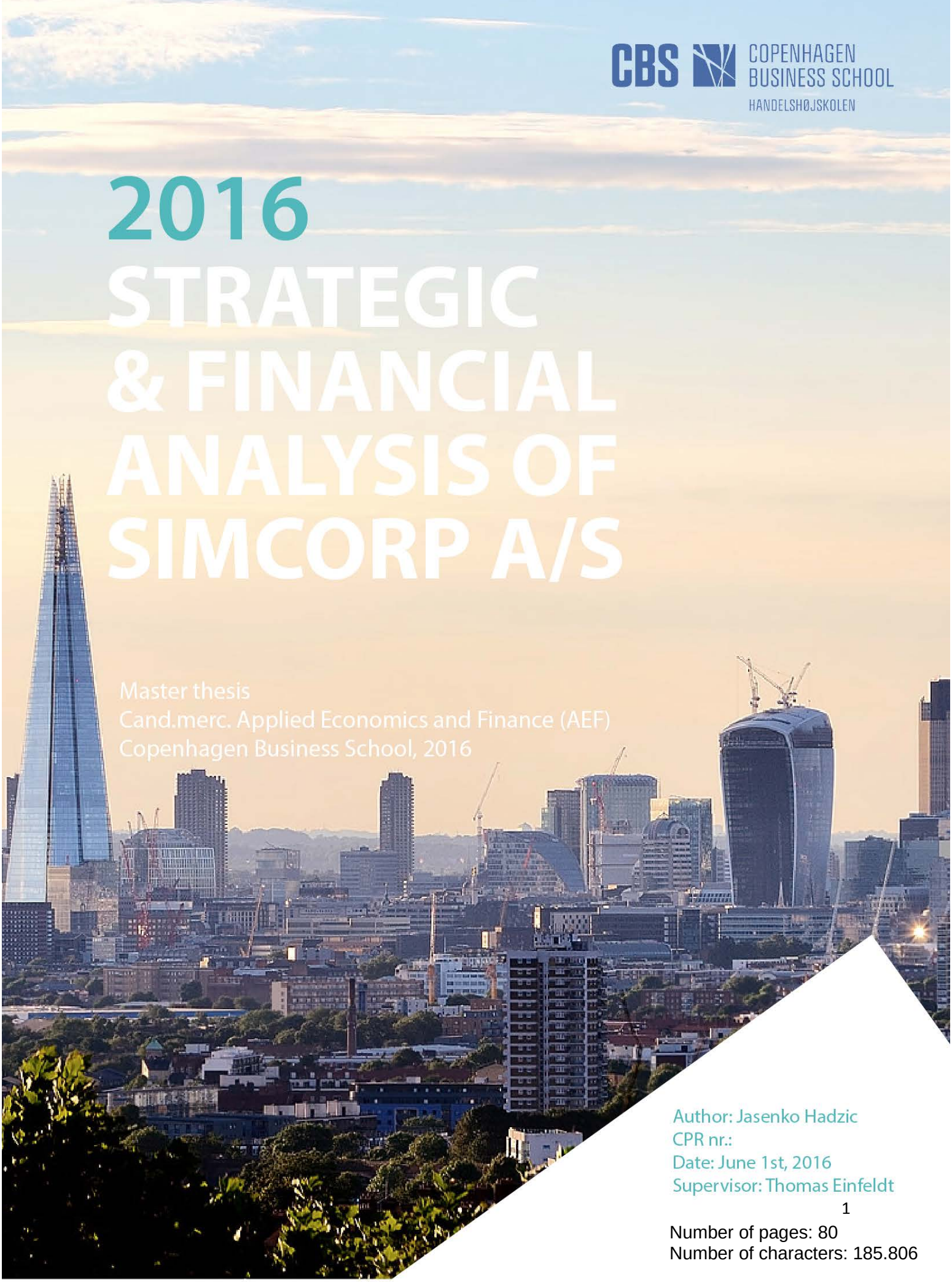

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2016
STRATEGIC & FINANCIAL ANALYSIS OF SIMCORP A/S

Master thesis
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Executive Summary

Despite global financial crisis in 2008 that took the investment management industry with storm, one software vendor, SimCorp showed that it had the right ingredient to grow. In the analysed period of 2008-2015 our analysis shows that SimCorp was in fact able to capitalize on the turmoil that shook up the investment management industry.

Our strategic analysis reveals that key factors part of this success were a combination of a strong management team, an inherent focus on innovation in its core product offering and a continuous investment in attracting and retaining skilled labour. This came through very clearly in the recent year of 2015 where the company experienced record revenue of EUR 277.9m. Moreover, the strategic analysis showed that the growth potential for SimCorp is immense, as approximately 89% of the investment industry still relies on old legacy systems, which are costly to maintain in a time where globalization, increased regulation and a squeeze on management fees is becoming more absolute for every day that goes. For SimCorp the biggest potential lies in North America, where the company only holds 4% of market share (compare to mature markets as the Nordics where SimCorp holds a market share of 66%. This very reason is also why the management of the company sees SimCorp future growth coming from North America, including two other designated growth markets, France and UK.

Our financial analysis showed that SimCorp is highly effective in managing its cost, while having a sharp focus on organic growth and on investing in innovation (20% of yearly revenue in R&D). Moreover, in the analysed period, SimCorp has been in a positive financial trend, where both ROIC and ROE have been increasing. These stem due to the a low Net Borrowing Cost (NBC), an effective management of cost and a strong reoccurring revenue in the form of professional services revenue (31% of revenue in 2015) and maintenance revenue (44% of revenue in 2015). Moreover, the risk analysis made it evident that SimCorp has a low short-term and long-term liquidity risk, which allows one to conclude that SimCorp can be characterised as a financially healthy and solid company.

Using the DCF model, we have estimated the value of SimCorp's share price to be **DKK 390.0** as of 22nd of February, 2016, which is 30% higher than the observed share price of SimCorp DKK 299 on the same date. Thus, using the models and assumptions made in this thesis, we conclude that SimCorp is undervalued and propose a **"BUY"-recommendation** of the share.

1.0 Table of Contents

2.0 Introduction

At a time where tech companies with valuations in the billions of dollars have started to insist that their immensely high growth rates should not be subjected to conventional P/E-based valuation analysis, investors have slowly become more critical. Critical posts by major industry figures have revealed that an upcoming tech bubble seems more and more likely for every day that passes. As Jules Maltz, a General Partner at Institutional Venture Partners states: “Private valuations have become disconnected from public reality”.[1]

With hottest among the tech companies, Uber and Airbnb, being valued at respective amounts of $50 billion and $25 billion by their latest investors, financial statements of these tech companies are under close scrutiny. This development gives immense food for thought in how to properly value a tech company and what metric to use when making company valuations.

Since post-financial crisis in 2008, the world economy has been slowly recovering. Markets have become optimistic again, investments have increased and the immense development in technology has been disrupting many industries. Many are referring this day of age as the second industrial revolution and call it “the technology revolution”. The revolution is manifesting itself in the form of the largest sectors being disrupting, one of which is the financial sector.

An integral part of the financial sector is investment management and post-financial crisis; investment managers have undertaken strict cost control and cost savings. These savings affected many companies, one of which is SimCorp, whose IT software solution targets the 1,200 largest investment managers in the world. SimCorp was affected in customers’ lack of willingness to invest in new software solutions and services, where software bought before the crisis was seen sufficient and therefore, investment managers stuck to old legacy solutions, which gave SimCorp difficulties in gaining new market share despite a huge unserved global market.

As markets have become more optimistic again in the last years and as politicians have imposed stricter regulations upon the financial sector, based on learnings from the crisis, the demand for SimCorps products has risen over the years. Especially, new regulations from EU

[1] http://www.inc.com/magazine/201509/jeff-bercovici/are-we-in-a-tech-bubble.html

and the national markets have put higher requirements for liquidity and solvency to ensure that the crisis of 2008 doesn't repeat itself have driven demand for SimCorp's software solutions.

SimCorp, a leader within its own vertical in the space of financial technology, has in the last three years from 2012-2015 has almost tripled in valuation. During this time the board has been highly active in stock buyback schemes, which has sent confident signals to shareholders and the market, about the management's faith and optimism in the future growth opportunities of SimCorp. All of this raises the question of whether SimCorp is overvalued or not. Therefore, the purpose of this thesis is to uncover this question by valuating the share price of the company as of February 22nd, 2016.

2.1 Motivation

The motivation for the chosen topic is based on a number of factors:

- It is related to my degree within the course, corporate finance
- It is within the technology space, which I am highly engaged in
- It is an exciting area large enough to cover the work in a master thesis

A valuation has been chosen based on a number of factors, which also coincides with SimCorp being the respective company to valuate. Post-financial crisis new legislation has been put forward to avoid a similar meltdown of the world economy as we saw in 2008. These new regulations influence one industry in particular, the investment management industry, by requiring investment managers to be able to demonstrate their company's operational risk in greater detail than before the financial crisis in 2008.This wave of new legislations has set high requirements for investment managers IT systems and within this space one company stands out, SimCorp. SimCorp, a listed on the Copenhagen Stock Exchange and an international market leader within investment management software industry, delivered the best financial performance to date in the company's history in 2015. The company's position prone SimCorp as the best positioned player to use the new wave of legislations to drive company growth, as it offers the most complete software systems in the form of its SimCorp Dimension product.

SimCorps breaking financial performance and increasing development in share price has led me to ponder over whether this vast increase in the share price for SimCorp over the years can

be reasonably justified and if the value has really increased or if the market is acting based on general optimism in the development in the investment management industry.

I believe the momentum of SimCorp's share price is interesting on several levels. Not only is the company growing fast and outperforming the OMX CPH MidCap Index, but more importantly, the company seems to have anticipated and timed the market development in a unique way. SimCorp is a company that has the history, the excellence, the award-winning technology, an experienced management with a proven track-record and most importantly, a position in a market situation where increases in regulations are driving technology adoption within the financial industry, currently stuck in old legacy systems.

Summed up, all of the above mentioned also presents a unique opportunity to contribute to academia, being that SimCorp has rarely been used in a thesis valuation. My hope is that this thesis will shine light on the investment management industry and provide new insights, which can be the inspiration for coming students to write their thesis about the industry.

2.2 Problem statement

The purpose of the valuation is to uncover whether SimCorp's share price is over- or undervalued compared the market price of its equity. The important underlying question that this thesis poses is: "What is driving SimCorp's share price and can the share price momentum be justified? ".

In view of this, answering the question of whether or not SimCorp is an attractive investment object relative to the stock market's valuation per 22nd February, 2016.

- If the estimated share price is higher (>) than the market price per. February 22, 2016 then an investment in SimCorp's share is considered attractive.
- If the estimated share price is lower (<) then an investment in SimCorp's share is not considered attractive
- If the estimated share price approximately equals (=) to the market price, then an investment in SimCorp's share is not considered attractive, because the expected return is equal to the required yield.

The bottom line of the valuation of SimCorp's equity (share price) presented in this work is to recommend whether to: Buy, Sell or Hold.

2.2.1. Problem specification

This thesis will seek to answer the following question:

What is the fair value of SimCorp A/S's equity (share price),
on a stand-alone basis, as of 22nd February, 2016?

2.3 Problem identification

The understanding of a business can be analysed in various ways; through product mix, immaterial assets such as know-how or by looking at goodwill, just to name a few.

In order to dig deeper into the discovery of the fair value of SimCorp, I have chosen to look at the core business of the company, as well as some of the aspects for which the company is known, such as its core products, SimCorp Dimension and SimCorp Coric, its revenue mix, its profitability, its liquidity and the cost management efforts of the company.

When making a valuation of SimCorp, I perceive of utmost relevance to consider not just the performance of SimCorp per se, but also the peer performance in the technology, as well as the financial services industry. This will work as a general benchmark for SimCorp's performance.

Finding the fair price is very much subjective and highly dependent on what data about the company one has puts emphasis on, it can also be valued differently. Hence, a lot of thought needs to be put into the valuation models used for the company in question, as the right mix of models may vary depending on which company is to be valued. Theoretically, there is only one fair price, which is correct and that is the quoted share price for the traded shares. The Efficient Market Hypothesis[2] implies that asset prices entail all know information about a company into the share price of that respective company and hence, a valuation of one of the companies outperforming the market, in terms of share price, seems in order.

Various models can be taken into consideration when valuing a listed company like SimCorp, each with advantages and disadvantages. Given the scope of this thesis it is impossible to take

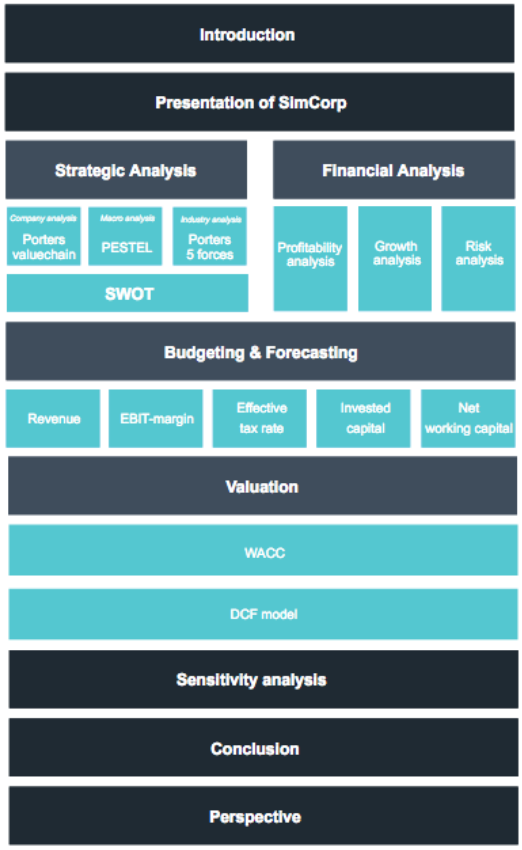
[2] https://en.wikipedia.org/wiki/Efficient-market_hypothesis

all such models into consideration, as some of these would add very little value to the end result and will as such be left out.

2.4. Structure and methodology

This chapter presents the thesis methodological approach and considerations in the choice of applied theory. In the following paragraphs I will therefore give my analysis strategy, defining the subject, and the choice of theoretical models. There are many models that can be used in determining the situation faced by a company and this thesis handles the issue of valuation through strategic analysis and financial statement analysis, followed by the forecasted prognoses and budgets made on the basis of the findings in the prior analysis. The forecasts and budgets will then be used to perform a valuation of SimCorp to compute the true value of the company. With the ambition of making the most precise valuation of SimCorp as possible, I have chosen models that are all reputable, well respected and most importantly, the ones used by all equity analysts that cover SimCorp's share, when trying to determine the value of a listed company like SimCorp. All models will be covered in-depth in the next chapter, where I will reflect on the strengths and weaknesses of the models, compare them to possible alternatives and lastly, argue for the models I have chosen as the e best fit for SimCorp, given the nature of its business and the market it operates in. The overall structure of this thesis and methodology used is depicted in Figure 1 below.

Figure 1: Structure of this thesis and methodology



Source: Authors own creation, Copenhagen Business School, June 2016

2.4.1. Introduction and Company Presentation

In order to do a proper valuation, it's important to have in-depth knowledge about the company in question. This creates a fundamental understanding of how the company should be valued, what analytical models to apply and which areas deserve more attention than others.

Therefore, these two sections of the assignment will form the foundation on which we will base the outlook on thesis.

2.4.2. Strategic Analysis

The strategic analysis focuses on the qualitative value drivers of SimCorp. It will provide an understanding of where SimCorp is now, as a company (internal factors) and what SimCorp can expect in future development and profitability in its industry (external factors). Thereby, the

strategic analysis will be divided into three levels: company, industry and macro, which will form the basis in estimating the earnings and growth potential of SimCorp in the long term future.

To determine the internal variables that exist on the company level (strengths and weaknesses of SimCorp), Porter's Value chain model (1985) will be utilized. Porter's Value chain model will help create an overview of SimCorp's activities, discover where profit is created and where it is not. The model goes in depth with the entire value chain of SimCorp. To determine the external variables that exist, two models will be used; the PESTEL model will be used to determine the external factors, such as political, economic, social, technological, environmental and legislative factors that exist on a macro level and Porter's Five Forces model (1979) will be used to determine external factors, specifically competitiveness that exist on an industry level. These two models will capture the opportunities and threats that the company must be aware of. The findings in this section will be summarized in a SWOT analysis. The SWOT analysis will give a visual indication of where the opportunities and threats lie in the future for SimCorp and where the present strengths and weaknesses exit for the company.

2.4.3. Financial Statement Analysis

The financial statement analysis intends to identify the historical trends and growth levels, which have driven SimCorp's share price up until now. This section will to a certain degree undergo reclassification of SimCorp's annual reports from 2008-2015 to separate operational activity and financial activity, where the period 2008-2015 is chosen to give a full picture of SimCorp's performance post-financial crisis.

The financial statement analysis will be based on historic levels and trends in key financial figures, growth analysis, based on research reports, risk analysis and peer group comparison. This part will contain an analysis of the accounting practices applied by SimCorp and corrections will be made to the statements when necessary, the corrected data material will then form the basis of any further analysis. A general analysis as to how the company has been performing in creating value for its shareholders, generate growth and control its risks, both operational as well as financial, will help reveal some of the financial aspects for SimCorp.

An in-depth look at the key financial ratios, an analysis of their meaning and how they have developed over the past years will help form the starting point for the budgeting following in the next part. Looking at the key financial ratios for only SimCorp however gives very little indication

as to where the company stands as there are no absolute measures for what the ratios should be. To give an indication of where SimCorp stands, a peer comparison with a chosen set of SimCorp's competitors in the technology as well as the financial sector will be made and analysed. The analysis is intended to give an investor the insight into the profitability for SimCorp in the future as well as other financial insights as they are key indicators to any valuations.

2.4.4. Budgeting and Forecasting

The budgeting and forecasting segment will look into the short-term future of SimCorp. Furthermore, this section will look into what the institutions, covering SimCorp's stock, have forecasted and what has the company itself have said about its current situation and where it expects the company to go. The forecasts and budgets will be dealing with short-term forecasts made by SimCorp, forecasts and budgets made by the author.

Budgeting will be done on basis of strategical as well as financial analysis. This means an assessment of a suitable aggregation level for the central value drivers, the length of the budget, which has its foundation in the strategical and financial analysis. The budget will present a series of possible scenarios for the future development of SimCorp.

2.4.5. Valuation

The valuation will be based on the previous three sections and in this section the actual valuation of SimCorp will be made. The valuation will provide a qualified answer to how future cash flow, P&L and financial estimates will be. The valuation will be based on an appropriate WACC and the DCF model, and the current market value of SimCorp.

Calculating WACC which for every investor is associated in investing in SimCorp, compared to another company with same risk profile. I will calculate SimCorp's capital cost by using several theoretical and empirical approaches and thereby increase the credibility of the estimate I will create.

Being that SimCorp has a strong cash flow, the DCF model is quite good fit, as it focuses on cash flows and harmonizes well with SimCorp's business model. Moreover, it could be argued that the addition of an EVA model on top would have increased the validity of the estimated value of SimCorp, as both are quite similar, but this will be covered in the coming chapter and

compared to other alternatives. The DCF is theoretically correct and gives an objective valuation, if input in the model is realistic and objective[3]. The model is only as good as the input its feed. The forecasted budget period will be 4 years. A longer period is estimated to be too insecure in the market in which SimCorp operates.

2.4.6. Sensitivity Analysis

The sensitivity analysis is the final part preceding the conclusion. Being that a valuation is subjective and can be attained in many ways with regard to the forecast figures, it is highly likely to be sensitive to some of the underlying value drivers used. Therefore, this section will highlight the valuation's level of sensitivity to changes in respective drivers such as WACC and beta. Furthermore, this section will calculate a best case and a worst case scenario of the estimated value of SimCorp.

2.5. Reflection on theory and models

This chapter presents a reflection on the choice of models used in estimating the value of SimCorp. It is crucial for the thesis that I remain critical to the limitations that exist in the used theory and the analysis made. Therefore, in the following I will sum up the choice of models used in this thesis and reflect on the pros and cons of these models compare them to alternatives and lastly, state my case for the models I have chosen as the best fit in valuating SimCorp.

Overall thoughts on theory and models:

1. The chosen theory is well-respected among academia and financial analysts, whom use them in real life
2. The choice of models used in this thesis was done given the nature of SimCorp's business and the market it operates in.
3. The choice of models has meant that other models weren't chosen, which might have given other food for thought and thereby affected the conclusion of this thesis.

Due to limitations in number of pages, the reflections of theory and models can be found in Appendix 36.

[3] (Petersen & Plenborg, 2012; s. 212)

2.5.4. Sub-conclusion

From the reflections on the strengths and weaknesses of the different valuation models, one present value model has constituted as the best fit in estimated the value of SimCorp. The DCF model will be used as a core valuation model. Moreover, to compensate for the limitations in the DCF model, I will perform a sensitivity analysis after the valuation. Lastly, it's my clear intention to take the limitations of the chosen models into account in the perspective section (see section 10.0). As stated in the above mentioned sections, all models in this thesis can be categorized as static models, in that they solely focus on the current situation for the company. To meet this weakness I will try to value the future development, which will be bear fruit for my analysis of future scenarios and the budget.

2.6. Data

Most of data used in this thesis is secondary data. The secondary data consists of SimCorp's publicly available data, such as share price, official quarterly and yearly financial statements, news articles, information from online news media, industry reports, statistics and non-fiction literature. Furthermore, secondary data consists of other material publicly available on SimCorp's and the competitor's homepages. Financial data will be used from accounting period 2008-2015.

2.7. Limitations

The valuation of SimCorp is made from the point of view of an external investor and will as such only be based on publicly available information. The share price available at the 22nd February, 2016 when markets close will be used.

The valuation will be made on a "stand alone" basis and therefore possible synergies with regard to for example consolidation with other companies are not considered in the valuation. Hence takeover premiums and the like are also not considered in this paper.

The data used will mainly be that of the annual reports in the years 2008-201 made by SimCorp. I am estimating the value from 22nd February, 2016, where I per this date choose not to look at other public information that would influence my estimates and valuation of the company.

I assume that the reader has a basic proficiency in corporate finance and financial statement analysis, which is why calculations of EBIT, EBITDA etc. won't be elaborated. It is assumed that the reader is familiar with these estimates.

In the financial analysis, I will not look on FX risk, being that the Board of Directors have established a hedge against large FX fluctuations. Moreover, from an FX perspective, I will not process FX risk that exists for a private investor that would invest in SimCorp. SimCorp has revenue and costs in a variety of currencies, which means that an investor, who holds his spend in other currencies would be exposed to a certain FX risk.

The forecasting period is only made 4 years forward as it is considered too arbitrary to predict further ahead in the turbulent market in which SimCorp operates. Any available financial information before the period 2008/2009 will not be used in the valuation, as it is considered too far back to have any relevant impact on the business today. Though, the early days of SimCorp will be covered briefly in the chronologic order, as they have appeared historically.

Numerous models exist when estimating the value of a company. In this thesis I only focus on reflecting on the various valuation methods and in the strategic analysis, I will not delve in other models beyond the three used in the strategic analysis and the DCF model. Instead, this thesis will cover four respective valuation methods, when reflecting on theory and models used. The pros and cons of the chosen methods used in this thesis are discussed in section 2.5.

2.8. Source criticism

As the valuation is made from an external investor's perspective the thesis is mostly based on secondary information. One of the primary sources of secondary information used are the respective annual reports from SimCorp. These have been written to make the company appear as good as possible and hence have a subjective tendency. The content however has been audited by an impartial auditor and is thus considered valid enough for this thesis. It is though important to point that SimCorp's Annual Reports make up an historical date with high degree of trust, as these are realized an can be confirmed through several sources and not to say the least, live up to the lawful accounting standards.

For general market information a range of databases has been used, such as DataStream, Reuters and Bloomberg. These are considered credible considering the lack of incentive to fudge the numbers and provide wrong information. In many instances the databases used are simply quoting the observed share prices in the market and are for that purpose completely free of bias.

Newspapers with articles covering SimCorp and its competitors are used to link events with the analysis performed. This data is most often covered in newspapers. The sources are here deemed reliable as they have no gain in delivering wrong information. The validity is secured by looking for information from more than one supplier of news, i.e. both “Euroinvestor” and “Børsen”.

3.0 Company presentation: SimCorp

In this section SimCorp is introduced. All the following analysis and valuation are highly dependent on this section, so the purpose of this section is to create an in-depth overview of the history and development of SimCorp, as well as all aspects related to the ownership structure, the organization and leadership, the products, the financials, competing markets and SimCorp’s overall strategy. The aim is to identify them most relevant value drivers, which are the round for the estimation of SimCorp's future performance. The main internal factors identified will be given greatest focus in the subsequent external strategic analysis.

3.1 Introduction

SimCorp is a leading provider of investment management software solutions and services to the global buy-side investment management industry. The company has more than 40 years of experience in providing investment management software and services to investment managers, investment managers, fund managers, fund administrators, pension funds, insurance funds, and wealth managers.[4]

SimCorp is listed on NASDAQ OMX Copenhagen under the ticker symbol SIM. The company is traded as part of the OMXC MidCap Index and on 22nd February, 2016 the company had a market cap of DKK 12.40bn. SimCorp has offices in 18 countries and operates in Scandinavia,

[4] https://en.wikipedia.org/wiki/SimCorp

Europe, North America, Middle East, the Asia Pacific region, employs over 1,300 people and has over 170 of the world's foremost financial institutions as its clients.

3.1.1 History

Due to the regulation of capital markets in the 1970s and a general increase in interest rates followed greater demand software for managing securities portfolios and here, SimCorp was born. SimCorp was founded in Denmark in 1971. In the 1980's SimCorp's focus changed to solely become a software company that delivered tailored security systems for the financial sector. In the years 1986-1989, the company established subsidiaries in the UK (SimCorp Ltd) and Germany (SimCorp GmbH).

In 1995 the company did a major structural change as the strategic focus changed to focus solely on developing a standardized investment management system, TMS2000 (today called, SimCorp Dimension). The same year, SimCorp formulated its Standard Software Strategy, where it got its first TMS2000 customers. Through the late 90's the company expanded aggressively to Norway (1998) and Benelux and Sweden (1999). The following year, SimCorp fuelled its expansion to USA and offered its Initial Public Offering (IPO) on NASDAQ OMX Copenhagen in April 2000. In spite of a turbulent stock market, due to the dot-com bubble in the years 1997-2000[5], SimCorp achieved its best result ever and the highest earnings margin that year.[6] In 2001, SimCorp continued its expansion to Asia, Switzerland, and SimCorp Business Systems in the UK. The company changed the name of its flagship investment management system from TMS2000 to SimCorp Dimension in 2003. Singapore and Austria followed swiftly in SimCorp's ambitious expansion plans, in the years after. In 2008 SimCorp also expanded to Ukraine, whereas the company also incorporated XpressInstruments into its market investment management system. The year after the company expanded to France and to Luxembourg and Canada in 2010. That year SimCorp also introduced a front office suite within SimCorp Dimension, its enterprise solution for investment management organizations.

3.1.2 Acquisitions and Investments

SimCorp acquired its first company in 1999, BA Swallow Business Systems Ltd., from Bank of America.[7] The acquisition reinforced SimCorp's position within Europe and opened new international opportunities in North America and Southeast Asia.

[5] https://en.wikipedia.org/wiki/Dot-com_bubble
[6] Page 3: http://globaldocuments.morningstar.com/documentlibrary/document/a05b496256fa94e7.msdoc/original
[7] http://borsen.dk/nyheder/generelt/artikel/1/14057/danske_sim_corp_koeber_amerikansk_selskab.html

In September 2005, SimCorp acquired a majority stake in FIX protocol specialist Solutionforge[8]. The remainder of the company's shares was acquired by SimCorp in November 2007 and the acquisition meant that it opened the way for SimCorp to embed Solutionforge's FIX.NET server and FIX.NET trader technology into SimCorp's own investment management software, and this in turn strengthened SimCorp's trading knowledge base. Following the acquisition, three members of the Solutionforge board took management roles within SimCorp.[9] Solutionforge was renamed in 2011 to SimCorp Development Centre UK Limited[10].

In the beginning of 2014 SimCorp acquired 100% of Equipos Ltd for EUR 10 million. Equipos's main product – the Coric Client Communications Suite – was already utilized by some of SimCorp's clients and prior to the acquisition, SimCorp held a 20% stake in the company's share capital. After the acquisition Coric Client Communication Suite was renamed to SimCorp Coric (see section 3.3.2.2.).The subsequent full integration into the SimCorp organization supports SimCorp's strategy of growing the business based on its single product platform SimCorp Dimension.
Moreover, in October 2015 SimCorp invested EUR 100,000 in UK-based Opus Nebula Ltd. to deliver cost-effective, agile fund and client reporting software-as-a-service (SaaS) solutions. The investments enables SimCorp to expand its product offering and its addressable market size, by delivering its SimCorp Coric client reporting solution to small to medium sized wealth and investment management firms.[11]

3.1.3 Divestments

Alongside SimCorp's strategy to focus entirely on their core solution, SimCorp Dimension, the company decided to sell off its IT2 business, SimCorp Treasury Solutions in May 2007.[12]

3.1.4 Share price development

As mentioned, SimCorp is listed on NASDAQ OMX Copenhagen under the ticker symbol SIM and is traded as part of the OMXC MidCap index. SimCorp's nominal share capital per 22nd of

[8] http://www.finextra.com/news/fullstory.aspx?newsitemid=14286
[9] Matthew Reid and Vince Avery within Front Office product development, and Steve Wilkinson as lead system architect for SimCorp Dimension.
[10] http://www.simcorp.com/Home/Company/Solutionforge-Ltd-will-change-its-name-to-SimCorp- Development-Centre-UK-Limited-.asp
[11] http://www.simcorp.com/company/news/2015/10/news-page
[12] http://www.simcorp.com/company/news/2007/07/simcorp-as-sale-of-it2-is-complete

February was DKK 41,500,000 divided into 41,500,000 shares of DKK 1 following a capital reduction of DKK 2,000,000, 13 June 2014.[13]

The share price experienced its all-time low post the dot-com bubble on 30 September 2002 of DKK 10 per share. Over the years that followed, recession started easing, and SimCorp's share grew to a pre-financial crisis high on 2 January, 2007 of DKK 139.4 per share. The financial crisis hit in 2007-2008, plummeting SimCorp's share price to a new low in recent years of DKK 40 per share on 10 October, 2008. In the years that followed, SimCorp's share was on a growth trajectory, remaining fairly stable in the years 2009-2011. In 2012 the share price took off and market reacted positively to the new appointment of group management executives (see section 3.2.3.) and the implementation of SimCorp's share repurchases programs. By end 2014 SimCorp experienced a break in share price momentum. SimCorp's share dropped 24%, even though its liquidity (as measured by average daily trading volume) on NASDAQ OMX Copenhagen A/S was up by 24% to EUR 1.7m and the average daily number of trades increased by 15% to 374.

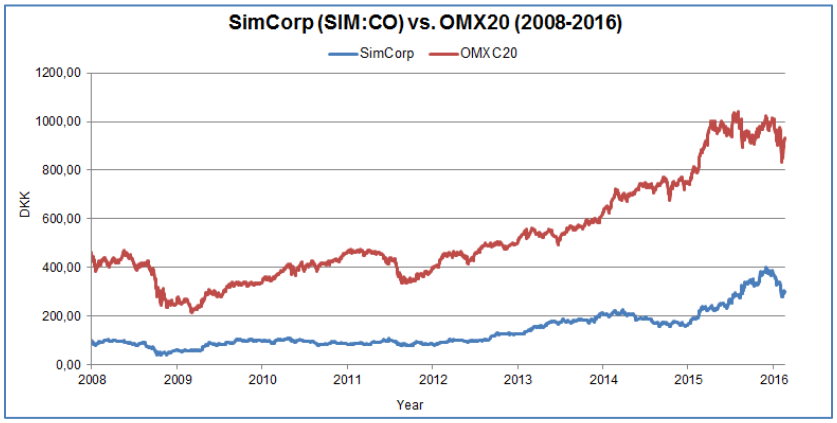
3.1.4.1 SimCorp vs. OMX Copenhagen MidCap Index

In this section we will compare SimCorp share to the index for medium-sized companies, OMX Copenhagen MidCap Index of which the SimCorp share is a component for the period 1st of January, 2008 to 22nd of February, 2016.

Firstly, we see that for whole period, SimCorp has generally outperformed the OMXC MidCap Index. During 2014, where SimCorp's share decreased 24%, OMXC MidCap rose by 5%. During that second half of 2015, we see the indexed stayed fairly constant, while SimCorps share price exploded. This difference in the latter half of 2015 indicates that certain stocks within the OMXC MidCap Index index must have underperformed, hence cancelling out the positive impact SimCorp's share.

[13] The shares are freely negotiable and confer equal rights on their holders

Figure 2: SimCorp vs. OMX Copenhagen MidCap Index (2008-2016)[14]



Source: Authors own creation, Copenhagen Business School, June 2016

2.1.6.2 Dividends

The Group Management of SimCorp has over the years had a sustained focus on shareholder value. Management believes that maintaining a composition of assets that does not raise questions about the company's financial stability is vital to SimCorp's continued international expansion. Therefore, SimCorp has annually paid dividends of at least 50% of the profits on ordinary activities after tax. For the accounting year 2015, SimCorp paid a dividend per share of DKK 5.2. In 2015 the total dividend payout was EUR 24.7m and the combined payout ratio was 86.9%.[15]

2.1.6.3 Share buyback

In 2012 SimCorp initiated its first share repurchase program since the company's IPO with the purpose to reduce SimCorp's share capital and to meet the obligations of SimCorp's incentive scheme. All of SimCorp's buyback programs are authorized at the company's Annual General Meeting (AGM) to buy back up to 10% of SimCorp's share capital in the period until the next AGM.[16] We notice that the standard duration of each stock repurchase program is six months. The only deviation was the first stock repurchase program between Q2 2012 and Q3 in 2012, which had a length of 3 months and acquired total market value of EUR 5.0m. This was during the hires of two key roles in the company, CFO, Thomas Jensen in 2011 and CEO, Klaus Holse in 2012. In the coming years, the share repurchase programs continued and increased, which is

[14] Stock data collected via DataStream
[15] SimCorp Annual Report 2014
[16] The buyback programs are conducted in accordance with the provisions of European Commission Regulation no. 2273/2003 of 22 December 2003, which provides protection against violation of insider trading laws in connection with the execution of the buyback.

both reflected in the amount of shares repurchased and the amount of shared capital owned by the company. This was during a period where of additional new appointment of key hires also took place (see section 3.2.3.). The market and the share price increased significantly from 2012-2015 with the new management team. Share repurchase programs usually send an indication that the company's management thinks the shares are undervalued. Because a share repurchase reduces the number of shares outstanding (i.e. supply), it increases earnings per share (EPS) and tends to elevate the market value of the remaining shares. In the case of SimCorp this is obvious in the fact

By the looks of SimCorp's share buyback programs, the company seems to have an average repurchase program of EUR 10.0m and 500,000 shares every six months. It seems that the compensation of the Board of Directors and Management has been closely linked to SimCorp's compensation, closely linking incentives of management with the best interest of the shareholders.

2.1.6.4 Stock Analyst Coverage

As mentioned earlier, SimCorp's share is covered by six financial institutions, which track the company on a continuous basis. These six analysts from ABG Sundal Collier, Carneige, Danske Bank, Handelsbanken, Nordea, SEB Enskilda[17]

3.2. Organization and leadership

In this section we will cover the ownership structure, the board of directors, the management team of SimCorp and the mission and vision of the company.

3.2.1. Ownership structure

SimCorp's share capital amounts to DKK 41,500,000 divided into 41,500,000 shares of DKK 1 each.[18] On 31 December 2015, SimCorp had around 7,650 registered shareholders representing more than 92% of the company's share capital. Approximately 70% of the share capital was held by institutional investors and more than 63% of the registered share capital was held by shareholders based outside Denmark, unchanged from 31 December 2014. At 31 December 2015, around 6% of the company's share capital was held by the company's management and by approximately 600 employees.[19] Additional information on the holdings of

[17] http://www.simcorp.com/investors/stock-information/stock-analyst-coverage
[18] The shares are freely negotiable and confer equal rights on their holders.
[19] http://www.simcorp.com/investors/stock-information/the-simcorp-share

SimCorp shares and restricted stock units by members of the Board of Directors, the Executive Management Board, and other related parties is disclosed in note 28 to the financial statements.

3.2.2. Board of Directors

SimCorp's Board of Directors currently consists of five elected board members and two employee-elected representatives.[20] The Board of Directors is body of elected or appointed members who jointly oversee and promote the long-term interests of the SimCorp. The Board of Directors is responsible for the overall strategic management, the financial and managerial control of the company being conducted adequately in all respects.[21]

Among the elected Board Members is Jesper Brandgaard (Chairman since 2008), Peter Schütze (Vice Chairman since 2012), Hervé Couturier (Board Member since 2008), Simon Jeffreys (Board Member since 2011) and Patrice McDonald (Board Member since 2014). Employee-elected representatives are Raymond John (Board Member since 2009, re-elected 2012) and Jacob Goltermann (Board Member since 2007, re-elected 2012)

3.2.3. Group Management

SimCorp's Group Management Committee consists of eight people in total and is currently headed by Klaus Holse, CEO. (See Appendix 5)

Since 1971 the CEO has been replaced 3 times at SimCorp. In the years, 2011-2012, SimCorp went through a large transformation within its Executive Management. In April 2011, Thomas Johansen was appointed as the Chief Financial Officer and in 2012, former CEO for more than 25 years, Peter L. Ravn, had decided to retire and leave SimCorp. That year the company appointed Klaus Holse as the CEO.[22] In 2014, SimCorp appointed Peter Hill as the Managing Director of SimCorp Ltd. based in London and Nick Quin as the Managing Director of SimCorp Asia, based in Sydney. Furthermore, the same year the company appointed Jens Olivarius as the Head of Group Marketing and Communications and due to a tough 2014 in the US-market, SimCorp decided to replace their Managing Director in North America. James Corrigan was appointed as the new Managing Director of SimCorp's North American operations.[23]

[20] The members of SimCorp's Board of Directors are elected for one year at a time (employee-elected members for three years)
[21] To ensure continuity in the composition of the Board of Directors, the five members elected by the shareholders who are currently serving on the Board of Directors will stand for re-election at SimCorp's annual general meeting.
[22] http://www.simcorp.com/company/news/2012/09/adjustments-to-simcorps-top-management-team
[23] http://www.simcorp.com/company/news/2014/09/simcorp-names-james-corrigan-managing-director-of-simcorp-north-america

In February 2015, the company appointed Victoria Turk as the Head of Human Resources for North America and Marc Mallett as the Vice President of Product and Managed Services at SimCorp North America. Furthermore, Scott Johnson was appointed Vice President and Head of Sales of SimCorp's North America division in March 2015.

3.2.3.1. Mission and vision

SimCorp's vision is to be the most attractive partner to investment managers and the number one provider of investment management solutions globally. The company's mission is to power successful investment management companies globally by offering integrated solutions unrivalled at reducing costs, mitigating risk, and enabling growth associated with investment activities.[24]

3.2.3.2. Culture and values

The culture in SimCorp focuses on determination, enthusiasm and performance with integration. Adding to the impact is "dialogue and empowerment", which encourages an open and direct communication and openness towards new and innovative ideas. The above goes hand in hand with the company investing 20% of revenue in R&D and product development. (see section 3.3.)

3.3. Products and Services

SimCorp develops, sells and provides the most integrated system, SimCorp Dimension[25] to the 1,200 largest investment management firms in the world. The company offers both software solutions and implementation services.[26] With a focus on the entire value chain SimCorp has built a strong name and is a leading technology solutions provider in the investment management industry. SimCorp has a simple product strategy with only one product SimCorp Dimension, which through a series of integrated front-to-back solutions, providing services to automatization of business processes within asset management.

[24] http://www.simcorp.com/company/about-us/our-vision-and-mission
[25] SimCorp changed the name of its flagship investment management system from TMS2000 to SimCorp Dimension in 2003.[#]
[26] SimCorp hosts a community neeting every year for all of their existing clients, where they engage with customers about future needs and possible improvements in their current solutions

Figure 3: Overview of SimCorp Dimension[27]

To continuously innovate and add upon its product offering to its clients, SimCorp reinvests more than 20% of the company's revenue every year in R&D. SimCorp has won thirteen different awards over the last years, noting 2015 as one of its most successful award-winning years.

3.3.1. SimCorp Dimension

As all of SimCorps revenue stems from the license sales of SimCorp Dimension, it's important to understand the product. SimCorp's core product offering, SimCorp Dimension, is a world class front-to-back investment management solution. SimCorp Dimension is built as a fully integrated system that is agile and flexible, enabling SimCorp to deploy a solution that matches the unique needs of every.

The production strategy for SimCorp Dimension can be categorized as "related diversification" as the company expands potential businesses using services that are closely related to the main product. Thus, scope benefits occur.[28] SimCorp Dimension is a multidimensional solution for investment managers that is completely modular and easily integrated, which means that modules can be bought separately or combined in a package. The core of product is that it's built with an "integration first" approach, giving immense flexibility, which enables SimCorp to tailor their software to the needs of every investment management firm. SimCorp Dimension enables investment management firms to get a real-time overview of their entire business in one system. For the investment manager this optimizes a lot of manual processes and removes the current middleware and the associated costs.

[27] http://www.simcorp.com/en/solutions/integrated-front-to-back-solution
[28] Douma and Schreuder, 2004

The main value proposition of SimCorp Dimension is that it automatizes workflows within an investment management firm, enabling investors to live up to regulatory requirements in the form of providing full transparency in their operational risk and giving them more time to focus on the value-adding tasks, such as providing better returns to their customers and giving a better service. The core feature of the SimCorp Dimension product is what the company calls “straight through processing”, which means that data only needs to be reregistered once in the system. This feature enables investment management firms to work in real-time and reduces risk of typing errors.

SimCorp Dimension covers all financial instruments, fulfils all regulatory requirements and accounting principles. It functions in a standard windows system environment, which gives their users the user experience of a Microsoft user interface and integrates easy to Excel. SimCorp Dimension is constantly being developed and upgraded, which means that the system is constantly on the cutting edge of the digitalization within the investment management industry. SimCorp’s strategy of investing approximately 20% of revenue every year in R&D enables the company to continuously develop innovative solutions, which gives it a competitive advantage. According to SimCorp, the software is released in a new and upgraded version every six months.

3.3.2.2 SimCorp Coric

SimCorp Coric is a market-leading provider of reporting software. SimCorp Coric was acquired in the advancement of SimCorp’s product strategy of continually building on SimCorp Dimension’s integrated portfolio of technical and business applications, while also providing selected applications as standalone solutions to leading investment managers. The acquisition represents an opportunity to eventually cross-sell between SimCorp Dimension and SimCorp Coric.

While already embedded in SimCorp Dimension’s Report Book Manager, the SimCorp Coric solution is also sold as a stand-alone solution to private wealth managers, institutional investment management firms, third party administrators and global custodians. The SimCorp Coric Client Communications is easily integrated with any investment management platform and enables portfolio managers to present increasingly complex portfolio data – extracted from any source – to their clients. Business users can create and modify client reports with ease, speed, and accuracy. Furthermore, the solutions offer transparency, a clear audit trail, and the ability to

mitigate operational risk. SimCorp Coric was fully integrated into SimCorp's product suite after an acquisition of SimCorp Coric with effect from 1 March 2014. For the past 10 years SimCorp has held 20% of the shares in the company.

3.3.2.3 Investment Book of Records (IBOR)

As a foundation of SimCorp Dimension, the company has their award winning IBOR solution that is integrated across front-, middle- and back-offices, helping asset managers get an overview and provide reliable up-to-date position data to make more informed investment decisions. [29] This minimizes barriers across an investment management firm and enables it to focus more on generating alpha with timely and relevant data. IBOR provides clients with more transparency, a clear audit trail and the ability to make smarter and more informed investment decisions.

SimCorps investment book of record (IBOR) delivers control over investment-critical information to asset managers by centralizing intraday positions across all asset classes into a 'golden copy'. It provides up-to-date information in real time about current, projected and historical positions, enabling portfolio managers and traders to make better investment decisions and providing risk managers with accurate views on exposures.

3.3.2.4. On premise vs. ASP solution

SimCorp also has the flexibility of letting clients choose between an on premise solution and an ASP solution. An on premise solution lets the client manage all aspects of their installation, from infrastructure to environments and data centres. Under an ASP solution, SimCorp handles the application management of clients, taking an installation of SimCorp dimension out of the client's infrastructure, while still allowing the client to operate with the same flexibility and configurability when using the application.

3.3.3 SimCorp's Professional Services

SimCorp has a proven track record of successful implementations. As adopting a new investment management system is a major project, SimCorp capabilities enables it to support their clients every step of the way. This due to their proven and standardized implementation processes. SimCorps Services offer guidance, best practices, and a range of support options to assist its clients throughout the life-cycle of their software acquisition. The company offers

[29] http://www.simcorp.com/en/insights/themes/ibor

services ranging from initial implementation planning and configuration through ongoing maintenance, operations, IT and end-user training programs, all the way to optimizing business processes.

SimCorp professional service can be divided up into three overall stages; Discovery, Delivery and Solution. In the discovery process clients get a no-commitment mapping of their current operating model with strategic objectives to show how an alignment of these can release the full potential of the SimCorp Dimension system. When asset management firms decide to purchase a SimCorp dimension license, they enter the Delivery phase, where SimCorp helps them with the end-to-end implementation of SimCorp Dimension and new regulatory frameworks, ensuring an agile and smooth process. SimCorp has four types of delivery services: Deployment model, Solutions delivery, Regulatory compliance, Preconfigured deliveries. After a successful implementation process, clients are fully operational with SimCorp Dimension and here they have a variety of operational services to choose from: Enterprise Assistance, System Performance, Training, Support and Upgrade.

SimCorp's professional services have grown faster than their CAGR of 18% over the past five years, affirming that client's see SimCorp as a reliable partner for. Furthermore, the service offering generates substantial recurring revenue for SimCorp. The company's services are designed to support its clients in achieving the maximum return on their SimCorp solution.[30]

3.4 Business Model

As in the majority of other software companies, the main driver of SimCorp's business model lies in license sales. SimCorp's setup consists of the following components: License fees, Initial License Fee's (ILF), Additional License Fee (ALF), consulting services, implementation services, maintenance services and training.

When an investment management firm chooses to buy a SimCorp Dimension license, the price range typically lies in EUR 1.5-3.0m, depending on the number of users, functionality requirements (modules) and the number of different asset classes managed. Within the first 10 years of a customer relationship, this amount is expected to increase by a factor of 4-8 in total

[30] http://www.simcorp.com/services

revenue. The total venue consists of several parts: the installation of new license, implementation services, on-going maintenance services, additional installation or upgrades of new modules. A typical customer relationship lasts more than 20 years, which firstly, means that the churn in customers is extremely low and secondly, that there's high loyalty among customers in using SimCorp Dimension.

All revenues arising from license sales, which is why it has been the major driving force in SimCorp generated revenue. License sales consist of sales of new licenses to new customers, and supplementary licenses to existing customers. SimCorp's business model is based on five elements sales of software licenses (new and add-on), professional services, maintenance services, training and activities, and the newly added ASP hosting. During the first 10 years of a client relationship – which overall typically lasts more than 20 years – the total accumulated revenue for SimCorp is typically four to eight times the initial license revenue. This includes the initial installation, professional services for implementation, additional functionality/ modules and users, and ongoing maintenance. SimCorp Coric, SimCorp's client communication solution, is sold on a subscription basis, typically on a three or four-year term.

3.5 Markets & Growth potential

SimCorp's market is defined as all global buy-side investment management companies with assets under management of more than EUR 10-15bn. This approximates to a tangible addressable market (TAM) of 1,200 of the biggest asset and fund managers. The tangible addressable market is impacted by the global macroeconomic conditions and in recent years, the industry has undergone significant rationalization. However, a significant number of investment managers still continue to operate on old and outdated system platforms (legacy systems), which makes them ill-equipped to deal with the current and expected pace of change.[31]

SimCorp's clients comprise some of the financially strongest investment managers in the industry. As we can see in the table 1 (Appendix 6), SimCorp estimates its SimCorp Dimension software to have a total market share of 173 clients all over the world covering a market share

[31] Of the identified potential clients in the market, SimCorp estimates that roughly 10% run on internally developed systems. The remaining 90% run on older legacy systems, various 'best-of-breed' solutions, other modern systems, or via third-party administrators.

of roughly 14% as of 2015.The Nordics remain SimCorp's most mature market with a market share of 66%, followed closely by Central Europe, Western Europe and the UK with respective 26%, 14% and 14% market shares. The company's largest growth potential lies in North America, and in 2014 the company experienced challenges in its expansion in the market, leading to disappointing results and a replacement with new management in place. The market potential still remains intact and with new management changes in place, the company has immense expectations for 2016 and the years to come.

SimCorp expects that the three designated "growth markets": France, UK and North America, will be instrumental in driving forward company growth in the coming years. Specifically the company expects the growth markets to drive more than half of the new license agreements.

3.6 Strategy

In this section we will aggregate all the insights from previous sections, in an overall strategy overview made by SimCorp up until now and additionally, delve into the forthcoming strategy for the years 2015-2017, which has been laid out by the company.

Strategy until now

Over the past 10 years, SimCorp has demonstrated sustainable and organic growth, building a robust business by offering one seamless software package to investment management firms around the world. Furthermore, the company has tripled its valuation over the past three years.

On the basis of the information provided about the company in the earlier sections, the following main pillars sum up the core of SimCorp's strategy up until now:

1. *Development and continual investment in its software solutions*
    - Investing 20% of revenue each year in research and systems
    - Acquisitions and investments made in technology companies to continually build based on SimCorp Dimension's integrated portfolio of technical and business applications.
2. *Maintaining focus on its core business*
    - To establish SimCorp within core geographical markets
    - To stablish long-term relations with current and expanding client base
3. *Maintaining a solid cash flow*

- 50% of SimCorp's proceeds paid out as dividends to shareholders each year[32]
- 50% of SimCorp's proceeds used for share buyback programs[33]

StrategyLab:

Additionally, in direct response to the increased focus on risk management, cost control, and growth opportunities within the investment management industry, SimCorp established its private research institution, SimCorp StrategyLab, in December 2008. SimCorps StrategyLab is formally organized under the management of a board of directors.

The work of SimCorp StrategyLab's research focuses on identifying, understanding and suggesting solutions to issues pertaining to mitigating risk, reducing cost and enabling growth in the investment management industry.[34] Building bridges between theory and practice, SimCorp StrategyLab's partners, leading academics, industry experts, and executives contribute to its research program and other activities. SimCorp StrategyLab is headed by the renowned Dr. Ingo Walter, Seymour Milstein Professor at the Stern School of Business of New York University, who is in charge of the research institution's academic affiliations and oversees the quality of its research work and related activities.[35] SimCorp StrategyLab is headed by the renowned Dr. Ingo Walter, Seymour Milstein Professor at the Stern School of Business of New York University, who is in charge of the research institution's academic affiliations and oversees the quality of its research work and related activities.

3.6.2. SimCorp's strategy from 2015-2017

SimCorp combines more than 40 years of experience with a clear strategy sets the direction for SimCorp – a strategy that has enabled SimCorp to record persistent organic growth over the past two decades. Going forward, reinforcing SimCorp's profile as a growth company will remain a strategic priority with focus on clearly defined targets. In order for SimCorp to continue its growth and reach its business objectives, the company has determined five areas of strategic priority for the years 2015-2017. These areas reflect how SimCorp sees and interprets the key

[32] In the past three years, SimCorp has paid out more in dividends to its shareholders than the comny has earned.(http://play.borsen.dk/share/55f69d54ac79c95260fa3f82)
[33] This might differ from year to year, as the SimCorp might decide to invest or acquire technology companies, just at is has done previously. (See Section 3.1.2)
[34] http://www.gutenberg.us/article/WHEBN0007852117/SimCorp
[35] Page 18: http://www.simcorp.com/~/media/pdfs/brochures/new%20solution%20brochure/simcorps%20solution%20portfolio%20brochure.ashx

trends in the market that influence the company's continued growth. All five are described in the sections below.[36]

SimCorp aims to continuously ad new clients in all markets, with a special focus on its targeted growth markets (North America, UK and France). The growth markets represent immense potential and will therefore be receiving additional focus throughout the years, as SimCorp aims to build upon its position in these markets. North America represents a significant growth opportunity and with the positioning of a new management team in 2014, the company feels prepared to exploit this potential.

SimCorp second strategy is to focus on the investment book of records (IBOR), as the IBOR has become of the most critical parts of running a successful investment management business today. The IBOR allows investment managers to maintain an overview of all their positions – an important feature when trying to understand one's positions across all asset classes to not only meet compliance demands, and performance requirements but also to manage risk. The front office also relies on this data, as the IBOR keeps history that can be used for investment decisions. Combining these two – the IBOR and the front office, where SimCorp has made sustained investment to now offer a solution that is comparable to best-of-breed offerings in the market – SimCorp believes it is ahead of other front office suppliers that are not able to provide the IBOR, hence providing SimCorp with a competitive advantage that the company intends to exploit. Additionally, SimCorp launched a comprehensive IBOR knowledge center in April 2015, which offers a comprehensive overview of the requirements and benefits of the IBOR, including case stories and industry insights.[37]

As the investment industry is increasingly demanding more business related services with the aim of reducing overall cost and making business more scalable, SimCorp will actively work towards becoming an Application Service Provider (ASP). This means that SimCorp will deliver its core product, SimCorp Dimension, as a fully managed service including hosting of the solution, application operation as well as application management. Moreover, adding upon its product offering, SimCorps will put additional efforts in extending its solution to also cater for investments in non-liquid assets that include, for example infrastructure, private equity, hedge

[36] http://www.simcorp.com/~/media/pdfs/financial%20reports/english/annual%20report%202014.ashx
[37] http://www.simcorp.com/company/news/2015/04/simcorp-launches-comprehensive-ibor-knowledge-center

funds and more. The reason being that traditional asset classes are under increasing pressure from investment strategies and declining interest rates, many asset managers, especially pension funds, are progressively looking towards investment in alternatives that typically have a longer horizon.

Lastly, the war for talent has intensified and as any other ambitious company, SimCorp is highly dependent on skilled and knowledgeable employees. SimCorp needs to continuously bring and hold the right people on board, in order to secure the success of its business. Therefore, the company has decided to put additional focus on attracting and maintaining the right staff. Efforts include renewed focus on management competences, management training, determining key positions and implementing a talent management tool.

4.0 Strategic Analysis

This section delves into the analysis of the strategic environment of SimCorp and identifies the non-financial value drivers that affect SimCorp's potential for growth and earnings. This section plays an essential role in the accuracy of the final budget and forecasting, and hence developing an accurate valuation of SimCorp. Thereby, the quality and accuracy of the final valuation is highly dependent of the findings in this section. The strategic analysis will be divided up into two main sections, one covering the internal factors affecting SimCorp and one covering the external factors, both of whom might SimCorp now and in the future. In the end of this section, the key findings will be assembled in a SWOT-analysis, which aggregates all of SimCorp's strengths, weaknesses, opportunities and threats found in the strategic analysis. The strategic analysis will include and cover macro-economic market data for the years of 2008-2020.

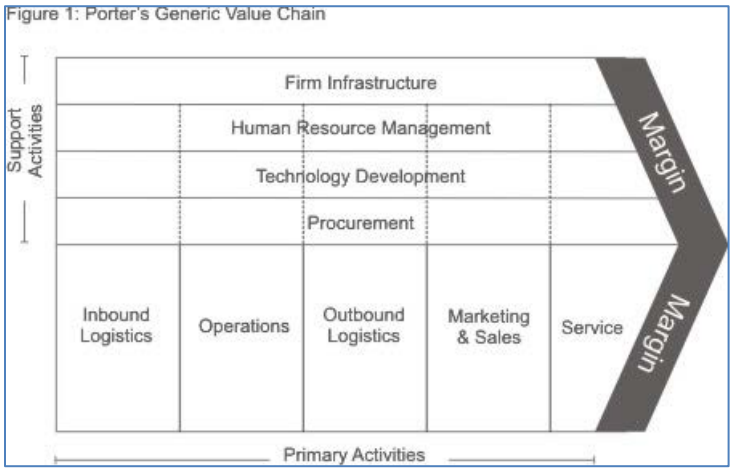
4.1. Internal factors

After analysing the external factors (macro and industry) that influence SimCorp, the subsequent section will analyse the internal resources of SimCorp and assess how these are exploited to generate returns to shareholders. The analysis will be conducted by using the well-

known Porter's Value chain (1985)[38], as this model identifies the value-adding activities of SimCorp and the company's business model.

To explore competitive advantage it is necessary to define a firm's value chain for competing in a particular industry.[39] The value-adding activities will be broken up into primary activities and support activities, so that we can see a fuller picture of where profit is created, the cost drivers and sources of differentiation.

Figure 4: Porter's Generic Value Chain[40]



4.1.1. Primary Activities

The primary activities cover SimCorp's core competencies and these provide an important insight into what SimCorp's customers pay for. The primary activities will give us insight into SimCorp's strengths and weaknesses and this knowledge will be used in the chapter on "Budgeting and Forecasting" when to submit a bid on future earnings. The primary activities constitute developing, servicing and selling investment management software. Primary activities of SimCorp relate directly to the development, sale, maintenance, service and support of the company's products and service. The primary activities are as follows:

[38] Michael Porter, Competitive Advantage: Creating and Sustaining Superior Performance
[39] (Porter 1985: 45)
[40] https://www.mindtools.com/pages/article/newSTR_66.htm

Inbound logistics

Inbound logistics are processes related to receiving, storing and distributing input internally. In the case of SimCorp that develops, sells and maintains software, supplier relations and internal coordinating about R&D of the product is essential. SimCorp's solutions support much of what their clients need, but regarding certain aspects that fall outside SimCorp's business scope, which is the reason why SimCorp has developed a network of partner's, which enable their clients to get the maximum out of SimCorp's solutions (see Section 3.3.). Therefore, SimCorp Dimension (its core offering) is an integration-first software solution that enables SimCorp to keep a sharp eye on its core product offering. The company partners up and integrate with the very best providers within certain areas that fall outside of the scope of the core product, such as hosting solutions, market data providers etc.

Additionally, being that SimCorp's products target a volatile industry experiencing a lot of challenges, SimCorp is very much dependent on having a strong internal coordination and knowledge distribution between its development team, product team, IT functions and its supportive activities that drive the development of the product roadmap. Therefore, SimCorp has made this an utmost priority by historically allocation a minimum of 20% of yearly revenue on R&D, as it wants to deliver the most innovative solutions in the industry. Additionally, it has established a Center for Regulatory Excellence that will research and keep a close eye on the regulatory challenges that influence it's industry, so that it can well-informed decisions within its product, that are incremental to its clients. This is among other one of the things that has created "stickiness" for SimCorp's products and ensured SimCorp long relationships with their clients.

Operations

Operations cover the transformative activities that change inputs into outputs, to be sold to SimCorp's clients. SimCorp has a track record with over 40 years of technical expertise in developing, selling and maintaining investment management software. SimCorp is the only full lifecycle solution in the industry that services the entire value-chain of an investment management firm. The software development takes place in Ukraine and Denmark and the company's core product offering, SimCorp Dimension, is an integrated solution that consists of 19 individual modules. This is one of SimCorps biggest strengths of SimCorp's product offering and a true win-win situation for clients as well. Clients are able to start off small with a few

modules and SimCorp is able to tailor their product to suit every clients individual needs. This gives immense flexibility to SimCorp's solution and the company's growth potential, as it enables the company to grow and upsell its solutions, upgrades etc.

Besides the core product, SimCorp has its professional services, which enables clients to extract maximum value out of the SimCorp Dimension solution. SimCorps heavy investments of approx. 20% of yearly revenue in R&D, not only enables SimCorp to be at the forefront of innovation, but also continuously do yearly releases of new versions of SimCorp Dimension and SimCorp Coric yearly. This is an additional driver in additional sales and upgrades. This also presents a challenge for the company, as it's hard to measure efficiency of the R&D department, in other world, output from the same EUR. Such large investments are hard to measure and many organizations like SimCorp have this challenge. In order to measure the ROI on the R&D you need many function points, but it's almost impossible to measure R&D output. The only output that SimCorp can measure is the commercial outcome in the form of new licenses (IFL), additional licenses (AFL), upgrades and professional services. SimCorps current approach is the development capacity and how much people are spending on things that are value-creating, which is something that their CTO, Georg Hetrodt, states that they can measure, including how much does it cost to produce one hour of time with the client.

Outbound logistics

Outbound logistics cover all of the activities that deliver SimCorps products and services to their clients. Due to an industry that requires complex systems and clients that require uniquely tailored solutions, SimCorp's main sales channel is doing direct sales and physical implementation, which is labour intensive and nonetheless requires a company like SimCorp with global ambitions to have physical offices in all of the regions that it operates. These traits are common for all industry players, but it's nonetheless still a weakness as it sets a cap on the growth potential of the company, compared to other software solutions that have self-service sign-ups. This very reason is also why SimCorp has offices in all regions of the worlds, and as the leading global provider of investment management software, SimCorp is more than well-position to leverage on the biggest markets drivers that are affecting their clients, such as globalization, investments in alternative assets, new regulations etc. (see PESTEL 4.2.1.)

As SimCorp handles most of these services (implementation, maintenance, support and training) in-house the company is very dependent on skilled labour in its entire value chain, which the company also has a top 5 priority. This dependency of talented and knowledgeable employees is a weakness for SimCorp in that it needs manpower to scale. Though, the company itself states that there are economies of scale in the seniority of its employees, meaning that the more experienced the employees are the more value SimCorp can extract from them. In order for this not to have an effect on the overall growth potential of the company, SimCorp has selected three external implementation consultancies, "Associate Partners", which participate in a large number of SimCorp Dimension implementation and enhancement projects. (See Appendix 7)

Marketing and Sales

Marketing and Sales cover all of the activities SimCorp's uses to persuade investment managers to purchase its products and services instead from its competitors. The sources of value here are the benefits SimCorp offers and how well the company communicates them.

With more than 16,000 active daily users and over 19 trillion dollars managed on SimCorp Dimension solution by clients, SimCorp is a trusted partner to the world's largest asset managers. Almost half of the world's Top 100 investment managers have chosen SimCorp.[41]

In an industry prone to long sales cycles, digitalization and increasing challenges facing investment management firms, SimCorp has been forced to think carefully about how to uniquely position itself in a mature competitive landscape. This is something SimCorp has excelled at and the company has through several key initiatives positioned itself as a thought leader within the investment management industry and continues to do so. Firstly, SimCorp's immense investments in R&D have created some of the most innovative solutions in the investment management industry, which has resulted in numerous awards throughout the years. The most impressive is that SimCorp keeps winning awards in several categories, which is a testament of the strength of its product. An example is the importance of SimCorp being awarded the Best Buy-Side IBOR Platform at the Buy-Side Technology Awards 2015[42], given that this is where many customers are going and where a big part of the industry is looking for.

[41] http://www.simcorp.com/en/solutions/integrated-front-to-back-solution
[42] SimCorp won the same prize last year in 2014 and key factors determining success were tangible business benefits offered by an IBOR that provide users with a competitive advantage

SimCorp's innovative product is the main differentiator among its competitor and has remained a core differentiation strategy for the company in the last 15 years. In a time of volatility awards bring recognition, trust and validity in SimCorp's positioning as the leading solution in the market. The company is leveraging this by communicating that it wants to be the "reliable business partner" for its clients.

Secondly, SimCorp has been good at turning industry challenges into actionable tangibles, which is clear in its investment in a regulatory research center, Center for Regulatory Excellence and its investment in its own flagship publication journal called "Journal of Applied IT in Investment Management". Via its Regulatory Center of Excellence SimCorp helps investment management firms turn regulatory challenges into competitive advantage and via its flagship publication, Journal of Applied IT in Investment Management publishes new ideas, hot topics, and trends in the industry seen from an IT perspective.

Thirdly, SimCorp has been good at not only building a community, but also facilitating, growing and nurturing it via its Capital Markets Day conference, its yearly global user community event and its local meet-ups. Here SimCorp listens to its clients, addresses key industry challenges and presents case presents to show how SimCorp Dimension has enabled clients to extract more value and grow. The events enable SimCorp to give clients comfort and transparency in how it plans to address the coming challenges, and hence, reassuring clients that SimCorp is the only technology supplier for them. Community meetings are a unique opportunity for current and potential new clients to get industry insights and inspiration from experts and share best practices. This not only forms a personal bond between SimCorp and its clients, but also increases retention among SimCorps clients. Moreover, these events enable SimCorp to invite potential prospect clients in pipeline, demonstrate the power of the SimCorp community and show them that SimCorp is equally focused on performing an outstanding service in its entire value chain.[43] Overall, the events are also an opportunity for SimCorp to learn more about the challenges clients are facing and the community meetings typically generate new leads for new and additional sales for SimCorp. SimCorps Capital Markets day is coordinated in London, UK, the financial headquarter of Europe and its International User Community Meeting (IUCM) is coordinated in Hamburg, Germany. Moreover, SimCorp hosts webinars and streamed sessions,

[43] This is a strategic move towards the long sales cycles SimCorp tries to cut shorter.

enabling potential clients all over the world to be part of every SimCorp community session hosted.

Fourthly, SimCorp has been good at building strong customer cases, which the company could use as references, especially in its aggressive push in the designated growth markets (North America, France and UK). By having 25% of the world's top 100 largest asset managers, SimCorp definitely has great references, which the company can use in its sales efforts.

Fifthly, SimCorp has a sustainable business model in that SimCorp Dimension is built on modules and entails great flexibility. The flexibility of SimCorp's solutions enables its clients to choose to combine core modules in front-, middle- and back-office in one integrated platform.

With all of the above mentioned initiatives, SimCorp builds its story as a thought leader and exploits the regulatory insecurity among its customers to drive them towards its integrated solutions. Not only does this give customer intimacy with its current clients, ensures a strong stickiness in its products and services, but it also continuously softens the ground for potential prospects in all phases of SimCorp's sales pipeline. SimCorp weakness in the industry throughout the years has been that much of the investment management industry still sees the company as a pure middle-back office provider. This is a pure branding and communication issue that has haunted SimCorp throughout the years and also a weakness that will constantly be there, due to SimCorps immense product portfolio. Due to its integrated end-to-end solutions, SimCorp will constantly face challenges in its communication with clients and potential prospects. The issue is evident in the fact that much of SimCorps clients in 2015 were driven by SimCorps Front-office/IBOR capabilities, which are a testament that SimCorp needs to be incredibly skilled at communicating the right value proposition to the right clients at exactly the right time, as each client has different setups, different needs and will be affect differently by the volatility in the market. This means that SimCorp will be at risk at losing certain deals, due to its communication challenges, just as it was the case in the European market in 2015, where it missed a case in Poland.

Service

Service covers all of the activities related to maintaining the value of SimCorp's products and services to their clients post-purchase.

After clients have purchased a license of SimCorp Dimension or SimCorp Coric, SimCorp's professional services ensure that clients are met with the best possible service. SimCorp professional service is divided up in three overall stages; Discovery, Delivery and Solution, that all focus on ensuring a maximum value extraction for SimCorp's clients. More and more clients choose to expand the services rendered from SimCorp to include business process services (packaged solutions) and additional operational services (serviced solutions). Additionally, SimCorp's heavy investments in R&D ensure that SimCorps products are constantly at the forefront of technology, servicing the clients in the form of frequent updates of both SimCorp Dimension and SimCorp Coric.

4.1.2. Support Activities

The secondary activities support SimCorp's primary functions above. In the figure, the dotted lines show that each support activity can play a role in each primary activity. The secondary activities constitute of human resource management, technology development, infrastructure and procurement.

Human Resource Management

Human resource management covers SimCorp's efforts in recruitment, hiring, training, motivating, rewarding and retaining its workers. Being that people are a significant source of value for almost all companies, especially SimCorp, good HR practices can create a clear advantage.

SimCorp is an internationally oriented company with more than 1,250 qualified employees and being that SimCorp is a knowledge based software company it is extremely dependent on competent employees with a vast amount of knowledge. (Barney 1991). The company sees its employees as its most important asset and over 90% hold an academic degree in economics, finance, or IT.[44] SimCorp employees come from over 50 nationalities, where 32% are women. The average employee is 40 years old and has approximately 7 years in seniority. Education-wise, 21% of the employees hold a Bachelor's degree, 68% hold a Master's degree, 7% hold a Ph.D. degree and the remaining 9% have another education. Degrees held by SimCorps employees are mainly within finance, it, software development and finance, which create large financial knowhow and set the foundation for all of SimCorps activities, products and services.

[44] http://www.simcorp.com/en/about/about-simcorp

While the employees are a core underlying strength of SimCorp, the company's dependency of skilled labour presents itself as one of its major weaknesses, as skilled labour isn't easily replaceable. The departure of key employees or o lack of performance thereof can have vastly negative consequences for the SimCorp and the cash flow of the company. The poor performance in the North American market in 2014 and 2015 with no new clients is a clear testament of this, leading to the replacement of the entire management team in 2014. Being that North America is one of SimCorp's growth markets and the growth market where the biggest opportunity for growth lies, SimCorp is very much dependent on the performance key individuals in order to execute on growth trajectory.

In order to attract and retain employees, SimCorp has put measures in place such as the SimCorp Leadership Academy and the various bonus incentives. The seniority of SimCorp's employees entails that the company is very successful at attracting employees and keeping them for a long period of time. Thereby, SimCorp is proven to have the right procedures in place that makes employees stay for a long period of time.

Technology Development

Technology development covers SimCorp's effort in managing and processing information, as well as protecting the company's knowledge base. By minimizing IT costs, staying current with technology advances and maintaining a technical excellence,

The heavy investments in R&D as described in the previous sections ensure that SimCorp stays in front of technology advances in the investment management industry. In order to minimize its IT costs, SimCorp has chosen to base its development hub in Ukraine, as 1) the company did not believe it could find the same quality of talented developers in Denmark and 2) because of the potential in cost savings by having its development office in Ukraine. By investing approximately 20% in R&D, SimCorp gets more value out of its investment both in terms of headcount and quality by having its development office in Ukraine. Though, these benefits do come at a cost. Being that development is a core element SimCorp's products, having most of their developers in a remote office, presents challenges in managing the teams and ensuring good communication across the teams within research, product, design and development. As

stated in its Annual Report of 2015, SimCorp's management tries to mitigate this risk by travelling frequently to each of their core offices.[45]

SimCorp continues to significantly focus on continued innovation and with R&D accounting for around 30% of the total expenses, SimCorp remains among the few independent software companies that continues to invest substantial resources in R&D. Around 40% of all employees in SimCorp work in Product Division and the management maintains focus on the ongoing improvements of efficiency and effectiveness within the Product Division. SimCorp continues to invest in R&D, spending some 21% of revenues on its solutions ever year.

4.2 External factors

The external analysis of SimCorp includes an analysis of the opportunities and threats in the company's industry and the outside world. Two models will be used to analyze, the PESTEL model and Porter's Five Forces (1979). Both models are analysed individually in the following.

4.2.1 PESTEL

The PESTEL framework will be used to analyse and monitor the macro-environmental factors that have present opportunities and threats to SimCorp. The PESTEL framework provides an overview of the different external factors that SimCorp cannot influence, but instead has to take into consideration. Therefore, PESTEL will be used as strategic tool for understanding market growth or decline, business position, potential and direction for operations.
The PESTEL framework addresses six issues including the political environment, socio-economic and demographic factors, the social and cultural factors, the technological environment, environmental conditions and the regulatory landscape.

4.2.1.1 Political and Legislative

The global environment is setting new requirements to investment managers who must be agile and enter or exit international markets, when conditions demand it.

Being that SimCorp is a global company employing over 1,260 people spread over 18 countries, the company is subject to local tax policies, fiscal policies and trade tariffs among other things. SimCorp has to constantly be aware of the political situations and the development in a country's tax and fiscal policies, in order to assess its own position. The company is well aware

[45] SimCorps Annual Report of 2015

of this and has implemented a number of business procedures and controls to increase transparency across all activities and provide an incremental overview of the company's financial exposure. Furthermore, Group Finance is diligent in pursuit of securing that, in line with the tax policy, SimCorp is at all times tax compliant in the countries where SimCorp conducts business.

There are both threats and opportunities for SimCorp when political and legal circumstances are considered. Generally there's a lot of regulation happening in the market and among important regulations, investment managers must be observant of SEC's Money Market Reform[46] (US), which requires institutional money market funds to "float" their net asset value per share (NAV), so that it reflects fair value of the investments held by the fund or Dodd-Frank[47] (US) and EMIR[48] (Europe), both of whom are requiring asset managers to report enterprise-wide information that can be difficult and expensive to aggregate in the absence of a centralized system. Additionally in Europe, investment managers must be observant of UCITS[49], which allows collective investment schemes to operate freely throughout the EU on the basis of a single authorization from one member state[50] and IFRS 9[51] in the US, which adds requirements for recognition and measurement, impairment, derecognition and general hedge accounting. Additionally, investment managers must also be aware of the EU short selling directive, the EU financial transaction tax, the ESMA collateral guidelines, Solvency I & Solvency II, FATCA, AIFMD and MIFIR.

Laws can and do change from proposal to what the law actually becomes, and therefore, SimCorp has to stay on top of regulation, in order to ensure the company constantly adresses the right market opportunities. On the other side, when regulation is turned into new law, SimCorp is presented with an opportunity, in the sense that in order for investment managers to live up to new regulations, they'll need modern systems. Thereby, regulation can be seen a driver for replacement of legacy systems, but on the other side, regulation also slows down replacement, as more work is needed on existing systems. This is where SimCorp has to excel at selling and having the right product offering, as some investement managers might end up

[46] https://www.kpmg.com/US/en/IssuesAndInsights/ArticlesPublications/Documents/sec-money-market-reform.pdf
[47] https://www2.isda.org/attachment/NTM5OQ==/Dodd-Frank%20Act%20v.%20EMIR.pdf
[48] http://cooconnect.com/guide/derivative-reporting-in-europe/how-emir-differs-from-dodd-frank
[49] http://ec.europa.eu/finance/investment/ucits-directive/index_en.htm
[50] https://en.wikipedia.org/wiki/Undertakings_for_Collective_Investment_in_Transferable_Securities_Directives
[51] http://www.iasplus.com/en-us/standards/international/ifrs-en-us/ifrs9

spending a significant part of their IT-budgets on fixing their old systems to live up to this regulation, instead of looking in the market for a modern system. On the long-term, regulatory changes should be seen as a positive thing, as some of the regulation requires integrated systems, in order to be able to perform in an efficient way.

Though, the pace at which the regulations are turned into laws is slow, which threatens to slow SimCorps growth. The reason being that clients wont go out and buy new software until they see what the law actually says. A survey done by SimCorp and KPMG with 100 individuals from 58 different firms[52], revealed large uncertainty and preparedness for SEC's Money Market Reform, due in Q3 2016. Due to the forthcoming of regulations, SimCorp has announced that it is tracking 60 different regulations around the world.[53]

The concrete example with the survey done by SimCorp and KPMG, reveals that there lies a good business case for SimCorp. SimCorp Dimension has been able to capture the requirements presented by the SEC's Money Market Reform for many years and the company is therefore well-positioned to capture more clients, as regulations comes in. Post-financial crisis in 2008 the demand for better risk management, reporting and transparency has been creeping in. The necessity to be able to see position data across all asset classes, apply the same risk models on the data, provide transparency throughout the entire investment process and on counterparty exposures, has become an integral part of an investment managers day. Many clients have risk management departments that are much larger than pre-financial crisis, and this presents an opportunity for SimCorp to take more market share. Risk management has moved from being something asset managers did on a weekly basis to being a necessity happening on an intra-day basis. Asset managers want to understand the risk profile before they make trades, so risk management has been moved out to portfolio managers, before they do rebalancing of the portfolio. That benefits SimCorp, as companies need to understand risk across the entire organisation.

4.2.1.2. Economic

The market in which SimCorp operates is predicted to have a solid outlook. The change predicted is of positive character and is an aggregation of some of the other opportunities

[52] SimCorp and KPMG, 2015: "Money Market Reform: The implica6ons for your firm and the available technology solutions to help you comply."
[53] SimCorp Capital Markets Day from June 4th , 2015

higlighted in the previous section in the PESTEL framework. Over the last 5 years, SimCorp has been in a market that has been growing at a fairly slow pace, 2-3% per year, post-financial crisis. Following this period of low growth, IT spend in the investment management industry is projected to grow at +5% CAGR from 2014-2018 - spread evenly across, front-, middle- and back-office. [54] This opportunity is one in which SimCorp is uniqely positioned with its product solution, as the only end-to-end software provider for investment managers.

SimCorp is sensitivity to fluctuations in the world economy, which we will see in the financial analysis post-financial crisis (section 5.0). The health of the world economy will therefore affect SimCorps cash flow, as large macro fluctuations will tighten the budgets of investment managers, just as we saw in the post-financial crisis. Moreover, due to the global nature of SimCorp's operations and its over 170 global clients, the company is exposed to changes in currency exchange rates.[55] SimCorp's Group Finance department manages the company's currency and financial exposure pursuant to the treasury policy approved by the Board of Directors, just as it keeps the overall currency exposure within defined limits. The Group's foreign subsidiaries are not severely impacted by foreign exchange fluctuations, as both income and costs are generally settled in the functional (local) currency of the individual entity. SimCorp's policy is not to hedge its currency exposure, as long as the influence of currency fluctuations on EBIT is within a given range. So, far currency fluctuations have been influencing EBIT in the allowed range, which is why SimCorp's currency exposures of investments in subsidiaries have not been hedged.

Protecting profit margins is another key issue. As more asset managers have moved into ETF's and passive investments, the pressure on fees has increased and the competition has increased on some of the other financial instruments.[56] Technology and operations cost, which comprise a large part of total expenditures, are thus prime candidates for scrutiny and rationalization in the pursuit of regaining operating leverage. Asset managers have to rethink and redesign processes and technology to promote greater effectiveness and efficiency. That means that SimCorps customers and the market in general needs to optimize the number of people that they have operating these systems and they need to have more smooth processing, having straightforward processes all the way from portfolio management to settlement and into

[54] *Ovum, January 2014: All spending categories (SW, HW, maintenance, services, outsourcing) in SimCorp geographical market*
[55] *A detailed analysis and description of financial risk exposure is provided in note 29 to the financial statements*
[56] The Boston Consulting Group. Global Asset Management 2014: Steering the Course to Growth, July 2014

accounting. Thereby, fewer people touching each individual trade has become an increasing demand for all investment managers. This presents an opportunity for SimCorp, as its SimCorp Dimension solution caters to exactly this. SimCorp Dimension provides not only the efficiency on the software side, but is also able to optimize the operating model, being that fewer people touch each trade.

An additional opportunity that is presented to SimCorp is that in the pursuit for alpha (higher returns) in a very low interest market, even with negative interest on some of the fixed income instruments, has driven investment managers to look into other asset classes. Especially, pension funds, have progressively been looking towards investment in alternatives that typically have longer investment horizons. BCG predicts that specifically alternative and other "non-core" asset classes will generate over 80% of the new fees through 2016. Traditional assets are predicted to continue to be squeezed by new faster growing assets. This that means that asset managers are increasing their asset diversification from traditional assets to alternatives, passives and solutions. The prediction from BCG is that the trend going to continue as long as the market is in its current state with low interests. In other words, investment managers are expected to move towards the right side of the graph above. SimCorp stated both in its Capital Markets Day in June, 2015 and at the presentation of its Q3 2015 figures that it's seeing some of its clients allocate 40-50% of their assets to this alternative assets group.

This expansion into alternatives investments presents an opportunity for SimCorp and one that SimCorp has identified as part of its five must-win battles for the coming years. As opposed to traditional single asset class portfolios managed against a market benchmark, these mandates often require the combination of multiple asset classes within a single client portfolio. Supporting multi-asset class mandates requires a system that provides commonality and consistency in data management, analytics, portfolio management, operations, accounting and client reporting. PWC predicts a CAGR of 9.3% in increasing investments in alternative asset classes from 2012-2020.[57] SimCorp has already put a few teams together in their development organisation driven by the product development function, that are now developing more functionalities for the IBOR on a set of alternative investments.

[57] *PWC - Asset Management 2020: A Brave New World*

4.2.1.3. Society

Organizational knowledge is called in the literature as the third factor of production, which sets the foundation for scope-benefits and is often characterized by being intangible. Knowledge which operates and develops the SimCorp Dimension product, relies exclusively on human competences and characteristics. Therefore, SimCorp also constitutes the company's most important asset, which is among its top 5 strategy targets.

A financial market constantly evolving requires information about market requirements in order to serve the demand in a short period of time. The employees identify these trends and not to say the least their ability to develop new functionalities that meet the trends that characterizes the market for asset management. Thereby, SimCorp's employees are an intangible asset for the company, which is deeply rooted in the company's history, culture and routines. Moreover, it's a competitive advantage for SimCorp, as the company's knowhow and organizational routines are very hard to replicate, as they are an intrinsic part of the company.

R&D makes up 21% of the yearly revenue and in 2015 it was 19%. Employees in R&D constitute of 37% of SimCorp's entire workforce. This testifies that SimCorp has a strong focus on meeting customer requirements by constantly stay abreast of new trends, in addition to live up to legislative action sector is continually subject politically. On top of that SimCorp has established an internal research institute, SimCorp Strategy, to stay at the forefront of this development. SimCorp StrategyLab aims to identify, understand and propose solutions to issues related to risk, cost reduction and opportunities for growing the asset management industry. This R&D effort ensures that SimCorps grows, adds new customers and in contradiction to many of their competitors, lives off of existing customers.

For SimCorp to maintain its position as a leader within the investment management industry, the company has to be very conscious of the exact manages to transform end products and services to strategic assets with the potential for sustainable competitive advantage (Amit & Schoemaker, 1993). For knowledge intensive companies, such as SimCorp, a large portion consist in cultivating talent and unique resources, which the employees represent. Retention and attraction of highly skilled employees are the key. A great employee departure would mean that SimCorp will lose a major competitive advantage compared to its competitors. To prevent this, SimCorp their own Leadership Academy, as well as an extensive internal training program.

SimCorp makes an effort to ensure that in the future will have access to skilled labour, which in the long term will be in possession of the financial know-how to ensure future growth.

4.2.1.4. Technology

Technology is disrupting a lot of industries and the investment management industry is certainly no stranger. Among the key trends happening globally within technology is the migrating to the cloud. There's increasing demand for cloud solutions among investment managers, as they are pressured on the operational side, demanding them to be more efficient. Currently, their old software legacy systems are non-scalable and costly to maintain and update. Until now, the investment management industry has solved its ussues by using sophisticated outsourcing arrangements for many years, but now there's an increasing demand for more business related services with the aim of reducing overall cost and making business more scalable. Investment managers are looking to achieve faster time-to-market by being able to push products to the market much more quickly. Generally, investment managers have been slow in migrating core systems to the cloud for a number of reasons, but that is starting to change now, expecting to gain momentum in 2016.[58] As outdated technology is a hindrance to growth, investment managers are expected to be more compelled to invest in modern and scalable solutions such as SimCorp Dimension. Cloud computing is something SimCorp has been doing for years and the company is able to host the system for its clients, while also taking care of the technical operations of their clients solutions. Thereby, the trend of migrating to the cloud, presents itself as an opportunity, which SimCorp is well-prepared to take advantage of.

Another technology trend that presents itself as an opportunity for SimCorp is work mobility. There's an increased expectation for people to work much more flexible with the penetration of smartphones and tablets. Corporate users are getting more and more devices in their hands and its not just PCs anymore. Now its PCs, Macs, smart phones and tablets. Investment managers are expected to be able to use applications simultaneously on multiple devices. More and more things are going mobile and towards a set of cloud-based technologies. This trend has been going on for a while but has still to really take off for the complex and highly regulated workflows in the investment management industry. Currently, the industry is stuck in complex systems that are only accessible from one location and that rely on offline reports and management information when away from their desks. As mobile computing meets cloud

[58] http://www.simcorp.com/campaigns/simcorps-industry-outlook-for-2016/general-market-trends

computing, centrally coordinated applications that can be delivered to any device are expected to grow. A lot of this is happening before SimCorp the stage where SimCorp comes in, but also its happening on client reporting, which is going more and more cloud. This is where an opportunity opens for SimCorps Dimension and SimCorp's Coric solution, which have already been shipped by SimCorp in the past as web-based solutions. SimCorp also expects to benefit further from the full ownership of SimCorp Coric by cross selling between SimCorp Dimension and SimCorp Coric. If SimCorp can manage to properly develop mobile-first solutions, the company will enable investment managers to get a real-time image or their positions and enable them to take timely action, wherever they are. This will not only support users away from their desks, it will provide for a far more flexible way of working for many users. Overall, this is a competitive advantage, which is able to drive more market share to SimCorp.

4.2.2. Porters Five Forces

The Porters Five Forces will be covered in this section and the model will be used to assess the conditions concerning SimCorp's industry attractiveness. The assessment of Porters Five Forces will give us an idea of the future development opportunities of SimCorp and the dynamics in bargaining power of both the company vs. the other industry players.

4.2.2.1. Bargaining Power of Clients

Being that SimCorp expects its targeted "growth markets" (North America, UK and France) to deliver more of its growth in the coming years, it's important to highlight the unique dynamics of these markets, as they might also inhibit SimCorps growth to a certain extent.
For example, the UK market is a bit more complicated then the other markets, as customers have more outsourced setups and have oversees companies owning the UK-based investment managers. This means for the UK-market, decision power is not local, which is exactly the case for most fund managers in North America and France. The interdependencies within the growth markets are between UK and North America, so as SimCorp becomes more successful in North America, it will also become more successful in UK, due to oversees ownership of UK-based funds. Therefore, there's a higher underlying risk and a larger potential gain presented in the North American market. If SimCorp is able to perform well in the North American market, the gain is not only market share in North America, but also in UK, due to the interdependencies. On the side, if SimCorp is not able to deliver new clients in the North American market, the UK-market will additionally be affected, due to the oversees ownership. Adding to the risk of failure is the fact that SimCorp replaced its entire management in North America, due to bad

performance in 2014. This means that SimCorp's North American division consists of new hires. Besides this, SimCorp has clearly identified and communicated that it wants to invest more in these "growth markets" and that it wants to scale the business more in the coming years.

Adding upon the nature of SimCorp's business is the lengthy process of closing new clients. By going after 1,200 of the biggest asset managers in the world, SimCorp faces a liquidity risk. The biggest challenge for SimCorp are the biggest customers, which might be slow in their decision making process. The case is that contract must typically be approved by a variety of committees, such as IT-committees, and adding to the complexity, is that certain asset managers have owners from different countries, which makes the decision making process even lengthier. This makes it a challenge for SimCorp to predict its order inflow and its order book from quarter to quarter. This adds a level of insecurity and fluctuations in SimCorp's cash flow, which is represented in the liquidity risk that the company faces. The way that SimCorp mitigates this liquidity risk is by having a company policy where the cash reserves must exceed 10% of the coming year's expected costs. Thereby, SimCorp aims to have sufficient cash resources to allow it to continue to operate adequately in case of unforeseen fluctuations in cash.

Furthermore, being that SimCorp is targeting a very small group of clients (1,200 asset managers), there is a risk that the company might be exposed to credit, but this is not the case for SimCorp. The company is not exposed to significant risks concerning individual clients or business partners. SimCorp's clients are in general major investment managers in the financial sector. To mitigate the credit risk, SimCorp has a policy where all major clients and other business partners are assessed prior to any contract being signed and a substantial amount is paid on entering into license agreements. As mentioned earlier, there doesn't exist many direct competitive products on the market. As the process of changing software for investment managers is both costly in time and money, while also being an extensive process, SimCorp will be positioned when time comes around for asset managers to get a new software. When an asset management firm finally buys a license at SimCorp, they are very unlikely to be shopping around for other providers, as there aren't any solutions providers that come close to having the product offering as SimCorp does. This is also the reason why SimCorp has such extensive client relationships with all of uts clients.

4.2.2.2. Bargaining power of Suppliers

SimCorp is very independent of suppliers in connection with the implementation of SimCorp Dimension, which the company sells and implements itself. SimCorps partners are seen in Appendix 7. The fact that SimCorp has chosen to keep these two functions in-house is assumed to be due to the product complexity and the long-term relation SimCorp has with its clients in the establishment of a contract.

4.2.2.3. Threat of Substitutes products or services

This threat is not that big as there isn't any new player coming in and scooping SimCorps clients away right now. The only clients SimCorp has churned were clients that went out of business (by shutting down) or for other reasons, as becoming a smaller asset manager. Not, because there was a better solution in the market. The respective investments in R&D have given SimCorp a unique product offering position with the best and most advanced investment book of records (IBOR) solutions and the best-of-breed capabilities in its front-office. Both the IBOR and the Front-office have been the main drives in the new licenses made in 2014 and 2015. The IBOR has been SimCorp's stronghold for a long time and in the last years where the market has demanded an integrated IBOR, SimCorp has been ready. Being both able to build both funds and investments that cuts across multiple instruments and is integrated is something that's important to all of their customers.

SimCorp is uniquely positions as a front-to-back integration solution across all asset classes, which differentiates SimCorp in a market dominated by non-integrated and domain-focused competition, increases the share of wallet potential of each client and maximizes switching cost for existing clients.[59] Moreover, within the investment management industry, SimCorp is primarily seen as a middle and back-office provider. This presents a solid opportunity for SimCorp to take market share, as it was only a couple of years back, when the company started to make a vast amount of investments in its front-office capabilities. This is something the company is already seeing bits of, as the driver of new clients are SimCorp's front-office capabilities. If SimCorp can invest more in its marketing capabilities to present itself as the only full front-to-back solution provider, the company has a great competitive advantage, in which it should be able to grasp more market share.

[59] http://www.simcorp.com/-/media/files/investor/capital-markets-day/cmd2015-presentation.pdf?la=en

4.2.2.4. Threat from new entrants

Being that SimCorp is a software company, it should firstly be noted that software in general can differ in numerous of ways. Whether it be requirements in the development phase, maintenance or implementation, or whether in nature, being that software is very different compared to production of physical products.

In SimCorp's case the nature of its software solution is complex and has high requisitions in terms of implementation and maintenance. Furthermore, being that the nature of the investment management is highly driven by regulation, software vendors that want to be competitive in the industry, have to fulfil high standards of quality and compliance. Therefore, in order to establish a clear overview in this analysis of the threats of potential new entrants, new entrants have to be divided into two classes: new entrants starting from scratch (NE1)[60], and new entrants entering from other verticals within financial technology (NE2). This is especially relevant, being that the financial services industry is being disrupted by newer and more innovative technologies. Accenture's report from 2014 on FinTech, highlights that global investments in FinTech ventures tripled to $12.21 billion in 2014, indicating the level of capital flowing into innovative technologies within the space.[61]

The investment management technology industry is highly competitive, where most software vendors have a long histories of being in the market and being that investment managers are managing a lot of money, taking in new software with little history under the above mentioned conditions, is highly unlikely. New entrants will have a hard case to compete with current big established players, whom not only have a solid track record, but also have some of the big customers in already. Not only is there increased competition, but the nature of the conservatism of the investment management industry makes taking market share difficult for new entrants. When looking at SimCorp, the company's average client relation stretches over 20 years. This indicates that customer loyalty is high within the investment management industry and switching cost might be high on several levels. Moreover, it seems that it's hard to time sales cycles. Throughout the years, SimCorp has experienced and is still experiencing that order inflow and order book fluctuates a lot from quarter to quarter. This is an indication of long

[60] In this case of example, I define "new entrants starting from scratch", as a young company of approximatelly 1-3 years in the making and between 2-20 employees.
[61] Acceneture, 2014: "The Future of Fintech and Banking: Digitally Disrupted or Reimagined?"

sales cycles within the industry with additionally, performance- based requirements when deals are finally signed at a given point.

For new entrants, especially NE1 this will present a liquidity issue and an increase risk of failure, as the timing of each cycle has to be timed accordingly. Additionally, there are capital requirements for the new entrants, which need to be spent on developing the software. The situation is not made easier by the bigger competitors, whom have better track records, industry relations and are better requipped on the financial side to aggressivelly push on the marketing side as well. SimCorp is an example of an industry leader, who is relentless in its innovation of new products and therefore, spends approximatelly 20% of revenue on R&D. Additionally, SimCorp is known to invest in new technology companies within the industry, which has not only pushed SimCorp well above its currenty competitors, but it has also secured it a firm position as a market leader in the past couple of years.

Government policies and regulations play a large role in the investment management industry, especially post-financial crisis. With many reforms coming up new entrants have to now only understand these regulations, but also have the capacity to build a software infrastructure that is secure, scalable and compliant with regulations. The big players, like SimCorp have an economies of scale advantage in comparison to the new entrants, being that they have been on top of current trends in the past years, making them more mature to capture new share when investment managers have to be compliant to the new regulation. Furthermore, big players like SimCorp will enjoy the economies of scale in progression of covering more and more regulations with their software. This gives them an advantage in the development costs for new regulation, being that they can build upon already developed software. All in all, regulations are a key driver in the adoptation of new technologies within the industry and new entrants have to time both understand, build and be compliant in accordance to new regulations, before they can try to sell their solution. If new entrants dont figure this out, the threat of new entrants will not be as high. An additional thing to note is that SimCorp is a complete end-to-end solution provider, being able to cater to the entire front-to-back office solution. This means that if new entrants come in, they are highly focus on one specific part of the workflow of the investmenet manager. New entrants, both E1 and E2, will have to focus on one specific area, in order to get foothold in the market. If this is the case, SimCorp won’t be able to sell its entire end-to-end solution, but instead will have to integrate with the new entrants software.

4.2.2.5 Part conclusion: Competitiveness in the industry

Competitive advantage is all about renewable uniqueness of value-adding strategies and therefore it is essential that SimCorp continuously manages to innovate their products, services and not least their business model.

On the basis of the above mentioned, I find SimCorp in a good competitive situation. The company competes in a competitive industry, which has reached a level of matureness. Moreover, there exists high entry barriers for potential entrants as branding, track record and a solid financial base is necessary to endure the long sales cycles. In addition to this it will be hard for new entrants to replicate SimCorps knowhow, which cannot be purchased, but which needs years to be built. Even though SimCorp is continuing to develop innovative products and solutions, one has to note that SimCorp has a track record of 40 years, again an indication that success simply does not happen overnight. And still, a company like SimCorp experiences long sales cycles. One of the main competitive advantages of SimCorp is that the company's continued ability to capture the trends that influence the needs of their clients. This is done by investing 20% of yearly revenue in R&D. All of the above mentioned characteristics about SimCorp, places the company in a strong position to not only grow its market share, but to become a dominant market leader for many years to come.

4.3 SWOT Analysis

The SWOT analysis gives a good overview and a sum up of the most important factors and part conclusion of the strategical analysis. This creates a good overview of the observations that have the highest importance for SimCorp. As some of the observations are threats and strengths, these factors will be present several places.

5.0 Financial Analysis

In this section we will delve into SimCorp's annual reports from 2008-2015, where we will analyse SimCorp's financial history and development throughout the years. The financial analysis will give us a good overview of SimCorp's economic health and its financial position. Using the historic development we can identify indicators for the company's future profitability. Moreover, it's possible to find the growth that the company undergoes, including assess the

operational and financial risk. Both then trend analysis and common-size analysis will be done in relation to SimCorp's revenue, as this will give the best picture of how the company distributes its turnover.

5.1. Restatement of the income statement and balance sheet

In order for us to calculate the key financial figures upon which we will base the financial analysis, it's necessary to do a restatement of the income statement and balance sheet. The restatement will be done by dividing the financial statement into operating and financial items, being that the operating is the operation is the main driver of value creation and therefore, is important to isolate, while the financing items gives us an indication of how the operation is financed.[62]

Moreover, it's important to ensure consistency in the restatement of items in the income statement and the balance sheet, so that we avoid double book keeping.[63] Sometimes, it's not absolutely clear if an item is an operating item or a financing item and therefore, I've made some assumptions in the formulation, unless it clearly stated in the note from the annual reports.

5.1.1. Restatement of the income statement

The classification of SimCorp's operating items and financing items, necessary for restatement of the income statement can be found in Appendix 1. Much of the classification is self-explanatory, so comments will only be added to three of the items, as they require special assumptions.

The first item is "Tax". Analysist typically estimate the tax rate on operating and financing items either by using the marginal tax rate or the effective tax rate. Being that the effective tax rate is stated in the annual reports and not the marginal tax rate; the effective tax rate will be used in the calculations of the results of the Net Operating Profit after Tax (NOPAT) and the net financial costs after tax. In addition to this, it's also worth commenting on the items that bypass the income statement, so-called "Dirty Surplus" items, which are instead stated directly in the equity statement. These items are recognized in the restated income statement as part of the operation, as the item typically covers FX adjustments in the calculation of foreign entities. As it

[62] (Petersen & Plenborg, 2012, s. 68)
[63] (Koller, Goedthart Wessels; 2010, s. 131-133)

is assumed that this stems from the daily operations, it will be classified as an operating item and will thereby be included in the calculated of NOPAT.

Lastly, under the item “Result, discontinued operations”, special comments will be added, being that items like these typically will occur as isolated cases and not reoccurring revenue. This is something that is clear in the income statement, where the item in question only has figures for the years 2008 and 2009. Therefore, this item will be classified as an operating item and will be part of the operations. In Appendix 2, the restated income statement can be found,

Lastly, under the activity “Result, discontinued operations” there will be attached special comments. Activities like these will typically be isolated cases and not reoccurring revenue. Thereby it can also be discussed if this activity should be a part of the operating activities or the financing activities. This activity is in the restated income statement stated as part of the operations. In Appendix 2 the restated income statement can be found, where EBITDA, EBIT and NOPAT are calculated as well.

5.1.2. Restatement of the balance sheet

As in the case of the income statement, we will classify the balance sheet into operating items and financing items. The classification of the majority of the items is self-explanatory and the items that give rise to discussion will be described in this section. In Appendix 3, the classification of the balance sheet can be found and in Appendix 4, the restatement of the balance sheet, where the invested capital appears.[64]

One of the items that give rise to discussion in the restatement of the balance sheet is “Investments in associates”. Being that associates only have a little part in the operating activities of the company, for example as a supplier, this item will typically be seen as part of the operations. This item can both be classified as both being part of the operations and the financing activities, but as “Share of profit after tax of associates” is included in the balance sheet as part of the operation, it therefore seems appropriate to let this item be classified as an operating item.

[64] Equity and similar plus net interest-bearing debt (interest-bearing debt minutes cash and cash equivalents and the like are not used in operating activities (operating cash flow).

The second item in question is “Deposits”, which is classified as a financing item. This item will typically appears in the form of bank deposits, advance payment for leased premises etc. and being that the notes in the annual report don’t fully describe what “Deposits” cover, it is therefore assumed that it covers of financing activities.

Thirdly, regarding the item “Deferred tax” it can be argued whether or not it should be classified as an operating item or a financing item. Typically this item arises, when expenses are recognized in the income statement before they are required to be recognized by the taxing authority or when revenue is subject to taxes before it is taxable in the income statement.[65] The case most often is that tax arises as a direct result of the operating activities, and being that the annual reports aren’t specific about whether the item in question arises from operating activities or financing activities, “Deferred tax” will be classified as an operating item.

Fourthly, “Income Tax Receivable” will be classified as an operating item. It can be argued whether or not this item should be classified as a financial item, being that the tax authority will add an interest rate to these items. As the item in question stems from the operations, we will classify the item as part of the operations. Fifthly, “Receivables in associates” will be classified as an operating item, as the annual reports aren’t specific in describing the given item. The case could be made that the item in question should be a financial item, as it could cover over loans made from SimCorp’s to its associates, but in this case, we classify it as part of the operations.

Lastly, the item “Prepayments” will be classified as an operating item. This item typically covers up-front payments of goods and services, which aren’t stated in the income statement of the current financial year.

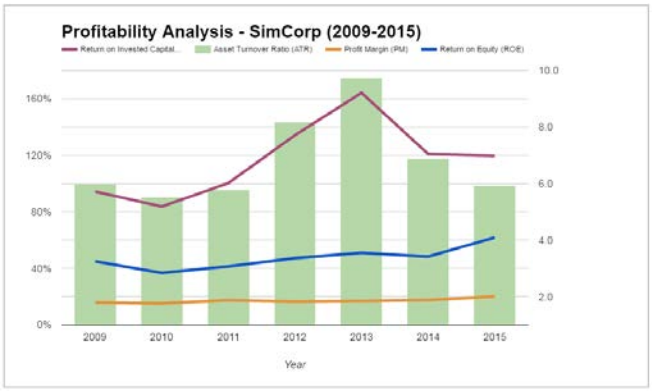
5.2. Profitability Analysis

As Petersen and Plenborg (2012) state, the historic development in profitability is an essential parameter in determining the future expectations to a company. In the following, we will analyse SimCorp’s historic profitability, which will give us a better overview of the potential future expectations to the company.

[65] http://www.investopedia.com/terms/d/deferredtaxasset.asp

A profitability analysis is a core part of the financial analysis of SimCorp. As SimCorp operates in a mature and competitive industry, profitability is a key factor in securing the company's future survival, where a favourable profitability is a sign of the economic strength of the company.

Figure 5: Profitability Analysis – SimCorp (2009-2015)[66]



Source: Authors own creation, Copenhagen Business School, June 2016

As the ratio, ROIC, describes SimCorp's ability to recoup on its invested capital it will also give us an indication of how profitable SimCorp's operation is. In Figure 7 below, we can see that SimCorp's profitability took a dive in the years 2009 and 2010, which indicates that SimCorp indeed was affected by the global financial crisis, given the fact that investment managers minimized budgets for investments in new software solutions. More over the drop in 2009 and 2010 and hence the negative affect in profitability (ROIC), can be explained by the large increase in invested capital in 2008, where SimCorp relocated its headquarters, which meant large investments in operating assets. Additionally, the period experienced a lower increase in the development of operating liabilities than in operating assets, which also helps to explain the growing trend in the development of invested capital.

Post-financial crisis in the years 2010-2013, SimCorp's profitability grew by 96%[67], partially driven by the additional sales to existing clients (maintenance revenue etc. (check if correct to see what the drivers in revenue were) and see if any given countries were driving more than others). The increase in profitability can be attributed to a declined in invested capital, while the NOPAT increased. In the years, 2013-2014, ROIC experienced a sharp decrease and remained

[66] See Table 2 and Table 3 for formulas and tables for the estimation of the factors
[67] = $(ROIC_{2013}-ROIC_{2010})/ROIC_{2010}$ =(164%/84%)/84% = 96%

almost constant in the period 2014-2015. In this period, SimCorp's invested capital doubled from EUR 23,094 in 2013 to EUR 47,717 will be covered in the Common-size analysis.

Moreover, post-financial crisis in the years 2010-1015 has been steadily increasing, with the biggest increase happening in the years 2014-2015. As, ROE indicates how much profit a company generates with the money invested by shareholders, the increase in 2014-2015 can be attributed to SimCorp's aggressive investment in its growth markets, France, UK and in particular, North America. Looking at the Asset Turnover Ratio (ATR), we can see that in the years 2010-2013, SimCorp's ATR has been increasing sharply, indicating that the company was generating more revenue per euro of assets.[68] Additionally, the years 2013-2015 we see a sharp decline in ATR, verifying the SimCorp's investments in its growth markets during that period. Moreover, if we look at the Profit Margin (PM) we will see that it has risen overall in the period, besides two minor declines in 2010 and 2012. The PM is solely driven by revenue and NOPAT, where revenue increased 59%[69] in the period 2009-2015 and NOPAT increased 138%[70], driving PM up. In addition to the operations, the financial affects also influence the return on equity (ROE). If we decompose ROE by the ratios that go into calculating ROE, we get Table 4 below.

Table 1: Key ratios in the calculation of ROE

PROFITABILITY ANALYSIS (EUR '000)	2009	2010	2011	2012	2013	2014	2015
Return on Invested Capital (ROIC)	94%	84%	100%	134%	164%	121%	120%
Net Borrowing Cost (NBC)	0.31%	3.30%	-1.12%	0.08%	0.16%	-0.34%	3.85%
Average Net interesting-bearing debt (Av. NIBD)	-36,335	-44,696	-46,678	-54,848	-54,358	-43,430	-40,746
Book Value of Equity (BVE)	69,177	76,587	80,352	84,524	78,715	72,473	81,600

Source: Authors own creation, Copenhagen Business School, June 2016

From Table 4 above, we firstly notice that the average net interest-bearing debt (NIBD) has been negative in the entire period, 2009-2015, which has also explains why the net borrowing costs, have been almost non-existing in the period. The NBC experiences two large increases, one in 2013 and in 2015, both periods of where SimCorp has invested in growth. The positive

[68] http://www.investopedia.com/terms/a/assetturnover.asp#ixzz4A8sk6oXH
[69] = $(Revenue_{2015}-Revenue_{2009})/Revenue_{2010}$ =(277,927-174,737)/174,737 = 59%
[70] = $(NOPAT_{2015}-NOPAT_{2009})/NOPAT_{2010}$ =(55,910-23,517)/23,517 = 138%

development in ROE can in the last period be attributed to an increase in NBC of 3.8% and BVE of EUR 81,600, which are due to an increase in financial expenses from year 2014-2015.

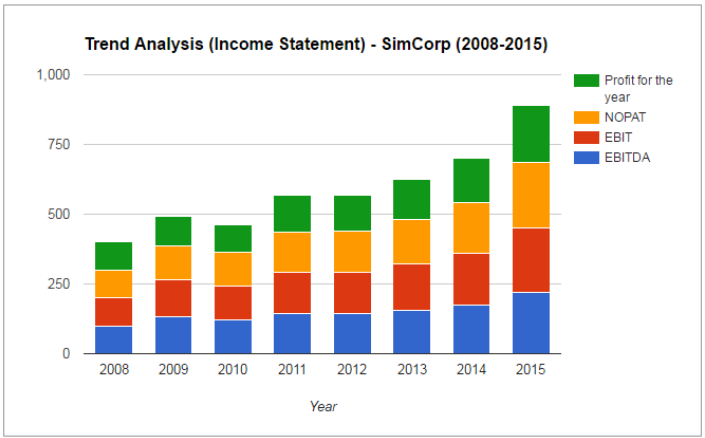
Looking at the four ratios we can conclude that there has been an upward trend from 2009-2015, whereas the ATR has remained constant throughout the entire period.

5.2.1. Trend analysis

In this section we will use a trends analysis to get a better understanding of SimCorps financial development through the years 2009-2015. In the case of SimCorp, a trend analysis will help create a better picture of how the various items in the company's financials have developed and help shape our understanding of what to have in mind when doing our budgeting and forecasting.

As calculated in Appendix 6 and illustrated in Figure 8 below, we can see that throughout the period of 2008-2015 there has been a positive trend in the profit, EBIT, EBITDA and NOPAT. From 2008-2015 the total profit increased with 118%, EBIT with 131%, EBITDA with 118% and NOPAT with 138%. One could argue that the increases in the ratios above could have even been larger, if it weren't for the fact that SimCorp had to replace its management team in North America, due to poor performance. In 2014 and 2015 SimCorp has not had any new clients in North America.

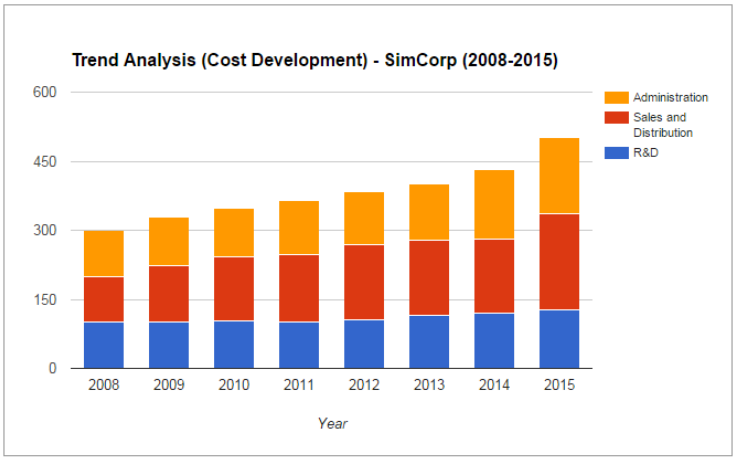
Figure 6: Trend Analysis (Income statement) – SimCorp (2008-2015)



Source: Authors own creation, Copenhagen Business School, June 2016

Looking at Figure 8 below, depicting the development in costs, we notice the relatively lower development in research and development cost, among other things fuelled the positive trend in the key ratios above.

Figure 7: Trend Analysis (Cost Development) – SimCorp (2008-2015)



Source: Authors own creation, Copenhagen Business School, June 2016

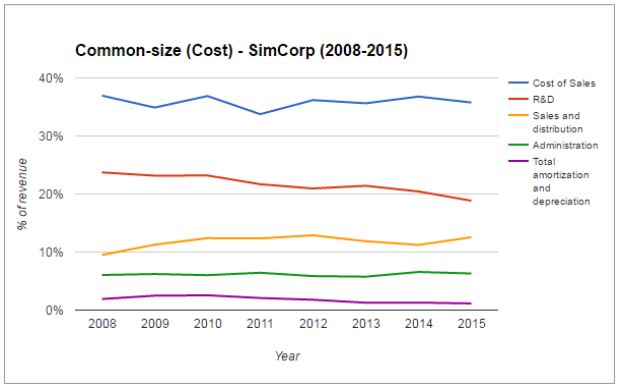
The positive effect was offset by the increase in administration cost and sales and distribution cost. This is due to SimCorp's strategy of ramping up aggressively in it growth markets, particularly in North America and is a testament that skilled labour is a core necessity in SimCorps growth ambitions. As stated in SimCorp's annual report 75% of the total costs in the company were related to its employees.[71] Moreover, if we look at the historic development of the average number of employees from 2008-2013, SimCorp's headcount has increase 27% and with a general salary increase of 2.5% throughout the period, which has adding on the employee costs. These increases have had a negative effect on both the gross profit and the EBITDA. Post-financial crisis an increased amount of regulations hit the asset management industry, which has been one of the driving forces in SimCorp's continuous allocation of approximately 20% of yearly revenue in R&D. Throughout the years this number has been declining, as the product mature and due to a new set of regulations and increased market drives, SimCorp's investment in R&D ensures that the company meets the new requirements and offers its customers the right functionalities.

[71] SimCorp Annual report 2015, page 30.

5.2.2. Common-Size analysis

In this section we will use a common-size analysis to get a better understanding of SimCorp's restated income statement in the years 2009-2015 relates to net revenue that has been selected as benchmarking. A common-size analysis eliminates all size effects, since it is expressed relative to a given size. In the following, an analysis of trends in selected items will be reviewed. As we can see from Appendix 8 & 9, SimCorp has been very effective in management its costs in relation to the revenue. Figure 9 below, illustrates the cost management of SimCorp in period of 2008-2015.

Figure 8: Common-size Analysis (Cost) – SimCorp (2008-2015)



Source: Authors own creation, Copenhagen Business School, June 2016

An immediate picture paints the picture that SimCorp has been good at managing its cost levels. Looking at the cost of sales, we see that this cost area has become more stable from 2008 to 2015, whereas the sales and distribution costs have increased, going hand in hand with SimCorp's aggressive push in its designated growth markets. As sales and distribution costs and cost of sales generally depend on the growth in revenue, it seems natural that cost of sales was very volatile in the early years post-financial crisis due to the generally poor global economy. The R&D spend, which has been one of the core differentiators of SimCorp in developing innovative solutions, seems to be decreasing in relation to revenue. This makes great sense in that as more mature SimCorp's products become, the less developing the product will require and the more focus will be placed on implementation and other services. Furthermore, it's interesting to observe the relation between NOPAT and profit for the year. The difference between the two is margin, which is a testament of SimCorp's ability to generate profits solely from their operations.

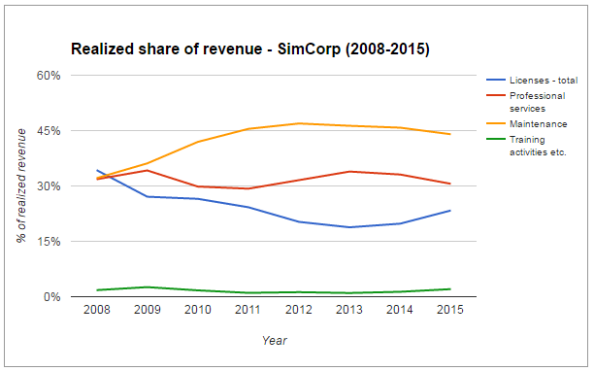
From the above mentioned analysis, it can be concluded that all items in the income statement make up a very stable part of the revenue in the period 2008-2015. SimCorp is good at managing its cost effectively, particularly in its core area, R&D. Additionally; it is evident from the financial statements that management has focused on efficiency improvement within just R&D, which goes hand in hand with the observed.

5.2.3. Breakdown of revenue

In this section we will break down the revenue streams of SimCorp in order to understand the historic development of these in the analysed period. Being that SimCorps revenue stems from its product and its services, it's interesting to investigate the dynamics of these.

As we can see in Figure 11 below, we can see that the revenue has been undergoing some transformation in the years 2008-2015. Post-financial crisis, the budgets of asset management firms were managed tightly, where we can see that from 2008 the maintenance revenue increases steadily as the revenue from new licenses decreases drastically and keep doing so, until it hits is all time low in the period of 2013. During the entire period, professional services have remained rather stable, experiencing the least amount of volatility, after training and activities. Additionally, if we look at the two underlying income items from license sales, new sales, and add-on sales, it is seen that the development of new sales has been declining in recent years, while the add-on sales has been a growing trend. The growing importance of maintenance revenue can be explained by the high revenues from sales of new licenses in the years leading up to the financial crisis. Despite this development, SimCorp has however managed to raise revenue to a record high from 2008-2015 to EUR 277.9m.

Figure 9: Realized share of revenue - SimCorp (2008-2015)



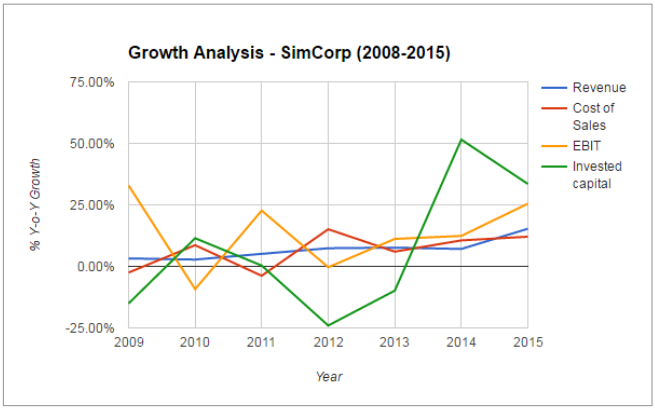
Source: Authors own creation, Copenhagen Business School, June 2016

To conclude on the breakdown of revenue, it seems that SimCorp is trending towards a period, where increased demand for integrated software solutions among investment managers, due to among other thing such as increased regulation, is driving up its revenue of new licenses, particularly in its growth markets.

5.3. Growth analysis

In this section we will delve into SimCorp's historic growth, as it creates the foundation for the expectations in the budget and forecasting section. In the following, we will therefore analyse SimCorp's growth by looking closer at the organic growth of the company. In Figure 12 below, we can see that SimCorp's revenue in the analysed period has been increasing YoY with the biggest increase happening in the period of 2014-2015. If we look at the EBIT and cost of sales, it seems that there is almost a perfect negative correlation between the two. In the period the growth of the EBIT has varied from -0.35% to 32.91% and the cost of sales from -3.81% in to 15.1%. Furthermore, there seems to be a natural delayed lag in the invested capital on the EBIT. The growth in revenue has been stable since 2009, with a positive trend in the development, whereas growth in EBIT and net profit has been very volatile. The trend of these is partly attributable to changes in production costs which in some years have experienced higher growth than revenue.

Figure 10: Growth analysis - SimCorp (2008-2015)

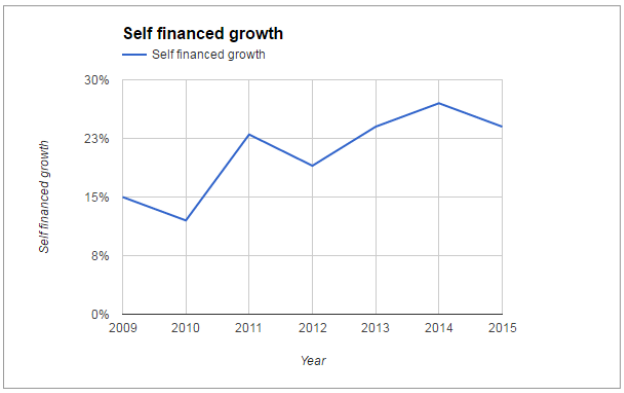


Source: Authors own creation, Copenhagen Business School, June 2016

5.3.1. Self-financed growth

Self-financed growth[72] is a growth target where SimCorp can grow its revenue without increasing its financial risk (Petersen & Plenborg, 2012, p. 128). The self-financed growth is influenced by two factors: ROE and Pay-out Ratio (PO) (the share of the annual profits paid as dividends to shareholders). A high ROE will have a positive effect on the self-financed growth while a high PO ratio will have a negative effect on the self-financed growth.

Figure 11: Self-financed growth of SimCorp (2008-2015)



Source: Authors own creation, Copenhagen Business School, June 2016

In the period of 2009-2015 NBC was almost non-existing, besides a peak in 2010 and 2015, were SimCorp invested in growth. Therefore, the positive development in the self-financed growth can argued to be attributed to the high ROIC in the period. If SimCorp is able to maintain a high ROIC and keep the NBC at a minimum, the company will be able to maintain a high self-financed growth, while maintain the high Pay-out-ratio (PO), which has been the case in the period.

5.4. Risk analysis

In the profitability analysis the drivers that create value was broken down, but as the value drivers create value, they also have a risk associated with them. Thereby, there's a risk that the value drivers will fail in the future (Sørensen & Eiling, 2005) and therefore, this risk must be assessed. In order to discount the future cash flows, knowing the underlying risk of SimCorp is a necessity.

[72] = ROIC + (ROIC - NBC) * NIBD/BEV) * Minority interest share * (1- Payout ratio)

Using financial ratios, the Liquidity Cycle and Current Ratio (CR), we will determine the short-term liquidity risk of SimCorp and via "Financial Gearing" (FG) and Solvency Ratio, we will determine the long-term liquidity risk of the company. The higher the ratios, the lower the liquidity risk of the company. Lack of liquidity will present SimCorp from taking advantage of profitable opportunities and discredit from stake holders could also be troublesome (Brealy et al., 2008). It should be noted that these ratios are mere indicators, being that they are backward looking and only describe part of the company's financial position (Plenborg & Petersen, 2012).

5.4.1. Short term liquidity risk

As stated in the above mentioned the short-term liquidity risk of SimCorp will be assessed from the liquidity cycle and the Current Ratio (CR). The liquidity cycle will tell us how many days it takes to turn net working capital to cash. The fewer days, the better the cash flows of SimCorp will be.[73]

As seen in the calculations in Appendix 15, SimCorps liquidity cycle is very stable from 2008-2015, where the company has been approximately 37 days in transforming net working capital into cash. The liquidity cycle dropped to an all time of 28 in the years 2013 and 2014, whereas it rose to 40 in 2015, which is close to the same level the company had in 2008.

As opposed to the liquidity cycle, the current ratio (CR) is based on a more traditional view on the financial statement. The current ratio can be hard to set in relation to the rest of our above mentioned analysis, but I have chosen to use it, as it gives us an overall idea if SimCorp's current assets are able to cover the current liabilities, hence giving an indication of SimCorp's short-term liquidity risk. The current ratio of SimCorp has in the analysed period on average been at a level of 2.6, ranging between the lowest value of 2.1 in 2014 and the highest value of 3.1 in respectively 2011 and 2012. The decrease from 2012 to 2013 is associated to large share repurchases as SimCorp share in 2013, as well as highly paid dividends to investors and shareholders. Due to the overall decreasing tendency and the stable level in the liquidity cycle and a high current ratio, which is a positive indicator[74], SimCorp does not seem to suffer from short-term liquidity problems.

[73] The rationale behind this is an inventory and receivables tie up capital, while creditors frees up capital (Petersen & Plenborg, 2012, page 153)
[74] A rule of thumb is that a current ratio (CR) of 2x or more is a sign of low short-term liquidity risk (Petersen & Plenborg, 2012, page 155-156)

5.4.2. Long-term liquidity risk

The solvency ratios that we will use to assess the long-term liquidity risk of SimCorp, measure how much the equity accounts for total liabilities and equity combined.

The two ratios, Financial Gearing and Solvency Ratio, have been used to determine the long-term liquidity risk of SimCorp and in Appendix 16; we can see that SimCorp has a high solvency ratio, averaging 64% in the period 2008-2015. The high solvency ratio states that SimCorp could lose 64% of its assets and still be able to pay off its creditors, which is a good indicator of the company's economic health. Moreover, the financial gearing has remained low throughout the period was low but has in the years 2013-2015 been affected by the high dividend payments, which have a negative impact on equity and thereby affect the financial leverage negatively. The high equity ratio and the low financial leverage ties in well the former observed debt-ratio of the company. As SimCorp wants to grow through organic growth, there is no expectation that the current capital structure will change in the future, which is why the current situation is not expected to change. On the basis of this, SimCorp is assessed not to suffer from long-term liquidity issues.

5.5. Conclusion on financial analysis

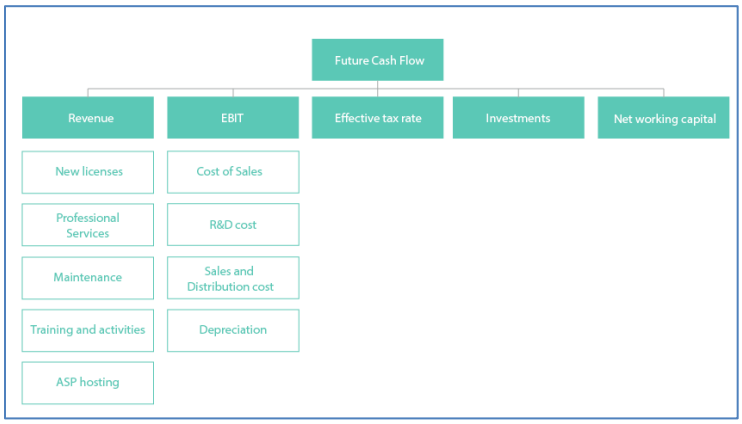
To sum up on the financial analysis, we found a positive development in ROIC and ROE in the analysed period. The common-size analysis revealed that SimCorp is very effective at managing its costs relative to the revenue. SimCorp's high self-financed growth has been driven by the positive development in the ROE and a low PO. On top of that, the risk analysis revealed that SimCorp has a very low short- and long-term liquidity risk. Thereby we can conclude that SimCorp is a stable company at good economic health.

6.0 Budgeting & Forecasting

Until now all chapters have provided us with an in-depth understanding of qualitative and quantitative value drivers of SimCorp. In this section, we will delve into the value drivers, which were found most relevant in the preceding strategic and financial analysis. The main conclusions found here will set the course for the assumptions made in this section, giving a credible future depiction of the future value creation of SimCorp. The choice of value drivers is made in order to attain an appropriate aggregation level.

In Figure 14 below, the chosen value drivers that will set the foundation for the budgeting in this section are depicted.

Figure 12 : Value driver map for budgeting



Source: Authors own creation, Copenhagen Business School, June 2016

The budget will be divided up into two pieces, one expanded budget of the revenue and a pro forma statement of income and balance sheet related items.

6.1. Estimation of budget period

In order to do a proper budgeting of the value drivers, the chosen budget period needs to be long enough for the chosen value drivers to reach a stable level. Being that we in the strategic analysis argued for SimCorp's sensitivity towards cyclical fluctuations, it will be hard for the estimated value drivers to reach a stable level. Also, being that SimCorp operates in a mature industry with long sales cycles, we cannot choose a budget period that is too short, so therefore, a budget period of 4 years has been chosen.

As the strategic analysis gave indications of a positive development in SimCorp's growth markets, which provide SimCorp with the opportunity to win new clients, it seems reasonable to have a budget period of 4 years.

6.2. Budgeting of revenue

As for the case of SimCorp, the largest driver of growth is the revenue, which was highlighted in the strategic analysis of the company. The weakness here is that the company operates in an industry with long sales cycles. The total revenue up until now has consists of license revenues both new and add-on licenses, revenues from professional services, maintenance revenue, training and activities and will in the future include ASP hosting as well. As stated by the company in its Annual Report 2015 presentation, ASP is expected to be demanded by its North American clients[75]. In the coming section we will break down each revenue type and forecast a growth in the given budget period of 4 years.

6.2.1. Revenue from new licenses

SimCorp's license sales, both new licenses and add-on licenses, have been in decline from 2008-2013. This trend was reversed in the recent years, where new licenses and add-on licenses experienced a nice momentum. As mentioned in early sections, this was due to the financial crisis, where in the years post-financial crisis the international asset management sector was affected by political and regulatory measures. Our PESTEL analysis (see section 4.2.1) showed that this presents itself as a great opportunity to SimCorp, as this trend can help drive new sales, being that asset managers all of the world have to comply with the given regulation and have become more global, as there was a pressure on fees. Moreover, it was evident that a large number of international asset managers are expected to replace their existing legacy systems to meet the increased demands that the sector has been subject to.

Thereby, it appears that these particular policies may be what helps open up orders again will flourish and the positive trend, seen in recent years, is expected to continue and new orders are expected to grow in the coming years ahead, reaching levels of 2008-2009. Looking at the historic growth levels in the analysed period of license sales, both new licenses and add-on licenses, we estimate that both new licenses and add-on licenses will experience the same growth of 15% in 2016 and 2017, where it will decline to 13% in 2018 and 6% in 2019. The decline in the growth levels is due to the date of when the regulatory come into play and as most are 2017 and 2018, the growth is expected to experience a drop.

[75] SimCorp Annual Report 2015

The positive outlook for the North American market, as well as France and UK is expected to be one of the main drivers in the revenue stemming from new licenses and add-on license. Sales of new licenses are extremely important for SimCorp's future growth as the positive trends in sales of add-on licenses cannot be maintained unless SimCorp manages to secure new clients. As stated in the strategic analysis is the entry in the North American market depends on strong reference customers as well as a strong management team. SimCorp has increasingly invested in a strong team in the region and as stated at its Annual Report 2015 presentation, it has ramped up heavily on employees, as deals are taking longer time than expected.

The reason for this assumption lies in the geographical composition of SimCorp's customers. Moreover, the reason for the equal expected growth in both new licenses and add-on licenses is due to SimCorp's strong hold in more mature markets in Europe, where regulations will driver current clients to upgrade their solutions and ramp up on their SimCorp Dimension usage.

6.2.2. Revenue from professional services

In the analysed period, professional services have on average accounted for 32% of the revenue for SimCorp. Professional services have been a core driver for SimCorp's stable revenue post-financial crisis. The estimated growth in the sales of new licenses and add-on licenses in the budget period is expected to have a spill over effect on SimCorp's professional services. Due to spill over effects from new licenses due to the very stable growth and position of the professional services revenue, I set the first two years at 12% growth and then the 2 after that at 8% for the professional services revenue, as it gradually builds up after the client has purchased. Even though, SimCorp can help clients from the very early stages of discovering the SimCorp Dimension solution, most of the professional services are expected to come in the form of implementing new licenses as well as add-on licenses. The professional services will come handy in the implementation when new clients need to find out how to extract most value out of SimCorp

6.2.3. Revenue from maintenance

SimCorp's maintenance revenue has without a doubt been the core of the company's revenue in the analysed period, averaging 42% per year of the yearly revenue. As described in the financial analysis, a large share of total revenue from new customers first materialized after a span of 10 years. The YoY growth of maintenance revenue has been 11.8% in the analysed period, mostly stemming to the growth in maintenance revenue in the years post-financial crisis.

As maintenance revenue has been picking up slowly and as we expect new license revenue and professional services revenue to increase in the budget period, I estimate the growth of maintenance revenue to come at a certain lag, as new clients as added. Therefore, I estimate the maintenance revenue will grow 10% in 2016, 12% in 2017 and 14% in the years of 2018 and 2019.

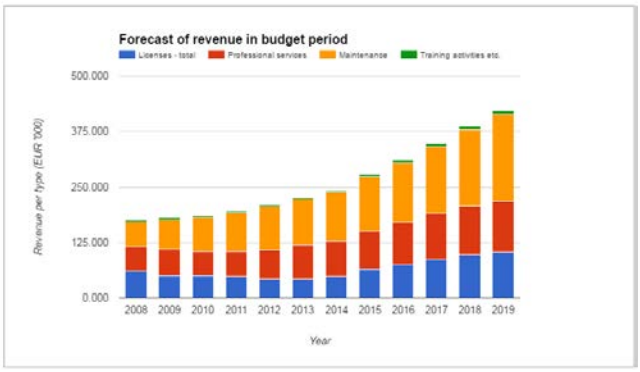
6.2.4. ASP hosting

ASP hosting is newly added to the company, as it is expected by the company to be a new revenue stream in the years to come. In the 2015 Annual Report of the company, SimCorp expects ASP hosting to account for 1% of the company's revenue in 2016[76] and increase in the years to come. Being that ASP hosting is among the company's top priorities, due to the fact that it expects that it will drive new clients in North America and will be expected more and more, I estimate that ASP hosting will grow 2% in 2016, 3% in 2017 and ramp up in 2017 and 2018 with an annual growth of 7%.

6.2.5. Total revenue for the budget period

Since I have estimated the performance of individual revenue items, the evolution of total revenue determined and used for budgeting. As shown in Figure 20 shows the development of individuals in the various items and summed these we get the total revenue for the budget period. It appears that the development in the coming years is very positive. Revenue growth is expected to run by the positive signs for the coming year in which the driving force as mentioned earlier is the expectation of the positive trend for the North American market.

Figure 13: Forecast of revenue in budget period



Source: Authors own creation, Copenhagen Business School, June 2016

[76] SimCorp Annual Report 2015, page 20

6.3. EBIT

In estimating the future operating profit (EBIT), I have chosen to assess the development of the significant cost items. These are cost of sales, research and development cost, sales and distribution cost and administration cost. All of the costs will be estimated as a percentage of the revenue, as it was clear from the common-size analysis that all of the cost items have been very stable of the analysed period.

6.3.1. Cost of Sales

The cost of sales have been very stable in the analysed period of 2008-2015, where the common-size analysis (see section 5.3.2.) revealed that cost of sales averaged 36%. As cost of sales contain wage costs of implementation consultants and other employee-related costs, it is estimated that cost of sales ties in closely to the sales of new licenses and add-on licenses, maintenance revenue and revenue from professional services. Regardless of SimCorp's revenue, the cost of sales has remained at an almost constant level and on this basis; I estimate that the cost of sales in the entire budget period in the years 2016-2019 will be 37%.

6.3.2. R&D Cost

Research and development has been the core of SimCorp and one of its biggest differentiators in the market. The company has proudly communicated that it invested approximately 20% of yearly revenue in R&D, being that it wants to innovate and strengthen its core offering, SimCorp Dimension. The common-size analysis (see section 5.3.2.) revealed that R&D cost have been on a decline (from 24% in 2008 to 19% in 2015), which seems natural as such heavy investments in the product would not seem to make sense, as the product matures.

Therefore, I estimate that the cost will be a smaller part of revenue in the budget period and estimate R&D cost to make up 19% of revenue in the years 2016 and 2017 and 18% in 2018 and 2019.

6.3.4. Sales and distribution cost

Sales and distribution cost covers sales and marketing capacity. As with the above mention costs, the common size analysis in section 3.5.2 reveals that sales and distribution costs have averaged 12% of yearly revenue in the analysed period. Due to a ramp-up in SimCorp's growth markets, particularly North America, where the company yet remains to prove itself in winning new licenses, sales and distribution costs are estimated to grow 15% in the first two years of the

budget period and drop down to 11% in 2018 and 2019. Besides the designated growth markets, SimCorp also has to focus on retaining its leading position in the mature markets.

6.3.5. Administration cost

Throughout the analysed period, Administration cost has firmly remained stable at 6% of revenue (see common-size analysis section 5.3.2.). I don't expect this to be differently in the years 2016-2019 and therefore I estimate that administration cost will make up 6% of total revenue in the budget period.

6.3.6. Depreciation and amortization

Depreciation and amortization have historically in the analysed period accounted for approximately 25% of the tangible and intangible assets. Depreciation and amortization increased immensely in the years 2010-2013, whereas they averaged approximately 20% from 2014-2015. I estimate depreciation and amortization will make up 25% of the tangible and intangible assets in the entire budget period.

6.4 Effective Tax rate

The effective tax rate of SimCorp has historically been at an average of 27% in the analysed period and remained close to the marginal corporate tax in Denmark of 25%. As the average effective tax rate shows, SimCorp has been above the marginal tax rate in Denmark. Variances in the tax rates are not specified in the Annual report, but they typically occur due to differences in deduction rights in the reported accounting and tax accounting. The tax rate of 2015 was 23.9% and in the budget period I estimate the effective tax rate of SimCorp to be 25%.

6.5 Investments

To reach the level of the invested capital, the operating items in the income statement need to be budgeted as well. This will be done by budgeting the tangible and intangible assets (section 6.5.1.) and the net working capital (section 6.5.2.) in relation to the revenue. This being due to the revenue seems as an appropriate indicator to use in the estimation of the budget period.

6.5.1. Tangible and intangible assets

Tangible assets as a percentage share of revenue have been declining since 2008 to 2015. As previously mentioned in the financial analysis, the increase of tangible assets in 2008 was due to the fact that SimCorp moved to new premises and had some costs of the establishment of the new premises. Since 2008, the trend has been declining and is due to the depreciation that

has been on the tangible assets. SimCorp is represented in all regions of the world, and due to that the fact that SimCorp hasn't made large investments in facilities over the years besides 2008, nor made clear indications of any new investments in facilities in the years to come, do I estimate that tangible assets will make up 2.5% of the revenue in the entire budget period.

Historically from the years 2008-2013 intangible assets made up 1.35% percent of revenue, as opposed to the average of making up 6.71% of revenue in the years 2014 and 2015. Overall the aggregated average in the analysed period of the intangible assets make up of revenue was 2.69%. Intangible assets cover software acquired for the development of SimCorp Dimension and goodwill. As stated in the annual report for 2013, SimCorp acquired the remaining 80% of the outstanding shares of Equipos Ltd. for EUR 10m. According to SimCorp this will provide an added value of EUR 11m, which will mainly relate to good will and software. I estimate that this added value on the longer term won't have any influence on the amount of tangible asset make up of total turnover. Even though, SimCorp is a company that has a sharp focus on organic growth, it cannot be excluded that it won't make similar investments. Therefore, I estimate that intangible assets will make up 3% of total revenue in the entire budget period.

6.6. Net working capital

Just as in the case of tangible and intangible assets, I have chosen to use the revenue as a driver for the net working capital, as the revenue should reflect the activity level and price development. Historically, the net working capital of SimCorp has been relatively stable around EUR 20m, with an increase to EUR 30m in 2015.

I estimate that net working capital will be slightly increasing in its part of revenue in the budget period and therefore, I estimate the working capital to increase an additional 1% YoY in the budget period, starting from 9% of revenue in 2016 and ending at 12% in 2019.

6.7. Scenario analysis assumptions

In the following section I will do a scenario analysis a best case and a worst case scenario, which will be based upon the base case scenario. The base case scenario being all the assumptions made until now. Moreover, the best and worst case will solely be estimated on in relation to drivers that influence the cash flow and revenue of SimCorp.

The budgeting of revenue in the previous chapter is tied with certain insecurities; especially the development in the North American market will have a large influence on the budgeting. Being that SimCorp's management sees the potential in the North American market as where SimCorp's future lies, North America seems as the likely choice, given the heavy investments made in increasing revenue sales in that region of the world. The North American market presents itself with the largest opportunity that exists for SimCorp.

6.6.2. Best case:

Many of the same assumptions made in the base case of SimCorp, will be present in the best case as well. Historically, in the analyzed period, SimCorp has been able to grow its revenue at a steady paste. Within this period, the year, where the company grew revenue the most was in the most recent year from 2014-2015, where the YoY growth in revenue was 15.26%.
Being that SimCorp has invested heavily in its designated growth markets, which it has publicly claimed, as it's where the company sees the biggest potential, I see the growth in the years 2014-2015 as being an indicator of the best case scenario in the budget period. In this case it would furthermore be a testament that the company would indeed have found the golden formula in capturing not only the market movements and using them to its advantage, but also an indication of a talented management team with the right strategy in place. With this being said, in the best case, I see SimCorp growing its revenue at a similar level as in the year 2014-2015, so in the best case, I assume a yearly revenue growth of 15% in the entire budget period. The budget from the worst case scenario can be found in Appendix 29.

6.6.3. Worst case:

In the worst case scenario, SimCorp's aggressive push in North America proves to take longer than expected. Being that much of SimCorp's push in 2014 and 2015 has been towards North America, the shareholders are expecting to see an increase in new licenses, particularly from the designated growth markets. Using the same methodology and intuition, as in the best case scenario, we see that the year where the company grew revenue the least was in the year 2009-2010, where the YoY growth in revenue was 2.77%. I see the growth in the growth in this year as being an indicator of the worst case scenario of SimCorp's performance, in the analyzed period. With this being said, I assume a yearly revenue growth of 2.7% in the entire budget period. The budget from the worst case scenario can be found in Appendix 31.

7.0 Valuation

In this section we will calculate the valuation of SimCorp, using the estimates from the previous section. Firstly, we will calculate the weighted average cost of capital (WACC), which will be used for discounting the free cash flow in the DCF model to time 0.

7.1 WACC: Estimating the discount rate

The WACC reflects equity and debt investors expect as a compensation for the time value of money and the risk related to the asset, in our case, SimCorp.[77] In order to achieve growth rates and success, while also satisfying investors, SimCorp has to accept a certain risk and as investors are assumed to be risk adverse in general, they would like to be compensated for the risk they take. In this case, WACC represents the opportunity cost that the investors could have been achieved by carrying out a different investment with the same risk profile as SmiCorp.

Equation 1: Equation for calculation of WACC[78]

$$\mathrm{WACC} = \frac{\mathrm{NIBD}}{(\mathrm{NIBD} + \mathrm{E})} * \mathrm{r_d} * (1 - \mathrm{t}) + \frac{\mathrm{NIBED}}{(\mathrm{NIBD} + \mathrm{E})} * \mathrm{r_e}$$

In the following parts we will estimate the relevant components and calculate the WACC. When the WACC is calculated, it's necessary to ensure consistency between the various components of WACC and the cash flows. None of the variables are observed directly and used therefore different models, assumptions and approximations in order to provide an estimate for each variable.

7.1.1. Capital structure of SimCorp

When the long-term capital structure is to be estimated, the book value of debt and equity is usually used. Being that companies rarely disclose their long-term debt targets and equity structure, it's necessary to estimate the long-term capital structure. An approximation for this is the current capital structure of SimCorp, which we in the previous sections argued wouldn't change in the coming years. Throughout the analyzed period from 2008-2015 SimCorp has a negative NIBD, which indicated that it has an equity share on 100%. It can be argued that the equity should be higher, as the NIBD is negative, but we will refrain from delving further in this.

[77] Petersen & Plenborg (2012), Financial Statement Analysis, p. 245
[78] Petersen & Plenborg (2012), Financial Statement Analysis, p. 246

7.1.2. Required return on debt

In order to fund a company, creditors require a rate of return above the risk free rate and the required rate of debt is based on the spread that the company pays above the risk-free interest rate. Different methods exist in estimating this spread for companies that without debt or available credit and one being, looking at the historical borrowing costs. To undertake a full credit is beyond the scope of this thesis due to the limitations described in section 2.5. Therefore, being that SimCorp's long-term capital structure is 100% equity financing, the required rate of debt will be set at 0%.

7.1.3. The required return on equity (CAPM)

The required rate of return is used by investors to determine where they should place their money. They compare the return of an investor with other available options, in order to determine the opportunity cost of investments into account. This is exactly what the required rate of return determines. As most of the literature recommends using the CAPM model when determining the required rate of return, we will use the same model as well. As covered in section 2.4.5., the CAPM model comes with certain assumptions and has inherent weaknesses we will cover in this section.

Equation 2: Equation for calculation of required rate of return (CAPM) [79]

$$r_e = r_f + \beta_e * (r_m - r_e)$$

In our estimation of the required rate of return, we will in the coming determine the r_f (the risk free rate), β_e(systematic risk of SimCorp's share) and r_m - r_f (the market premium).

7.1.3.1. The risk free rate (r_f)

The risk free rate, r_f, is defined as theoretical rate of return of an investment with zero risk.[80] In other words, it's the interest rate an investor can achieve without taking on any risk. In most developed countries, where governments are seen as being "default free", long-term governments bonds can be used as a proxy for the risk free rate. In current times, it can be argued, whether a government bond will be a good proxy for the risk free investment[81], being that we are experiencing turmoil in Europe with the Grexit and the coming vote regarding the supposed "Brexit", which presents an inherent risk to companies dealing with foreign

[79] http://www.investopedia.com/terms/c/capm.asp
[80] http://www.investopedia.com/terms/r/risk-freerate.asp
[81] Petersen & Plenborg, 2012, p. 249-251

subsidiaries. If we divide SimCorps revenue into market units we see that Europe[82] accounted for 45% alone and herein, one SimCorps designated growth markets, France, is included. Growth markets are expected to make up a larger portion of SimCorp's revenue in the future and despite the aggressive push in the UK and North America, it will still take some time. Therefore, it seems appropriate to use the government bond of an European country, as SimCorp is using EUR as reported currency. What should be noted is that interest rates all over Europe have generally been falling and as the illustration below shows, the same is true for the 10-year Government bond that we are using as a proxy for the risk-free rate. Being that Germany is a strong economy and is affected by the upcoming "Brexit"-vote, we don't expect Germany to be defaulting anytime soon.

The government that will be used as a proxy for the risk free rate will be a 10-year German government bond[83]. On February 22nd, 2016 the 10-year German government bond was 0.178%.

7.1.3.2. SimCorp's beta (β_e)

Beta is a measure of the systematic risk and drives as a function of the relationship between the return of the market portfolio and the actual return on the stock. In other words, SimCorp's beta is the correlation between SimCorp's share price and the markets return. It measures the volatility of SimCorp's share relative to the market and is the systematic risk that investors expect to be compensated for, so the higher the systematic risk, the higher the compensation the investors require.

Beta is typically interpreted as follows:[84]

- B=0: SimCorp is a risk-free investment
- B<1: Investing in SimCorp will yield lower systematic risk than the market portfolio
- B=1: Investing in SimCorp will yield the same systematic risk than the market portfolio
- B>0: Investing in SimCorp will yield higher systematic risk than the market portfolio

The beta coefficient can be determined in multiple ways and implications vary across the different methodologies. Due to the limitations and the scope of this thesis, we will rely in

[82] Central and Western Europe (excl. UK and the Nordics)
[83] http://www.bloomberg.com/quote/GDBR10:IND
[84] Petersen & Plenborg, 2012, p. 251-252

external sources in the calculation of beta. A survey made by PriceWaterhouse Coopers (PWC) found that over 90% of the respondents use external sources in the estimation of the beta, such as Bloomberg and Reuters. According to Reuters, SimCorp's Beta is estimated to be 0.76.[85]

In the case of Reuter's calculation of beta, where the beta coeffient is based on historical returns of SimCorp and the S&P500 index, there are certain weaknesses that should be taken into account, such as the missing liquidity in beta over time, which can lead to a lower beta estimate and an incorrect reflection of the underlying company risk. In the case of SimCorp this is not the case, as the SimCorp's share has a high average volatility. Optimally, beta should explain the future risk and should be estimated on the future stock returns, but as this is not available, historic returns are used.

7.1.3.1. The market risk premium (r_m-r_e)

The market risk premium is the return in excess of the risk free rate that shareholders expect as compensation on taking the risk of investing in other assets than the risk free government bond. In the case of SimCorp, the market risk premium measures the excess return an investor requires to invest in SimCorp's share instead of the risk-free government bond.
There is high insecurity about what the real risk premium is, as Penman (2010) states: "Let's be honest with ourselves, No one knows what the market premium is". Damodaran (2012) states the historic risk premium over the period of 1999-2011 for Denmark to be 4.4% on average. Moreover, Fernandez, et al. (2012) did a large survey of what market risk premium is used in 82 different countries and he concluded that the average market risk premium in Denmark is 5.5% with a median value of 5%.[86] To add to this, according to Price Waterhouse Coopers's (PWC) semi-annually survey, the market premium in the period of 2002-2008 was constant of approximately 4.5% and rise to 4.9% in 2009.[87] Being that most of the research papers, both the long-term and the recent ones lie in the range of 4.4%-5.5%, the average of 5% seems appropriate and therefore, we will estimate the market risk premium of (r_m-r_e) to be 5.0%. This market risk premium is close to the research mentioned above, both the ones that look at short and long time spans.

[85] Retuers.com calculats its beta based on trailing 5-year prices, on a monthly basis, relative to the S&P 500 index
[86] Fernandez, Aguirreamalloa, Corres. Market risk premium used by 82 countries in 2012: A survey with 7.192 answers. Working paper.IESE Business School, Madrid, 2012
[87] www.formuepleje.dk/information/nyheder/2013/formuepleje-ser-godt-potentiale-i-aktier

7.1.4. Calculation of WACC

Based on these estimates, we can now estimate the weighted average cost of capital (WACC) and the required rate of return, using the CAPM model. The required rate of return for SimCorp is estimated to be:

$r_e = r_f + \beta_e * (r_m - r_e) = 0.178\%$ + 0.76 * 5% = **3.98%**

Using the required rate of return in the above, we can now calculate the WACC using the formula in section 7.1:

$\text{WACC} = -0.92 * 0\% * (1 - 25\%) + 1.92 * 3.98\% =$ **7.65%**

According to our calculations in the above, we estimate SimCorp's required rate of return, r_e, to be 3.98% and the WACC to be 7.65%. The estimated WACC will have great importance for the valuation of SimCorp, as this estimate will be used to discount the budgeted cash flows.

7.1.5. Estimation of the growth factor in the terminal period (g)

Before we can do a valuation of SimCorp, we need to estimate the growth rate for the terminal period. The long-term growth for SimCorp is expressed via the coefficient, g, and based on the development SimCorp's industry and the macro environment in which it operates. The assumption is that SimCorp in the terminal period has reached steady state, where WACC = ROIC. According to literature, a company will grow at a rate similar to the growth rate of the economy, which is made up of GDP growth plus inflation (Sorensen, 209). From the strategic analysis, it became clear that the IMF estimates that world GDP growth up to 2019 will increase by 3.3% per year. Further assess the ECB that inflation over the next five years will be 1.8% so that the growth rate of the economy will be 5.1%. From this it is estimated that the long-term growth factor, g, will be 2.5%.

7.2 The DCF-model

In this section we will estimate the value of SimCorp by using the Discounted Cashflow method (DCF). We will use the estimates from the basis scenario in estimating the value of SimCorp and in the sensitivity analysis, we will include the estimates for the best and worst case scenarios.

Equation 3: Equation for calculation of the discounted cash flow model (DCF)

$$\text{Value of SimCorp} = \sum_{t=1}^{n} \frac{FCFF}{(1 + WACC_g)^t} + \frac{FCFF_{n+1}}{WACC - g} * \frac{1}{(1 + WACC)^n}$$

Using the budget estimates in section 6.0, we have calculated the pro forma income statement, balance sheet and the free cash flow (FCFF), which can be found in Appendix 35.

The calculated FCFF in the table above will be used in our DCF model. Though, before we can use the DCF method, we need to setup certain assumptions that allow us to use the calculated WACC of 7.6% (see section 7.1) in the whole budget period.[88] Firstly, we assume that all the excess liquidity will be paid out as dividend in the budget period. Moreover, we assume that all revenue and costs are posted directly in the income statement, so that "Dirty Surplus" items don't occur. In using the DCF method to calculate the estimated value of SimCorp, we also need a growth rate, and here we use the growth rate, g, of 2.5%, which was estimated in section 7.1.5. Normally, the estimated value of a company would be estimated as the estimated value minus the net interesting bearing debt, but as SimCorp does not have any net interest bearing debt, but instead a lot of cash, this then becomes the estimated value of the company. Being that the values in SimCorps annual report are in EUR the exchange rate of EUR/DKK from February 22nd, 2016 is used. We can now calculate the estimated value of SimCorp, and as seen in the table below, the estimated share price of SimCorp per. 22nd of February is found to be DKK 390.0.

Table 2: SimCorp's Discounted Cash Flow model and estimated share price

DCF MODEL - BASE CASE (EUR '000)	2015	2016	2017	2018	2019	2020 terminal	g
							2.50%
Free Cash Flow (FCFF)		93,944	95,163	103,602	113,350	123,680	
WACC		7.65%	7.65%	7.65%	7.65%	7.65%	
Present value factor		0.9290	0.8630	0.8016	0.7447		
Present value of FCFF		87,269	82,121	83,051	84,410		
Total present value of FCFF in budget period		336,851					
Total present value of FCFF in terminal period		1,789,003					
Estimated company value		2,125,854	EUR 1.000				
"- Net interest bearing debt"		-43,103	EUR 1.000				
Estimated market value of equity		2,168,957	EUR 1.000				
Exchange rate pr. 22nd February, 2016*		7.462	EUR/DKK				
Estimated value of equity		**16,184,756**	DKK 1.000				
Number of shares		41,500,000					
Estimated share price per February 22nd, 2016		**390.0**					

** European Central Bank (https://www.ecb.europa.eu/stats/exchange/eurofxref/html/eurofxref-graph-dkk.en.html)*

Source: Authors own creation, Copenhagen Business School, June 2016

[88] These assumptions are made, as the DCF method is only correct if you use the total income as the income

If we compare the estimated share price of SimCorp with the observed share price of DKK 299 on February 22nd, 2016, our calculations indicate that there is an upside potential of 30.4%. In other words, according to our calculations, SimCorp is highly undervalued, but before we can conclude if SimCorp is an attract investment, we need to do a sensitivity analysis. A sensitivity analysis will be performed in the next section.

Moreover, it's worth noting that the relatively short budget period of 4 years gives a terminal period that accounts for 84% of the total estimated value of SimCorp, which is a very high share of the total estimated value.

8.0 Sensitivity Analysis

Before we can conclude on our estimated value of SimCorp, found in the previous section, we need to perform a scenario analysis and a sensitivity analysis. By doing this, we find out how sensitive the estimated share price of SimCorp is to changes in the most important parameters. In the following, we will do a scenario analysis, followed by a sensitivity analysis.

8.1 Scenario analysis

We recall from the assumptions made in section 6.6 that the development in the base case, best case and worst case scenarios was based on the forecasted revenue and in particular the influence of SimCorp's success markets, more notably North America.
The best case scenario assumed a yearly revenue growth of 15% in the entire four year budget period, whereas the worst case assumed a yearly revenue growth of 2.77% in the entire budget period. The three scenarios are illustrated below and compared to actual observed share price of SimCorp on February 22nd, 2016.

The illustration in Appendix 37 shows a large difference in the estimated share price in the three different scenarios. This goes well hand in hand with the large influence that the growth in North America has on the future of SimCorp. Being that SimCorp's growth in the North American market comes with a certain uncertainty and have such a large influence on SimCorps future revenue, this presents itself as a high risk element. As we can see, both the base case and the best case, see potential in SimCorp's share. As a total evaluation, we will calculate and

estimated share price in order to take into account the uncertainty associated with the development in revenue. Given the fact that this entire thesis has been based on the base case scenario, I will give it the largest weight of 60%. Taking into account that the estimated value of SimCorp is 30.4% higher than the observed price and that the best case and worst are significantly different than the base case, I will give the worst case a weight of 30% and the best case a weight of 10%. This being due to the comparison in the cases, shows that the base case is inherently very optimistic and dependent on large number of factors. Moreover, taking into account the dynamics in the investment management industry, as well as the volatility in macro factors that influence it, SimCorp's growth can very much be prohibited.

On the basis of this assumption, a weighted estimation of SimCorps share price per 22nd of February is found to be DKK 365.2[89], which is 22% higher than the observed share price of SimCorp on 22nd of February, 2016.

8.2 Sensitivity analysis

The calculated share prices for SimCorp in the previous section are calculated on the basis of estimates, which we have made in the analysis of SimCorp. This has lead us to certain value drivers, which have a large effect on the valuation made. If we change some of these estimates, the estimated value of Simcorp will change as well. With that purpose in mind, we will map out the effect of these factors on the estimated share price of SimCorp. Throughout this analysis, there has been several value drivers, whom have had an effect on the estimated share price on SimCorp. Ideally the sensitivity analysis should be based on the fundamental analysis, which are the basis of the pro forma financial statements, but it has been decided to look into the long-term growth rate, g, and the estimated WACC. The argument for choosing these two is factors is to be found in the high percentage share of the value of the terminal period of the calculated share price and therefore, the elements that influence the terminal period, will also influence the estimated share price of SimCorp.

Being that the discount factor, WACC and the long-term growth rate,g, have a large say in the value of the terminal period, these two are estimate d to have the largest influence on the

[89] Calculation = Best case * 10% + Base case * 60% + Worst case * 10% = DKK 365.2.

estimated share price. In the below mentioned table we can see the sensitivity of the estimated share price on these two.

Table 3 SimCorp's estimated share price with different WACC and growth rate, g

		Growth rate, g						
		1.00%	1.50%	2.00%	2.50%	3.00%	3.50%	4.00%
WACC	6.15%	410.6	447.2	492.5	550.4	626.5	731.4	885.2
	6.65%	374.0	403.5	439.4	483.9	540.7	615.4	718.4
	7.15%	343.3	367.6	396.6	431.8	475.6	531.2	604.6
	7.65%	317.4	337.7	361.5	390.0	424.6	467.5	522.3
	8.15%	295.0	312.1	331.9	355.3	383.3	417.2	459.3
	8.65%	275.5	290.1	306.9	326.4	349.4	376.8	410.1
	9.15%	258.5	271.1	285.4	301.9	31.0	343.6	370.5

Source: Authors own creation, Copenhagen Business School, June 2016

As seen in the table above, SimCorp's estimated share price can vary from DKK 258.5-885." Per share, if the value of the given factors is uphold. Moreover, we can see that a long-term growth rate of 1.5% combined with a WACC of 8.65% give an estimated share price of DKK 290.1 per share, which comes very close to the observed share price of SimCorp on 22nd of February, 2016. This could mean that the used WACC and long-term growth rate, g in the terminal period are too low and too high, compared to the ones used by other investors.

If we delve further into WACC, we can see the effect that variations of +/- 0.05 in the beta, have on the estimated WACC and henceforth, the estimated share price of SimCorp, in the table below.

Table 4: SimCorps estimated share price via changes in β

Beta	0.66	0.71	0.76	0.81	0.86
WACC	6.69%	7.17%	7.65%	8.13%	8.61%
growth rate (g)	2.5	2.5	2.5	2.5	2.5
Estimated share price	479.7	430.2	390	356.7	328.6

Source: Authors own creation, Copenhagen Business School, June 2016

The large effect the changes in beta have on the WACC and estimated share price of SimCorps, entails the uncertainty associated with the subjectivity in choosing the value drivers in the DCF model. This hopefully shows that by adjusting the core factors, one can get any estimated value out of the DCF model.

9.0 Conclusion

The purpose of this thesis was to estimate the value of SimCorp as of 22nd of February, 2016, in in order to find out whether SimCorp was undervalued or overvalued, resulting in a buy, sell or hold recommendation.

An in-depth look in the company reveals that SimCorp has economic foundation, which stems from its high percentage share of revenue coming from professional services (31% of revenue in 2015) and maintenance revenue (44% of revenue in 2015). Furthermore, a look at the cost structure tells a story about the pursuit of innovation in that the company allocates approximately 20% of yearly revenue to R&D, in order to continuously improve on its product offering. This core product offering is the main strength and the main differentiator of SimCorp, in a mature and competitive landscape, which we found out in the strategic analysis. On top of that, the company possess a strong knowhow in the skilled labour, where there is a high seniority among the employees and a very low employee turnover. In a time where talent is on everybody's agenda, SimCorp proves that it not only is able to attract talent, but most important, maintain and develop the talent it has via SimCorp Leadership Academy.

The financial analysis revealed that SimCorp is good at managing its cost, while growing its revenue, both in new licenses and add-on licenses. In addition to this, an increasing ROIC and ROE in the entire period of the analysis (2008-2015) reveal a positive development in SimCorp's economic health. Due to the high reoccurring revenue stemming from professional services and maintenance services, SimCorp has been able to grow organically throughout the years, while keeping a low short-term and long-term liquidity risk.

Using the DCF method, we determine the value of SimCorp to DKK 390.0 per share as of 22nd of February, 2016. The following sensitivity analysis revealed that the yielded estimate was very sensitive to even small changes in the parameters of the DCF model. On the basis of the models and assumptions made in this thesis, we estimate SimCorp to be undervalued and propose a "BUY"-recommendation on the SimCorp share.

Due to the findings in the sensitivity analysis, we add that the true value of SimCorp might be far from the obtained one in this thesis, but as with any valuation models, inherent weaknesses exist and therefore, the reader is encouraged to perform his or hers own estimate of SimCorp.

10.0 Perspective

In estimating the value of SimCorp, we only used the discounted cash flow model (DCF), and as mentioned in section 2.5.2.1., this valuation model comes with certain weaknesses. Even though the model is the most widely used, many people still argue whether or not the model is the right one. Too often the case is that many of the valuation models rely on assumptions that rely on additional assumptions down the line, which is the face of the DCF, which relies on the WACC, which relies on the Beta estimate of SimCorp, which relies on the method used in estimating the Beta, the length of the data, the daily or monthly share prices and I could continue.

In hindsight, this thesis could have proven its conclusion even better by using a complimentary valuation model, but as noted when dealing with real life equity analysts, they stick to keeping things simple. When they report on their recommendations they communicate with respective clients, who don't have the knowhow like they do.

With that being said, every model relies on a set of given assumptions, which most often hold various aspects of the world constant, in order to explain a given angle. Being that our world is vastly complex and being that many of the valuation models are highly influenced by subjected opinions, the art seems more like finding a model you like and getting comfortable with.

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14.0 Appendices

Appendix 1: Selected analysts preferred practice

Table 5: Selected analysts preferred practice

Analysts	Preferred valuation models		
	DCF	EVA	Multiples
ABG Sondal Collier	Yes	Yes	P/E
Handelsbanken	Yes	No	No

Source: Authors creation, May 2016, based on research reports

Appendix 2: History of SimCorops Clients

In year 2000 SimCorp signed a TMS2000 contract with Evli Securities in Finland, where Evli Securities replaced its systems with SimCorp's TMS2000, an integrated investment management system. In 2002, Swissca Portfolio Management, Switzerland's investment managers, entered into a license agreement with SimCorp for TMS2000.

Singapore followed swiftly in year 2004, where the company entered into cooperation with TietoEnator for providing information technology (IT) solutions to the financial industry. Furthermore, SNS Asset Management, a part of the SNS Reaal Group, selected SimCorp Dimension for its investment management operations, in 2005.

In 2006, the company partnered with Actuate to deliver business reporting to investment management customers. In the same year, FIX CITY partnered with SimCorp to integrate indication of interests (IOIs) with trading platform.

In 2007 and partnered with Spotfire, a provider of enterprise analytics software. where Edmond de Rothschild Asset Management selected SimCorp Dimension as its platform for domestic and international asset management activities. In the same year, Nomura Bank (Luxembourg)

selected SimCorp Dimension as its platform for its fund administration and fund accounting activities. The same year, American Century Investments, an asset management firm, selected SimCorp Dimension as a platform to support the operations of its institutional investment business. In the same year, Schroder Investment Management completed the implementation of SimCorp Dimension for valuation and settlement functions across four countries within its Asia Pacific operation. Also in the same year, C. Hoare & Co., a UK-based independent private bank, selected SimCorp Dimension as its investment management platform.

In 2010 the company and ITG Net, a global network company, entered into a partnership agreement to enable the customers by utilizing ITG Net to route orders to broker dealers through an interface. Later in the same year, Fennia Mutual Insurance Company selected SimCorp Dimension as its investment management platform.
In 2011 MN Services extended SimCorp Dimension license agreement and entered into a cooperation agreement with SimCorp. In the same year, Marathon Asset Management, an independent investment management company, selected SimCorp Dimension as its investment management system. Continentale Insurance Group, a German insurance group, selected SimCorp Dimension as its investment management system in the same year. Also in the same year, the company signed a license agreement with American Eagle Asset Management.

In 2013, Swedbank Robur selected and introduced the company's SimCorp Dimension Solvency II solution. In the same year, the company entered into a product partnership with AcadiaSoft to enable automated margin call messaging.

The same year, *BlueBay Asset Management selected the company's SimCorp* Dimension as its investment management technology platform. Also in the same year, Alberta Investment Management Corporation (AIMCo) selected the company's SimCorp Dimension as its investment management solution. Also in the same month, SimCorp made an agreement with Elo Mutual Pension Insurance Company to provide services of SimCorp Dimension.

SimCorp Dimension made an agreement with Swisscanto in April 2014. Under this agreement, SimCorp managed in-house funds of Swisscanto. In June 2014, SimCorp made an agreement with MSCI to support a direct data and analytics link between SimCorp Dimension and the MSCI RiskManager platform. In the same month, Mizuho Trust & Banking (Luxembourg)

(MHTBL) chose SimCorp Dimension as its new integrated software solution. Also in the same month, SimCorp changed the name of Equipos to SimCorpCoric. Later, Federis Gestion d'Actifs appointed the company's SimCorp Dimension as its new investment management technology platform. In July 2014, Notenstein Private Bank appointed SimCorp Dimension as its new software solution for front and middle office operations.

Appendix 3: SimCorp's Company Awards

Table 6: List of SimCorp awards[90]

Year	Month	Award
2015	December 2nd	SimCorp named Best Front-to-Back Office Provider at Funds Europe Awards for second consecutive year
2015	November 9th	SimCorp Voted Best IBOR Solution by Waters Technology for Second Year Running
2015	April 29th	SimCorp Dimension Wins FTF's 2015 Technology Innovation Award for 'Best IBOR Solution'
2014	November 10th	SimCorp Wins Waters Award for IBOR Solution
2013	November 26th	SimCorp Dimension Named Best Collateral Management System for Fund Managers at Inaugural Global Custodian Awards
2013	November 7th	SimCorp named "Best Portfolio Accounting Solution" at 2013 Buy-Side Technology Awards
2013	November 4th	Coric Client Communications (now SimCorp Coric) Awarded Third Consecutive "Best Client Reporting Platform" Award by Waters Buy-Side Technology
2013	June 21st	Coric Client Communications (now SimCorp Coric) Named "Best Client Reporting Solution 2013" at UK Systems in the City Awards
2013	May 9th	WealthBriefing European Awards Recognize Coric Client Communications (now SimCorp Coric) as "Best Front Office Solution"
2012	November 21th	SimCorp Wins Industry Award for Best Product Implementation at a Buy-Side Firm
2012	November 5th	Coric Client Communications (now SimCorp Coric) Named 2012 "Best Client Reporting Platform" by Waters Buy-Side Technology

[90] http://www.simcorp.com/company/about-us/company-awards

2011	November 8th	Coric Client Communications (now SimCorp Coric) Wins 2011 "Best Client Reporting Platform" at Waters Buy-Side Technology Awards
2008	October 23rd	SimCorp Wins "Vendor of the Year" Award

Appendix 4: SimCorp's Board of Directors:

Elected Board of Directors:

Chairman: Jesper Brandgaard (since 2008)

- Directorship: Chairman of SimCorp A/S' Board of Directors since 2008 and Vice Chairman of SimCorp A/S' Board of Directors since 2007. Chairman of the Board of Directors of NNIT A/S.
- Career: Since 2000, Executive Vice President and CFO of Novo Nordisk A/S.)
- Relevant competences and experiences: Group executive experience in a multinational corporation, including responsibility for strategy development and implementation, information technology and finance. Furthermore, involved in the development and governance of companies with IT and consultancy activities.

Vice Chairman: Peter Schütze (since 2012)

- Directorship: Vice Chairman of SimCorp A/S' Board of Directors since 2012.
- Career: Former CEO of Nordea Bank Danmark A/S and member of Group Executive Management in Nordea AB.)
- Relevant competences and experiences: More than 30 years of management experience from an international financial company as well as several board positions both as chairman and member. Involvement in IT development and trading operations in financial institutions.

Board member: Hervé Couturier (since 2008)

- Directorship: Member of SimCorp A/S' Board of Directors since 2008.
- Career: Executive Vice President in Amadeus S.A.S.)
- Relevant competences and experiences: International experience in software development for the financial sector as well as general management skills.

Board Member: Simon Jeffreys (since 2011)

- Directorship: Member of SimCorp A/S' Board of Directors since 2011. Chairman of the Audit Committee of SimCorp A/S since 2013. Director and Chairman of the Audit Committee of the Board of Directors of Henderson International Income Trust. In addition member of the Board of Directors of Wellcome Trust Finance plc. and St. James's.
- Career: Chief Operating Officer of the Wellcome Trust. More than 20 years' experience as audit partner in PwC. Experience from membership of the Board of Directors for Aon Limited as non-executive director, chairman of the Audit Committee, member of the Risk and Compliance Committee and Nominations Committee.
- Relevant competences and experience: Significant international experience, financial services and financial knowledge as well as general management skills.

Board Member: Patrice McDonald (since 2014)

- Directorship: Member of SimCorp A/S' Board of Directors since 2014.
- Career: Head of Risk & Regulation, Wealth & Asset Management, Ernst & Young LLP. Formerly, Managing Director in the UK consulting firm Anchura. More than 20 years of experience in wealth management, investment and asset management as well as investment banking, gained within the Barclays Group, Coutts, Deutsche Bank and at Accenture.
- Relevant competences and experience: Significant board level experience within the financial services industry covering risk, strategy, corporate governance, major program management and consulting services.

<u>Employee-elected representatives</u>

Board Member: Raymond John (since 2009, re-elected 2012)

- Directorship: Employee-elected member of SimCorp A/S' Board of Directors since 2009. Re-elected 2012.
- Career: Production Engineer in American automobile and aerospace industries; self-employed investment manager. Current position as technical writer in Accounting Test and Documentation.
- Relevant competences and experiences: 5 years' experience as Project Manager facilitating communication between production workers, management, engineering and

other stakeholders in multicultural environment. 10 years' experience as an investor/shareholder in US and Canada.

Board Member: Jacob Goltermann (since 2007, re-elected 2012)

- Directorship: Employee-elected member of SimCorp A/S' Board of Directors since 2007. Re-elected 2012.
- Career: Employed in SimCorp since 1997. Has worked with financial software and held different management positions. Since 2011 Chief Business Consultant in SimCorp's Strategic Research Department.
- Relevant competences and experiences: 10 years' experience with development of financial software. Strategic and technological management experience within application development of investment management systems. Management experience as an officer in the Danish army.

Appendix 5: SimCorp's Group Management:

Table 7: The Group Management Committee of SimCorp[91]

Position	Name	Employed since / Position since
CEO	Klaus Holse	Employed since 2012 Position since 2012
CTO	Georg Hetrodt	Employeed since 1998 Position since 2012
CFO	Thomas Johansen	Employed since 2012, Position since 2011
Executive VP - EMEA and Asia Pacific	Jochen Müller	Employed since 1996 Position since 2012
Group Human Resources	Elise Hauge	Employed since 2014 Position since 2014
Executive VP - Professional Services	Henrik Schlægel	Employed since 2013

[91] http://www.simcorp.com/company/about-us/management

		Position since 2013
CMO - Group Marketing & Communications	Jens Olivarius	Employed since 2014 Position since 2014
Executive VP - MD of SimCorp North America	James Corrigan	Employed since 2014 Position since 2014
Senior VP - ASP Division	Thorvaldur Flemming Jensen	Employed since 2011 Position since 2015

Appendix 6: SimCorps clients and market share as of 2015

Table 8: SimCorp clients and market share as of 2015[92]

Market unites	Number of clients	Total market	SimCorp's Market shares
North America	19	500	4%
Central Europe	51	200	26%
Western Europe	24	170	14%
UK	21	150	14%
Asia	12	110	11%
Nordics	46	70	66%
Total	**173**	**1,200**	**14%**

[92] Figures are based on SimCorp's own estimates from their Annual Report 2015

Appendix 7: SimCorps Authorized Partners[93]

Business Partners (Our Business Partners provide complementary business solutions to SimCorp Dimension. We have collaborated with the business partner to they build and support an interface that integrates with both solutions.)

Order Management Partners (Our Order Management Partners provide connectivity or trading algorithms that can be leveraged in support of order management and execution within SimCorp's Order Manager.)

Interface Partners (Our Interface Partners provide data that can be uploaded into SimCorp Dimension via a standard, integrated interface, and then accessed across all relevant functionality within SimCorp Dimension.)

Technology Partners (Our Technology Partners provide software that is either embedded within SimCorp Dimension or delivers supporting functionality that provides the foundation for the operation of SimCorp Dimension.)

Associated Partners (Our Authorized Partners are selected for their ability to complement a SimCorp Dimension business transformation project.)

Appendix 8: SimCorp's Repurchase programs

The six repurchase programs are as follows:[94]

#	Months	Period Start	Period End	Max number of shares at value á DKK 1	Max percentage of total SimCorp-shares allowed to be bought	Limited to a total market	Capital owned after

[93] http://www.simcorp.com/en/about/about-simcorp/simcorp-partners

[94] 1) https://newsclient.omxgroup.com/cdsPublic/viewDisclosure.action?disclosureId=672647&lang=da
2) https://newsclient.omxgroup.com/cdsPublic/viewDisclosure.action?disclosureId=645361&lang=da
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					up on one trading day	value of	
1	6	August 25th, 2015	February 26th, 2016	750,000	25%	EUR 15.0m	Started
2	6	February 23rd, 2015	August 14th, 2015	500,000	25%	EUR 10.0m	2,78 %
3	6	September 2nd, 2014	February 13th, 2015	500,000	25%	EUR 10.0m	2,47 %
4	6	February 26th, 2014	August 22nd, 2014	400,000	25%	EUR 10.0m	5,93%
5	6	August 28th, 2013	February 24th, 2014	1,000,000	25%	EUR 20.0m	5.33%
6	6	February 28th, 2013	August 26th, 2013	1,800,000	25%	EUR 25.0m	3.65%
7	6	September 12th, 2012	February 26th, 2013	1,000,000	25%	EUR 10.0m	5.76%
8	3	May 29th, 2012	August 27th, 2012	1,000,000	25%	EUR 5.0m	5.73%

Appendix 9: SWOT analysis:

Strengths of SimCorp:

- Unique product
- Market leader in certain regions
- High degree of specialization
- Large advantage compared to old legacy systems
- Large potential for growth in identified growth markets
- Specialized employees are strategic asset
- SimCorp Dimension builds on combination of unique capabilities and financial knowhow
- Capable of attracting and maintaining highly qualified workforce

Weaknesses of SimCorp:

- Low product diversification
- Large dependency of success of growth markets
- Success on North American market dependent on replacing old Legacy systems
- High dependency of employee knowhow and loyalty

Opportunities for SimCorp:

- World economy showing positive signs of growth
- Low competition from companies with substitutive products
- Costly for asset managers to replace their IT system, which places SimCorp in a strong position due to its large market share
- Financial sector invests in IT again post-crisis
- Existing clients make strong foundation for license revenue
- Large increase in amount of political regulation brings potential replacement of old Legacy systems

Threats for SimCorp:

- Not enough qualified workforce accessible with right IT competences
- Sensitivity in regards to conjuncture
- Large players on growth markets sit heavy on client base
- Revenue streams associated with FX risk due to revenue in diverse FX
- Competitors headhunt SimCorps employees to “buy” strategic actives and competitive advantages

Appendix 10: Formulas of key ratios calculated in table 3

Table 9: Formulas of key ratios

Key ratios	Formulas
Return in Invested Capital (ROIC)	= Net Operating Profit After Tax (NOPAT) / Invested Capital
Asset Turnover	= Revenue / Invested Capital

Ratio (ATR)	
Profit Margin (PM)	= Net Operating Profit After Tax (NOPAT) / Revenue
Net Borrowing Cost (NBC)	= Net financial cost after tax (NFE) / Net interesting-bearing debt (NIBD)
Return On Equity (ROE)	= ROIC + (ROIC - NBC) x (NIBD / BVE))

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 11: Key ratios for SimCorp (2009-2015)

Table 10: Key ratios for SimCorp (2009-2015)

PROFITABILITY ANALYSIS (EUR '000)	2009	2010	2011	2012	2013	2014	2015
Return on Invested Capital (ROIC)	94%	84%	100%	134%	164%	121%	120%
Asset Turnover Ratio (ATR)	6.0	5.5	5.8	8.2	9.7	6.9	5.9
Profit Margin (PM)	15.8%	15.2%	17.4%	16.4%	16.8%	17.6%	20.1%
Return on Equity (ROE)	45%	37%	41%	47%	51%	48%	62%

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 12: Classification of the income statement

Table 11: Classification of the income statement

Classification	INCOME STATEMENT (EUR '000)	2008	2009	2010	2011	2012	2013	2014	2015
Operating item	Revenue	174,737	180,375	185,375	194,815	209,190	225,129	241,069	277,927
Operating item	Cost of Sales	-65,421	-63,939	-69,580	-66,830	-76,575	-80,883	-89,327	-100,086
	Gross Profit	**109,316**	**116,436**	**115,795**	**127,985**	**132,615**	**144,246**	**151,742**	**177,841**
Operating item	Other operating income	225	66	93	196	203	52	176	492
Operating item	Research and development costs	-42,966	-44,390	-45,459	-44,194	-45,599	-49,548	-50,803	-53,917
Operating item	Sales and distribution costs	-16,779	-20,647	-23,390	-24,492	-27,344	-26,980	-27,453	-35,337
Operating item	Administrative expenses	-11,361	-11,761	-11,790	-13,145	-12,958	-13,534	-16,399	-18,041
Operating item	Other operating expenses	-33	-34	-50	-10	-2	-	-	-
	Operating Profit (EBIT)	**38,435**	**39,704**	**35,249**	**46,350**	**46,917**	**54,236**	**57,263**	**71,038**
Operating item	Share of profit after tax in associates	36	177	48	107	141	-111	50	126
Financing item	Financial income	6,968	3,134	1,983	2,610	2,006	2,375	1,819	1,796
Financing item	Financial expenses	-2,880	-3,300	-3,993	-1,884	-2,066	-2,494	-1,616	-3,860
	Profit before tax	**42,559**	**39,715**	**33,287**	**47,183**	**46,998**	**54,006**	**57,516**	**69,100**
Operating/Financing item	Tax on the profit for the year	-11,046	-12,952	-8,847	-13,217	-12,522	-14,670	-15,933	-16,516
	Profit before tax	**31,513**	**26,763**	**24,440**	**33,966**	**34,476**	**39,336**	**41,583**	**52,584**
Operating item	Result, discontinued operations	-442	260	-	-	-	-	-	-
	Tax of discontinued operations	91	-64	-	-	-	-	-	-
	Profit for the year	**31,162**	**26,959**	**24,440**	**33,966**	**34,476**	**39,336**	**41,583**	**52,584**
	Effective tax rate	*-26%*	*-32.60%*	*-26.60%*	*-28%*	*-26.60%*	*-27.20%*	*-27.70%*	*-23.90%*

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 13: Restatement of the income statement

Table 12: Restatement of the income statement

ANALYTICAL INCOME STATEMENT (EUR '000)	2008	2009	2010	2011	2012	2013	2014	2015
Revenue	174,737	180,375	185,375	194,815	209,190	225,129	241,069	277,927
Cost of Sales	-64,573	-62,942	-68,365	-65,758	-75,687	-80,214	-88,689	-99,393
Gross Profit	**110,164**	**117,433**	**117,010**	**129,057**	**133,503**	**144,915**	**152,380**	**178,534**
Other operating income	225	66	93	196	203	52	176	492
Research and development costs	-41,448	-41,779	-42,993	-42,246	-43,836	-48,218	-49,269	-52,378
Sales and distribution costs	-16,592	-20,327	-22,975	-24,064	-26,962	-26,702	-27,062	-34,880
Administrative expenses	-10,570	-11,212	-11,163	-12,534	-12,256	-12,960	-15,844	-17,541
Other operating expenses	-33	-34	-50	-10	-2	-	-	-
Share of profit in associates	45	235	61	137	179	-141	64	156
Other comprehensive income (Dirty Surplus)	-6,226	2,073	3,073	548	-232	-2,000	1,223	2,275
Result, discontinued operations	-442	260	-	-	-	-	-	-
Earnings before interest, tax, depreciation and amortization (EBITDA)	**35,124**	**46,714**	**43,055**	**51,084**	**50,597**	**54,946**	**61,668**	**76,658**
Amortization and depreciation, cost of sales	-848	-997	-1,215	-1,072	-888	-669	-638	-693
Amortization and depreciation, research and development costs	-1,518	-2,611	-2,466	-1,948	-1,763	-1,330	-1,534	-1,539
Amortization and depreciation, sales and distribution costs	-187	-320	-415	-428	-382	-278	-391	-457
Amortization and depreciation, administrative expenses	-791	-549	-627	-611	-702	-574	-555	-500
Total amortization and depreciation	-3,344	-4,477	-4,723	-4,059	-3,735	-2,851	-3,118	-3,189
Operating Profit (EBIT)	**31,780**	**42,237**	**38,332**	**47,025**	**46,862**	**52,095**	**58,550**	**73,469**
Tax of operating activities	-8263	-13769	-10196	-13167	-12465	-14170	-16218	-17559
Net Operating Profit After Tax (NOPAT)	**23,517**	**28,468**	**28,136**	**33,858**	**34,397**	**37,925**	**42,332**	**55,910**
Financial income	6,968	3,134	1,983	2,610	2,006	2,375	1,819	1,796
Financial expenses	-2,880	-3,300	-3,993	-1,884	-2,066	-2,494	-1,616	-3,860
Net financial cost	**4,088**	**-166**	**-2,010**	**726**	**-60**	**-119**	**203**	**-2,064**
Tax of financial activitites	-1063	54	535	-203	16	32	-56	493
Net financial cost after tax	**3,025**	**-112**	**-1,475**	**523**	**-44**	**-87**	**147**	**-1,571**
PROFIT FOR THE YEAR	**26,542**	**28,356**	**26,661**	**34,381**	**34,353**	**37,839**	**42,479**	**54,339**

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 14: Classification of the balance sheet

Table 13: Classification of the balance sheet

Classification	BALANCE SHEET (EUR '000)	2008	2009	2010	2011	2012	2013	2014	2015
	ASSETS								
	Non-Current Assets								
	Ingantible assets								
Operating item	Goodwill	688	768	796	908	875	792	4,331	4,579
Operating item	Software	3,770	2,323	1,222	1,054	623	386	3,920	3,749
Operating item	Client contracts	-	-	-	-	-	-	3,426	3,442
	Total intangible assets	**4,458**	**3,091**	**2,018**	**1,962**	**1,498**	**1,178**	**11,677**	**11,770**
	Property, plant and equipment								
Operating item	Leasehold improvements	4,982	4,382	3,867	3,275	2,717	2,224	1,721	1,700
Operating item	Technical equipment	1,959	1,493	2,384	2,882	1,660	2,431	2,722	2,383
Operating item	Other equipment, fixtures , fittings and prepayments	3,957	3,466	2,528	1,656	836	184	192	250
	Total property, plant and equipment	**10,898**	**9,341**	**8,779**	**7,813**	**5,213**	**4,839**	**4,635**	**4,333**
	Other non-current assets								
Operating item	Investments in subsidiaries	-	-	-	-	-	-	-	-
Operating item	Investments in associates	372	1,069	1,120	1,214	1,364	1,221	338	628
Operating item	Receivables in subsidiaries	-	-	-	-	-	-	-	-
Operating item	Receivables in associates	362	150	158	60	-	-	-	-
Financing item	Deposits	1,718	1,910	1,969	2,062	2,095	2,111	1,873	2,102
Operating item	Deferred tax	5,417	4,488	5,163	3,897	5,680	6,219	6,984	9,078
	Total other non-current assets	**7,869**	**7,617**	**8,410**	**7,233**	**9,139**	**9,551**	**9,195**	**11,808**
	Total non-current assets	**23,225**	**20,049**	**19,207**	**17,008**	**15,850**	**15,568**	**25,507**	**27,911**
	Current assets								
Operating item	Receivables	43,614	41,980	44,105	47,826	46,124	49,336	57,994	68,144
Operating item	Receivables in associates	-	-	-	-	-	422	-	-
Operating item	Income tax receivable	-	6,755	3,057	3,326	1,335	1,223	1,667	4,276
Operating item	Prepayments	4,161	3,301	3,953	3,169	3,585	3,814	4,644	5,854
Financing item	Cash and cash equivalents	25,463	44,305	42,689	48,149	58,897	47,106	37,995	43,344
	Total current assets	**73,238**	**96,341**	**93,804**	**102,470**	**109,941**	**101,901**	**102,300**	**121,618**
	Total assets	**96,463**	**116,390**	**113,011**	**119,478**	**125,791**	**117,469**	**127,807**	**149,529**

Classification	BALANCE SHEET (EUR '000)	2008	2009	2010	2011	2012	2013	2014	2015
	LIABILITIES AND EQUITY								
	Equity								
Financing item	Share capital	6,616	6,179	6,179	6,179	6,045	5,844	5,575	5,575
Financing item	Exchange adjustment reserve	-5,580	-3,854	-1,427	-999	-1,182	-2,394	-1,055	1,011
Financing item	Retained earnings	43,552	55,117	54,853	60,431	61,036	45,942	44,208	54,825
Financing item	Proposed dividend	18,111	18,212	17,915	17,573	19,965	22,174	24,652	28,409
	Total equity	**62,699**	**75,654**	**77,520**	**83,184**	**85,864**	**71,566**	**73,380**	**89,820**
	Liabilities								
	Non-current liabilities								
Operating item	Deferred tax	1,941	931	-	412	408	213	513	973
Operating item	Provisions	1,373	1,589	2,257	2,563	2,904	3,177	4,179	4,687
Financing item	Employee bonds	-	726	756	758	749	-	-	-
Financing item	Other debt	-	-	-	-	-	-	1,480	2,343
	Total non-current liabilities	**3,314**	**3,246**	**3,013**	**3,733**	**4,061**	**3,390**	**6,172**	**8,003**
	Current liabilities								
Operating item	Prepayments from clients	1,618	2,195	3,216	2,296	3,901	5,490	9,084	7,678
Operating item	Trade payables and other payables	25,826	26,044	23,682	27,653	29,155	33,498	35,539	42,215
Operating item	Income tax	2,990	9,229	5,452	2,415	2,715	2,640	3,424	1,810
Operating item	Provisions	16	22	128	197	95	140	208	3
Financing item	Employee bonds	-	-	-	-	-	745	-	-
	Total current liabilities	**30,450**	**37,490**	**32,478**	**32,561**	**35,866**	**42,513**	**48,255**	**51,706**
	Total liabilities	**33,764**	**40,736**	**35,491**	**36,294**	**39,927**	**45,903**	**54,427**	**59,709**
	TOTAL LIABILITIES AND EQUITIES	**96,463**	**116,390**	**113,011**	**119,478**	**125,791**	**117,469**	**127,807**	**149,529**

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 15: Restatement of the balance sheet

Table 14: Restatement of the balance sheet

INVESTED CAPITAL (EUR '000)	2008	2009	2010	2011	2012	2013	2014	2015
OPERATING ACTIVITIES								
Non-current operating activitities								
Goodwill	688	768	796	908	875	792	4,331	4,579
Software	3,770	2,323	1,222	1,054	623	386	3,920	3,749
Client contracts (NEW)	-	-	-	-	-	-	3,426	3,442
Leasehold improvements	4,982	4,382	3,867	3,275	2,717	2,224	1,721	1,700
Technical equipment	1,959	1,493	2,384	2,882	1,660	2,431	2,722	2,383
Other equipment, fixtures , fittings and prepayments	3,957	3,466	2,528	1,656	836	184	192	250
Investments in subsidiaries	-	-	-	-	-	-	-	-
Investments in associates	372	1,069	1,120	1,214	1,364	1,221	338	628
Receivables in subsidiaries	-	-	-	-	-	-	-	-
Receivables in associates	362	150	158	60	-	-	-	-
Deferred tax	5,417	4,488	5,163	3,897	5,680	6,219	6,984	9,078
Current operating activitities								
Receivables	43,614	41,980	44,105	47,826	46,124	49,336	57,994	68,144
Receivables in associates	-	-	-	-	-	422	-	-
Income tax receivable	-	6,755	3,057	3,326	1,335	1,223	1,667	4,276
Prepayments	4,161	3,301	3,953	3,169	3,585	3,814	4,644	5,854
Total operating activities	**69,282**	**70,175**	**68,353**	**69,267**	**64,799**	**68,252**	**87,939**	**104,083**
OPERATING LIABILITIES								
Non-current operating liabilities								
Deferred tax	1,941	931	-	412	408	213	513	973
Provisions	1,373	1,589	2,257	2,563	2,904	3,177	4,179	4,687
Current operating liabilities								
Prepayments from clients	1,618	2,195	3,216	2,296	3,901	5,490	9,084	7,678
Trade payables and other payables	25,826	26,044	23,682	27,653	29,155	33,498	35,539	42,215
Income tax	2,990	9,229	5,452	2,415	2,715	2,640	3,424	1,810
Provisions	16	22	128	197	95	140	208	3
Total operating liabilities	**33,764**	**40,010**	**34,735**	**35,536**	**39,178**	**45,158**	**52,947**	**57,366**
TOTAL OPERATING ACTIVITIES	**35,518**	**30,165**	**33,618**	**33,731**	**25,621**	**23,094**	**34,992**	**46,717**
EQUITY								
Equity								
Share capital	6,616	6,179	6,179	6,179	6,045	5,844	5,575	5,575
Exchange adjustment reserve	-5,580	-3,854	-1,427	-999	-1,182	-2,394	-1,055	1,011
Retained earnings	43,552	55,117	54,853	60,431	61,036	45,942	44,208	54,825
Proposed dividend	18,111	18,212	17,915	17,573	19,965	22,174	24,652	28,409
Total equity	**62,699**	**75,654**	**77,520**	**83,184**	**85,864**	**71,566**	**73,380**	**89,820**
FINANCIAL OBLIGATIONS								
Long-term financing								
Employee bonds	-	726	756	758	749	-	-	-
Other debt	-	-	-	-	-	-	1,480	2,343
Short-term financing								
Employee bonds	-	-	-	-	-	745	-	-
Total financial obligations	**0**	**726**	**756**	**758**	**749**	**745**	**1,480**	**2,343**
ASSETS								
Long-term financial assets								
Deposits	1,718	1,910	1,969	2,062	2,095	2,111	1,873	2,102
Short-term financial assets								
Cash and cash equivalents	25,463	44,305	42,689	48,149	58,897	47,106	37,995	43,344
Total financial assets	**27,181**	**46,215**	**44,658**	**50,211**	**60,992**	**49,217**	**39,868**	**45,446**
Net interest-bearing debt	**-27,181**	**-45,489**	**-43,902**	**-49,453**	**-60,243**	**-48,472**	**-38,388**	**-43,103**
Net financial liabilities + Total equity	**35,518**	**30,165**	**33,618**	**33,731**	**25,621**	**23,094**	**34,992**	**46,717**

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 16: Profitability Analysis

Table 15: Profitability Analysis

PROFITABILITY ANALYSIS (EUR '000)	2008	2009	2010	2011	2012	2013	2014	2015	Average
Net Operating Profit After Tax (NOPAT)	23,517	28,468	28,136	33,858	34,397	37,925	42,332	55,910	35,568
Invested capital	35,518	30,165	33,618	33,731	25,621	23,094	34,992	46,717	32,932
Return in Invested Capital (ROIC)	**66%**	**94%**	**84%**	**100%**	**134%**	**164%**	**121%**	**120%**	**110.47%**
Revenue	174,737	180,375	185,375	194,815	209,190	225,129	241,069	277,927	211,077
Invested capital	35,518	30,165	33,618	33,731	25,621	23,094	34,992	46,717	32,932
Asset Turnover Ratio (ATR)	**4.9**	**6.0**	**5.5**	**5.8**	**8.2**	**9.7**	**6.9**	**5.9**	**6.62**
Net Operating Profit After Tax (NOPAT)	23,517	28,468	28,136	33,858	34,397	37,925	42,332	55,910	35,568
Revenue	174,737	180,375	185,375	194,815	209,190	225,129	241,069	277,927	211,077
Proft Margin (PM)	**13.5%**	**15.8%**	**15.2%**	**17.4%**	**16.4%**	**16.8%**	**17.6%**	**20.1%**	**17%**
Controle									
PM x ATR (ROIC decomposed)	66%	94%	84%	100%	134%	164%	121%	120%	**110%**
Return on Invested Capital (ROIC)	66%	94%	84%	100%	134%	164%	121%	120%	**110%**
Difference	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**
Net financial cost after tax (NFE)	3,025	-112	-1,475	523	-44	-87	147	-1,571	**51**
Net interest-bearing debt (NIBD)	-27,181	-45,489	-43,902	-49,453	-60,243	-48,472	-38,388	-43,103	**-44,529**
Average Net interesting-bearing debt (Av. NIBD)		-36,335	-44,696	-46,678	-54,848	-54,358	-43,430	-40,746	**-40,136**
Net Borrowing Cost (NBC)		**0.31%**	**3.30%**	**-1.12%**	**0.08%**	**0.16%**	**-0.34%**	**3.85%**	**0.78%**
									0
Spead		94%	80%	101%	134%	164%	121%	116%	**1**
Book Value of Equity (BVE)	62,699	75,654	77,520	83,184	85,864	71,566	73,380	89,820	**77,461**
Av. Book Value of Equity (Av. BVE)		69,177	76,587	80,352	84,524	78,715	72,473	81,600	**67,928**
Return on Equity (ROE)		**45%**	**37%**	**41%**	**47%**	**51%**	**48%**	**62%**	**41.42%**

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 17: Trend analysis of restated income statement

Table 16: Trend analysis of restated income statement

TREND ANALYSIS, INCOME STATEMENT (EUR '000)	2008	2009	2010	2011	2012	2013	2014	2015
Revenue	100	103	106	111	120	129	138	159
Cost of Sales	100	97	106	102	117	124	137	154
Gross Profit	**100**	**107**	**106**	**117**	**121**	**132**	**138**	**162**
Other operating income	100	29	41	87	90	23	78	219
Research and development costs	100	101	104	102	106	116	119	126
Sales and distribution costs	100	123	138	145	163	161	163	210
Administrative expenses	100	106	106	119	116	123	150	166
Other operating expenses								
Share of profit in associates	100	517	134	302	394	-311	141	344
Other comprehensive income (Dirty Surplus)	100	-33	-49	-9	4	32	-20	-37
Result, discontinued operations								
Earnings before interest, tax, depreciation and amortization (EBITDA)	**100**	**133**	**123**	**145**	**144**	**156**	**176**	**218**
Amortization and depreciation, cost of sales	100	118	143	126	105	79	75	82
Amortization and depreciation, research and development costs	100	172	162	128	116	88	101	101
Amortization and depreciation, sales and distribution costs	100	171	222	229	204	149	209	244
Amortization and depreciation, administrative expenses	100	69	79	77	89	73	70	63
Total amortization and depreciation	100	134	141	121	112	85	93	95
Operating Profit (EBIT)	**100**	**133**	**121**	**148**	**147**	**164**	**184**	**231**
Tax of operating activities	100	167	123	159	151	171	196	213
Net Operating Profit After Tax (NOPAT)	**100**	**121**	**120**	**144**	**146**	**161**	**180**	**238**
Financial income	100	45	28	37	29	34	26	26
Financial expenses	100	115	139	65	72	87	56	134
Net financial cost	**100**	**-4**	**-49**	**18**	**-1**	**-3**	**5**	**-50**
Tax of financial activitites	100	-5	-50	19	-2	-3	5	-46
Net financial cost after tax	**100**	**-4**	**-49**	**17**	**-1**	**-3**	**5**	**-52**
PROFIT FOR THE YEAR	**100**	**107**	**100**	**130**	**129**	**143**	**160**	**205**

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 18: Trend analysis of invested capital

Table 17: Trend analysis of invested capital

TREND ANALYSIS, INVESTED CAPITAL (EUR '000)	2008	2009	2010	2011	2012	2013	2014	2015
OPERATING ACTIVITIES								
Non-current operating activitities								
Goodwill	100	112	116	132	127	115	630	666
Software	100	62	32	28	17	10	104	99
Client contracts (NEW)	-	-	-	-	-	-	-	-
Leasehold improvements	100	88	78	66	55	45	35	34
Technical equipment	100	76	122	147	85	124	139	122
Other equipment, fixtures , fittings and prepayments	100	88	64	42	21	5	5	6
Investments in subsidiaries	-	-	-	-	-	-	-	-
Investments in associates	100	287	301	326	367	328	91	169
Receivables in subsidiaries	-	-	-	-	-	-	-	-
Receivables in associates	100	41	44	17	0	0	0	0
Deferred tax	100	83	95	72	105	115	129	168
Current operating activitities								
Receivables	100	96	101	110	106	113	133	156
Receivables in associates	-	-	-	-	-	-	-	-
Income tax receivable	-	-	-	-	-	-	-	-
Prepayments	100	79	95	76	86	92	112	141
Total operating activities	100	101	99	100	94	99	127	150
OPERATING LIABILITIES								
Non-current operating activitities								
Deferred tax	100	48	0	21	21	11	26	50
Provisions	100	116	164	187	212	231	304	341
Current operating activitities								
Prepayments from clients	100	136	199	142	241	339	561	475
Trade payables and other payables	100	101	92	107	113	130	138	163
Income tax	100	309	182	81	91	88	115	61
Provisions	100	138	800	1231	594	875	1300	19
Total operating liabilities	**100**	**118**	**103**	**105**	**116**	**134**	**157**	**170**
TOTAL OPERATING ACTIVITIES	**100**	**85**	**95**	**95**	**72**	**65**	**99**	**132**
EQUITY								
Equity								
Share capital	100	93	93	93	91	88	84	84
Exchange adjustment reserve	100	69	26	18	21	43	19	-18
Retained earnings	100	127	126	139	140	105	102	126
Proposed dividend	100	101	99	97	110	122	136	157
Total equity	**100**	**121**	**124**	**133**	**137**	**114**	**117**	**143**
FINANCIAL OBLIGATIONS								
Long-term financing								
Employee bonds	-	-	-	-	-	-	-	-
Other debt	-	-	-	-	-	-	-	-
Short-term financing								
Employee bonds	-	-	-	-	-	-	-	-
Total financial obligations								
ASSETS								
Long-term financial assets								
Deposits	100	111	115	120	122	123	109	122
Short-term financial assets								
Cash and cash equivalents	100	174	168	189	231	185	149	170
Total financial assets	**100**	**170**	**164**	**185**	**224**	**181**	**147**	**167**
Net interest-bearing debt	**100**	**167**	**162**	**182**	**222**	**178**	**141**	**159**
Net financial liabilities + Total equity	**100**	**85**	**95**	**95**	**72**	**65**	**99**	**132**

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 19: Common-size analysis of restated income statement

Table 18: Common-size analysis of restated income statement

COMMON-SIZE, INCOME STATEMENT (EUR '000)	2008	2009	2010	2011	2012	2013	2014	2015
Revenue	100%	100%	100%	100%	100%	100%	100%	100%
Cost of Sales	-37%	-35%	-37%	-34%	-36%	-36%	-37%	-36%
Gross Profit	**63%**	**65%**	**63%**	**66%**	**64%**	**64%**	**63%**	**64%**
Other operating income	0%	0%	0%	0%	0%	0%	0%	0%
Research and development costs	-24%	-23%	-23%	-22%	-21%	-21%	-20%	-19%
Sales and distribution costs	-9%	-11%	-12%	-12%	-13%	-12%	-11%	-13%
Administrative expenses	-6%	-6%	-6%	-6%	-6%	-6%	-7%	-6%
Other operating expenses	0%	0%	0%	0%	0%	0%	0%	0%
Share of profit in associates	0%	0%	0%	0%	0%	0%	0%	0%
Other comprehensive income (Dirty Surplus)	-4%	1%	2%	0%	0%	-1%	1%	1%
Result, discontinued operations	0%	0%	0%	0%	0%	0%	0%	0%
Earnings before interest, tax, depreciation and amortization (EBITDA)	**20%**	**26%**	**23%**	**26%**	**24%**	**24%**	**26%**	**28%**
Amortization and depreciation, cost of sales	0%	-1%	-1%	-1%	0%	0%	0%	0%
Amortization and depreciation, research and development costs	-1%	-1%	-1%	-1%	-1%	-1%	-1%	-1%
Amortization and depreciation, sales and distribution costs	0%	0%	0%	0%	0%	0%	0%	0%
Amortization and depreciation, administrative expenses	0%	0%	0%	0%	0%	0%	0%	0%
Total amortization and depreciation	-2%	-2%	-3%	-2%	-2%	-1%	-1%	-1%
Operating Profit (EBIT)	**18%**	**23%**	**21%**	**24%**	**22%**	**23%**	**24%**	**26%**
Tax of operating activities	-5%	-8%	-6%	-7%	-6%	-6%	-7%	-6%
Net Operating Profit After Tax (NOPAT)	**13%**	**16%**	**15%**	**17%**	**16%**	**17%**	**18%**	**20%**
Financial income	4%	2%	1%	1%	1%	1%	1%	1%
Financial expenses	-2%	-2%	-2%	-1%	-1%	-1%	-1%	-1%
Net financial cost	**2%**	**0%**	**-1%**	**0%**	**0%**	**0%**	**0%**	**-1%**
Tax of financial activitites	-1%	0%	0%	0%	0%	0%	0%	0%
Net financial cost after tax	**2%**	**0%**	**-1%**	**0%**	**0%**	**0%**	**0%**	**-1%**
PROFIT FOR THE YEAR	**15%**	**16%**	**14%**	**18%**	**16%**	**17%**	**18%**	**20%**

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 20: Common-size analysis of balance sheet

Table 19: Common-size analysis of balance sheet

COMMON-SIZE ANALYSIS, BALANCE SHEET (EUR '000)	2008	2009	2010	2011	2012	2013	2014	2015
OPERATING ACTIVITIES								
Non-current operating activitities								
Goodwill	0%	0%	0%	0%	0%	0%	2%	2%
Software	2%	1%	1%	1%	0%	0%	2%	1%
Client contracts (NEW)	0%	0%	0%	0%	0%	0%	1%	1%
Leasehold improvements	3%	2%	2%	2%	1%	1%	1%	1%
Technical equipment	1%	1%	1%	1%	1%	1%	1%	1%
Other equipment, fixtures , fittings and prepayments	2%	2%	1%	1%	0%	0%	0%	0%
Investments in subsidiaries	0%	0%	0%	0%	0%	0%	0%	0%
Investments in associates	0%	1%	1%	1%	1%	1%	0%	0%
Receivables in subsidiaries	0%	0%	0%	0%	0%	0%	0%	0%
Receivables in associates	0%	0%	0%	0%	0%	0%	0%	0%
Deferred tax	3%	2%	3%	2%	3%	3%	3%	3%
Current operating activitities	0%	0%	0%	0%	0%	0%	0%	0%
Receivables	25%	23%	24%	25%	22%	22%	24%	25%
Receivables in associates	0%	0%	0%	0%	0%	0%	0%	0%
Income tax receivable	0%	4%	2%	2%	1%	1%	1%	2%
Prepayments	2%	2%	2%	2%	2%	2%	2%	2%
Total operating activities	**40%**	**39%**	**37%**	**36%**	**31%**	**30%**	**36%**	**37%**
OPERATING LIABILITIES								
Non-current operating activitities								
Deferred tax	1%	1%	0%	0%	0%	0%	0%	0%
Provisions	1%	1%	1%	1%	1%	1%	2%	2%
Current operating activitities	0%	0%	0%	0%	0%	0%	0%	0%
Prepayments from clients	1%	1%	2%	1%	2%	2%	4%	3%
Trade payables and other payables	15%	14%	13%	14%	14%	15%	15%	15%
Income tax	2%	5%	3%	1%	1%	1%	1%	1%
Provisions	0%	0%	0%	0%	0%	0%	0%	0%
Total operating liabilities	**19%**	**22%**	**19%**	**18%**	**19%**	**20%**	**22%**	**21%**
TOTAL OPERATING ACTIVITIES	**20%**	**17%**	**18%**	**17%**	**12%**	**10%**	**15%**	**17%**

INVESTED CAPITAL (EUR '000)	2008	2009	2010	2011	2012	2013	2014	2015
EQUITY								
Equity								
Share capital	4%	3%	3%	3%	3%	3%	2%	2%
Exchange adjustment reserve	-3%	-2%	-1%	-1%	-1%	-1%	0%	0%
Retained earnings	25%	31%	30%	31%	29%	20%	18%	20%
Proposed dividend	10%	10%	10%	9%	10%	10%	10%	10%
Total equity	**36%**	**42%**	**42%**	**43%**	**41%**	**32%**	**30%**	**32%**
FINANCIAL OBLIGATIONS								
Long-term financing								
Employee bonds	0%	0%	0%	0%	0%	0%	0%	0%
Other debt	0%	0%	0%	0%	0%	0%	1%	1%
Short-term financing								
Employee bonds	0%	0%	0%	0%	0%	0%	0%	0%
Total financial obligations	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**1%**	**1%**
		0	0	0	0	0	0	0
ASSETS								
Long-term financial assets								
Deposits	**1%**	**1%**	**1%**	**1%**	**1%**	**1%**	**1%**	**1%**
Short-term financial assets								
Cash and cash equivalents	**15%**	**25%**	**23%**	**25%**	**28%**	**21%**	**16%**	**16%**
Total financial assets	**16%**	**26%**	**24%**	**26%**	**29%**	**22%**	**17%**	**16%**
Net interest-bearing debt	**-16%**	**-25%**	**-24%**	**-25%**	**-29%**	**-22%**	**-16%**	**-16%**
Net financial liabilities + Total equity	**20%**	**17%**	**18%**	**17%**	**12%**	**10%**	**15%**	**17%**

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 21: Breakdown of revenue

Table 20: Breakdown of revenue

Revenue per type (EUR '000)	2008	2009	2010	2011	2012	2013	2014	2015
Licenses - new sales	*23.968*	*13.192*	*14.250*	*13.690*	*14.842*	*12.255*	*15.800*	*32.600*
Licenses - additional sales	*35.951*	*35.660*	*34.890*	*33.510*	*27.560*	*30.000*	*31.900*	*32.300*
Licenses - total	59.919	48.858	49.149	47.200	42.405	42.319	47.700	64.900
Professional services	55.593	61.694	55.300	57.000	66.060	76.309	79.800	85.000
Maintenance	56.114	65.146	77.739	88.581	98.149	104.221	110.400	122.300
Training activities etc.	3.111	4.677	3.176	2.020	2.567	2.251	3.200	5.700
ASP services	-	-	-	-	-	-	-	-
Total revenue	**174.737**	**180.375**	**185.364**	**194.801**	**209.181**	**225.100**	**241.100**	**277.900**

Realized share of revenue	2008	2009	2010	2011	2012	2013	2014	2015
Licenses - new sales	*14%*	*7%*	*8%*	*7%*	*7%*	*5%*	*7%*	*12%*
Licenses - additional sales	*21%*	*20%*	*19%*	*17%*	*13%*	*13%*	*13%*	*12%*
Licenses - total	34%	27%	27%	24%	20%	19%	20%	23%
Professional services	32%	34%	30%	29%	32%	34%	33%	31%
Maintenance	32%	36%	42%	45%	47%	46%	46%	44%
Training activities etc.	2%	3%	2%	1%	1%	1%	1%	2%
Total revenue	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 22: YoY Growth of realized share of revenue

Table 21: YoY Growth of realized share of revenue

Y-o-Y Growth of realized share of revenue	2008	2009	2010	2011	2012	2013	2014	2015
Licenses - total	-	-18%	1%	-4%	-10%	0%	13%	36%
Professional services	-	11%	-10%	3%	16%	16%	5%	7%
Maintenance	-	16%	19%	14%	11%	6%	6%	11%
Training activities etc.	-	50%	-32%	-36%	27%	-12%	42%	78%

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 23: Estimated share of revenue one year prior

Table 22: Estimated share of revenue one year prior

Estimated share of revenue one year prior	2008	2009	2010	2011	2012	2013	2014	2015
Licenses - total	-	30%	25–30%	25–30%	20–30%	20–30%	20–30%	15%–20%
Professional services	-	30%	30-35%	25–30%	30–35%	30–35%	30–35%	30%–40%
Maintenance	-	35%	35-45%	45%	45%	45%	45%	45%
Training activities etc.	-	-	-	-	-	1–2%	1–2%	5%

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 24: Growth analysis

Table 23: Growth analysis

GROWTH ANALYSIS (EUR '000)	2008	2009	2010	2011	2012	2013	2014	2015
Revenue		3.23%	2.77%	5.09%	7.38%	7.62%	7.08%	15.29%
Cost of Sales		-2.53%	8.62%	-3.81%	15.10%	5.98%	10.57%	12.07%
EBIT		32.91%	-9.25%	22.68%	-0.35%	11.17%	12.39%	25.48%
Invested capital		-15.07%	11.45%	0.34%	-24.04%	-9.86%	51.52%	33.51%

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 25: Self-financed growth

Table 24: Self-financed growth

ORGANIC GROWTH (EUR '000)	2008	2009	2010	2011	2012	2013	2014	2015
ROIC		94%	84%	100%	134%	164%	121%	120%
NBC		0.31%	3.30%	-1.12%	0.08%	0.16%	-0.34%	3.85%
Average Net interesting-bearing debt (Av. NIBD)		-36,335	-44,696	-46,678	-54,848	-54,358	-43,430	-40,746
Av. Book Value of Equity (Av. BVE)		69,177	76,587	80,352	84,524	78,715	72,473	81,600
Payout ratio (PO)		68%	73%	54%	58%	59%	59%	55.50%
Self financed growth		**15%**	**12%**	**23%**	**19%**	**24%**	**27%**	**24%**

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 26: Risk analysis: Short-term liquidity risk

Table 25: Risk analysis: Short-term liquidity risk

SHORT-TERM LIQUIDITY RISK								
LIQUIDITY CYCLE	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Revenue	174,737	180,375	185,375	194,815	209,190	225,129	241,069	277,927
OPERATING ACTIVITIES								
Investments in subsidiaries	-	-	-	-	-	-	-	-
Investments in associates	372	1,069	1,120	1,214	1,364	1,221	338	628
Receivables in subsidiaries	-	-	-	-	-	-	-	-
Receivables in associates	362	150	158	60	-	-	-	-
Deferred tax	5,417	4,488	5,163	3,897	5,680	6,219	6,984	9,078
Receivables	43,614	41,980	44,105	47,826	46,124	49,336	57,994	68,144
Receivables in associates	-	-	-	-	-	422	-	-
Income tax receivable	-	6,755	3,057	3,326	1,335	1,223	1,667	4,276
Prepayments	4,161	3,301	3,953	3,169	3,585	3,814	4,644	5,854
OPERATING LIABILITIES								
Deferred tax	1,941	931	-	412	408	213	513	973
Provisions	1,373	1,589	2,257	2,563	2,904	3,177	4,179	4,687
Prepayments from clients	1,618	2,195	3,216	2,296	3,901	5,490	9,084	7,678
Trade payables and other payables	25,826	26,044	23,682	27,653	29,155	33,498	35,539	42,215
Income tax	2,990	9,229	5,452	2,415	2,715	2,640	3,424	1,810
Provisions	16	22	128	197	95	140	208	3
Net working capital	**20,162**	**17,733**	**22,821**	**23,956**	**18,910**	**17,077**	**18,680**	**30,614**
Liquidity cycle	**42**	**36**	**45**	**45**	**33**	**28**	**28**	**40**
CURRENT RATIO	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Total current assets	73,238	96,341	93,804	102,470	109,941	101,901	102,300	121,618
Total current liabilities	30,450	37,490	32,478	32,561	35,866	42,513	48,255	51,706
Current Ratio	**2.4**	**2.6**	**2.9**	**3.1**	**3.1**	**2.4**	**2.1**	**2.4**

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 27: Risk analysis: Long-term liquidity risk

Table 26: Risk analysis: Long-term liquidity risk

LONG-TERM LIQUIDITY RISK								
FINANCIAL GEARING	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Total liabilities	33,764	40,010	34,735	35,536	39,178	45,158	52,947	57,366
Equity	62,699	75,654	77,520	83,184	85,864	71,566	73,380	89,820
Financial Gearing, Book value	**54%**	**53%**	**45%**	**43%**	**46%**	**63%**	**72%**	**64%**
SOLVENCY RATIO	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Equity	62,699	75,654	77,520	83,184	85,864	71,566	73,380	89,820
Total assets	96,463	116,390	113,011	119,478	125,791	117,469	127,807	149,529
Solvency Ratio	**65%**	**65%**	**69%**	**70%**	**68%**	**61%**	**57%**	**60%**

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 28: Market unit – Revenue per region

Table 27: Market unit – Revenue per region

Market Units	**Countries included**	2014	2015
Central Europe	Germany, Austria, Switzerland	30%	27%
Nordics	Denmark, Sweden, Norway, Finland	23%	19%
Western Europe	Belgium, Netherlands, France, Luxemburg	15%	18%
North America	USA, Canada	16%	18%
UK	UK, Ireland	5%	8%
APAC	Australia, Singapore, Hong Kong	7%	6%
Other	-	4%	4%

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 29: SimCorp's budgeted FCFF (best case)

Table 28: SimCorp's budgeted FCFF (best case)

BUDGETTED INCOME STATEMENT (EUR '000)	2015	2016	2017	2018	2019	2020 terminal
Revenue	277,927	319,585	367,523	422,651	486,049	558,956
Cost of Sales	-99,393	-118,246	-135,983	-156,381	-179,838	-206,814
Gross Profit	**178,534**	**201,339**	**231,539**	**266,270**	**306,211**	**352,142**
R&D Cost	-52,378	-60,721	-69,829	-76,077	-87,489	-100,612
Sales and Distribution cost	-34,880	17,737	20,398	17,202	19,782	22,750
Administration cost	-17,541	-12,080	-13,892	-15,976	-18,373	-21,129
EBITDA	**76,658**	**146,274**	**168,215**	**191,419**	**220,132**	**253,151**
Depreciation	-3,189	-4,394	-5,053	-5,811	-6,683	-7,686
EBIT	**73,469**	**141,880**	**163,162**	**185,607**	**213,448**	**245,466**
Effective tax rate	-17,559	-35,470	-40,790	-46,402	-53,362	-61,366
NOPAT	**55,910**	**106,410**	**122,371**	**139,205**	**160,086**	**184,099**

BUDGETTED BALANCE SHEET (EUR '000)	2015	2016	2017	2018	2019	2020 terminal
Intangible assets	11,770	9,588	11,026	12,680	14,581	16,769
Tangible assets	4,333	7,990	9,188	10,566	12,151	13,974
Total assets	16,103	17,577	20,214	23,246	26,733	30,743
Net working capital	30,614	28763	36752	46492	58326	72664
Invested capital	46,717	33286	40352	48519	53801	63347

CASH FLOW STATEMENT (EUR '000)	2015	2016	2017	2018	2019	2020 terminal
EBIT	73,469	141,880	163,162	185,607	213,448	245,466
Tax	-17,559	-35,470	-40,790	-46,402	-53,362	-61,366
NOPAT	**55,910**	**106,410**	**122,371**	**139,205**	**160,086**	**184,099**
"+ Depreciation"	3,189	4,394	5,053	5,811	6,683	7,686
"- Difference in Net working capital"		1,851	-7,990	-9,739	-11,834	-14,338
"- Investments in total assets"		-17,577	-20,214	-23,246	-26,733	-30,743
"= Free Cash Flow (FCFF)		**95,078**	**99,221**	**112,032**	**128,203**	**146,704**

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 30: Estimation of SimCorp's share price (best case)

Table 29: Estimation of SimCorp's share price (best case)

Source: Authors own creation, Copenhagen Business School, June 2016

DCF MODEL - BEST CASE (EUR '000)	2015	2016	2017	2018	2019	2020 terminal	g
							2.50%
Free Cash Flow (FCFF)		95,078	99,221	112,032	128,203	146,704	
WACC		7.65%	7.65%	7.65%	7.65%	7.65%	
Present value factor		0.9289	0.8629	0.8016	0.7446		
Present value of FCFF		88,322	85,620	89,805	95,464		
Total present value of FCFF in budget period		359,211					
Total present value of FCFF in terminal period		2,121,183					
Estimated company value		2,480,393	EUR 1.000				
"- Net interest bearing debt"		-43,103	EUR 1.000				
Estimated market value of equity		2,523,496	EUR 1.000				
Exchange rate pr. 22nd February, 2016*		7.462	EUR/DKK				
Estimated value of equity		**18,830,330**	DKK 1.000				
Number of shares		41,500,000					
Estimated share price per February 22nd, 2016		**453.7**					

** European Central Bank (https://www.ecb.europa.eu/stats/exchange/eurofxref/html/eurofxref-graph-dkk.en.html)*

Appendix 31: SimCorp's budgeted FCFF (worst case)

Table 30: SimCorp's budgeted FCFF (worst case)

BUDGETTED INCOME STATEMENT (EUR '000)	2015	2016	2017	2018	2019	2020 terminal
Revenue	277,927	285,598	293,509	301,639	309,994	318,581
Cost of Sales	-99,393	-105,671	-108,598	-111,606	-114,698	-117,875
Gross Profit	**178,534**	**179,927**	**184,911**	**190,033**	**195,297**	**200,706**
R&D Cost	-52,378	-54,264	-55,767	-54,295	-55,799	-57,345
Sales and Distribution cost	-34,880	15,851	16,290	12,277	12,617	12,966
Administration cost	-17,541	-10,796	-11,095	-11,402	-11,718	-12,042
EBITDA	**76,658**	**130,718**	**134,339**	**136,612**	**140,397**	**144,285**
Depreciation	-3,189	-3,927	-4,036	-4,148	-4,262	-4,380
EBIT	**73,469**	**126,791**	**130,303**	**132,465**	**136,134**	**139,905**
Effective tax rate	-17,559	-31,698	-32,576	-33,116	-34,034	-34,976
NOPAT	**55,910**	**95,093**	**97,727**	**99,349**	**102,101**	**104,929**

BUDGETTED BALANCE SHEET (EUR '000)	2015	2016	2017	2018	2019	2020 terminal
Intangible assets	11,770	8,568	8,805	9,049	9,300	9,557
Tangible assets	4,333	7,140	7,338	7,541	7,750	7,965
Total assets	16,103	15,708	16,143	16,590	17,050	17,522
Net working capital	30,614	25704	29351	33180	37199	41416
Invested capital	46,717	33286	40352	48519	53801	63347

CASH FLOW STATEMENT (EUR '000)	2015	2016	2017	2018	2019	2020 terminal
EBIT	73,469	126,791	130,303	132,465	136,134	139,905
Tax	-17,559	-31,698	-32,576	-33,116	-34,034	-34,976
NOPAT	**55,910**	**95,093**	**97,727**	**99,349**	**102,101**	**104,929**
"+ Depreciation"	3,189	3,927	4,036	4,148	4,262	4,380
"- Difference in Net working capital"		4,910	-3,647	-3,829	-4,019	-4,216
"- Investments in total assets"		-15,708	-16,143	-16,590	-17,050	-17,522
"= Free Cash Flow (FCFF)		**88,223**	**81,973**	**83,077**	**85,294**	**87,571**

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 32: Estimation of SimCorp's share price (worst case)

Table 31: Estimation of SimCorp's share price (worst case)

DCF MODEL - WORST CASE (EUR '000)	2015	2016	2017	2018	2019	2020 terminal	g
							2.50%
Free Cash Flow (FCFF)		88,223	81,973	83,077	85,294	87,571	
WACC		7.65%	7.65%	7.65%	7.65%	7.65%	
Present value factor		0.9289	0.8629	0.8016	0.7446		
Present value of FCFF		81,953	70,736	66,594	63,513		

Total present value of FCFF in budget period	282,797	
Total present value of FCFF in terminal period	1,266,185	
Estimated company value	1,548,982	EUR 1.000
"- Net interest bearing debt"	-43,103	EUR 1.000
Estimated market value of equity	1,592,085	EUR 1.000
Exchange rate pr. 22nd February, 2016*	7.462	EUR/DKK
Estimated value of equity	**11,880,137**	DKK 1.000
Number of shares	41,500,000	
Estimated share price per February 22nd, 2016	**286.3**	

** European Central Bank (https://www.ecb.europa.eu/stats/exchange/eurofxref/html/eurofxref-graph-dkk.en.html)*

Appendix 33: SimCorp's estimated share price with different WACC and g (best case)

Table 32: SimCorp's estimated share price with different WACC and g (best case)

		Growth rate, g						
		1.00%	1.50%	2.00%	2.50%	3.00%	3.50%	4.00%
WACC	6.15%	478.1	521.5	575.3	643.9	734.3	858.7	1041
	6.65%	434.8	469.8	512.4	565.2	632.5	721.2	843.3
	7.15%	398.5	427.3	461.7	503.5	555.3	621.4	708.4
	7.65%	367.7	391.7	420	453.7	494.8	545.6	610.5
	8.15%	341.4	361.5	385.1	412.9	446	486.2	536.2
	8.65%	318.3	335.6	355.5	378.6	405.9	438.4	477.9
	9.15%	298.3	313.1	330	349.6	372.3	399.1	431

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 34: SimCorp's estimated share price with different WACC and g (worst case)

Table 33: SimCorp's estimated share price with different WACC and g (worst case)

		Growth rate, g						
		1.00%	1.50%	2.00%	2.50%	3.00%	3.50%	4.00%
WACC	6.15%	301.2	327.1	359.2	400.1	454.1	528.3	637.2
	6.65%	275.1	296.1	321.5	353	393.2	446.1	519
	7.15%	253.4	270.6	291.1	316.1	347	386.4	438.4
	7.65%	234.9	249.2	266	286.3	310.7	341.1	379.8
	8.15%	219	231.1	245.2	261.7	281.5	305.6	333.5
	8.65%	205.2	215.5	227.4	241.2	257.5	276.9	300.5
	9.15%	193.1	202	212	223.8	237.3	253.3	272.4

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 35: SimCorps budgeted FCFF

Table 34: SimCorps budgeted FCFF

BUDGETTED INCOME STATEMENT (EUR '000)	2015	2016	2017	2018	2019	2020 terminal
Revenue	277,927	313,961	348,993	385,727	421,858	462,058
Cost of Sales	-99,393	-116,166	-129,127	-142,719	-156,087	-170,962
Gross Profit	**178,534**	**197,795**	**219,865**	**243,008**	**265,770**	**291,097**
R&D Cost	-52,378	-59,653	-66,309	-69,431	-75,934	-83,171
Sales and Distribution cost	-34,880	17,425	19,369	15,699	17,170	18,806
Administration cost	-17,541	-11,868	-13,192	-14,580	-15,946	-17,466
EBITDA	**76,658**	**143,700**	**159,734**	**174,696**	**191,059**	**209,266**
Depreciation	-3,189	-4,317	-4,799	-5,304	-5,801	-6,353
EBIT	**73,469**	**139,383**	**154,935**	**169,392**	**185,259**	**202,913**
Effective tax rate	-17,559	-34,846	-38,734	-42,348	-46,315	-50,728
NOPAT	**55,910**	**104,537**	**116,201**	**127,044**	**138,944**	**152,185**

BUDGETTED BALANCE SHEET (EUR '000)	2015	2016	2017	2018	2019	2020 terminal
Intangible assets	11,770	9,419	10,470	11,572	12,656	13,862
Tangible assets	4,333	7,849	8,725	9,643	10,546	11,551
Total assets	16,103	17,268	19,195	21,215	23,202	25,413
Net working capital	30,614	28256	34899	42430	50623	60068
Invested capital	46,717	33286	40352	48519	53801	63347

CASH FLOW STATEMENT (EUR '000)	2015	2016	2017	2018	2019	2020 terminal
EBIT	73,469	139,383	154,935	169,392	185,259	202,913
Tax	-17,559	-34,846	-38,734	-42,348	-46,315	-50,728
NOPAT	**55,910**	**104,537**	**116,201**	**127,044**	**138,944**	**152,185**
"+ Depreciation"	3,189	4,317	4,799	5,304	5,801	6,353
"- Difference in Net working capital"		2,358	-6,643	-7,531	-8,193	-9,445
"- Investments in total assets"		-17,268	-19,195	-21,215	-23,202	-25,413
"= Free Cash Flow (FCFF)		**93,944**	**95,163**	**103,602**	**113,350**	**123,680**

Source: Authors own creation, Copenhagen Business School, June 2016

Appendix 36: Reflection on models and theory

Strategic Analysis

In the strategic analysis three models were chosen as the best fit for the analysis of internal factors (Porters Value chain) and external factors (Porters Five Forces and PESTEL) that influence SimCorp's cash flow growth on the short and long term. All of these are further summed up in a fourth model, SWOT.

Porters Five Forces

Porters five forces model biggest strength is that it provides a general understanding of industry dynamics that a given company has to take into account, in that it reveals the competitiveness the company faces. As many other general models[95] that try to model the dynamics in the complex world we live in, Porters Five forces been critiqued on several areas.

Firstly, the model has limitations in the form of being too static, not accounting the constant change the environment we operate in into account. The author has defended his model by arguing for the importance of historic data on our understanding of the future. Secondly, the model sees clients and suppliers as some kind of enemies, instead of seeing them as potential partners with common goals and interests. Thirdly, the model doesn't take into account that the five forces, in which the competitiveness of an industry is measured, can in fact have an uneven importance for a company's competitive situation. This is especially relevant in the case of SimCorp, and can be imagined to have an uneven distribution that depends on the company, the product/service that the company offers, the timing of the overall market situation, the lifecycle of a company and the matureness of an industry. Lastly, the model has been critiqued for not being very useful in analyzing service companies, compared to large production companies for whom the theory was originally developed. I will not delve more into Porters Five Forces, as it is beyond the scope of this thesis, but I will argue that the limitations of the model aren't a hindering for my estimation of the value of SimCorp, as I see it to be in the company's value chain their source for competitiveness comes from. The combination of models used in this thesis ensures that we are both backward and forward looking. As a standalone model, Porters Five Forces wouldn't be sufficient in providing us an overview of the whole picture necessary for strategic analysis of SimCorp.

[95] In the case of Porters Five forces, the model is general in the sense that it covers all company's and industries.

PESTEL

The strength of the PESTEL framework is that it is good overview all of the macro factors that influence a company and the industry in which it operates. The limitations of the framework are that it places too much focus on historic events instead of the future scenarios, just as in the case of Porters Five Forces, we discusses in the section above. The argument is that while historic data is able to show some tendencies in the past, it isn't necessarily representative for the future. Additionally, the framework is lacking a solutions oriented approach that explains how actual stakeholders should be addressed, in the case where the analysis identifies central challenges.

In this thesis I will use the PESTEL framework mostly to get a feel of the macro factors, instead of seeing the framework as the full truth. Neither of the limitations of the PESTEL framework will influence my strategical analysis of SimCorp in a negative way, given the purpose of this thesis. The purpose of this thesis is to estimate the value of SimCorp from an external investor perspective and not to address internal management challenges.

SWOT

The SWOT model is a simple, yet powerful model that aggregates all of the strengths, weaknesses, opportunities and threats determined in PESTEL, Porters Five Forces and Porters Value chain. In other words, the SWOT model summarized all the findings in our strategic analysis. The limitations of the SWOT model is that it simplifies the identified factors and hence the problems. Additionally, just as the PESTEL framework, it lacks a solutions-oriented approach. In this thesis it's my intention to make a strategic analysis that is as operational as possible by mapping out all the value drivers of SimCorp's cash flows on the short and long term. Just as in the argument made regarding the Porters Five Forces framework, the limitations of the SWOT would be an issue if they were looked upon solely in the estimation of SimCorp's value, but as this thesis uses a combination of models, we limit the effect of one model solely.

Financial Analysis

From the standpoints of both the scholars and practitioners, a variety of valuation models and techniques can be utilized in valuing any company. Differences in the nature of the company, the level of maturity of the industry and the performance of cash flows, together with a range of other factors are great determinants of what valuation method(s) to apply.

There are many alternatives to make a valuation, each with different emphases and different outcomes. In this section, we will cover the most recognized and widely adopted valuation models, highlighting the strengths and weaknesses of each. The clarifications made in this section forms the basis of the models selected in this thesis.

CAPM

The strength of the CAPM is that it highlights the relation between risk and expected return of a company and the model is mostly used to price high risk papers. The limitations of CAPM is that it's difficult to use in real life, as it depends on certain assumptions that needs to be fulfilled (as in the case of trading in a perfect market[96] and an investor's ability to borrow at a risk free interest rate[97]). I will note delve more into the limitations of CAPM, as it is beyond the scope of the thesis, but even though CAPM doesn't uphold the theoretical assumptions the model is practically useful and will be used in this thesis.

WACC

The strength of the WACC is that it enables us to create the cost of capital by a weighted average, which we will discount the future cash flow (FCF) with in the DCF model, used in the valuation (see section 7.2). The limitation of the WACC is that it remains constant in the budget period, which doesn't go hand in hand with real life practice, as the cost of capital changes with the fluctuations in the world economy. Small changes in the WACC will have immense effect on the valuation made in the DCF model.

In this thesis I will determine the influence of the WACC on the estimated value of SimCorp by doing a sensitivity analysis. More on this will be covered in the part-conclusion of this section.

Overview of valuation models

In order to truly gain insights the drivers of the share value of SimCorp and estimate the attractiveness of the investment opportunity of the company, we have to be deliberate and thorough in our selection of the right valuation model. Without a thorough fundamental valuation, the likelihood of making wrong investments increases, so knowing the characteristics of SimCorp will enable us to choose a valuation method best suited to value the company.

[96] In a perfect market it's stated that there's no tax or transaction cost, which isn't the case in real life, as an investor will be taxes of the return and pays curator a trade cost to trade.
[97] The normal investor normally can't borrow at the risk free rate

The valuation models chosen in thesis will be based four main criteria that according to Plenborg & Petersen (2010, p. 212) characterizes a good valuation. We face a trade-off between following four criteria: the models precision (unbiased estimates), realistic assumptions, usability and simplicity and understandable results.
In the following section we will cover five different valuation approaches and discuss which would be most suitable for the case of estimating the value of SimCorp. These five different valuation approaches are: technical analysis, liquidation approach, multiples, presents value and real options.[98] It should be stated that none of them comply fully with all four criteria that characterize a good valuation model, according to Plenborg & Petersen (2010).

Technical analysis

The first method, technical analysis, approaches a company's share from the charts. The core belief of technical analysis is that it is unnecessary to analyse a company's fundamentals, because these are all accounted for in a company's share price. Technical analysis takes a completely different approach from the other valuation models, being that the calculated value is based on past information, instead of being based on financial statements.

Practitioners of technical analysis are typically only interested in identifying relationships between a company's share price movements and the market. This is done by studying the market itself, as opposed to its components.[99] Park & Irwin (2007) conducted a meta-study of 95 studies regarding technical analysis, in which 56 studies found positive results in that technical analysis can be used to generate economic profit. Though, the study found that most of the studies had various problems in their testing procedures. Much of the criticism made about technical analysis is that it's deeply rooted in academic theory, specifically the efficient market hypothesis (EMH), which states that the market's price is always the correct one with any past trading information already reflected in the current price of a stock and, therefore, any analysis to find undervalued securities is useless. The main disadvantage of using technical analysis is that it does not calculate the fundamental value of the company. Therefore, we will not use the method to estimate the value of SimCorp.

Liquidation approach

The liquidation method is one of the primary business valuation methods. It is used when it's estimated that the value of the business is questioned. In other words, when liquidating the

[98] Plenborg & Petersen (2012) and Siegel et al. (2000)
[99] Siegel, Joel G., Shim, Jae K., Qureshi, Anique, Brauchler, Jeffrey (2000), International enclyclopedia of technical analysis, Fitzroy Dearborn

assets and settling its liabilities would yield a higher value[100] than the present value of its future earnings and cash flow potential (Plenborg & Petersen, 2012). Though the approach might seem simple to use, the approach is not flawless and one of the weaknesses lies in an imperfect balance sheet.[101]

Being that SimCorp is a healthy cash flow generating business that is profitable and growing, the asset-based liquidation approach seems inappropriate and therefore, this valuation approach will note be used in estimating the value of SimCorp.

Multiples approach

The multiples method is a relative valuation method that doesn't attempt to find an intrinsic value for the stock, but instead it simply compares the stock's price multiples to a group of "identical" firms to determine if the stock is relatively undervalued or overvalued.[102]

The multiples method can almost be used in all circumstances, as multiples are simply the ratio of an observable market value to a particular number in the financial statement, such as the price-to-earnings (P/E), price-to-book (P/B), price-to-sales (P/S), price-to-cash flow (P/CF), and many others.[103] Of these ratios though, the P/E ratio is the most commonly used one because it focuses on the earnings of the company, which is one of the primary drivers of an investments value. Generally, relative valuation models, such as the multiples method are easier and quicker to calculate than the absolute valuation methods, which is why many investors and analysts start their analysis with these models. The weaknesses of the multiples approach is firstly, that the approach assumes that the stocks of the comparable firms are efficiently priced (Damodaran, 2012). Thereby, the method depends on investor expectations and does not calculate the intrinsic value of the company. Secondly, the model is based on snapshots taken on specific periods, which do not assume discrepancies in the performance evolution of compared companies. Within the model there is a requirement that the comparable firms must share the same economic characteristics and outlook[104], where the only variable is fluctuations in the market, which is hardly the case in general. Thirdly, the accounting figures are required to

[100] Intangible assets are not included in a company's liquidation value. Intangible assets include a business's intellectual property, goodwill and brand recognition.
[101] Penman, Stephen H. (2010), Financial Statement Analysis and Security Valuation, McGraw Hill
[102] The rationale for this is based off of the Law of One Price, which states that two similar assets should sell for similar prices. The intuitive nature of this method is one of the reasons it is so popular.
[103] Penman, Stephen H. (2010), Financial Statement Analysis and Security Valuation, McGraw Hill
[104] Koller, Tim et al. (2010): Valuation – Measuring and Managing the Value of Companies. 5. udgave. John Wiley & Sons Inc.

have the same quality, as differences in recognition criteria between the respective comparable firms can lead to incorrect conclusions (Plenborg & Petersen, 2012).
Plenborg & Petersen (2012) and Damodaran (2012) both approve of the method, but highlight the potential shortcomings if assumptions are not fulfilled. Being that the multiples method does not estimate the fundamental value of the firm, but instead bases it on existing market prices, the multiples method seems less appropriate to use as the core valuation model in estimating the value of SimCorp. Being that SimCorp operates in a vastly mature industry with a fully developed competitive landscape between players, I will use the multiples approach as a complimentary model to increase the quality of the overall valuation, since all the models have their advantages and disadvantages and thus complement each other.

Present value models

Compared the above mentioned valuation approach, present value models are not influenced by investor expectations as they measure intrinsic value by discounting forecasted future cash flows or excess returns. The models attempt to find the intrinsic or "true" value of an investment based only on fundamentals, such as dividends, cash flow and growth rate for a single company, and not worry about other companies.

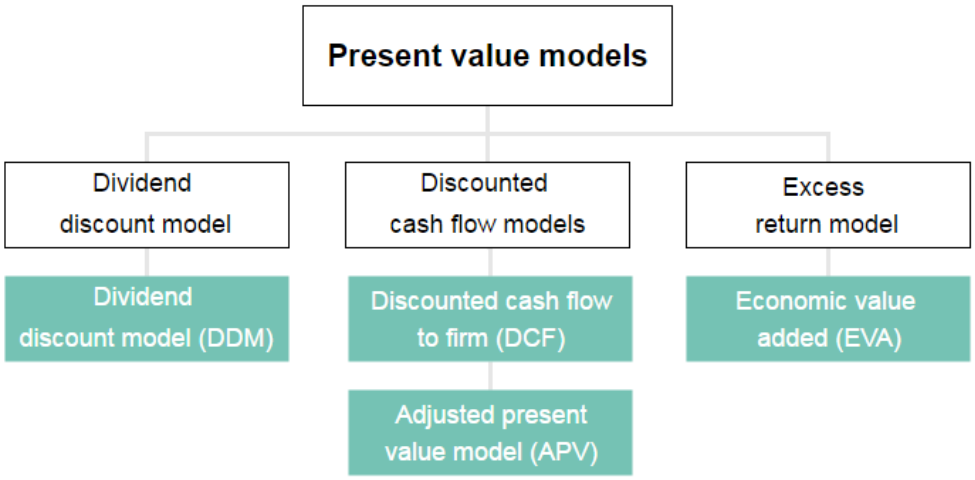
Equity-based valuation model like these directly estimate the value of equity. This requires that free cash flow to equity or residual income be discounted by equity holder's required rate of return. If the approaches are to yield identical results, the required rate needs to fluctuate with changes in the market value of the capital structure for each year (Plenborg & Petersen, 2012). By using the value-based approaches, a complex iteration procedure is avoided and hence, Plenborg & Petersen's 'user friendliness' criterion is satisfied.

A lot of present value models exist and when used correctly, all these approaches yield identical results (Plenborg & Petersen, 2003), which can be used a validation check on one another. The present value models come in three types and due to the inherent limitations in this thesis, we will only cover four:[105]

1. The dividend discount model (DDM),
2. The discounted cash flows models (DCF and APV)
3. The excess return models (EVA)

[105] Penman, Stephen H. (2012), Financial Statement Analysis and Security Valuation, McGraw Hill

Figure 14:Depiction of the various present value models available[106]



Source: Authors own creation, Copenhagen Business School, June 2016

As in the models mentioned above, there are disadvantages of using present value models:

1. Future financial drivers with an infinite time horizon are budgeted. Such forecasts are difficult to make, as they are subject to uncertainty.
2. The estimation of beta and the market risk premium is difficult (Koller et al, 2010).
3. The growth rate in the terminal period is expected to be static, which essential means that even small differences in the growth rate can have substantial impact on the stock price, being that the terminal period often consists of a part of the value (Møller, 2006).
4. The underlying assumption is that cash surpluses are paid out as dividends or reinvested in projects with a net present value (NPV) equity to zero. (Plenborg & Petersen, 2012). This assumption seems problematic as many companies earn returns that are different from its cost of capital.

Aside from the disadvantages stated above, present value models are the most accepted and used models among practitioners (Plenborg & Petersen, 2012) and Koller (2005).

Dividend Discount Model (DDM) [107]

[106] Source based on Penman (2012), Plenborg & Petersen (2012) and Damodaran (2012)
[107] The companies that pays stable and predictable dividends are typically mature blue-chip companies in mature and well-developed industries. These type of companies are often best suited for this type of valuation method.

The dividend discount model (DDM) is one of the most basic of the absolute valuation models. It calculates the "true" value of a firm based on the dividends the company pays its shareholders. The justification for using dividends to value a company is that dividends represent the actual cash flows going to the shareholder, thus valuing the present value of these cash flows should give a value for how much the shares should be worth. Requirements for using the model are that the company actually pays a dividend and that the dividend is stable and predictable, as it is not enough for the company to just a pay dividend.

The dividend discount model can be utmost helpful in evaluation potential dividend income from a stock, but it has several inherent disadvantages, like the other models we have reviewed. Firstly, being that the model does not factor in buybacks and its fundamental assumption only derives from dividends, it's difficult to do accurate projections.[108] Secondly, the model cannot be used to evaluate stocks that don't pay dividends, regardless of the capital gains that could be realized from investing in the stock. There are a number of variations of the DDM that attempt to overcome the problems, but most of them involve making additional projections and calculations that are also subject to errors that are magnified over time.

Ignoring stock buybacks illustrates the major problem with the DDM of being too conservative in its estimation of stock value. SimCorp is a company that has made buybacks equivalent of in the latest years, but nonetheless due to the limitations of DDM, we will use it in the case of SimCorp.

Discounted Cash Flow Models

Discounted cash flow (DCF) methods are used to value a project, company or asset using the concepts of the time value of money. All future cash flows are estimated and discounted by using cost of capital to give their present values (PVs). In the following we will cover the Discounted Cash Flow (DCF) and the Adjusted Present Value (APV) models.

The DCF model

Instead of looking at dividends, the DCF model uses a firm's discounted future cash flows to value the business. The method finds the sum of the future cash flow of the business and discounts it back to a present value. The DCF model has several variations, but the most

[108] http://www.investopedia.com/ask/answers/042315/what-are-drawbacks-using-dividend-discount-model-ddm-value-stock.asp

commonly used form is the Two-Stage DCF model. In this variation, the free cash flows are generally forecasted for five to ten years, and then a terminal value is calculated to account for all the cash flows beyond the forecast period. Requirements for using the model are that the company has a predictable free cash flow (FCF) and that the free cash flow of the company is positive.[109]

The strengths of the model are firstly, that it is widely used and well-known by users. Secondly, the model produces the closest value of the company unlike other models, using comparable multiples.[110] Thirdly, it works best with relatively stable debt-to-value ratios and relies solely on cash flow going in and out. Fourthly, the model can be used with a wide variety of firms that don't pay dividends, and even for companies that do pay dividends. Moreover, it forces the investor to think about the stock as a business and analyze the cash flow of a business, rather than its earnings.[111]

As with all of the above models, DCF has certain limitations as well. Firstly, it is very sensitive to the basic assumptions about cash flow, discount rate etc. being correct. If the basic assumptions are inaccurate, the model will give a distorted valuation (garbage in, garbage out). Secondly, if capital expenditure decreases or the company postpones capital expenditure, the value of the company increases. Thirdly, the model needs to be performed on a regular basis as it depends on a large degree of confidence in the forecast, which change over time. Fourthly, the model is not suitable for measuring performance for a single year, as cash flow provides little insight into the company's economic performance (EVA is better at this task). Overall, the DCF model is criticized on the fact that a company's future operations are based on subjective estimates and minor changes in these can have a significant effect on the end result

In the case of estimating the value of SimCorp, the DCF model seems to be a good candidate and the model will be used as the core valuation model in this thesis. I argue my choice by the fact that it's optimal to estimate the value of SimCorp from its cash flows, being that SimCorp

[109] Based on the second requirement alone, many small high-growth firms and non-mature firms will be excluded due to the large capital expenditures these companies generally face.
[110] These models are fairly easy to calculate and are not useful if the entire market or sector is over or undervalued (Source: http://www.investopedia.com/university/dcf/dcf5.asp)
[111] Since cash is what a business needs in order to maintain and grow its operations, it's only right to consider the possibility of its future cash growth rather than earnings growth.

has stable, positive and predictable free cash flow, due to 44%of its revenue came from maintenance in 2015.[112]

The APV model:

The APV valuation method resembles the standard DCF model, but instead of discounting cash flows of a company using the WACC, the APV method uses the unlevered cost of equity to discount cash flows of the company. Additionally, tax shields are discounted at either the cost of debt (Myers) or with the unlevered cost of equity (following later academics). Inherently the WACC assumes the capital structure of the business will remain the same in perpetuity, but in the case when the capital structure changes, the APV method is useful.

Changing the level of debt can be cumbersome under the DCF method, as it uses WACC, but in the APV model this is dealt with by separating financing effects on value from the value of operations themselves.[113] The APV method is a more flexible way or estimating value when the capital structure is expected to change. As there are no signs of SimCorp changing its capital structure in the near future, both the APV and the standard DCF methods should result in identical valuations of a company. Therefore, I will not use APV model in estimating the value of SimCorp.

The Excess return models

The third type of present value valuation methods is the excess return model and within this type of valuation models, we will only delve into the Economic Value Model (EVA).

The EVA model

The idea behind the Economic Value Added (EVA) model is that value is created when the return on the firm's economic capital employed exceeds the cost of that capital. In this model, the value of a firm can be written as the sum of capital invested currently in the company and the present value of excess returns that the firm expects to make in the future. So, the EVA is an estimate of a firm's economic profit, or the value created in excess of the required return of the company's investors (shareholders and debt holders). A positive EVA means that the company is profitable and able to cover its cost of capital and vice versa. The strengths of the EVA are firstly, that it summarizes how much profit is obtained and from where it originates.

[112] SimCorp Annual Report 2015
[113] http://www.acuitasinc.com/articles/mlz_apv_method.html

Secondly, it takes into account the invested capital and the income statement (NOPAT). Moreover, it forces managers to think about assets as well as expenses in their decision making process. The limitations of the EVA model are as follows. Firstly, it's very sensitive to the WACC, the growth rate (g) and is largely dependent on a correct terminal value. Secondly, as the model depends greatly on invested capital, the model is most applicable to asset intensive companies that are generally stable. Thirdly, the calculation of NOPAT can be distorted by decisions regarding depreciation and amortization. Lastly, the EVA model only applies to the period measure, so it is not predictive of future performance (especially for companies about to make large capital investments or that are in midst of restructuring)[114]

According to Petersen & Plenborg (2012), the Economic Value Added (EVA) model is the best option, as it provides the most comprehensive result. Under the correct assumptions and application, the Discounted Cash Flow model (DCF) will provide the same result as the EVA model, as it is based upon the fundamental value drivers of a company and should therefore be less exposed to "market moods"[115]. Therefore, I will not use the EVA in estimating the value of SimCorp, being that I am already using the DCF model. It could be argued that the EVA model could have constituted as a sanity check, since the DCF and the EVA should provide the same results under the same assumptions, but as argued in 2.5.3., it wouldn't add much value.

Real options models

The last type of valuation models we will cover in our approach are the real option models. Compared to financial options, real options are based in tangible assets and they can take into account the value of follow-up investment opportunities, timing investment, the abandonment of projects etc. This is an attract feature, as the models use elements from the discounted cash flow models, while taking the flexibility in investment decisions into account.

This feature is something several scholars have criticized the traditional present value models for, as they are not able to incorporate the future value of flexibility in their forecasting.[116] In other words, the traditional NVP approach may lead to a flawed budgeting decision and an incorrect valuation of a company. Block (2007) argues that the disadvantage of using real options in practice lies in their immense level of complexity and uncertainty. Additionally, as a

[114] http://www.investinganswers.com/financial-dictionary/financial-statement-analysis/economic-value-added-eva-2925
[115] Damodaran, A. (2004), "An Introduction to Valuation", p. 24 & (Petersen, Plenborg, 2011a)
[116] (Brealey et al. 2008, Mason 1984, Trigeorgis 2005).

result of the flexibility that is inherent in the model, real options models are more applicable for companies that undertake investments based on high future uncertainty, such as IT technology investments, pharmaceutical companies etc.

Larsen (2010) finds in her thesis that real option models theoretically are the most correct valuation models, when it comes to early-stage companies.[117] With that being said, due the business model, the matureness and inherent nature of the company, the real option method seems less appropriate to use in estimating the value of SimCorp. SimCorp is nowhere near being liquidated nor has a business model that feeds in a valuation by using option models and therefore, option models or liquidation models won't be used in estimating the value of SimCorp.

Analysts preferred choice

SimCorp is currently being covered by six equity analysts and after careful interviews with two interesting insights have been made. Firstly, both analysts highlight that there is a big divide between models stated in academia (the ones we cover) and the ones used in real life, as real life practices are much more simplistic. This is due to the fact that analysts have to communicate with clients, where they use basic multiples, such as the P/E multiple. Secondly, when it comes to the strategic analysis part, all analysts have different things they weigh differently, but the general denominator is that all are focusing on core value drivers that have influence cash flows on the short-term and long-term.

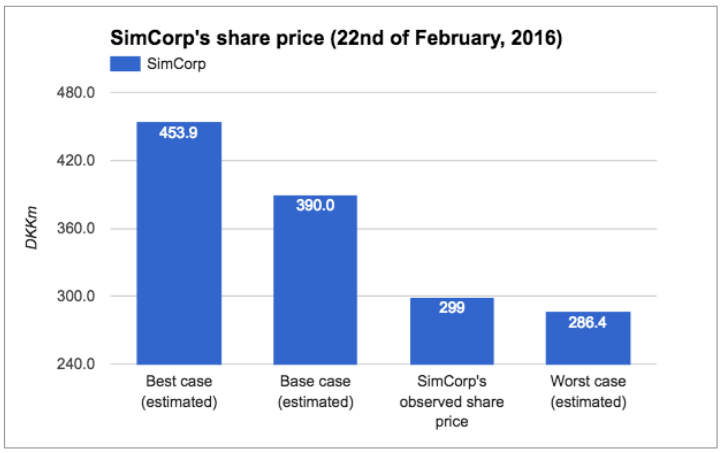
Thirdly, both analysts use the DCF, each with their own individual assumptions. They disagree on the usage of the EVA. One argues that the EVA model is unnecessary when using the DCF, as they should state the same result. The other analyst uses the EVA, as a sanity check, to ensure that his DCF model is calculated correctly, just as we will do in this thesis. Additionally, one analyst argues that getting the DCF and EVA to state the same result isn't easy, as the capital structure can be tricky to work around, but nonetheless it's still possible.

When it comes to multiples, both analysts argue that as business models can vary, multiples have many disadvantages compared to the peer's group analysts. As companies differ on so many levels (tax, business model, matureness, product, service etc.), one has to take all of these into account, in order to do a proper multiples analysis.

[117] Larsen, Rie (2010): Problemstillinger ved værdiansættelse af entrepreneur virksomheder. Afhandling på Cand. merc. aud., Handelshøjskolen i København.

Appendix 37: Estimated share price of SimCorp in all three scenarios

Figure 15: Estimated share price of SimCorp in all three scenarios



Source: Authors own creation, Copenhagen Business School, June 2016