Management of Long-Lived Non-Financial Assets and Performance of Latvian Companies Listed on the Baltic Stock Exchange// Book: Reliability and Statistics in Transportation and Communication, Springer International Publishing AG, - 2019., p.684-694. ISSN: 2367-3370, ISSN (electronic):

- 2367-3389, ISBN: 978-3-030-12449-6, E-book ISBN: 978-3-030-12450-2. DOI: <https://doi.org/10.1007/978-3-030-12450-2>. **Springer International Publishing**.
2. Kozlovska I., Corporate Governance Disclosures: The Case of Latvian Companies Listed on Baltic Stock Exchange// Book: Reliability and Statistics in Transportation and Communication, Springer International Publishing AG, - 2018., p.574-584. ISBN: 978-3-319-74453-7, E-book ISBN: 978-3-319-74454-4. DOI: https://doi.org/10.1007/978-3-319-74454-4_55. **Springer International Publishing**.
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2. **Massala J.F.**, Tax Regime for Asset Depreciation and Amortization: a Comparative Analysis Between Angola and Portugal, Dissertação de Mestrado em Contabilidade e Finanças apresentada à Faculdade de Economia, - 2020, - p.1-137, <http://hdl.handle.net/10316/94734>.
Koowattanatianchai N., Charles M.B., Eddie I. Incentivising investment through accelerated depreciation: Wartime use, economic stimulus and encouraging green technologies, - 2019, - 24(1), - p.115-137, <https://doi.org/10.1177/1032373217739921>

3. **Mitic V., Kokic T., Mizdrakovic V., Tereladze D.** Correlation Between Asset Measurement and Profitability of Serbian Listed Companies, *Accounting, Audit and Forensic Science*, - 2019, - Vol.Finiz, - p.52-57, <https://doi.org/10.15308/finiz-2019-52-57>.
4. **Panova EA.** Влияние амортизационной политики на финансовые показатели и инвестиционные возможности промышленного предприятия, *Финансы и кредит*, - 2019, - 25(1), - p.144-158.
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Participation in international scientific conferences by the author of the doctoral dissertation:

The main results of the research were presented in the Republic of Latvia and abroad in various scientific discussions and international scientific conferences:

1. 14th Annual Scientific Baltic Business Management Conference ASBBMC2021, "Economics and Business: Foreseeing Challenges and Opportunities", June 1-2, 2021, Riga, Latvia. Presentation "Corporate Governance and Information Asymmetry: Case of Latvian Companies Listed on Baltic Stock Exchange".

2. 13th Annual Scientific Baltic Business Management Conference ASBBMC2020, “Evolving Dimensions of Long-lived Non-financial Asset Management and the 21st Century Expectations”, February 19-20, 2020, Riga, Latvia. Presentation “Linkage between PPE and Profitability: Case of Baltic Stock Exchange”.
3. 12th Annual Scientific Baltic Business Management Conference ASBBMC2019, “Foreseeing Challenges and Opportunities for Organizations at the Macro and Micro Level”, February 21-23, 2019, Riga, Latvia. Presentation “Linkage between PPE and Profitability: Case of Baltic Stock Exchange”.
4. 18th International Multidisciplinary Conference, Reliability and Statistics in Transportation and Communication (RealStat-2018), October 17-20, 2018, Riga, Latvia. Publication and presentation “Corporate Governance Disclosure: The Case of Latvian Companies Listed on Baltic Stock Exchange 12th Annual Scientific Baltic Business Management Conference ASBBMC2019, “Foreseeing Challenges and Opportunities for Organizations at the Macro and Micro Level”, February 21-23, 2019, Riga, Latvia. Presentation “Linkage between PPE and Profitability: Case of Baltic Stock Exchange”.
5. 11th Annual Scientific Baltic Business Management Conference ASBBMC2018, “Trend of Business and Funding Models in Contemporary World”, March 15-17, 2018, Riga, Latvia. Presentation “Influence of Corporate Governance Disclosure Index: Evidence from Latvian Listed Companies on Baltic Stock Exchange”.
6. 11th Annual Scientific Baltic Business Management Conference ASBBMC2017, “Trends of Business and Funding Models in Contemporary World”, March 15-17, 2018, Riga, Latvia. Publication and presentation “Influence of Corporate Governance Disclosure Index: Evidence from Latvian listed companies on Baltic Stock Exchange”.
7. 17th International Scientific Conference RealStat-2017, “Reliability and Statistics in Transportation and Communication”, October 18- 21, 2017, Riga, Latvia. Publication and presentation “Corporate Governance Disclosures: The Case of Latvian Companies Listed on Baltic Stock Exchange”.
8. International Scientific and Educational Conference, Actual Problems of Education. (Competence-Oriented Approach- iSECRET Results Dissemination (MIP 2017), “MIP 2017” Presentation “Financial Technologies: New Challenges of Education of Financial Managers”, June 1-2, 2017, Riga, Latvia.
9. 10th Annual Scientific Baltic Business Management Conference ASBBMC2017 and Doctoral Seminar “Sustainable organisations: Creating and Managing in Turbulent Business Environment”, April 26-29, 2017, Riga, Latvia. Publication and presentation

- “Role of long-lived non-financial assets in performance of Latvian listed companies in Baltic stock exchange”.
10. 19th Nordic Conference Small Business Research (NSCB 2016), “Entrepreneurship and Value Creation”, May 19-20, 2016, Riga, Latvia. Publication chapter in book and presentation: “The impact of long-lived non-financial asset impairment on financial statements of Latvian companies”.
 11. 9th Annual Scientific Baltic Business Management Conference, ASBBMC 2016, “Challenges of Business Sustainability in the Digital Age”, April 21-23, 2016, Riga, Latvia. Publication and presentation: “Measurement of long-lived non-financial assets in Latvian listed companies: cost model versus revaluation model”.
 12. International scientific-practical conference “Strategy of Entrepreneurship” Proceedings, paper presented “The Impact of evaluation approaches of long-lived assets on a company’s financial performance” (co-author Kuzmina-Merlino I.). ISBN 978-966-926-038-3, SHEI Kyiv National Economic University named after V.Hetman, 27 November, 2015, Kyiv, Ukraine, page 329-331.
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 14. 8th International Scientific Conference: Information Society and Modern Business. Modern Trends in Business: Globalization vs Localization, April 23-24, 2015, Ventspils, Latvia. Presentation: “Accounting of depreciation and amortization of long-lived assets”.
 15. 6th International Scientific Conference: In Search of New Business Solutions for Emerging Future, April 25-27, 2013, Riga, Latvia. Presentation: “Measuring long-lived assets value: accounting regulation and practical issues”.
 16. 9th ICAFT: International Conference on Accounting and Finance in Transition, European and World Experience and Public Policy Consideration”, October 11-13, 2012, Riga, Latvia. Publication and presentation: “Accounting measurement of long-lived assets: a case of impairment practice”.
 17. 5th International Scientific Conference “Information Society and Modern Business Knowledge Creation and Transfer into New Competencies”, April 26-27, 2012, Ventspils, Latvia. Presentation: “Long-term asset management in the corporate governance system”.
 18. International Scientific Conference “Innovative and creative solutions in business and culture”, The University College of Economics and Culture, March 28-30, 2012, Riga,

Latvia. Publication and presentation: “Quality of financial information as an important element of corporate governance”.

19. International Scientific Conference “Business analysis, accounting, taxes and auditing”, Department of Accounting at Tallinn University of Technology, November 10-11, 2011, Tallinn, Estonia. Publication and presentation: “Credit management improvement in the international commercial company”.

Structure and volume of the research

This doctoral dissertation is an independent research and consists of the following parts: introduction, 3 main chapters comprising subchapters, conclusions and recommendations, a bibliography, and appendices. The total volume of the paper is 250 pages including 40 tables and 24 figures. The structure of this doctoral dissertation developed according with the goal and corresponding tasks defined for the research (table 1).

Framework for management of long-lived non-financial assets within the system of corporate governance of Latvian companies listed on Baltic stock exchange

Table 1.

Structure of the research

Research object – Latvian companies listed on Baltic stock exchange			
Research subject – Management of long-lived non-financial assets within the system of corporate governance and in accordance with Corporate governance principle “disclosure and transparency”			
Research goal - Based on study of long-lived non-financial asset management process assess topicality of long-lived non-financial asset management, develop framework for management of long-lived non-financial assets and make suggestions how to ensure transparent long-lived non-financial assets accounting (internal)/reporting (external) processes within the system of corporate governance			
TASKS			
Based on the review of academic literature and corresponding rules and regulations	Identify and analyse existing practices for the one of key corporate	Develop the framework for long-lived non-financial asset	Provide conclusions and recommendations for improvement of the management process of long-lived non-financial assets owned by Latvian

ascertain the meaning and role of efficient management process of long-lived non-financial assets owned by listed companies within the system of corporate governance and its impact on company's performance	governance principle "disclosure and transparency" for management process of long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange	management process within the system of corporate governance	companies listed on Baltic stock exchange within the system of corporate governance or any other long-lived non-financial assets intensive organization by application the framework to ensure at the same time both – the highest level of disclosure and transparency and company's performance accordingly. Furthermore, also key prerequisites how to implement this framework in the most successful way for all company's stakeholders – internal and external
Provide recommendations for improvement of the management process of long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange within the system of corporate governance			
1.chapter Long-lived non-financial asset management within the system of corporate governance	2.chapter Long-lived non-financial asset management in Latvian companies listed on Baltic stock exchange	3.chapter Framework for long-lived non-financial asset management within the system of corporate governance of Latvian companies listed on Baltic stock exchange	
Hypothesis is accepted			
Conclusions 1. – 10.	Conclusions 11. – 21.	Conclusions 22. – 31.	

Recommendations

The doctoral dissertation is structured as follows:

INTRODUCTION

1. THEORETICAL ASPECTS OF LONG-LIVED NON-FINANCIAL ASSET MANAGEMENT WITHIN THE SYSTEM OF CORPORATE GOVERNANCE

1.1. Long-lived non-financial asset management in Latvian companies listed on Baltic stock exchange

1.1.1. Latvian companies listed on Baltic stock exchange

1.1.2. Corporate governance in listed companies: importance of corporate governance from shareholders' perspective

1.1.3. Long-lived non-financial assets and its role in company's performance

1.1.4. Long-lived non-financial assets governance

1.2. Accounting policy as a basis of long-lived non-financial asset management

1.2.1. Key elements of accounting policy

1.2.2. Definition and standard classification

1.2.3. Recognition and initial measurement

1.2.4. Measurement after recognition

1.2.5. Derecognition (retirement, disposal)

1.2.6. Presentation and disclosure

1.2.7. Financial performance and interpretation

1.3. The impact of corporate governance on efficiency of long-lived non-financial asset management

1.3.1. Efficient management of long-lived non-financial assets

1.3.2. Evaluating efficiency of long-lived non-financial asset management

1.3.3. Quality of information and financial performance

1.3.4. Results of measuring efficiency of asset management: main issues

1.4. Theoretical framework and conceptual structure of the doctoral dissertation

1.4.1. Theoretical framework; research variables

1.4.2. Research questions (RQ)

2. LONG-LIVED NON-FINANCIAL ASSET MANAGEMENT IN LATVIAN COMPANIES LISTED ON BALTIC STOCK EXCHANGE

2.1. Rules and regulations determining transparent financial accounting and reporting, evaluation, and management processes for the listed (publicly accountable) company

2.2. Specifics of long-lived non-financial asset management of Latvian companies listed on Baltic stock exchange and its impact on quality and transparency of information disclosure

- 2.3. Application of *fair value* concept in the measurement process of long-lived non-financial assets
 - 2.3.1. Research problem description
 - 2.3.2. IAS 36 impact on company's financial performance
 - 2.3.3. Scientific researches about the impairment of long-lived non-financial assets
 - 2.3.4. The main problems in practical application of the *fair value* principle
- 2.4. Long-lived non-financial asset management and companies' financial performance
 - 2.4.1. Financial reporting – main source of information for decision making
 - 2.4.2. Long-lived non-financial asset management and performance
 - 2.4.3. Recognition and measurement of long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange: identification of possible issues and problems
- 3. CORPORATE GOVERNANCE AND FINANCIAL PERFORMANCE
 - 3.1. Corporate governance and financial performance: case of Latvian companies listed on Baltic stock exchange
 - 3.2. Framework for long-lived non-financial asset management within the system of corporate governance
 - 3.3. Framework for long-lived non-financial asset management within the system of corporate governance of Latvian companies listed on Baltic stock exchange¹⁷³
 - 3.4. Implementation process of the framework for long-lived non-financial asset management within the system of corporate governance of Latvian companies listed on Baltic stock exchange

CONCLUSIONS

RECOMMENDATIONS

BIBLIOGRAPHY

APPENDICES

1 THEORETICAL ASPECTS OF LONG-LIVED NON-FINANCIAL ASSET MANAGEMENT WITHIN THE SYSTEM OF CORPORATE GOVERNANCE

(Chapter 1 consists of four sections, 56 pages comprising 4 tables and 9 figures)

Chapter 1 of the doctoral dissertation represents the theoretical study and review of the management of long-lived non-financial assets within the system of corporate governance, and theoretical framework of long-lived non-financial asset management impact on performance of Latvian companies listed on Baltic stock exchange. Today one of key goal of country is how to ensure its economic growth to ensure welfare of people living in this country. Its economic growth has been significantly influenced also by such factor as its stock market (Bogdan, 2016). Growth rates of listed companies' aggregated earnings and of GDP tend to share similar trends (ECB, 2017). Nasdaq stock exchange in Riga called Nasdaq Riga is a part of Nasdaq Baltic equity market. Latvian companies listed in Nasdaq Riga varies among years – from 41 companies in year 2007 to 27 companies in year 2017, and 15 companies in year 2021. Furthermore, competitiveness of every company depends on various finance and non-finance factors and its mutual influence. One of such a factor is **corporate governance having significant impact on various decision-making processes including ones relating long-lived non-financial assets.**

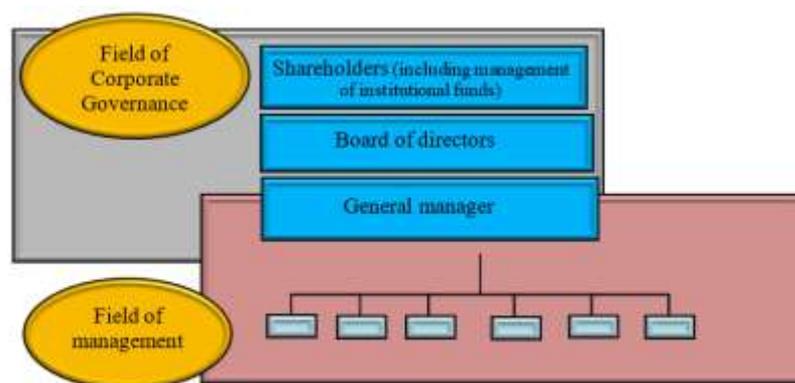


Figure 1.1. The field of corporate governance

Source: developed by author

Today practices of good and efficient corporate governance have impact on image, market share, growth, customers, long-term strategy and how to manage one in the global market (Crişan-Mitra, 2015, p.465; Suzuki, 1999). The figure 1.1. reflects an overall corporate governance system of the listed company including three main areas of management: general meetings of shareholders, board of directors – supervising and leading the company, functional areas of management (e.g., procurement, production, marketing, finance, public relations, etc.)

headed by the company's CEOs who are ones owing real power to lead companies based on their own political, social, and economic beliefs (Morck, 2007). Practices of corporate governance are core reasons for financial woes to the Asian crisis in year 1997, global financial crisis in year 2007 (Pillai and Al-Malkawi, 2016). Policy makers stress importance of corporate governance also among not listed companies (OECD, 2015). One of key problems of corporate governance is **including better disclosure by an annual corporate governance statement** to help shareholders to exercise their rights and **responsibility of board members to shareholders for financial statements/ annual report** (Lovrinčević Šelamov and Hrštić, 2012). The concept of governance is authority plus control to ensure transparency, accountability (Mahanti R., 2021). The strongest guidelines worldwide of the corporate governance are being accounting "The OECD Principles of Corporate Governance" (issued in year 1999, revised in year 2004) including five key categories: board and management structure and process, ownership structure and exercise controlling rights, **financial transparency and information disclosure**, auditing, corporate responsibility, and compliance (McKeith and Collins, 2013). Therefore, today **there should be clear and transparent relationship among companies' shareholders and management, information should be reliable and transparent, in according with respective regulative documents governing listed companies or Corporate Governance Code. Companies applying principles of corporate governance do have an undoubted advantage to attract shareholders and investments. Investors' risk to experience loss of financial funds has been decreased significantly. Therefore, the practices of the corporate governance do have significant impact on company's performance in the global market contributing growth, stability, long-term investments.** Long-lived non-financial assets often requiring significant investments constitute also considerable part of companies' total assets in its statements of financial position (Derun, 2013, p.185; Garinina, 2009). During period of 11 years (from year 2007 to year 2017) these assets owned by Latvian companies listed on Baltic stock exchange constitute in average 41,77% of its total balance sheet values. This average proportion increased from 38% in year 2007 up to 55% in year 2017 reflecting significant capital investments performed (Kozlovska, 2015; Kozlovska, 2017; Kozlovska and Kuzmina-Merlino, 2019). Therefore, these assets do have significant impact on the company at various levels – internal, external, and even more global one. Decisions taken toward these assets during their whole life cycles should be transparent and taken very seriously in accordance with companies' long-term plans and supported with detailed calculations, plans. By example, during utilization stage of such an asset following issues must be considered: funding and financing, technology, environment and even socioeconomics/ politics issues (Amadi-Echendu, 2021). Asset management has been

developing new models and concepts covering much more areas as ever before with key goal to increase and even optimize company's long-term non-financial asset's overall performance and contribute to the company's overall performance (Price, 2018). Furthermore, asset manager works together with accounting/ finance departments must be familiar with basic principles of depreciation (Hastings, 2021). Today it goes together with asset governance that is systematic and coordinated business strategy of the company based on which the company manages its physical assets, resulting in increased indicators of company's performance and growth (Alles et al., 2005). "With Asset Governance company can creating framework for asset management processes, organizational structure, high economic performance and growth on long time horizon including decision making process in regard to the asset life-cycle, higher level of accountability and transparency in asset reporting and penalty system for asset users" (Katičić et al., 2014, p.208). **Business leaders in asset intensive organizations are beginning to understand the impact that asset management has on efficiency, safety, reliability, sustainability, and stakeholders' confidence (Katičić et al., 2014). Therefore, the one can state that the company's long-lived non-financial asset management does have significant impact on multiple areas within the system of corporate governance.** There are several basic principles of good corporate governance. One of the most important one is the principle also investigated – **transparency of information including preparation of companies' financial statements/ annual reports, how all the information has been disclosed, company's internal controls, etc. Company's financial accounting and reporting processes at the highest level is one of key characteristics for qualitative corporate governance which main rules and requirements are in accordance with ones announced by shareholders.** This interpretation is also in line with the conclusion stated by Cohen et al. (2004): **"One of the most important functions that corporate governance can play is ensuring the quality of financial reporting process"** (Cohen, et al., 2004, p.87). "A system of corporate governance needs a good level of disclosure and adequate information to eliminate (or at least reduce) information asymmetries between all parties" (Madhani, 2015, p.7). According with Madhani (2007) even points out that based on the corporate governance rating systems and surveys of **shareholders' opinion as key core attributes of good corporate governance includes disclosure and transparency (Madhani, 2007). Further, there are various schemes how to evaluate the quality of financial information within company's existing/ planned corporate governance system. Usually as one of key elements in these schemes is also company's accounting policies including one for its long-lived non-financial assets applied.** Management recognizes **that there are real economic benefits to be gained from a well-managed disclosure policy (Madhani, 2015).** Company's internal accounting and

reporting policy of long-lived non-financial assets has focused on the following key areas reflected in the figure 1.2. (Metka, 2015, p.32; Sidney, 2009; McNeeney, 2005; Roggi and Giannozzi, 2015; Kozlovska, 2011; Poenaru and Halliburton, 2011; Woodruff, 1997; Garinina, 2009; Knowledge Management, 2000/2001, p.1; Carlucci and Schiuma, 2016; Carlucci and Schiuma, 2006; Zhang et al., 2014).

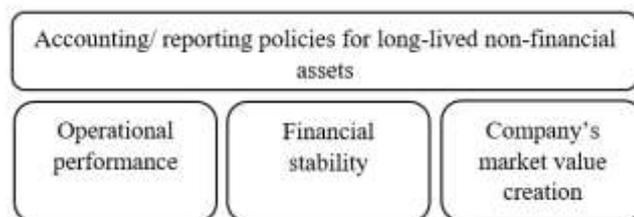


Figure 1.2. Areas focused by the company's internal accounting and reporting policy of long-lived non-financial assets

Source: Developed by author



Figure 1.3. Areas provided by the company's long-lived non-financial asset management at the highest quality

Source: Developed by author

Management of the company's long-lived non-financial assets within the system of corporate governance at the highest quality influences areas shown in the picture 1.3. above (IAM, 2017; Katičić and Dulčić, 2012; IMA, 2017; Yu, 2011; Mande et al., 2012). **As a result, it is crucial that accounting and reporting processes or processes for recognition and measurement of company's long-lived non-financial assets are correct, transparent, and in accordance with respective accounting and reporting rules and regulations. In the process of decision making toward financing and possible future investments in these assets it is very important that information available is transparent, fairly reflecting real situation in the company. Therefore, one can state that performance and financial accounting and reporting of these assets play significant role within the system of corporate governance of the company.** Furthermore, corporate accounting policy consists of definite principles, bases, conventions, rules, and specific practices of recognition, evaluation, presentation, and its accounting management rules of all positions reflected in the company's financial statements/ annual report. It includes information presented in the financial statements/ annual report that is credible, prudent, neutral, comparable, and relevant for the user's decision-making process

(Manea, 2017). To ensure qualitative financial information during this process the key prerequisites are the following: identification of the most promising investment opportunities, control of managers' decisions defined as the best ones in favour of managers rather than owners of the capital, limiting them from stealing, decrease the problem of asymmetric information (Bushman R. M., Smith A.J., 2003, 76-87).

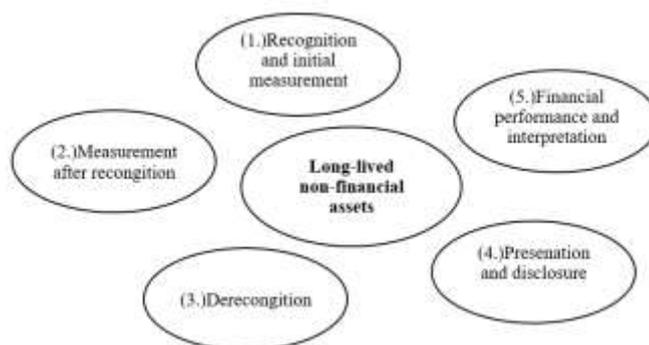


Figure 1.4. Key elements of accounting and reporting policies of company's long-lived non-financial assets for decision making

Source: prepared by author

Nevertheless, there are requirements and guidance defined by IASB standards and interpretations what the corporate accounting policy of company's long-lived non-financial assets should include (Figure 1.4.) each of these steps include various unsolved issues influencing the quality and transparency of financial accounting and reporting of long-lived non-financial assets and performance of the particular company accordingly (Kozlovska, 2017; Brînză and Bengescu, 2016; Burton and Jermakowicz, 2015e; Jáčov and Horák, 2015; Barth, 2014; El-Tawy and Abdel-Kader, 2013b; Ilincuta, 2013; Talnagiova and Cerna, 2011; Devalle, 2014; Rodriguez-Perez et al., 2011; Talnagiova and Cerna, 2011; Betakova et al., 2014; Roggi and Giannozzi, 2015; Gordon and Hsu, 2012; Rennekamp et al., 2015; Trottier, 2013; Sitnikova, 2014). **Disclosure requirements ensures strong possibility to increase the quality of financial reporting that further is very positive signal for existing/ potential shareholders because the problems of asymmetric information and agency costs will be decreased** (Tarca, 2004). **Key goals to force companies adopt IAS/ IFRS is to increase quality of financial statements/ annual report and efficiency of capital markets** (Evans, 2003). Financial analysis is essential for every company to evaluate its performance in all financial aspects. **Ratio analysis is one of the powerful tools in the process of financial analysis indicating the effectiveness of company's short-term and long-term financial policies** (Pawan et al., 2013). **“Financial accounting information, to the extent that it provides value-relevant information, plays a critical role as a corporate governance device in disciplining managers”** (Habib, 2008, p.6). **Processes of accounting and reporting are**

very important in the management system of any company providing with information regarding long-lived non-financial asset, its physical state, the rate of provision with this asset, its depreciation. This information is very useful to control acquisition, turnover, analyse usage effectiveness of the asset (Domeika, 2008). Therefore, it can be concluded that policy of long-lived non-financial assets is part of company's financial strategy that ensures the timely updating of long-lived assets, ensures high efficiency of the usage of these assets, and an optimal structure of funding sources. Moreover, **business leaders in asset intensive organizations are beginning to understand the impact that asset management has on efficiency**, reliability, sustainability, stakeholders' confidence (Katičić et al., 2014). Asset management has been used to analyse how effectively and efficiently the company has been using its assets to produce turnover or sales (Peavler, 2017). Efficiency of long-lived non-financial assets directly influence possibility to increase company's production capacity, cost reduction and profit. Long-lived non-financial asset management process does have significant impact on company's profitability and efficiency indicators that increase owners' wealth (Chakraborty, 2014; Sur and Yadav, 2014). Key ratios used for efficiency measurement: return on fixed assets, profitability of fixed assets (%), capacity of fixed assets (Rurāne, 2006). Furthermore, to develop investment management structures both factors (financial and non-financial) should be considered (Hongson et al., 2013). Even CEO compensation system can have impact on company's operating efficiency and assets productivity (Jiswal and Bhattacharyya, 2016). **Therefore, the one can state that also processes relating accounting and reporting of long-lived non-financial assets become more and more important component of company's management and performance evaluation plus corporate governance of the company processes in the most efficient way.** Asset governance does have large scope in terms of strategies at the corporate level with key goal to identify ways how physical assets can be used to reach business goals, create company's further value (Katičić et al., 2014). Further, corporate governance does have significant impact on companies' financial performance and it **directly influences companies' financial performance** (Tehrani, 2016). Better corporate governance is highly correlated with better company's operating performance and company's market valuation. **The quality of corporate governance significantly determines the stock price, strongly correlates, and has strong impact on stock returns, have higher company's value** (Malik and Shah, 2013; Tehrani, 2016; Gompers and Metrick, 2003; Carvalhal and Nobili, 2011; Sungmin et al., 2014). **There is mutual relationship between company's corporate governance index and company's share price** (Black et al., 2006). Nevertheless, most of studies show the positive link between corporate governance and company's performance others show a negative one or even the third category of studies

concludes that there is not any relationship (Dissenayake et.al., 2021; Pintea et al., 2015; Kara et al., 2015; Ayuso et al., 2014). **Corporate governance system does have impact on managers’ behaviours in the decision-making processes** (Jermias, 2007). “Agents” (the board of directors and management) are also key persons for companies’ Corporate Governance Process. **Problem of maintaining a balance of responsibility between interests of shareholders and managers in this situation becomes vital for listed companies.** Place of company’s long-lived non-financial assets as the object to be managed within the system of corporate governance as well as its management impact on company’s performance (figure 1.5.).

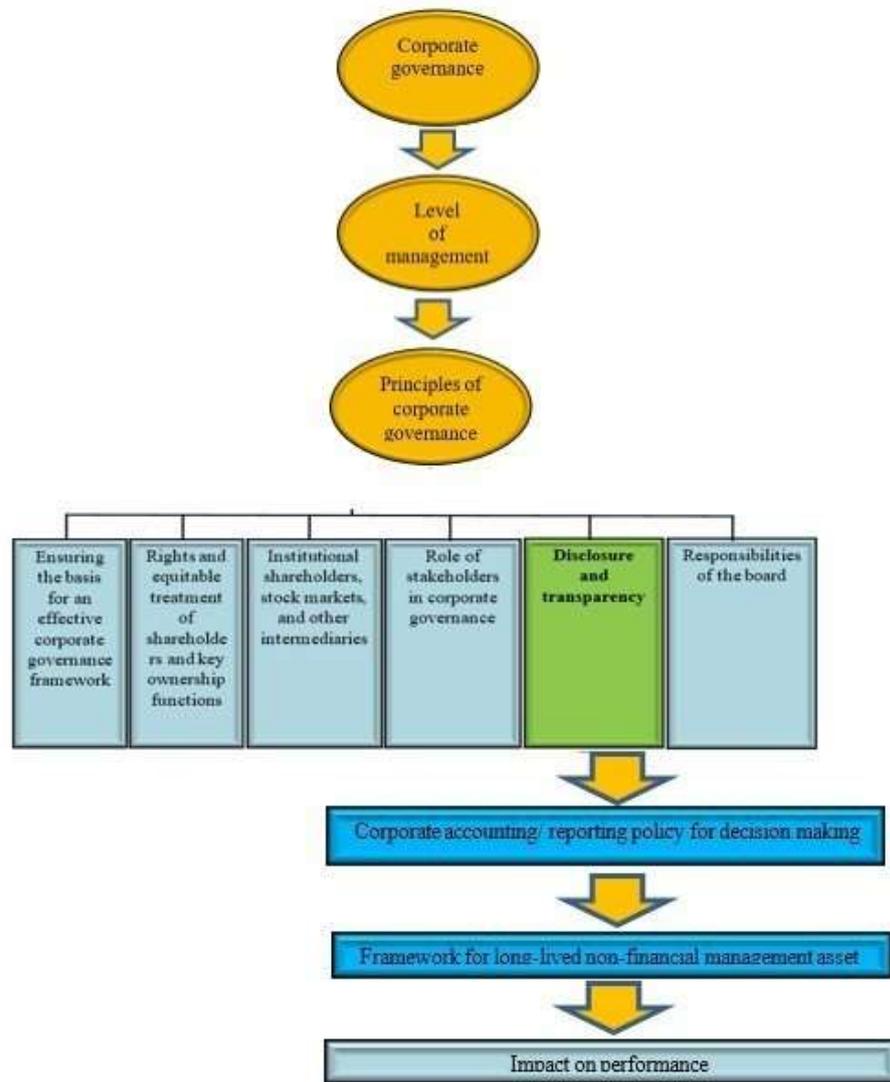


Figure 1.5. The place of accounting and reporting processes for company’s long-lived non-financial assets in accordance with corporate governance principle “disclosure and transparency” or as the object within the system of corporate governance

Source: developed author

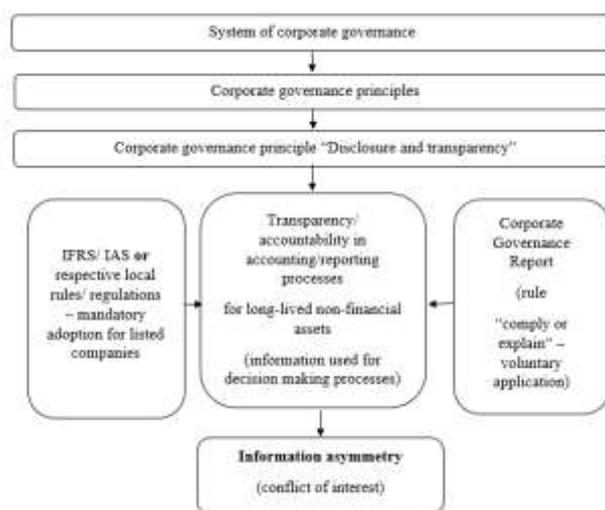


Figure 1.6. Mutual relation between mandatory and voluntary rules and regulations within accounting and reporting processes for long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange

Source: developed by author

Table 1. 1.

Long-lived non-financial asset management and its impact on company's performance from perspective of corporate governance principle "disclosure and transparency": gaps identified

Key elements	Issues
Classification	Issues and procedure relating standard classification of long-lived non-financial assets.
Recognition and initial measurement	how, when and in what value the long-lived non-financial asset can be recognized as one.
Measurement after recognition	which/ how model must be applied in order to measure the particular asset (cost/ revaluation), further how this asset should be depreciated/ amortized as well as impaired.
Derecognition (retirements, disposals)	when/ how retirement/ disposal of the long-lived non-financial asset must be performed.
Presentation and disclosure	how all the information related to the accounting and reporting processes of company's long-lived non-financial assets should be presented and disclosed in financial statements for all stakeholders in accordance with corporate governance principle "disclosure and transparency".
Performance and interpretation	Procedures evaluating and interpreting the impact of corporate governance principle "disclosure and transparency" relating accounting and reporting processes for long-lived non-financial assets on various company's performance indicators including ones relating efficiency of its long-lived non-financial assets management and performance.

Source: developed by author (2021)

These scientific findings can be also interpreted as the base for the empirical research of this doctoral dissertation and development of the framework to manage company's long-lived non-financial assets within the system of corporate governance of Latvian companies listed on Baltic stock exchange. This framework will ensure the highest level of disclosure and transparency in companies' financial statements/ annual report and in accounting and reporting processes for these assets, therefore, will increase company's performance indicators including investment attractiveness. Therefore, one can conclude by saying that methods applied for the accounting and reporting treatment of company's long-lived non-financial assets do have impact on the quality of financial information, content of its financial statements/ annual report and financial

performance. Furthermore, it determines the level of “transparency” of the financial information available in public disclosures based on which shareholders make their managerial and financial decisions.

2 LONG-LIVED NON-FINANCIAL ASSET MANAGEMENT IN LATVIAN COMPANIES LISTED ON BALTIC STOCK EXCHANGE

(Chapter 2 consists four sections, 72 pages comprising 19 tables and 5 figures)

In this section of this doctoral dissertation the author did the research on practices applied by Latvian companies listed on Baltic stock exchange – the object of this doctoral dissertation.

RQ1: What ensures transparency of financial information reflected in financial statements/ annual report of listed companies? Reliable, consistent, and uniform financial reporting is a very important part of good corporate governance practices worldwide with goal to get credibility of the business in eyes of existing and potential shareholders and other stakeholders (Gupta, 2014). Nevertheless, there are various rules and regulations for accounting and reporting processes for company’s long-lived non-financial assets there are areas significant improvements needed to ensure disclosure and transparency because the way how the ones have been applied **do have significant impact** on company’s financial accounting, reporting, evaluation, and management processes of these assets as on company’s financial results per reporting period as well as significant impact on decisions made by various companies’ stakeholders – **local rules and regulations:** more detailed information about accounting and reporting of company’s tangible and intangible assets, Nasdaq Riga rules and regulations – more attention should be paid to the quality and transparency of companies’ financial statements/ annual report and issues concerning these assets. Strict rules for companies should be implemented in case any manipulative activity in its accounting and reporting processes will be identified. **IFRS/ IAS:** supplement with very strict and standardized rules toward accounting and reporting of company’s long-lived non-financial assets (e.g. IAS 36, etc.). More detailed description of the research performed provided in the full doctoral dissertation.

RQ2: What are the most problematic issues in practices of Latvian listed companies on Baltic Stock Exchange processes for long-lived non-financial assets accounting, reporting and management within the system of corporate governance? To what extent existing methods used to prepare financial statements/ annual report are in accordance with the corporate governance principle “financial transparency”? The author by use of survey research identified what type of frameworks and mechanisms Latvian companies listed on Baltic

stock exchange used to apply to manage its long-lived non-financial assets according with the corporate governance principle “disclosure and transparency”. Survey sticks to a questionnaire, contained in total 27 questions about issues concerning accounting, reporting and management processes of companies’ long-lived non-financial assets. The survey was developed in the special program (<https://www.visidati.lv/surveys/>) and electronically distributed to all 28 Latvian companies listed on Baltic stock exchange during period from the end of year 2013 to year 2015. The final number of respondents was 25.

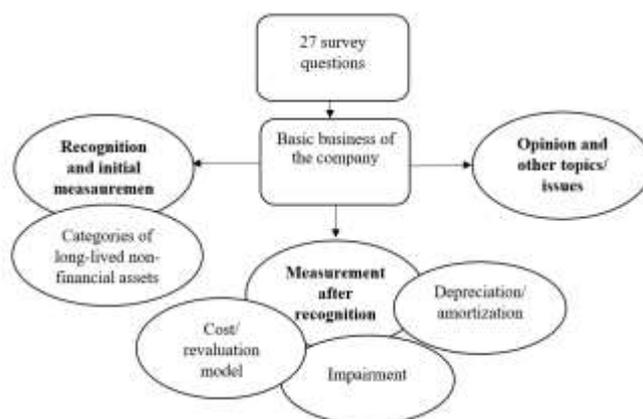


Figure 2.1. Framework of the survey

Source: developed by author

Based on the results of the survey one can conclude that it is not safe that stakeholder using financial statements/ annual report of Latvian companies listed on Baltic stock exchange is able to see the true and fair view of the company’s performance concerning its long-lived non-financial assets management and its impact on other positions of financial statements/ annual report accordingly. Furthermore, there is a significant need to develop frameworks and mechanisms for all stakeholders of Latvian companies listed on Baltic stock exchange to be applied to manage long-lived non-financial assets within the system of corporate governance in transparent and reliable manner. Not only these companies, but also regulatory institutions and society should pay more attention to this type of issues. Today’s economic and political situation and the process of globalization reinforces the importance of these issues either. The following most problematic issues in the practices of these companies relating its accounting, reporting and management processes of these assets within the system of corporate governance identified: **recognition and initial measurement of companies’ long-lived non-financial assets** – in most of companies cost model has been applied, less than 20% of ones chose revaluation model. Therefore, one can conclude by saying that these companies also choose the model easier for its internal accounting and reporting processes. Furthermore, both models are being used for different purposes. **Measurement after recognition – depreciation/ amortization** – 96% of these companies apply the straight-line method that is easy and

convenient from the perspective of company's internal accounting and reporting processes. Further, there are not any company applying unit production method. Only 21% of all companies have changed the depreciation/ amortization. Nevertheless, there is no such a method that could be the best one and applied in all companies all stakeholders do have rights to get reliable and transparent information about the situation in the company per reporting period. To eliminate situations of manipulative activities by side of company's management there is significant need to have more detailed rules and regulations toward the issue relating choice of the most appropriate depreciation/ amortization method for the long-lived non-financial asset. **Measurement after recognition – impairment of long-lived non-financial asset** – since local and international rules and regulations do not state definite and strict rules regarding impairment of these assets Latvian companies listed on Baltic stock exchange do have legal rights to manipulate with the accounting and reporting of the impairment of these assets. Only 60% of all these companies reflect information relating impairment of long-lived non-financial assets in its financial statements/ annual report. Also, problem of non-recognition of impairment of these assets does exist. It has been influenced by factors as compensation, reputation of companies' CEOs, as well violation of a bond indenture, etc. Results of this survey also shows that company's management is the one deciding whether and how to calculate amount of this impairment. Therefore, it can manipulate with calculations and figures reflected in the company's financial statements/ annual report, if it is necessary for better performance results of the company. The author can conclude that impairment of long-lived non-financial assets is a multidimensional issue. Furthermore, the practices relating one and IAS 36 should be viewed in a wider cycle, not only among accountants, but also among managers, shareholders, and other stakeholders. There is significant need to implement more detailed explanations toward IAS 36 and local rules and regulations as well as methodology, when and how companies should perform impairment of its long-lived non-financial assets. Furthermore, there is significant need for local and international requirements of company's long-lived non-financial assets' impairment to ensure this process more standardized and, therefore, also reliable, and transparent. Furthermore, the survey described above shows that the problem of assessing long-lived non-financial assets applying the fair value principle has been actual problem among Latvian companies listed on Baltic stock exchange. In this study in total 52 financial statements/ annual report per reporting year 2010 and reporting year 2011 of Latvian companies were analysed. The annual net sales volume of these companies were more than 10 million Latvian lats and long-lived non-financial assets constituted more than 50% of its total assets or value of balance sheet (source of information: www.lursoft.lv). Results of this study showed that the information on impairment of long-lived non-financial assets was disclosed

only in the 19 financial statements/ annual report of these companies or 36.5% of the total number of companies investigated in this research. However, out of these 19 financial statements/ annual reports only 7 ones representing different industries were selected useful for further investigation because they contained the information useful for the further analysis to draw the final conclusions (Kuzmina and Kozlovska, 2012). Based on the data presented in the financial statements/ annual reports a list of different indicators was calculated to develop an understanding of the impairment of long-lived non-financial assets and the extent of the impairment loss as well as to determine some peculiarities and relationships among the financial indicators. Therefore, the author's question is: "Can investors trust the provided information?" The practical reality is that accountants apply subjective assessment for many assets that will be required to be measured at fair value. Determining an appropriate discount rate that reflects current market assessments and the appropriate risks will often be difficult and will require consideration and input from financial management, corporate management, and valuation professionals. Impairment losses contain unfavourable information about company's expected future performance, the question arises as whether companies attempt to provide true and transparent information to help shareholders better assess the implications of the impairments for future cash flows (Kvaal, 2005). The results show the topic of accounting measurement and evaluation of companies' long-lived non-financial assets and its financial performance remains the subject for considerable debate among scholars and professionals. The studies conducted in this field of knowledge and the provisions of international accounting standard IAS 36 are more focused on various aspects of accounting measurement of goodwill impairment and information disclosure, and to a lesser extent, deal with the issues related to accounting regulation of the impairment of company's tangible or fixed assets. This explains the attention of the author to the category of long-lived non-financial assets. Therefore, the problems connected with the practical application of the standard IAS 36 can be explained by the fact that impairment of assets is a multidimensional issue. **To conclude, the range of problems considered above proves that measurement and evaluation of long-lived assets is directly related to corporate governance and cannot be ignored when developing investment strategies.** Large variations in terminology and presentation in the companies' financial statements/ annual reports increase the need for individual interpretation and **urges the need for further research aimed to develop methodological approaches to the transparent accounting and reporting measurement of long-lived assets as well as to research the impact of its impact on company's performance. Therefore, the author performed the research about long-lived non-financial asset management and companies' financial performance: all Latvian companies listed on Baltic stock exchange should have to prepare and report is financial**

statements/ annual reports every quarter which can increase investments in long-term projects, improve company's access to finance by reducing risks of information frictions between ones needed financing (companies) and ones providing finance (capital providers). Furthermore, contributing companies to invest in larger set of projects with positive net present value. **In addition, the requirement of regular reporting increase transparency of the financial information provided that is associated with lower level of information asymmetry in performance reports as well as automatically improves activities performed by companies' corporate managers, decrease possible agency problems and managers' avoidance to invest in long-term projects** (Johan S. and Zhang M., 2020; Kraft et al., 2018). Furthermore, there are studies stating opposite view – regular reporting process can create managers to perform short-term investment activities with goal to boost short-term profits at the expense of the company's long-term value and creating or exacerbating existing agency problems (Hermalin and Weisbach, 2012). **Moreover, there are also discussions toward regularity of mandatory reporting of listed companies supporting this with the same idea – greater disclosure requirements may cause managers to make myopic investment decisions.** There are discussions, attempts to decline interim reporting requirements supported by the EU and the UK. There are also various suggestions for the US toward removal of mandatory quarterly reporting (Kraft et al., 2018). Summarizing issues described above the author **concluded that financial accounting and reporting does have significant impact not only on the quality of information provided in companies' financial statements/ annual reports, but also on the long-term investment decisions taken by both sides – as by companies' managers as by companies' shareholders as well as other stakeholders.** In most of cases to analyse performance of the company the only way how external user can do it is by use of publicly available financial statements/ annual reports as well as ratio analysis to measure corporate performance, viability (Voulgaris and Doumpos, 2000; Moscviciov et al., 2010; Knežević et al. 2011). More detailed description of the research performed provided in the full doctoral dissertation.

Long-lived non-financial asset management and performance or RQ3: Does information relating long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange show/ prove that the assets and management of these assets do have influence on companies' performance? This research is based on the secondary data (<http://www.nasdaqbaltic.com/market/?pg=mainlist&lang=en>). The analysis of financial statements/ annual reports of Latvian companies listed on Baltic stock exchange performed for the period of 11 years (from year 2007 to year 2017). For the further research only companies

representing Baltic Main List and Baltic Secondary List were selected in total 21 ones representing 7 industries.

1. Total analysis of Baltic Main List and Baltic Secondary List: it covered two different periods within the period of 11 years: year 2007 and year 2017 – therefore, the author thinks that this period allowed to also achieve objective of this research. Within this scope the author selected in total 9 financial ratios/ measures per period of 11 years (year 2007 and year 2017 and in some cases also from year 2007 to year 2017) of Latvian companies listed on Baltic stock exchange. The selection of the most appropriate ratios for analysing efficiency and impact of company's long-lived non-financial asset management on overall corporate performance of Latvian companies listed on Baltic stock exchange was based on the research done by Tehrani N.G. (Tehrani, 2016) and ones by view of the author. The author analysed values of long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange as well as all the changes occurred during the period of this research – from year 2007 to year 2017. Furthermore, different methods of financial analysis had been applied – benchmarking or industry analyses and trend analyses by use of various financial ratios as well as common-size financial statements/ annual reports analyses.

Overall corporate performance analysis of Latvian companies listed on Baltic Main List and Baltic Secondary List per period of 11 years (from year 2007 to year 2017) and per period of 5 years (from year 2013 to year 2017): to evaluate significance of long-lived non-financial assets and its management within the system of corporate governance of Latvian companies listed on Baltic stock exchange the author analysed what is the proportion of these assets is from companies' total balance sheet value during whole the research period. Further, to analyse mutual relation of these assets and companies' overall corporate performance from the perspective of profitability was performed. It was done by use of various mathematical tools (averages, percentages, ratios) and correlation analysis. For this analysis intangible assets have been excluded since the proportion of these assets from the total balance sheet value of these companies is not significant in comparison to tangible ones. Further, the selection of the most appropriate ratios for analyses was based on the research done by Chakraborty (Chakraborty, 2014) and Peavler (Peavler, 2017). To ensure more precise and reliable results for the analysis of ratios the rank test has been performed. Moreover, analysing results obtained the author came to the following general conclusions on the information relating long-lived non-financial assets owned by Latvian listed companies on Baltic stock exchange and its impact on the ones' overall corporate performance – **analysis of overall performance of Latvian companies listed on Baltic stock exchange during the period from year 2007 to year 2017:** based on the information summarized and analysed in the table 2.1. one can state that during the period of

11 years (year 2007 to year 2017) the average overall corporate performance of all Latvian companies listed on Baltic stock exchange (ones listed on the Baltic Main list and the Baltic Secondary List) has been improved considerably. Companies have been investing in long-lived non-financial assets. Therefore, average proportion of long-lived non-financial assets of total assets shows significant increase (Baltic Main List this average increase was 32%, Baltic Secondary List average increase of 31%). Nevertheless, there is similarities with the global tendency for the increasing average proportion of intangible assets from the total assets, also the average proportion of tangible or fixed assets from the total assets has been increasing. Therefore, it can be concluded that the management of long-lived non-financial assets of Latvian listed companies within the system of corporate governance does have significant impact on the overall corporate performance of these companies. Further, liquidity ratio shows that nevertheless in the research period the proportion of long-lived non-financial assets from the total assets has been increasing companies representing both of lists use their resources more efficiently. ROE and ROA prove the improvement of its overall performance and competitiveness. Comparing profitability of company's assets between year 2007 and year 2017 for the companies listed on the Baltic Main list shows that it is at the same level, but for the ones listed on the Baltic Secondary List it has even increased from 0,01 to 0,09. Therefore, it can be concluded that companies listed on the Baltic Secondary List use its assets more efficiently. Company's operating cash flow shows cash outflows and inflows relating activities from its main business. Analyses of the average operating cash flow per research period indicates very significant and positive trend for the Latvian companies listed on the Baltic Main List – average increase of 268%. Therefore, it can be concluded that these companies have been generating cash flow from its basic business operations highly successful. Opposite it is for Latvian listed companies on the Baltic Secondary List – decrease of 47%. The author thinks that explanation for this conclusion is the fact that during this period the Republic of Latvia experienced period of the significant financial crises. Therefore, this tendency should be analysed more detailed per industries these companies represent. Furthermore, analysing companies' liabilities the author concludes that during research period the average debt to total assets ratios have been increasing for the companies listed on the Baltic Main List and decreasing for the ones listed on the Baltic Secondary List. Nevertheless, for both lists this ratio is below 1 and it is good indicator, which proves not all debt have been financed by ones' assets and the risk of default is not so high.

Table 2.1.

Financial ratios analysis of corporate performance of Latvian companies listed on lists of Baltic stock exchange per year 2007 and per year 2017, mean

Ratio	Baltic Main List		+/-	Baltic Secondary List		+/-
	2017, Mean	2007, Mean		2017, Mean	2007, Mean	
Long-lived non-financial assets to Total assets, proportion (%)	36.83	27.82	+	59.67	45.54	+
Fixed Assets (%)	29.50	22.94	+	59.15	45.34	+
Intangible Assets (%)	7.32	4.87	+	0.53	0.20	+
Liquidity	2.70	2.14	+	3.24	4.57	+
ROE	0.14	0.06	+	0.26	0.02	+
ROA	0.09	0.05	+	0.09	0.01	+
ROAA	0.09	0.04	+	0.09	0.01	+
Operating cash flow	9,726,146	2,646,457	+	2,751,713	5,140,905	-
Equity/ total debt ratio	2.47	1.79	+	3.60	4.77	-
Debt to own funds proportion = total debt/ total assets	0.66	0.51	+	0.51	0.60	-

Source: developed by author (2018) based on information available at <http://www.nasdaqbaltic.com/market/?pg=industry&lang=en>

Since average equity to total debt ratio for the companies of both lists are above 1 it can be concluded the following – nevertheless there is slight fluctuations to both directions Latvian companies listed on Baltic stock exchange are stable enough to cover its short-term and long-term liabilities. This ratio is advisable to be at least 2. Therefore, it can be concluded since average equity to total debt ratio is above 2 for both of lists as in year 2007 as in year 2017 companies in average are stable enough to cover its debts from its own capital. Therefore, Latvian companies listed on Baltic stock exchange become less risky and in case of possible problems ones can set their financial obligations by selling assets own. **Furthermore, the accounting, reporting and management of its long-lived non-financial assets become especially important.** Moreover, the author of this doctoral dissertation analysed also overall corporate performance of Latvian listed companies per industries ones represent – during the research period industries representing in average the biggest proportion of long-lived non-financial assets from total assets or balance sheet are financials, utilities, and basic materials (Table 2.2.).

Table 2.2.

Average proportion of long-lived non-financial assets to balance sheet value of industries represented by Latvian companies listed on Baltic stock exchange from year 2007 to year 2017, %

Industry	Proportion of long-lived non-financial assets to total assets, 2007-2017 (%), Mean		
	Total long-lived non-financial assets	Tangible (fixed) assets	Intangible assets
Financials	74.35	74.34	0.01
Utilities	65.58	65.13	0.45
Basic materials	64.65	63.34	3.68
Health care	52.63	46.37	6.26
Industrials	49.78	45.71	4.06
Consumer goods	32.14	31.95	0.19
Technology	30.21	28.47	1.74

Source: developed by author (2018) based on information available at <http://www.nasdaqbaltic.com/market/?pg=industry&lang=en>

Table 2.3.

Average ROAA of Latvian companies listed on Baltic stock exchange per period from year 2007 to year 2017 (%), Mean

Industry	ROAA, Mean
Financials	-3%
Utilities	5%
Basic materials	2%
Health care	6%
Industrials	-1%
Consumer goods	1%
Technology	4%

Source: developed by author (2018) based on information available at <http://www.nasdaqbaltic.com/market/?pg=industry&lang=en>

Also, analysing average return on average assets (ROAA) the highest ratio per research period of 11 years (from year 2007 to year 2017) is for the health care industry which includes two companies from the Baltic Main List – Olainfarm and Grindeks, and one from the Baltic Secondary List – Latvijas Jūras Medicīnas Centrs (table 2.3.).

Further, considering that the average proportion of long-lived non-financial assets from balance sheet value of the companies representing this industry is 52,63%, the management of these assets do have significant influence on the indicators characterizing overall corporate performance of the ones. The same conclusion can be stated also about industry with average ROAA of 5% - utilities.

Table 2.4.

Average operating cash flow, ROE, ROA of Latvian companies listed on Baltic stock exchange represented by industries per period from year 2007 to year 2017, Mean

Industry	Operating cash flow, euro, Mean	ROE (%), Mean	ROA (%), Mean
Basic materials	61,944,572	6%	5%
Financials	6,934,482	5%	2%
Consumer goods	6,349,642	8%	6%
Industrials	1,735,774	0%	3%
Utilities	1,724,812	-18%	-2%
Technology	774,831	32%	0%
Health care	-41,934	-4%	-4%

Source: developed by author (2018) based on information available at <http://www.nasdaqbaltic.com/market/?pg=industry&lang=en>

Analysing operating cash flow, ROE and ROA per the research period in the tables 2.4. above the author concludes that average highest operating cash flow is for basic materials which also represents one of the highest ROE and ROA.

The same industry is one representing significant proportion of long-lived non-financial assets from the total assets. This industry is a good example showing significance and impact of long-lived non-financial asset management on the company's overall performance within the system of corporate governance. Furthermore, there are industries with a higher proportion of these assets from balance sheet value, but with not so good indicators of companies' overall corporate performance.

Therefore, the author can conclude, that the management of long-lived non-financial assets within the system of corporate governance do have significant impact on the performance indicators of Latvian companies listed on Baltic stock exchange within the system of corporate governance.

Table 2.5.

Average debts to own funds proportion, liquidity, equity to debt ratio of Latvian companies listed on Baltic stock exchange represented by industries per period from year 2007 to year 2017, Mean

Industry	Debt to own funds proportion = Total debt/ Total assets, Mean	Liquidity, Mean	Debt/Equity/ debt ratio, Mean
Basic materials	0.35	1.488	0.60
Industrials	0.48	1.432	0.99
Utilities	0.74	0.990	3.36
Financials	0.56	3.998	3.94
Technology	0.57	3.198	2.72
Health care	0.72	2.755	3.17
Consumer goods	0.63	7.993	8.59

Source: developed by author (2018) based on information available at <http://www.nasdaqbaltic.com/market/?pg=industry&lang=en>

The best average liquidity ratio during the research period is for industries as basic materials (1,498) as well as industrials (1,432). Furthermore, for the same two industries also ratio of average total debt to total assets is the best in comparison to other industries represented by the Baltic stock exchange. Further, industries as consumer goods and utilities show the weakest performance of the three ratios described. Therefore, since proportion of long-lived non-financial assets to total assets or balance sheet value of these companies is quite high – utilities (65,58) and consumer goods (32,40) – also, **in this situation the management process of long-lived non-financial assets is critical for the overall corporate performance of the ones.**

2. Analyses of relation between management of long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange and its overall corporate performance

– to find out is there any mutual relation between long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange and its overall corporate performance the author performed analysis based on the performance of each company and not per industries repressed by ones. Therefore, to do the further research, the author in the figure 2.2. below calculated the average proportion of long-lived non-financial assets from these companies' balance sheet values per period of 11 years – from year 2007 to year 2017. Based on the information provided in the figure 2.2. below it can be concluded that during the period of 11 years (from year 2007 to year 2017) the average proportion of long-lived non-financial assets from balance sheet value of these companies has been increased. This increase is from 44% in year 2007 to 55% in year 2017 (Kozlovskā and Kuzmina-Merlino, 2019) showing a very positive trend.

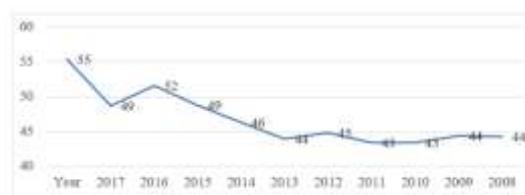


Figure 2.2. Average proportion of long-lived non-financial assets from balance sheet value of Latvian companies listed on Baltic stock exchange per period from year 2007 to year 2017

Source: developed by author (2018) based on information available at <http://www.nasdaqbaltic.com/market/?pg=industry&lang=en>

For the further research the author selected year 2007 and year 2017 and evaluate the mutual relation and correlation between fixed or tangible asset turnover ratio and return on capital employed. For the further research intangible assets have been excluded since the proportion of these assets from the total balance sheet value of Latvian companies listed on Baltic stock exchange is not significant in comparison to fixed or tangible ones. Further, in the table 2.6. the average efficiency-profitability of Latvian companies listed on Baltic stock exchange per period

Based on the calculations and analyses reflected in the table 2.7. above the one can conclude by saying that there is strong mutual correlation and influence between management of long-lived non-financial assets and companies' overall corporate performance. Furthermore, the author investigated two separate periods – 11 years (from year 2007 to year 2017) and 5 years (from year 2013 to year 2017). The reason is that during the research period the Republic of Latvia experienced significant financial crisis. Therefore, in author's opinion this fact significantly influenced results of the research per period of 11 years (from year 2007 to year 2017).

Period from year 2007 – year 2017 – in statistics, the correlation coefficient is measuring strength and direction of a linear relationship between two variables on a scatterplot – in this case it is FATR and ROCE. The value of this coefficient always is between +1 and -1. The result of the analysis performed for the period from year 2007 to year 2017 divided per lists of Baltic stock exchange has been summarized in the table 2.8. below. The correlation coefficient shows that **there is mutual correlation between FATR and ROCE**. Furthermore, there is **not any negative correlation coefficient identified**. Furthermore, there are only 4 companies identified with moderate or strong mutual correlation between FATR and ROCE. Most of Latvian companies listed on Baltic stock exchange show weak or very weak mutual correlation between FATR and ROCE. One of the key explanations for such performance of weak or very weak performance of this correlation coefficient can be explained by the financial crisis the Republic of Latvia experienced during the research period. Therefore, further the author performed the analysis of the second period of this research.

Table 2.8.

Analysis of mutual correlation between fixed asset turnover ratio (FATR) and return on capital employed (ROCE) for Latvian companies listed on Baltic stock exchange per period of 11 years (from year 2007 to year 2017) divided per lists of Baltic stock exchange

No.	Correlation coefficient	From year 2007 to year 2017	
		Baltic Main List	HarsoMatrix
1	0.0-0.3	Baltic Secondary List	Grobtava, Valmieras stikla izpilde, Rigas kugu izpildstava, Tomsava kajuizpildstava, Bervane Valsts, Saikun ceobiznesistiba (AS Pats Saikuns), Latvijas Balzams
2	0.4-0.5	Baltic Secondary List	Rigas autoelektronpariba rupaiba, Dzinu pievadkolu rupaiba, Rigas elektronmaliniba rupaiba, Latvijas Hmas medicinas centrs, Latvijas Oksa, VEF Radiotehnika RRB, Karasmas Atsluga 1, Rigas javlietuvestralpjamu rupaiba
3	0.5-0.7	Baltic Main List	SAP Tehnika
4	0.7-1	Baltic Secondary List	Siguldas CMAS
		Baltic Main List	Obainfarm, Ormsleks
		Baltic Secondary List	VEF

Source: developed by author (2018)

Period from year 2013 – year 2017 – the calculated correlation coefficient shows (table 2.9.) that there are is stronger mutual correlation between FATR and ROCE of Latvian companies listed on Baltic stock exchange. Furthermore, like the analysis for the period from year 2007 to year 2017 above there is not any negative correlation identified. The results obtained show better performance of the correlation coefficient almost for all companies listed on Baltic stock exchange as it was for the research period of 11 years (from year 2007 to year 2017).

Table 2.9.

Analysis of mutual correlation between fixed asset turnover ratio (FATR) and return on capital employed (ROCE) for Latvian companies listed on Baltic stock exchange per period of 5 years (from year 2013 to year 2017) divided per lists of Baltic stock exchange

No.	Correlation coefficient	From year 2013 to year 2017	
1	0-0.3	Baltic Main List	HansaMatrix, SAF Tehnika
		Baltic Secondary List	Latvijas Jūras medicīnas centrs
2	0.3-0.5	Baltic Main List	
		Baltic Secondary List	VEF Radiotehnika RRR; Rīgas juvelierizstrādājumu rūpnīca
3	0.5-0.7	Baltic Main List	Olainfarm
		Baltic Secondary List	Diton pievadķēžu rūpnīca, Rīgas elektronaizbūves rūpnīca; Latvijas Gāze; Saldus mežrūpniecība (AS Patā Saldus)
4	0.7-1	Baltic Main List	Grindeks
		Baltic Secondary List	VEF, Rīgas autoelektronparāņu rūpnīca; Grobiņa; Valmieras stāks iekārtas; Rīgas kuģu būvētavā; Tosmares kuģubūvētavā; Bērvais Vilnis; Kurzemes Atslēga 1, Siguldas CMAS; Latvijas Balzāms

Source: developed by author (2018)

The only exceptions identified with opposite (decrease) performance of the correlation coefficient were the following companies listed in the Baltic Main List: Olainfarm, Grindeks, SAF Tehnika and in the Baltic Secondary List: Latvijas Jūras medicīnas centrs and VEF Radiotehnika RRR.

To conclude it can be said that the higher FATR of Latvian companies listed on Baltic stock exchange the higher efficiency of management of long-lived non-financial assets within the system of corporate governance. This leads to increase of companies' earning capability, and thus shareholders' wealth has been maximized accordingly. Based on the research performed above one can conclude by saying that information relating long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange within the system of corporate governance **shows and proves that long-lived non-financial asset management do have direct impact on companies' performance.** More detailed description of the research performed provided in the full doctoral dissertation.

Therefore, one can conclude by saying that to ensure highest quality, transparency and usefulness of financial information needed it is important to consider issues described above and the management of long-lived non-financial asset within the system of corporate governance. Because these assets will be used in company's daily operations to reach the best results plus create and increase company's value. Therefore, the accounting and reporting policies of these assets are important elements of company's long-lived non-financial asset management within the system of corporate governance.

3 CORPORATE GOVERNANCE AND FINANCIAL PERFORMANCE

(Chapter 3 consists of four sections, 47 pages comprising 16 tables and 9 figures)

Corporate governance and financial performance: case of Latvian companies listed on Baltic stock exchange

RQ4: Does corporate governance have any impact on the financial performance of Latvian company listed on Baltic stock exchange? Is it possible to measure this impact and how? Is there any relation between “voluntary” corporate governance and financial performance of Latvian companies listed on Baltic stock exchange? The author analysed existing approaches in all Latvian companies listed on Baltic stock exchange related to “voluntary” corporate governance disclosures and companies' performance per period year 2007 to year 2016 and the final sample to 24 Latvian listed companies on Baltic stock exchange representing seven industrial sectors. The secondary sources of information available at the Nasdaq Riga website were used. The corporate governance recommendations defined by the Nasdaq Riga are with a recommendatory nature rather than mandatory rules. There are not any indexes for this report available calculated by the Nasdaq or any other institution. **Therefore, the author developed the “voluntary” corporate governance disclosure index** (Mohamed et al, 2009; Chau and Gray, 2002; Chow and Wong-Boren, 1987). The results of this research support the idea that **there is mutual relation between voluntary corporate governance disclosures and performance of Latvian companies listed on Baltic stock exchange in period from year 2007 to year 2016**. To prove the result of this research the mean of return on assets or ROA, return on equity or ROE, profit per share, net profit, and average volume weighted price of company' share in the particular period were calculated (table 3.1.).

Table 3.1.

Average “Voluntary” CG disclosure index and ROA, ROE of Latvian companies listed on Baltic stock exchange per industries (from year 2007 to year 2016), Mean

Industry	CG index	ROA Mean	ROE Mean	Share market price, Mean	Profit per share, Mean	Net profit, Mean
Health care	0.75	8%	0%	4.83	0.06	5,333,217
Industrials	0.71	-17%	-2%	0.60	-0.02	-429,624
Consumer goods	0.65	-3%	-1%	1.63	-0.10	-594,179
Financials	0.63	2%	1%	0.80	0.01	39,650
Basic materials	0.62	3%	2%	6.10	0.02	1,893,872
Utilities	0.50	6%	5%	8.13	0.03	15,111,200
Technology	0.68	-1%	2%	0.71	0.02	254,362
Telecommunications	NA	NA	NA	NA	NA	NA

Source: develop by author (2017)

This mutual relation is not consistent that could be explained by the fact during the period explored the country was experiencing significant financial crisis plus Latvian company listed on Baltic stock exchange are only partly following rules defined which/ how items should be disclosed in companies' Corporate governance report. Furthermore, this **structural feature of these companies provides evidence the ones are forced to become more transparent due to such pressures as globalization and internationalization**. This issue must be considered also by Nasdaq Riga defining rules for Latvian companies listed on Baltic stock exchange (Kozlovskā, 2018). Therefore, corporate governance does have mainly positive impact on company's financial performance having corporate governance at the highest level that helps to support company's performance in the longer period. Since corporate governance does have impact on company's financial performance the companies having corporate governance at the highest level will attract interest and confidence of more shareholders to the company and country, and even to the region. Therefore, to foster conditions for sustainable long-term investments it is vital the market does have complete confidence in the quality and transparency of corporate reporting processes. These processes must be in accordance with corporate governance principle “disclosure and transparency”. More detailed description of the research performed provided in the full doctoral dissertation.

Framework for long-lived non-financial asset management within the system of corporate governance or RQ5: What is/ are necessary to be improved or implemented in the management process of long-lived non-financial assets within the system of corporate governance of Latvian companies listed on Baltic stock exchange to ensure at the same both – the highest level of company's performance and transparency of the information that could be usable for various analysis and decision making processes performed by all stakeholders? The framework is a system of rules, ideas, or beliefs that is used to plan or decide something (Cambridge University Press, 2019). Based on the conclusions derived from the theoretical part and other conclusions of this doctoral dissertation the author

states that the company owing long-lived non-financial assets does have significant advantages from the application of the framework for long-lived non-financial asset management processes within the system of corporate governance of Latvian companies listed on Baltic stock exchange. **The framework is systematised, as a part of company's coordinated business strategy according with laws and regulations including corporate governance principle "disclosure and transparency" as well as shareholders' and other stakeholders' interests.** Company by use of this framework can manage its long-lived non-financial assets in the most efficient and effective way. **This will result in increased indicators of company's corporate performance, growth, productivity, value, etc.** According to author's conclusions from the theoretical part of this doctoral dissertation and results obtained from result of empirical researches transparent and reliable management processes for long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange within the system of corporate governance are of very high importance. Furthermore, **this ensures that the one out of six corporate governance principles ("disclosure and transparency") will be followed and companies' performance indicators and company's value, market share, corporate governance index – increased . This will lead to increased potential shareholders' interest about Latvian stock market and the stock exchange market capitalization proportion to GDP of the Republic of Latvia will be increased either.**

One of the most important factors for company's business successes is its asset management process ensuring best performance indicators by decreasing risks and optimizing costs during ones' lifecycles. **Furthermore, asset management does have significant impact not only on company's performance indicators, but also on its business sustainability, reliability, and stakeholders' confidence.** Especially important it is for asset intensive companies. Therefore, the author proposes the framework for long-lived non-financial asset management owned by Latvian companies listed on Baltic stock exchange within the system of corporate governance. Mutual interaction between governance and management of long-lived non-financial assets within the system of corporate governance graphically shown in the figure 3.1. below. **Asset governance process** is the process ensuring to develop and implement the most efficient and effective **framework for long-lived non-financial asset management process** as well as high economic performance and growth in the long-term period. It includes total life cycle as well as more transparent, reliable accounting and reporting processes of these assets (Alles et al., 2005; Katičić et al., 2014).

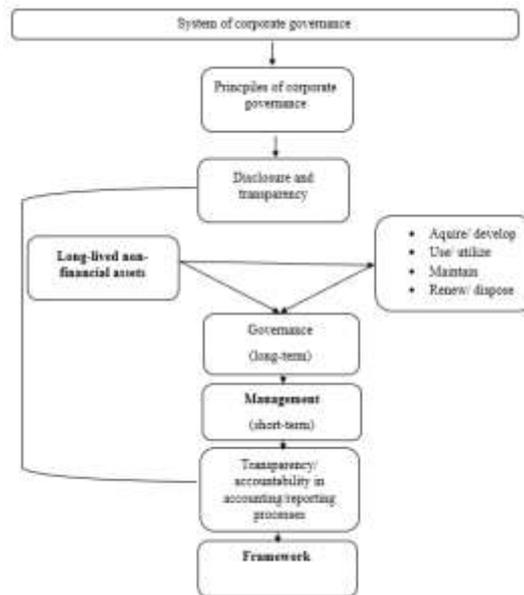


Figure 3.1. Mutual interaction between governance and management processes of long-lived non-financial assets within the system of corporate governance of Latvian companies listed on Baltic stock exchange

Source: developed by author

Information relating accounting and reporting processes of company's long-lived non-financial assets within the system of corporate governance is the same importance for all company's stakeholders – internal and external users of this information for different decision-making processes. Furthermore, one can conclude by saying that for external users the issue of transparency and reliability is with a higher importance, but for internal ones – issues of accountability and transparency. **Nowadays to gain competitive advantage is one of the key goals and challenge not for the company as such, but also for its asset management process.** Therefore, **long-lived non-financial asset management is mutual collaboration between both types of company's stakeholders – internal and external.** During whole asset's lifecycle process company must ensure the best performance and results that is based on business plan derived from stakeholders' interests. Therefore, the author's developed framework for long-lived non-financial assets of Latvian listed companies on Baltic stock exchange within the system of corporate governance will ensure that financial information that is transparent, reliable and in accordance with respective laws and regulations. Furthermore, this will influence shareholders' and other stakeholders' behaviour, respective security prices and company's ability to get additional finance accordingly. Figure 3.2. reflects users of the author's developed framework for long-lived non-financial asset management of Latvian listed companies within the system of corporate governance.

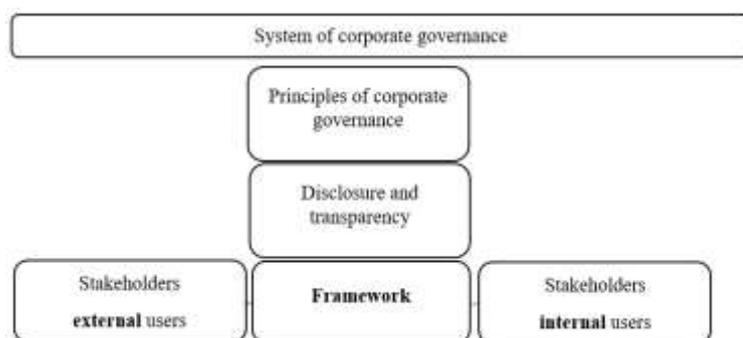


Figure 3.2. Users of information relating governance and management processes of long-lived non-financial assets within the system of corporate governance of Latvian companies listed on Baltic stock exchange

Source: developed by author

Company’s financial accounting and reporting processes at the highest level is one of key characteristics for qualitative corporate governance. This allows to decrease and even eliminate any possible information asymmetries among all stakeholders (Palea, 2013; Cohen et al., 2004; Madhan and Panakj, 2015). Application of the author’s developed framework will allow to decrease any risks of earning management, possible manipulations with financial information in the accounting and reporting processes of these assets for internal and external users of respective information, as well as “principal/ agency” problem and potential shareholders’ uncertainty. Therefore, the cost of capital for the company will be decreased and value of the company increased. Author’s developed framework will provide definite direction and guidance on the transparent, reliable and in accordance with respective laws and legislation accounting and reporting processes of long-lived non-financial assets of Latvian companies listed on Baltic stock exchange within the system of corporate governance. The framework includes the following key elements shown in the figure 3.3. below:



Figure 3.3. Key elements of the framework for management process of long-lived non-financial assets within the system of corporate governance of Latvian companies listed on Baltic stock exchange

Source: developed by author

It can be concluded that elements of author’s developed framework allow to develop and implement or improve management process of long-lived non-financial assets within the system of corporate governance and all stakeholders’ (internal/ external) decision making processes

with company's performance accordingly. Also vice versa – based on possible changes in management and/ or decision-making processes by company's stakeholders (internal/ external) also changes in the framework can be performed in case there are any indications for the necessity of such a process. This defines key elements for accounting and reporting processes of these assets. Therefore, the framework also ensures compliance with the one of key principle of corporate governance “disclosure and transparency”. Summarizing principles of the author's developed framework for long-lived non-financial asset management within the system of corporate governance of Latvian companies listed on Baltic stock exchange this framework can be applicable and used by all company's management levels – coordinating activities realize value for respective assets increasing company's value and shareholders' wealth accordingly (figure 3.4.).

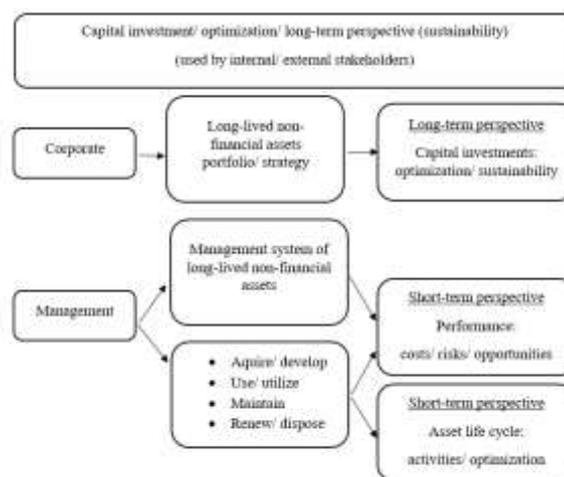


Figure 3.4. Management levels involved in the framework for long-lived non-financial asset management within the system of corporate governance of Latvian companies listed on Baltic stock exchange

Source: developed by author

Results of this doctoral dissertation can be applied to develop and implement new or to improve existing management process of long-term non-financial assets owned by Latvian listed companies on Baltic stock exchange within the system of corporate governance. This framework is extensive one. Therefore, it can be applied also by any other company owing long-lived non-financial assets. Furthermore, companies by application of this framework will ensure that accounting and reporting processes of long-lived non-financial assets within the system of corporate governance are at the highest quality, transparent, reliable and in accordance with respective laws and regulations including corporate governance principle “disclosure and transparency”. This accordingly will lead to the most efficient and effective financial and investment decision making processes performed not only by company's management, but also shareholders (existing/ potential) and other stakeholders. **Therefore, the**

author can conclude that long-lived non-financial asset management of Latvian companies listed on Baltic stock exchange within the system of corporate governance does have significant impact on the following main areas reflected below in the figure 3.5.

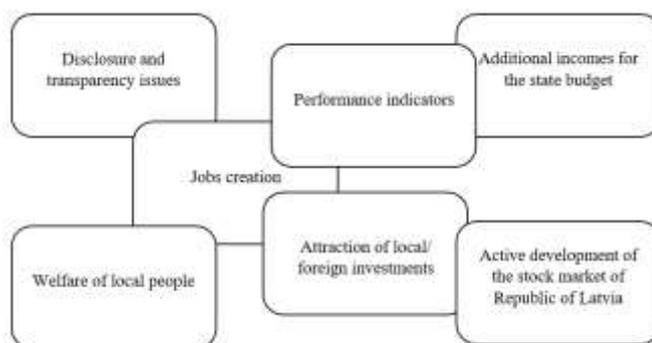


Figure 3.5. Areas influenced by the framework for long-lived non-financial asset management within the system of corporate governance of Latvian companies listed on Baltic stock exchange

Source: developed by author

Framework for long-lived non-financial asset management within the system of corporate governance of Latvian companies listed on Baltic stock exchange

To ensure the framework for accounting and reporting processes of the management of long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange within the system of corporate governance is easy applicable as well as practically useful for any company's stakeholder – internal or external one – the author of this dissertation has developed practically applicable framework steps for every stage of the life cycle of particular long-lived non-financial asset within the system of corporate governance (figure 3.1.): acquire/develop, use/ utilize, maintain, renew/ dispose. Furthermore, since accounting and reporting policies affect as balance sheet, profit, and loss statement as company's corporate performance the author of this dissertation has also developed evaluation forms for each of the framework steps. Evaluation forms consist of 6 key parts and includes author's developed relevant management processes as well as empirically measurable indicators with the goal to evaluate results from development and implementation of the framework for long-lived non-financial asset management within the system of corporate governance. Furthermore, the form also will ensure that author's developed framework will provide definite direction and guidance on the transparent, reliable and in accordance with respective laws and legislation accounting and reporting processes of long-lived non-financial assets of Latvian companies listed on Baltic stock exchange within the system of corporate governance. **In addition, author's developed framework is widely applicable not only for Latvian listed companies on Baltic stock**

exchange, but any other company or organization. Asset management process can differ among companies because of different companies, cultures, objectives and even languages. Nevertheless, management of long-lived non-financial assets within the system of corporate governance includes many different steps in most of these steps the precise and transparent accounting and reporting information relating long-lived non-financial assets is essential and even critical in steps reflected in the figure 3.6. below.

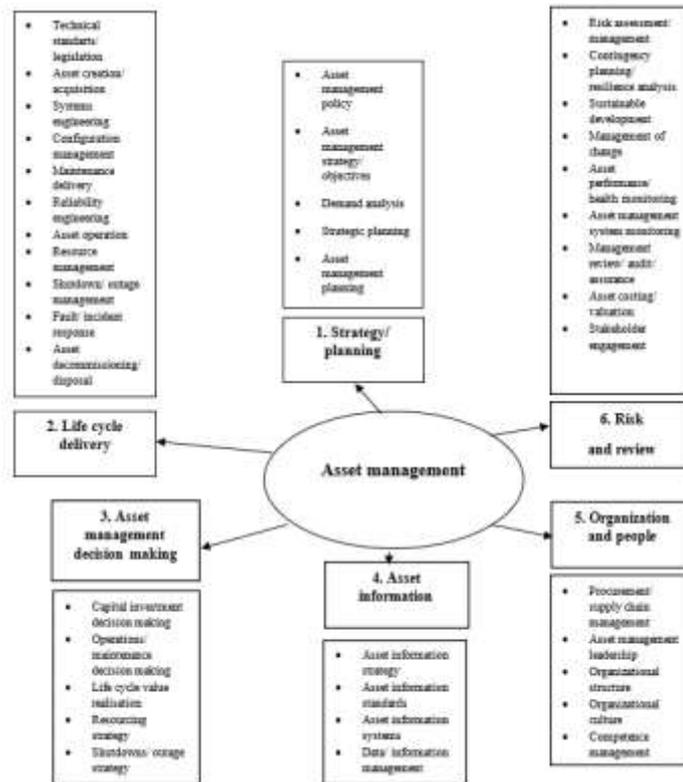


Figure 3.6. The landscape of asset management

Source: developed by author based on information available at:

<https://theiam.org/knowledge/Knowledge-Base/the-landscape/>

The framework developed by the author of this doctoral dissertation establishes the base of information necessary to be provided during the whole life cycle of every long-lived non-financial asset owned by Latvian companies listed on Baltic stock exchange to make material influence on companies' financial statements/ annual reports and overall corporate performance. Furthermore, this will influence shareholders (existing/ potential) activities toward company's shares, therefore, further successes. Since investments in these assets compromise significant financial resources more and more stakeholders want to gain confidence that the management of company's long-lived non-financial assets delivers highest results and returns to the company.

Since company's long-lived non-financial assets occupy in average half of its balance sheet value and almost half of operating costs following costs relating to labour and information technologies. Therefore, it is important that company has enough and up-to-day document and IT system not only describing, but also ensuring efficient management of long-lived non-financial assets within the system of corporate governance. The author's developed framework is important and necessary tool because it ensures that accounting and reporting processes of long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange are correct, transparent and in line with company's business specifics and in accordance with respective accounting and reporting rules and regulations including corporate governance principle "disclosure and transparency". Furthermore, the author's developed framework for long-lived non-financial assets within the system of corporate governance of Latvian companies listed on Baltic stock exchange will provide guidelines how to account, report and control these assets in the most efficient, effective, and transparent manner. Also, it will ensure the company to enable to control the long-lived non-financial asset during its whole life cycle in the most effective and efficient way. Therefore, the framework for the management of long-lived non-financial assets of Latvian companies listed on Baltic stock exchange is of a very high importance and easy applicable tool as well. Since management process of long-lived non-financial assets focuses on the value these assets create to the company – financial, non-financial, tangible, intangible – also this framework ensures the same options. Furthermore, the value the long-lived non-financial asset(s) create to the company has been defined by company's stakeholders based on company's goals.

Framework for management of long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange within the system of corporate governance

All steps of this framework are documented information specifying activities of long-lived non-financial asset life cycle including all activities from its initial acquisition/ development to its disposal or renewal visualized in the figure 3.7. – acquire/ develop, use/ utilize, maintain, renew/ dispose.

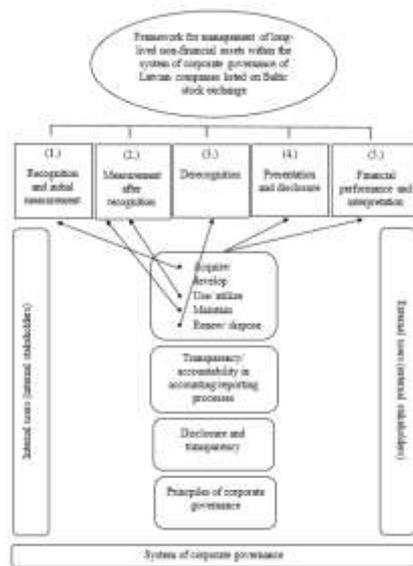


Figure 3.7. Mutual interaction between management of long-lived non-financial assets of Latvian companies listed on Baltic stock exchange within the system of corporate governance and transparency/ accountability in accounting/ reporting processes of these assets

Source: developed by author

The framework for the management of long-lived non-financial asset management of Latvian companies listed on Baltic stock exchange within the system of corporate governance consists of the following accounting/ reporting processes of these assets and evaluation - recognition and initial measurement, measurement after recognition, derecognition (retirements, disposals), presentation and disclosure, financial performance and interpretation, additional information. Based on the description of the author’s developed framework for long-lived non-financial assets accounting and reporting processes within the system of corporate governance above it can be concluded that information available toward these assets differs significantly between internal and external stakeholders. Furthermore, management as well as different decision-making processes can be significantly influenced based on the information available. Therefore, transparency and accountability in the accounting and reporting processes of long-lived non-financial assets within the system of corporate governance do have impact on the value the ones create to the company – financial, non-financial, tangible, intangible. This framework ensures not only control over these assets and its management processes, but also influence assets’ value and company’s corporate performance, shares/ stock value, shareholders’ wealth accordingly. Furthermore, also in the longer period also make the impact on stock market and economy of the Republic of Latvia as well.

Thus, the author of this dissertation suggests all stakeholders (internal and external) of Latvian companies listed on Baltic stock exchange in the process of decision making take into account the author’s developed framework for management of long-lived non-financial assets

owned by Latvian companies listed on Baltic stock exchange within the system of corporate governance. Furthermore, this also will ensure that one of key principles of corporate governance – “disclosure and transparency” – will be applied. Furthermore, there will be possibility to make the best decisions toward these assets, development, and performance of the company as well as stock market and economy of the Republic of Latvia accordingly. This framework can be developed and implemented also by any other company owing these assets as well.

Implementation process of framework for long-lived non-financial asset management within the system of corporate governance of Latvian companies listed on Baltic stock exchange

Based on conclusions from the literature review and researches performed within this dissertation by the author the following implementation process of the author’s developed framework for long-lived non-financial asset management of Latvian companies listed on Baltic stock exchange within the system of corporate governance is advisable to be performed. Nevertheless, there are definite rules and regulations how Latvian companies listed on Baltic stock exchange must show publicly information toward accounting and reporting processes of its long-lived non-financial assets there is significant difference of the availability of all information. Furthermore, companies’ management can decide what information and how to reflect in publicly available financial statements/ annual and other reports. Therefore, the implementation process has divided in 2 key directions visualized in the figure 3.8. – for internal/ external stakeholders.

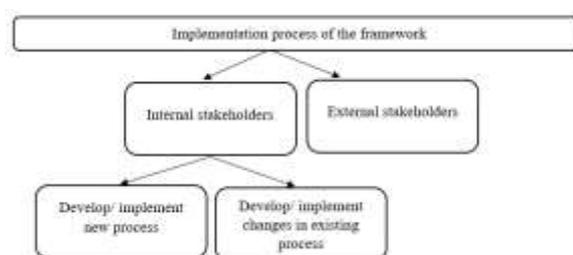


Figure 3.8. Users of the framework for management of long-lived non-financial assets of Latvian companies listed on Baltic stock exchange within the system of corporate governance and its implementation process

Source: developed by author

Nevertheless, there is significant difference of the availability of information between internal and external stakeholders’ key steps in the implementation process are very similar visualized in the figure 3.9. below.

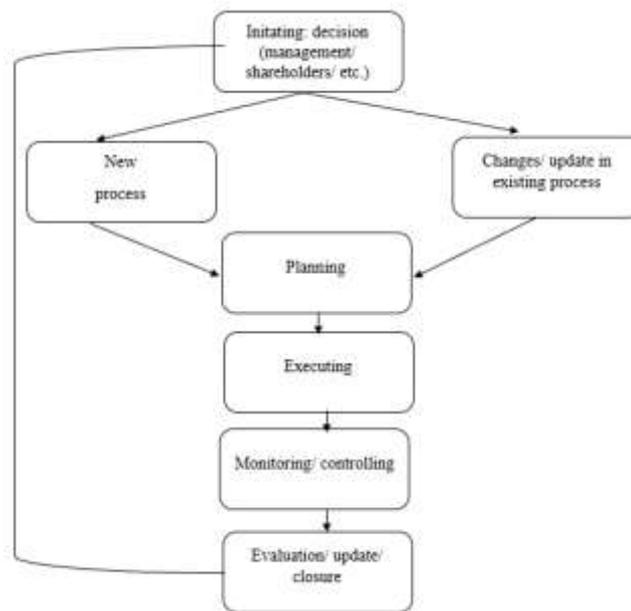


Figure 3.9. Implementation process of the framework for management of long-lived non-financial assets of Latvian companies listed on Baltic stock exchange within the system of corporate governance

Source: developed by author

CONCLUSIONS

This doctoral dissertation comprises research on the management of long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange within the system of corporate governance as a management tool to enforce the corporate governance principle “disclosure and transparency” relating these assets, and thus increase performance indicators of Latvian companies listed on Baltic stock exchange.

1. **Research confirms that there is direct long-lived non-financial asset management impact on performance of Latvian companies listed on Baltic stock exchange. Consequently, the hypothesis has been accepted.**
2. Long-lived non-financial assets do have significant impact on the company at various levels – internal, external, and even the global one. In today’s fast changing business environment and markets as well as changing expectations from customers’ and other stakeholders’ long-lived non-financial asset management process is critical for further successes increasing overall performance of these assets as well as its contribution to the company’s performance accordingly. Decisions taken toward these assets during their whole life cycle should be transparent, in accordance with respective rules and regulations as well as with companies’ long-term plans, supported with detailed calculations and plans.
3. Quality and transparency of information represented in the company’s financial statements/ annual reports play significant rule having impact on company’s performance. One of ways

to evaluate the level of quality and transparency of financial information within the system of corporate governance is principles and methods of accounting and reporting processes for company's long-lived non-financial assets.

4. The practices of the corporate governance do have significant impact on company's performance in the global market contributing growth, stability, long-term investments. Companies applying principles of corporate governance do have an undoubted advantage to attract shareholders and investments: good corporate governance ensures reliable management and **transparent company's activities**. Therefore, shareholders' risk to experience loss of financial funds has been decreased significantly.
5. Principles of corporate governance have been also subject to the management of long-lived non-financial assets owned by listed companies. **The most important of them is "disclosure and transparency" – powerful tool ensuring timely and the highest quality disclosure of information** relating all most important aspects of company's performance including areas of the one's performance and financial situation, results and perspectives, structures of ownership and management as well as **transparency and accountability for accounting and reporting processes for long-lived non-financial assets**.
6. Only **accounting and reporting processes for** company's long-lived non-financial assets that are correct, transparent, in line with company's business specific as well as respective rules and regulations will allow to company's stakeholders to take the most efficient decisions toward these assets during its whole life cycle – right decisions toward repairment, rebuilding, disposal, identify the most promising investment opportunities, control managers directing resources toward particular projects, limiting managers from stealing, maximizing return on investment, predicting residual value, decrease the possible problem of asymmetric information delivered to company's stakeholders, manipulation of earnings and earning management, etc.
7. To ensure financial statements/ annual reports provides a true and fair view of the position of company as at definite date in accordance with respective rules and regulations including information relating long-lived non-financial assets. Furthermore, **company's management is responsible to be experienced enough to select and apply the most suitable and appropriate** accounting treatment for recognition and initial measurement, measurement after recognition, derecognition, presentation and disclosure of these assets.
8. Based on the analysis of relevant international and local rules and regulations governing accountability, transparency and quality for accounting and reporting processes for long-lived non-financial assets numerous **gaps where identified**. These gaps allow companies legally manipulate with information relating these assets reflected in companies' public

disclosures, thus also influencing ones' performance indicators and stakeholders' decision-making processes accordingly. Therefore, it is important to define certain, without any ambiguity local and international rules and regulations for accounting and reporting processes for long-lived non-financial assets not allowing companies' management to report false or misleading information about companies' performance including long-lived non-financial assets.

9. Management of long-lived non-financial asset owned by listing company within the system of corporate governance is the competence of financial management that is one of the most important functional areas of management.
10. During the period of 11 years (from year 2007 to year 2017) the average proportion of long-lived non-financial assets from balance sheet value of Latvian companies listed on Baltic stock exchange is 48% (positive trend – increase from 44% in year 2007 to 55% in year 2017). The choice of principles and methods for accounting and reporting of these assets do have significant role to ensure transparent and reliable information reflected in companies' financial statements/ annual reports.
11. Survey research allowed to identify the most problematic issues in the practices of Latvian companies listed on Baltic stock exchange relating its accounting and reporting processes for its long-lived non-financial assets within the system of corporate governance according with the most important corporate governance principle from shareholders' perspective – “disclosure and transparency”.
12. Only part of Latvian companies listed on Baltic stock exchange must account and report its long-lived non-financial assets in accordance with IFRS/ IAS (ones listed on the official list or Baltic Main List and ones have been reporting its consolidated annual reports). For all other companies it is permitted, but not required. These companies account and report its long-lived non-financial assets in accordance with local laws and regulations of the Republic of Latvia. Nevertheless, there is requirement that information in company's financial statements/ annual reports must be transparent and reliable comparability problem regarding companies' financial statements/ annual reports arises.
13. Nevertheless, there are various international and local rules and regulations for accounting and reporting processes of company's long-lived non-financial assets there are various areas significant improvements needed: local rules and regulations – more detailed information about accounting and reporting processes for these assets, Nasdaq Riga rules and regulations – more attention should be paid to the quality and transparency of companies' financial statements/ annual reports including issues identified in this research concerning long-lived non-financial assets. Also, strict rules and regulations for these companies have

- to be implemented in case any manipulative activity in its accounting and reporting processes will be identified (e.g. accounting and reporting of impairment of long-lived non-financial asset), IFRS/ IAS – supplement with very strict and also standardized rules toward accounting and reporting of company's long-lived non-financial assets (e.g. IAS 36, etc.).
14. There is a significant need to develop frameworks and mechanisms for all stakeholders of Latvian companies listed on Baltic stock exchange to be applied to manage long-lived non-financial assets within the system of corporate governance in transparent and reliable manner. Not only these companies, but also its shareholders as well as regulatory institutions and society should pay more attention to this type of issues. Today's economic and political situation and the process of globalization reinforces the importance of these issues either.
 15. Since average proportion of long-lived non-financial assets to total assets per research period is almost half or even more than half of total balance sheet values of Latvian companies listed on Baltic stock exchange it can be concluded that the management of these assets do have significant impact on companies' performance. Furthermore, there is mutual relation and correlation between long-lived non-financial asset management and performance of Latvian companies listed on Baltic stock exchange. Therefore, it is critical that the accounting, reporting and management processes of these assets are, transparent, reliable, correct and in accordance with the respective rules and regulations.
 16. Today long-lived non-financial asset management plays significant role as in company's accounting and reporting processes as in company's management and stakeholders' or even potential shareholders' decision-making processes.
 17. Analysis of economic literature and scientific publications reveals that corporate governance does have significant impact on company's corporate performance as well as contributing to the growth, stability, long-term investments in the global market. Furthermore, every country is eligible to develop principles of corporate governance based on its own vision. There is not any single formula for a good and effective corporate governance.
 18. Nowadays there is significant need not only to increase shareholders' interests, but what is more important, to ensure reliability in Latvian companies listed on Baltic stock exchange. There should be clear and transparent relationship defined among shareholders and management of these companies, all the information should be reliable and transparent, in according with respective regulative documents governing listed companies or Corporate Governance Code. Nevertheless, there is not any single formula for a good and effective corporate governance, there are several principles advised by the OECD to be included in

this document of the country. One of these principles that is related to accounting and reporting is “disclosure and transparency” – transparency of the information to be usable for various analysis. This principle should be applied also to accounting and reporting processes relating long-lived non-financial assets owned by these companies.

19. From the very beginning since year 2006 the corporate governance principles defined for Latvian companies listed on Baltic stock exchange are developed in form of recommendations for their implementation (not mandatory) in the document “Principles of Corporate Governance and Recommendations on Their implementation”. Therefore, the rule “comply or explain” has been implemented allowing shareholders to understand various specifics and nuances of corporate governance practiced in the company. It is based on transparency, accountability, long-term perspective. Latvian company listed on Baltic stock exchange are only partly following rules defined which/ how items should be disclosed in companies’ Corporate governance report. This structural feature of these companies provides evidence the ones are forced to become more transparent due to such pressures as globalization and internationalization. In addition, since there is mutual, but not consistent relation between voluntary corporate governance disclosures and performance of Latvian companies listed on Baltic stock exchange this issue must be considered also by Nasdaq Riga defining rules for Latvian companies listed on Baltic stock exchange.
20. There are not any indexes available for evaluation of quality and transparency of corporate governance calculated by the Nasdaq or any other institution in the Republic of Latvia. Therefore, the author developed the “voluntary” corporate governance disclosure index. This index describes practices of “voluntary” corporate governance of all Latvian companies listed on Baltic stock exchange based on the principles of corporate governance and the recommendations on their implementation defined by the stock exchange Nasdaq Riga.
21. **There is mutual relation between “voluntary” corporate governance disclosures and performance of Latvian companies listed on Baltic stock exchange.** This mutual relation is not consistent that could be explained by the fact during the period explored the country was experiencing significant financial crisis. Based on results of this research paper Latvian company listed on Baltic stock exchange are only partly following rules defined which/ how items should be disclosed in companies’ Corporate governance report. Furthermore, this **structural feature of these companies provides evidence the ones are forced to become more transparent due to such pressures as globalization and internationalization.** This issue must be considered also by Nasdaq Riga defining rules for Latvian companies listed

- on Baltic stock exchange. Since corporate governance does have mainly positive impact on company's financial performance companies having corporate governance at the highest level will attract interest of more shareholders to the company and country or even region.
22. Financial information is the result of the company's corporate accounting and external reporting systems measuring and disclosing audited quantitative data about publicly held company's financial position and overall performance.
 23. Research about the governance in area of accounting and reporting processes of company's long-lived non-financial assets also including in accordance with corporate governance principle "disclosure and transparency" investigated the properties of accounting and reporting systems of Latvian companies listed on Baltic stock exchange as well as surrounding institutional environment playing important role in the effective governance processes of these companies. Therefore, to foster conditions for sustainable long-term investments it is vital the market does have complete confidence in the quality and transparency of corporate reporting processes. Furthermore, these processes must be in accordance with corporate governance principle "disclosure and transparency". Key objective of the corporate governance is to ensure shareholders and other stakeholders do have information about company's internal controls regarding financial reporting processes, internal control system, risk management, etc. Therefore, one can conclude by saying that corporate governance at the highest level helps to support company's performance in the longer period. Furthermore, since corporate governance does have impact on company's financial performance Latvian companies listed on Baltic stock exchange having corporate governance at the highest level will attract interest and confidence of more shareholders to the particular company and country, and even to the particular region.
 24. Framework because of this doctoral dissertation can be applied to develop and implement new or to improve existing management process of long-term non-financial assets owned by Latvian companies listed on Baltic stock exchange within the system of corporate governance. This framework is extensive one. Therefore, it can be applied also by any other company owing long-lived non-financial assets. Furthermore, companies by application of this framework will ensure that accounting and reporting processes of long-lived non-financial assets within the system of corporate governance are at the highest quality, transparent, reliable and in accordance with respective laws and regulations including corporate governance principle "disclosure and transparency". This accordingly will lead to the most efficient and effective financial and investment decision making processes

performed not only by company's management, but also shareholders (existing/ potential) and other stakeholders.

25. Long-lived non-financial asset management of Latvian companies listed on Baltic stock exchange within the system of corporate governance does have significant direct impact on the following main areas – disclosure and transparency, performance indicators, attraction of local/ foreign investments, active development of the stock market of Republic of Latvia, job creation, additional incomes for the state budget, welfare of local people.

RECOMMENDATIONS

- 1. Internal and external stakeholders of Latvian companies listed on Baltic stock exchange or any other long-lived non-financial assets intensive organization: implementation of the author's developed framework for long-lived non-financial asset management.** This framework is systematised, as a part of company's coordinated business strategy according with respective laws and regulations including corporate governance principle "disclosure and transparency" as well as shareholders' and other stakeholders' interests. Company's internal as well as external stakeholder by use of this framework can manage and control company's long-lived non-financial assets in the most efficient and effective way. This will result in company's performance improvement as well as increase of productivity, growth, company's value, stock price, corporate governance index, etc. Transparent, reliable and in accordance with respective local and international rules and regulations management processes for long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange within the system of corporate governance is of a very high importance. Furthermore, this ensures that the one out of six corporate governance principles ("disclosure and transparency") will be followed accordingly. This will facilitate active development of the stock market of Republic of Latvia, increased interest of potential shareholders' (local/ foreign) interest about Latvian stock market and Baltic stock exchange as well as additional incomes for the state budget, job creation and increase welfare of local people.
- 2. Latvian companies listed on Baltic stock exchange or any other long-lived non-financial asset intensive organization: data governance through the whole life cycle of every long-lived non-financial asset owned by the company.** Based on the author's developed framework Latvian companies listed on Baltic stock exchange or any other long-lived non-financial assets intensive organization can develop the management tool for information system, which in turn supports decision making processes for management process of every long-lived non-financial asset owned by the company separately.

Furthermore, it can be easily used by completely all company's employees related to this asset during its whole life cycle (from acquisition/ development to renewal or disposal). The framework allows to control and manage every asset during its whole life cycle allowing to take transparent, reliable the most efficient decisions in accordance with company's strategies, plans as well as with respective local and international rules and regulations. Furthermore, this will also allow long-lived non-financial asset management to be viewed also from perspective of decision-making processes combining company's strategic, planning, and operational levels. By improving data governance process relating long-lived non-financial assets owned by Latvian companies listed on Baltic stock exchange it is possible to improve decision making processes significantly. Furthermore, also one of key principles of corporate governance "disclosure and transparency" will be ensured – timely and highest quality disclosure of information about all most important aspects of company's performance relating these assets, and thus company's performance accordingly.

3. Ministry of Finance of the Republic of Latvia as well as other institutions defining rules and regulations as well as controlling accounting and reporting processes of long-lived non-financial assets. To ensure standardized approach for accounting and reporting of long-lived non-financial assets among companies as well as various organizations, and thus ensuring transparent and reliable information in financial statements/ annual reports and other public disclosures there is significant necessity for additional provisions in local and international rules and regulations:

- Ensure all countries (in this case it is the Republic of Latvia) to be able to implement IFRS/ IAS in the same manner, and thus ensuring possibility to compare performance among companies, stock exchanges, representing different countries, etc.;
- Recognition and initial measurement: implementation of additional reporting rules or even additional reporting document providing information of fair value measurement of long-lived non-financial assets since cost model and revaluation model reflect completely different information about long-lived non-financial assets. Therefore, to ensure complete, reliable, transparent and useful information in the company's financial statements/ annual reports for all stakeholders there is significant need for the provision stating to use both of these models or implement even the new model combining both models in the one model;
- Measurement after recognition – depreciation/ amortization: since there is no such a long-lived non-financial asset depreciation/ amortization method that could be the best one and applied in all companies there is significant need to have more detailed local as well as international rules and regulations defining how the company has to evaluate the appropriateness of the particular depreciation/ amortization method to be applied for the particular group of long-lived non-financial assets. Furthermore, it is necessary to define very strict criteria how companies have to evaluate and choose

the most appropriate depreciation/ amortization method for its long-lived non-financial assets – by use of such criteria as industry company operates in, type and useful life of the asset, economic situation of the company, situation/ rules and regulations, etc. in the country the company operates in, global economic situation, company's investment strategies and possibilities, asset's depreciable/ amortizable amount, etc. Furthermore, also there is need of strict rules and regulations defining when and how to evaluate whether there is need to change depreciation/ amortization method applied for the group of long-lived non-financial assets. Since various stakeholders have to make various important decisions concerning investing, financing, controlling and other activities, they have rights to get reliable and transparent information about the situation relating these assets and its depreciation/ amortization per particular reporting period. Therefore, to eliminate situations of manipulative activities by side of company's management, there is need to provide regular reports to company's stakeholders also about evaluation of the potential risk of obsolescence of long-lived non-financial assets owned by the company. This will decrease or even eliminate situations the company's management will try to manipulate with the net income per period by increasing/ decreasing respective depreciation/ amortization expenses. This could be done in various ways – changing depreciation method, increasing/ decreasing period of an asset's useful life, deciding to capitalize or not the elements of the acquisition cost, etc.;

- Measurement after recognition – impairment: to decrease any possibilities of speculative actives by side of companies' management, etc. do not allow situations companies are allowed to choose to perform/ not to perform revaluation of long-lived non-financial assets; also process, provide detailed and strict description, how it has to be performed step by step;
- Derecognition: retirements/ disposals – to define strict rules and regulations how the information relating retired and disposed long-lived non-financial assets has been reflected in company's financial statements/ annual reports. Further, detailed explanation provided, whether the long-lived non-financial asset should be disposed or there is not any future economic benefit expected from the usage of the particular long-lived non-financial asset planned to be disposed;
- Presentation and disclosure – define mandatory strict and standardized rules and regulations toward accounting and reporting of company's long-lived non-financial assets (e.g. IAS 36, etc.) as well as exactly the information and format of this information to be provided in company's financial statements/ annual reports. Furthermore, important also define the penalty system in case the company choose not to do it or do it partly.

4. Nasdaq Riga: Nasdaq Riga rules and regulations, implementation of corporate governance index and penalty system. More attention should be paid to the quality and transparency of companies' financial statements/ annual reports including issues concerning its long-lived non-financial assets. During research period Nasdaq Riga does not have responsibility to check the transparent of the information provided by published financial statements/ annual reports of these companies. Furthermore, during research period also regulations of Corporate governance report is not mandatory obligation to Latvian listed companies on Baltic stock exchange, but it must be just in accordance with the “comply or explain” principle. This is the issue that must be also implemented as

mandatory obligation. Furthermore, also in accordance with the idea and standards of external auditors the independent auditor's report does not ensure that completely all information reported in financial statements/ annual reports of these companies is 100% correct. Independent auditors' report states that it gives a true and fair view of the financial position as of definite date. Therefore, it is very important to implement definite system/ process, how Nasdaq Riga control and ensure that information reported in companies' financial statements/ annual reports is transparent, reliable, etc. (corporate governance principle "disclosure and transparency"). Also, strict rules for these companies should be implemented in case any manipulative activity in its accounting and reporting processes will be identified (e.g. accounting and reporting of impairment of long-lived non-financial asset, etc.). Further, ensure such instrument as author's developed corporate governance index must be developed and implemented. This The approach to evaluate corporate governance ratings ensures to reduce asymmetric information. This will ensure shareholders or other stakeholders of Latvian companies listed on Baltic stock exchange to follow and control their investments in these companies. Also, Nasdaq Riga is advisable to take a part as well as to insist on the issues described in the recommendation No.3.

5. **Educational institutions (universities, institutes, associations, organizers of seminars, courses, etc.).** Ensure students/ participants are introduced with the problematic issues relating accounting, reporting and management of long-lived non-financial assets. So, the issues of the quality and transparency of these processes, and thus financial statements/ annual reports will be considered, respected, and controlled.
6. **Researchers.** Extend extent of the study relating accounting and reporting of long-lived non-financial assets (including with the system of corporate governance) as well as in relation to sustainability reports.