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Evaluating differences of Elisa Oyj and Telia Company AB financial performances by using financial ratios

Bachelor's thesis
Programme International Business Administration,
specialization Finance & Accounting

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Tallinn 2018

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The document length is 9620 words from the introduction to the end of the conclusion.

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ABSTRACT

Telia and Elisa are major market holders in the telecommunication service market in Finland. Telia being the larger company having international services, in Finland, it has subsidiary Telia Finland. In telecommunication industry the fast development of technology its crucial for companies to stay ahead of their competition. Finland is a great nation for telecommunication companies, that can be seen for how well these two companies are performing compared to others in the industry.

Finding the differences by using each of the company's financial statements going even more detail with financial ratios to determine which one is more financial healthier and perform better as telecommunication company Then using the data gotten from these analyses to determine the research purpose.

From the study, we could see that Elisa is more financial healthier and taking a look into the future of both of the companies Elisa has the better-looking one. Telia have had some rough years behind them but are starting to get back to what they once were a great telecommunication company.

Keywords: Financial statement, component analysis, financial ratios, telecommunication

INTRODUCTION

In this paper, I will go over the financial ratios and financial statements of two major telecommunication companies, Telia and Elisa. Both companies have a major market share in Finland's mobile phone network. Although these two companies are considering different sizes Telia being the larger company "A characteristic of the multinational enterprise is the coordination of activities in various countries. The activities belonging to the group are attuned to each other within the framework of common objectives and a common strategy." (Kraijenhoff, G., Simoncini, F., & Duquesne de la Vinelle, L. 1972). Telia has a subsidiary in Finland called Telia Finland that is the same size as Elisa, market shares being 34% and 38% respectively. It will show us how Elisa is a contender in telecommunication in Finland although Telia being the larger entity. The size difference of the company won't affect the result much, of course, it will have an effect. Thinking about the operating cost of the company since they operate in the same industry, they should have similarities. If one of them, financial performance is greater than the other considerations, we could from their make more research on why. I also am interested to see How Elisa compares to Telia as its much larger, I want to know how the whole Telia is managed not just the Finland subsidiary, Telia Finland. Since that study would make in my opinion much less interesting and if I manage to find out that Elisa is managed more efficiently, that could mean that the subsidiary Telia Finland would be doing good in the future and that the larger Telia as a company is managed poorly. This could show us that telecommunication market is very favorable for companies to invest or to be part of. The data can be evaluated by using percentages of the sums. Using Component analysis for ratios we can determine which of these is more efficient as a company. Since they are a major contender I want to know which one is managed better, then I would be able to forecast their future potential.

Using Financial statements to analyze these two company's we can evaluate which company manages their assets more efficiently. We can forecast the company's future figures and analyze them. Evaluate which company has better cost-effectiveness. I will be using financial ratios to evaluate these two companies, which will give us an indication of the overall picture. Using a few different financial ratios allows us to analyze and compare them. Results should give us key

indicators of how the company is managed. I will be using profitability ratios. Profitability ratios are a way of measuring how much companies are generating revenue compared to its expenses. Usually a solid measurement on how the company main business plan is going. Liquidity ratios determine how well a company can pay off their short-term liabilities as they become due and when their long-term liabilities become current. There commonly 2 different ratios Quick ratio and Current Ratio. Liquidity ratios will give data to analyze which company is more liquid. Companies are financed by debt. or/and equity, so leverage ratios give understanding how well can a company's pay off their financial obligations. This financial ratio gives an understanding of the company's risk, so this ratio can be used as a risk management tool. Valuation ratio indicates the valuation of the company, meaning that it shows what the company is worth. All of the information that is gathered from the company and converted into financial ratios can be used to determine the worth of the company, but valuation ratios give us a simplified valuation that can be easily compared and analyzed. As the telecommunication industry is fast rapidly developing, it will be interesting to see how these companies manage against each other. Evidence for a rapidly developing industry is the demand of the services. "Gartner, Inc. forecasts that 8.4 billion connected things will be in use worldwide in 2017, up 31 percent from 2016, and will reach 20.4 billion by 2020. Total spending on endpoints and services will reach almost $2 trillion in 2017." (Gartner, 2017). "Based on these statistics, there is an evident increasing gap between the number of devices needed and developers available on the market, as the numbers of IoT devices and developers aren't growing at the same pace (far from it). This results in an intriguing paradox: How can the few millions of software developers meet the demand for the billions of connected devices in the years to come? The solution: Software development must become more efficient and user-friendly to make the IoT user experience comparably efficient and user-friendly." (Forbes, Knoll 2018). To put it simply the number of devices connected is huge and it will keep increasing over the years, which means for telecommunications industry needs to develop its infrastructure for it to be able to maintain this huge number of devices or invent other possibilities. This means ever rapidly changing the industry for telecommunication companies. Even Elisa has mentioned this in the Annual report "The rapid developments in telecommunications technology may have a significant impact on Elisa's business."(Annual Report, 2017)

Telecommunication service has a large part in the economy of Finland, most notable in the early 2000s when Nokia was doing very well. "In early 2000s Nokia accounted for two-thirds of total turnover, more than 80 percent of the total exports, and a lion's share of total R&D expenditure of the domestic and foreign telecom companies operating in Finland. Nokia's share of the total R&D

expenditure of the Finnish business sector was almost half, and one-third of total national R&D." (Lemola, 2016). Nokia has been a key player in the telecommunication sector and a leader. Today's telecommunications companies can thank Nokia for the state of the sector now. "The evolution of Finland's telecom sector and its locomotive Nokia have been deeply rooted in the Finnish innovation system, but whatever the future policy could be, it can't be based on building or waiting for a new Nokia. Finland has been lucky that it has been able to host such a company and host the company still in the future. However, as an economy, Finland has been more reliant on one manufacturing company than any other country in the world except Taiwan." (Lemola, 2016). Nokia brought a lot good to Finland's economy and because of Nokia telecommunication companies can have great chances to succeed in Finland. For Finland, it is important to support these companies as they can at least have some of the impacts that the Nokia had. "Most probably, finding soon or even in the longer term a new Nokia is not possible, and it is not necessarily desirable either. More diversified industrial structure with a bigger number of small and medium-sized companies could fit better for Finland of the future. From the point of view of state policies and many of the policy instruments which were used in Finland for upgrading and renewal of the telecom industry are still relevant for Finland and many other countries, including developing countries." (Lemola, 2016).

To analyze which of the company would have the upper hand for this industry as it develops rapidly. My hypothesis for this paper will be that Elisa will outperform Telia in the future as it has the ability to adapt to this rapidly developing industry. If we take a look at them fast, we can determine that Telia is the one that is larger and Elisa the smaller of the two. We could then think that if Telia is larger it would have more assets to use for example for R&D than Elisa. But then again it would be easier to implement changes to a company that is smaller and does mostly their business in one place being Elisa in Finland. For Elisa, we can think that smaller might be better to adapt to changes thus making a more efficient company of the two. "The companies aim not only to optimize their size but also to strengthen the global production networks, affording them a better competitive position, in a mighty competitive environment and under the pressure of rapid development of the technological environment. The size of a company has become a barrier that stops its entry into the sector, higher than profitability, which explains why some corporations have focused, in recent times, more on strengthening their position abroad, although their economic performance does not justify this endeavor" (Manolică, A., & Roman, T. 2012). For smaller companies, competitors are always a risk that they need to be aware off for Elisa competitor would be Telia. But we have to remember that both of these companies have a major market share in

Finland meaning and are successful companies. “The macroeconomic environment in Finland has improved, but long-term structural challenges still remain. Competition in the Finnish telecommunications market remains challenging.” (Elisa Annual Report, 2017). This could be the biggest challenge for Elisa. Elisa has to be advancing as pace as the others since Elisa at the moment is holding the biggest market share in Finland.

1. FINANCIAL RATIOS

Financial ratios are used to evaluate a company's performance by using various numerical values from their financial statements. Form these ratios we can take a look at the company's performance more closely and analyses it. There is some standard to which they are calculated, but they do differ, which means if ratios want to be analyzed and compared we have to use the same formulas to get the financial ratios. Financial ratios can be used by various entity's internal and external sources of a company. For internal usage like financial managers of a firm, shareholders of the firm and creditors of the firm. External usage is even larger audience commonly used by competitors and potential investor to analyses how the companies are doing and forecast how the companies could grow. Competitors can use these to evaluate a company's weaknesses and strengths. This what is called benchmarking, a company's evaluate and analyses their own financial ratios and compared them to the industry leaders to learn what the best in the industry is doing and implement that to their own financial management plan. There are many different financial ratios, and what they actually analyze from the company, they can be from how liquid the company's assets are to how productively they are using these assets.

1.1. Profitability Ratios

Profitability ratios are a way of measuring how much companies are generating revenue compared to its expenses. Usually a solid measurement on how the company main business plan is going. Can be used by various entities, like in every financial ratio its used both internally and externally. Profitability ratios are used by companies as it is very important ratios, but an investor can use it as well. Profitability ratios give a good understanding of how efficiently is the company performing. A good indicator is that if a company's profitability ratios increase over years that means they are either managing their cost of producing revenue or demand allows them to sell for greater value. If we want to compare different company's profitability ratios they must have the similarity's in their business plan, because the ratios can vary from industry to industry. Most

commonly used profitability ratios are profit margin, ROE (Return on Equity) and ROA (Return on Asset).

1.1.1. Profit margin

Profit margin is calculated by revenue as a base and then calculating all costs to find the profit margin, commonly indicated as, Net Income/Revenue. It is important to take into account all cost operating cost, raw material cost, and tax cost since it will give the most accurate description on how well is the company is managing its cost of sale. We can go even higher detail with this ratio, with using ratios like gross profit margin or operating margin to analyzed exactly which are the cost that is driving down companies profit margin. Profit margin does not all ways tell the whole difference to company performance, a company can have a higher cost on some occasion if they are investing to cut expenses in the future for example.

$$Profit\ margin = \frac{Net\ income}{Revenue} \quad (1)$$

1.1.2. Return on Asset

Return on assets is the measurement to see how much a company are generating profits compared to total assets. Same as before it used by various entities to see how well a company's assets are used to generate profit for the company. Again, ROA shouldn't be compared to a totally different industry company's. It should be compared to a similar company or to the company's own previous ratios to get the best evaluation possible. Because the company's in different industries have different methods of financing their business, for example, some industries have very capital heavy financing. Total assets are calculated by the sum of the company's total liabilities and shareholder's equity. Both are the numerical value of the financing mechanics of the company. Companies are financed by debt or equity. If companies are financed by debt mostly, they can reduce the cost of that debt by deducting the interest expense form the calculation. The normal formula would be Net income/Average Total Assets and by implementing interest expense to the calculation by (Net Income + Interest expense) / Average Total Asset companies are able to get a more favorable outcome on that ratio. The higher the ROA ratio is the more effectively the companies is generating from its financing instruments.

$$Return\ on\ assets = \frac{Net\ income}{Total\ assets} \quad (2)$$

1.1.3. Return on Equity

Return on equity gives the data about how is the company managing their shareholder's investments to the company by comparing it to generated sales by it. ROE is a percentage of formula, Net Income / Shareholder Equity. There are similarities to ROA, but it doesn't take into account how much of the company finance is long and short-term loans. ROE gives an indicator for investors as well for the company on how much their investments into the company are generating revenue. To put it simply it measures cash coming into to company from investors how well its turned into positive gain or growth for the company.

$$Return\ on\ equity = \frac{Net\ income}{Shareholders\ equity} \quad (3)$$

1.2. Leverage ratios

Companies are financed by debt. or/and equity, so leverage ratios give understanding how well can a company's pay off their financial obligations. This financial ratio gives an understanding of the company's risk, so this ratio can be used as a risk management tool. It gives a picture of how much debt. the company has in its finance and is the company able meet the deadlines on payments, if someone would look at a company that is financed by debt mostly and sees these leverage ratios to be off, that person would not give a loan to the companies. so, it's important for financial managers to oversee how much and how well is the company's financed. These ratios are important because almost all companies have debt or have had debt because of it an easy way to finance their business at some point. Having debt isn't a bad thing, but it can be if not managed properly.

1.2.1. Debt to Equity

Debt to equity gives an understanding of how much of its business is financed by debt and how much it has debt compared to equity. Commonly known D/E ratio. Depending on how high this number it gives a clue on how the company uses its leverage, for companies that need aggressive growth or some situational financing, can mean that for period D/E ratio can be high. If it doesn't stay high for periods of time. If for example, the company need to finance research and development to increase their profits over the years, getting that financed by debt can be an option, although the risk is included in a decision like these. This why financial manager must be very precise and have their decision making on point. Also, form investor perspective this ratio can be used to determine your mind about a company. If a company is financing it business through debt

mostly and it interest expenses doesn't exceed it revenue, then the investor would be pleased that this new project is funded by debt, because more generated income for that investor. Although if the debt expense is higher what is made by this debt, shareholders would lose their profits on their share since the shares can take a dump because of this.

$$Debt\ to\ equity\ ratio = \frac{Total\ liabilities}{Shareholders\ equity} \quad (4)$$

1.2.2. Interest coverage ratios

Interest coverage ratio gives us a clue on how well a company is able to pay off its interest on its outstanding debts. This is calculated by EBIT / Interest Expense. By dividing these 2 numbers gives data about how any time over can the interest be paid on the debts of the company. The values that are put into the formula must be gathered from the same time period or else the data we get is misleading. Lower the ratio number is of a company the worse it is for them. There is the universal ratio of 1.5 to be considered the bare minimum, anything lower than this becomes critical for company's needing to finance their business with debt because lenders don't want to lend the money. The risk would be too high for lenders to receive their money back.

$$Interest\ coverage\ ratios = \frac{EBIT}{Interest\ expense} \quad (5)$$

1.3. Liquidity ratios

Liquidity ratios determine how well a company can pay off their short-term liabilities as they become due and also when their long-term liabilities become current. There commonly 2 different ratios Quick ratio and Current Ratio. These let us analyses how much cash a company has right now to pay off their debts and how much cash they can get from their assets to pay off debt. So, this ratio doesn't just take into account cash that is available in right at the moment but also assets such as account receivables and inventory since for most company's these are easy to convert to cash quickly

1.3.1. Current ratio

Current ratios determine company ability to meet its expectations on short-term liabilities, for those that are current within a year. Since it gives us an evaluation of the next year all the assets that can be listed as current assets must be so that they can be converted into cash quickly. The formula

goes by Current assets / Currents liabilities. This shows the company ability to pay those short-term liabilities without having to use their long-term assets that may have great revenue streams. The higher the ratio the better, since it gives us an indication of how many times over can those short-term liabilities be paid off. For example, ratios of 7 mean that a company can pay off their short-term liabilities 7 times without having to use their long-term assets. Usually, if companies having to sell their long-term assets to pay off their short-term liabilities, it means the revenue its generating form their operations aren't sufficient to cover their overall activities.

$$Current\ ratio = \frac{Current\ assets}{Current\ liabilities} \quad (6)$$

1.3.2. Quick ratio

Quick ratios give us an indication of how well a company can manage to deal with their current assets that can be converted into cash in a very short time usually meaning 90 days. For calculating this formula, we use even detailed assets.

$$\frac{Cash + Cash\ equivalents + short\ term\ investments + Current\ receivables}{Current\ liabilities} \quad (7)$$

This means it is only referring to the most liquid assets the company has to pay off their short-term obligations. To analyze this, we can't use the same parameters as we used for current ratio, as quick ratios of 1 or lower it doesn't mean the company is doing poorly but is relying on other assets such as inventory. Of course, it can also mean that they aren't as liquid in the short run and can't meet the obligations they need to. The company that has very high quick ratios mean that they may have cash laying around for no use. For investors, this can mean that the company isn't using their assets efficiently since there is money just sitting. That money could be used for financing new operations for the company. If for some reason a company has high quick ratio we can determine that there is unused money or the company is bad at collecting their account receivables for example.

1.4. Valuation Ratios

Valuation ratio indicates the valuation of the company, meaning that it shows what the company is worth. All of the information that is gathered from the company and converted into financial ratios can be used to determine the worth of the company, but valuation ratios give us a simplified valuation that can be easily compared and analyzed.

1.4.1. Price to Earnings ratio

P/E is the most commonly used investment valuation ratio. It gives a simple yet accurate data from the company. The formula for calculating this is, Market price / EPS. EPS stands for Earning Per Share and that is calculated by Net Income / Shares outstanding. P/E ratio indicates how much an investor is paying for every 1 euro of earnings. With this simplified ratio you a compared with other company's and determine most suitable. Although this ratio gives us a clue about how the company is doing we need to analyses more financial ratios to analyses the company as a whole and to forecast its future.

$$Price\ to\ earnign\ ratio = \frac{Market\ price}{Earnings\ per\ share} \quad (8)$$

1.4.2. Price-to-book-value

Price-to-book-value also known as P/B ratio is used to the compare value of a company between the book value and the market value. It determines is company over or undervalued. Calculated by, Market price per share / Book value per share. Book value per share is calculated by (Total assets – Total liabilities) / number of shares outstanding.

P/B ratios give understanding if you are paying too much for the company if it goes bankrupt since the company would be liquidated and if its overvalued by P/B ratio of 0.8 means for every 1 euro invested would be 0.8 euros earnings back. "Since the publication of Fama and French's (1993) seminal paper – which attempts to explain the previously documented value effect (the over (under) performance of high (low) book-price stocks) and size effect (the outperformance of small market capitalization stocks) – the debate over whether the book-price (B/P) ratio represents a risk factor, or is attributable to mispricing, has become one of the most contentious issues in the finance literature" (Foye, James; Mramor, Dusan (20 May 2016). The argument that is P/B ratio a risk factor or more mispricing of the prices in book value, is a valid research question to be answered.

$$Price\ to\ book\ value = \frac{Market\ price\ per\ share}{Book\ value\ per\ share} \quad (9)$$

2. TELECOMMUNICATION INDUSTRY OVERVIEW

Telecommunication as an industry in today's market faces multiple challenges to succeed, as telecommunication is connected to the fast developing market and the fast development of technology. "The telecommunication services market, which includes both wireline and wireless services, is one of the most profitable segments of the IT industry" (Statista.com). In the year 2015, all global telecommunication provides generated 1,1 trillion revenues, about a quarter of that, was generated in Europe. This shows great potential in this region for those companies, since 4 biggest telecommunications companies are in other continents. Those 4 are AT&T, Verizon, China Mobile, and NTT. These companies' revenue is much higher compared to Elisa or Telia since they operate mainly in Scandinavian countries. The leaders in Europe's market are Deutsche Telekom, Telefonica, and Vodafone, these being the largest revenue in 2016, with combined revenue almost at 200 billion euros. German company Deutsche Telekom is the largest and most profitable telecommunication operator in Europe, generating almost 70 million euros in revenues in 2015. Deutsche Telekom is also one of the largest companies in the world, with a market value of approximately 83.3 billion U.S. dollars (Statista.com). These three are also in the top 30 largest telecommunication companies, so benchmarking Telia and Elisa to these vastly larger companies would be beneficial, but I will be comparing benchmarking Return on Equity and Return on Assets only. These 2 ratios give us an idea without their size affecting that much. Companies have to be on top of their game to succeed. But although all these challenges faced by telecommunication companies, Finland is a country where these kinds of companies thrive, since Finland is a liberal and fast developing country in the sense of telecommunications. Finland is one of the best European countries to have developed this great infrastructure in their telecommunications. "When comparing the use and penetration of telecommunications services in the Nordic and Baltic countries in 2015, Finland is still the leading country in several statistics on mobile services. For instance, the volume of data transferred over mobile networks per capita is much higher in Finland than in other Nordic and Baltic countries (FCRA, 2016). This is said by the Finnish communication regulatory authority, there we can conclude that Finland great platform for these companies.

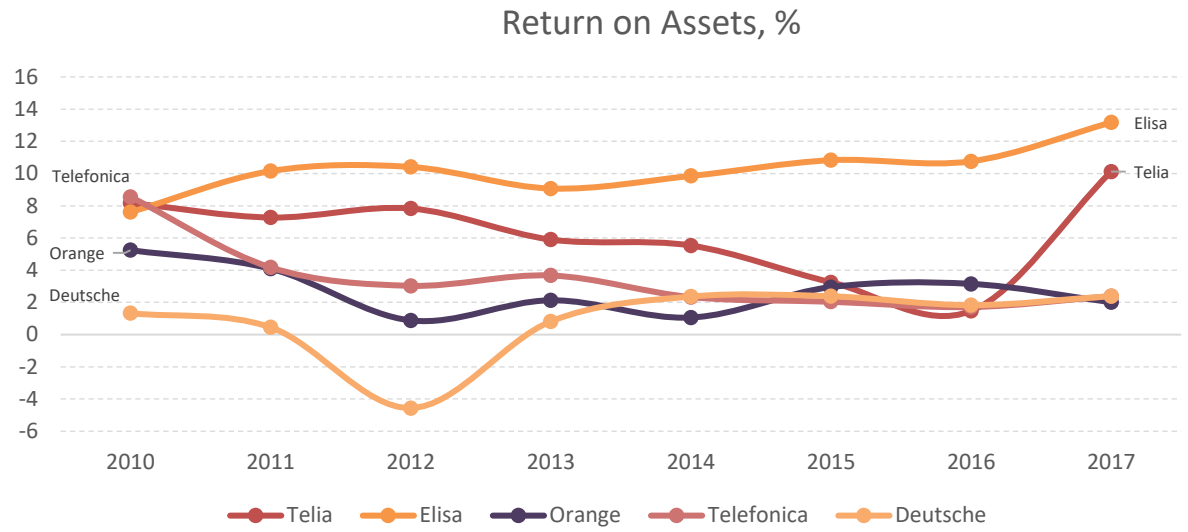

Figure 1. Return on assets
Sources: Morningstar, author calculations

With Return on the asset, we can measure how profitable these companies are relative to the asset that they own or control. Since ROA should be compared with companies within the same industry. The above table shows the ROA's of three largest telecommunication companies in Europe and my research companies Telia and Elisa. My chosen two companies are smaller in size, yet the results on the table show us that the smallest of the companies, that being Elisa is dominating with its ROA. It's fairly stable over the years and actually over the last year has increased tremendously. ROA being so high with almost 14% last year of Elisa doesn't mean it doing better than the other companies, ROA doesn't give us the whole picture, but it does tell that the management of the assets of Elisa is managed more efficiently than the others. To get more in-depth data on why is this we should do a component analysis of ROA for all these companies, but I will only be doing that to Telia and Elisa since that's what this research is for. For the component analysis for Telia and Elisa, we can evaluate which one is managing their assets more efficiently.

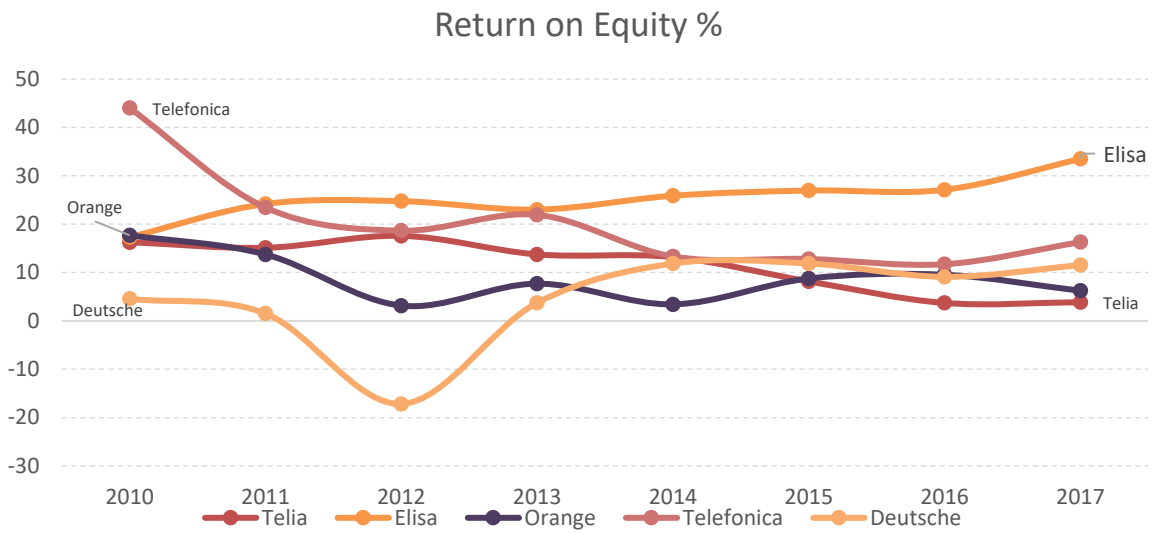

Figure 2. Return on equity
Sources: Morningstar, author calculations

Return on Equity tells how much profit is made by the company relative to its shareholder's equity and its a good indicator for an investor to see which company to invest. From the above table, we can see that all of the companies are again at the same levels for most of the part but Elisa once again having the highest ratio. To get more detailed data and answer we can also do a component analysis of this, but I am only doing it to Elisa and Telia just like with ROA. The financial performance of Elisa compared to others is much higher on average, we can see that the company is managed great. In both tables, ROA and ROE of the largest company Deutsche Telekom had dropped on the year 2011 to 2012. “We recorded a net loss of around €5.3 billion, primarily due to the recognition of an impairment loss" of €7.4 billion on T-Mobile USA, Deutsche Telekom said in its 2012 annual report. In 2011, it booked a year-end profit of €557 million euros.” (The Local” 2012). This huge telecom company also said that it would affect next years and from the ratio, we can see it being true. But still, this huge company isn’t close to the ratio of Elisa.

2.1. Elisa Oyj overview

Finland leading telecommunication company Elisa Oyj founded in 1882. Elisa operates in both consumer customers and corporate customers segments. The consumer customers segment offers consumers and households with telecommunications services, such as voice and data services. The corporate customer's segment provides voice and data services, ICT solutions, and contact center services to corporate and community customers. As a leader of Finnish telecommunications with

yearly revenue of 1.79 billion in 2017. Elisa is also the number two in Estonian telecommunications. With a market share of 38% in mobile phone networks.

Table 1. Income statement of Elisa Oyj

	2013	2014	2015	2016	2017	2014	2015	2016	2017	2013-2017
Sales	1 547	1 535	1 570	1 636	1 787	*-0.8%*	*2.3%*	*4.2%*	*9.2%*	*15.5%*
Cost of revenue	620	606	609	626	696	*-2.3%*	*0.5%*	*2.8%*	*11.2%*	*12.3%*
Gross profit	928	929	961	1 009	1 092	*0.1%*	*3.4%*	*5.0%*	*8.2%*	*17.7%*
Total oper. exp.	648	628	651	672	716	*-3.1%*	*3.7%*	*3.2%*	*6.5%*	*10.5%*
Operating income	279	301	309	338	375	*7.9%*	*2.7%*	*9.4%*	*10.9%*	*34.4%*
Interest Expense	34	28	24	22	22	*-17.6%*	*-14.3%*	*-8.3%*	*0.0%*	*-35.3%*
Other income	9	4	6	5	50	*-55.6%*	*50.0%*	*-16.7%*	*900%*	*456%*
EBT	255	278	291	320	403	*9.0%*	*4.7%*	*10.0%*	*25.9%*	*58.0%*
Tax	58	55	47	63	66	*-5.2%*	*-14.5%*	*34.0%*	*4.8%*	*13.8%*
Net income	197	225	243	257	337	*14.2%*	*8.0%*	*5.8%*	*31.1%*	*71.1%*
EPS										
Basic	1.3	1.4	1.5	1.6	2.1	*12.8%*	*7.8%*	*5.9%*	*31.1%*	*68.8%*
Diluted	1.3	1.4	1.5	1.6	2.1	*12.8%*	*7.8%*	*5.9%*	*31.1%*	*68.8%*
EBITDA	499	520	535	566	655	*4.2%*	*2.9%*	*5.8%*	*15.7%*	*31.3%*

Sources: Morningstar; author's calculations

In the figure above w can that changes in green indicate a positive change for the company, although the change might be negative if its expenses that is a positive change for Elisa. Elisa has had a good few last years as indicated above, but they have had their expenses increased over the last few years. With average operating expense growth of 3-4%, but that increase in expenses doesn't affect their net income since it been increasing 14-15% each year, the increase has been volatile. But we can conclude that the increase in expenses isn't that correlated to the net income.

2.2. Telia

Telia company AB is the fusion of Swedish Telia and Finnish Sonera, this happened in 2002. Telia offers both fixed and mobile telecommunications services to corporate and consumer customers. Sweden is a major shareholder in the company, although Telias shares are listed on both Sweden and Finland. Both company's Telia and Sonera had a monopoly in their time but now united. National subsidiaries are Telia Finland and Telia Sverige. They had their original names throughout the years after the fusion of these major companies. Nowadays Telias main operations are done in

the Nordic but have now also widely spread all over the globe. Telia Finland the subsidiary of Telia has a market share of 34% respect to Elisa's 38%. This still major part since it's just the Finnish subsidiary.

Table 2. Income statement of Telia

	2013	**2014**	**2015**	**2016**	**2017**	**2014**	**2015**	**2016**	**2017**	**2013-2017**
Sales	1 547	1 535	1 570	1 636	1 787	*-0.8%*	*2.3%*	*4.2%*	*9.2%*	*15.5%*
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Interest Expense	34	28	24	22	22	*-17.6%*	*-14.3%*	*-8.3%*	*0.0%*	*-35.3%*
Other income	9	4	6	5	50	*-55.6%*	*50.0%*	*-16.7%*	*900%*	*456%*
EBT	255	278	291	320	403	*9.0%*	*4.7%*	*10.0%*	*25.9%*	*58.0%*
Tax	58	55	47	63	66	*-5.2%*	*-14.5%*	*34.0%*	*4.8%*	*13.8%*
Net income	197	225	243	257	337	*14.2%*	*8.0%*	*5.8%*	*31.1%*	*71.1%*
EPS										
Basic	1.3	1.4	1.5	1.6	2.1	*12.8%*	*7.8%*	*5.9%*	*31.1%*	*68.8%*
Diluted	1.3	1.4	1.5	1.6	2.1	*12.8%*	*7.8%*	*5.9%*	*31.1%*	*68.8%*
EBITDA	499	520	535	566	655	*4.2%*	*2.9%*	*5.8%*	*15.7%*	*31.3%*

Sources: Morningstar; author's calculations

In the figure above, we can see a lot of red indicates that overall Telia isn't doing so well. Telia expense has gone down 11% on average each year, this absolutely huge number, but still the overall performance of the company is driving down. We would need to get earlier data to determine are the operating expenses have grown for the past 10 years and now they are just doing damage control on what they can. The net income has gone down by a whopping 31% each year, which means the management of expenses is why the company is suffering. Gross profit is decreasing on average 8% each year, but the huge difference in data between gross profit and net income is an indication that operating cost for the company is all time high now. Telia is fixing their expenses at the moment as stated before, but from this, we can forecast at least a few years will be rough for Telia.

3. FINANCIAL ANALYSIS OF STATEMENTS

Telia's total assets are keeping at the same level, but they are going up and down by 5-6% over a few years. In 2014 they made a relatively large investment compared to the year before that, but not big enough for causing the drop in total assets over that year to the next. Most of the assets are non- current assets, meaning that their liquidity ratios suffer because this and an event where they would have a need for huge amounts of cash quickly would be bad since they even have their cash reserves decreased over the years. They had in 2015 huge decrease in assets like gross property, accumulated depreciation, net property, and goodwill, by decreasing these they also have made prepaid pension increasing by a whopping 1200%, we can see it in the liabilities part too that pension has increased almost the same. They have managed to keep their assets same meaning they are managing them well, I will furthermore evaluate how effective are these assets used to generate revenue. Telia had a lot of changes in 2015 those stated above and they got rid of debt in 2014 and then increased its financing by short-debt by 150% and decreasing long-term by 15,8% in 2015 possibly to compensate for those above stated investments. Telia has had a few rough years since shareholders equity has been decreasing over the years, roughly 20%. Meaning Telia isn't favored for an investor to put their money on this company.

For Elisa, there are some minor changes in current assets but still, it kept in the same levels through the years. In total non-current assets, the increase has been steadily increasing over the years, most notable would be gross property increase that is over the years combined almost 20%. It seems the assets are managed well considering the balance sheet, but cannot be determined by with balance sheet alone, that's why we will take data from the balance sheet to go into detail. Stockholders equity has increased over the years, so this shows financial health for Elisa is positive. Comparing it to Telia which had a huge decrease in shareholder equity, shows that from purely from these two financial statements we conclude that Elisa is in better financial health and has better financial performance

Table 3. Telia balance sheet

	2012	2013	2014	2015	2016	2013	2014	2015	2016	2013-17
Cash and cash equivalents	29 805	31 721	28 735	14 647	14 510	6%	-9%	-49%	-1%	-51%
Short-terminvestments	163	351	3 145	5 635	5 660	115%	796%	79%	0%	3372%
Total cash	29 968	32 072	31 880	20 282	20 170	7%	-1%	-36%	-1%	-33%
Receivables	13 509	11 856	11 724	10 549	9 676	-12%	-1%	-10%	-8%	-28%
Inventories	1 623	1 582	1 779	1 871	1 792	-3%	12%	5%	-4%	10%
Other current assets	12 273	13 452	16 261	47 465	42 317	10%	21%	192%	-11%	245%
Total current assets	57 373	58 962	61 644	80 167	73 955	3%	5%	30%	-8%	29%
Gross property	216 403	221 527	231 975	197 050	199 009	2%	5%	-15%	1%	-8%
Accumulated Depreciation	-153 746	-156 735	-162 305	-141 956	-140 902	2%	4%	-13%	-1%	-8%
Net property	62 657	64 792	69 669	55 093	58 107	3%	8%	-21%	5%	-7%
Goodwill	69 162	67 313	70 895	54 938	57 923	-3%	5%	-23%	5%	-16%
Intangible assets	14 116	14 209	15 266	12 995	13 024	1%	7%	-15%	0%	-8%
Deferred income taxes	6 722	5 493	5 955	5 054	4 366	-18%	8%	-15%	-14%	-35%
Prepaid pension benefit	1 571	1 551	289	3 773	3 380	-1%	-81%	1206%	-10%	115%
Other long-term assets	42 740	40 508	48 348	41 997	42 675	-5%	19%	-13%	2%	0%
Total non-current assets	196 968	193 866	210 422	173 850	179 475	-2%	9%	-17%	3%	-9%
Total assets	**254 341**	**252 828**	**272 066**	**254 017**	**253 430**	**-1%**	**8%**	**-7%**	**0%**	**0%**
Short-term debt	8 585	7 848	3 568	9 259	3 059	-9%	-55%	160%	-67%	-64%
Capital leases	3	3	10	7	10	0%	233%	-30%	43%	233%
Accounts payable	10 433	11 691	10 644	8 685	6 610	12%	-9%	-18%	-24%	-37%
Taxes payable	247	355	571	85	19	44%	61%	-85%	-78%	-92%
Other current liabilities	16 291	16 771	22 746	24 605	47 128	3%	36%	8%	92%	189%
Total current liabilities	35 559	36 668	37 539	42 641	56 826	3%	2%	14%	33%	60%
Long-term debt	62 226	58 860	61 292	51 607	43 067	-5%	4%	-16%	-17%	-31%
Capital leases	62	56	62	46	221	-10%	11%	-26%	380%	256%
Deferred taxes liabilities	10 758	10 063	10 840	10 627	10 567	-6%	8%	-2%	-1%	-2%
Pensions and other benefits	1 209	1 468	3 505	1 824	2 109	21%	139%	-48%	16%	74%
Minority interest	3 956	4 610	4 981	4 318	5 036	17%	8%	-13%	17%	27%
Other long-term liabilities	27 175	28 169	37 483	40 752	40 735	4%	33%	9%	0%	50%
Total non-current liabilities	105 386	103 226	118 163	109 174	101 735	-2%	14%	-8%	-7%	-3%
Total liabilities	**140 945**	**139 894**	**155 702**	**151 815**	**158 561**	**-1%**	**11%**	**-2%**	**4%**	**12%**
Additional paid-in capital	35 444	35 474	35 486	35 496	35 520	0%	0%	0%	0%	0%
Accumulated other comprehensive income	73 996	72 850	75 897	62 388	54 313	-2%	4%	-18%	-13%	-27%
Total stockholders' equity	**109 440**	**108 324**	**111 383**	**97 884**	**89 833**	**-1%**	**3%**	**-12%**	**-8%**	**-18%**
Total liabilities and stockholders' equity	250 385	248 218	267 085	249 699	248 394	-1%	8%	-7%	-1%	-1%

Sources: Morningstar; author’s calculations

Table 4. Elisa Oyj balance sheet

	2013	2014	2015	2016	2017	2014	2015	2016	2017	2014-17
Total cash	138	41	29	45	44	-70%	-29%	55%	-2%	-68%
Receivables	284	285	296	310	346	0%	4%	5%	12%	22%
Inventories	56	53	55	55	68	-5%	4%	0%	24%	21%
Prepaid expenses	25	24	22	28	47	-4%	-8%	27%	68%	88%
Other current assets	24	24	15	202	15	0%	-38%	1247%	-93%	-38%
Total current assets	526	428	418	639	521	-19%	-2%	53%	-18%	-1%
Gross property	3125	3257	3387	3576	3776	4%	4%	6%	6%	21%
Accumulated Depreciation	-2412	-2565	-2709	-2862	-3018	6%	6%	6%	5%	25%
Net property	714	692	677	714	758	-3%	-2%	5%	6%	6%
Goodwill	832	832	830	880	1014	0%	0%	6%	15%	22%
Intangible assets	143	137	135	160	177	-4%	-1%	19%	11%	24%
Deferred income taxes	14	14	23	25	17	0%	64%	9%	-32%	21%
Other long-term assets	96	142	164	116	94	48%	15%	-29%	-19%	-2%
Total non-current assets	1798	1816	1829	1894	2059	1%	1%	4%	9%	15%
Total assets	**2324**	**2243**	**2247**	**2533**	**2580**	**-3%**	**0%**	**13%**	**2%**	**11%**
Short-term debt	274	220	301	338	174	-20%	37%	12%	-49%	-36%
Capital leases	5	4	4	3	4	-20%	0%	-25%	33%	-20%
Accounts payable	138	115	124	150	194	-17%	8%	21%	29%	41%
Taxes payable	0	2	1	1	1	200%	-50%	0%	0%	100%
Other current liabilities	142	134	137	160	162	-6%	2%	17%	1%	14%
Total current liabilities	560	476	569	652	534	-15%	20%	15%	-18%	-5%
Long-term debt	799	791	662	805	917	-1%	-16%	22%	14%	15%
Capital leases	30	27	24	22	22	-10%	-11%	-8%	0%	-27%
Deferred taxes liabilities	21	21	23	28	24	0%	10%	22%	-14%	14%
Deferred revenues	6	6	5	5	5	0%	-17%	0%	0%	-17%
Pensions and other benefits	14	18	16	17	16	29%	-11%	6%	-6%	14%
Minority interest	2	1	1	1	1	-50%	0%	0%	0%	-50%
Other long-term liabilities	-832	-853	-904	-940	-1017	3%	6%	4%	8%	22%
Total non-current liabilities	40	10	-174	-61	-33	-75%	-1840%	-65%	-46%	-183%
Total liabilities	**1464**	**1365**	**1321**	**1562**	**1541**	**-7%**	**-3%**	**18%**	**-1%**	**5%**
Total stockholders' equity	**860**	**878**	**925**	**971**	**1040**	**2%**	**5%**	**5%**	**7%**	**21%**
Total liabilities and equity	2324	2243	2247	2533	2580	-3%	0%	13%	2%	11%

Sources: Morningstar; author’s calculations

3.1. Financial ratios analysis

From the figure above, we can see that Telia has had an increase in Cost of goods sold for a few years now, they have increased 10% in the last 10 years. Which has influenced gross margin since it has gone down, Telia have sold, general and administrate expenses taking a large part of the gross margin, although it has decreased. Research and development are on minimal, no major investments on, which can be a bad sign since the industry is fast developing.

Table 5. Telia margins

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Revenue	100	100	100	100	100	100	100	100	100
COGS	56.25	55.85	55.85	53.93	54.73	55.63	56.82	59.56	60.94
Gross Margin	43.75	44.15	44.15	46.07	45.27	44.37	43.18	40.44	39.06
SG&A	25.23	23.38	21.72	23.26	22.41	22.46	21.88	23.03	23.13
R&D	—	1.14	0.92	0.75	0.48	0.36	0.29	0.28	0.17
Operating Margin	19.16	18.15	27.78	29.92	22.74	14.48	19.88	17.2	16.08
Net Int Inc & Other	7.05	7.35	-2.48	-1.93	2.9	8.86	1.09	1.55	-2.57
EBTMargin	26.21	25.5	25.3	27.98	25.64	23.34	20.98	18.75	13.51

Sources: Morningstar; author's calculations

Table 6. Elisa Oyj margins

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Revenue	100	100	100	100	100	100	100	100	100	100
COGS	43.9	40.3	41	42.1	42.2	40.1	39.5	38.8	38.3	38.9
Gross Margin	56.1	59.7	59	58	57.8	59.9	60.5	61.2	61.7	61.1
SG&A	10.9	13.2	—	0.03	—	0.04	0.03	0.04	0.04	0.03
R&D	—	—	—	—	—	—	—	—	—	—
Operating Margin	17.8	18.7	18.3	19.1	19.2	18	19.5	19.7	20.6	21
Net Int Inc & Other	-2.48	-2.28	-4.85	-1.8	-1.59	-1.39	-	1.08	1.56	
EBTMargin	15.3	16.4	13.5	17.3	17.3	16.5	18.1	18.5	19.6	22.6

Sources: Morningstar; author's calculations

From the figure above, we can conclude Elisa has their Gross margin increased over the years, it has increased by 6%, compared to Telia they have cost of goods sold managed more efficiently since they have driven the numbers down by 5%. Elisa has very low amounts of selling general and administrate expenses and research and development. This could be because they have different accounting principles since most of the gross margin is in other. since we can't tell from the figure above specifically where they have the cost. These to figures cannot be compared

because the data is inaccurate. But we can conclude from the earnings before taxes that Elisa is more favorable from the 2 companies. Tax regulatory is almost the same in the two countries.

Table 7. Telia efficiency

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Days Sales Outstanding	85.0	84.7	81.4	77.9	78.4	62.6	45.5	42.6	47.0	43.9
Days Inventory	7.29	9.10	9.65	9.33	9.19	9.68	10.1	10.6	12.6	13.2
Payble Period	164.9	174.6	165.6	159.4	154.6	105.7	69.8	70.2	66.8	55.1
Cash Conv. Cycle	-72.6	-80.8	-74.5	-72.2	-67.0	-33.5	-14.1	-17.0	-7.26	1.97
Receivables Turnover	4.29	4.31	4.48	4.69	4.65	5.83	8.02	8.57	7.77	8.32
Inventory Turnover	50.1	40.1	37.8	39.1	39.7	37.7	36.1	34.6	28.9	27.7
Fixed Assets Turnover	1.91	1.81	1.19	1.19	1.77	1.72	1.60	1.50	1.39	1.49
Asset Turnover	0.46	0.43	0.41	0.41	0.41	0.41	0.40	0.39	0.33	0.33

Sources: Morningstar; author's calculations

Table 8. Elisa Oyj efficiency

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Days Sales Outstanding	92.77	76.2	70.03	69.9	67.84	65.87	67.58	67.56	67.6	66.98
Days Inventory	14.04	16.8	21.25	22.4	27.74	33.83	32.73	32.37	32	32.35
Payble Period	118.7	164	165.4	153	107.7	77.9	76.39	71.69	79.9	90.28
Cash Conv. Cycle	-11.9	-71.3	-74.1	-61	-12.12	21.8	23.92	28.23	19.7	9.05
Receivables Turnover	3.93	4.79	5.21	5.22	5.38	5.54	5.4	5.4	5.4	5.45
Inventory Turnover	25.99	21.8	17.17	16.3	13.16	10.79	11.15	11.28	11.4	11.28
Fixed Assets Turnover	2.34	2.29	2.38	2.49	2.52	2.33	2.18	2.29	2.35	2.43
Asset Turnover	0.71	0.72	0.74	0.77	0.77	0.71	0.67	0.70	0.68	0.70

Sources: Morningstar; author's calculations

Above tables shows that Elisa is managing their cash conversion cycle better since their data from above tables are much better and they even have greatly improved it over years. Telias numbers aren't bad but comparing these two indicates that Telias management isn't as efficient as Elisa. It takes Elisa half the days to convert resource inputs into cash flows compared to Telia. This shows great management from Elisa and that they are managing their assets and resources well, and we can look that even deeper when we compare these two company's other ratios such as RoA and RoE. With these ratios and Return on Equity and Return on Assets, we can analyze how much more efficiently Elisa is managed compared to Telia.

3.2. Component analysis

We can analyze RoE and RoA more in-depth by dividing them into components, I am going to divide RoA into two components Return on sales and Asset turnover and RoE also into those two and also including leverage ratio also known as equity multiplier. This gives us an understanding of what values increase or decrease these two ratios and from there we can evaluate which of the companies are managed better. Firstly, covering RoA's component analysis then proceeding into RoE component analysis which is also known by Du Pont analysis. "According to DuPont analysis, ROE is affected by three things: operating efficiency, which is measured by profit margin; asset use efficiency, which is measured by total asset turnover; and financial leverage, which is measured by the equity multiplier." (Investopedia.com). From these components, we can analyze if operating efficiency, asset use efficiency or financial leverage is the reason for the change is the ratio.

Table 9. Elisa Oyj Du Pont analysis

	2013	**2014**	**2015**	**2016**	**2017**
Net income	197	225	243	257	337
Sales	1 547	1 535	1 570	1 636	1 787
ROS	13.0%	15.0%	15.0%	16.0%	19.0%
Sales	1 547	1 535	1 570	1 636	1 787
Assets	2 324	2 243	2 247	2 533	2 580
Assets turnover	67.0%	68.0%	70.0%	65.0%	69.0%
Assets	2 324	2 243	2 247	2 533	2 580
Equity	860	878	925	971	1 004
Leverage ratio	2.7	2.55	2.43	2.61	2.57
RoA	8.5%	10.0%	10.8%	10.1%	13.1%
RoE	22.9%	25.6%	26.3%	26.5%	33.6%

Sources: Morningstar; author's calculations

From this component analysis, we can see the data that affects the changes in RoA and RoE since Leverage ratio and Return on sales are almost same for both companies, the reason for Elisa higher ratios is asset turnover being almost double to that of Telias. Meaning for assets they are generating revenue almost double, so their financial performance is much higher than Telias. For telecommunication companies, the asset turnover ratios are usually lower than in other industries since they have large amounts of assets compared to sales, but the difference in these two is huge. That can easily be seen in Rome and RoE, but I wanted to find out even more from these two. Asset turnover being the main difference in the components we can analyze that even further. Since

there are two factors in that formula Sales / Assets, we can analyze which one of these two is the reason for the large difference, for this, we can take a look back at the financial statements.

Table 10. Telia Du Pont analysis

	2013	2014	2015	2016	2017
Net income	14 970	14 502	8 551	3 732	9 608
Sales	101 700	101 060	86 570	84 178	79 867
ROS	15.0%	14.0%	10.0%	4.0%	12.0%
Sales	101 700	101 060	86 570	84 178	79 867
Assets	252 828	272 066	254 017	253 430	243 845
Assetturnover	40.0%	37.0%	34.0%	33.0%	33.0%
Assets	252 828	272 066	254 017	253 430	243 845
Equity	108 324	111 383	97 884	89 833	99 970
Leverageratio	2.33	2.44	2.6	2.82	2.44
RoA	5.9%	5.3%	3.4%	1.5%	3.9%
RoE	13.8%	13.0%	8.7%	4.2%	9.6%

Sources: Morningstar; author's calculations

We can see from then that the sales for Elisa are steadily increasing, but Telias are decreasing even more. The decrease in sales is the impact of an investigation of corrupt payments by Telia. "Telia Co AB agreed to pay penalties of at least $965 million to U.S. and international authorities to resolve a long-running investigation into corrupt payments involving telecom contracts in Uzbekistan. The settlement, resulting from negotiations that started months before President Donald Trump was elected, is the first major foreign corruption case brought under his administration. The resolution is likely to be examined closely by white-collar defense lawyers looking for signs of a change of approach to enforcement of the Foreign Corrupt Practices Act, which Trump has criticized as a "horrible law" that put U.S. companies at a "huge disadvantage." "(Kim McLaughlin, 2017). Now there is a question, is Telia managed poorly or has this scandal actually the reason for the seemingly low ratios? Factors impacting Telia's Q3 2017 performance include the investigation into the company's actions in Uzbekistan by US and Dutch authorities. A settlement was agreed in September this year where Telia agreed to pay a global resolution sanction of USD965 million. The group's total number of subscribers fell from 26.8 million at 30 September 2016 to 23.3 million a year later (telegeography.com). So naturally, if their subscribers base falls off by over 3 million, it would affect sales by a lot. So everything affecting these ratios could be traced to this scandal since none of the other components aren't affecting since they are

on the same levels as Elisa, we can conclude that the sales decrease is the reason why these ratios look better for Elisa. The truth of which company has better management isn't so clear anymore.

Conclusion

The aim of this study was to evaluate the differences in two major telecommunication companies Telia and Elisa by using data found in their financial statements. To evaluate the financial performance of both companies and finding out how well each company manages their assets and resources. To furthermore go into detail on both of the company's financial ratios eventually compare them, mainly using Return on assets and Return on equity.

First take into account few major telecommunication companies from Europe Deutsche Telekom, Telefonica, and Orange and analyze their differences in Return on assets and Return on equity, we saw that Elisa was way above the competition. Telia was on the same levels like the other companies. Secondly to compare which one of the companies are using their financial assets and resources more efficiently. Made by using their financial statements mainly balance sheet and income statement, going over the financial statements using horizontal analysis we could determine on which part the company had increases or decreases. From those, we concluded that overall Telia had a decrease in shareholder equity and had their asset decrease in one year, but come back up for the next year. Telia had no significant change in the value of the asset from 2012-2016, they had no growth or no major decreases. In other hand Elisa was looking to be the more financial healthier and performer, as we could see its assets having significant increases of 13% and even had their liabilities decreases by the minor change. Income statement was looking more favorable for Elisa since it had increases in net income steadily over the years. Telia, on the other hand, was struggling since it had its net income decreased by a lot. There were indications that operating expenses weren't managed properly and that's why net income had so major drop. From these, we could analyze Elisa to be the more financial healthier, but we couldn't identify which one of them would be greater financial performance, for this we needed to go into financial ratios.

Looking first at cash conversion cycle Elisa had again better results. Elisa is managing their cash conversion cycle better since their data from Table are much better and they even have greatly improved it over years. Comparing these two indicates that Telias management isn't as efficient as Elisa. It takes Elisa half the days to convert resource inputs into cash flows compared to Telia.

From the component analysis, we could determine and analyze which one of the companies had better financial performance, done by using return on asset and return on equity, taking them into components to determine which is a driver for the ratio. Since Elisa had the better overall Return on assets and Return on equity ratio, I found out the reason for this. Telia and Elisa are very similar when taken into a component of Return on sale, asset turnover ratio and leverage ratio, we could determine which of these were the driver. Return on sales and leverage ratio were almost the same for each of the companies, so the driver had to be asset turnover. Elisa had almost double the asset ratio of Telia, which indicate a lack of management of assets on Telia. "Telia Company today announces that a global settlement has been reached with the U.S. Department of Justice (DOJ), Securities and Exchange Commission (SEC) and the Dutch Public Prosecution Service (Openbaar Ministerie, OM) relating to previously disclosed investigations regarding historical transactions in Uzbekistan. Telia Company has agreed to a total financial sanction of USD 965 million. The global resolution brings an end to all known corruption-related investigations or inquiries into Telia Company" (Telia company, 2017). Founding out that they investigation going on, that could have been the reason for the decreases in sales and net income, where sales are the driver for asset turnover which causes the major differences in the company's Return on assets and Returns on equity. Although Telia had increased its financial performance in 2017 significantly, we can determine for the analyzed period Elisa was clearly performing better and were financially healthier.

Now that we have analyzed these two companies we can get back to the hypothesis which was, Elisa will outperform Telia in the future as it has the ability to adapt to this rapidly developing industry. From the analysis, we can see that Elisa has outperformed Telia in almost every way and its future seems great, long as they are able to keep up with the rapidly developing industry. Since they are competitors in Finland telecommunication market we can conclude for now that it is harder for big company multinational company like Telia to adapt and perform in Finlands telecommunication market. "The foundation is superior network connectivity. This means that we secure a network that can transport massive data volumes with high quality and our investments are steered towards modern technologies such as fiber and 4G. We are also developing 5G together with our industry partners and have started to virtualize our network and drive the software-defined networks" (Telia annual report, 2017). This was stated in Telia's annual report which indicates Telia is focusing next-generation network called 5G. That is the logical way to adapt to the company. "The next stage of mobile technology, 5G, is almost here. At the end of the year, we

were the first operator in Finland to introduce a very fast (Gbit/s) mobile data connection in our network in Tampere and downtown Helsinki." (Elisa annual report 2017). But as we can see that Elisa has the same plans for the future as Telia, but they have already succeeded in taking the next step. This also Indicates that the hypothesis was right as Elisa would outperform and adapt better than Telia. It would be different research if we would have compared only the Finnish subsidiary of Telia and also Elisa, it would have been also interesting to see. And if in that research it would have been clear that Elisa would also be outperforming we could assume that there are bigger problems in Telia's business model or management.

Telias increase in net income could mean they are getting over that investigation that had a huge impact on the company. Elisa is on the right track for the future, if they manage to grow with the same way they could become even more major market holder in Finland's telecommunication market. This study should be done in a few years again to determine whether or not Telia is getting back on track or are there actually some major problems in the company's management. Since we can't say for sure will they increase their net income over the next years? It would be interesting to see these two competitors and how they match each other in the oncoming years.

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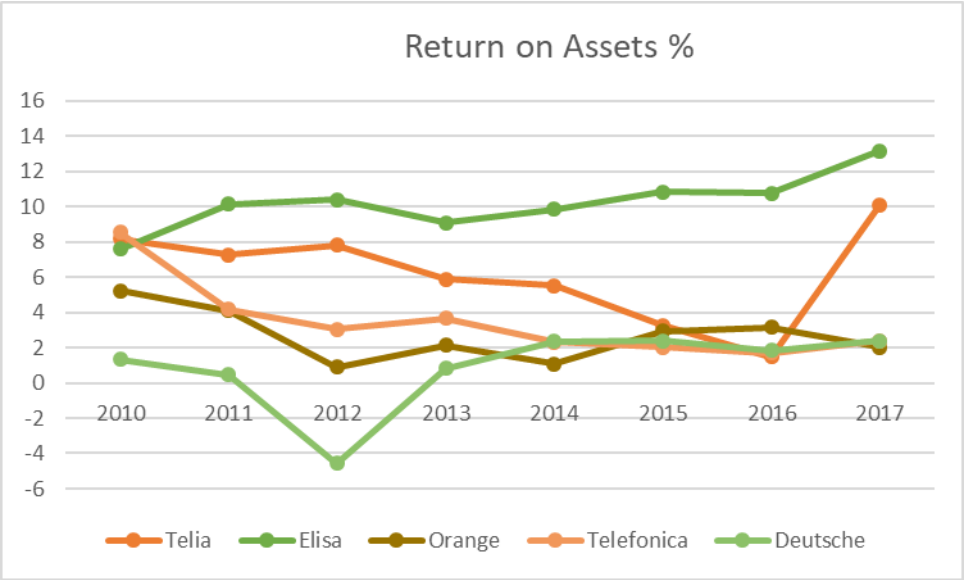
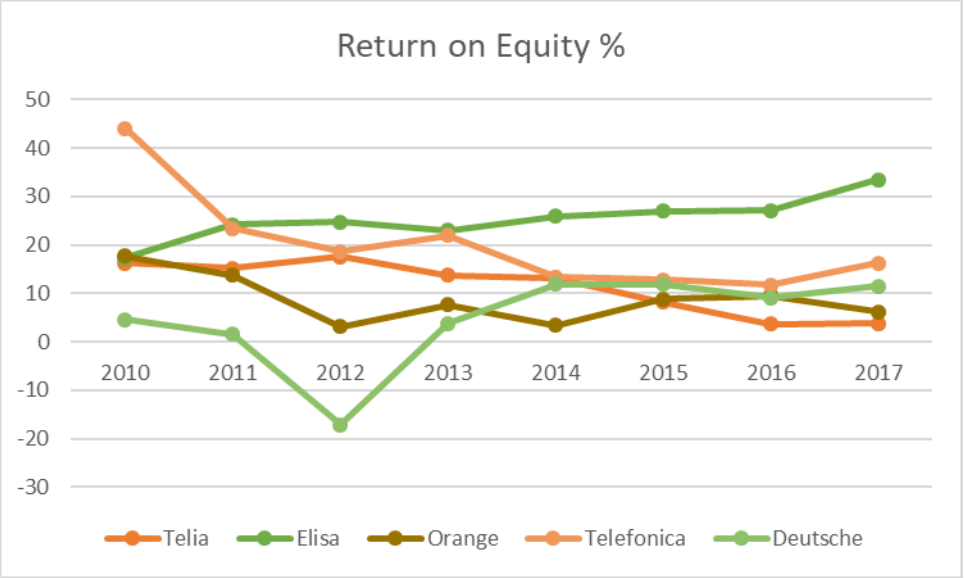
APPENDICES

1. *Appendix Return on Assets*



Source: Morningstar

2. Appendix Return on Equity



Source: Morningstar

3. Appendix Income statement of Elisa Oyj

	2013	2014	2015	2016	2017	2014	2015	2016	2017	2013-2017
Sales	1,547	1,535	1,570	1,636	1,787	*-0.8%*	*2.3%*	*4.2%*	*9.2%*	*15.5%*
Cost of revenue	620	606	609	626	696	*-2.3%*	*0.5%*	*2.8%*	*11.2%*	*12.3%*
Gross profit	928	929	961	1,009	1,092	*0.1%*	*3.4%*	*5.0%*	*8.2%*	*17.7%*
Total oper. exp.	648	628	651	672	716	*-3.1%*	*3.7%*	*3.2%*	*6.5%*	*10.5%*
Operating income	279	301	309	338	375	*7.9%*	*2.7%*	*9.4%*	*10.9%*	*34.4%*
Interest Expense	34	28	24	22	22	*-17.6%*	*-14.3%*	*-8.3%*	*0.0%*	*-35.3%*
Other income	9	4	6	5	50	*-55.6%*	*50.0%*	*-16.7%*	*900%*	*456%*
EBT	255	278	291	320	403	*9.0%*	*4.7%*	*10.0%*	*25.9%*	*58.0%*
Tax	58	55	47	63	66	*-5.2%*	*-14.5%*	*34.0%*	*4.8%*	*13.8%*
Net income	197	225	243	257	337	*14.2%*	*8.0%*	*5.8%*	*31.1%*	*71.1%*
EPS										
Basic	1.3	1.4	1.5	1.6	2.1	*12.8%*	*7.8%*	*5.9%*	*31.1%*	*68.8%*
Diluted	1.3	1.4	1.5	1.6	2.1	*12.8%*	*7.8%*	*5.9%*	*31.1%*	*68.8%*
EBITDA	499	520	535	566	655	*4.2%*	*2.9%*	*5.8%*	*15.7%*	*31.3%*

Source: Morningstar

4. Appendix Income statement of Telia

	2013	2014	2015	2016	2017	2014	2015	2016	2017	2013-2017
Sales	104,898	101,700	101,060	86,569	84,178	*-3.0%*	*-0.6%*	*-14.3%*	*-2.8%*	*-19.8%*
Cost of revenue	58,388	57,883	58,091	52,782	50,691	*-0.9%*	*0.4%*	*-9.1%*	*-4.0%*	*-13.2%*
Gross profit	46,510	43,817	42,969	33,787	33,487	*-5.8%*	*-1.9%*	*-21.4%*	*-0.9%*	*-28.0%*
Total oper. exp.	31,435	23,563	23,690	19,876	19,116	*-25.0%*	*0.5%*	*-16.1%*	*-3.8%*	*-39.2%*
Operating income	15,075	20,254	19,279	13,911	14,371	*34.4%*	*-4.8%*	*-27.8%*	*3.3%*	*-4.7%*
Interest Expense	3,777	3,687	3,310	3,081	2,581	*-2.4%*	*-10.2%*	*-6.9%*	*-16.2%*	*-31.7%*
Other income	13,184	4,801	4,138	859	7,459	*-63.6%*	*-13.8%*	*-79.2%*	*768%*	*-43.4%*
EBT	24,482	21,368	20,107	11,689	19,249	*-12.7%*	*-5.9%*	*-41.9%*	*64.7%*	*-21.4%*
Tax	3,314	4,601	4,508	2,157	2,816	*38.8%*	*-2.0%*	*-52.2%*	*30.6%*	*-15.0%*
Net income	19,886	14,970	14,502	8,551	3,732	*-24.7%*	*-3.1%*	*-41.0%*	*-56.4%*	*-81.2%*
EPS										
Basic	4.6	3.5	3.4	2.0	0.9	*-24.6%*	*-3.2%*	*-41.2%*	*-56.3%*	*-81.3%*
Diluted	4.6	3.5	3.4	2.0	0.9	*-24.6%*	*-3.2%*	*-41.2%*	*-56.3%*	*-81.3%*
EBITDA	48,815	40,285	39,006	36,475	35,492	*-17.5%*	*-3.2%*	*-6.5%*	*-2.7%*	*-27.3%*

Sources: Morningstar

5. Appendix Telia balance sheet

	2012	2013	2014	2015	2016	2013	2014	2015	2016	2013-17
Cash and cash equivalents	29,805	31,721	28,735	14,647	14,510	6%	-9%	-49%	-1%	-51%
Short-terminvestments	163	351	3,145	5,635	5,660	115%	796%	79%	0%	3372%
Total cash	29,968	32,072	31,880	20,282	20,170	7%	-1%	-36%	-1%	-33%
Receivables	13,509	11,856	11,724	10,549	9,676	-12%	-1%	-10%	-8%	-28%
Inventories	1,623	1,582	1,779	1,871	1,792	-3%	12%	5%	-4%	10%
Other current assets	12,273	13,452	16,261	47,465	42,317	10%	21%	192%	-11%	245%
Total current assets	57,373	58,962	61,644	80,167	73,955	3%	5%	30%	-8%	29%
Gross property	216,403	221,527	231,975	197,050	199,009	2%	5%	-15%	1%	-8%
Accumulated Depreciation	-153,746	-156,735	-162,305	-141,956	-140,902	2%	4%	-13%	-1%	-8%
Net property	62,657	64,792	69,669	55,093	58,107	3%	8%	-21%	5%	-7%
Goodwill	69,162	67,313	70,895	54,938	57,923	-3%	5%	-23%	5%	-16%
Intangible assets	14,116	14,209	15,266	12,995	13,024	1%	7%	-15%	0%	-8%
Deferred income taxes	6,722	5,493	5,955	5,054	4,366	-18%	8%	-15%	-14%	-35%
Prepaid pension benefit	1,571	1,551	289	3,773	3,380	-1%	-81%	1206%	-10%	115%
Other long-term assets	42,740	40,508	48,348	41,997	42,675	-5%	19%	-13%	2%	0%
Total non-current assets	196,968	193,866	210,422	173,850	179,475	-2%	9%	-17%	3%	-9%
Total assets	**254,341**	**252,828**	**272,066**	**254,017**	**253,430**	**-1%**	**8%**	**-7%**	**0%**	**0%**
Short-term debt	8,585	7,848	3,568	9,259	3,059	-9%	-55%	160%	-67%	-64%
Capital leases	3	3	10	7	10	0%	233%	-30%	43%	233%
Accounts payable	10,433	11,691	10,644	8,685	6,610	12%	-9%	-18%	-24%	-37%
Taxes payable	247	355	571	85	19	44%	61%	-85%	-78%	-92%
Other current liabilities	16,291	16,771	22,746	24,605	47,128	3%	36%	8%	92%	189%
Total current liabilities	35,559	36,668	37,539	42,641	56,826	3%	2%	14%	33%	60%
Long-term debt	62,226	58,860	61,292	51,607	43,067	-5%	4%	-16%	-17%	-31%
Capital leases	62	56	62	46	221	-10%	11%	-26%	380%	256%
Deferred taxes liabilities	10,758	10,063	10,840	10,627	10,567	-6%	8%	-2%	-1%	-2%
Pensions and other benefits	1,209	1,468	3,505	1,824	2,109	21%	139%	-48%	16%	74%
Minority interest	3,956	4,610	4,981	4,318	5,036	17%	8%	-13%	17%	27%
Other long-term liabilities	27,175	28,169	37,483	40,752	40,735	4%	33%	9%	0%	50%
Total non-current liabilities	105,386	103,226	118,163	109,174	101,735	-2%	14%	-8%	-7%	-3%
Total liabilities	**140,945**	**139,894**	**155,702**	**151,815**	**158,561**	**-1%**	**11%**	**-2%**	**4%**	**12%**
Additional paid-in capital	35,444	35,474	35,486	35,496	35,520	0%	0%	0%	0%	0%
Accumulated other comprehensive income	73,996	72,850	75,897	62,388	54,313	-2%	4%	-18%	-13%	-27%
Total stockholders' equity	**109,440**	**108,324**	**111,383**	**97,884**	**89,833**	**-1%**	**3%**	**-12%**	**-8%**	**-18%**
Total liabilities and stockholders' equity	250,385	248,218	267,085	249,699	248,394	-1%	8%	-7%	-1%	-1%

Source: Morningstar

6. Appendix Elisa balance sheet

	2013	2014	2015	2016	2017	2014	2015	2016	2017	2014-17
Total cash	138	41	29	45	44	-70%	-29%	55%	-2%	-68%
Receivables	284	285	296	310	346	0%	4%	5%	12%	22%
Inventories	56	53	55	55	68	-5%	4%	0%	24%	21%
Prepaid expenses	25	24	22	28	47	-4%	-8%	27%	68%	88%
Other current assets	24	24	15	202	15	0%	-38%	1247%	-93%	-38%
Total current assets	526	428	418	639	521	-19%	-2%	53%	-18%	-1%
Gross property	3125	3257	3387	3576	3776	4%	4%	6%	6%	21%
Accumulated Depreciation	-2412	-2565	-2709	-2862	-3018	6%	6%	6%	5%	25%
Net property	714	692	677	714	758	-3%	-2%	5%	6%	6%
Goodwill	832	832	830	880	1014	0%	0%	6%	15%	22%
Intangible assets	143	137	135	160	177	-4%	-1%	19%	11%	24%
Deferred income taxes	14	14	23	25	17	0%	64%	9%	-32%	21%
Other long-term assets	96	142	164	116	94	48%	15%	-29%	-19%	-2%
Total non-current assets	1798	1816	1829	1894	2059	1%	1%	4%	9%	15%
Total assets	**2324**	**2243**	**2247**	**2533**	**2580**	**-3%**	**0%**	**13%**	**2%**	**11%**
Short-term debt	274	220	301	338	174	-20%	37%	12%	-49%	-36%
Capital leases	5	4	4	3	4	-20%	0%	-25%	33%	-20%
Accounts payable	138	115	124	150	194	-17%	8%	21%	29%	41%
Taxes payable	0	2	1	1	1	200%	-50%	0%	0%	100%
Other current liabilities	142	134	137	160	162	-6%	2%	17%	1%	14%
Total current liabilities	560	476	569	652	534	-15%	20%	15%	-18%	-5%
Long-term debt	799	791	662	805	917	-1%	-16%	22%	14%	15%
Capital leases	30	27	24	22	22	-10%	-11%	-8%	0%	-27%
Deferred taxes liabilities	21	21	23	28	24	0%	10%	22%	-14%	14%
Deferred revenues	6	6	5	5	5	0%	-17%	0%	0%	-17%
Pensions and other benefits	14	18	16	17	16	29%	-11%	6%	-6%	14%
Minority interest	2	1	1	1	1	-50%	0%	0%	0%	-50%
Other long-term liabilities	-832	-853	-904	-940	-1017	3%	6%	4%	8%	22%
Total non-current liabilities	40	10	-174	-61	-33	-75%	-1840%	-65%	-46%	-183%
Total liabilities	**1464**	**1365**	**1321**	**1562**	**1541**	**-7%**	**-3%**	**18%**	**-1%**	**5%**
Total stockholders' equity	**860**	**878**	**925**	**971**	**1040**	**2%**	**5%**	**5%**	**7%**	**21%**
Total liabilities and equity	2324	2243	2247	2533	2580	-3%	0%	13%	2%	11%

Source: Morningstar

7. Appendix Telia Margins

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Revenue	100	100	100	100	100	100	100	100	100
COGS	56.25	55.85	55.85	53.93	54.73	55.63	56.82	59.56	60.94
Gross Margin	43.75	44.15	44.15	46.07	45.27	44.37	43.18	40.44	39.06
SG&A	25.23	23.38	21.72	23.26	22.41	22.46	21.88	23.03	23.13
R&D	—	1.14	0.92	0.75	0.48	0.36	0.29	0.28	0.17
Operating Margin	19.16	18.15	27.78	29.92	22.74	14.48	19.88	17.2	16.08
Net Int Inc & Other	7.05	7.35	-2.48	-1.93	2.9	8.86	1.09	1.55	-2.57
EBTMargin	26.21	25.5	25.3	27.98	25.64	23.34	20.98	18.75	13.51

Source: Morningstar

8. Appendix Elisa Margins

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Revenue	100	100	100	100	100	100	100	100	100	100
COGS	43.93	40.3	41.02	42.1	42.2	40.06	39.48	38.8	38.3	38.92
Gross Margin	56.07	59.7	58.98	58	57.8	59.94	60.52	61.2	61.7	61.08
SG&A	10.94	13.2	—	0.03	—	0.04	0.03	0.04	0.04	0.03
R&D	—	—	—	—	—	—	—	—	—	—
Operating Margin	17.81	18.7	18.32	19.1	19.19	18.04	19.48	19.71	20.6	21
Net Int Inc & Other	-2.48	-2.28	-4.85	-1.8	-1.59	-1.39	-	1.08	1.56	
EBTMargin	15.33	16.4	13.47	17.3	17.31	16.45	18.09	18.52	19.6	22.56

Source: Morningstar

9. Appendix Telia effiency

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Days Sales Outstanding	85.0	84.7	81.4	77.9	78.4	62.6	45.5	42.6	47.0	43.9
Days Inventory	7.29	9.10	9.65	9.33	9.19	9.68	10.1	10.6	12.6	13.2
Payble Period	164.9	174.6	165.6	159.4	154.6	105.7	69.8	70.2	66.8	55.1
Cash Conv. Cycle	-72.6	-80.8	-74.5	-72.2	-67.0	-33.5	-14.1	-17.0	-7.26	1.97
Receivables Turnover	4.29	4.31	4.48	4.69	4.65	5.83	8.02	8.57	7.77	8.32
Inventory Turnover	50.1	40.1	37.8	39.1	39.7	37.7	36.1	34.6	28.9	27.7
Fixed Assets Turnover	1.91	1.81	1.19	1.19	1.77	1.72	1.60	1.50	1.39	1.49
Asset Turnover	0.46	0.43	0.41	0.41	0.41	0.41	0.40	0.39	0.33	0.33

Source: Morningstar

10. Appendix Elisa effiency

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Days Sales Outstanding	92.77	76.2	70.03	69.9	67.84	65.87	67.58	67.56	67.6	66.98
Days Inventory	14.04	16.8	21.25	22.4	27.74	33.83	32.73	32.37	32	32.35
Payble Period	118.7	164	165.4	153	107.7	77.9	76.39	71.69	79.9	90.28
Cash Conv. Cycle	-11.9	-71.3	-74.1	-61	-12.12	21.8	23.92	28.23	19.7	9.05
Receivables Turnover	3.93	4.79	5.21	5.22	5.38	5.54	5.4	5.4	5.4	5.45
Inventory Turnover	25.99	21.8	17.17	16.3	13.16	10.79	11.15	11.28	11.4	11.28
Fixed Assets Turnover	2.34	2.29	2.38	2.49	2.52	2.33	2.18	2.29	2.35	2.43
Asset Turnover	0.71	0.72	0.74	0.77	0.77	0.71	0.67	0.70	0.68	0.70

Source: Morningstar

11. Appendix Elisa Du pont analysis

	2013	2014	2015	2016	2017
Net income	197	225	243	257	337
Sales	1,547	1,535	1,570	1,636	1,787
ROS	13.0%	15.0%	15.0%	16.0%	19.0%
Sales	1,547	1,535	1,570	1,636	1,787
Assets	2,324	2,243	2,247	2,533	2,580
Assets turnover	67.0%	68.0%	70.0%	65.0%	69.0%
Assets	2,324	2,243	2,247	2,533	2,580
Equity	860	878	925	971	1,004
Leverage ratio	2.7	2.55	2.43	2.61	2.57
RoA	8.5%	10.0%	10.8%	10.1%	13.1%
RoE	22.9%	25.6%	26.3%	26.5%	33.6%

Source: Morningstar

12. Appendix Telia Du pont analysis

	2013	2014	2015	2016	2017
Net income	14,970	14,502	8,551	3,732	9,608
Sales	101,700	101,060	86,570	84,178	79,867
ROS	15.0%	14.0%	10.0%	4.0%	12.0%
Sales	101,700	101,060	86,570	84,178	79,867
Assets	252,828	272,066	254,017	253,430	243,845
Assetturnover	40.0%	37.0%	34.0%	33.0%	33.0%
Assets	252,828	272,066	254,017	253,430	243,845
Equity	108,324	111,383	97,884	89,833	99,970
Leverageratio	2.33	2.44	2.6	2.82	2.44
RoA	5.9%	5.3%	3.4%	1.5%	3.9%
RoE	13.8%	13.0%	8.7%	4.2%	9.6%

Source: Morningstar