Valuation of NNIT

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Valuation of NNIT:

A valuation assessment of the fair value of NNIT

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Executive summary

The thesis in your hands is a compilation of methodology, theoretical frameworks and a practical investigation. The main purpose of the thesis is to provide the fair value per share of NNIT as of ***May 20th 2016***. Along that, the analysis of a company and the industry it operates in has been undertaken. The report is written from an investor's point of view solely based on publicly available information.

Information Technology today is vital for any business. IT is used for fast communications, data processing and data storing. Information technology enables businesses to view global markets and to keep up with customer needs. Businesses employ IT to become more cost effective and more productive. Most importantly, information technology helps driving business innovation and growth. The report has analysed one of the biggest IT consultancies in Denmark - NNIT.

The strategic analysis have applied the PEST framework to research macro-environment and the Porter's Five Forces framework to study industry environment. Political, economic, social and technological factors have an impact on demand and returns of NNIT. The competition among IT consultancy firms do exist, and NNIT has to stay proactive and respond towards technological developments. Additional and up-to-date services that differentiate from the competitors is one of the keys attracting new and keeping existing customers.

In the financial analysis, historical performance of NNIT was studied. Reformulated financial statements have revealed that NNIT should focus on its expenses in order to improve its NOPAT, and thus operating efficiency. The free cash flow to the firm has indicated that large outsourcing contracts lead to a decreased free cash flow as new agreements require higher investments.

Findings from the strategic and the financial analyses were then utilized in preparing budgets for NNIT. Multiple scenarios were established in order to forecast NNIT's performance under various circumstances. After all three scenarios were defined, the valuation has taken place. The discounted cash flow model has determined the fair value of NNIT for each scenario and the weighted share price was then applied, resulting in **DKK 198.73** per share. NNIT's market share price per May 20th 2016 was DKK 200.50. Taking into account the amount of newly signed contracts, the difference between the estimated and the market share price is insignificant. The sensitivity analysis has inferred that the WACC and the share price are sensitive to the different input factors, thereby indicating an existing uncertainty in the valuation.

Table of Contents

List of Figures

List of Tables

1. Introduction

1.1 Motivation

For the master thesis I have chosen to do a strategic and financial analysis of NNIT A/S (hereafter NNIT) - a consultancy company in IT development, implementation and operations. There are several reasons that make this topic interesting.

Information Technology (IT) industry, which NNIT operates in, has become one of the most robust industries in the world. In the developed world, IT industry has an increasing productivity, which makes it a major driver of global economic growth. The main reason and interest of this particular company is grounded in fact that NNIT went public in 2015 which makes it attractive for analysis.

Today NNIT is one of the leading IT and consultancy service providers in Denmark. NNIT offers services to the Life sciences, Public, Finance and Enterprise customer groups in Denmark, Czech Republic, Germany, Switzerland, the United Kingdom, the United States, China and the Philippines. Found in 1994 as Novo Nordisk IT, NNIT converted into a wholly owned aktieselskab (a stock-based corporation) in 2004.

On March 6th, 2015 NNIT went public with an offer price of DKK 125 per share. Through an initial public offering (IPO) a privately held NNIT transformed into a publicly traded company. There are a large number of reasons why a company makes a decision to go public.

Public company has a reduced cost of capital and is able to negotiate with banks to obtain better interest rates. Another benefit is a large inflow of capital at one time through the large amount of shares sold during an initial public offering (IPO). The capital then can be used for expansion, purchasing equipment or investing in future growth, as long as it complies with the guidelines described in the company's prospectus. What is more, a publicly held company is more attractive to potential talented employees, which in a long-term would assist in obtaining new customers as well. However, the main reason is to raise money and spread the risk of ownership between a large group of shareholders (BusinessDictionary, 2016).

This report's intention is to determine a current share price as of May 20th 2016. A return on invested capital (ROIC) greater than the weighted average cost of capital (WACC) and an ability to grow drive a company's value (Koller et al., 2005).Therefore, we will analyse what has driven the growth of NNIT and what are the estimated future earnings.

1.2 Problem statement

As NNIT went public last year and currently signing lots of agreements with new customers, this makes the company interesting and relevant for a research. The thesis will be focusing on financial and strategic analysis of NNIT combined with the forecasting and the valuation in order to answer the following problem statement:

What is the fair value per share of NNIT as of May 20th 2016?

To help to answer the problem statement, a number of sub-questions must be explored:

1. Introduction to the industry and company itself:

- *What is IT industry and how has it developed during the years?*
- *What is NNIT, what is its history and the services it provides?*
- *What is NNIT's growth strategy?*
- *What are the main values, vision and mission of NNIT?*
- *Who are the peers of NNIT, what is the competitive situation of NNIT?*

2. Strategic analysis:

- *What are the non-financial value drivers of NNIT?*
- *Which macro-environment factors affect NNIT and its earnings?*
- *How attractive is the industry from a competitive point of view?*

3. Financial analysis:

- *What are the financial value drivers of NNIT?*
- *Which accounting policies are applied in NNIT?*
- *How did NNIT perform historically?*
- *What are the key drivers of NNIT's profitability?*
- *How did NNIT's historical performance affect its key financial ratios?*
- *How did NNIT's cash flows look historically?*
- *What is the short- and long-term liquidity risk of NNIT?*

4. Forecasting:

- *What is the optimal period and method to be used in forecasting?*
- *How NNIT is likely to perform in the future based on various scenarios?*

- *What are the expectations of NNIT's future cash flows based on various scenarios?*

5. Valuation:

- *Which frameworks are going to be applied for valuing a company?*
- *What is the most likely WACC for NNIT?*
- *What is the estimated market value of equity and the price of NNIT's stock?*
- *How sensitive is the WACC and the share price to changes in essential inputs?*

6. Conclusion:

- *Should NNIT stay on the current path?*
- *Should a private investor buy stocks from NNIT?*

2. Methodology and delimitations

This section is going to clarify the whole research design of the thesis which will further help to answer the research question. A discussion regarding different valuation techniques and models is presented in this section. Moreover, each chapter of the thesis will include an introduction of the models chosen and their relevance in the present analysis.

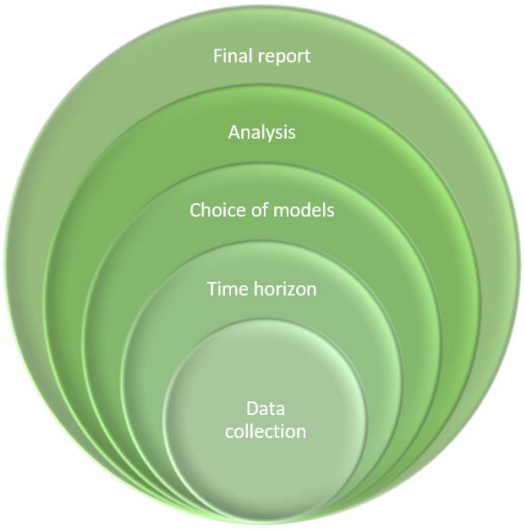

Figure 1. The research "onion".
Source: Saunders, Lewis and Thornhill (2008) and own creation

2.1 Research design

In the following section, structure of the thesis is described. Thesis contains nine chapters. Each chapter has its own introduction and conclusion which sums up the most important findings throughout a chapter. Introduction to the thesis, its Methodology and Delimitations are described in first two chapters. This is followed by an Introduction to the Information Technology industry and to the company itself – chapter 3. The Strategic Analysis is conducted in the next chapter and it is bound with the Financial Analysis chapter. Those two chapters will serve as a fundament for the next two chapters – for the Forecasting chapter as we are now able to forecast NNIT's future development and for the Valuation chapter as we can now perform an evaluation of a company. Conclusion chapter sums up the whole analysis of the thesis.

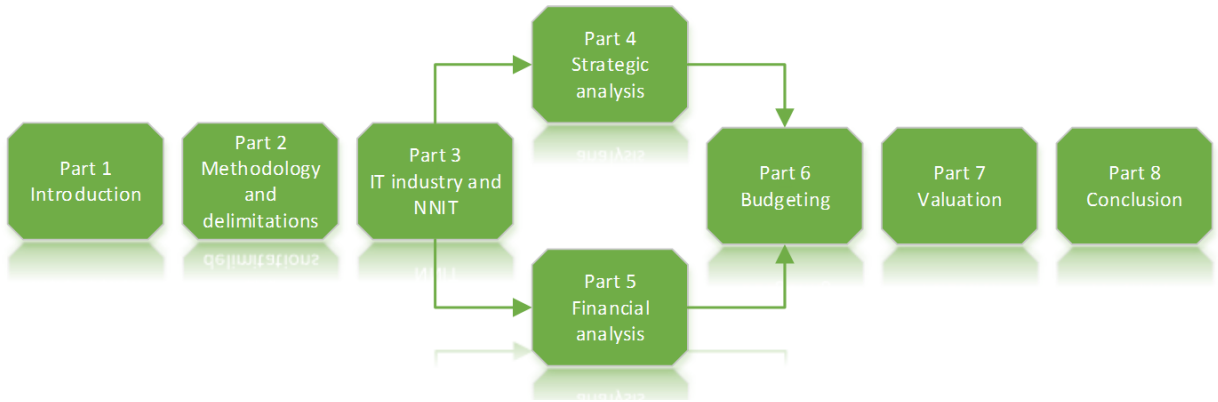

Figure 2. Structure of the thesis. Source: own creation

2.2 Data collection and choice of the timeline

The report is written from an investor's point of view. The thesis is based mainly on the secondary data; only publicly available information was collected and applied to the analysis. No association with the company secures that the thesis is written with an objective perspective. The main sources of data are company's annual reports, its website, financial data from Bloomberg, Financial Times, Reuters, Yahoo Finance and various professional reports and newspaper articles. Along, the thesis will use relevant academic literature on the subject to serve as a foundation and diminish bias in the data.

Combination of quantitative and qualitative data will be used for valuation which will balance the limitations of one type of data by the strengths of another.

For our analysis we used a six-year period, 2010-2015, for which information is publicly available. Moreover,

the interesting subject of present analysis is that NNIT went public in March 2015; that is within the period of our analysis.

2.3 Choice of models

This section will briefly discuss models that are applied to the thesis. Despite the fact that chosen models are most frequently used, there might be some inaccuracies which are going to be taken into consideration and which will be also mentioned in limitations.

2.3.1 Strategic analysis

Since the business environment is dynamic, it is not enough to only analyse financial value drivers. Therefore, it is important to conduct a strategic analysis in order to determine non-financial drivers of the stock price. Strategic analysis will help us with a macro- and microanalysis of a chosen company. Moreover, it helps the analyst to generate better forecasts (Petersen & Plenborg, 2012). While the financial value drivers measure the historic performance of the company, the non-financial value drivers enable to estimate the development of the company.

Macro factors have a different effect on companies and it is therefore important to understand which factors are likely to affect a company's cash flow and risks at present and which are potentially more important in the future (Petersen & Plenborg, 2012). The PEST framework will help to determine macro-environmental (external marketing environment) factors that have an impact on an organization (Professional Academy, 2015). These factors are political, economic, social and technological factors.

Understanding the macro-environment only gives you a half of the picture (Porter's Five Forces: Strategy Skills, 2013). The Porter's Five Forces analysis will help to examine the industry NNIT operates in. Furthermore, the Porter's Five Forces will enable to do an analysis of the competitive environment by analysing a rivalry among existing competitors. The key factors of this model determines threats of new entrants, threat of substitutes, bargaining power of suppliers, bargaining power of buyers, and degree of competitive rivalry.

2.3.2 Financial analysis

The purpose of the financial analysis is to analyse the trend of historical performance, assess the future profitability and growth potential of NNIT. The academic literature for the financial statement analysis will

be rooted in the "Financial Statement Analysis" by Petersen and Plenborg (2012) and in the "Valuation" by Koller et al. (2005 and 2015).

The financial analysis will be conducted based on historic financials from 2010 to 2015. Prior the financial analysis, a short review of accounting policies will be provided in order to properly understand the information provided in the financial statements. Thereafter, corrections to the financial statements will be prepared as financial statements and commonly used accounting measures are generally biased. The operating activities will be separated from the financing activities in order to obtain a better knowledge of the different sources of value creation in a firm (Petersen & Plenborg, 2012). The analytical balance sheet will calculate invested capital, whilst in the analytical income statement we will determine net earnings of a company. Historical profitability of the company will be evaluated through the reformulated income statement and balance sheet. Reformulated cash flow statement will reveal the free cash flow to the firm and will serve as a foundation in the forecasting and the valuation chapters.

The financial analysis will uncover financial value drivers of a company. Though financial key ratios such as ROIC, profit margin, turnover rate of an invested capital and ROE, a profitability of the company will be analysed.

In order to assess how healthy is the company, various liquidity ratios will be applied. Liquidity cycle, current and quick ratios will assess the short-term liquidity risk, whereas financial leverage, solvency ratio and interest coverage ratio will measure the long-term liquidity risk of NNIT.

2.3.3 Forecasting

Knowledge gained from the strategic and the financial analyses will be applied to prepare a forecasted budget of NNIT future performance. We have decided to use sales-driven forecasting approach and to prepare budgets for multiple scenarios. This will help us to foresee NNIT's future performance under various circumstances. The estimated budgets will be further applied to perform a valuation of the company.

2.3.4 Valuation and sensitivity analysis

There are several techniques that can be used for valuing the company. To perform an absolute valuation, we will use two most commonly used models – the Discounted Cash Flow (DCF) and the Economic Value Added (EVA). Prior that, we will find the weighted average cost of capital (WACC). Capital Asset Pricing Model (CAPM) will determine the required rate of return. The WACC will determine the rate of return that investors

expect to earn from investing in the company and therefore the appropriate discount rate for the free cash flow (Koller et al., 2005).

The DCF model is a favourite of academics and practitioners because it relies solely on how cash flows in and out of the company (Koller et al., 2005). It examines the difference in values by factoring the capital spending (CAPEX) and cash flows required to generate earnings. The DCF model has significant pitfalls which will be described further in chapter 7.

The sensitivity analysis will estimate how the WACC and the share price value would be affected against the defined factors, such as changes in the debt ratio, beta, the WACC itself and the growth rate.

2.4 Delimitations

This section will indicate elements that were excluded from the thesis and at the same time will point out areas which should have been explored deeper. Apart that, it is assumed that the reader has a general understanding of the topic. Therefore only application of theories and models used will be described.

As no internal resources were available, only publicly accessible secondary data was used in the analysis. This is also grounded in fact that investors only use information available in the market when making investment decisions. Publications and reports used in the analysis are assumed to be reliable - we did not verify and do not guarantee the accuracy of such information. Where information was not available assumptions were made.

One of the limitations of the present analysis is that we have limited financial data that is publicly available. Only annual reports in the period 2007-2015 will be taken into the analysis. Historical numbers beyond this period will not be analysed.

The explicit forecast period is narrowed to six years due to the risk of unpredictable factors that can influence the profit of NNIT. Due to limited amount of pages of the report, only a “most-likely” scenario will be discussed in detail. We will only elaborate on the major line items of the financial statements in an “optimistic” and a “pessimistic” scenario.

When estimating the WACC in the valuation chapter, an estimation of the beta value was applied. NNIT has only been listed in NASDAQ for less than a year at the time of the valuation, therefore there are only limited amounts of data points for the purpose of estimating beta.

No relative valuation using multiples (peers) was performed as we believe NNIT does not have direct peers with the same portfolio and growth rates. Moreover, multiples are not accurate in markets that are over- or undervalued. Multiple analysis is not performed in the thesis.

3. Information Technology industry and NNIT

In order for an investor to get familiar with a company, this chapter provides an introduction to the industry NNIT operates in and to the company itself. The introduction includes its history and recent development, current board of directors and management, company's services and clients, growth strategy, vision and mission. Main information sources for this part are NNIT Prospectus report (2015) and the company's homepage. Chapter also includes a presentation of peers.

3.1 Information Technology industry and its development

Initially, the term "information technology" referred to all the technologies associated with the gathering, processing, storing, and dissemination of information (United Nations Public Administration Network, 2015). However, today, Information Technology (IT) is much more - including the use of computers, storage, networking and other physical devices, infrastructure and processes to create, process, store and exchange all forms of electronic data (TechTarget, 2015). Computer (both software and hardware) and communication technologies are comprised in the term IT.

Easy accessibility and a wide range of IT products provided a steady growth of the demand for IT services. Today, the IT industry supports other businesses in their growth process and enables them to differentiate from their competitors (TechNet Blogs, 2009). The use of IT in the services sector, improves operational efficiency (Economy Watch, 2010). IT service companies support their clients with IT technology solutions in order for them to reduce their costs and improve their effectiveness by leveraging business technologies (NNIT Prospectus, 2015).

IT industry is dynamic and constantly evolving. Continuous innovation increased demand for IT services, which in turn created a window for new IT service providers to appear and consequently led to an increased competition between them. NNIT being one of the main IT service providers in Denmark (listed third according to IDC) is a key player in this competition.

3.2 NNIT

NNIT is a Danish IT consultancy company which has rapidly evolved during past years and today is providing a wide range of IT services to other companies, both at home and abroad. Last year NNIT made DKK 2.4 billion in net turnover, DKK 153 million in free cash flow and operating profit margin of 11% (NNIT Annual Report 2014). During the first six months of 2015, NNIT increased revenue by 8.8% and operating profit margin by 10.7% (Financial report for Q2, 2015).

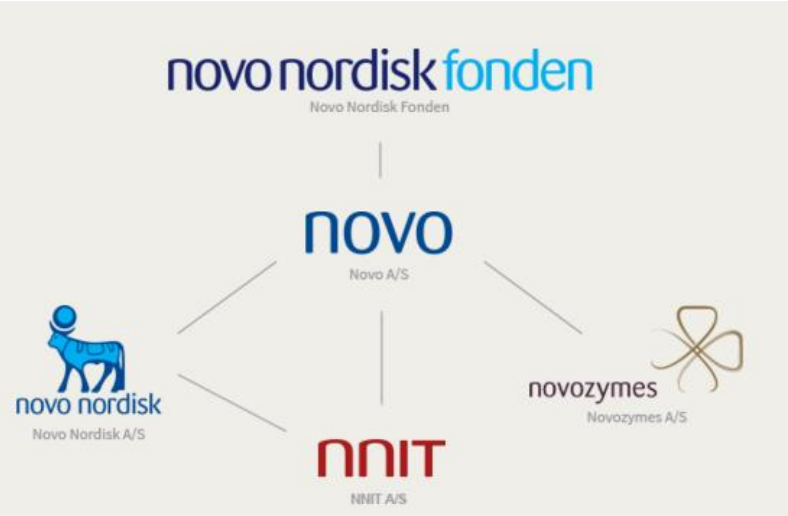

Figure 3. The Novo Group. Source: Novo website (2015)

3.2.1 History and important events

1994

NNIT was found in 1994 in Bagsværd, Denmark, under the name Novo Nordisk IT. Two information technology departments of Novo Nordisk – Healthcare and Enzyme, and Novo Nordisk Data Service Division – were merged together into an independent unit and profit center called Novo Nordisk IT.

1997

Few years later, in 1997 Novo Nordisk IT became one of the first Danish IT companies which has attained ISO 9001-certification[1].

Early 2000s

In 2000 Novo Nordisk IT became certified at level two of the People Capability Maturity Model (PCMM)[2] as the first European company to achieve this certification. In early 2000s Novo Nordisk IT started to

[1] ISO 9001 is a set of the requirements of a quality management system. This standard is based on a number of quality management principles including a strong customer focus, the motivation and implication of top management, the process approach and continual improvement which an organization must maintain in their quality system to get the certification (Iso.org, 2015).
[2] The People Capability Maturity Model® (People CMM®) is a framework used for addressing the critical people issues in organization and improving the management and development of the human assets of an organization.

cooperate with Microsoft, SAP, Documentum, Oracle, Siebel and others. Today Microsoft solutions is one of the key areas of NNIT solutions.

2003

Back into 1998 Novo Nordisk IT was incorporated as a limited liability company (a subsidiary) which was owned by Novo Nordisk A/S. An ambition to expand and become a leading IT provider in the European market has led to opening a first office outside Denmark – in Zurich, Switzerland in 2003 (NNIT homepage, 2015). The same year Novo Nordisk IT launched Academy which goal was to give all Novo Nordisk IT employees an understanding of how to create and improve company's success.

2004-2007

After 10 years of existing as Novo Nordisk IT the company was converted into a wholly owned aktieselskab and changed its name to NNIT. Clearly, the aim of the change is to expand and to get new customers outside Novo Nordisk. Over the time, NNIT began providing services to customers outside the Novo Nordisk Group, which became the major driver of their growth in business. In June 2004, Børsen[3] placed NNIT at the top of its list of the best-performing Danish consultancies based on financial reporting data. NNIT got listed under Capability Maturity Model® Integration (CMMI)[4] level two. The goal of the CMMI model is to improve usability of maturity models by integrating several different models into one framework. With this certification, NNIT joins a small, exclusive group of software providers in Denmark who live up to the highest standards of quality and reliability as a supplier.

In 2004 NNIT recognized growth in annual turnover in terms of sales (12% growth compared to 2003) and in annual net profit (23% growth compared to 2003).

The growth is recognized also in the forthcoming years resulting in NNIT's turnover to be over DKK 1 billion in 2007. NNIT started to expand globally and opened their offices in Czech Republic and in China.

2009-2012

In 2009 NNIT acquired Microsoft development business Corebuilt Technologies which is based in Philippines. NNIT opened a new data center and in 2012 moved to the new headquarters – Copenhagen

[3] Børsen (Dagbladet Børsen) is a Danish newspaper specialising in business news published in Denmark.
[4] Capability Maturity Model Integration (CMMI) is a process improvement approach that provides organizations with the essential elements of effective processes (Select Business Solutions, 2015).

(Søborg), Denmark. At the same time a new office was opened in Princeton, New Jersey (USA). Ultimately, NNIT now has sales offices in Zurich (Switzerland) and Princeton (USA), principal offshore delivery centre in Tianjin (China), delivery centres in Manila (the Philippines) and Prague with Olomouc (the Czech Republic) (NNIT Prospectus, 2015).

March 2015

The continuous growth of company's turnover resulted that in March 2015 NNIT got listed on NASDAQ OMX Nordic. Today NNIT is one of Denmark's leading IT consultancies with more than 2,600 employees[5].

3.2.2 Board of Directors and management

NNIT has a two-tier governance structure which are separate - there are no overlapping members and it consists of Board of Directors and Executive Management. Board of Directors determines company's overall strategy and controls its activities, financial development, management and organization. Executive Management is responsible for the daily business operation and its members are appointed and dismissed by Board of Directors. The members of Board of Directors are elected during general meeting for a period of one year and might be re-elected. Appendix 1 represents an overview of the current members of the Board of Directors, Executive Management and Group Management.

3.2.3 Services and clients

NNIT provides a wide range of IT services including advising, building, implementing, managing and supporting IT solutions and operating IT systems for its customers (NNIT Prospectus, 2015). NNIT deliver services and solutions through two business areas:

- IT Operation Services, or "Operations" which provides IT infrastructure outsourcing services to customers, including data storage, servers and networks (Infrastructure Outsourcing Services), and support for these functions (Support Services). In 2014,

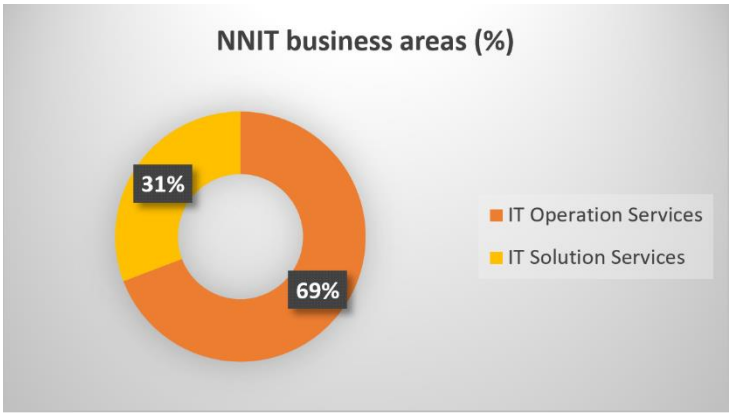

Figure 4. NNIT business areas. Source: NNIT Prospectus (2015) and own creation

[5] As per October, 2015

Operations generated 69.2% of NNIT net turnover (2013: 67.8%; 2012: 67.1%) and generated an operating profit margin of 11.3% in 2014 (2013: 9.3%; 2012: 12.2%); and

- IT Solution Services, or "Solutions" which provides management consulting (Advisory), the building and implementation of IT solutions (Business Solutions) and application management services (Application Outsourcing). In 2014 Solutions generated 30.8% of NNIT net turnover (2013: 32.2%; 2012: 32.9%) and generated an operating profit margin of 10.4% in 2014 (2013: 15.2%; 2012: 7.5%) (NNIT Prospectus, 2015).

Although NNIT principal customer Novo Nordisk Group comes from the life sciences sector, the company also provides services for public, enterprise and finance sectors. Figure below displays net turnover by each customer sector.

Life Sciences customer group includes pharmaceutical companies medical device companies, clinical research organisations and biotech companies and includes the Novo Nordisk Group, the largest customer (NNIT delivers services and solutions to both Novo Nordisk's headquarters in Denmark and its international subsidiaries), as well as Lundbeck, Boji, Rundo and others. Main service offerings include IT solutions for Clinical Development, Regulatory Affairs, Quality Management, Supply Chain Management/Serialisation and GxP Operations. Life Sciences customers purchase services and solutions from both Operations and Solutions businesses.

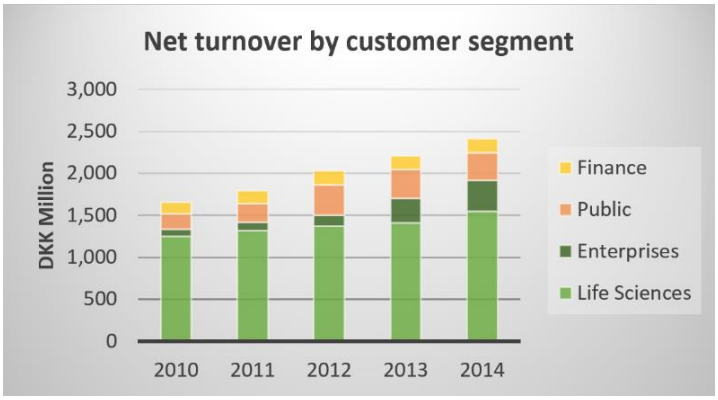

Figure 5. Net turnover by customer segment. Source: NNIT annual report 2014 and own creation

In 2014, Life Sciences customer group contributed DKK 1,546.8 million, or 64.2%, to NNIT net turnover (2013: DKK 1,409.6 million, 64.0%; 2012: DKK 1,372.5 million, 67.7%). The Novo Nordisk Group as largest net turnover contributor made DKK 1,260.3 million, or 52.3%, to NNIT net turnover in 2014 (2013: DKK 1,170.0 million, 53.1%; 2012: DKK 1,153.6 million, 56.9%) (NNIT Prospectus, 2015).

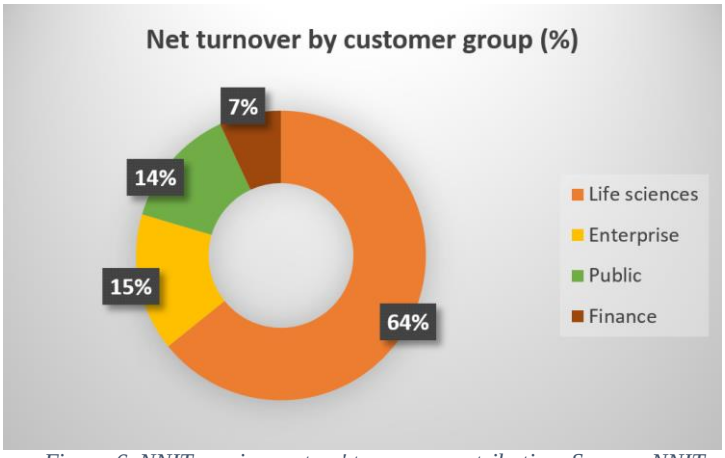

Figure 6. NNIT service sectors' turnover contribution. Source: NNIT Prospectus (2015) and own creation

Enterprise customer group comprises large Danish companies in the manufacturing and food-production industries, such as Arla Foods, Vestas Wind Systems, Danish Crown and Bang & Olufsen. Service offerings for this customer group include security and compliance consulting, Portal and Collaboration solutions, and in particular the full range of infrastructure outsourcing services. The key offering is SAP services in which NNIT believes has a leading position in Denmark. Enterprise customers purchase services and solutions from Operations business.

In 2014, Enterprise customer group contributed DKK 371.3 million, or 15.4%, to NNIT net turnover (2013: DKK 291.5 million, 13.2%; 2012: DKK 133.7 million, 6.6%) (NNIT Prospectus, 2015).

Public customer group primarily comprises customers in the Danish central government as well as in regional government and the Danish railways: DSB, the Capital Region and Digitaliseringsstyrelsen. Service offerings for this customer group include certain services and solutions that are particularly relevant to Public customers such as IT project excellence services, business intelligence solutions, the building of portal solutions, document management and the full range of infrastructure operation and support. A key development area is an implementation of healthcare solutions, such as patient journal solutions and a telemedicine platform. Public customers purchase services and solutions from Operations business.

In 2014, Public customer group contributed DKK 326.1 million, or 13.5%, to NNIT net turnover (2013: DKK 344.8 million, 15.6%; 2012: DKK 357.0 million, 17.6%) (NNIT Prospectus, 2015).

Finance customer group comprises customers in the finance industry from the banking, insurance, pension fund and life insurance segments which includes PFA Pension, PenSam and Alka, and others. Financial institutions are required to document and report business transactions, therefore NNIT service offerings for finance customers mainly include security and compliance consulting, project and programme management, hosting of business critical applications such as Tia, Edlund and SimCorp Dimension, cloud services and in particular the full range of infrastructure outsourcing services. Finance customers has been very limited during recent years, sales to this customer group has been derived from Operations business.

In 2014, the Finance group contributed DKK 166.3 million, or 6.9%, to NNIT net turnover (2013: DKK 158.6 million, 7.2%; 2012: DKK 164.3 million, 8.1%) (NNIT Prospectus, 2015).

As at 31 December 2014, NNIT was providing services to approximately 160 customers (NNIT Prospectus, 2015). Internationally, NNIT provides services to companies headquartered in Switzerland, Netherlands, China, Germany, the United States, Belgium, France, Sweden, the United Kingdom and Italy. Below figure represents a selection of customers.

Figure 7. NNIT clients. Source: NNIT homepage (2015)

NNIT main customer, Novo Nordisk Group, generates more than half of NNIT net turnover, i.e. 51% (NNIT Annual Report 2015). This creates a risk for NNIT. If the Novo Nordisk Group business suffers due to various internal or external factors, this will lead to a reduced IT spending or Novo Nordisk switching towards other supplier. NNIT might have to lower prices to retain Novo Nordisk as a customer, which will cause decrease in their net turnover and profitability.

3.2.4 Growth strategy

NNIT has set a key objective to

> "grow net turnover from, and market share in, both IT services market in Denmark and the life sciences IT services market internationally while maintaining or improving operating profit margins" (NNIT Prospectus, 2015).

The key elements of the growth strategy are (discussed in depth in Appendix 2):

- Continue to expand market share in Denmark
- Support Danish customers' internationalization
- Leverage a strong industry-specific expertise in life sciences internationally

- Continue to enhance and deepen an expertise and service offerings through specialisation and standardisation
- Continue to increase industrialisation of service delivery
- Maintain company's culture and enhance human capital
- Continue to promote customer satisfaction (NNIT Prospectus, 2015).

3.2.5 Values, vision and mission

Since 2011, NNIT worked the "NNIT Way", which comprises their vision, mission and values, to develop a strong NNIT culture to attaining business targets. NNIT values are staying open and honest, conscience driven and value adding company (NNIT homepage, 2015). Employee satisfaction is constantly improving – in 2014 NNIT achieved a score of 4.3 (out of 5.0), compared with 4.2 for both 2013 and 2012 (Annual employee satisfaction survey, 2012-2014).

Company's vision (goals) is by 2020, their quality and value adding IT services will make them:

- "Denmark's preferred IT outsourcing partner and,
- A leading international IT partner dedicated to life sciences"

NNIT's mission is "We are passionate people building winning teams with our customers".

3.2.6 Key strengths and main value drivers

A company's competiveness is created by a mix of different activities it provides. NNIT expects their future growth while staying focused on:

- recruiting and training specialists in life sciences, utilisation of personnel with the right mix of skills and experience;
- maintaining high level of customer satisfaction which is considered a key driver of NNIT commercial success and customer loyalty,
    - Customer Feedback Programme monitors and measures customers' level of satisfaction and experience;
- developing and improving internal infrastructure, i.e. financial, operational, communications and other internal systems;
- managing operating costs and remaining cost effective – a key driver of profitability:
    - intention is to increase offshore and nearshore delivery capabilities,

    - to standardise as many of service delivery processes as possible,
    - to improve the efficiency of both Operations and Solutions deliveries,
    - to increase automation to lower cost of production and achieve economies of scale;
- cutting employee costs which is the most significant cost (69.7% of total operating costs in 2014) and are critical drivers of NNIT profitability;
- keeping existing and attracting new customers (NNIT Prospectus, 2015).

Growing popularity in analytics, mobility and cloud technologies for which IT professional services are required is another value driver. NNIT provides a broad range of IT services and solution offerings, but one of the key areas is SAP solutions, where the company expects to continue to leverage process orchestration and business intelligence, and to become a complete SAP service provider. Microsoft solutions is another key area where NNIT has an experience of building solutions for the public sector and other industries (NNIT Prospectus, 2015).

Collaboration with Microsoft, HP, EMC, SAP, Oracle and Cisco is another significant profitability driver; incorporating their resources and technology, NNIT attempts to create the best solution for each customer. Once a relationship with a customer is established, NNIT seeks to offer as many of its service and service solution categories as possible.

Each of NNIT clients is a value driver itself. The Novo Nordisk Group is definitely the major value driver of NNIT's growth. As it was mentioned before, Novo Nordisk Group generates more than a half of NNIT's net turnover. However, NNIT provides services to other customers outside the Novo Group. In 2013, outsourcing contract with Arla[6] was a principal driver of 118% growth in net turnover from Enterprise sector (NNIT Prospectus, 2015). Increase in net turnover in 2014 is principally due to a strong growth in the Enterprise customer group (due to a new operation outsourcing contract with Vestas Wind Systems[7], signed in December 2013) and growth in sales in Life Sciences (due to a new outsourcing contract with Lundbeck[8], signed in December 2013 and increased sales to the Novo Nordisk Group as a result of recent contract renewals) and Finance customers (due to the extension and expansion of contracts with existing customers).

Several other companies have chosen NNIT services which has triggered revenue growth from non-Novo Nordisk customers. Contracts were extended with DSB (extended in 2016 for 2 years) and Association of

[6] Arla Foods is a largest producer of dairy products in Scandinavia based in Århus, Denmark.
[7] Vestas Wind Systems A/S is a Danish manufacturer, seller, installer, and servicer of wind turbines.
[8] Lundbeck A/S is a Danish international pharmaceutical company.

Danish Pharmacies[9] (extended in 2015 for 4 years). New contracts were signed with PANDORA (signed in 2016 for 5 years), Danske Bank (signed in 2016 for 10 years), Capital Region and Region Zealand[10] (signed in 2015 for 4 years), SAS Institute[11] (signed in 2015), Qlik (signed in 2013 for 5 years) and Coop Danmark (signed in 2013 for 5 years). Appendix 3 includes more detailed information on the agreements.

Back in 2011 NNIT launched GxP Cloud (Good Cloud Practice) which adoption will give a competitive advantage in several years from now, before the industry begins to use cloud for the most critical GxP applications. In November 2014 NNIT got listed as sample vendor of compliant GxP cloud services in Gartner's 2014 Hype Cycle for Life Sciences. GxP clouds services are becoming viable for the life sciences.

3.3 Rivals and peers

As currently Danish operations generate most of NNIT's net turnover, the success of the company relies predominantly on the Danish market. According to IDC and NNIT Annual Report 2015, the main IT service providers by market share in Denmark are IBM, KMD and NNIT (see table 2). These companies are considered as competitors and are described in detail in chapter 4.

The peer group consists of the companies that are similar and possibly comparable to NNIT. These companies should operate in the same market as NNIT, hold similar business characteristics, have same prospects for ROIC and growth which will enable us to use them in multiples analysis for valuation purposes (Koller et al., 2005). Nordic IT peers such as Atea and KnowIt and an international peer Atos are presented (NNIT Annual Report 2015 and FinanceLab, 2015). An overview of all companies is provided in the Appendix 4-5.

4. Strategic analysis

As Michael Porter has emphasized, strategy is not about doing things better - this is the concern of operational effectiveness - strategy is about doing things differently; hence, the essence of strategy is making choices (Grant, 2010). The strategic analysis will analyse non-financial value drivers that affect the company. Both, internal and external, analysis will be conducted in order to find a link between the firm and its environment.

[9] Danmarks Apotekerforening
[10] Both regions are part of Denmark
[11] SAS Institute Inc. provides business analytics software and services to help customers improve performance and deliver value by making better decisions (Bloomberg, 2015).

We will use a top-down approach which starts with the PEST analysis on macro-environment factors and will be narrowed down with the Porter's Five Forces analysis on the industry NNIT operates in.

4.1 Macroeconomic analysis – PEST analysis

The PEST analysis which is applied to analyse macroeconomic environment focuses on four external factors within the environment that have or could have an impact on the company's operations. These four factors will help us to answer these questions:

- What are the key **political** factors?
- What are the most important **economic** factors?
- What **cultural (social)** aspects are most important?
- What **technological** innovations are likely to occur? (Pestle Analysis: Strategy Skills, 2013).

The analysis will concentrate mostly on European market because NNIT headquarters are located in Denmark and main operations are concentrated in Denmark, Switzerland and Czech Republic[12]. NNIT offerings are primarily targeted to the largest companies in the industry, and NNIT has identified approximately 40 focus accounts mostly headquartered in Europe (NNIT Prospectus, 2015). Four factors that are going to be analysed might overlap since they are very closely related to each other.

4.1.1 Political factors

The political factors exert a great influence on both pricing and demand of the pharmaceutical industry and thus also influences NNIT market. Political factors influence company's short- and long-term strategic and operational decision-making (Gimbert, 2011).

Legislation

Legislative changes that might appear can be costly to implement. Changes in laws and regulations or their interpretation can affect NNIT business through increased compliance costs, implementation costs of services and solutions and can threaten an ability to continue to serve certain markets. New, more onerous laws relating to the handling of customer data, implementation of the proposed amendment (COM(2014)213, final) to Directive 2007/36/EC on the encouragement of long-term shareholder engagement and changes in tax laws would diminish profitability of NNIT. In particular, anti-offshoring legislation in Europe, China, the Philippines or the United States, if adopted, could have an unfavourable effect on NNIT business. This would

[12] As according to IMF, we will look into Other Advanced Economies subgroup as all 3 countries belong to this subgroup.

lead tax disincentives, fees or penalties, intellectual property transfer restrictions, mandatory government audit requirements, and new standards that have the effect of restricting the use of certain business and work visas. If this become a law, net turnover and profitability could be adversely affected and ability to provide services to the customers could be impaired (NNIT Prospectus, 2015).

However, as per today it is assumed that there will be no changes in existing political, legal, fiscal, market or economic conditions or in applicable legislation, regulations or rules, which would affect results of NNIT operations.

Licenses

In order to sell goods or services, company needs to have a license from the state.

One of NNIT's material subsidiary is located in China. NNIT (Tianjin) Technology Co. Ltd. operates an offshore delivery centre in Tianjin under a renewable 30-year license (running from 2007), which is a standard for foreign-owned enterprises operating in China (NNIT Prospectus, 2015).

There is no publicly available information about licenses in other countries than China, however as NNIT is operating in all listed countries, the licenses do exist.

Political risk

NNIT operates both in developed countries – Denmark, Czech Republic, Switzerland and the United States – and in developing countries – China and Philippines. Political risk is appraised as relatively low and stable in developed economies. The collaboration in the European Union cause standardization of legislations which in turn reduces political factors with a negative effect (IMF, 2015). Situation in developing countries whereas is different and that is where we put our focus. Besides that, these are economies with potential for future growth. The political risks that arise in these emerging markets reflect the threats that NNIT is facing.

Philippines is characterized as country with high political risk. The political system in Philippines is lacking traditional political parties that would offer wide-ranging policies. High corruption and threats of terrorist attacks from a diverse population creates a potential for an increased political instability (AMB Country Risk Report, Philippines, 2015).

Even though China is one of the world's biggest economies by total gross domestic product (GDP), the financial system and political risks in China are considered as moderate. The government is led by Chinese Communist Party, however in the industrial centers exist capitalist-style economics which is aimed to be composed with communist central government. Terminating corruption is 'priority number one', hundreds of

officials have been censured, removed from office or placed on trial. Steady approach towards market liberalization[13] has been undergoing, though the state still has a significant presence in the industrial sector and a dominant presence in the banking and energy sectors. Furthermore, due to a large and diverse population and inequality in income China is enduring social and ethnic tensions stemming (AMB Country Risk Report, China, 2015).

Geopolitical risks

Ongoing events around Ukraine, the Middle East, Greece and parts of Africa deteriorate tensions and increase disruptions in global trade and financial transactions. Geopolitical tensions are expected to continue being elevated, and that is mainly due the remaining difficult situation around Ukraine and other conflicts in some countries in the Middle East. Ease of these tensions and a gradual recovery in the most affected economies is assumed in 2016–17 (World Economic Outlook, 2015).

Public customers

NNIT provide their services to Danish public sector entities, which include national, provincial, state and local governmental entities as well as the Danish Railways (DSB), and which made approximately 13.5% of NNIT's net turnover in 2014. Projects that involve public customers are subject to a risk of reduction in scope or contract termination due to political and economic factors such as changes in government, pending elections or the reduction in, or absence of, adequate funding (NNIT Prospectus, 2015).

4.1.2 Economic factors

The economic factors are the most important macroeconomic variables. We will look into following variables: GDP, Interest rate, Exchange rate, and separately into pharmaceutical and finance industries.

GDP

Gross domestic product (GDP) is one of the primary indicators of a country's health and an economic factor that needs a careful consideration. It represents the economy in a total value of all goods and services provided through a specific period of time. Usually, compared to a previous year, GDP can say whether there is a rise or decline in economic growth. Change in GDP directly affects the stock market. Healthy economy implies higher profits for companies, which in turn means higher stock prices. Figure 8 shows the annual economic growth for selected economies starting from 2000 and forecasted until 2020.

[13] Liberalization policies include partial or full privatisation of government institutions and assets, greater labour market flexibility, lower tax rates for businesses, less restriction on both domestic and foreign capital, open markets, etc. (Wikipedia, 2015).

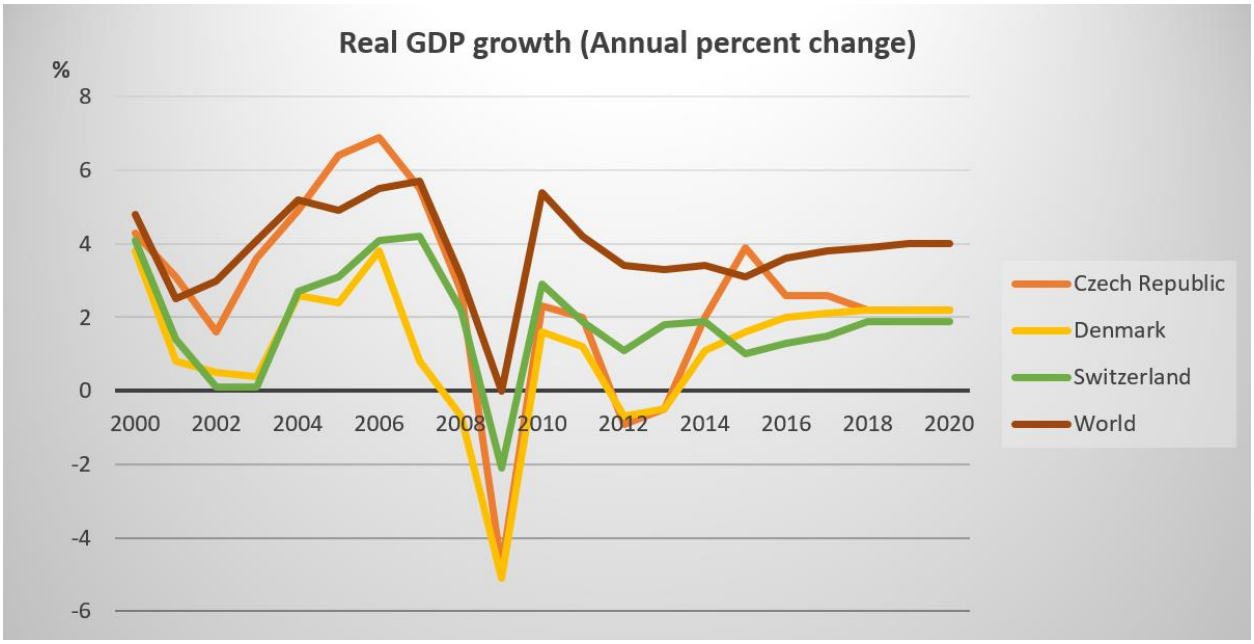

Figure 8. Real GDP Growth (Annual percent change). Source: IMF (2015) and own creation

The graph clearly illustrates the financial crisis in the period of 2007-2009, followed by a significant rise in 2010. The economy experiencing peaks and valleys in the period of 2011-2014, got relatively stabilized in 2014. Switzerland appears has recovered faster from economic crisis, in 2012, mainly because it is not a member of the European Union, and therefore is not dependant on the Euro area countries and its economies.

Considering 2013 as a turning point for countries to come out of a recession, GDP growth in 2014 and estimated GDP growth in 2015 have stabilized economy, although at different levels. According to IMF (2015), world GDP and GDP of selected countries is expected to have a positive growth in the near future. Switzerland is expected to have a growth of 1.3%, whereas Denmark and Czech Republic will most likely overcome the 2% frontier, attaining growth of 2.1% and 2.6% respectively. Moderate growth includes low productivity growth since global financial crisis; high public and private debt, financial sector weakness, and low investment in some advanced economies; demographic transitions; ongoing adjustment in many emerging markets following the post-crisis credit and investment boom; a growth realignment in China and a downturn in commodity prices triggered by weaker demand as well as higher production capacity (IMF, 2015). Financial market volatility such as Greek debt negotiations, the sharp stock market decline in China, following the depreciation of the renminbi (CNY), has increased global risk aversion and weakened currencies for many emerging markets.

Growth in the economies is forecasted to increase modestly this year and next year. Primarily, this is reflected by a strengthening of the recovery, supported by declining oil prices, accommodative monetary policy[14] and currency depreciation[15]. Further improvement in the economies is projected five years ahead. The growth rate is expected to be weaker than in 2014, but solid (IMF, 2015 and The World Bank, 2015). The sharp exchange rate appreciation earlier in 2015 is projected to depress growth in the near term.

NNIT services are primarily aimed on optimization and standardization, meaning that their services and solutions will be in demand in both economic growth, when the company can afford to invest in such services and in economic recession times, when companies adapt cost-conscious policies and their focus is on optimization. With an increased GDP, however, we expect increasing living standards, and therefore a higher demand in IT services.

Interest rate

Interest rates are paid by company on their interest-bearing assets and liabilities. Interest rates are forecasted to remain relatively low at a value of 1.5% in 2015 with a slight decrease up to 1.2% in 2016 and a growth back in the period of 2017-2020 – 1.4% (IMF, 2015).

NNIT interest-bearing liabilities relate to limited overdrafts made on their DKK 300 million credit facility, which bears interest according to movements in the T/N rate[16]. As in October 2015, the T/N rate has been varying between 0.02% – 0.04% (Danmarks Nationalbank[17], 2015). Below figure illustrates the T/N rate fluctuations for the past years.

[14] Accommodative monetary policy implies when a central bank attempts to expand the overall money supply to boost the economy when growth is slowing (GDP). This encourages more spending from consumers and businesses by making money less expensive to borrow by lowering the interest rate (Investopedia, 2015).
[15] Currency depreciation is a loss of value of country's currency.
[16] The T/N interest rate is an uncollateralised day-to-day interest rate for money-market lending. Calculation of the T/N interest rate is based on daily reports from the largest banks in the Danish money market. The T/N interest rate is calculated as a turnover-weighted average of interest rates on actual lending. Reporting takes place with a time lag of one day, e.g. Monday's lending is reported on Tuesday. The Danish Bankers Association has the overall responsibility of the T/N interest rate (Danmarks Nationalbank, 2015).
[17] Danish Central Bank

Figure 9. T/N fluctuations. Source: Danmarks Nationalbank (2015)

Once again we can clearly see the financial crisis in 2007 – 2009 and its consequences. Now as economy is getting stabilized the T/N rate amounts to -1% - -1.5% in 2015 which is expected to stay stable in the upcoming future. Moreover, NNIT is expecting the interest rate to continue to be calculated according to movements in the T/N rate also in future (NNIT Prospectus, 2015).

Exchange rate

Changes in the value of the Danish kroner against other currencies affects NNIT reported net turnover and expenses, and hence NNIT operating profit. NNIT has already operations internationally and aims to expand their business globally, which means that its operating results are and will become even more affected by fluctuations in foreign currency. Nevertheless, NNIT reports its operating results in Danish kroner, a part of its net turnover and expenses are expressed in other currencies. Portion of net turnover is earned in the U.S. dollar and portion of NNIT costs are denominated in the Chinese yuan (in 2014, 7.1%), in the Philippine peso (in 2014, 1.1%), the Swiss franc (in 2014, 1.9%) and the Czech koruna (in 2014, 0.6%). These include costs for delivery of services at offshore sites and other costs that are denominated in local currency. Sales in above mentioned countries are not large enough to balance costs denominated in these currencies, therefore giving a rise to foreign exchange risk. Moreover in China, NNIT has strict restrictions on the movement of cash and the exchange of foreign currencies, which could confine using these funds globally (NNIT Prospectus, 2015).

The Danish kroner is pegged to the euro at an exchange rate of 7.46 kroner per euro, and according to the Danish Central Bank policy, fluctuations are allowed only within +/- 2.25% band. This means that the highest exchange rate can be DKK 7.63 per 1 euro, while the lowest – DKK 7.29 per 1 euro. If the exchange rate

rises above or falls below the band, the Danish Central Bank must intervene. Fluctuations resulted of the peg have a similar effect on the rate of the Danish kroner (NNIT Prospectus, 2015). There has been significant exchange rate instability in 2015, including the currencies that are relevant for NNIT business. Quantitative easing[18], announced by the European Central Bank, has affected the euro and as a result of the peg, the Danish kroner.

NNIT in its prospectus report (2015) made an estimation of a 10% depreciation of the average 2014 exchange rate of the Danish kroner against the currencies that impacted the operating profit in 2015. Results are presented in the following table:

Table 1. Estimation of DKK exchange rate. Source: NNIT Prospecus (2015)

	Chinese yuan	***Euro***	***Philippinese peso***	***Swiss franc***	***U.S. Dollar***	***Czech koruna***
Impact on operating profit resulting from 10% depreciation of DKK (impact in DKK million)	(12)	9	(2)	(2)	(2)	(1)

Foreign exchange risks can be managed by hedge agreements to hedge balances in the Chinese yuan and other currencies.

Differences in exchange rates may also affect the value of shareholdings or dividends paid. Shares and their trading price are denominated in Danish kroner only, and the same applies to any dividends paid. Therefore, shareholders outside Denmark may be impacted by the Danish kroner depreciation against the relevant currency.

Pharmaceutical industry

As we have talked before, NNIT's main sector is Life Sciences which includes pharmaceutical companies. Pharmaceutical industry is not vulnerable to economic recession and market for medicine is constantly growing as people need medical treatment regardless of economic conditions. Therefore, there is NNIT's potential for growth, since a number of pharma companies adapting IT and automation solutions is increasing.

[18] Quantitative easing (QE) is an unconventional form of monetary policy where a Central Bank creates new money electronically to buy financial assets, like government bonds. This process aims to directly lower interest rates, increase private sector spending in the economy and return inflation to target (Investopedia, 2015).

Finance industry

IT spending on outsourcing in the finance industry is the norm. Due to global financial crisis, the finance industry has to comply with many regulations, which is increasing demand for IT solutions (NNIT Prospectus, 2015). Information Management is an important competitive capability in the finance industry and the only way to automate customer risk assessment and customise customer experience. IM capabilities need to be incorporated into internal systems and self-service platforms in order to digitalise financial business processes. All above mentioned means that potential demand for IT service in the Danish market is expected to increase and NNIT predicts it to be growing from DKK 1.8 billion in 2014 to approximately DKK 2.0 billion in 2020 (NNIT Prospectus, 2015).

4.1.3 Socio-cultural factors

Social trends can affect business and the demand for NNIT services, especially in the long run. IT consumers, who want smartphones, apps, access to networks and cloud services 24/7, are becoming more and more demanding. Businesses request IT solutions as they want to stay innovative and competitive, and IT services, therefore, became more accessible and integrated than a decade ago.

Internet usage

In recent decades, Internet usage has a stable growing popularity for both personal and professional activities. Internet-based computing (e.g. cloud, servers, storage, etc.) benefits from an increased access to the Internet and social network. In particular, the number of Internet users has increased significantly during past decades, which has provided a marvellous opportunity for businesses around the world. Our generation is actively engaged in social networking, researching, Internet banking, and media through Internet and certainly future generations will be further involved in activities related to Internet. Companies are expected to exploit Internet to improve their internal processes.

Population growth

Population growth is one of the main social factors. Population of humans on earth correlates directly with the number of companies established and correspondingly to an interest in IT services. Population predictions made by United Nations, forecast the world population continues to grow though more slowly than in the recent past. The world population is projected to increase to 8.5 billion in 2030, and to increase further to 9.7 billion in 2050 and 11.2 by 2100 (United Nations, 2015). As according to Eurostat (2015), demographic situation in EU currently is also characterized by population growth. At the beginning of 2015 the population

was estimated at 508.2 million which is 1.3 million more than last year and 101.5 million more than in 1960. However, Europe's population is projected to shrink by 4 million by 2030 and even more, by 31 million by 2050 (United Nations, 2015). Figures illustrate population projections of selected economies which are expected to grow.

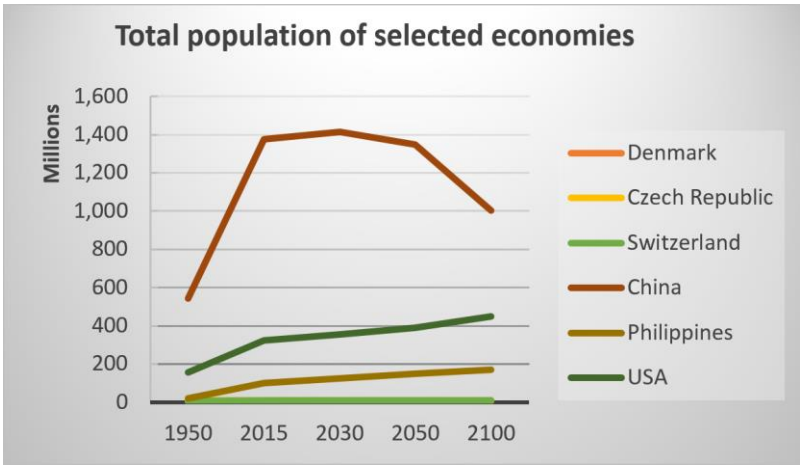

Figure 10. Total population of selected economies. Source: United Nations (2015) and own creation

Countries with the fastest growing population are among the highest interest, as that is a potential market for NNIT expansion. During 2015-2050, half of the world's population growth is expected to be concentrated in nine countries: India, Nigeria, Pakistan, Democratic Republic of the Congo, Ethiopia, United Republic of Tanzania, United States of America, Indonesia and Uganda. Nigeria's population is growing the most rapidly and is projected to surpass population of the United States by 2050 (United Nations, 2015). Nevertheless, most of the above mentioned countries are developing countries, this is the future market.

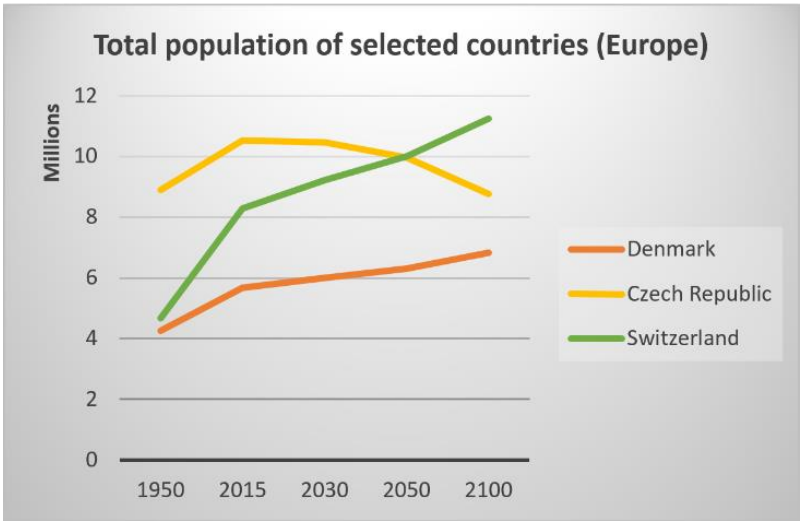

Figure 11. Total population of selected economies in Europe. Source: United Nations (2015) and own creation

4.1.4 Technological factors

Over the last few decades, IT infrastructure and IT services has become a key driver for business growth. Recent developments allow to use IT services more efficiently and at a lower cost.

Technological innovation

The technological innovation of IT industry is very fast, and it is constantly evolving to more complex IT solutions and better IT equipment. In order to stay competitive companies have to keep up with these technological developments. Cloud computing is one of the biggest innovations in recent years. Cloud

services bring flexibility and enables accessing software via the Internet rather than have installations on PCs. Clouds saves time which is very crucial for global operations where short response is a main constraint. NNIT provides a full range of cloud services - from evaluating the usefulness of cloud technologies, to transitioning your applications to the NNIT Cloud Platform and providing post-implementation monitoring (NNIT homepage, 2015).

Automation and optimization

Technological factor also relates to automation processes and research and development activities that improve operations inside the company. Many organisations invest in IT to optimize and standardize their processes. IT industry requires NNIT to be proactive and reactive towards technological innovations. This include e.g. adapting new tools, implementing new data centres, outsourcing new minds (which can be also considered as a social factor).

4.2 Industry analysis – Porter's Five Forces

Potential issues within macro-environment that have or could have implications on NNIT have been evaluated through the PEST analysis. A tool that will help us to analyse industry attractiveness is the Porter's Five Forces framework. Porter's uncovered five forces enables to analyse the industry by looking at competitors. In order to create profit, a firm has to understand their customers and create value for them (Porter's so called bargaining power of buyers). Goods and services has to be acquired from suppliers, which therefore makes it important to understand the suppliers and manage relationships with them (bargaining power of suppliers). These two sources represent "vertical" competition. Profitability is dependent on the intensity of competition among firms. Competition is one of the major reasons of decreasing rates of return on invested capital. Therefore, the firm must understand competition which includes competition from substitutes (threat of substitutes), competition

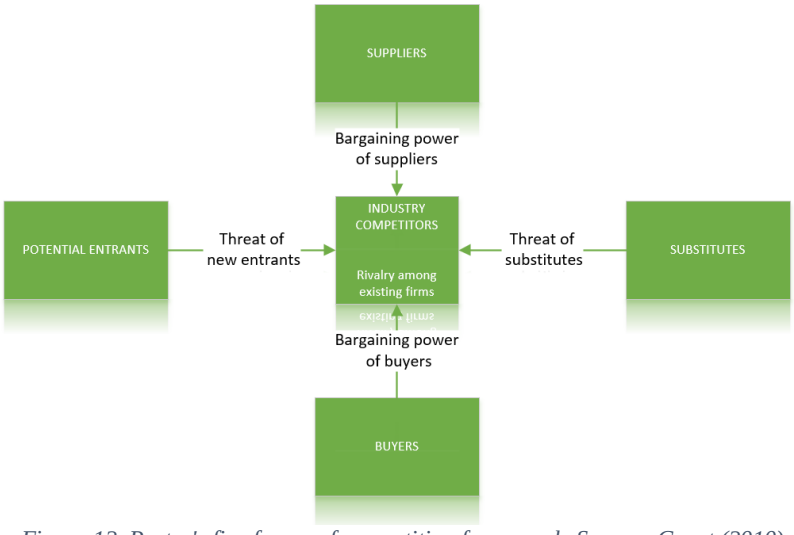

Figure 12. Porter's five forces of competition framework. Source: Grant (2010) and own creation

from entrants (threat of new entrants), and competition from established rivals (rivalry among existing firms). The latter three sources is so called "horizontal" competition (Grant, 2010).

4.2.1 Threat of substitutes

Substitute products are defined as products or services that meet customer needs but are available in other markets. The threat of substitution affects the company and its profitability as customers can any time choose a substitute product. Substitute products determine a price for goods and services as the price is constrained by the existence of alternative products which are never completely identical but are similar to some extent.

Technological innovation

The IT services industry is characterised by a rapid technological change, and businesses has to adopt to it. Organization has to keep up with the latest advances in Information Technology as that is a key to long-term success. NNIT's services which offer advising, building, implementing, managing and supporting IT solutions and operating IT systems for customers does not have clear substitutes as such. IT industry, and NNIT in particular, helps other industries to grow and most of the businesses depend on IT to get their processes automated and streamlined. For example big data, enabled in life sciences companies, shows the effectiveness of various treatment regimens on different kinds of patients, personalised medicine can better match patients with complex diseases with the best therapies and eliminate the trial-and-error process that often results in ineffective treatments (NNIT Prospectus, 2015). IT services support specialised industry needs. Therefore, one can say that the threat of substitutes for NNIT services is low.

4.2.2 Threat of new entrants

Whenever demand for any goods or services increases, it stimulates a growth of the number of potential new entrants. The attractiveness of an industry indicates the possibility of earning returns which are higher than the cost of capital. New players bring new capacity and a desire to gain market shares which sequentially have an adverse effect on returns (Petersen & Plenborg, 2012). Industries that require high level of investment are much harder to break into, which protects the existing players. NNIT operates in fast evolving industry, where new entrants may offer newer technologies and services, hence making NNIT's offerings less competitive. Barriers to entry can ensure that established firms have an advantage over new entrants. Such obstacles prevent new competitors from easily entering an industry and protect revenues and profits of existing companies already operating in the industry (Investopedia, 2015).

Economies of scale

Logic behind economies of scale is simple – the larger the company, the lower the unit cost. Smaller enterprises have to bear higher unit costs than the companies already established in the industry (Gimbert, 2011). New entrants are then faced with a choice to either enter on a small scale and accept high unit costs, or enter on a large scale and bear the costs of underutilized capacity (Grant, 2010).

Globally there is a vast amount of companies in the IT industry; to mention some of the biggest companies: VMware Inc. (US software company), Infosys and Tata Consultancy Services Ltd. (largest India-based IT services companies), SAP SE (German multinational software corporation), and leading global IT companies such as Accenture, Oracle, IBM and Microsoft Corporation (mbascool.com, 2015). Those big companies are assumed to be able to reach economies of scale, which make them more cost effective. Moreover, most have been active in the industry for a long period of time, which results in economies of learning[19]. Taking all into consideration, it would be hard for new entrants to enter the market.

Capital requirements

The capital costs for new firms to be established in an industry can be so large that it discourages all except the largest businesses (Grant, 2010). New companies will require large investments in capital expenditures, R&D and marketing to enter the industry and to be able to compete with existing players. IT companies have to allocate a significant portion of their budgets to maintain their infrastructure. Concerns over the risks of insufficiently secure and disaster-proof data centre require the capital expenditures such as investments in storage and servers. This comprises purchase of tangible assets, such as hardware for data centre and servers for the projects. As an example, NNIT expects capital expenditure for 2015 to be 5-6% of 2015 net turnover, however if additional data centre will be built because of company growth, capital expenditure will make up DKK 250 million over a three-year period (NNIT Prospectus, 2015).

Product differentiation and brand awareness

Existing players have the advantages of brand recognition and customer loyalty (Grant, 2010). NNIT is a known company either under its own name or as Novo Nordisk IT whose success reflect on NNIT. Besides that, IT companies' services are much differentiated. The newly established companies should offer innovative solutions that would attract customers to switch to them. Moreover, new entrants must spend more

[19] Economies of learning derive through experience. It does not depend on producing more quantity or a wider portfolio, but to keep on improving efficiency and becoming a specialist in a certain area (Policonomics, 2012).

money on advertising and promotion to get brand awareness. This might be a significant entry barrier as newly established companies have limited financial resources.

Tenders

As we have discussed in the PEST analysis, companies that work with projects involving public sector entities, including national, provincial, state and local governmental entities, bear various risks essential in the public sector contracting process. Projects that involve public customers are generally subject to Danish public procurement rules. These rules imply that IT services are re-tendered on a regular basis, which means that NNIT and other companies are required to participate in a tender to maintain existing or/and to get new public contracts (NNIT Prospectus, 2015). New entrants have a possibility to win a tender if their terms and conditions in contract are more appealing. However, in order to be able to participate in public tenders, enterprises should be in a good financial health.

Governmental and legal barriers

Getting license from a public authority is also an important entry barrier. Government should grant enterprises a right to offer their services. Patents and other legally protected forms of intellectual property are another barriers to entry that need to be taken into consideration in knowledge-intensive industries, such as an IT industry. In general, regulatory requirements and environmental and safety standards put new entrants at a disadvantage than existing players as compliance costs influence new players more heavily (Grant, 2010).

All above mentioned entry barriers make it difficult for new entrants to enter the market. Despite that, and even though IT industry is fairly saturated with IT service providers, the environment supports new entrants as they may offer new technologies, services and solutions. This will make NNIT's offerings less attractive or less competitive, when compared to other alternatives, and which adversely affect NNIT's results of operations (NNIT Prospectus, 2015). Therefore, the threat of new entrants can be assessed as moderate.

4.2.3 Bargaining power of buyers

The bargaining power of the buyers assess the extent to which customers or buyers can influence the pricing of IT services. The IT industry is fragmented[20] with small and large players. Buyers that have high market share percentages obtain a higher degree of bargaining power. When the number of buyers is high, buyers' individual bargaining power is decreased. The bargaining power increased when customers buy in large

[20] There is more than one enterprise which has large enough share of the market and therefore is able to influence the industry.

quantities and thus can put pressure on prices. Furthermore, buyers can choose other IT service providers who provide similar solutions under better conditions which increases the bargaining power (Grant, 2010).

NNIT provides their services to approximately 160 customers from four customer groups, mainly to Life Sciences, which includes the principal customer, the Novo Nordisk Group. Novo Nordisk owns 6,375,000 shares, corresponding to 25.5% of NNIT share capital (NNIT homepage, 2015). Share ownership gives them buyer power. NNIT public customers[21] which in 2014 contributed 13.5% of NNIT net turnover, also have a considerable bargaining power since they are governmental institutions and the largest companies in Denmark. Due to this and several other factors that we discuss further bargaining power of customers is considered as fairly high.

Any reduction in IT spending, termination or non-renewal of the contracts with any of their customers will negatively affect NNIT's results of operations. Typically contracts run for four years which gives bargaining power to NNIT. Contracts for Advisory Services and Business Solutions offerings are mainly less than 12 months in duration, and typically permit a customer to terminate the agreement on a short notice. Outsourcing contracts generally require a longer notice period for termination and often provide for an early termination fee to be paid; however, this fee might not be sufficient to cover the costs or make up for profits lost upon termination of the contract (NNIT Prospectus, 2015).

Furthermore, if any of NNIT's current customers merge with other business which uses another IT services provider, NNIT may lose the existing customer. Customer can choose not to retain NNIT for additional stages off the project, can try to renegotiate the terms of its contract or cancel or delay additional planned work due to cost-cutting initiative. In each above mentioned case NNIT will lose net turnover. It is therefore very important that NNIT attracts additional work from existing customers and retains them.

Customer can choose another IT company if he/she seeks other types of services or solutions delivered that NNIT does not offer or NNIT has not developed in response to changes in technology (NNIT Prospectus, 2015).

Price sensitivity of the buyers is influenced by the differential advantage that a company can offer (Grant, 2010). NNIT states that many specific customer engagements involve unique services and solutions[22], and that their brand and reputation help to distinguish their services and solutions offerings from the competitors.

[21] Public segment includes DSB, the Capital Region and Digitaliseringsstyrelsen (NNIT Prospectus, 2015).
[22] NNIT constructed a unique offering – the GxP Cloud solution for Life Sciences customers.

Moreover, NNIT positions themselves as a leading supplier of SAP operations in Denmark (NNIT Prospectus, 2015). This increases NNIT negotiation power and lowers customers' price sensitivity. However, at the same time NNIT accepts that their competitors may offer similar services, and be more successful in that. A great number of IT providers in the market increases the bargaining power of customers.

4.2.4 Bargaining power of suppliers

The main NNIT software and hardware suppliers are its partners, therefore the bargaining power of suppliers will be analysed in scope of partners.

NNIT has built partnerships with a number of vendors in order to provide high quality services and to become IT services market leader in Denmark and a leading international partner to life sciences companies. Hardware and software are delivered by key technology partners: Cisco (network devices), EMC (storage equipment), HP (data center equipment), Microsoft (software), Oracle (software and data center equipment) and SAP (ERP systems), and selected niche partners such as Citrix (network devices and software), ETQ (software), DITA Exchange (software) and Agnitio (software) [23]. Significant part of NNIT offerings are based on and build upon resources and technologies from these partnerships (NNIT homepage, 2015). Partners can negotiate the price of their services, delivery terms, can set various objectives. The risk of being replaced with an alternative supplier is small, as in fact, both parties benefit from this cooperation. NNIT's long-term development is dependent on these partnerships. Therefore, bargaining power of suppliers is considered as fairly high (or moderate).

The supplier concentration is high, switching to another supplier is not a necessity as NNIT benefits from partnerships with high-tech companies, and common business creates a strong bargaining power against other suppliers.

4.2.5 Rivalry among existing firms

Competitive rivalry among existing players is one of the determinants of future success and growth of the company compared to its competitors. Competitive rivalry in IT industry is heavy and the top existing players must focus apart from price, also on performance, contract terms and conditions, customer service. The more organizations are in the market, the greater the level of rivalry since organisations are trying to win customers. Competition becomes more aggressive and more intense when companies have similar market shares and

[23] NNIT also partner with smaller software providers.

they contend to become the market leader. The intensity of competition is dependent on various factors (Grant, 2010). Those factors are discussed below.

Industry growth

When there is an industry growth, the companies have to keep the market share to be able to increase their sales. There is less rivalry when the industry growth is strong (Gimbert, 2011). Global IT services spending reached USD 931 billion in 2012 and remained flat at the same level in 2013 (Gartner, 2014). Technologies are innovating, and global IT services spending is expected to increase on average by 3.9% in 2015-2018. IT services spending in Denmark is expected to follow the trend and grow by approximately 1.1% until 2018.

More and more enterprises started to invest in Big Data technologies, and Gartner's 2014 Big Data survey shows that, 73% of the respondents have or planning to invest in Big Data technologies in the next 24 months and this number has increased from 64% in survey made in 2013.

Concentration and diversity of competitors

Although NNIT is positioning themselves as well-established in Denmark, there are companies which have greater financial, marketing, or other resources than NNIT (NNIT Prospectus, 2015). Besides that the market NNIT operates in is highly competitive market which is rapidly changing.

Global companies have made a strong entrance into the Danish marketplace, however, they still remain relatively small. According to IDC and NNIT Prospectus, the main competitors of NNIT in Denmark are IBM, KMD, CSC, Atea, and Accenture (an overview of these companies can be found in Appendix 4-5).

Table illustrates that in Denmark, IBM and KMD have highest market share percentages in 2013, 16.7% and 11.5% correspondingly, whereas NNIT has only 6.1%. However, if we look at a difference between 2013 and 2012 data, we can see that NNIT had the highest market share change among other companies that are presented in the table and assuming there will be a further growth in the market share, picture might radically change. Note, the data provided is for 2013 due to limited access to data for 2014.

The more competitors are in the industry, the sharper the rivalry since the industry is shared among more companies, and thus market share for each of them will be smaller (Gimbert, 2011).

Table 2. Danish IT Services market. Source: IDC (2014) and NNIT Prospectus (2015)

	2013	Change	2012	Market Share 2013
	DKK million	%	DKK Million	%
IBM	5,748	-3.2	5,936	16.7
KMD	3,956	-0.4	3,971	11.5
NNIT	**2,116**	**9.7**	**1,930**	**6.1**
CSC	1,477	-9.8	1,638	4.3
Atea	1,266	0.7	1,257	3.7
Accenture	1,140	-1.9	1,162	3.3
CGI	1,066	1.6	1,050	3.1
BEC	1,002	-1.4	1,016	2.9
EG	924	6.8	865	2.7
HP	605	-7.1	652	1.8
Other	15,153	4.9	14,450	44
Total	**34,454**	**1.6**	**33,928**	**100.00%**

Product differentiation

Product differentiation is another important factor to consider. The greater the differentiation in an industry, the lower is rivalry. Similar services are offered by various organisations, for instance:

- multinational IT services providers, including the services arms of large global technology providers (hardware, equipment and software);
- offshore ("pureplay"[24]) IT service providers in lower-cost locations, e.g. IT outsourcing companies based in India that offer services similar to those NNIT offers but often at highly competitive prices or on aggressive contractual terms;
- pure cloud providers offering IT infrastructure as a service on usage-based terms;
- accounting and management consulting firms that operate in the same areas as NNIT and that have expanded or are in the process of expanding;
- niche service providers and local competitors that compete with NNIT in a specific industry segment or service area, including companies that provide new or alternative products, services or delivery models;
- in-house IT departments of large corporations that use their own resources, rather than engage an outside firm; and

[24] Pureplay is a publicly traded company that is focused on only one industry or product Investopedia, 2015).

- business process outsourcing providers of the IT solution (NNIT Prospectus, 2015).

NNIT admits itself that their competitors might be more successful in offering similar services. The more similar are offerings among rival firms, the higher risk customers switching between them (Grant, 2010). The existence of such organisations makes IT industry more competitive and disables NNIT to easily raise prices for their services and which in turn decreases profit potential. Siemens Business Services has won outsourcing contract with Novozymes IT, which previously has been handled by NNIT (Børsen, 2004). Thus, NNIT should focus on offering additional services in order to differentiate from its competitors.

Exit barriers

High exit barriers force organisations to continue their operations even being unprofitable. Technology advanced and complex equipment that IT industry uses is difficult to relocate or sell. This creates a cost impact on companies wanting to exit the IT industry as asset write-offs and closure costs might be high. Having NNIT built new data center in 2010 which provides a possibility to run the data center for the next 50 years without any downtimes, power outages and system failures (NNIT Annual Report 2010) creates a high barrier to exit the industry. Moreover, NNIT has a recognizable name as it comes from a strong the Novo Group brand, where the high quality is expected. Having Novo Group brand and its reputation, which are important assets to NNIT, helps it to differentiate itself from the competitors. If the company decides to close, it would negatively affect the brand which could cause a negative impact for all the Novo Group. These exit barriers make it difficult to leave the industry. The higher the exit barriers, the greater is intensity of rivalry in the industry (Gimbert, 2011).

All above mentioned factors indicate high competitive rivalry. The product differentiation that exist in the industry is lowering the rivalry, whilst the high exit barriers strengthen the rivalry. Price wars and additional services goal is to preserve market position. NNIT has to be careful – price cut leads to reduced revenue, which in turn limits the ability to invest in research and development which is crucial in such innovative industry as IT industry. Any time competitors can offer new services, solutions or technologies, it may make NNIT offerings less attractive or less competitive, when compared to other alternatives (NNIT Prospectus, 2015).

4.3 Conclusion on the strategic analysis

Main finding of the strategic analysis are highlighted in this section. The PEST analysis has revealed the main factors in macroeconomic environment that might have an influence on NNIT.

Changes in any applicable laws and regulations in or outside Denmark can affect NNIT operations. The anti-offshoring legislation, if adopted, can have an adverse effect on NNIT business as it would lead to tax disincentives, extra fees or penalties, intellectual property transfer restrictions, mandatory government audit requirements, and other restrictions on usage of certain business and work visas. With global operations, comes threat of political risks from developing countries. Political and economic factors such as changes in government, pending elections or the reduction in, or absence of, adequate funding might impact contracts with public customers.

Global and local economic conditions may impact NNIT's future results. GDP growth is estimated to stabilize, although at different levels. Greece's debt crisis and Chinese stock market decline has enhanced global risk aversion. Overall growth in the economies is forecasted in five years further, and that is mainly due to strengthened recovery after financial recession 2007-2009.

One of the main social factors – world population growth – is expected to grow, although slower than in the recent past. Population in Europe is projected to shrink by 4 million by 2030, whereas it is forecasted to increase rapidly in developing countries. Higher population leads to an increased interest in IT services, where developing countries are the future market.

Technological innovations is yet another factor to consider. Demand for IT services has increased in recent years and it is expected to remain high in the future, but changes in the demand for IT services may appear. NNIT should stay proactive and offer new IT solutions and advanced IT equipment in order to respond towards technological developments.

The Porter's Five Forces framework has analysed industry attractiveness. Today Information Technology is a key to a long-term success, and businesses have to follow the latest advances in IT. NNIT consults other enterprises with IT Operations and IT Solutions services. There are no clear substitutes for IT services, therefore, the threat of substitutes for NNIT services is low.

Entry barriers for new entrants such as economies of scale, capital requirements and brand recognition can be substantial and restrict the entry of new players. However, new rivals may offer innovative technologies, services and solutions, which would make NNIT's offerings less competitive. Moreover, new entrants have a possibility to win a tender if their contract terms are more favourable. Having said that, we believe that the threat of new entrants is medium.

Bargaining power of buyers is considered as fairly high because a customer can give preference to other IT consultancies. Other types of services or more innovative and successful solutions are the reasons that lay behind this decision.

As for bargaining power of suppliers, we assess it as fairly high as well. NNIT software and hardware suppliers are its partners, and NNIT benefits from resources and technologies of its well-known high-tech partners.

At last, we have analysed competitive rivalry in IT industry and all examined factors have indicated high competitive rivalry. Intense competition from existing and new rivals may threaten NNIT's market share growth. Despite that, NNIT has a recognizable name (previously called Novo Nordisk IT and comes from a strong the Novo Group brand), where a high quality is expected. Therefore, if NNIT focus on offering additional and up-to-date services it may differentiate from its competitors and become more attractive that other IT companies.

5. Financial analysis

In the strategic analysis we have focused on non-financial value drivers. Now our focus moves to financial value drivers. The objective of the financial analysis is to understand NNIT's historical performance and key financial ratios to be able to forecast its future. The financial analysis will help us to understand cost drivers and will together with the strategic analysis form foundation for preparing the budgets.

An average business cycle lasts around six years[25], therefore we will look into financial data from 6-year-period, i.e. 2010-2015 as we believe this period is sufficient to be able to analyse company's ability to create value and to analyse what made NNIT to go public. Only data from NNIT annual reports in the period 2009-2015 and NNIT Prospectus (2015) will be used.

In the following chapter we start by discussing accounting quality and accounting policies, which is an important procedure before the numerical analysis. We will review accounting policies in order to understand how those particular accounting principles were used in preparing the company's financial statements (Simple studies, 2012). Next step, is to reclassify balance sheet and income statement. We will make corrections to financial statements since they reflect economic, instead of accounting, performance. Where information is

[25] Various online resources has shown that complete business cycles vary in length and can be anywhere from about two to twelve years, however, with mostly the average is six years in length.

missing, we will make informed assumptions (Koller et al., 2005). Original financial statements will be included in the appendices. After that, we will perform profitability analysis, cash flow analysis and liquidity risk analysis. Appendices 9-10 include a common-size analysis and a trend analysis of revenue and expenses. Each chapter section will contain the most relevant and essential theoretical elements.

The value of a company is driven by its ability to earn a return on invested capital (ROIC) greater than its weighted average cost of capital (WACC) and by its ability to grow. High ROIC and growth result in high cash flow (Koller et al., 2005). Consequently, the goal of this chapter is to analyse historical performance of NNIT, and especially cash flow statement which will serve as a foundation for the subsequent two chapters – Forecasting and Valuation.

5.1 Accounting policies

The purpose of the financial statements is to provide information about performance, financial position and cash flows of the company. This information is useful for economic decision-making for both owners of the company who are (and are not) involved in running the business and for potential investors and shareholders when reviewing earnings reports.

Accounting policies are the specific principles, procedures and practices applied by an accounting entity in preparing and presenting financial statements. Accounting policies deal with consolidation of accounts, depreciation methods, goodwill, inventory pricing, and research and development costs (BusinessDictionary.com, 2015). When looking into company's accounting policies, one can see whether management is conservative or aggressive when reporting earnings (Investopedia, 2015). As we are going to review NNIT's financial statements, we should first verify its accounting policies.

NNIT is listed on NASDAQ OMX Copenhagen A/S and prepares its consolidated financial statements in accordance with International Financial Reporting Standards (IFRS), approved by the European Union, and in accordance with the Danish Financial Statements Act for annual reports of large companies (accounting class C). The entire analysed period has been using IFRS accounting standards which ensures comparability, the only reason why previously published financial information may differ from subsequently published financial information is due to implementation of changes in accounting policies and other adjustments made in accordance with IFRS. The consolidated financial statements were prepared in accordance with IFRS for the financial years ended 31 December 2015, 2014, etc. (NNIT Prospectus, 2015). Only these consolidated financial reports will be used for the analysis and investment decision.

Financial statements, even though are prepared in accordance with IFRS, can include judgements, estimates and assumptions that may affect the amounts reported. NNIT claims that these "*estimates and judgements are continually evaluated and are based on historical experience and other factors, […] that are believed to be reasonable under the circumstances*" (NNIT Prospectus, 2015). Therefore, actual results may differ from these estimates and that is what we have to be careful with when performing financial analysis.

Changes to accounting policies should be carefully examined as they might have effected reported financials. We have carefully read and analysed notes of the consolidated financial statements in order to find any significant changes in accounting policies. We have discovered that capitalised operational lease obligations are now to be treated as debt where previously it was not (NNIT Prospectus, 2015). The most critical accounting policies adopted by NNIT are discussed further below.

5.1.1 Changes in accounting standards

IFRS 8 is applied for reporting results of two operating segments – Operations and Solutions. It is usually applied to public companies and "*requires the identification, measurement and disclosure of operating segments on the basis of internal reports that are regularly reviewed by the entity's chief operating decision maker in order to allocate resources to the segment and assess its performance*" (NNIT Prospectus, 2015). As NNIT went public only in 2015, past financial statements do not reflect IFRS operating segment reporting.

IAS 11 "Construction Contracts" is applied for the recognition of net turnover for "*negotiated contracts to design or develop IT applications for customers (part of application outsourcing)*". Net turnover from "*contracts not treated as construction contracts*" are recognised in accordance with **IAS 18** "Revenue". Together with IAS 11 it will be replaced by IFRS 15. **IFRS 15** "Revenue from Contracts with Customers" with effective date 1 January 2017 is currently awaiting EU endorsement. The new standard will establish "*a single, comprehensive framework for revenue recognition*" (NNIT Prospectus, 2015).

In order to report key-ratios earnings per share **IAS 33** has been adopted. Share-based payments are set off against equity according to **IFRS 2** cash method.

Financial measures such as the free cash flow, the cash to earnings, the operating profit margin, EBITDA, EBITDA margin, and return on invested capital are included in NNIT Offering Circular but are not measures of financial performance or liquidity under IFRS. These measures are used by management to monitor the underlying NNIT's performance and operations, however they are not indicative of historical operating results, nor are such measures meant to be predictive of NNIT's future results. Moreover, these non-IFRS

financial measures should not be considered as a substitute for operating profit, net profit, cash flow or other financial measures computed in accordance with IFRS (NNIT Prospectus, 2015).

5.2 Reformulation of the financial statements

We need to understand NNIT's past performance in order to be able to predict its future. Therefore, we start by analysing historical performance. Financial statements and reported accounting measures such as return on assets (ROA), return on equity (ROE), and cash from operations (CFO) are falsely supplemented by non-operating items and capital structure (Koller et al., 2005). To limit these biases we will separate operating and non-operating items, will adjust nonrecurring items and where information is missing, we will make informed assumptions. The reason behind it that the company's operations is the primary driving force behind value creation and that is what makes company unique (Petersen & Plenborg, 2012). Later, on the separation, makes it easier to calculate financial ratios. The majority of accounting items are easily classified, but with some we face a problem when determining whether these items are operating or financing, as the definition of operations is not clear and the classification of items in the financial statements do not clearly distinguish between operating and financing items (Petersen & Plenborg, 2012). Thus we will have to make careful considerations regarding a number of accounting items.

Our focus is on the key value drivers: return on invested capital, growth, and free cash flow. Analysis of historical performance will enable us to document whether NNIT has created value, whether it has grown, and how it compares with its competitors (Koller et al., 2005). In order to calculate ROIC, NOPAT and FCFF, we will reformulate financial statements in accordance with Koller et al. (2005) and Petersen and Plenborg (2012).

5.2.1 Reformulation of the balance sheets

The balance sheet reorganisation purpose is to isolate operating and financing assets and liabilities that generate earnings, and to create invested capital. Invested capital indicates the total investor capital that is required to fund operations, without distinction to how the capital is financed (Koller et al., 2015). NNIT's reformulated balance sheets can be found in Appendix 6. We had to make a clear distinction between operating and financial items, and following subsections will explain a number of accounting items which have required careful consideration. It might differ from the classification that was offered in NNIT Prospectus (2015).

Operating assets and liabilities

The invested capital is calculated by subtracting total operating assets from total operating liabilities.

- IT development projects, projects that are under development and goodwill are recognised under intangible assets, and are identified as **operating** assets of NNIT. At 31 December 2012, an impairment test of intangible assets was conducted and resulted in a write down of goodwill to the value of DKK 0 (NNIT Prospectus, 2015). Not physical in nature, intangible assets represent company's resources.
- Tangible assets refer to plant, equipment (e.g. hardware for data centre and servers), fittings, buildings, leasehold and land are treated as **operating** assets.
- Deferred tax assets and deferred tax liabilities are the differences between the carrying value and tax value of assets and liabilities. Deferred tax can concern both operating and financing activity, however we recognise deferred tax assets and liabilities under **operating** activities.
- Inventories represent goods for resale and belong to **operating** assets.
- Trade receivables is a component of NNIT working capital and comprise payments which are due to NNIT by their customers. NNIT's trade receivables balance has generally increased between 2012 and 2014 due to a general increase in net turnover and new large customers with more favourable payment terms (NNIT Prospectus, 2015). Trade receivables are recognised under **operating** assets.
- Trade payables is another component of NNIT working capital and comprise payables to the suppliers in relation to hired labour and materials, as well as employee-related costs and tax liabilities (NNIT Prospectus, 2015). Trade payables are recognised under **operating** liabilities.
- Work in progress is last significant component of NNIT working capital and is a material that is not yet a finished product. Work in progress is recognised as **operating** asset.
- Tax receivables and tax payable are another items that need a careful evaluation. When a company pays too much in tax on account during the fiscal year, tax receivable emerges and conversely for tax payable (Petersen & Plenborg, 2012). Tax receivables and tax payables can relate to both operating and financing activities, however here are considered as non-interest bearing and therefore are classified under **operating** activities.
- Other receivables and pre-payments refer to rental deposits, current receivables and prepayments for maintenance of hardware and software licenses (NNIT Prospectus, 2015). These are **operating** assets as they belong to core operation (Petersen & Plenborg, 2012).

- Prepayments received are considered as tangible assets and therefore are directly related to **operations**.
- Other current liabilities refer to other short-term liabilities and therefore are recognised as **operating** liabilities.

Financial assets and liabilities

- Leasing liabilities which consist of leasing payments and interests are recognised as **financing** activities.
- Financial lease is recognised at the present value of the minimum lease payments determined on the basis of interest rate implicit in the contracts or if not available, NNIT's incremental borrowing rate (NNIT Prospectus, 2015). Financial leasing is a **financial** liability.
- Wages, salaries, social security contributions, paid annual leave and sick leave, bonuses and non-monetary benefits are recognised as employee benefits (NNIT Prospectus, 2015). Employee benefits are dependent on future circumstances and are classified as **financial** liabilities.
- Provisions are recognized where NNIT has a legal or constructive obligation arising from past events, it is probable that the company will have to draw on its financial resources to settle the liability, and the liability amount can be reliably estimated. NNIT's provisions consist of provisions for losses on construction projects and refurbishment obligations. Provision for loss on projects relates to projects that NNIT is obligated to finalize and where the total project costs exceed the total project income. Provision for refurbishment obligation relates to the leasehold agreement (NNIT Prospectus, 2015). Provisions can be recognised both as operating and financing activity. Ongoing operating provisions are normally treated as operating expense, whereas restructuring provisions are converted from an accrual to a cash basis and treated as non-operating (Koller et al., 2005). Therefore, in our reformulated balance sheet we recognise provisions as **financial** liabilities.
- Employee costs payable is recognised as a **financial** liability.
- Cash and cash equivalents include cash and deposits in the parent company, Novo Nordisk A/S, as a result of the cash pool policy in the Novo Nordisk Group, since these resources are part of day-to-day cash management, are freely available, and can readily be converted into cash (NNIT Prospectus, 2015). Cash and cash equivalents should be separated into operating cash, which is non-interest bearing and excess cash, which should not be included in invested capital, otherwise it incorrectly depress the company's ROIC. Operating cash is cash used for investments and payment of bills. Excess cash represents temporary imbalances in the company's cash position and is paid out as

dividends, share buy-back or debt payments (Koller et al., 2005). We will recognise all cash and cash equivalents as excess cash as there is no clear distinction in the annual reports. Excess cash is a financial asset, therefore cash and cash equivalents are recognised as a **financial** asset.

- Shares include Novo Nordisk shares which are purchased in relation to the share-based incentive program for key employees (NNIT Prospectus, 2015). Portfolio of NN shares are classified as **financial** assets.
- Other financial assets represent deposits and are recognised under **financial** assets.
- Derivative financial instruments assets and derivative financial instruments liabilities are recognised under **financial** assets and **financial** liabilities correspondingly (NNIT Annual Report 2015).
- Employee benefit obligations are various retirement obligations (NNIT Annual Report 2015) which are interest bearing (Petersen & Plenborg, 2012) and therefore are recognised under **financial** liabilities.

5.2.2 Reformulation of the income statement

We will reorganise the income statement to create net operating profit after taxes (NOPAT). NOPAT indicates the total after-tax operating income which is generated by the company's invested capital is available to all financial investors (Koller et al., 2005). NOPAT will be further used to calculate ROIC. NNIT's reformulated income statement can be found in Appendix 7. For better understanding we will discuss items that have been adjusted, added or removed.

Depreciation and amortization

In order to calculate operating profit of the company, depreciation and amortization has to be included in income statement. These numbers has been taken from NNIT's annual reports.

Taxation

Taxation of corporate income and profit distributions is different across countries (Koller et al., 2005). In our analysis of NNIT's financial performance we have disregarded already calculated taxation item and have calculated tax on EBIT and tax on net financials instead. This enables us to look into the company's true economic performance (Koller et al., 2005). Tax on EBIT has been calculated by multiplying EBIT on effective tax rate. Tax on net financials has been calculated by multiplying net financials on effective tax rate. Tax rate for 2010 have not been provided in NNIT's annual reports, so we have made an assumption that it is the same as in 2011 and in 2012 and equals 26%.

Statement of comprehensive income

Other comprehensive income has not been included in our reformulated income statement as it is presented in a separate statement of comprehensive income and which is not in a scope of our analysis.

Calculation of EBITDA, EBIT, NOPAT and consolidated profit after tax

Earnings before interest, taxes, depreciation and amortization (EBITDA) reflects company's financial health and has been calculated by subtracting sales and distribution costs and administrative expenses from gross profit.

Operating profit or earnings before interest and taxes (EBIT) is one of the key measures and shows a firm's profit from its core business regardless of how it has been financed (Petersen & Plenborg, 2012). EBIT is calculated by subtracting depreciation and amortization from EBITDA.

Net operating profit after tax (NOPAT) represents the profits generated from the company's core operations after subtracting the income taxes related to the core operations (Koller et al., 2005). In turn, profit after tax is a sum of NOPAT and net financial expenses after tax.

5.3 Profitability analysis

Now after we have reorganized financial statements, we can perform profitability analysis of NNIT. Various measures will be involved to evaluate economic performance of NNIT. Profitability analysis will be based on previous findings and reformulated analytical statements. Below figure reflects structure of our analysis.

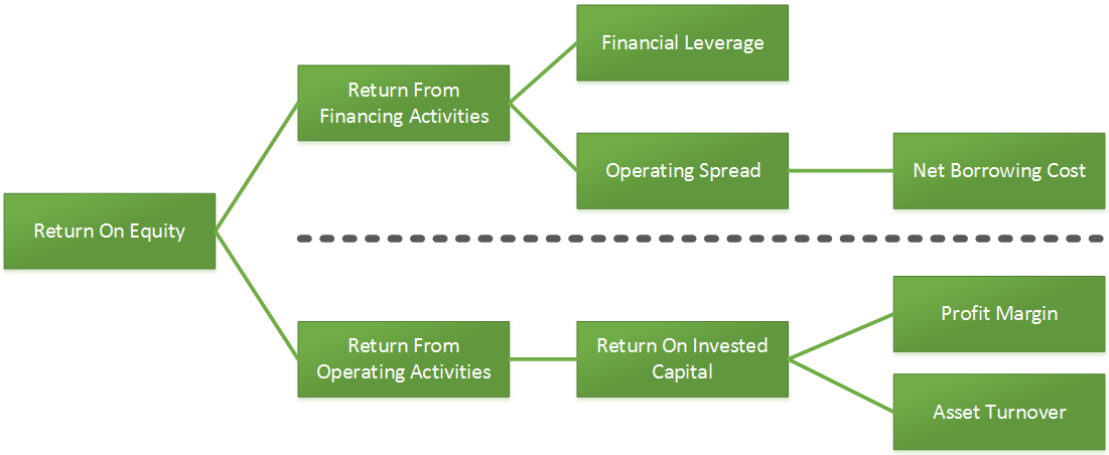

Figure 13. Profitability analysis. Source: Penman (2010) and own creation.

Profitability analysis will help to forecast NNIT's future performance. We will start by calculating return from operating activity – ROIC, and Profit Margin and Asset Turnover. Then we will calculate return from financing activities – Financial Leverage, Operating Spread and Net Borrowing Costs. In the end of this section, we will present calculation of ROE.

5.3.1 Return on invested capital

Return on invested capital (ROIC) measures the profitability of the operations (operating profitability) (Petersen & Plenborg, 2012). In other words, ROIC is the return NNIT earns on each krone invested in the business. A company's value creation depends on ROIC and ability to grow (Koller et al., 2005), higher ROIC leads to a higher value of the company, therefore operating profitability is considered as one of the key value drivers (Petersen & Plenborg, 2012). ROIC after tax is calculated using below formula:

$$ROIC\ (after\ tax) = \frac{Net\ operating\ profit\ after\ tax\ (NOPAT)}{Average\ invested\ capital}\ (percent)$$

Calculation of ROIC is provided in the table below. Note that for calculations we have used an average invested capital as it is more accurate when it comes to evaluate the value creation capability of a firm, especially for a fast growing company which is the case of NNIT (Chan, 2001; Petersen & Plenborg, 2012).

Table 3. Calculation of ROIC (after tax). Source: Own creation based on data from NNIT's annual reports

DKK '000	2010	2011	2012	2013	2014	2015
Invested capital (net operating assets)	395,722	525,312	739,186	746,539	835,688	875,506
Average invested capital		460,517	632,249	742,862	791,113	855,597
NOPAT	120,231	97,523	93,849	109,419	110,480	99,753
ROIC (after tax)		***21.18%***	***14.84%***	***14.73%***	***13.97%***	***11.66%***

Return on invested capital shows how well a company is using its money to generate returns (Investopedia, 2015). The numbers above indicate that ROIC has been decreasing during the past 5 years. 2011 was evidently the strongest year for NNIT as ROIC reached its highest level. In 2015 return on invested capital decreased to 11.66% which means that the company made 11.66 øre for each DKK invested. While invested capital has increased during the period analysed, however it did not lead to increase in ROIC due to a decreasing NOPAT. NOPAT has dropped by 22% in 2012 in comparison to 2010 and resulted in DKK 93.8 million. Despite the fact that net revenues has grown, the reason for a decrease in NOPAT could have been due to increased employee costs: cost of goods sold, administrative expenses and sales and distribution costs. Namely, sales

and distribution costs increased by almost 40% from DKK 92 million in 2010 to DKK 129 million in 2015, and administrative expenses – by almost 57% from DKK 75 million in 2010 to DKK 118 million in 2015).

Table 4. Yearly changes in net turnover, COGS, sales and distribution costs, and administrative expenses. Source: Own creation based on data from NNIT's annual reports

DKK '000	2010	2011	2012	2013	2014	2015
Net turnover	1,653,770	1,795,133	2,027,557	2,204,532	2,410,396	2,600,287
Change in net turnover, %		***8.55%***	***12.95%***	***8.73%***	***9.34%***	***7.88%***
Cost of goods sold	-1,277,944	-1,412,094	-1,612,174	-1,755,589	-1,930,680	-2,083,027
Change in COGS, %		***10.50%***	***14.17%***	***8.90%***	***9.97%***	***7.89%***
Sales and distribution costs	-92,769	-103,049	-111,420	-112,723	-111,898	-129,604
Change in sales and distribution costs, %		***11.08%***	***20.10%***	***21.51%***	***20.62%***	***39.71%***
Administrative expenses	-75,374	-85,598	-87,215	-89,759	-102,471	-118,551
Change in administrative expenses; %		***13.56%***	***15.71%***	***19.08%***	***35.95%***	***57.28%***

Employee costs increased between 2012 and 2014 (2015) due to the insourcing of certain finance, facilities, buildings and other services which traditionally were paid by Novo Nordisk. Moreover, in 2012 and 2013, NNIT insourced certain activities, which were previously outsourced to external subcontractors, to Chinese office. This increased internal employee costs. Total operating costs increased as well and that is due to NNIT's move to a new headquarters in 2012 and increased depreciations mainly due to company's data centre (the depreciation and amortization was almost double bigger in 2012 than in other years throughout the analysed period). An increase in hardware costs and depreciations are a result of the onboarding of new customers in 2013, which in turn led to increased total operating costs (NNIT Prospectus, 2015).

During 2014, NNIT incurred additional employee costs related to investigation of and preparation for an initial public offering. This includes an addition or enhancement of functions such as treasury, investor relations, legal and compliance, as well as consultant fees for a strategic assessment undertaken in connection with the initial public offering. During the same year, NNIT increased total operating costs such as hardware costs, depreciations and consultant costs (NNIT Prospectus, 2015).

The decrease in NOPAT, i.e. employee costs, was possibly the main reason of a decreased ROIC in 2012. Nevertheless that NOPAT has started to raise in 2013 and 2014, ROIC has continued falling. Net operating profit after tax has been raising less than net turnover. This also shows that an increase in NOPAT was not large enough for the amount of invested capital. The invested capital has almost doubled, but NNIT was still making the same money. NNIT's downward trend of operating profitability shows that the company should focus more on controlling their expenses.

Petersen & Plenborg (2012) states that it is important to evaluate ROIC against either required rate of return (weighted average cost of capital – WACC) or competitors. Comparing NNIT's ROIC with WACC reveals whether company has efficiently invested its cash. We have calculated WACC in the valuation chapter and it is smaller than ROIC, meaning that ROIC is at a fairly satisfying level.

5.3.2 Decomposition of ROIC: Profit margin and Turnover rate of invested capital

ROIC disregards how a firm is financed (Petersen & Plenborg, 2012). It can be manipulated in the short term and does not reveal how a company earns its ROIC – through high prices and declining market share, or stable prices and growing share. Therefore, we will look into what builds ROIC: the profit margin (PM) and the turnover rate of invested capital (ATO)[26]. Formula below explains the relationship:

$$ROIC\ (after\ tax) = Profit\ margin\ (PM)\ x\ Turnover\ rate\ of\ invested\ capital\ (ATO)$$

Profit margin (PM) measures a firm's ability to generate profit after consideration of all operating expenses. High profit margin indicates that a company has control over its expenses (Petersen & Plenborg, 2012):

$$Profit\ margin\ (after\ tax) = \frac{NOPAT}{Net\ revenues}\ (percent)$$

Turnover rate of invested capital (ATO) measures a firm's effectiveness in using its assets invested in the operation (invested capital). High turnover rate indicates that a company generates more revenues from the invested capital; lower ATO denotes lower capital efficiency (Petersen & Plenborg, 2012):

$$ATO = \frac{Net\ revenues}{Average\ invested\ capital}$$

Calculation of the profit margin and the turnover rate of invested capital is provided in the table below.

Table 5. Calculation of PM and ATO. Source: Own creation based on data from NNIT's annual reports

DKK '000	2010	2011	2012	2013	2014	2015
Net turnover	1,653,770	1,795,133	2,027,557	2,204,532	2,410,396	2,600,287
NOPAT	120,231	97,523	93,849	109,419	110,480	99,753
PM (after tax)	***7.27%***	***5.43%***	***4.63%***	***4.96%***	***4.58%***	***3.84%***
Average invested capital		460,517	632,249	742,862	791,113	855,597
ATO		***3.90***	***3.21***	***2.97***	***3.05***	***3.04***
ROIC (after tax)		***21.18%***	***14.84%***	***14.73%***	***13.97%***	***11.66%***

[26] Also known as DuPont model.

As we can see from the above calculations, the profit margin has visibly decreased in 2011 compared to 2010, from 7.27% to 5.43%. Profit margin continued declining in the next four years, and resulted in 3.84% in 2015, which means that NNIT was able to generate a net income of 3.84 øre for each DKK of sales. Even though net revenues have been growing during the entire period, the reason for such negative trend is a decreased NOPAT, especially in 2011, 2012 and 2015, which was caused by increased employee costs[27].

The turnover rate of invested capital has been falling in the years 2011-2013, from being almost 4 in 2011 and decreasing to 2.97 in 2013. In 2014 and 2015 a small growth resulted in ATO equalled to 3.05 (3.04 in 2015), which denotes that for each DKK invested in the operation, net turnover of 3.05 (3.04) DKK was generated. Both, net revenues and invested capital, have been increasing during the period analysed, however an increase in invested capital has been greater than in net revenues, therefore this have not contributed to an increase in the turnover rate.

Figure 14 displays fluctuations of ROIC, profit margin and turnover rate of invested capital during the analysed period and we can observe a slight decrease in ROIC. Moreover, the figure does not explain whether profit margin or turnover rate have a greater influence on ROIC.

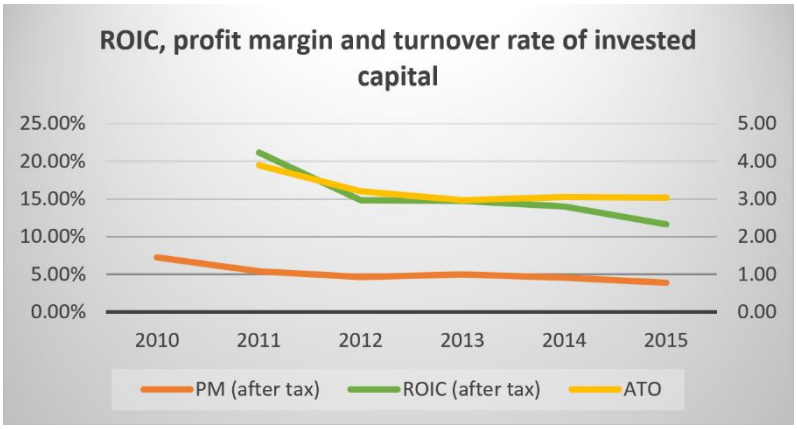

Figure 14. ROIC, Profit margin and Turnover rate of invested capital. Source: Own creation based on data from NNIT's annual reports

The profit margin and the turnover rate of invested capital describes the analysed industry. Service industry such as IT industry is characterised by a high turnover rate. The price of services is often a key competitive determinant, therefore it is difficult to retain a high profit margin. Higher turnover rate will be able to compensate for the low profit margin. Company should focus of differentiation of their services or other competitive advantages to generate higher profits. Another offering is tight cost control and invested capital held at a minimum (Petersen & Plenborg, 2012).

[27] This has been discussed in more details above.

5.3.3 Return on equity

The impact on profitability from financing is measured by return on equity (ROE). ROE measures the profitability taking into account **returns earned on operations** (ROIC) plus the effect of financial leverage as opposite to ROIC which only accounts operating profitability. ROE measures the profit level a company generates from the money that its shareholders have invested (Petersen & Plenborg, 2012). High return on equity is a signal of strong financial performance of the company. The following relationship represents the return on equity:

$$ROE = ROIC + (ROIC - NBC)\ x\ \frac{NIBD}{BVE}\ (percent)$$

where ROIC is return on invested capital after tax, NBC is net borrowing cost after tax in percent, NIBD is the same as net financial liabilities, BVE is book value of equity.

Spread (ROIC – NBC) and financial leverage together creates **return from financing activities:**

$$Spread = ROIC - NBC$$

$$NBC = \frac{Net\ financial\ expenses\ after\ tax}{Net\ interest\ bearing\ debt}\ (percent)$$

When calculating net borrowing cost using formula above, we need to be aware that NBC rarely matches a firm's borrowing rate. One of the reasons is that NBC is affected by the difference between deposit and lending rates. Moreover, currency gains and losses on securities are included in financial income and expenses (Petersen and Plenborg, 2012). NBC should be carefully interpreted, therefore we have decided not to use it for any other analytical purposes than as a part of ROE.

$$Financial\ leverage = \frac{Net\ interest\ bearing\ debt\ (NIBD)}{Book\ value\ of\ equity\ (BVE)}$$

Financial leverage is the degree to which a company uses debt (NIBD) and equity. High financial leverage indicates that the company uses more debt financing, and also means higher interest payments, which has a negative impact on company's earnings per share (Investopedia, 2015). Net interest bearing debt (NIBD) measures the difference between interest-bearing debt and interest-bearing assets and have been calculated in our reformulated balance sheet. Further in our calculations we have used average NIBD and average equity, since profit is measured over the entire year, and the balance sheet shows end-year numbers (Koller et al., 2005).

5.3.4 Calculation of ROE

As it is revealed in the formula, NNIT's return on equity is a function of its ROIC, its spread of ROIC over its after-tax cost of debt, and its book-based debt-to-equity ratio (Koller et al., 2005). The following table displays NNIT's yearly return on equity in the period 2010-2015.

Table 6. Calculation of ROE. Source: Own creation based on data from NNIT's annual reports

DKK '000	2010	2011	2012	2013	2014	2015
ROIC (after tax)		***21.18%***	***14.84%***	***14.73%***	***13.97%***	***11.66%***
NBC		-7.07%	-94.40%	46.82%	-2.80%	-1.71%
Net financials, after tax		-9,681	-16,423	-8,931	1,858	2,440
NIBD	-181,926	-91,748	56,954	-18,805	151,436	134,688
Average NIBD		-136,837	-17,397	19,074	66,315	143,062
Spread (ROIC - NBC)		28.25%	109.24%	-32.09%	16.77%	13.36%
Equity	577,648	617,060	682,232	765,344	684,252	740,818
Average equity		597,354	649,646	723,788	724,798	712,535
Financial leverage		-0.23	-0.03	0.03	0.09	0.20
ROE		***14.71%***	***11.92%***	***13.88%***	***15.50%***	***14.34%***

ROE was not stable during the analysed 5-year-period, it decreased from being 14.71% in 2011 to 11.92% in 2012, went up in two years after, resulting in 15.50% in 2014, and decreased again to 14.34% in 2015. Certainly, factors that have been previously discussed affected profitability of NNIT. Employee costs such as costs of goods sold and fixed overhead influence ROE. In order for NNIT to increase the return on equity, the company can increase ROIC by improving operations; here focus should be on NOPAT, i.e. employee costs. Increased employee costs have led to a decrease in NOPAT, especially in 2012,[28] and as a result negatively impacted ROE. The situation slightly improved in 2014 when NOPAT increased and subsequently positively affected ROE.

Lower net financials in 2011-2013 cannot be interpreted as an essential factor of the decreasing ROE, however critically low net financials of DKK -16.4 million in 2012 did influence ROE in a negative way. The spread between ROIC and NBC is an important factor; when the spread is positive, ROE increases and vice versa. The spread has been positive in all years except 2013, which means ROE would go further up with an increase in financial leverage (Petersen & Plenborg, 2012)[29]. Though it would lead to greater financial risk – risk to stockholder return. In 2013 financial leverage negatively impacted NNIT's ROE as NBC exceeded ROIC, and the spread equalled -32.09%.

[28] This has been discussed in more details above.
[29] Other things being equal

Financial leverage has increased over the time from -0.23 in 2011 and up to 0.20 in 2015 but stayed low which denotes a low debt level compared to equity. A greater financial leverage in 2014 positively impacted ROE. Increase in debt-to-equity ratio by swapping debt to equity (Koller et al., 2005) is an alternative to increase ROE. The latter makes ROE more sensitive to changes in operating profitability (ROIC) and increases risks shareholders will encounter. However, in May 2014 NNIT purchased Novo Nordisk shares which minimizes NNIT's risk when there are fluctuations in the share value (NNIT Annual Report 2014).

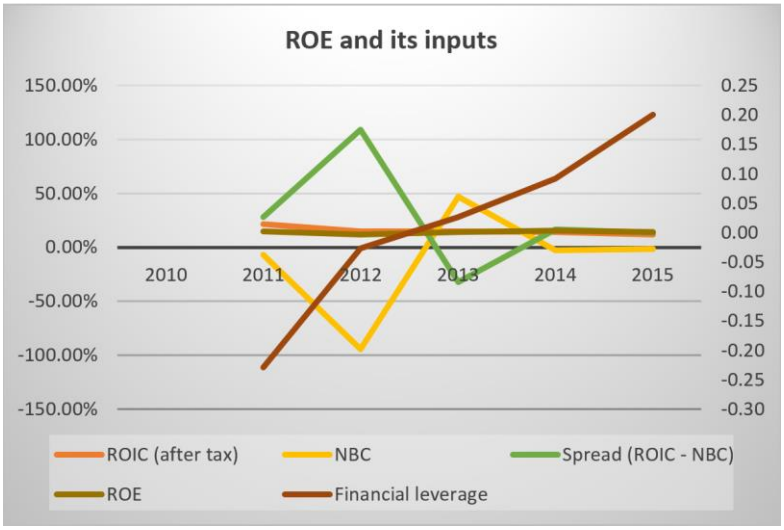

Figure 15. ROE and its inputs. Source: Own creation based on data from NNIT's annual reports

Assuming a company has a certain amount of cash, it has two options to return to shareholders – either to pay out dividends or through share buybacks. In 2014 and 2015 NNIT decreased the amount it pays in dividends, and increased share capital to DKK 250 million. When a company issues shares, the equity value increases, and ROE declines. NNIT's average equity has been growing during the period analysed which could have been a reason of a negative development in ROE in 2012-2013.

Decreasing ROE could be also explained by other external factors which were discussed in strategic analysis. The average ROE during the analysed period was 14.07% which is at a satisfactory level for NNIT's investors.

5.4 Cash flow analysis

Cash flow statements provide a company's cash receipts, cash payments, and the net change in the company's cash resulting from a company's operating, investing and financing activities for the period analysed (Petersen & Plenborg, 2012). Cash flow gives an insight to NNIT's ability to generate cash and how cash is used. When analysing company's cash flow, negative cash flow is not necessarily a negative indicator if the company is currently investing to generate larger cash flows in the future; sizable and stable cash flows support higher debt (Koller et al., 2005).

NNIT's annual reports provide the accountant's cash flow statement. The free cash flow to the firm (FCFF) that we are going to calculate is the after-tax cash flow which is independent of financing and non-operating items. We start with NOPAT which excludes non-operating income and interest expense. Further we calculate gross cash flow which is the cash flow generated by NNIT's operations. FCFF is a cash flow from operating activities less cash flow from investing activities. Cash flow from operating activities is represented by the sum of gross cash flow and the change in net working capital. Cash flow from investing activities or net investments includes the purchase of intangible and tangible assets. Both cash flow from operating activities and cash flow from investing activities are different from the accountant's prepared as we exclude items which we consider as non-operating. Next we calculate gross investment which is the sum of the change in net working capital and cash flow from investing activities and lastly FCFF.

The free cash flow statement is produced based on the reformulated financial statements and will be further used in discounted cash flow (DCF) valuation. Full free cash flow statement can be found in Appendix 8.

Table 7. Free cash flow to the firm. Source: Own creation based on data from NNIT's annual reports

DKK '000	2010	2011	2012	2013	2014	2015
Gross cash flow	165,366	160,067	183,797	217,227	234,496	240,970
Cash flow from operating activities	68,220	228,591	337,179	204,195	297,363	245,287
Cash flow from investing activities	-217,772	-109,968	-174,811	-104,249	-155,227	-136,041
Gross investment	-314,918	-178,492	-328,194	-91,216	-218,094	-140,358
Free cash flow to the firm (FCFF)	***-149,552***	***-18,424***	***-144,397***	***126,011***	***16,403***	***100,612***

Table 7 confirms that the free cash flow is determined by investments in fixed assets and working capital. NNIT's gross cash flow has been increasing during the analysed period, from DKK 165 million in 2010 and to DKK 241 million in 2015. Conversely, FCFF has been unstable: it was negative in 2010-2012 but in 2013 significantly increased. During 2013 NNIT focused on improving working capital which together with higher net profit resulted in a higher FCFF in 2013. An increase in cash flow from investing activities in 2014 (and 2012) was due to a lower effect from change in trade payables related to investments and higher net capital expenditure on assets in 2014 (and 2012) compared to 2013. The latter was a result of investments required in the onboarding of new customers and refreshing networks for the existing customers (NNIT Prospectus, 2014). FCFF decreased but remained positive in 2014. There was an increase in FCFF in 2015 compared to 2014 and that was due to increased reversal of non-cash items, such as depreciations combined with lower investments (NNIT Annual Report 2015).

When the company does not have cash, it is harder to develop new products, make acquisitions, pay dividends and reduce debt. However, a decreased or negative free cash flows signals that NNIT is making large

investments which is expected to pay off in the long run. Delayed investments would improve free cash flow for long-term value creation. Reinvestment of the gross cash flow would develop the company's growth (Koller et al., 2005).

Nevertheless, a high or rising free cash flow is more attractive for investors, as it makes a company to look healthy in a current environment. Moreover, if a company has undervalued share prices, the share price will increase shortly. We cannot say about NNIT that it has rising free cash flow, however it seems to be improving.

5.5 Liquidity risk analysis

Liquidity is used to address a basic question about the firm's financial health: how liquid is the firm. A business is financially liquid if the company's is able to meet short-term obligations, such as interest expenses, rental payments, and required principal payments (Koller et al., 2005). Lack of liquidity may limit management's freedom of action, reduce the potential for profitable investment opportunities, increase financial expenses, lead to bankruptcy. Liquidity is an important input to evaluate the credit risk of a company (Petersen & Plenborg, 2012). We split our analysis into short-term liquidity risk and long-term liquidity risk. All liquidity ratios rely on historical financial statements and therefore are backward looking (Petersen & Plenborg, 2012).

5.5.1 Short-term liquidity risk

Liquidity cycle

Liquidity cycle is the number of days it takes to convert working capital into cash. The fewer days it takes to convert working capital into cash, the smaller is liquidity risk (Petersen & Plenborg, 2012). The formula for liquidity cycle is following:

$$Liquidity\ cycle = \frac{365}{(Revenue\ /\ Net\ working\ capital)}\ (days)$$

Our calculations can be observed in the table 8.

Table 8. Liquidity cycle. Source: Own creation based on data from NNIT's annual reports

DKK '000	2010	2011	2012	2013	2014	2015
Net turnover	1,653,770	1,795,133	2,027,557	2,204,532	2,410,396	2,600,287
Net working capital	125,799	194,323	347,705	334,672	397,539	401,856
Liquidity cycle (days)	***27.76***	***39.51***	***62.59***	***55.41***	***60.20***	***56.41***

Calculations above show that NNIT has had a relatively low liquidity risk according to its liquidity cycle. However, what we can notice, is that the amount of days in liquidity cycle doubled from 28 days in 2010 to 56 days in 2015 which is mainly due to a significant increase in net working capital. This resulted in a growing liquidity risk.

Current ratio

Current ratio is another measure for the short-term liquidity risk and says whether the company is able to cover current liabilities by selling its current assets (Petersen & Plenborg, 2012). The formula is following:

$$Current\ ratio = \frac{Current\ assets}{Current\ liabilities}$$

and our calculations are presented in the table below:

Table 9. Current ratio. Source: Own creation based on data from NNIT's annual reports

DKK '000	2010	2011	2012	2013	2014	2015
Current assets	689,264	729,689	795,440	842,998	817,849	832,750
Current liabilities	398,071	461,484	507,031	495,998	572,970	547,524
Current ratio	***1.73***	***1.58***	***1.57***	***1.70***	***1.43***	***1.52***

Current ratio greater than 2.0 indicates low short-term liquidity risk (Petersen & Plenborg, 2012). According to current ratio, NNIT could not be regarded as healthy company since the company did not reach the current ratio higher than 1.73 during the analysed period. Conclusion on liquidity risk based on current ratio numbers, however, conflict with conclusion on the same based on liquidity cycle. This creates a need for an additional measure – quick ratio.

Quick ratio

Unlike current ratio, quick ratio only includes the most liquid current assets (excludes inventory), and therefore is perceived to be a more conservative indicator of the short-term liquidity risk. Quick ratio answer the same question as current ratio: is the company able to cover current liabilities by selling its current assets (Petersen & Plenborg, 2012). The formula for the quick ratio is following:

$$Quick\ ratio = \frac{Cash + Securities\ (other\ financial\ assets) + Receivables}{Current\ liabilities}$$

and our calculations are following:

Table 10. Quick ratio. Source: Own creation based on data from NNIT's annual reports

DKK '000	2010	2011	2012	2013	2014	2015
Cash and cash equivalents	357,209	280,243	143,627	234,990	97,648	131,026
Other financial assets	-22,434	-23,912	-21,219	-21,455	-22,269	-28,313
Receivables (exclude inventory)	330,278	445,984	612,776	556,668	663,527	650,679
Current liabilities	398,071	461,484	507,031	495,998	572,970	547,524
Quick ratio	***1.67***	***1.52***	***1.45***	***1.55***	***1.29***	***1.38***

The greater is quick ratio, the lower is short-term liquidity risk and better ability to service short-term debts. NNIT, like any other service delivery company, is less capital intensive and has relatively lower current and quick ratios, and a greater short-term liquidity risk which has been increasing during the analysed period. This is a bottleneck of the whole industry (Petersen & Plenborg, 2012).

5.5.2 Long-term liquidity risk

Financial leverage

Financial leverage is one of the measures of the long-term liquidity risk. Financial leverage is calculated as:

$$Financial\ leverage = \frac{Total\ liabilities}{Equity}$$

High financial leverage indicates high long-term liquidity risk (Petersen & Plenborg, 2012). Calculations of financial leverage are presented below:

Table 11. Financial leverage. Source: Own creation based on data from NNIT's annual reports

DKK '000	2010	2011	2012	2013	2014	2015
Total liabilities	413,629	467,530	546,302	510,975	598,158	594,963
Equity	577,648	617,060	682,232	765,344	684,252	740,818
Financial leverage	***0.72***	***0.76***	***0.80***	***0.67***	***0.87***	***0.80***

Table above shows that during the analysed period NNIT's has had a fairly low and stable financial leverage, which in turn means a low long-term liquidity risk.

Solvency ratio

Solvency ratio is a variation of financial leverage and another measure of the long-term liquidity risk (Petersen & Plenborg, 2012). We will measure the solvency ratio as:

$$Solvency\ ratio = \frac{Equity}{Total\ liabilities + Equity}$$

If market values would be available, the ratio should be based on market values rather than on book values (Petersen & Plenborg, 2012). Market values are more realistic and use current values, i.e. at the time of the

analysis and not historical financials. The difference between book values and market values can be very significant. In our calculations we use book values:

Table 12. Solvency ratio. Source: Own creation based on data from NNIT's annual reports

DKK '000	2010	2011	2012	2013	2014	2015
Equity	577,648	617,060	682,232	765,344	684,252	740,818
Total equity and liabilities	991,277	1,084,590	1,228,534	1,276,319	1,282,410	1,335,781
Solvency ratio	***0.58***	***0.57***	***0.56***	***0.60***	***0.53***	***0.55***

Low solvency ratio indicates high long-term liquidity risk. According to our calculations, solvency ratio has fluctuated between 0.53 (2014) and 0.60 (2013) which indicates that NNIT has had a good and stable balance between its equity and liabilities. The picture might be different if we would have used market values instead.

Interest coverage ratio

Interest coverage ratio measures company's ability to meet its net financial expenses, i.e. how many times operating profit covers net financial expenses (Petersen & Plenborg, 2012). The formula to calculate interest coverage ratio is:

$$Interest\ coverage\ ratio = \frac{Operating\ profit\ (EBIT)}{Net\ financial\ expenses}$$

In formula above we use EBIT, but some accountants replace EBIT with cash flow from operations:

$$Interest\ coverage\ ratio\ (cash) = \frac{Cash\ flow\ from\ operations}{Net\ financial\ expenses}$$

Interest coverage ratio (cash) provides more timely information about liquidity risk (Petersen & Plenborg, 2012). We have performed calculations using both formulas. Values for cash flow from operations have be taken from the free cash flow statement.

Table 13. Interest coverage ratio. Source: Own creation based on data from NNIT's annual reports

DKK '000	2010	2011	2012	2013	2014	2015
EBIT (operating profit)	162,548	131,848	126,800	138,653	141,331	127,888
Cash flow from operating activities	68,220	228,591	337,179	204,195	297,363	245,287
Net financial expenses	3,839	13,088	22,189	11,317	2,377	3,128
Interest coverage ratio	***42.34***	***10.07***	***5.71***	***12.25***	***59.46***	***40.88***
Interest coverage ratio (cash)	***17.77***	***17.47***	***15.20***	***18.04***	***125.10***	***78.42***

The higher the ratio, the lower the long-term liquidity risk. Interest coverage ratio greater than 2 is a signal of a low liquidity risk. Our calculations above show that both operating profit and cash flow from operating activities were constantly exceeding net financial expenses throughout the analysed period. Interest coverage

ratio has been declining in 2010-2012 and then raising in 2013-2014, and decreased again in 2015. Despite the fact that the interest coverage ratio decreased in 2015, it kept high showing that the long-term liquidity has improved. Interest coverage ratio (cash) showed a similar behaviour.

5.6 Conclusion on the financial analysis

Financial analysis has evaluated historical performance of NNIT and a summary is presented below. Note that NNIT in its annual reports provides values of various ratios, however as we have reclassified operating and financing activities and reformulated financial statements these ratios might differ. These adjustments lead to ratios being slightly lower, however were necessary to be performed in order to properly reveal company's operations. Operational ratios in turn serve as the key drivers for forecasting and a foundation for an accurate valuation.

Even though NNIT has been increasing its volume of sales every year from 2010-2015 by approximately DKK 200 million or 8-9% (in 2012 – by 12.95%), the cost of goods sold (COGS) has been increasing even more, fluctuating from 8.90% (2013) and up to 14.17% (2012)[30]. This means that COGS were increasing at a higher growth rate than net turnover, which resulted in NNIT not being able to maintain its gross margin (revenues less cost of goods sold) at the same level. A slight decreasing trend in gross margin is observed during the period analysed. Calculations are provided in the table below.

Table 14. Calculation of Gross margin. Source: Own creation based on data from NNIT's annual reports

DKK '000	2010	2011	2012	2013	2014	2015
Gross Profit	375,826	383,039	415,383	448,943	479,716	517,260
Gross Margin	***22.73%***	***21.34%***	***20.49%***	***20.36%***	***19.90%***	***19.89%***

Profitability ratios of NNIT have been fluctuating during the analysed period. NNIT has been experiencing a negative development on ROIC during the period analysed. ROIC has decreased from 21.18% in 2011 to 11.66% in 2015, however have not reached critically low level. What is more, ROIC has been greater than WACC, one of the most important cost of capital measure, meaning that NNIT has been creating the value rather than destroying it (Investopedia, 2015). Negative development of ROIC over the whole period, low net financials in 2011-2013 and a low financial leverage have impacted a return on equity which resulted in a

[30] These figures have been presented in table 4.

decline of ROE in 2012-2013. ROE started to stabilize in 2014 when it reached its highest value over the analysed period – 15.50%. In 2015 there was a slight decrease in ROE.

As a public company NNIT expects to have extra costs such as annual listing fees related to ongoing NASDAQ Copenhagen and VP Securities and costs related to the annual general meeting. Moreover, NNIT intends to pay higher salaries to their board members and is going to implement new employee incentive programme which bears additional costs (NNIT Prospectus, 2015). Nevertheless, Per Kogut, CEO at NNIT comments:

> *"In our first year as a listed company, the performance has been reassuring and we have delivered on our targets. Despite a competitive market and currency headwinds, we have been able to deliver […] the strong increase in free cash flow […] allows us to propose a dividend of DKK 4.00 per share corresponding to a pay-out ratio 46% of net profit." (NASDAQ, 2016).*

As it was suggested previously in order to increase ROIC and ROE NNIT should concentrate more on their employee costs. What is more, even though NNIT's invested capital has almost doubled, the company is not generating higher profits, therefore NNIT could try to retain the invested capital at a minimum. As discussed before, differentiation from competitors is an extra option for generating higher profits. NNIT has already set up targets to get new customers.

Cash flow did not have the same year-to-year trend during the analysed period. New large outsourcing contracts in 2012 and 2014 required higher investments which in turn led to a lower free cash flow. There was a reverse situation in 2013 and 2015 when NNIT had lower investments related to new clients and concentrated on improving working capital. The intrinsic value of the company is generated by its future cash flow and investors are interested in the company's future performance, not in its historical performance and definitely not in the cost of assets in the company (Koller et al., 2005). Thus in our next chapter we will forecast NNIT's future performance.

Financial ratios' goal was to help us to assess NNIT's liquidity risk. Our interpretations and conclusions are subjective as financial ratios are less useful in the absence of an appropriate benchmark (Petersen & Plenborg, 2012). Financial ratios signal that NNIT has an increasing short-term liquidity risk and a decreasing long-term liquidity risk. Good market conditions and steady growth of the demand for IT services[31] favour NNIT's

[31] Growth of the demand for IT services has been discussed more in detail in previous sections.

long-term financial health. The demand for IT services is expected to grow, and NNIT should an advance in offering new IT solutions and IT equipment to stay competitive.

Petersen and Plenborg (2012) states that if the company is facing short-term liquidity problems it could overcome these problems by getting funding from shareholders and lenders. Long-term liquidity problems are more challenging but that is not the case of NNIT. Cash and cash equivalents equalled DKK 131 million in 2015, should allow NNIT to increase debt capital and equity capital for short- and long-term investments (Koller et al., 2005). Based on the above, currently NNIT has no possible threats of getting bankrupted.

6. Forecasting

The strategic analysis has revealed an understanding of how the environment is changing and how to turn this understanding into strategic decisions. The financial analysis in turn has examined historical and current performance of NNIT. In addition, we also have identified the main value drivers which company should focus on. Now after both strategic and financial analysis are completed, we can apply this information to forecast company's future performance. Our budget will be prepared for multiple scenarios - "optimistic", "most-likely" and "pessimistic" - in order to show how the company should faster respond to downfalls and rises. We define an "optimistic" scenario as when NNIT increases its operating profit and continues expanding its business in Denmark and globally. A "pessimistic" scenario is a possibly the worst scenario for NNIT: we make assumptions what would happen if NNIT loses its main customers and IT industry slows down its growth. Finally, a "most-likely" scenario is a case when NNIT stays at its current or average growth level (2015). Due to limited amount of pages of the thesis we will not be able to discuss each scenario in detail.

In the following chapter we will determine length of the forecasting period, will make balance sheet forecast and income statement forecast. After that, we will calculate ROIC and FCFF for each forecast year as we have done for a historical performance. Forecasting will be based on theoretical concepts described in Koller et al. (2005) and Petersen and Plenborg (2012) textbooks.

6.1 Forecast period and method

Before preparing forecasts for NNIT, we have to decide on forecast period. Koller et al. (2005) recommends for forecasting to use a 10-15-year period, however both Koller and Petersen and Plenborg (2012) argue that an extended period might introduce bigger and extra estimation errors. What is more, the explicit forecast period should reach a steady state when the company is growing at a constant rate, is constantly reinvesting its operating profit and is constantly earning on actual and new capital invested (Koller et al., 2005). As we have mentioned before, an average business cycle is approximately six years, therefore we have decided to develop an explicit forecast for six years, 2016-2021. From the subsequent year we assume the terminal period with a constant growth rate.

Several forecasting techniques exist, each having a special use and a particular application; the two most common used methods are described. In a "line-item" approach each accounting item is forecasted without referring to the expected level of activity. A deep understanding of each item is necessary to make a forecast. In a sales-driven forecasting approach, different accounting items are driven by the expected level of activity (i.e. sales growth) (Petersen & Plenborg, 2012). Consequent enables to estimate the majority of items in the financial statements as a percentage of sales and the ratios of those items are fairly stable. Hence, we will use sales-driven forecasting.

6.2 Income statement forecast

We will start by forecasting income statement and we will discuss net turnover forecast, costs forecast including depreciation and amortization forecast, tax rate forecast, net financial forecast and net operating profit after tax forecast. Income statement forecast for each scenario can be found in Appendix 11.

6.2.1 Net turnover forecast

Net turnover forecast is yet the most significant item to forecast in the sales-driven approach. Since NNIT have its operations in two business areas and four customers groups, we forecast net turnover for each area and group separately in order to see the growth development in each segment. Due to limited page amount, we will not discuss each segment in depth but only the most significant elements. Forecasts for each segment will be rounded to the nearest quarter of a percent.

In order to estimate net turnover we will use two approaches – a top-down and a bottom-up – meaning we will take into account both market prospects and NNIT's own forecasts of demand from current and potential customers (Koller et al., 2005).

We have discussed in previous chapters that a moderate growth in economies is projected in 2016 and going forward. Economies have stabilized after recession. IDC (2014) forecasts a slight but continuous growth in the IT spending in the Danish **public** sector. Digitalization in the public sector and welfare services driven by cost savings, job creation potential and technological advancements creates new opportunities. A non-profit organisation called KOMBIT promotes an open competition and tender management system among IT vendors (NNIT Prospectus, 2015). No doubt, this is beneficial for NNIT as previously it has been dominated by KMD.

The **finance** industry already outsources its operations and uses offshoring widely. Due to the global financial crisis, the finance industry have to comply with more regulations than before which in turn increase the need for IT solutions. Information Management which includes customer risk assessment and customisation of customer experience and digitalisation of financial business processes as well require information processing.

NNIT provide services to some large **enterprise** customers such as Bang & Olufsen, Vestas, Coop, Arla, COWI and Danish Crown. These businesses have experienced high growth in net turnover over past years and are concerned in cost savings and latest IT-driven innovations (e.g. cloud).

NNIT has estimated that IT services market in the international **life sciences** is expected to increase by 15.75% from approximately DKK 12.7 billion in 2014 to approximately DKK 14.7 billion in 2020 (NNIT Prospectus, 2015 and Valcon report based on third party data, 2015). Legislation regarding the new standards for the identification of medical products (i.e. ISO IDMP) and serialisation compels life sciences companies have resource to IT services providers. All in all, the life sciences and healthcare industry is expected to increase IT spending on outsourcing a CASR[32] of 4.5% between 2013 and 2018 as compared to 3.9% for banking and securities, 2.7% for government, 3.8% for utilities and 3.7% for transport (Gartner, 2015).

In general, mature industries are growing slower, however IT industry cannot be characterized as a mature; it is still in a growing stage. NNIT over the analysed period 2010-2015 in average increased net turnover by 8.61% per year. In 2012 the growth was at the highest level resulting in 12.95%. This could be primary due to the recruitment of two major new customers, Arla and DSB[33] (NNIT Annual Report 2012). Opposite was in 2010 – NNIT's net turnover raised by 4.21% only. New data center built could be one of the reasons for

[32] Compound Annual Growth Rate is a mean annual growth rate over a determined period of time longer than a year (Investopedia, 2016).
[33] Other new customers in 2012 were Bristol-Myers Squibb, Haldor Topsøe, Ikano Bank, Nykredit and Telia (NNIT annual report, 2012).

this. Both extremely high and low figures offset each other, therefore we have decided 8.61%, an average of 2010-2015, is a good and realistic estimate for 2016.

Press release on May 19th, 2016 announced that NNIT has signed a new agreement with PANDORA which means that PANDORA's IT operations will be handled by NNIT. The agreement will run for five years with an option of a two-year extension and amounts in the mid three-digit DKK million range. On May 3rd, 2016 NNIT announced about a significant ten-year agreement, with the option of extension, with Danske Bank on delivery of Tier III data center capacity at two different locations. The agreement comes along with NNIT expanding its data center capacity by building an additional data center which is expected to be ready for use in Q1 2018. The agreement will become effective from Q1 2017 and represents a medium-size three-digit DKK million amount. Earlier this year, NNIT announced about a five-year agreement, with an option of a two year extension, with another new customer outside the Life Sciences segment. The agreement represents a medium-size three-digit DKK million amount. The customer name was not publicized. The existing five-year contract with DSB has been extended and will run from April 1, 2017 to March 31, 2019 and represents a minor three-digit DKK million amount (NNIT News & Media, 2016).

Based on the discussion above, in a "most likely" scenario we estimate net turnover to grow by 8.61% in 2016, and then the growth rate will increase by 1% in 2017-2019 resulting in net turnover growth of 9.61%, 10.61% and 11.61% respectively. Further we estimate net turnover to grow slower – by 9.61% in 2020 and by 8.11% in 2021. The reason of a slower growth is driven by possible strengthened competition and a lack of new agreements. In the terminal period we assume net turnover growth to be 6.11% (2% lower than in 2021). It is smaller than in explicit forecast period due to various potential risks that might arise in the future and we are not able to state them yet.

When we look into each customer group separately, in life sciences we forecast net turnover to grow by 9% in 2016-2019, and then decrease to 3% in the terminal period. NNIT is working on getting more customers in other customer groups, however NNIT's aim is to be a leading international IT partner for life sciences. Currently NNIT has growth rates of 16.5% in life sciences outside the Novo Nordisk Group and has agreements with large and small international life sciences companies (NNIT Annual Report 2015). We forecast a decrease in a growth in this sector closer to the terminal period as the hazards do exist in the future. According to our forecast, finance sector will experience the highest growth, from 17% in 2016 and up to 28% in 2019, in the terminal period – 17.50%. As mentioned before, main contributor is a new contract with Danske Bank and a general focus on IT and security in a financial sector. Public and enterprises are expected

to have similar growth rates, 5.50-6.00% in 2016, going up to 11-12% in 2019 and remaining 6.50-7.50% in the terminal period. As per area, IT Operation Services is forecasted to have a growth in net turnover by 9.50% in 2016 and in subsequent years we expect the growth rate to go up to 13.75% (2019), thereafter it will start to go down resulting in 7.25% in the terminal period. For IT Solution Services, we estimate a lower growth since historically the average increase in net turnover was weaker than in Operations area. We expect a net turnover growth in years 2016-2019 of a rough 7% each year. Following years - 2020 and 2021, it is expected to see a decline in growth rate and settle at 3% in the terminal period.

Our estimates for an "optimistic" scenario are 8.61% in 2016, 10.61% in 2017, 12.11% in 2018, 12.61% in 2019, 10.61% in 2020 and 9.11% in 2021; 7.11% in the terminal period (2% lower than in 2021). For a pessimistic scenario we forecast a situation similar to 2004 when the company have just separated from Novo Nordisk and have not signed any big contracts outside Novo Nordisk. Unfortunately, annual reports earlier than 2007 are not publicly available which makes it harder to make such estimates. Net turnover in 2006 was approximately DKK 1 billion (NNIT Annual Report, 2007) and that will be our reference point for 2018. An average negative growth rate of 22% in the forecast period and 1% in the terminal period is forecasted. Each scenario forecasts can be found in Appendix 11. Net turnover forecasts for each segment in an "optimistic" and a "pessimistic" scenarios are not provided due to possible high estimation errors.

6.2.2 Costs forecast

Costs forecast comprise COGS, sales and distribution costs, administrative expenses and depreciation and amortization. Since costs had a similar year-to-year trend we have decided to use an average of 2010-2015 to forecast 2016 figure. We estimate COGS of 79.22%, sales and distribution costs of 5.26% and administrative expenses of 4.42%. In a "most-likely" scenario we expect the average of 2010-2015 for our forecast and the terminal period. Costs in a relationship to net turnover could possibly decrease by 0.25% each year in an "optimistic" scenario if NNIT as it was discussed previously will focus on their employee costs. An increase in COGS growth rate by 1-2% and in other costs by 0.25-0.5% each year could result due to NNIT expecting to have additional costs such as annual listing fees, NASDAQ and VP Securities fees, costs related to the annual general meeting, new incentive system implementation costs and a risk of increased future costs – that is a "pessimistic" scenario. The terminal value in both an "optimistic" and a "pessimistic" scenarios is assumed to equal 2021 figure.

We estimate depreciation and amortization relative to net turnover which might be inaccurate in case when net turnover increases but there are no capital expenditures. It would be more accurate to predict depreciation

and amortization relative to property, plant and equipment (PP&E). Unfortunately, we lack information of the future PP&E. Moreover, we do not have an access to internal information about NNIT's assets and their life and salvage value (Koller et al., 2005). Depreciation and amortization had almost doubled figure in 2012, while being approximately 17,000 or 0.25% higher each year. We believe it is realistic to estimate it to increase by 0.25% in subsequent years in all scenarios. For the terminal period we have set depreciation and amortization to be the same as in 2021, i.e. 6.93%.

6.2.3 Tax rate forecast

Predicting future tax rate is difficult as it is dependent on various factors but most financial planners assume it will rise. We will simplify the forecast and apply the average tax rate of 2010-2015, 23.8%, into the whole forecast and the terminal period in all scenarios.

6.2.4 Net financials forecast

Historically net financials have been less than 1% relative to net turnover, and negative in 2010-2013.

Therefore we estimate is to be 0.11% - an average of past two years – in the whole forecast and the terminal period for all scenarios.

6.2.5 NOPAT forecast

After all the forecasts have been conducted, we can estimate net operating profit after tax forecast. Each scenario proposes different figures. In a "most likely" scenario we expect NNIT to experience a stable growth of 3-4% in NOPAT. We believe this figure is realistic and is in line with yearly averages during analysed historical period. If we try to be more optimistic, and we take into account an increasing amount of customers and services offered by the company, NOPAT will continue growing with 0.38 percentage points higher each year until the terminal period when we forecast a profit growth of 6.03%. In a "pessimistic" scenario NNIT will have a negative growth in operating profit resulting in -6.92% by the terminal period. IT industry is highly competitive and rapidly changing, therefore we cannot guarantee that NNIT will sustain profitable growth.

6.3 Balance sheet forecast

Next step is to forecast a balance sheet. To begin with, we will forecast net working capital and net non-current operating assets, and then we will estimate invested capital which is the sum of the first two. This is

discussed in the following subchapters and balance sheet forecast for each scenario can be found in Appendix 12.

6.3.1 Net working capital forecast

Inventories, receivables, work in progress, prepayments received, trade payables and tax payables constitute net working capital (NWC). Historical performance has showed that NWC significantly increased in 2012, as a percentage of sales (net turnover) – by 6.32% in comparison to 2011 figure. Main contributors of NWC increasing are trade receivables which draw up payments due to NNIT by its customers.

As we have mentioned before, an increase in trade receivables in 2012-2015 was partly a result of NNIT attracting new large customers. NWC has remained stable high in 2013-2015, therefore we have assumed analogous trend in future. In a "most likely" scenario we estimate NWC to be 16.07% - the average of 2012-2015 figures – in 2016-2021. Such decision matches with Koller et al. (2005 and 2015) theory. In a "pessimistic" scenario we forecast NWC growth rate to be falling by 1-3% the next forecast years. Controversially, in an "optimistic" scenario growth rate of NWC is expected to rise by 0.5-1.5% each year in the forecast period. In the terminal period we assume a growth rate of 3.45% in a "pessimistic" scenario and 20.07% in an "optimistic" scenario to be realistic.

6.3.2 Net non-current operating assets forecast

Net non-current operating assets comprise intangible and tangible assets and deferred tax assets and liabilities. The former, i.e. tangible assets, more than doubled in 2010 compared to 2009 figure and has been continuously growing which correspondingly resulted in increasing net non-current operating assets in 2010-2015. As a percentage of sales, net non-current operating assets have barely fluctuated during the analysed historical period, therefore in 2016 we estimate net non-current operating assets to be an average of 2010-2015 figures. We expect the same figure, 18.19%, to be in the whole forecast period and in a terminal period in all scenarios.

6.3.3 Line items and invested capital forecasts

As specified by Koller et al. (2005) most line items of NWC can be forecasted relative to sales, while it might be more accurate to estimate inventories and accounts payable as a percentage of cost of goods sold as inventories and accounts payable are tied to prices. We will lower the complexity by forecasting all line items relative to sales. All line items forecasts are presented in Appendix 12. Invested capital forecast is a sum of

net working capital forecast and net non-current operating assets forecast. Depending on the scenario, we estimate it to vary from 33.01% to 34.26%.

6.4 ROIC, PM and ATO forecasts

We have analysed return on invested capital, profit margin and asset turnover historically, and now will make projections on their future performance. In the previous section, we have produced income statement and balance sheet forecasts, thus we will use these produced figures.

In a "most-likely" scenario we expect a slight decline in a growth in ROIC, while PM and ATO remaining stable. We expect a continuous development in ROIC in an "optimistic" scenario and a decline in a "pessimistic" scenario. All figures are presented in Appendix 13.

6.5 Free cash flow to the firm forecast

In order to start valuation of the company we will finalize our forecasting chapter with the free cash flow to the firm forecast. Most line items of the FCFF have been forecasted in previous sections. Capital expenditure, or CAPEX, will be discussed in the next section.

6.5.1 CAPEX forecast

Development in CAPEX has been fluctuating over the analysed historical period. There was a decrease in CAPEX when NNIT have had less large outsourcing contracts (e.g. in 2015). Last year, company focused on efficient utilization of their data center (NNIT Annual Report 2015). Now, after new agreement with Danske Bank has been signed and NNIT announced that new data center will be built, we expect an increase in CAPEX. NNIT on its homepage presume an investment of around DKK 250 million over the period 2016-2018. This estimation is close to CAPEX figure in 2010 when first data center was built, therefore we believe DKK 250 million in 2016-2018 is a realistic assumption for a "most-likely" scenario. In an "optimistic" scenario, we estimate DKK 215 million (a little less than in 2010) and in a "pessimistic" – DKK 285 million. Even if NNIT loses its main customers (what we assume in a "pessimistic" scenario), new data center will be built. In the following years for a "most-likely" scenario we forecast CAPEX of DKK 136 million – an average of historical years without building a new data center, i.e. 2011-2015. There is a likelihood that NNIT might require a new data center in 2024-2025 in order to be able to serve customers, however this estimation does not have any evidence. We use the lowest historical CAPEX, DKK 104 million, for our estimation in

2019-2021 in an "optimistic" scenario, and the highest historical figure, DKK 175 million, for a "pessimistic" scenario. CAPEX estimation is lowered to DKK 130 million in the terminal period for all scenarios.

6.5.2 FCFF forecast

The free cash flow to the firm is expected to increase in a long term, though depending on a scenario to a different degree. Increased investments due to a new data center lead to a lower FCFF in 2016-2018 which will be improved in the coming years. FCFF forecast for each scenario can be found in Appendix 14.

6.6 Conclusion on the forecasting

Before preparing a budget, an explicit forecast period has to be determined. Our decision of a 6-year explicit forecast (2016-2021) is based on combination of Koller et al. (2005) and Petersen and Plenborg (2012) theory. Terminal period, which is simplified, starts in a consequent year after the explicit period. Projected financial statements are of great importance as they will be further used in the valuation.

Forecasting has been prepared relative to net sales and a ground for our assumptions is the historical performance. Three different scenarios have been produced in order to foresee NNIT's several alternative future developments. A "most-likely" scenario displays assumptions that we believe are the most realistic. These assumptions are mostly in line with NNIT's yearly averages.

In the first place we have forecasted income statement. We expect an increase in net turnover growth in 2016-2019 followed by a slow-down by the terminal period. NNIT has a strong market position in Denmark, supports Danish customers in their international expansion and provides their services to international businesses. We assume highest growth in Finance customer group due to a new significant agreement with Danske Bank. A peak growth of 26.5% and 28% is expected in 2018-2019 when a new data center will be built. Life sciences are forecasted to have a steady growth of 9% and thereafter lowered to 6% in 2021 and 3% in the terminal period mainly driven by the risk of a loss of NNIT's principal customer, Novo Nordisk. This would affect net turnover and have a material adverse effect on NNIT's business (NNIT Prospectus, 2015).

Costs forecast which composes COGS, sales and distribution costs, administrative expenses and depreciation and amortization are estimated in accordance to historical averages due to their low fluctuation during the analysed period. Growth in net turnover and stable costs drive NOPAT to grow over time by 3-4% in a "most-likely" scenario.

In the second place we have prepared budgeted balance sheet. We have assumed that forecast of invested capital and its components – net working capital and net non-current operating assets – will be based on its line items' historical averages. Since historical performance have had the same growth pattern, we have decided to apply the same growth rates for the whole forecast and terminal periods. In order to forecast net working capital, an average of 2012-2015 has been used to estimate its line items. We have excluded 2010-2011 in calculating averages as during this period figures were very different from the past years. Net non-current operating assets forecast is based on its line items' historical change during 2010-2015. We projected NWC at 16% of net turnover and NNCOA at 18% of net turnover, resulting in invested capital of 34% relative to net turnover.

In the third place, calculations of ROIC, PM and ATO were carried out. ROIC is forecasted to lower until it reaches 9.55% in the terminal period. Decrease in ROIC accompanies PM's fall since ATO is expected to remain persistent.

Last but not least, we have determined free cash flow to the firm which in a "most-likely" scenario is expected to fall due to large investments (CAPEX) as a new data center is being built throughout 2016-2018. The FCFF is expected to increase in 2019 and threefold by the terminal period.

Forecasts for the remaining two scenarios are extreme cases. An "optimistic" is the most favourable scenario for NNIT. It assumes higher growth rates, concentration on employee costs, new agreements with customers and new IT services, which all in turn would lead to an increased NOPAT, ROIC and FCFF. On the contrary, a "pessimistic" scenario assumes more critical and dangerous situation. NNIT losing its main customers, decline in net turnover growth, higher costs and increased capital expenditures followed by intensified rivalry among existing firms characterize figures behind a "pessimistic" scenario.

7. Valuation

We have performed a strategic analysis which has helped us to determine macro-environmental (external marketing environment) and the competitive environment factors. Moreover, we have carried out a financial analysis which has clarified a historical performance of the company. These analyses enabled us to perform forecasts for NNIT's future performance. We are now able to value the company.

We will try to evaluate our company from a buyer's perspective. We have decided to perform an absolute valuation in order to answer our problem formulation – finding the value of NNIT's IPO as of the **May 20th 2016**.

What we have to take into consideration, is that a valuation of the company relies on its expected future performance. Some value drivers rely on the analysts' subjective estimation. That creates a need of conducting a sensitivity analysis. We perform a sensitivity analysis of the WACC and the share price for a "most-likely" scenario. Sensitivity analysis also enable us to test how the WACC and the share price values would be affected by an increase/decrease in different parameters.

Valuation will be performed in accordance with theoretical concepts described in Koller et al. (2015) and Petersen and Plenborg (2012) textbooks.

7.1 Choice of framework

In this section we discuss two basic methods: absolute and relative valuation models that are used to determine estimated value of equity.

Absolute valuation is a process where we assess the current intrinsic ("true") value of the company based on its forecasted cash flows. This is carried through discounting future profits – free cash flow (or economic growth) – at a determined discount factor. Future performance is then calculated in a budget period and at a terminal value. Present value models such as Discounted Cash Flow (DCF) and Economic Value Added (EVA) are the main frameworks that will be used in the absolute valuation. The absolute models are flexible, quite easy to use but time consuming methods to value a company. They are theoretically correct methods, even though based on subjective forecasts.

Relative valuation measures one company's valuation relative to another. Multiples is practitioners' choice of relative valuation approach. The advantage of the relative valuation is that it provides valuation on current stocks and its alternatives in the industry. The main pitfall of relative valuation is that it assesses current valuation and does not advise whether it is appropriate at this point of time. Therefore it is important to have comparable companies that are similar in size and other fundamentals.

Important point to highlight, both of these approaches are affected by the investor's required rate of return on the stock because this rate is used or is a major component of the discount rate.

7.2 WACC

To perform an absolute valuation, we will use two most commonly used models – the Discounted Cash Flow (DCF) and the Economic Value Added (EVA) – but before that we have to find the discount rate WACC. The Weighted Average Cost of Capital is the discount rate for the free cash flow or the rate of return that investors expect to earn from investing in the company. Koller et al. (2005) defines WACC as:

$$WACC = \frac{D}{D+E} r_d \, (1-T) + \frac{E}{D+E} r_e$$

where D is net interest bearing debt (NIBD), E is equity, r_d is the required rate of return for debt, r_e is the required rate of return for equity, T equals the corporate tax rate.

Each component has been decomposed and calculated in order to determine the WACC. Due to limited amount of pages, all discussions and calculations can be found in Appendix 15.

Final calculation of the WACC results in the following:

$$WACC = (2.62\% \text{ x } 1.885\%) \; + \; (97.38\% \text{ x } 8.099\%) \; = \; 7.94\%$$

WACC estimate is close to the IT industry average of 8.27% (Damodaran, 2016) and therefore is assumed reasonable. In the valuation we will use the WACC of 7.94%.

7.3 DCF valuation

The discounted cash flow model assumes company's profits and free cash flows and determines a company's stock price. The DCF model is great for making important long-term strategic decisions (Koller et al., 2015). In the previous sections all necessary components have been determined which allows us to perform the DCF valuation.

Below is presented the DCF for a "most-likely" scenario. We have estimated the free cash flow to the firm in the forecasting chapter. Growth rate (g) in the market is expected to grow at a compound annual growth rate (CAGR) of 3.3% (Gartner, NNIT Annual Report 2015). The discount factor for each year is 1 divided by 1 plus WACC raised to the power of 1, 2, 3 etc. respectively for each subsequent year. However, we have adjusted the discount factor for May 20th 2016. May 20th was a 141st day in a leap year meaning that the discount factor will be calculated in a power of 0.615[34] for the first forecast year. The present value of FCFF

[34] 366 – 141=225; 225/366=0.615

was calculated by multiplying each year's FCFF by the corresponding adjusted discount factor and thereafter summed across years into the present value of FCFF in the forecast period. The present value of FCFF in the terminal period is determined by dividing the FCFF value in the terminal period with the difference between WACC and growth assumption, and then multiplying obtained result by the 2021E's discount factor. The sum of present value of FCFF in the forecast and the terminal period constitutes the enterprise value. Finally, the share price is calculated by dividing the estimated value of equity with the total number of outstanding shares. This figure has been then multiplied by 1000 as we show financial statement items in thousands.

Table 15. Discounted cash flow valuation. Source: Own creation based on NNIT's forecasted statements

	Explicit forecast period						
DKK '000	**2016E**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**	**Terminal period**
FCFF	-24,904	11,929	37,222	181,811	225,858	267,119	311,274
g	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
WACC	7.94%	7.94%	7.94%	7.94%	7.94%	7.94%	7.94%
Discount factor (31/12/2015)	0.9264	0.8583	0.7952	0.7367	0.6825	0.6323	
Duration	0.615	1.615	2.615	3.615	4.615	5.615	
Adjusted discount factor (20/05/2016)	0.9541	0.8839	0.8189	0.7587	0.7029	0.6512	
Present value of FCFF	**-23,762**	**10,545**	**30,481**	**137,935**	**158,747**	**173,937**	
Present value of FCFF in forecast period	487,884						
Present value of FCFF in terminal period	4,368,319						
Enterprise value	**4,856,203**						
Net interest bearing debt (2015)	-134,688						
Estimated value of equity	**4,721,515**						
Number of shares outstanding	25,000,000						
Share price	**188.86**						

The DCF valuation shows a share price of DKK 188.86 whilst NNIT's close price on May 20th 2016 was DKK 200.50. The difference of 5.81% could mean that NNIT's shares are over-valued or our forecasts for a "most-likely" scenario are too weak. Due to that, we have looked into other scenarios.

Calculations of the share price for an "optimistic" and a "pessimistic" scenarios can be found in the Appendix 17. As discussed earlier, no huge negative impact on financial condition which could bring NNIT close to bankruptcy is foreseen in the upcoming years. Taking into consideration findings from the strategic and the financial analyses and scenario assumptions, the weight assigned to an "optimistic" and a "pessimistic" scenario is 40% and 10% respectively; the highest probability, 50%, is assigned to a "most-likely" scenario.

Table 16. Calculation of weighted share price. Source: Own creation based on data from the DCF valuation for different scenarios

DKK	Scenario weight	Scenario share price	Weighted share price
Most-likely	50%	188.86	94.43
Optimistic	40%	285.67	114.27
Pessimistic	10%	-99.65	-9.96
			198.73

Table above displays the calculation of weighted share price. We believe that in regards to the latest company news the weighted share price provides higher accuracy.

7.4 EVA valuation

The Economic Value Added (EVA) approach rely on accrual accounting data as opposed to the DCF that relies on cash flow data, and estimates the enterprise value of the company (Petersen & Plenborg, 2012). Both the EVA model and the DCF model compose of values in the explicit forecast period and in the terminal period. The EVA valuation uses the NOPAT and the invested capital, beginning of the period (year before) forecasted values. In order to calculate EVA, we first have to compute the cost of capital which is the invested capital multiplied with the WACC. EVA is then the difference between NOPAT and the cost of capital. Next steps in determining the share price are similar to the DCF valuation. Again we present a "most-likely" scenario in the table below. An "optimistic" and a "pessimistic" scenarios can be found in Appendix 18.

The estimated share price is DKK **54.16** and is different from the value using the DCF model. In theory, these valuations should return similar results. Separation of operating and financing assets and liabilities performed in the financial analysis might be incorrect thus leading to incorrect invested capital and distortion in EVA. Accounting distortions and wrong periodizing of EVA could be another reason. EVA has a tendency to be small at the beginning of a project and increase by the end of the project. NNIT's EVA has an opposite pattern. Historical performance could have been affected by a high inflation which in turn leads to wrong underlying rate of return and forecasting. Such was seen in 2010-2012 when the inflation rate was approximately 3% and today is 0.23% (Inflation.eu, 2016; TradingEconomics.com, 2016). Assets have different depreciation schedules which interfere forecasting of the NOPAT. All above mentioned generate the value of EVA far from the cash flow based measure. Considering these effects we have decided to trust the DCF value.

Table 17. Economic value added valuation. Source: Own creation based on NNIT's forecasted statements

	Explicit forecast period						
DKK '000	**2016E**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**	**Terminal period**
NOPAT	116,633	121,946	128,364	135,990	141,081	143,899	152,691
Invested capital, beginning of period	875,506	967,575	1,060,559	1,173,084	1,309,279	1,435,101	1,551,487
g	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
WACC	7.94%	7.94%	7.94%	7.94%	7.94%	7.94%	7.94%
Cost of capital	69,515	76,825	84,208	93,143	103,957	113,947	123,188
EVA	**47,118**	**45,121**	**44,156**	**42,847**	**37,125**	**29,952**	**29,503**
Discount factor (31/12/2015)	0.9264	0.8583	0.7952	0.7367	0.6825	0.6323	
Duration	0.615	1.615	2.615	3.615	4.615	5.615	
Adjusted discount factor (20/05/2016)	0.9541	0.8839	0.8189	0.7587	0.7029	0.6512	
Present value of EVA	**44,956**	**39,884**	**36,160**	**32,507**	**26,094**	**19,504**	
Invested capital, beginning of period	875,506						
Present value of EVA in forecast horizon	199,103						
Present value of EVA in terminal period	414,040						
Estimated enterprise value	**1,488,649**						
Net interesting-bearing debt	-134,688						
Estimated market value of equity	**1,353,961**						
Number of shares outstanding	25,000,000						
Share price	**54.16**						

7.5 Advantages and disadvantages of both approaches

The DCF and the EVA valuation are similar and leans on the inputs from budgets and estimations of the WACC and growth rates. The difference in those two models is that the DCF provides a present value of the FCFF and the EVA centers the cost of capital over time. The DCF valuation displays how changes in net working capital and CAPEX influence the FCFF and in turn the value of equity. The EVA concentrates on the accounting rate of return.

The DCF is most commonly used valuation model which relatively simple and provides a fair value of the analysed company. However, outputs of both approaches can significantly fluctuate as they rely on the inputs used in the valuation. Estimations of growth rates, free cash flow components and the invested capital have to be accurate in order to see a clearer picture. Lack of published information is another disadvantage as it leads to a subjective valuation.

7.6 Multiples

Relative valuation using multiples can only be performed if a company has direct peers with the same portfolio and growth rates. Today NNIT can be considered as a fast growing company which has no direct peers. In December 2015 NNIT's share price compared with its Nordic peers[35] is approximately DKK 60 higher and with European peers[36] - approximately DKK 35 higher (NNIT Annual Report 2015). The major IT service provider in the life sciences is NNIT therefore no clear peers are visible. IBM which provides IT outsourcing is a mature company and therefore cannot be considered as a peer company. Moreover, multiples are not accurate in markets that are over- or undervalued. Multiple analysis will not be performed in the thesis.

7.7 Sensitivity analysis

In order to evaluate the accuracy of the valuation a sensitivity analysis of the parameters used in the valuation will be performed. We have decided to develop the WACC and the share price sensitivity analyses for a "most-likely" scenario.

Taking into consideration findings from the strategic and financial analyses, and subsequent forecasting one can say that changes in the capital structure might incur in the long term. NNIT has signed significant agreements with new customers and is expanding its computer and storage systems by building a new data center. Therefore, we have developed a sensitivity analysis to see how WACC is changing towards variation of the debt ratio and the beta.

Table 18. WACC sensitivity analysis. Source: Own creation based on data from NNIT's annual reports

		Debt ratio									
		1.62%	**2.62%**	3.62%	4.62%	5.62%	6.62%	7.62%	8.62%	9.62%	10.62%
	0.25	2.98%	2.97%	2.96%	2.95%	2.94%	2.93%	2.91%	2.90%	2.89%	2.88%
	0.50	4.24%	4.21%	4.19%	4.16%	4.14%	4.12%	4.09%	4.07%	4.04%	4.02%
	0.75	5.49%	5.45%	5.42%	5.38%	5.34%	5.31%	5.27%	5.23%	5.20%	5.16%
B	1.00	6.74%	6.69%	6.65%	6.60%	6.55%	6.50%	6.45%	6.40%	6.35%	6.30%
e	**1.25**	8.00%	**7.94%**	7.87%	7.81%	7.75%	7.69%	7.63%	7.56%	7.50%	7.44%
t	1.50	9.25%	9.18%	9.10%	9.03%	8.95%	8.88%	8.80%	8.73%	8.65%	8.58%
a	1.75	10.51%	10.42%	10.33%	10.24%	10.16%	10.07%	9.98%	9.89%	9.81%	9.72%
	2.00	11.76%	11.66%	11.56%	11.46%	11.36%	11.26%	11.16%	11.06%	10.96%	10.86%
	2.25	13.02%	12.90%	12.79%	12.68%	12.56%	12.45%	12.34%	12.22%	12.11%	12.00%
	2.50	14.27%	14.14%	14.02%	13.89%	13.77%	13.64%	13.51%	13.39%	13.26%	13.14%

[35] Nordic IT peers: Atea, Cybercom, KnowIT, HiQ, Tieto
[36] European IT peers such as Atos, Bechtle, CapGemini, Devoteam, Gfi Informatique, IndraSistemas, Ordina, Sopra Steria

In the above table we can observe that an increase in the debt ratio with a constant beta lead to a slight decrease in the cost of capital. In turn, an increase in the beta leads to a significant increase in WACC which is greater when the debt ratio is constant.

The share price sensitivity analysis is tested using the WACC in a range of 7-9% and the terminal growth rate in a range of 1-5% which make our estimated share price in the middle of these parameters. Table below provides the figures.

Table 19. Share price sensitivity analysis. Source: Own creation based on data from NNIT's annual reports

		WACC									
		7.00%	7.25%	7.50%	7.75%	**7.94%**	8.00%	8.25%	8.50%	8.75%	9.00%
	1.0%	156.87	149.20	142.13	135.60	130.95	129.54	123.91	118.67	113.77	109.19
	1.5%	169.78	160.90	152.77	145.30	140.02	138.42	132.06	126.17	120.69	115.58
G	2.0%	185.26	174.82	165.34	156.69	150.62	148.78	141.52	134.82	128.63	122.89
r	2.5%	204.18	191.67	180.42	170.26	163.16	161.03	152.62	144.92	137.84	131.33
o	3.0%	227.84	212.49	198.85	186.67	178.25	175.72	165.83	156.85	148.66	141.17
w	**3.3%**	245.10	227.51	212.02	198.29	**188.86**	186.04	175.04	165.11	156.10	147.90
t	3.5%	258.25	238.85	221.90	206.95	196.73	193.68	181.83	171.17	161.54	152.79
h	4.0%	298.80	273.34	251.53	232.64	219.90	216.14	201.59	188.67	177.12	166.75
	4.5%	355.57	320.36	291.03	266.23	249.81	245.00	226.62	210.55	196.38	183.80
	5.0%	440.73	388.27	346.33	312.04	289.90	283.49	259.35	238.67	220.77	205.12

The sensitivity of the share price towards the changes in one of the parameters is relatively low: a decrease in WACC to 7.75% leads to an increase in the share price by DKK 9.43 (5%) and an increase in the growth rate to 3.5% results in an increase in the share price by DKK 7.87(4.2%). The value fluctuates significantly with both parameters changing: a decreasing WACC and an increasing growth rate enlarge the share price and vice versa.

7.8 Conclusion on the valuation

The goal of the valuation was to estimate NNIT's share price as of the May 20th 2016 which is based on the findings from the strategic analysis, the financial analysis and the forecasting.

To begin with, we have estimated the WACC. Each item of the WACC was carefully discussed and calculated. After all considerations were made, the WACC parameters resulted in following: the equity ratio of 97.38% and the debt ratio of 2.62%, the cost of equity of 8.099% and the cost of debt after tax of 1.885%. The WACC was determined to 7.94% which is close to the IT industry average of 8.27%.

Next, the absolute valuation using the Discounted Cash Flow and the Economic Value Added have been carried out. The applied growth rate of 3.3% have been taken from the annual report. From the DCF valuation we can estimate that if NNIT will continue increasing the FCFF, it will become more attractive to invest in, and hence the share price will go up. For a "most-likely" scenario the DCF valuation has revealed the fair value of NNIT which is DKK 188.86 per share and a total value of the company of approximately DKK 4.7 billion. However, in order to reflect two other scenarios and the latest company news, the weighed share price of each scenario was applied which resulted in DKK 198.73 per share. NNIT's share price per May 20th 2016 was DKK 200.50 meaning that the company is overvalued by 1%.

The EVA valuation does not seem to be valid as the estimated share price is very low. Accounting distortions and biases that could have caused the EVA to appear have been discussed and we have decided not to trust the EVA value.

Further, main advantages and disadvantages of the DCF and the EVA were argued. The main advantage of the DCF is that the valuation model is user-friendly and provides a fair value of the company. However, both the DCF and the EVA have pitfalls. Forecasting of the FCFF line items and the invested capital have to be accurate as they together with the growth rate and the WACC form the valuation.

We have decided not to perform a relative valuation using multiples as we believe currently NNIT does not have a direct peer with the same IT services and solutions offered and a similar growth rate. Moreover, in Life sciences where NNIT have had the highest net turnover in comparison to other customer groups, NNIT is the major IT service provider.

The sensitivity analysis has evaluated how dependent the WACC is on the debt ratio and the beta, and how changes in the WACC and the terminal growth influence the share price of NNIT. The debt ratio has a minor impact on the WACC whereas an increasing beta influences the WACC significantly. The share price value is slightly sensitive to either the WACC or the growth rate when only one parameter is changing whilst other staying constant. In case of both inputs fluctuate, e.g. the WACC is decreasing while the growth rate increases, the share price grows vastly and vice versa. What is more, as we have discussed before, a decrease in costs has a positive effect on NNIT's NOPAT which in turn means that by cutting costs, the share price would increase. The sensitivity analysis indicates an existing uncertainty in the valuation.

8. Conclusion

The goal of this master thesis was to estimate NNIT's enterprise value and fair value per share as of May 20th 2016. NNIT went public in March 2015 after existing as a privately-held company for more than 10 years. What has allowed NNIT to make such decision?

In order to answer the problem statement, a comprehensive investigation was performed. Prior that, we have briefly analysed IT industry and its development and then studied NNIT as a company. We have reviewed NNIT's history and the most important events, its offered services and solutions, current clients, the development strategy for further growth, NNIT's values, vision and mission, and the main value drivers. Next, we have explored NNIT's peers, however we do not consider them further in our analysis as we believe NNIT is a fast growing company and there are no direct peers with a similar range of IT services and solutions offered and the same growth rates as NNIT has.

In the strategic analysis we have analysed non-financial value drivers that affect NNIT. A top-down approach using the PEST analysis on macro-environment and the Porter's Five Forces analysis on the industry was performed. We have found that if anti-offshoring legislation will be adopted, it would have an adverse effect on NNIT business. Tax disincentives, extra fees or penalties, intellectual property transfer restrictions, mandatory government audit requirements, and other restrictions on usage of certain business and work visas would follow. Agreements with public customers might be influenced by changes in government or lack of adequate funding. Global risk aversion, intensified by the debt crisis in Greece and Chinese stock market decline, should not influence NNIT's development as strengthened recovery after financial recession 2007-2009 and overall growth in the economies is expected. Demand for IT service is high, however NNIT should stay proactive and continue offering new and differentiated IT solutions (which we also conclude in the financial analysis) and advanced IT equipment to stay on top of emerging technologies. Porter's Five Forces framework has uncovered IT industry attractiveness. The threat of substitutes for IT services is low, whereas the threat of new entrants is considered as medium. New rivals might offer the latest technologies in IT and in cases when their contract terms are more favourable - win a tender. Bargaining power of buyers and suppliers is considered as fairly high as both parties can change their preferences to other IT provider due to the same reasons described earlier. Last but not least, competitive rivalry from existing and new rivals is high which may threaten NNIT's market share growth. However, NNIT has a strong and recognizable brand name with high-quality expectations that engage new clients. Latest significant agreements with Danske Bank,

PANDORA, Købstædernes Forsikring and Popermo Forsikring, an extended contract with DSB, a partnership with Kinapse, etc confirm that.

The financial analysis has examined historical performance and the key financial ratios of NNIT. Our main focus was on financial value and cost drivers. The profitability analysis has shown that NNIT should concentrate more on their expense controls. NNIT has almost doubled its invested capital over the analysed period, however the company did not generate higher profits. Return on invested capital (ROIC) has decreased from 21.18% in 2011 to 11.66% in 2015. A steady increase in the volume of sales by 8-9% was not enough to be able to maintain the growth margin at the same level, 22.73%, as in the beginning of the analysed period. The reason lies in the cost of goods sold increasing at a higher growth rate. What is more, NNIT estimates to have extra costs related to NNIT becoming a public company. NNIT's cash flows has fluctuated during the analysed period. Higher investments due to new large outsourcing contracts in 2012 and 2014 reduced the free cash flow to the firm, whereas an opposite together with improved working capital in 2013 and 2015 enhance the FCFF. The analysis of the cash flows is important since the intrinsic value of the company is generated by its future cash flow which is estimated mostly based on the historical performance of the business. The liquidity analysis has exposed that NNIT has an increasing short-term liquidity risk and a decreasing long-term liquidity risk. However, due to good market conditions and steady growth of the demand for IT services, NNIT can be considered as a financially healthy company which is able to increase debt and equity capital for short- and long-term investments.

The financial analysis together with the strategic analysis has established the foundation for creating forecast of NNIT's future performance. We have decided to prepare budgets for multiple scenarios in order to demonstrate possible outcomes under various conditions. A "most-likely" scenario have estimated that NNIT continues its growth level with the same as historical pattern. An "optimistic" scenario assumes NNIT increasing its operating profit and continues expanding its operations both locally and globally. A potentially worst scenario is an extreme case of NNIT losing its main customers and a decrease in IT industry in general. Forecasted financial statements have been prepared relative to the net turnover in accordance with Koller et al. (2015). In a "most-likely" scenario, where our main focus is, we have estimated an increase in the net turnover growth in 2016-2019 followed by a slow-down by the terminal period. We believe that Life sciences will not experience an unusual growth in the future, therefore we have estimated a steady growth of 9%, lowering to 3% by the terminal period. A new significant agreement with Danske Bank will provide Finance customer group to experience a highest growth with a peak of 26.5% and 28% in 2018-2019 when newly

built data center will be put into operation. Worth noting that large investments due to new data center being built will reduce the FCFF in 2016-2018 which will then is expected to increase in 2019 and threefold by the terminal period in a "most-likely" scenario.

Since the costs are projected to have a stable development, the NOPAT is expected to grow by 3-4% during the explicit forecast and the terminal periods in a "most-likely" scenario. The net working capital and the net non-current operating assets for the same scenario are forecasted to remain at its average growth rate, 16.07% and 18.19% respectively. This results in the invested capital increasing by 34.26% in the whole forecast period.

All investigation has enabled us to perform a valuation of the company. The discounted cash flow model has revealed the total value of the company which is approximately DKK 4.7 billion in a "most-likely" scenario. In order to estimate a fair value per share, the weighted share price of a "most-likely", an "optimistic" and a "pessimistic" scenarios has been applied. A fair value of **DKK 198.73** per share as of the May 20th 2016 has been determined. NNIT's market share price per May 20th 2016 was DKK 200.50 which is 1% higher than the estimated in the valuation. The sensitivity analysis has concluded that the share price is dependent on the WACC and the growth rate. The WACC, which has a substantial effect on the DCF and the EVA models, in turn is very sensitive to changes in the beta. Thus, the valuation should be treated carefully.

We are reluctant to state that the share price is overvalued as it has been fluctuating since January 2016 and started to constantly grow since the beginning of May. The difference from our estimated share price is fairly small, and an increased share price could be driven by the latest significant agreements or too poor estimations on NNIT's future growth. To conclude, we do recommend a private investor to buy stocks from NNIT. NNIT in turn, should continue offering up-to-date IT solutions and services to stay competitive.

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Appendices

Appendix 1. Board of Directors and Management

Board of Directors

Jesper Brandgaard	Chairman	Member of the Board of Directors since June 1999 (except between 19 April 2001 and 24 April 2002) and Chairman since April 2002
Wilbert A.M. Kieboom	Deputy Chairman	Member and Deputy Chairman of the Board of Directors since March 2015
Rene Stockner	Board member	Member of the Board of Directors since March 2009
Anne Broeng	Board member	Member of the Board of Directors since April 2014.
Eivind Kolding	Board member	Member of the Board of Directors since March 2015
John Beck	Board member	Member of the Board of Directors since March 2015
Alex Steninge Jacobsen	Employee representative	Member of the Board of Directors since March 2011 as an employee representative
Anders Vidstrup	Employee representative	Member of the Board of Directors as an employee since March 2015

Executive Management

Per Kogut	President and Chief Executive Officer (CEO)	Has been Senior Vice President and Chief Executive Officer since he joined NNIT in January 2007. Currently – President and CEO of the company.
Carsten Krogsgaard Thomsen	Executive Vice President and Chief Financial Officer (CFO)	Has been Senior Vice President and Chief Financial Officer since he joined NNIT in January 2014. Currently – Executive Vice President and CFO of the company. He previously served as Deputy Chairman from 2007 to January 2014 and was a member of the Board of Directors of the company between March 2004 and January 2014.
Jess Julin Ibsen	Executive Vice President – IT Operation Services	Has been Senior Vice President—IT Operation Services since he joined NNIT in June 2013. Currently – Executive Vice President—IT Operation Services.

Other members of Group Management

The other members of Group Management comprise three Corporate Vice Presidents, who are each responsible for their functional or business areas.

Brit Kannegaard-Johannessen	Senior Vice President – People, Communication & Quality	Has been Corporate Vice President and responsible for People, Communication & Quality since she joined NNIT in May 2010. Currently – Senior Vice President.
Michael Bjerregaard	Senior Vice President – Client Management	Joined NNIT in March 2005 and has been Corporate Vice President and responsible for Client Management since April 2008. Currently – Senior Vice President.
Søren Luplau-Pagh	Senior Vice President – Solutions Division	Joined NNIT in June 2007 and has been Corporate Vice President and responsible for Solutions since June 2011. Currently – Senior Vice President. Previously was responsible for Marketing & Communications and also Life Sciences Division.

Appendix 2. The key elements of the growth strategy

Continue to expand market share in Denmark

In order to further strengthen NNIT current position in Denmark, company plans to concentrate on engaging with both existing customers and new prospects. The long-term objective is to "become the preferred IT services partner in Denmark and to deliver high-quality full-service solutions at competitive prices" (NNIT Prospectus, 2015).

Support Danish customers' internationalization

As NNIT's Danish customers expand internationally, NNIT supports them by providing IT services to support their international operations. Customers can maintain a centralized IT infrastructure which is cost-effective for NNIT as they can leverage their existing capabilities in Denmark and their global delivery centres (NNIT Prospectus, 2015).

Leverage a strong industry-specific expertise in life sciences internationally

NNIT is aiming to become a leading international IT partner to life science companies by benefiting from existing relationships and experience with Life Sciences customers. NNIT intends to expand IT services to U.S. life science companies and to support non-U.S. Life Sciences customers' operations in the United States.

Continue to enhance and deepen an expertise and service offerings through specialisation and standardisation

NNIT is focused on evolving their services and solutions from technological point of view and at the same time to correspond to the demands of their customers. NNIT plans to keep investing in standardisation in order to create new service offerings, varying from self-service supported infrastructure solutions to packaged management consulting services (NNIT Prospectus, 2015).

Another goal is to develop innovative offerings to stand out from their competitors. SAP solutions is one of the key areas where NNIT aims to continue to leverage their competencies in areas such as hosting, process orchestration, business intelligence and serialisation to create a full-range SAP service provider both in life sciences industry in Denmark and internationally. Microsoft solutions is another key area, where NNIT has a strong history of building solutions for the public sector as well as other industries (NNIT Prospectus, 2015).

Through developments of GxP operation services[37] (i.e., infrastructure and applications systems operations for pharmaceutical companies according to GxP requirements) and GxP cloud (i.e., fully automated cloud environment, pre-qualified for GxP systems), NNIT prospects to provide Operations services to international Life Sciences customers.

Continue to increase industrialisation of service delivery

NNIT seeks to manage cost of service delivery. The goal is to increase offshore and nearshore delivery capabilities toward maintaining a flexible, highly skilled and cost efficient workforce. Besides, NNIT concentrates on increasing resources within Europe by expanding Prague office which will cut administrative expenses in low-cost locations by 2020. Automation of services will lower cost of production and at the same time will improve quality through standardisation of processes. NNIT aims to continue to standardise as many of service delivery processes as possible to be able to increase speed and efficiency of delivery ("lean production principles"), improve quality control and launch new services with high degree of self-service.

Maintain company's culture and enhance human capital

NNIT mission statement: "We are passionate people building winning teams with our customers" and corporate culture that emphasizes teamwork, continuous process improvement and dedication to the client are critical to the success of their business. Therefore training throughout an employee's career and creation of fully integrated teams is a main focus to support a stronger delivery organisation.

Continue to promote customer satisfaction

NNIT plans to continue monitoring customer satisfaction in annual Customer Satisfaction Surveys, test the quality of service delivery through quarterly surveys among daily customer contacts ("EvalGO") and capture Service Desk end-user experiences to further improve competencies, communication and teamwork at NNIT (NNIT Prospectus, 2015).

[37] GxP Systems provides world-class validation and compliance services that enable its multinational life science clients to achieve operational excellence. Leading businesses in the biotech, medical device and pharmaceutical industries choose GxP Systems to achieve regulatory compliance (GXP Systems, 2015).

Appendix 3. New and extended contracts

In June 2015, Association of Danish Pharmacies extended their contract with NNIT for the operation and development of PharmaNet[38]. Partnership between Association of Danish Pharmacies and NNIT began in 2007 and will remain for another 4 years which represents a three-digit million DKK turnover over four years.

In March 2015, Capital Region and Region Zealand has signed a contract for the implementation of CareCom's terminology service HealthTerm[39] and related advisory services for four years. HealthTerm will be implemented in all hospitals in Region Zealand and the Capital Region of Denmark and will go live at the first hospital in May 2016. NNIT has delivered IT operations to the Capital Region of Denmark since 2007.

In January 2015, NNIT and SAS Institute has joined into a strategic collaboration to offer a unique means of IDMP (Identification of Medicinal Products) implementation for the pharmaceutical companies. IDMP purpose is to provide a universal ID for drugs and it will take effect from 1 July 2016 when all pharmaceutical companies with EU marketing authorisation will have to comply with the new ISO IDMP standards. SAS Institute and NNIT are already experiencing a high interest in their expertise from various companies in Central and Northern Europe. This collaboration is expected to lead to a future business growth.

In August 2013, NNIT committed into a partnership with a software company Qlik (previously QlikTech). NNIT and Qlik have signed an agreement to provide business intelligence in the Danish market. The partners are offering the QlikView Business Discovery platform in combination with NNIT's consulting, implementation and operations services. This partnership enables to implement business intelligence systems quicker and less costly than their competitors do and brings growth for both businesses.

In the same year, in May 2013, Coop Danmark A/S, Denmark's leading grocery supplier, signed an agreement for five years with NNIT for the future operation of Coop's SAP platform. The agreement means that NNIT has to deliver the IT infrastructure for Coop's new SAP systems and be responsible for the operation and support of the technical elements of the SAP systems on behalf of Coop. The agreement is worth an amount in the double digit million range and is expected to be renewed before its expiry.

[38] PharmaNet system is the backbone of the daily customer service and financial management at more than 325 pharmacy units across Denmark (NNIT News, 2015).
[39] HealthTerm is a web-based solution with will increase patient security, developed by CareCom and is implemented by NNIT (NNIT News, 2015).

Appendix 4. Overview of the main IT service providers by market share in Denmark

IBM

Headquartered in New York, IBM is the largest technology and consulting company in the world. IBM is established in more than 170 countries and has more than 375,000 employees. In 2015, revenue of IBM was USD 81.74 in 2015 (DKK 547 billion).

IBM offers IT services such as business continuity and resiliency, Cloud Computing, data center services, integrated communications services, Mobility, security services, technical support services. Moreover, IBM provides business process outsourcing, Microsoft consulting services, outsourcing services, Oracle consulting services, SAP consulting services and software services. In Denmark IBM offers cognitive solutions and cloud platforms (IBM homepage, 2016). IBM is listed on the New York Stock Exchange, Dow Jones Industrial Average and S&P 500 Index.

KMD

KMD (previously Kommunedata) is Danish IT and software companies which was founded in 1972. With locations in Copenhagen, Aarhus, Odense and Aalborg, KMD is one of Denmark's largest IT and software companies, has approximately 3,200 employees and generated revenue of DKK 5.2 billion in 2015. The KMD Group also has subsidiaries in Norway, Sweden, Finland and Poland (KMD homepage, 2016).

KMD offers software development, is creating and delivering IT solutions for the local government, central government, regional and private markets.

Accenture

Accenture is an IT company which provides a broad range of services and solutions in strategy, consulting, digital, technology and operations. Founded in 1989, Accenture is headquartered in Dublin, Ireland. Accenture operates in more than 120 countries and has approximately 373,000 people serving clients. In 2015 revenue of Accenture was USD 31 billion (DKK 207 billion). Accenture is listed on the New York Stock Exchange.

Accenture develops and implements technology solutions to improve its clients' productivity and efficiency. Accenture's businesses are: Accenture Strategy, Accenture Consulting, Accenture Digital, Accenture Technology and Accenture Operations.

Appendix 5. Overview of the main NNIT peers

Atea

Atea (previously Ementor) is Nordic and Baltic supplier of IT infrastructure which was founded in 1968. Atea operates in 90 cities in Norway, Sweden, Denmark, Finland, Lithuania, Latvia and Estonia and has approximately 6,800 employees. Atea had revenue of more than NOK 25 billion (DKK 20 billion) in 2014 and is listed on Oslo Stock Exchange.

Atea Logistics and Atea Global Services form Atea Group. The former handles purchasing of IT products for the Atea Group as well as configuration, logistics services and recycling. The latter is one of the leading Nordic IT infrastructure company which is famous for its tools for System Center management used small to large enterprises (Atea homepage, 2015).

KnowIt

KnowIt is one of the leading consultancy firms in the Nordic region which was found in in 1990. It has offices in fifteen locations in Sweden, five in Norway and in one each in Estonia, Finland, Germany and Denmark and has over 1800 employees. KnowIt had net sales of SEK 2,031 billion (DKK 1,63 billion) in 2014 and is quoted on the Nordic Exchange in Stockholm as KnowIt AB.

KnowIt is a specialist company supplying creative and strategic services within Design & Digital, IT and Management (KnowIt homepage, 2015).

Atos

Atos SE (Societas Europaea) is a leader in digital services which was found in 1988. Atos is a European IT services corporation headquartered in Bezons, France 93,000 employees in 72 countries. In 2014 pro forma annual revenue of the company was around € 11 billion (DKK 82 billion). Atos is listed on the European Stock Exchange Euronext.

Atos serves clients globally by providing them with Consulting & Systems Integration services, Managed Services & BPO, Cloud operations, Big Data & Cyber-security solutions, as well as transactional services through Worldline, the European leader in the payments and transactional services industry. Atos operates under the brands Atos, Atos Consulting, Atos Worldgrid, Bull, Canopy, and Worldline. Through its brands the company works in different business sectors including Defense, Financial Services, Health, Manufacturing, Media, Utilities, Public sector, Retail, Telecommunications, and Transportation (Atos homepage, 2015).

Appendix 6. Analytical Balance Sheet

Analytical Balance Sheet

DKK '000	2009	2010	2011	2012	2013	2014	2015
Inventories	2,095	1,777	3,462	1,801	2,301	1,639	1,730
Trade receivables	93,162	249,356	296,355	319,607	340,562	430,416	489,465
Work in progress	27,769	12,843	82,151	171,323	141,317	134,156	84,443
Other receivables and pre-payments	47,466	63,204	67,450	107,589	74,789	85,477	76,771
Tax receivables	0	4,875	28	14,257	0	13,478	0
Operating current assets	**170,492**	**332,055**	**449,446**	**614,576**	**558,969**	**665,166**	**652,409**
Prepayments received	16,691	13,996	16,240	13,232	35,396	41,146	60,499
Trade payables	43,504	98,914	154,849	190,695	116,373	110,942	72,978
Tax payables	4,031	0	5,920	0	15,938	2,589	11,338
Other current liabilities	77,613	93,346	78,114	62,944	56,590	112,950	105,738
Operating current liabilities	**141,839**	**206,256**	**255,123**	**266,871**	**224,297**	**267,627**	**250,553**
Net working capital	***28,653***	***125,799***	***194,323***	***347,705***	***334,672***	***397,539***	***401,856***
Intangible assets	11,184	43,524	51,120	51,089	43,250	35,411	27,571
Tangible assets	95,758	236,055	275,891	360,786	364,539	401,298	402,186
Deferred tax	1,790	0	3,978	0	4,077	5,583	43,939
Operating non-current assets	**108,732**	**279,579**	**330,989**	**411,875**	**411,866**	**442,292**	**473,696**
Deferred tax	0	9,656	0	20,394	0	4,143	46
Operating non-current liabilities	**0**	**9,656**	**0**	**20,394**	**0**	**4,143**	**46**
Net non-current operating assets	***108,732***	***269,923***	***330,989***	***391,481***	***411,866***	***438,149***	***473,650***
Invested capital (net operating assets)	***137,385***	***395,722***	***525,312***	***739,186***	***746,539***	***835,688***	***875,506***
Average invested capital		266,554	460,517	632,249	742,862	791,113	855,597
Share capital		1,000	1,000	1,000	1,000	250,000	250,000
Treasury shares		0	0	0	0	0	-7,500
Retained earnings		497,204	546,783	569,048	621,779	344,716	395,969
Other reserves		444	1,277	4,184	2,565	5,823	5,349
Proposed dividends		79,000	68,000	108,000	140,000	83,713	97,000
Total equity		***577,648***	***617,060***	***682,232***	***765,344***	***684,252***	***740,818***
Other financial assets (deposits)		-22,434	-23,912	-21,219	-21,455	-22,269	-28,313
Portfolio of NN shares (other current asset)		0	0	-37,236	-49,039	-55,035	-49,315
Derivative financial instruments			0	0	0	0	-1,022
Cash and cash equivalents		-357,209	-280,243	-143,627	-234,990	-97,648	-131,026
Financial assets		**-379,643**	**-304,155**	**-202,082**	**-305,484**	**-174,952**	**-209,676**
Leasing liabilities		418	341	0	0	0	0
Financial leasing		2,004	1,911	341	0	0	0
Employee benefits		5,484	5,705	18,877	11,955	16,511	39,054
Provisions (non-current)		0	0	0	3,022	4,534	8,339
Provisions (current)		868	1,283	6,447	5,782	8,728	5,494
Employee costs payable		188,943	203,167	233,372	265,919	296,615	267,518
Derivative financial instruments		0	0	0	0	0	5,330
Employee benefit obligations		0	0	0	0	0	18,629
Financial liabilities		**197,717**	**212,407**	**259,037**	**286,678**	**326,388**	**344,364**
Net interest bearing debt		***-181,926***	***-91,748***	***56,954***	***-18,805***	***151,436***	***134,688***
Average net interest bearing debt			-136,837	-17,397	19,074	66,315	143,062
Invested capital (financing)		***395,722***	***525,312***	***739,186***	***746,539***	***835,688***	***875,506***

Source: Own creation based on data from NNIT's annual reports

Appendix 7. Analytical Income Statement

Analytical Income Statement

DKK '000	2010	2011	2012	2013	2014	2015
Net turnover:						
Life sciences	1,252,192	1,320,775	1,372,526	1,409,647	1,546,824	1,649,740
Hereof Novo Nordisk Group	1,074,574	1,101,905	1,153,622	1,170,042	1,260,270	1,315,766
Hereof other life sciences	177,618	218,871	218,904	239,605	286,554	333,974
Enterprises	86,142	101,079	133,675	291,478	371,253	384,669
Public	176,270	215,803	357,030	344,844	326,065	375,113
Finance	139,166	157,475	164,326	158,563	166,254	190,765
Net turnover by customer group	**1,653,770**	**1,795,133**	**2,027,557**	**2,204,532**	**2,410,396**	**2,600,287**
IT Operation Services	1,070,927	1,131,848	1,359,852	1,495,686	1,667,104	1,740,403
IT Solution Services	582,843	663,285	667,705	708,846	743,292	859,884
Net turnover by business area	**1,653,770**	**1,795,133**	**2,027,557**	**2,204,532**	**2,410,396**	**2,600,287**
Net turnover	1,653,770	1,795,133	2,027,557	2,204,532	2,410,396	2,600,287
Cost of goods sold	-1,277,944	-1,412,094	-1,612,174	-1,755,589	-1,930,680	-2,083,027
Gross Profit	***375,826***	***383,039***	***415,383***	***448,943***	***479,716***	***517,260***
Sales and distribution costs	-92,769	-103,049	-111,420	-112,723	-111,898	-129,604
Administrative expenses	-75,374	-85,598	-87,215	-89,759	-102,471	-118,551
EBITDA	***207,683***	***194,392***	***216,748***	***246,461***	***265,347***	***269,105***
Depreciation and amortization	-45,135	-62,544	-89,948	-107,808	-124,016	-141,217
EBIT (operating profit)	***162,548***	***131,848***	***126,800***	***138,653***	***141,331***	***127,888***
Tax on EBIT	42,317	34,325	32,951	29,234	30,851	28,135
NOPAT	***120,231***	***97,523***	***93,849***	***109,419***	***110,480***	***99,753***
Financial income	3,232	1,637	493	930	7,480	28,756
Financial expenses	-7,071	-14,725	-22,682	-12,247	-5,103	-25,628
Net financials	**-3,839**	**-13,088**	**-22,189**	**-11,317**	**2,377**	**3,128**
Tax on net financials	-999	-3,407	-5,766	-2,386	519	688
Net financials, after tax	**-2,840**	**-9,681**	**-16,423**	**-8,931**	**1,858**	**2,440**
Consolidated profit after tax	***117,391***	***87,842***	***77,426***	***100,488***	***112,338***	***102,192***
Tax rate	26.0%	26.0%	26.0%	21.1%	21.8%	22%

Source: Own creation based on data from NNIT's annual reports

Appendix 8. Free Cash Flow Statement

Free Cash Flow Statement

DKK '000	2009	2010	2011	2012	2013	2014	2015
NOPAT		120,231	97,523	93,849	109,419	110,480	99,753
Depreciation and amortization		45,135	62,544	89,948	107,808	124,016	141,217
Gross cash flow		**165,366**	**160,067**	**183,797**	**217,227**	**234,496**	**240,970**
Net working capital	28,653	125,799	194,323	347,705	334,672	397,539	401,856
Change in net working capital		**-97,146**	**-68,524**	**-153,383**	**13,033**	**-62,867**	**-4,317**
Cash flow from operating activities		***68,220***	***228,591***	***337,179***	***204,195***	***297,363***	***245,287***
Purchase of intangible assets		-32,340	-12,097	-10,491	0	0	0
Purchase of tangible assets		-185,432	-97,871	-164,320	-104,249	-155,227	-136,041
Change in trade payables related to investments		0	-6,016	-43,226	57,686	4,329	-4,651
Cash flow from investing activities		***-217,772***	***-115,984***	***-218,037***	***-46,563***	***-150,898***	***-140,692***
Gross investment		-314,918	-184,508	-371,420	-33,530	-213,765	-145,009
Free cash flow to the firm (FCFF)		***-149,552***	***-24,440***	***-187,623***	***183,697***	***20,732***	***95,961***

Source: Own creation based on data from NNIT's annual reports

Appendix 9. Common-size analysis

DKK '000	2010	2011	2012	2013	2014	2015
Net turnover:						
Life sciences	76%	74%	68%	64%	64%	63%
Hereof Novo Nordisk Group	65%	61%	57%	53%	52%	51%
Hereof other life sciences	11%	12%	11%	11%	12%	13%
Enterprises	5%	6%	7%	13%	15%	15%
Public	11%	12%	18%	16%	14%	14%
Finance	8%	9%	8%	7%	7%	7%
Net turnover by customer group	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
IT Operation Services	65%	63%	67%	68%	69%	67%
IT Solution Services	35%	37%	33%	32%	31%	33%
Net turnover by business area	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Net turnover	100%	100%	100%	100%	100%	100%
Cost of goods sold	-77%	-79%	-80%	-80%	-80%	-80%
Gross Profit	***23%***	***21%***	***20%***	***20%***	***20%***	***20%***
Sales and distribution costs	-6%	-6%	-5%	-5%	-5%	-5%
Administrative expenses	-5%	-5%	-4%	-4%	-4%	-5%
EBITDA	***13%***	***11%***	***11%***	***11%***	***11%***	***10%***
Depreciation and amortization	-3%	-3%	-4%	-5%	-5%	-5%
EBIT (operating profit)	***10%***	***7%***	***6%***	***6%***	***6%***	***5%***
Tax on EBIT	3%	2%	2%	1%	1%	1%
NOPAT	***7%***	***5%***	***5%***	***5%***	***5%***	***4%***
Financial income	0%	0%	0%	0%	0%	1%
Financial expenses	0%	-1%	-1%	-1%	0%	-1%
Net financials	**0%**	**-1%**	**-1%**	**-1%**	**0%**	**0%**
Tax on net financials	0%	0%	0%	0%	0%	0%
Net financials, after tax	**0%**	**-1%**	**-1%**	**0%**	**0%**	**0%**
Consolidated profit after tax	***7%***	***5%***	***4%***	***5%***	***5%***	***4%***
Tax rate	26.0%	26.0%	26.0%	21.1%	21.8%	22.0%

Source: Own creation based on data from NNIT's annual reports

Appendix 10. Trend analysis

DKK '000	2010	2011	2012	2013	2014	2015
Net turnover:						
Life sciences	100%	105%	110%	113%	124%	132%
Hereof Novo Nordisk Group	100%	103%	107%	109%	117%	122%
Hereof other life sciences	100%	123%	123%	135%	161%	188%
Enterprises	100%	117%	155%	338%	431%	447%
Public	100%	122%	203%	196%	185%	213%
Finance	100%	113%	118%	114%	119%	137%
Net turnover by customer group	**100%**	**109%**	**123%**	**133%**	**146%**	**157%**
IT Operation Services	100%	106%	127%	140%	156%	163%
IT Solution Services	100%	114%	115%	122%	128%	148%
Net turnover by business area	**100%**	**109%**	**123%**	**133%**	**146%**	**157%**
Net turnover	100%	109%	123%	133%	146%	157%
Cost of goods sold	100%	110%	126%	137%	151%	163%
Gross Profit	***100%***	***102%***	***111%***	***119%***	***128%***	***138%***
Sales and distribution costs	100%	111%	120%	122%	121%	140%
Administrative expenses	100%	114%	116%	119%	136%	157%
EBITDA	***100%***	***94%***	***104%***	***119%***	***128%***	***130%***
Depreciation and amortization	100%	139%	199%	239%	275%	313%
EBIT (operating profit)	***100%***	***81%***	***78%***	***85%***	***87%***	***79%***
Tax on EBIT	100%	81%	78%	69%	73%	66%
NOPAT	***100%***	***81%***	***78%***	***91%***	***92%***	***83%***
Financial income	100%	51%	15%	29%	231%	890%
Financial expenses	100%	208%	321%	173%	72%	362%
Net financials	**100%**	**341%**	**578%**	**295%**	**-62%**	**-81%**
Tax on net financials	100%	341%	577%	239%	-52%	-69%
Net financials, after tax	**100%**	**341%**	**578%**	**315%**	**-65%**	**-86%**
Consolidated profit after tax	***100%***	***75%***	***66%***	***86%***	***96%***	***87%***
Tax rate	26%	26%	26%	21%	22%	22%

Source: Own creation based on data from NNIT's annual reports

Appendix 11. Income Statement Forecasts

MOST-LIKELY SCENARIO	Historical period						Explicit forecast period						Terminal period
	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	
Net turnover by customer group													
Life sciences	3.94%	5.48%	3.92%	2.70%	9.73%	6.65%	9.00%	9.00%	9.00%	9.00%	8.00%	6.00%	3.00%
Enterprises	-25.75%	17.34%	32.25%	118.05%	27.37%	3.61%	6.00%	7.50%	9.00%	11.00%	8.00%	7.50%	7.50%
Public	-13.54%	22.43%	65.44%	-3.41%	-5.45%	15.04%	5.50%	8.00%	10.00%	12.00%	7.00%	6.50%	6.50%
Finance	124.43%	13.16%	4.35%	-3.51%	4.85%	14.74%	17.00%	20.50%	26.50%	28.00%	23.50%	20.00%	17.50%
Net turnover by business area													
IT Operation Services		5.69%	20.14%	9.99%	11.46%	4.40%	9.50%	10.75%	12.25%	13.75%	11.50%	9.75%	7.25%
IT Solution Services		13.80%	0.67%	6.16%	4.86%	15.69%	7.00%	7.00%	7.25%	6.75%	5.00%	4.00%	3.00%
Net turnover	4.23%	8.55%	12.95%	8.73%	9.34%	7.88%	8.61%	9.61%	10.61%	11.61%	9.61%	8.11%	6.11%
Cost of goods sold	-77.27%	-78.66%	-79.51%	-79.64%	-80.10%	-80.11%	-79.22%	-79.22%	-79.22%	-79.22%	-79.22%	-79.22%	-79.22%
Gross Profit	***22.73%***	***21.34%***	***20.49%***	***20.36%***	***19.90%***	***19.89%***	***20.78%***	***20.78%***	***20.78%***	***20.78%***	***20.78%***	***20.78%***	***20.78%***
Sales and distribution costs	-5.61%	-5.74%	-5.50%	-5.11%	-4.64%	-4.98%	-5.26%	-5.26%	-5.26%	-5.26%	-5.26%	-5.26%	-5.26%
Administrative expenses	-4.56%	-4.77%	-4.30%	-4.07%	-4.25%	-4.56%	-4.42%	-4.42%	-4.42%	-4.42%	-4.42%	-4.42%	-4.42%
EBITDA	***12.56%***	***10.83%***	***10.69%***	***11.18%***	***11.01%***	***10.35%***	***11.10%***	***11.10%***	***11.10%***	***11.10%***	***11.10%***	***11.10%***	***11.10%***
Depreciation and amortization	-2.73%	-3.48%	-4.44%	-4.89%	-5.15%	-5.43%	-5.68%	-5.93%	-6.18%	-6.43%	-6.68%	-6.93%	-6.93%
EBIT (operating profit)	***9.83%***	***7.34%***	***6.25%***	***6.29%***	***5.86%***	***4.92%***	***5.42%***	***5.17%***	***4.92%***	***4.67%***	***4.42%***	***4.17%***	***4.17%***
Tax on EBIT	2.56%	1.91%	1.63%	1.33%	1.28%	1.08%	1.29%	1.23%	1.17%	1.11%	1.05%	0.99%	0.99%
NOPAT	***7.27%***	***5.43%***	***4.63%***	***4.96%***	***4.58%***	***3.84%***	***4.13%***	***3.94%***	***3.75%***	***3.56%***	***3.37%***	***3.18%***	***3.18%***
Financial income	0.20%	0.09%	0.02%	0.04%	0.31%	1.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Financial expenses	-0.43%	-0.82%	-1.12%	-0.56%	-0.21%	-0.99%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Net financials	**-0.23%**	**-0.73%**	**-1.09%**	**-0.51%**	**0.10%**	**0.12%**	**0.11%**	**0.11%**	**0.11%**	**0.11%**	**0.11%**	**0.11%**	**0.11%**
Tax on net financials	-0.06%	-0.19%	-0.28%	-0.11%	0.02%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%
Net financials, after tax	**-0.17%**	**-0.54%**	**-0.81%**	**-0.41%**	**0.08%**	**0.09%**	**0.08%**	**0.08%**	**0.08%**	**0.08%**	**0.08%**	**0.08%**	**0.08%**
Consolidated profit after tax	***7.10%***	***4.89%***	***3.82%***	***4.56%***	***4.66%***	***3.93%***	***4.21%***	***4.02%***	***3.83%***	***3.64%***	***3.45%***	***3.26%***	***3.26%***
Tax rate	26.03%	26.03%	25.99%	21.08%	21.83%	22.00%	23.83%	23.83%	23.83%	23.83%	23.83%	23.83%	23.83%

Source: Own creation based on data from NNIT's annual reports

MOST-LIKELY SCENARIO	Historical period						Explicit forecast period						
DKK '000	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
Net turnover by customer group													
Life sciences	1,252,192	1,320,775	1,372,526	1,409,647	1,546,824	1,649,740	1,798,217	1,960,056	2,136,461	2,328,743	2,515,042	2,665,945	2,745,923
Enterprises	86,142	101,079	133,675	291,478	371,253	384,669	407,749	438,330	477,780	530,336	572,763	615,720	661,899
Public	176,270	215,803	357,030	344,844	326,065	375,113	395,744	427,404	470,144	526,561	563,421	600,043	639,046
Finance	139,166	157,475	164,326	158,563	166,254	190,765	223,195	268,950	340,222	435,484	537,823	645,387	758,330
Net turnover by business area													
IT Operation Services	1,070,927	1,131,848	1,359,852	1,495,686	1,667,104	1,740,403	1,905,741	2,110,608	2,369,158	2,694,917	3,004,833	3,297,804	3,536,895
IT Solution Services	582,843	663,285	667,705	708,846	743,292	859,884	920,076	984,481	1,055,856	1,127,126	1,183,483	1,230,822	1,267,747
Net turnover	1,653,770	1,795,133	2,027,557	2,204,532	2,410,396	2,600,287	2,824,227	3,095,635	3,424,082	3,821,618	4,188,875	4,528,593	4,805,290
Cost of goods sold	-1,277,944	-1,412,094	-1,612,174	-1,755,589	-1,930,680	-2,083,027	-2,237,217	-2,452,213	-2,712,393	-3,027,302	-3,318,225	-3,587,333	-3,806,520
Gross Profit	***375,826***	***383,039***	***415,383***	***448,943***	***479,716***	***517,260***	***587,010***	***643,422***	***711,689***	***794,316***	***870,650***	***941,259***	***998,770***
Sales and distribution costs	-92,769	-103,049	-111,420	-112,723	-111,898	-129,604	-148,672	-162,960	-180,250	-201,177	-220,510	-238,393	-252,959
Administrative expenses	-75,374	-85,598	-87,215	-89,759	-102,471	-118,551	-124,781	-136,773	-151,284	-168,848	-185,075	-200,084	-212,309
EBITDA	***207,683***	***194,392***	***216,748***	***246,461***	***265,347***	***269,105***	***313,557***	***343,689***	***380,155***	***424,291***	***465,065***	***502,782***	***533,502***
Depreciation and amortization	-45,135	-62,544	-89,948	-107,808	-124,016	-141,217	-160,439	-183,597	-211,636	-245,761	-279,851	-313,869	-333,046
EBIT (operating profit)	***162,548***	***131,848***	***126,800***	***138,653***	***141,331***	***127,888***	***153,117***	***160,093***	***168,518***	***178,529***	***185,214***	***188,913***	***200,456***
Tax on EBIT	42,317	34,325	32,951	29,234	30,851	28,135	36,485	38,147	40,154	42,540	44,132	45,014	47,764
NOPAT	***120,231***	***97,523***	***93,849***	***109,419***	***110,480***	***99,753***	***116,633***	***121,946***	***128,364***	***135,990***	***141,081***	***143,899***	***152,691***
Financial income	3,232	1,637	493	930	7,480	28,756							
Financial expenses	-7,071	-14,725	-22,682	-12,247	-5,103	-25,628							
Net financials	**-3,839**	**-13,088**	**-22,189**	**-11,317**	**2,377**	**3,128**	**3,107**	**3,405**	**3,766**	**4,204**	**4,608**	**4,981**	**5,286**
Tax on net financials	-999	-3,407	-5,766	-2,386	519	688	740	811	897	1,002	1,098	1,187	1,259
Net financials, after tax	**-2,840**	**-9,681**	**-16,423**	**-8,931**	**1,858**	**2,440**	**2,366**	**2,594**	**2,869**	**3,202**	**3,510**	**3,794**	**4,026**
Consolidated profit after tax	***117,391***	***87,842***	***77,426***	***100,488***	***112,338***	***102,192***	***118,999***	***124,540***	***131,233***	***139,192***	***144,591***	***147,694***	***156,718***
Tax rate	26.0%	26.0%	26.0%	21.1%	21.8%	22%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%

Source: Own creation based on data from NNIT's annual reports

OPTIMISTIC	Historical period						Explicit forecast period						
DKK '000	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
Net turnover	4.23%	8.55%	12.95%	8.73%	9.34%	7.88%	8.61%	10.61%	12.11%	12.61%	10.61%	9.11%	7.11%
Cost of goods sold	-77.27%	-78.66%	-79.51%	-79.64%	-80.10%	-80.11%	-79.22%	-78.97%	-78.72%	-78.47%	-78.22%	-77.97%	-77.97%
Gross Profit	***22.73%***	***21.34%***	***20.49%***	***20.36%***	***19.90%***	***19.89%***	***20.78%***	***21.03%***	***21.28%***	***21.53%***	***21.78%***	***22.03%***	***22.03%***
Sales and distribution costs	-5.61%	-5.74%	-5.50%	-5.11%	-4.64%	-4.98%	-5.26%	-5.01%	-4.76%	-4.51%	-4.26%	-4.01%	-4.01%
Administrative expenses	-4.56%	-4.77%	-4.30%	-4.07%	-4.25%	-4.56%	-4.42%	-4.17%	-3.92%	-3.67%	-3.42%	-3.17%	-3.17%
EBITDA	***12.56%***	***10.83%***	***10.69%***	***11.18%***	***11.01%***	***10.35%***	***11.10%***	***11.85%***	***12.60%***	***13.35%***	***14.10%***	***14.85%***	***14.85%***
Depreciation and amortization	-2.73%	-3.48%	-4.44%	-4.89%	-5.15%	-5.43%	-5.68%	-5.93%	-6.18%	-6.43%	-6.68%	-6.93%	-6.93%
EBIT (operating profit)	***9.83%***	***7.34%***	***6.25%***	***6.29%***	***5.86%***	***4.92%***	***5.42%***	***5.92%***	***6.42%***	***6.92%***	***7.42%***	***7.92%***	***7.92%***
Tax on EBIT	2.56%	1.91%	1.63%	1.33%	1.28%	1.08%	1.29%	1.41%	1.53%	1.65%	1.77%	1.89%	1.89%
NOPAT	***7.27%***	***5.43%***	***4.63%***	***4.96%***	***4.58%***	***3.84%***	***4.13%***	***4.51%***	***4.89%***	***5.27%***	***5.65%***	***6.03%***	***6.03%***
Financial income	0.20%	0.09%	0.02%	0.04%	0.31%	1.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Financial expenses	-0.43%	-0.82%	-1.12%	-0.56%	-0.21%	-0.99%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Net financials	**-0.23%**	**-0.73%**	**-1.09%**	**-0.51%**	**0.10%**	**0.12%**	**0.11%**	**0.11%**	**0.11%**	**0.11%**	**0.11%**	**0.11%**	**0.11%**
Tax on net financials	-0.06%	-0.19%	-0.28%	-0.11%	0.02%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%
Net financials, after tax	**-0.17%**	**-0.54%**	**-0.81%**	**-0.41%**	**0.08%**	**0.09%**	**0.08%**	**0.08%**	**0.08%**	**0.08%**	**0.08%**	**0.08%**	**0.08%**
Consolidated profit after tax	***7.10%***	***4.89%***	***3.82%***	***4.56%***	***4.66%***	***3.93%***	***4.21%***	***4.59%***	***4.98%***	***5.36%***	***5.74%***	***6.12%***	***6.12%***
Tax rate	26.03%	26.03%	25.99%	21.08%	21.83%	22.00%	23.83%	23.83%	23.83%	23.83%	23.83%	23.83%	23.83%

Source: Own creation based on data from NNIT's annual reports

OPTIMISTIC	Historical period						Explicit forecast period						
DKK '000	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
Net turnover	1,653,770	1,795,133	2,027,557	2,204,532	2,410,396	2,600,287	2,824,227	3,123,877	3,502,179	3,943,803	4,362,241	4,759,641	5,098,051
Cost of goods sold	-1,277,944	-1,412,094	-1,612,174	-1,755,589	-1,930,680	-2,083,027	-2,237,217	-2,466,776	-2,756,747	-3,094,513	-3,411,935	-3,710,863	-3,974,706
Gross Profit	***375,826***	***383,039***	***415,383***	***448,943***	***479,716***	***517,260***	***587,010***	***657,102***	***745,432***	***849,290***	***950,306***	***1,048,778***	***1,123,346***
Sales and distribution costs	-92,769	-103,049	-111,420	-112,723	-111,898	-129,604	-148,672	-156,637	-166,850	-178,030	-186,014	-191,060	-204,645
Administrative expenses	-75,374	-85,598	-87,215	-89,759	-102,471	-118,551	-124,781	-130,211	-137,224	-144,668	-149,112	-150,797	-161,519
EBITDA	***207,683***	***194,392***	***216,748***	***246,461***	***265,347***	***269,105***	***313,557***	***370,254***	***441,358***	***526,592***	***615,180***	***706,920***	***757,182***
Depreciation and amortization	-45,135	-62,544	-89,948	-107,808	-124,016	-141,217	-160,439	-185,272	-216,463	-253,619	-291,434	-329,882	-353,337
EBIT (operating profit)	***162,548***	***131,848***	***126,800***	***138,653***	***141,331***	***127,888***	***153,117***	***184,982***	***224,895***	***272,973***	***323,747***	***377,038***	***403,845***
Tax on EBIT	42,317	34,325	32,951	29,234	30,851	28,135	36,485	44,077	53,588	65,044	77,142	89,840	96,228
NOPAT	***120,231***	***97,523***	***93,849***	***109,419***	***110,480***	***99,753***	***116,633***	***140,905***	***171,307***	***207,929***	***246,605***	***287,198***	***307,618***
Financial income	3,232	1,637	493	930	7,480	28,756							
Financial expenses	-7,071	-14,725	-22,682	-12,247	-5,103	-25,628							
Net financials	**-3,839**	**-13,088**	**-22,189**	**-11,317**	**2,377**	**3,128**	**3,107**	**3,436**	**3,852**	**4,338**	**4,798**	**5,236**	**5,608**
Tax on net financials	-999	-3,407	-5,766	-2,386	519	688	740	819	918	1,034	1,143	1,248	1,336
Net financials, after tax	**-2,840**	**-9,681**	**-16,423**	**-8,931**	**1,858**	**2,440**	**2,366**	**2,617**	**2,934**	**3,304**	**3,655**	**3,988**	**4,272**
Consolidated profit after tax	***117,391***	***87,842***	***77,426***	***100,488***	***112,338***	***102,192***	***118,999***	***143,523***	***174,242***	***211,234***	***250,260***	***291,186***	***311,889***
Tax rate	26.0%	26.0%	26.0%	21.1%	21.8%	22%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%

Source: Own creation based on data from NNIT's annual reports

PESSIMISTIC	Historical period						Explicit forecast period						
	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
Net turnover	4.23%	8.55%	12.95%	8.73%	9.34%	7.88%	-21.61%	-24.61%	-26.61%	-22.61%	-21.61%	-13.61%	-1.00%
Cost of goods sold	-77.27%	-78.66%	-79.51%	-79.64%	-80.10%	-80.11%	-82.11%	-84.11%	-86.11%	-87.11%	-88.11%	-89.11%	-89.11%
Gross Profit	***22.73%***	***21.34%***	***20.49%***	***20.36%***	***19.90%***	***19.89%***	***17.89%***	***15.89%***	***13.89%***	***12.89%***	***11.89%***	***10.89%***	***10.89%***
Sales and distribution costs	-5.61%	-5.74%	-5.50%	-5.11%	-4.64%	-4.98%	-5.48%	-5.98%	-6.23%	-6.48%	-6.73%	-6.98%	-6.98%
Administrative expenses	-4.56%	-4.77%	-4.30%	-4.07%	-4.25%	-4.56%	-4.81%	-5.06%	-5.31%	-5.56%	-5.81%	-6.06%	-6.06%
EBITDA	***12.56%***	***10.83%***	***10.69%***	***11.18%***	***11.01%***	***10.35%***	***7.60%***	***4.85%***	***2.35%***	***0.85%***	***-0.65%***	***-2.15%***	***-2.15%***
Depreciation and amortization	-2.73%	-3.48%	-4.44%	-4.89%	-5.15%	-5.43%	-5.68%	-5.93%	-6.18%	-6.43%	-6.68%	-6.93%	-6.93%
EBIT (operating profit)	***9.83%***	***7.34%***	***6.25%***	***6.29%***	***5.86%***	***4.92%***	***1.92%***	***-1.08%***	***-3.83%***	***-5.58%***	***-7.33%***	***-9.08%***	***-9.08%***
Tax on EBIT	2.56%	1.91%	1.63%	1.33%	1.28%	1.08%	0.46%	-0.26%	-0.91%	-1.33%	-1.75%	-2.16%	-2.16%
NOPAT	***7.27%***	***5.43%***	***4.63%***	***4.96%***	***4.58%***	***3.84%***	***1.46%***	***-0.82%***	***-2.92%***	***-4.25%***	***-5.58%***	***-6.92%***	***-6.92%***
Financial income	0.20%	0.09%	0.02%	0.04%	0.31%	1.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Financial expenses	-0.43%	-0.82%	-1.12%	-0.56%	-0.21%	-0.99%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Net financials	**-0.23%**	**-0.73%**	**-1.09%**	**-0.51%**	**0.10%**	**0.12%**	**0.11%**	**0.11%**	**0.11%**	**0.11%**	**0.11%**	**0.11%**	**0.11%**
Tax on net financials	-0.06%	-0.19%	-0.28%	-0.11%	0.02%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%
Net financials, after tax	**-0.17%**	**-0.54%**	**-0.81%**	**-0.41%**	**0.08%**	**0.09%**	**0.08%**	**0.08%**	**0.08%**	**0.08%**	**0.08%**	**0.08%**	**0.08%**
Consolidated profit after tax	***7.10%***	***4.89%***	***3.82%***	***4.56%***	***4.66%***	***3.93%***	***1.54%***	***-0.74%***	***-2.83%***	***-4.17%***	***-5.50%***	***-6.83%***	***-6.83%***
Tax rate	26.03%	26.03%	25.99%	21.08%	21.83%	22.00%	23.83%	23.83%	23.83%	23.83%	23.83%	23.83%	23.83%

Source: Own creation based on data from NNIT's annual reports

PESSIMISTIC	Historical period						Explicit forecast period						
DKK '000	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
Net turnover	1,653,770	1,795,133	2,027,557	2,204,532	2,410,396	2,600,287	2,038,310	1,536,682	1,127,771	872,782	684,174	591,058	585,147
Cost of goods sold	-1,277,944	-1,412,094	-1,612,174	-1,755,589	-1,930,680	-2,083,027	-1,673,607	-1,292,466	-971,096	-760,259	-602,809	-526,677	-521,410
Gross Profit	***375,826***	***383,039***	***415,383***	***448,943***	***479,716***	***517,260***	***364,703***	***244,216***	***156,675***	***112,523***	***81,365***	***64,380***	***63,737***
Sales and distribution costs	-92,769	-103,049	-111,420	-112,723	-111,898	-129,604	-111,785	-91,958	-70,308	-56,593	-46,074	-41,281	-40,868
Administrative expenses	-75,374	-85,598	-87,215	-89,759	-102,471	-118,551	-98,025	-77,743	-59,875	-48,519	-39,745	-35,813	-35,455
EBITDA	***207,683***	***194,392***	***216,748***	***246,461***	***265,347***	***269,105***	***154,892***	***74,514***	***26,492***	***7,410***	***-4,454***	***-12,713***	***-12,586***
Depreciation and amortization	-45,135	-62,544	-89,948	-107,808	-124,016	-141,217	-115,793	-91,138	-69,706	-56,127	-45,708	-40,965	-40,556
EBIT (operating profit)	***162,548***	***131,848***	***126,800***	***138,653***	***141,331***	***127,888***	***39,099***	***-16,623***	***-43,214***	***-48,717***	***-50,162***	***-53,679***	***-53,142***
Tax on EBIT	42,317	34,325	32,951	29,234	30,851	28,135	9,317	-3,961	-10,297	-11,608	-11,953	-12,790	-12,663
NOPAT	***120,231***	***97,523***	***93,849***	***109,419***	***110,480***	***99,753***	***29,783***	***-12,662***	***-32,917***	***-37,109***	***-38,210***	***-40,888***	***-40,479***
Financial income	3,232	1,637	493	930	7,480	28,756							
Financial expenses	-7,071	-14,725	-22,682	-12,247	-5,103	-25,628							
Net financials	**-3,839**	**-13,088**	**-22,189**	**-11,317**	**2,377**	**3,128**	**2,242**	**1,690**	**1,241**	**960**	**753**	**650**	**644**
Tax on net financials	-999	-3,407	-5,766	-2,386	519	688	534	403	296	229	179	155	153
Net financials, after tax	**-2,840**	**-9,681**	**-16,423**	**-8,931**	**1,858**	**2,440**	**1,708**	**1,288**	**945**	**731**	**573**	**495**	**490**
Consolidated profit after tax	***117,391***	***87,842***	***77,426***	***100,488***	***112,338***	***102,192***	***31,491***	***-11,375***	***-31,972***	***-36,377***	***-37,636***	***-40,393***	***-39,989***
Tax rate	26.0%	26.0%	26.0%	21.1%	21.8%	22%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%

Source: Own creation based on data from NNIT's annual reports

Appendix 12. Balance Sheet Forecasts

MOST-LIKELY	Historical period						Explicit forecast period						
	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
Inventories	0.11%	0.19%	0.09%	0.10%	0.07%	0.07%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%
Trade receivables	15.08%	16.51%	15.76%	15.45%	17.86%	18.82%	16.97%	16.97%	16.97%	16.97%	16.97%	16.97%	16.97%
Work in progress	0.78%	4.58%	8.45%	6.41%	5.57%	3.25%	5.92%	5.92%	5.92%	5.92%	5.92%	5.92%	5.92%
Other receivables and pre-payments	3.82%	3.76%	5.31%	3.39%	3.55%	2.95%	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%
Tax receivables	0.29%	0.00%	0.70%	0.00%	0.56%	0.00%	0.32%	0.32%	0.32%	0.32%	0.32%	0.32%	0.32%
Operating current assets	20.08%	25.04%	30.31%	25.36%	27.60%	25.09%	27.09%	27.09%	27.09%	27.09%	27.09%	27.09%	27.09%
Prepayments received	0.85%	0.90%	0.65%	1.61%	1.71%	2.33%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%
Trade payables	5.98%	8.63%	9.41%	5.28%	4.60%	2.81%	5.52%	5.52%	5.52%	5.52%	5.52%	5.52%	5.52%
Tax payables	0.00%	0.33%	0.00%	0.72%	0.11%	0.44%	0.32%	0.32%	0.32%	0.32%	0.32%	0.32%	0.32%
Other current liabilities	5.64%	4.35%	3.10%	2.57%	4.69%	4.07%	3.61%	3.61%	3.61%	3.61%	3.61%	3.61%	3.61%
Operating current liabilities	12.47%	14.21%	13.16%	10.17%	11.10%	9.64%	11.02%	11.02%	11.02%	11.02%	11.02%	11.02%	11.02%
Net working capital	***7.61%***	***10.82%***	***17.15%***	***15.18%***	***16.49%***	***15.45%***	***16.07%***	***16.07%***	***16.07%***	***16.07%***	***16.07%***	***16.07%***	***16.07%***
Intangible assets	2.63%	2.85%	2.52%	1.96%	1.47%	1.06%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%
Tangible assets	14.27%	15.37%	17.79%	16.54%	16.65%	15.47%	16.01%	16.01%	16.01%	16.01%	16.01%	16.01%	16.01%
Deferred tax	0.00%	0.22%	0.00%	0.18%	0.23%	1.69%	0.39%	0.39%	0.39%	0.39%	0.39%	0.39%	0.39%
Operating non-current assets	16.91%	18.44%	20.31%	18.68%	18.35%	18.22%	18.48%	18.48%	18.48%	18.48%	18.48%	18.48%	18.48%
Deferred tax	0.58%	0.00%	1.01%	0.00%	0.17%	0.00%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%
Operating non-current liabilities	0.58%	0.00%	1.01%	0.00%	0.17%	0.00%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%
Net non-current operating assets	***16.32%***	***18.44%***	***19.31%***	***18.68%***	***18.18%***	***18.22%***	***18.19%***	***18.19%***	***18.19%***	***18.19%***	***18.19%***	***18.19%***	***18.19%***
Invested capital (net operating assets)	***23.93%***	***29.26%***	***36.46%***	***33.86%***	***34.67%***	***33.67%***	***34.26%***	***34.26%***	***34.26%***	***34.26%***	***34.26%***	***34.26%***	***34.26%***

Source: Own creation based on data from NNIT's annual reports

MOST-LIKELY	Historical period						Explicit forecast period						
DKK '000	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
Inventories	1,777	3,462	1,801	2,301	1,639	1,730	2,314	2,536	2,805	3,131	3,432	3,710	3,937
Trade receivables	249,356	296,355	319,607	340,562	430,416	489,465	479,353	525,419	581,166	648,639	710,973	768,633	815,597
Work in progress	12,843	82,151	171,323	141,317	134,156	84,443	167,146	183,209	202,647	226,175	247,910	268,016	284,391
Other receivables and pre-payments	63,204	67,450	107,589	74,789	85,477	76,771	107,303	117,614	130,093	145,197	159,151	172,058	182,570
Tax receivables	4,875	28	14,257	0	13,478	0	8,913	9,769	10,806	12,060	13,219	14,291	15,165
Operating current assets	**332,055**	**449,446**	**614,576**	**558,969**	**665,166**	**652,409**	**765,028**	**838,547**	**927,517**	**1,035,202**	**1,134,685**	**1,226,708**	**1,301,660**
Prepayments received	13,996	16,240	13,232	35,396	41,146	60,499	44,424	48,693	53,860	60,113	65,890	71,233	75,586
Trade payables	98,914	154,849	190,695	116,373	110,942	72,978	155,990	170,981	189,122	211,079	231,364	250,127	265,410
Tax payables	0	5,920	0	15,938	2,589	11,338	8,942	9,801	10,841	12,099	13,262	14,338	15,214
Other current liabilities	93,346	78,114	62,944	56,590	112,950	105,738	101,840	111,627	123,470	137,805	151,048	163,298	173,276
Operating current liabilities	**206,256**	**255,123**	**266,871**	**224,297**	**267,627**	**250,553**	**311,196**	**341,102**	**377,292**	**421,096**	**461,563**	**498,996**	**529,485**
Net working capital	***125,799***	***194,323***	***347,705***	***334,672***	***397,539***	***401,856***	***453,832***	***497,446***	***550,225***	***614,106***	***673,121***	***727,712***	***772,175***
Intangible assets	43,524	51,120	51,089	43,250	35,411	27,571	58,793	64,443	71,281	79,557	87,202	94,274	100,034
Tangible assets	236,055	275,891	360,786	364,539	401,298	402,186	452,292	495,757	548,357	612,021	670,836	725,241	769,553
Deferred tax	0	3,978	0	4,077	5,583	43,939	10,958	12,011	13,285	14,827	16,252	17,570	18,644
Operating non-current assets	**279,579**	**330,989**	**411,875**	**411,866**	**442,292**	**473,696**	**522,043**	**572,211**	**632,923**	**706,405**	**774,290**	**837,085**	**888,231**
Deferred tax	9,656	0	20,394	0	4,143	46	8,300	9,098	10,063	11,232	12,311	13,309	14,123
Operating non-current liabilities	**9,656**	**0**	**20,394**	**0**	**4,143**	**46**	**8,300**	**9,098**	**10,063**	**11,232**	**12,311**	**13,309**	**14,123**
Net non-current operating assets	***269,923***	***330,989***	***391,481***	***411,866***	***438,149***	***473,650***	***513,742***	***563,113***	***622,859***	***695,173***	***761,979***	***823,776***	***874,109***
Invested capital (net operating assets)	***395,722***	***525,312***	***739,186***	***746,539***	***835,688***	***875,506***	***967,575***	***1,060,559***	***1,173,084***	***1,309,279***	***1,435,101***	***1,551,487***	***1,646,283***

Source: Own creation based on data from NNIT's annual reports

OPTIMISTIC	Historical period						Explicit forecast period						
	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
Net working capital	7.61%	10.82%	17.15%	15.18%	16.49%	15.45%	16.07%	17.07%	18.57%	19.07%	19.57%	20.07%	20.07%
Net non-current operating assets	16.32%	18.44%	19.31%	18.68%	18.18%	18.22%	18.19%	18.19%	18.19%	18.19%	18.19%	18.19%	18.19%
Invested capital (net operating assets)	***23.93%***	***29.26%***	***36.46%***	***33.86%***	***34.67%***	***33.67%***	***34.26%***	***35.26%***	***36.76%***	***37.26%***	***37.76%***	***38.26%***	***38.26%***

OPTIMISTIC	Historical period						Explicit forecast period						
DKK '000	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
Net working capital	125,799	194,323	347,705	334,672	397,539	401,856	453,853	533,246	650,355	752,083	853,691	955,260	1,023,179
Net non-current operating assets	269,923	330,989	391,481	411,866	438,149	473,650	513,742	568,250	637,065	717,399	793,516	865,805	927,363
Invested capital (net operating assets)	***395,722***	***525,312***	***739,186***	***746,539***	***835,688***	***875,506***	***967,596***	***1,101,496***	***1,287,420***	***1,469,483***	***1,647,206***	***1,821,065***	***1,950,542***

Source: Own creation based on data from NNIT's annual reports

PESSIMISTIC	Historical period						Explicit forecast period						
	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
Net working capital	7.61%	10.82%	17.15%	15.18%	16.49%	15.45%	12.45%	9.45%	8.45%	6.45%	4.45%	3.45%	3.45%
Net non-current operating assets	16.32%	18.44%	19.31%	18.68%	18.18%	18.22%	18.19%	18.19%	18.19%	18.19%	18.19%	18.19%	18.19%
Invested capital (net operating assets)	***23.93%***	***29.26%***	***36.46%***	***33.86%***	***34.67%***	***33.67%***	***30.64%***	***27.64%***	***26.64%***	***24.64%***	***22.64%***	***21.64%***	***21.64%***

PESSIMISTIC	Historical period						Explicit forecast period						
DKK '000	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
Net working capital	125,799	194,323	347,705	334,672	397,539	401,856	253,857	145,282	95,345	56,332	30,475	20,417	20,213
Net non-current operating assets	269,923	330,989	391,481	411,866	438,149	473,650	370,780	279,531	205,148	158,764	124,455	107,517	106,441
Invested capital (net operating assets)	***395,722***	***525,312***	***739,186***	***746,539***	***835,688***	***875,506***	***624,637***	***424,813***	***300,493***	***215,096***	***154,930***	***127,933***	***126,654***

Source: Own creation based on data from NNIT's annual reports

Appendix 13. ROIC, PM and ATO Forecasts

MOST-LIKELY	Historical period						Explicit forecast period						
DKK '000	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
Invested capital (net operating assets)	395,722	525,312	739,186	746,539	835,688	875,506	967,575	1,060,559	1,173,084	1,309,279	1,435,101	1,551,487	1,646,283
Average invested capital		460,517	632,249	742,862	791,113	855,597	921,540	1,014,067	1,116,821	1,241,182	1,372,190	1,493,294	1,598,885
NOPAT	120,231	97,523	93,849	109,419	110,480	99,753	116,633	121,946	128,364	135,990	141,081	143,899	152,691
ROIC (after tax)		*21.18%*	*14.84%*	*14.73%*	*13.97%*	*11.66%*	*12.66%*	*12.03%*	*11.49%*	*10.96%*	*10.28%*	*9.64%*	*9.55%*

MOST-LIKELY	Historical period						Explicit forecast period						
DKK '000	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
Net turnover	1,653,770	1,795,133	2,027,557	2,204,532	2,410,396	2,600,287	2,824,227	3,095,635	3,424,082	3,821,618	4,188,875	4,528,593	4,805,290
NOPAT	120,231	97,523	93,849	109,419	110,480	99,753	116,633	121,946	128,364	135,990	141,081	143,899	152,691
PM (after tax)	*0.07270108*	*5.43%*	*4.63%*	*4.96%*	*4.58%*	*3.84%*	*4.13%*	*3.94%*	*3.75%*	*3.56%*	*3.37%*	*3.18%*	*3.18%*
Average invested capital		460,517	632,249	742,862	791,113	855,597	921,540	1,014,067	1,116,821	1,241,182	1,372,190	1,493,294	1,598,885
ATO		*389.81%*	*320.69%*	*296.76%*	*304.68%*	*303.91%*	*306.47%*	*305.27%*	*306.59%*	*307.90%*	*305.27%*	*303.26%*	*300.54%*
ROIC (after tax)		*21.18%*	*14.84%*	*14.73%*	*13.97%*	*11.66%*	*12.66%*	*12.03%*	*11.49%*	*10.96%*	*10.28%*	*9.64%*	*9.55%*

Source: Own creation based on data from NNIT's annual reports

OPTMISTIC	Historical period						Explicit forecast period						
DKK '000	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
Invested capital (net operating assets)	395,722	525,312	739,186	746,539	835,688	875,506	967,596	1,101,496	1,287,420	1,469,483	1,647,206	1,821,065	1,950,542
Average invested capital		460,517	632,249	742,862	791,113	855,597	921,551	1,034,546	1,194,458	1,378,451	1,558,344	1,734,135	1,885,804
NOPAT	120,231	97,523	93,849	109,419	110,480	99,753	116,633	140,905	171,307	207,929	246,605	287,198	307,618
ROIC (after tax)		*21.18%*	*14.84%*	*14.73%*	*13.97%*	*11.66%*	*12.66%*	*13.62%*	*14.34%*	*15.08%*	*15.82%*	*16.56%*	*16.31%*

OPTMISTIC	Historical period						Explicit forecast period						
DKK '000	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
Net turnover	1,653,770	1,795,133	2,027,557	2,204,532	2,410,396	2,600,287	2,824,227	3,123,877	3,502,179	3,943,803	4,362,241	4,759,641	5,098,051
NOPAT	120,231	97,523	93,849	109,419	110,480	99,753	116,633	140,905	171,307	207,929	246,605	287,198	307,618
PM (after tax)	*0.07270108*	*5.43%*	*4.63%*	*4.96%*	*4.58%*	*3.84%*	*4.13%*	*4.51%*	*4.89%*	*5.27%*	*5.65%*	*6.03%*	*6.03%*
Average invested capital		460,517	632,249	742,862	791,113	855,597	921,551	1,034,546	1,194,458	1,378,451	1,558,344	1,734,135	1,885,804
ATO		*389.81%*	*320.69%*	*296.76%*	*304.68%*	*303.91%*	*306.46%*	*301.96%*	*293.20%*	*286.10%*	*279.93%*	*274.47%*	*270.34%*
ROIC (after tax)		*21.18%*	*14.84%*	*14.73%*	*13.97%*	*11.66%*	*12.66%*	*13.62%*	*14.34%*	*15.08%*	*15.82%*	*16.56%*	*16.31%*

Source: Own creation based on data from NNIT's annual reports

PESSIMISTIC	Historical period						Explicit forecast period						
DKK '000	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
Invested capital (net operating assets)	395,722	525,312	739,186	746,539	835,688	875,506	624,637	424,813	300,493	215,096	154,930	127,933	126,654
Average invested capital		460,517	632,249	742,862	791,113	855,597	750,071	524,725	362,653	257,794	185,013	141,432	127,294
NOPAT	120,231	97,523	93,849	109,419	110,480	99,753	29,783	-12,662	-32,917	-37,109	-38,210	-40,888	-40,479
ROIC (after tax)		***21.18%***	***14.84%***	***14.73%***	***13.97%***	***11.66%***	***3.97%***	***-2.41%***	***-9.08%***	***-14.39%***	***-20.65%***	***-28.91%***	***-31.80%***

PESSIMISTIC	Historical period						Explicit forecast period						
DKK '000	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
Net turnover	1,653,770	1,795,133	2,027,557	2,204,532	2,410,396	2,600,287	2,038,310	1,536,682	1,127,771	872,782	684,174	591,058	585,147
NOPAT	120,231	97,523	93,849	109,419	110,480	99,753	29,783	-12,662	-32,917	-37,109	-38,210	-40,888	-40,479
PM (after tax)	***0.07270108***	***5.43%***	***4.63%***	***4.96%***	***4.58%***	***3.84%***	***1.46%***	***-0.82%***	***-2.92%***	***-4.25%***	***-5.58%***	***-6.92%***	***-6.92%***
Average invested capital		460,517	632,249	742,862	791,113	855,597	750,071	524,725	362,653	257,794	185,013	141,432	127,294
ATO		***389.81%***	***320.69%***	***296.76%***	***304.68%***	***303.91%***	***271.75%***	***292.85%***	***310.98%***	***338.56%***	***369.80%***	***417.91%***	***459.68%***
ROIC (after tax)		***21.18%***	***14.84%***	***14.73%***	***13.97%***	***11.66%***	***3.97%***	***-2.41%***	***-9.08%***	***-14.39%***	***-20.65%***	***-28.91%***	***-31.80%***

Source: Own creation based on data from NNIT's annual reports

Appendix 14. Free Cash Flow to the Firm Forecasts

MOST-LIKELY		Historical period						Explicit forecast period						
DKK '000	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016E**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**	**Terminal period**
NOPAT		120,231	97,523	93,849	109,419	110,480	99,753	116,633	121,946	128,364	135,990	141,081	143,899	152,691
Depreciation and amortization		45,135	62,544	89,948	107,808	124,016	141,217	160,439	183,597	211,636	245,761	279,851	313,869	333,046
Gross cash flow		**165,366**	**160,067**	**183,797**	**217,227**	**234,496**	**240,970**	**277,072**	**305,543**	**340,001**	**381,751**	**420,933**	**457,768**	**485,738**
Net working capital	28,653	125,799	194,323	347,705	334,672	397,539	401,856	453,832	497,446	550,225	614,106	673,121	727,712	772,175
Change in net working capital		**-97,146**	**-68,524**	**-153,383**	**13,033**	**-62,867**	**-4,317**	**-51,976**	**-43,613**	**-52,779**	**-63,881**	**-59,016**	**-54,590**	**-44,463**
Cash flow from operating activities		***68,220***	***228,591***	***337,179***	***204,195***	***297,363***	***245,287***	***329,049***	***349,156***	***392,780***	***445,632***	***479,948***	***512,358***	***530,201***
Purchase of intangible assets		-32,340	-12,097	-10,491	0	0	0	0	0	0	0	0	0	0
Purchase of tangible assets		-185,432	-97,871	-164,320	-104,249	-155,227	-136,041	-250,000	-250,000	-250,000	-136,059	-136,059	-136,059	-130,000
CAPEX		**-217,772**	**-109,968**	**-174,811**	**-104,249**	**-155,227**	**-136,041**	**-250,000**	**-250,000**	**-250,000**	**-136,059**	**-136,059**	**-136,059**	**-130,000**
Cash flow from investing activities		***-217,772***	***-109,968***	***-174,811***	***-104,249***	***-155,227***	***-136,041***	***-250,000***	***-250,000***	***-250,000***	***-136,059***	***-136,059***	***-136,059***	***-130,000***
Gross investment		-314,918	-178,492	-328,194	-91,216	-218,094	-140,358	-301,976	-293,613	-302,779	-199,940	-195,075	-190,649	-174,463
Free cash flow to the firm (FCFF)		***-149,552***	***-18,424***	***-144,397***	***126,011***	***16,403***	***100,612***	***-24,904***	***11,929***	***37,222***	***181,811***	***225,858***	***267,119***	***311,274***

Source: Own creation based on data from NNIT's annual reports

OPTMISTIC		Historical period						Explicit forecast period						
DKK '000		2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
NOPAT		120,231	97,523	93,849	109,419	110,480	99,753	116,633	140,905	171,307	207,929	246,605	287,198	307,618
Depreciation and amortization		45,135	62,544	89,948	107,808	124,016	141,217	160,439	185,272	216,463	253,619	291,434	329,882	353,337
Gross cash flow		**165,366**	**160,067**	**183,797**	**217,227**	**234,496**	**240,970**	**277,072**	**326,177**	**387,771**	**461,548**	**538,038**	**617,080**	**660,955**
Net working capital	28,653	125,799	194,323	347,705	334,672	397,539	401,856	453,853	533,246	650,355	752,083	853,691	955,260	1,023,179
Change in net working capital		**-97,146**	**-68,524**	**-153,383**	**13,033**	**-62,867**	**-4,317**	**-51,997**	**-79,393**	**-117,109**	**-101,729**	**-101,607**	**-101,569**	**-67,919**
Cash flow from operating activities		***68,220***	***228,591***	***337,179***	***204,195***	***297,363***	***245,287***	***329,069***	***405,569***	***504,879***	***563,277***	***639,646***	***718,650***	***728,874***
Purchase of intangible assets		-32,340	-12,097	-10,491	0	0	0	0	0	0	0	0	0	0
Purchase of tangible assets		-185,432	-97,871	-164,320	-104,249	-155,227	-136,041	-215,000	-215,000	-215,000	-104,249	-104,249	-104,249	-130,000
CAPEX		**-217,772**	**-109,968**	**-174,811**	**-104,249**	**-155,227**	**-136,041**	**-215,000**	**-215,000**	**-215,000**	**-104,249**	**-104,249**	**-104,249**	**-130,000**
Cash flow from investing activities		***-217,772***	***-109,968***	***-174,811***	***-104,249***	***-155,227***	***-136,041***	***-215,000***	***-215,000***	***-215,000***	***-104,249***	***-104,249***	***-104,249***	***-130,000***
Gross investment		-314,918	-178,492	-328,194	-91,216	-218,094	-140,358	-266,997	-294,393	-332,109	-205,978	-205,856	-205,818	-197,919
Free cash flow to the firm (FCFF)		***-149,552***	***-18,424***	***-144,397***	***126,011***	***16,403***	***100,612***	***10,075***	***31,784***	***55,662***	***255,571***	***332,182***	***411,262***	***463,036***

Source: Own creation based on data from NNIT's annual reports

PESSIMISTIC		Historical period						Explicit forecast period						
DKK '000		2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
NOPAT		120,231	97,523	93,849	109,419	110,480	99,753	29,783	-12,662	-32,917	-37,109	-38,210	-40,888	-40,479
Depreciation and amortization		45,135	62,544	89,948	107,808	124,016	141,217	115,793	91,138	69,706	56,127	45,708	40,965	40,556
Gross cash flow		**165,366**	**160,067**	**183,797**	**217,227**	**234,496**	**240,970**	**145,576**	**78,475**	**36,789**	**19,019**	**7,499**	**77**	**76**
Net working capital	28,653	125,799	194,323	347,705	334,672	397,539	401,856	253,857	145,282	95,345	56,332	30,475	20,417	20,213
Change in net working capital		**-97,146**	**-68,524**	**-153,383**	**13,033**	**-62,867**	**-4,317**	**147,999**	**108,575**	**49,937**	**39,013**	**25,857**	**10,058**	**204**
Cash flow from operating activities		***68,220***	***228,591***	***337,179***	***204,195***	***297,363***	***245,287***	***-2,423***	***-30,099***	***-13,149***	***-19,995***	***-18,358***	***-9,981***	***-128***
Purchase of intangible assets		-32,340	-12,097	-10,491	0	0	0	0	0	0	0	0	0	0
Purchase of tangible assets		-185,432	-97,871	-164,320	-104,249	-155,227	-136,041	-285,000	-285,000	-285,000	-174,811	-174,811	-174,811	-130,000
CAPEX		**-217,772**	**-109,968**	**-174,811**	**-104,249**	**-155,227**	**-136,041**	**-285,000**	**-285,000**	**-285,000**	**-174,811**	**-174,811**	**-174,811**	**-130,000**
Cash flow from investing activities		***-217,772***	***-109,968***	***-174,811***	***-104,249***	***-155,227***	***-136,041***	***-285,000***	***-285,000***	***-285,000***	***-174,811***	***-174,811***	***-174,811***	***-130,000***
Gross investment		-314,918	-178,492	-328,194	-91,216	-218,094	-140,358	-137,001	-176,425	-235,063	-135,798	-148,954	-164,753	-129,796
Free cash flow to the firm (FCFF)		***-149,552***	***-18,424***	***-144,397***	***126,011***	***16,403***	***100,612***	***8,575***	***-97,950***	***-198,274***	***-116,779***	***-141,455***	***-164,676***	***-129,720***

Source: Own creation based on data from NNIT's annual reports

Appendix 15. WACC Estimation

Koller et al. (2005) defines WACC as:

$$WACC = \frac{D}{D+E} r_d\,(1-T) + \frac{E}{D+E} r_e$$

where D is net interest bearing debt (NIBD), E is equity, r_d is the required rate of return for debt, r_e is the required rate of return for equity, T equals the corporate tax rate.

Each component has been decomposed and calculated in order to determine the WACC. One of the things to notice is that the WACC is affected by the company's current capital structure, $r_d\,(1-T)$ and r_e (Koller et al., 2005).

Capital structure

One of the first steps in estimating WACC is to calculate the capital structure of NNIT. The capital structure refers to a company's short- and long-term debt and equity. The capital structure shows a firm's ability to finance its operations and growth (Investopedia, 2016). As determined by Koller et al. (2015) the market values of equity and the book value of net interest bearing debt will be used to estimate the capital structure. What we have noticed is that in order to perform the final valuation of NNIT's equity, WACC is required which in turn is influenced by NNIT's equity. In other words, the future value of equity can be estimated only when NNIT's current equity value is estimated since it will be applied as a foundation into the valuation (Koller et al., 2015).

The market value of equity is calculated by multiplying the current, **May 20th 2016**, market price of NNIT's share by the total number of outstanding shares. Net interest bearing debt will be used as of December 31st 2015 (calculation has been provided in Financial analysis chapter). Equity/(Debt + Equity) represent the equity ratio, whereas Debt / (Debt + Equity) is the debt ratio.

Table 20. Calculation of equity and debt ratios. Source: Own creation based on data from NNIT's annual reports

DKK	
Current stock price	200.50
Number of shares outstanding	25,000,000
Market value of equity	**5,012,500,000**
Net interest bearing debt	134,688,000
Company value	**5,147,188,000**
Equity ratio	***97.38%***
Debt ratio	***2.62%***

In the table above all the calculations are presented. The equity ratio of **97.38%** and the debt ratio of **2.62%** is used as the capital structure of NNIT and further in the calculation of WACC.

Capital Asset Pricing Model

Next step in estimating WACC is to find the investors' r_e. For this purpose we will use most often suggested Capital Asset Pricing Model. The formula that will be used for calculating CAPM is:

$$r_e = r_f + \beta_e \, x \, (r_m - r_f)$$

where r_e is cost of equity, r_f is risk-free rate, β_e is Beta (systematic risk), r_m is return on market portfolio (Petersen & Plenborg, 2012) or the market risk premium (Koller et al., 2005).

The idea behind CAPM is that by holding an extensive portfolio of shares, investors only pay for the systematic risk – unsystematic risk is diversified away (Petersen & Plenborg, 2012). Further we will compute each component of CAPM and calculate investors' required rate of return, r_e.

Risk-free rate

Risk-free rate indicates to which extent an investor can earn with zero risk. Petersen and Plenborg (2012) affirm that the expected return on zero-β portfolio would be the best estimate of the risk-free rate, however composing such portfolio could be pricy and complex. Therefore, in practise a government bond is used as a proxy for the risk-free rate since the underlying assumption is that a government bond is risk-free. In a perfect case we should discount each forecasted cash flow using a government bond with a similar maturity; this would require to recalculate the cost of capital for each year in forecast period. Due to inefficiency and complexity of the approach (Koller et al., 2015), we will use a 10-year Danish government bond as a proxy for the risk-free rate. As of May 13, 2016 Danish ten-year government bond was 0.419% (TradingEconomics.com, 2016; Investing.com, 2016). It is extremely low in comparison to historical values and is effected by the credit crisis in Europe and Denmark's peg against euro as euro has fallen against the Danish krone (Bloomberg, 2016; Investing.com, 2016; other sources). Taking this into account, we believe the current rate is biased and is expected to increase in future. Therefore, we have calculated an average rate between 01/01/2010 and 13/05/2016 which will be further applied as a risk-free rate. The risk-free rate to be used in the valuation is **1.724%** (Investing.com, 2016).

Beta

The beta indicates a stock's incremental risk to a diversified investor, where risk is defined as the extent to which the stock moves up and down in conjunction with the aggregate stock market (Koller et al.,

2015). Investors' required rate of return increases the higher the systematic risk is. Interpretation of systematic risk is following:

β_e = 0 Risk-free investment

0 < β_e < 1 Investment with less systematic risk than the market portfolio

β_e = 1 Investment with the same systematic risk as the market portfolio

β_e > 1 Investment has higher systematic risk than the market portfolio (Petersen & Plenborg, 2012).

Beta cannot be observed directly, therefore we will need to make estimations of its value. Regression analysis using the market model is the most common approach to estimate a company's raw beta:

$$R_i = \alpha + \beta R_m + \varepsilon$$

where R_i is the stock's return and R_m is the market's return (Koller et al., 2015).

Model displays that the stock's return is regressed against the market's return. Good benchmarks for market indices are the S&P 500[40] and the MSCI World Index[41]. At least 60-month observations should be used as advised by Koller et al. (2015). The S&P 500 offers day-to-day observations (excluding weekends) over 5 years starting from May 13th, 2011 and until May 13th, 2016. In order to start the regression analysis, we need to collect NNIT's historical stock returns over past 5 years. However, NNIT went public only on March 6th 2015. Prior the company was not listed on NASDAQ Copenhagen stock market. 1-year figures are not stable, create noise and are not good indicators of NNIT's future performance. Providers of financial news such as Bloomberg, Reuters, Financial Times, Morningstar, Yahoo Finance, etc. as well are missing information on the beta.

For a more accurate valuation, we have compared industry peers' beta: Nordic IT peers such as Atea (0.5309) and KnowIt (0.9056), international peers such as IBM (0.703), Atos (0.4553), Cap Gemini (1.14) (Reuters, 2016 and Financial Times, 2016). The peer's group average beta is 0.75 which

[40] The S&P 500® is widely regarded as one of the best single gauge of large-cap U.S. equities. It contains over USD 7.8 trillion benchmarked to the index, with index assets comprising approximately USD 2.2 trillion of this total. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization. [http://us.spindices.com/indices/equity/sp-500]

[41] The MSCI World Index, which is part of The Modern Index Strategy, is a broad global equity benchmark that represents large and mid-cap equity performance across 23 developed markets countries. It covers approximately 85% of the free float-adjusted market capitalization in each country and MSCI World benchmark does not offer exposure to emerging markets. [https://www.msci.com/world]

indicates that the market portfolio has lower systematic risk and these companies are less risky to invest in. One of NNIT's growth strategies is to support Danish customers internationally which in turn means an increased risk. Moreover, NNIT's share price has not been stable, fluctuating from DKK 150.00 (18/03/2016) up to DKK 200.50 (20/05/2016) (NNIT Share price, 2016). Therefore, we will make an estimation of the beta value equal to **1.25**. We believe this number is reasonable and is higher than 1 as we expect a higher systematic risk in NNIT thank in its peers.

Market risk premium

The market risk premium is the difference between market returns and returns from risk-free investments, $(r_m - r_f)$ (Petersen & Plenborg, 2012). Petersen and Plenborg describes two most commonly used methods:

- ex-post approach examines the difference between the historical returns and assumes historical risk premium to be a reasonable determinant of the future market portfolio's risk premium;
- ex-ante approach attempts to estimate the market portfolio's risk premium based on analysts' consensus earnings forecast.

The expected return on a stock and on the market is unobservable. Neither ex-post approach, nor ex-ante approach are able to precisely estimate the true level of the risk premium. Koller et al. (2015) discuss each method and infer that a range around 5 percent is appropriate. Petersen and Plenborg (2012) based on the survey conducted by Fernandez in 2008 states that in the European market an average risk premium is 5.3%. Damodaran (2016) who monthly updates the figures implies a risk premium of 5.11% as of May 1st, 2016. Considering the mentioned, we have decided to use the market risk premium of **5.1%**.

Calculation of cost of equity

After all inputs have been determined in the CAPM model, we can now perform the calculation of the cost of equity:

$$r_e = 1.724\% + 1.25\ x\ 5.1\% = 8.099\%$$

Cost of debt after tax

The required rate of return on net interest-bearing debt or so called cost of debt has a following formula:

$$r_d = (r_f + r_s)\ x\ (1 - tax\ rate)$$

where r_f is risk-free rate and r_s is credit spread (risk premium on debt) (Petersen & Plenborg, 2012).

We have already defined and determined the risk free rate; in this section we will concentrate on the credit spread.

The credit spread is the risk level for the debt holder. Lower credit spread indicates the debt to be more secure for the debt holder. Credit rating companies such as Standard & Poor's and Moody's provide information about credit ratings for various companies. It is missing for NNIT and we assume the reason is NNIT being relatively new as a public company. We will resort to Damodaran (2016) who creates a link between interest coverage ratios, credit ratings and credit spreads[42]. In the financial analysis we have calculated interest coverage ratio and in 2015 it was 40.88. Since NNIT is a smaller company with the market cap less than USD 5 billion, and current interest coverage ratio above 12.5 a credit rating of Aaa/AAA and the credit spread of **0.75%** is expected.

Tax rate

The effective corporate tax rate is a weighted average of the group's different corporate tax rates and should have been applied as a tax rate. However, since it relies on multiple assumptions which are difficult to implement in practise, we will use the corporate tax (the effective tax rate) (Petersen & Plenborg, 2012). The average effective tax rate of 23.8% will be applied.

Calculation of cost of debt after tax

EBIT and net financials that are applied when calculating the interest coverage ratio are tax-deductible, therefore we should estimate the cost of debt after tax. The cost of debt after tax is then the following:

$$r_d = (1.724\% + 0.75\%)\ x\ (1 - 23.8\%) = 1.885\%$$

The required rate of return on debt is always lower than investors' required rate of return on equity as in case of company's default, the debt should be paid out first.

Calculation of WACC

After all parameters have been estimated we can compute the cost of capital:

$$WACC = (2.62\% \text{ x } 1.885\%) \ + \ (97.38\% \text{ x } 8.099\%) \ = \ 7.94\%$$

WACC estimate is close to the IT industry average of 8.27% (Damodaran, 2016) and therefore is assumed reasonable. In the valuation we will use the WACC of 7.94%.

[42] Damodaran created tables that relate the interest coverage ratio with the credit rating and spread can be found in Appendix 16.

Appendix 16. Credit Spread Tables.

Source: Damodaran (2016). Ratings, Interest Coverage Ratios and Default Spread and own creation

For large non-financial service companies with market cap > USD 5 billion

Interest coverage between		Rating	Spread
>	≤		
8.5	100000	Aaa/AAA	0.75%
6.5	8.499999	Aa2/AA	1.00%
5.5	6.499999	A1/A+	1.10%
4.25	5.499999	A2/A	1.25%
3	4.249999	A3/A-	1.75%
2.5	2.999999	Baa2/BBB	2.25%
2.25	2.49999	Ba1/BB+	3.25%
2	2.25	Ba2/BB	4.25%
1.75	1.999999	B1/B+	5.50%
1.5	1.749999	B2/B	6.50%
1.25	1.499999	B3/B-	7.50%
0.8	1.249999	Caa/CCC	9.00%
0.65	0.799999	Ca2/CC	12.00%
0.2	0.649999	C2/C	16.00%
-100000	0.199999	D2/D	20.00%

For smaller non-financial service companies with market cap < USD 5 billion (NNIT)

Interest coverage between		Rating	Spread
>	≤		
12.5	100000	Aaa/AAA	0.75%
9.5	12.5	Aa2/AA	1.00%
7.5	9.499999	A1/A+	1.10%
6	7.499999	A2/A	1.25%
4.5	5.999999	A3/A-	1.75%
4	4.499999	Baa2/BBB	2.25%
3.5	4	Ba1/BB+	3.25%
3	3.499999	Ba2/BB	4.25%
2.5	2.999999	B1/B+	5.50%
2	2.499999	B2/B	6.50%
1.5	1.999999	B3/B-	7.50%
1.25	1.499999	Caa/CCC	9.00%
0.8	1.249999	Ca2/CC	12.00%
0.5	0.799999	C2/C	16.00%
-100000	0.499999	D2/D	20.00%

Appendix 17. Discounted Cash Flow Valuation

OPTIMISTIC	Explicit forecast period						
DKK '000	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
FCFF	10,075	31,784	55,662	255,571	332,182	411,262	463,036
g	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
WACC	7.94%	7.94%	7.94%	7.94%	7.94%	7.94%	7.94%
Discount factor (31/12/2015)	0.9264	0.8583	0.7952	0.7367	0.6825	0.6323	
Duration	0.615	1.615	2.615	3.615	4.615	5.615	
Adjusted discount factor (20/05/2016)	0.9541	0.8839	0.8189	0.7587	0.7029	0.6512	
Present value of FCFF	9,613	28,095	45,582	193,894	233,479	267,798	
Present value of FCFF in forecast period	778,460						
Present value of FCFF in terminal period	6,498,085						
Enterprise value	**7,276,546**						
Net interest bearing debt (2015)	-134,688						
Estimated value of equity	**7,141,858**						
Number of shares outstanding	25,000,000						
Share price	**285.67**						

Source: Own creation based on data from NNIT's annual reports

PESSIMISTIC	Explicit forecast period						
DKK '000	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
FCFF	8,575	-97,950	-198,274	-116,779	-141,455	-164,676	-129,720
g	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
WACC	7.94%	7.94%	7.94%	7.94%	7.94%	7.94%	7.94%
Discount factor (31/12/2015)	0.9264	0.8583	0.7952	0.7367	0.6825	0.6323	
Duration	0.615	1.615	2.615	3.615	4.615	5.615	
Adjusted discount factor (20/05/2016)	0.9541	0.8839	0.8189	0.7587	0.7029	0.6512	
Present value of FCFF	8,181	-86,581	-162,368	-88,597	-99,424	-107,231	
Present value of FCFF in forecast period	-536,020						
Present value of FCFF in terminal period	-1,820,439						
Enterprise value	**-2,356,459**						
Net interest bearing debt (2015)	-134,688						
Estimated value of equity	**-2,491,147**						
Number of shares outstanding	25,000,000						
Share price	**-99.65**						

Source: Own creation based on data from NNIT's annual reports

Appendix 18. Economic Value Added Valuation

MOST-LIKELY	Explicit forecast period						
DKK '000	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
NOPAT	116,633	121,946	128,364	135,990	141,081	143,899	152,691
Invested capital, beginning of period	875,506	967,575	1,060,559	1,173,084	1,309,279	1,435,101	1,551,487
g	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
WACC	7.94%	7.94%	7.94%	7.94%	7.94%	7.94%	7.94%
Cost of capital	69,515	76,825	84,208	93,143	103,957	113,947	123,188
EVA	**47,118**	**45,121**	**44,156**	**42,847**	**37,125**	**29,952**	**29,503**
Discount factor (31/12/2015)	0.9264	0.8583	0.7952	0.7367	0.6825	0.6323	
Duration	0.615	1.615	2.615	3.615	4.615	5.615	
Adjusted discount factor (20/05/2016)	0.9541	0.8839	0.8189	0.7587	0.7029	0.6512	
Present value of EVA	**44,956**	**39,884**	**36,160**	**32,507**	**26,094**	**19,504**	
Invested capital, beginning of period	875,506						
Present value of EVA in forecast horizon	199,103						
Present value of EVA in terminal period	414,040						
Estimated enterprise value	**1,488,649**						
Net interesting-bearing debt	-134,688						
Estimated market value of equity	**1,353,961**						
Number of shares outstanding	25,000,000						
Share price	**54.16**						

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Source: Own creation based on data from NNIT's annual reports

OPTIMISTIC	Explicit forecast period						
DKK '000	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
NOPAT	116,633	140,905	171,307	207,929	246,605	287,198	307,618
Invested capital, beginning of period	875,506	967,596	1,101,496	1,287,420	1,469,483	1,647,206	1,821,065
g	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
WACC	7.94%	7.94%	7.94%	7.94%	7.94%	7.94%	7.94%
Cost of capital	69,515	76,827	87,459	102,221	116,677	130,788	144,593
EVA	**47,118**	**64,078**	**83,848**	**105,708**	**129,928**	**156,410**	**163,025**
Discount factor (31/12/2015)	0.9264	0.8583	0.7952	0.7367	0.6825	0.6323	
Duration	0.615	1.615	2.615	3.615	4.615	5.615	
Adjusted discount factor (20/05/2016)	0.9541	0.8839	0.8189	0.7587	0.7029	0.6512	
Present value of EVA	**44,956**	**56,641**	**68,664**	**80,198**	**91,322**	**101,848**	
Invested capital, beginning of period	875,506						
Present value of EVA in forecast horizon	443,628						
Present value of EVA in terminal period	2,287,840						
Estimated enterprise value	**3,606,974**						
Net interesting-bearing debt	-134,688						
Estimated market value of equity	**3,472,286**						
Number of shares outstanding	25,000,000						
Share price	**138.89**						

Source: Own creation based on data from NNIT's annual reports

PESSIMISTIC	Explicit forecast period						
DKK '000	2016E	2017E	2018E	2019E	2020E	2021E	Terminal period
NOPAT	29,783	-12,662	-32,917	-37,109	-38,210	-40,888	-40,479
Invested capital, beginning of period	875,506	624,637	424,813	300,493	215,096	154,930	127,933
g	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
WACC	7.94%	7.94%	7.94%	7.94%	7.94%	7.94%	7.94%
Cost of capital	69,515	49,596	33,730	23,859	17,079	12,301	10,158
EVA	**-39,732**	**-62,259**	**-66,647**	**-60,968**	**-55,288**	**-53,190**	**-50,637**
Discount factor (31/12/2015)	0.9264	0.8583	0.7952	0.7367	0.6825	0.6323	
Duration	0.615	1.615	2.615	3.615	4.615	5.615	
Adjusted discount factor (20/05/2016)	0.9541	0.8839	0.8189	0.7587	0.7029	0.6512	
Present value of EVA	**-37,909**	**-55,032**	**-54,578**	**-46,254**	**-38,860**	**-34,635**	
Invested capital, beginning of period	875,506						
Present value of EVA in forecast horizon	-267,269						
Present value of EVA in terminal period	-710,624						
Estimated enterprise value	**-102,387**						
Net interesting-bearing debt	-134,688						
Estimated market value of equity	**-237,075**						
Number of shares outstanding	25,000,000						
Share price	**-9.48**						

Source: Own creation based on data from NNIT's annual reports