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Faculty of Economics and Management

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Bachelor Thesis

Financial Analysis of Atlas Copco Group

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BACHELOR THESIS ASSIGNMENT

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Thesis title

Financial analysis of Atlas Copco Group

Objectives of thesis

This thesis aims to evaluate the financial health of a chosen company, which is Atlas Copco Group for the period 2014-2017. This work purpose is to determine the overview of the company's financial activities and stability. Therefore, it would help to provide information for management decision making as well as for internal and external users.

Methodology

In methodology, the thesis focuses mainly on theory and indicators being used. There will be the explanation of financial analysis, its users and financial statements. Moreover, some specific indicators will be used to evaluate the company's financial performance. For instance, horizontal and vertical analysis, basic and chain index, profitability ratios, liquidity ratios and activity ratios.

The proposed extent of the thesis

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Keywords

financial analysis, financial ratios, ROE, ROA, Spider analysis

Recommended information sources

- ČESKÁ ZEMĚDĚLSKÁ UNIVERZITA V PRAZE. KATEDRA OBCHODU A FINANČÍ, – STÁROVÁ, M. *Accounting theory : lectures and seminars*. V Praze: Česká zemědělská univerzita v Praze, 2017. ISBN 978-80-213-2745-0.
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Declaration

I declare that I have worked on my bachelor thesis titled "Financial analysis of Atlas Copco Group" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break copyrights of any their person.

In Prague on 15.03.2019

Thi Kieu Oanh Hoang

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Financial Analysis of Atlas Copco Group

Summary

This bachelor thesis aims to evaluate the financial health of a chosen company, which is Atlas Copco Group for the period 2014-2017. This work purpose is to determine the overview of the company's financial activities and stability. Therefore, it would help to provide information for management decision making as well as for internal and external users. The purpose of this thesis is to explain the financial performance of Atlas Copco Group by analysing their financial statements and using some specific indicators. The bachelor thesis consists of two main parts. The first part is about theory and methodology, it focuses on the explanation of financial analysis, financial indicators used to analyse it and compare with the competitor using Spider analysis. The second part will describe some basic information about the company, using methods and indicators from the first part to illustrate the results from chosen company.

Key Words: Financial analysis, financial statements, financial ratios, Spider analysis, Atlas Copco.

Finanční Analýza Atlas Copco Group

Souhrn

Cílem této bakalářské práce je zhodnotit finanční zdraví vybrané společnosti, která je skupinou Atlas Copco pro období 2014-2017. Cílem práce je určit přehled finančních aktivit společnosti a její stabilitu. Proto by to pomohlo poskytnout informace pro rozhodování vedení, stejně jako pro interní i externí uživatele. Cílem této práce je vysvětlit finanční výsledky skupiny Atlas Copco analýzou jejich účetních výkazů a pomocí některých specifických ukazatelů. Bakalářská práce se skládá ze dvou hlavních částí. První část se zabývá teorií a metodikou, zaměřuje se na vysvětlení finanční analýzy, finanční ukazatelé by měli pomoci k její analýze a srovnání s konkurentem pomocí analýzy Spider. Druhá část popisuje některé základní informace o společnosti pomocí metod a ukazatelů z první části, které ilustrují výsledky vybrané společnosti.

Klíčová slova: Finanční analýza, finanční výkazy, finanční ukazatele, Spider analýza, Atlas Copco.

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List of Abbreviations

AC: Atlas Copco

COGS: Cost of goods sold

EBIT: Earnings before tax and interest expenses

MSEK: Million Swedish krona

ROA: Return on assets

ROE: Return on equity

1. INTRODUCTION

In any organization or company, finance is always one of the most important department to make the business run effectively. Understanding a company's financial analysis means understanding their activities, their financial performance and how it works. This analysis will be useful for variety of users for different purposes. The aim of this thesis is to access financial health of chosen company, which is Atlas Copco Group.

Every function in the business is very important to make the company work smoothly, and finance plays a crucial role in any type of business and affects the decision making of the managers.

Nowadays, in this globalized world, a lot of manual works are replaced by machines and technology. Industries all over the world rely on expertise and innovations to develop their businesses. Atlas Copco's products and solutions can be found everywhere and include compressors, vacuum solutions and air treatment systems, construction equipment, power tools and assembly systems. Their products and services increase customers' productivity and competitiveness while benefiting society and minimizing the environmental impact (Atlascopcogroup.com).

The main reason I chose Atlas Copco Group for my thesis is that I am currently working in this company in Prague in financial field. Therefore, I have an opportunity to observe how the company is doing and how important finance is in the business.

The purpose of this thesis is to explain the financial performance of Atlas Copco Group for the period 2014-2017 by analysing their financial statements and using some specific indicators. The bachelor thesis is divided into two main parts. The first part is theory and methodology, it focuses on the explanation of financial analysis, financial ratios and indicators. The second part will describe some basic information about the company, using methods and indicators from the first part to illustrate the results from chosen company.

2. OBJECTIVES

This thesis aims to evaluate the financial health of a chosen company, which is Atlas Copco Group for the period 2014-2017. This work purpose is to determine the overview of the company's financial activities and stability. Therefore, it would help to provide information for management decision making as well as for internal and external users.

3. THEORETICAL PART

3.1. Overview of financial analysis

In any type of firms, in order to make decisions and investment, they need to access and understand the company's financial health and stability. Financial analysis is an essential tool to determine whether the company is working effectively or not. Internal and external users can use this information to evaluate, make decision and predict the future.

Financial analysis is using mainly financial statements (balance sheet, income statement, cash flow statement) to review and evaluate a business's financial performance and suitability. Generally, it is used to determine whether an entity is stable, solvent, liquid or profitable. Financial analysis helps to evaluate economic trends, set financial policy, make decision in investments and build long-term plans for business activities (Investopedia.com, 2018). According to Fridson and Alvarez, financial statement analysis is an essential skill in a different type of occupations, they can be corporate finance, investment management, commercial lending and the creditors, as well as individuals (Fridson and Alvarez, 2002, p. 4).

The purpose of financial analysis is to evaluate past and current data to see a business's financial position, from that they can forecast future risk, understand its strengths and weaknesses. By using different methods and ratios, it would help users compare the difference between actual result and the expected plan in order to make better decisions.

3.2. Sources of financial analysis

For the purpose of evaluating company's financial health, we need to take data from financial statements. It gives information about the past, present and the future of the company. It is necessary to analyse financial statements: balance sheet, income statement, statement of cash flows. These are the most common data that can be found on company's official website.

3.3. Users of financial analysis

There are many people would like to know about the result of financial analysis of the company, different user desires different purpose according to their goal. The list below determines some of the users of financial statements and why they would like to know this information (Accountingtools.com, 2018):

Company management: The managers would like to know the information about profitability, liquidity, and cash flows of the business. Therefore, the managers can make better decisions.

Competitors: The competitive companies can collect these types of information in order to evaluate its financial condition. After that they can create competitive strategies.

Employees: They will focus on the company's position and future development. The company can provide its financial statements to employees with a detailed explanation of what the statements contain.

Governments: The government needs this analysis to see if the business follow the obligations. In addition, they can check if the company had paid the correct taxes or not.

Investment analysts: Outside analysts want to see financial statements in order to decide whether they should recommend the company's securities to their clients.

Investors: Investors need this information to evaluate the firm's ability to make profit, and in order to make sure they would make the right decision to invest in the company.

Lenders: they can be creditors or banks, in order to lend money they also need this information to see if the company can pay back the loans and interest. They want to know if it is risky or not to lend money to the business.

Suppliers: The suppliers would need this information about financial statements to determine where the company can be a good customer in the long-term.

Unions: A union wants to use this analysis to determine whether the business paid compensation and benefits to the union members or not.

(Accountingtools.com, 2018)

3.4. Characteristics of financial statements

Financial statements summarize entity activities for a period of time. They are the set of standardized reports which review the performance and the status of an entity. Financial statements are issued at least once a year. The annual financial statements summarize the entity's activities over the last year.

Financial statements give information for comparing:

- end of the year with beginning of the year in an entity,
- common year with previous years of an entity,
- entities (Stárová, 2017, p. 12).

3.4.1. Balance sheet

Balance sheet can also be called the Statement of Financial Position. It is a statement of total assets, equity and liabilities of an entity on particular date, usually the last day of the accounting period. The most common accounting date is the end of the calendar year (31 December). The first part on the left side contains fixed and current assets, the second part on the right side shows the own sources (equity) or sources of somebody else (liabilities). The totals for each part must be equal (Stárová, 2017, p. 13).

A balance sheet provides information about:

- financial position of an entity,
- entity's economic resources (assets) and claim against those assets by the owners (equity) and creditors (liabilities),
- investing and financing amounts (Stárová, 2017, p. 13).

In financial accounting, the total sum of assets equals the sum of total equity plus total liabilities.

$$\text{Assets} = \text{Equity} + \text{Liabilities}$$

The left side of the equation is assets. It means any object and owned by a company. Assets can come in variety of forms and divided into current assets and non-current assets. According to Tracy and Tracy (2013), fixed assets (non-current assets) are divided into two parts: “Long-term Operating Assets” and “Other Assets”. Long-term operating assets can be tangible and intangible. Tangible assets have physical existence, for instance buildings or machines. Intangible assets do not have physical existence but are legally protected rights, for example trademarks or copyrights. Current assets are cash and other assets that will be converted into cash during one operating cycle (Tracy and Tracy, 2013).

The right side of the equation shows how they have been financed, they are Equity and Liabilities. Equity represents how much the owners invested in the company, it can be increased through further investment of funds by the owners or the firm making profit, however it can be decrease if they suffer losses. Liabilities mean money is borrowed from creditors and divided into long-term (non-current) liabilities or short-term (current) liabilities.

3.4.2. Income statement

Income statement or profit and loss statement provides a financial summary of the firm’s operating results during a specified period, usually in one year (Gitman, 2006, p.42). The income statement gives information about profit, loss, revenues and costs to determine company’s profitability. In order to understand income statement, there are some important terms will be explained below:

- Revenues/ Sales: this is the result from sales and services and is performed at the top of the statement.
- Cost of goods sold (COGS) is displayed below the revenues to represent how much does it cost to produce goods and service. This is the direct cost that is used in the production.
- Gross profit: this is the profit earned after subtracting cost of goods sold from revenues.

- Operating expenses: costs associated with the selling and administrative activities of the company. In other words, it can be called non-manufacturing expenses.
- Retained earnings: this is earnings after paying dividends to shareholders and it can be used to reinvest.
- EBIT: earnings before taxes and interests, this is the profit after deducting operating expenses, financial expenses from gross profit.
- Net profit: this is the final result of the business after deducting all expenses.

3.4.3. Cash flow statement

According to Gitman, cash flow statement is the lifeblood of the firm, is the primary focus of the financial managers both in managing day-to-day finances and in planning and making strategic decisions aimed at creation of shareholders' value. There is one important factor that affects a firm's cash flow is depreciation (and any other noncash charges) (Gitman, 2006, p.98).

Cash flow statement shows us the amount of cash and cash equivalents going in and going out a company. This statement measures how well the company can generate cash to pay the obligations and fund its operating expenses (Investopedia.com, 2018).

Cash flow statement gives information about:

- The increase and decrease in the amount of cash of a business.
- The amount of cash that is generated or consumed in a given period of time.
- This is the money that actually available to make purchases and pay current bills.
- This is a financial report that describes the source of a company's cash and how it was spent during a period of time. Thus it helps the managers to evaluate if a firm is facing a risk with cash or not.

A cash flow statement is commonly divided into three components, they include internal and external sources:

Cash flow from operating activities: It is usually referred to as working capital, this is the cash flow generated from internal operations. This is the real “lifeblood” of the business, and because it is internal thus it is under the control of a management.

Cash inflow:

- From sales of goods and services
- From interest received on loans
- From dividends received on equity securities (Investopedia.com, 2019)

Cash outflow:

- Cash paid to suppliers
- Cash paid to employees
- Cash paid to government
- Cash paid to lenders
- Cash paid to other expenses (Investopedia.com, 2019)

Cash flow from investing activities: It is generated internally from non-operating activities, it focuses on the purchase of the long-term assets as well as selling of any long-term assets.

Cash inflow:

- Cash inflows from sales of property, plant and equipment
- Cash inflows from sales of financial investments
- Collection of principal on loans to other entities (Investopedia.com, 2019)

Cash outflow:

- Purchase of property, plant and equipment
- Purchase financial investments
- Loans to other entities (Investopedia.com, 2019)

Cash flow from financing activities: financing cash flow is the cash to and from external sources, for instance, lenders, investors and shareholders. Financing activities

include the inflow of cash from investors and its outflow to shareholders as dividends when the company gets profit.

Cash inflow:

- Cash inflow from new loan
- Issuance of shares (Investopedia.com, 2019)

Cash outflow

- Payment of dividends to shareholders
- Redemption of long-term debt (Investopedia.com, 2019)

4. METHODOLOGY

In order to understand deeply about a company's performance, many tools and indicators are being used to analyse. In this thesis, we will access the company's financial health by using absolute indicators, ratio indicators and Spider analysis.

4.1. Absolute indicators

In order to evaluate financial statements, two important methods will be used, they are horizontal and vertical analysis. We use these data from different time periods to compare values in time. The results should give the user the analysis of the historical development of the company in time and predict its future development (Růčková, 2011).

The disadvantage of this method is that there is no clarification of the change of the single values, it does not give the user a reason why a value of a certain item changed rapidly, it only provides a fact that it did change. To find out why the change occurred in the first place, a further analysis is required (Růčková, 2011).

4.1.1. Horizontal analysis

Horizontal analysis of financial statements is the comparison of a financial ratios over a period of time. It can be called trend analysis. Horizontal analysis gives us information about the behaviour of revenues, expenses, and other line items of financial statements during the observed period. Balance sheet, income statement and statement of cash flows can use this analysis to compare items. (Readyratios.com, 2017)

There are two different methods can be used in horizontal analysis:

- Absolute comparison: is to compare the absolute amounts of some items over the period of time. This method can determine which item is changing the most. In the equation below, we can compare the value between two period of time, which is the value in current year (t) and value in base year (t_0).

$$\text{Absolute change} = \text{Value (t)} - \text{Value (t}_0\text{)} \quad (1)$$

- Percentage comparison: helps to compare percentage differences in items during a specific period. In this method, the absolute currency amounts will be converted

into percentage in order to compare. This analysis can be calculated as follows (Readyratios.com, 2017).

$$\text{Percentage change} = [\text{Value (t)} / \text{Value (t}_0)] \times 100 \quad (2)$$

4.1.2. Vertical analysis

Vertical analysis of financial statements helps to compare each line item with basic value in percentage. For example, in balance sheet we can compare each item in this table with the total assets or total equity and liabilities. In income statement, we can compare each expense with the total revenues in a given year to see how much does it cost in percentage. (Investopedia.com, 2018)

4.2. Ratio indicators

Financial ratios are very useful to compare and analyse company's financial status. Understanding how to calculate and interpret ratios will help firm's managers and investor make better decision and have a better overview of company's productivity over a period of time. There are some common indicators used, such as profitability ratios, liquidity ratios and activity ratios.

4.2.1. Profitability ratios

According to Gitman, there are many measures of profitability. These types of measurement help analysts to evaluate the firm's profits with respect to a given level of sales, a certain level of assets, or the owner's investment. Without profits, a firm could not attract outside capital. Owners, creditors, and management pay close attention to boosting profits because of the great importance placed on earnings in the marketplace (Gitman, 2006, p.61).

Profitability ratios show whether a business is making profits, and if so whether at an acceptable rate. As a result, profitability ratios always include an item of profit, it can be net income, earnings before tax and interest or some other partial economic result.

Return on Total Assets (ROA) often called the return on investment (ROI), measures the overall effectiveness of management by comparing profit before interest

and tax expenses and the total assets. The higher the firm's return on total assets, the better (Gitman, 2006, p.65). The return on total assets is calculated as follows:

$$\text{ROA} = \text{EBIT} / \text{Total assets} \quad (3)$$

ROA uses EBIT instead of net income because EBIT includes external expenses (taxes, interest), therefore we can get more correct information of efficiency of the company as a whole.

Return on Equity (ROE) measures the return earned on the common stockholders' investment in the firm. Generally, the higher this return, the better off are the owners (Gitman, 2006, p.65). Return on common equity is calculated as follows:

$$\text{ROE} = \text{Net income} / \text{Equity} \quad (4)$$

ROE uses net income instead of EBIT because we care about the final profit, what we really earn after expenses.

Gross profit margin compares gross profit to sales revenue in order to measure the percentage of each sales dollar remaining after a company has paid for the cost of goods. If the gross profit margin is higher, the better (Gitman, 2006, p.62). It means if the company has high gross profit margin, the company is doing effectively, and low gross profit margin means the cost of goods sold is high.

Gross profit margin shows the difference between sales revenues and cost of goods sold. Therefore, it is a measure of profitability in buying and selling goods before other expenses are deducted (Atrill, 2017, p. 77). The gross profit margin is calculated as follows:

$$\text{Gross profit margin} = \text{Gross profit} / \text{Revenues} \quad (5)$$

Operating profit margin helps to measure operating performance after deducting all operating expenses from gross profit. Operating profits can be seen as "pure" because they measure only the profits earned on operations and ignore interest, taxes, and preferred stock dividends. A high operating profit margin is preferred (Gitman, 2006, p.63).

The operating profit margin is calculated as follows:

$$\text{Operating profit margin} = \text{Operating profits} / \text{Revenues} \quad (6)$$

Net profit margin helps to understand the percentage of each sales generated after deducting all expenses, including interest, taxes, and preferred stock dividends. The higher the firm's net profit margin, the better (Gitman, 2006, p.64).

$$\text{Net profit margin} = \text{Net profit} / \text{Revenues} \quad (7)$$

4.2.2. Liquidity ratios

The liquidity of a firm explains the firm's ability to satisfy its short-term obligation as they come due. The two basic measures of liquidity are the current ratio and the quick (acid-test) ratio" (Gitman, 2006, p.54). In other words, liquidity ratios illustrate how capable a business is in order to meet its short-term obligations as they fall due.

According to Friedlob and Scheleifer, evaluating firm's liquidity means examining the relationship between current assets and current liabilities to test if the business can satisfy its obligations in the short term (Friedlob and Schleifer, 2003).

Current ratio measures the firm's ability to meet its short-term obligations. The higher the current ratio, the more liquid the business can be. A current ratio of 2.0 is usually can be acceptable, but acceptability's value depends on the industry in which the business operates. For instance, a current ratio of 1.0 can be acceptable for a public utility but might be unacceptable for a manufacturing firm. The more predictable the business's cash flows, the lower the acceptable current ratio (Gitman, 2006, p.54). This ratio is expressed as follows:

$$\text{Current ratio} = \text{Current assets} / \text{Current liabilities} \quad (8)$$

Quick ratio looks similar to the current ratio except that it does not include inventory, which is generally the least liquid current asset (Gitman, 2006, p.54). The quick ratio is calculated as follows:

$$\text{Quick ratio} = (\text{Current assets} - \text{Inventory}) / \text{Current liabilities} \quad (9)$$

The result of quick ratio is 1 or bigger than 1 is usually recommended, however similar as current ratio, the ratio is acceptable or not depends mainly on the type of industry. It gives us a better measurement of general liquidity if the company's inventory cannot be easily converted into cash (Gitman, 2006, p.55).

Cash ratio is the ratio of the business's total cash and cash equivalents to current liabilities. This is the most common used ratio to evaluate company's liquidity. It explains the ability to pay current liabilities using only cash and cash equivalents on hand. There are some items that are not included in this ratio, for example, account receivable, inventory and certain investments. The reason is that these items take more time and effort (Investopedia.com, 2018). The cash ratio is calculated as follows:

$$\text{Cash ratio} = \text{Cash} / \text{Current liabilities} \quad (10)$$

In this equation, if the result is 1, it means the business has exactly the amount of cash that can pay the debt. If the cash ratio is less than 1, it means there are more current liabilities than cash. And if it is greater than 1, the company can cover all short-term debt and still has remaining cash (Investopedia.com, 2018).

4.2.3. Activity ratios

This type of ratios helps to measure a business's ability to convert different accounts within its balance sheet into cash or sales. It measures the amount of resources invested in the business's collection and inventory management. Therefore, it will give the users some information about how many times of turnovers of given items (Investopedia.com, 2019).

Total assets turnover ratio that measures the assets activity and firm's ability of generating sales through its assets is total asset turnover. Total assets turnover means how efficient the value of total assets were being used and generated in profit (Bragg, 2007). It is calculated as follows:

$$\text{Total assets turnover} = \text{Net sales} / \text{Average total assets} \quad (11)$$

It is clear that the higher this ratio, the better as the business can generate more profit with some certain level of assets and the company is using assets efficiently. Lower ratio means that the business is not using assets efficiently and might have some

management or production problems. This ratio gives the investors and creditors an overview of how the business is managed and uses its assets (Myaccountingcourse.com, 2019).

Inventory turnover ratio commonly measures the activity, or liquidity, of a firm's inventory. This ratio shows how many times a firm has sold and replaced inventory during a given period of time and whether the company can effectively sell the inventory it buys. The inventory turnover ratio is important because it shows how effectively inventory is managed by comparing the cost of goods sold and inventory (Myaccountingcourse.com, 2019). It is calculated as follows:

$$\text{Inventory turnover} = \text{Cost of goods sold} / \text{Inventory} \quad (12)$$

Fixed assets turnover ratio measures a business's return on investment in property, plant and equipment by comparing revenues to fixed assets. The result will give us information about how many times fixed assets can turnover during one year. This ratio will explain how effectively and efficiently a business is using its fixed assets to generate profit (Readyratios.com).

This ratio is calculated as follows:

$$\text{Fixed assets turnover ratio} = \text{Revenues} / \text{Fixed assets} \quad (13)$$

4.2.4. Stability ratios

Stability ratios measure the degree of a business's fixed financing obligations and its ability to satisfy them (long-term solvency). It focuses on the long-term health of a business, particularly the effect of the capital/finance structure on the business.

Debt to equity ratio helps to compare a business's total debt to total equity. A higher debt to equity ratio means that more creditor financing (bank loans) is used than investor financing (shareholders). Otherwise, lower debt to equity ratio means that the business is stable. This ratio is calculated as follows (Myaccountingcourse.com, 2019):

$$\text{Debt to equity ratio} = \text{Total liabilities} / \text{Total equity} \quad (14)$$

Interest coverage ratio measures a firm's ability to pay interest on its debt, this ratio is used to see if the business can be able to make contractual interest payments. If

the value if interest coverage ratio is higher, the better the firm can cover its interest obligations (Gitman, 2006, p.60). The interest coverage ratio is calculated as follows:

$$\text{Interest coverage} = \text{EBIT} / \text{Interest expense} \quad (15)$$

4.3. Spider analysis

Spider analysis is a graphical tool to illustrate a variety of indicators by using graph, which is called spider graph or radar graph. The purpose of spider analysis is to compare data from different companies based on indicators. Financial ratios will be used in spider graph to compare the difference between chosen company and its competitor from 2014 to 2017.

In order to obtain the result, we need to take the data not just only from chosen company, but from its competitor to compare indicators for each year during the observed period. This graph will give us the better view of the difference between companies in the same sector, thus the internal and external users can make better financial decision.

5. PRACTICAL PART

In this practical part, the thesis will focus on analysing financial situation of Atlas Copco group by using indicators and methods from methodology part. The result will be analysed for the period 2014 – 2017, the data was used in this part can be found in appendix 1, 2 and 3.

5.1. About Atlas Copco

5.1.1. History and overview of Atlas Copco

In the beginning, Atlas Copco was established in 1873 in Stockholm, Sweden to produced products for railways with all types of equipment for building and running Sweden's new railway. However then the primary business dates back to the early 20s when the first compressors, tools and rock drills were produced. Today, they are in leading position in these type of areas. After that, the growth of Swedish rail was short-lived, which made the company shift toward to produce more advanced products, for examples steam engines and boilers. (Atlascopcogroup.com, 2019).

Their industrial customers are active in a wide range of businesses in more than 180 countries. Their own customer centers and services operations in 90 countries with 34 thousand employees. The operating profit margin reached 21.8%. They are known for their great people, quality products and services and strong focus on business ethics (Atlascopcogroup.com, 2019).

Their customer base is 100% business to business and any industry in the world is a customer or potential customer. The industries that account for most sales are general manufacturing, electrical and technology, construction, motor vehicle, process industry and services (Atlascopcogroup.com, 2019).

5.1.2. Atlas Copco's business areas

There are four main areas of Atlas Copco, they are compressor technique, vacuum technique, industrial technique and power technique. Their products and services help to increase customers' productivity and competitiveness while benefiting society and minimizing the environmental impact.

- **Compressor technique**

Atlas Copco supplies market-leading, highly energy-efficient industrial compressors, gas and process compressors and expanders, air and gas treatment equipment and air management systems. Their customers are from manufacturing, oil, gas and process industries. Compressors are used in a variety of applications. Clean, dry and oil-free air is very important in industrial processes. For example, food, pharmaceutical, electronics and textile industries. In the future, they will continue to develop on energy savings, energy recovery and reduce CO2 emissions; focus on total solution and total lifecycle cost (Atlascopcogroup.com, 2019).

- **Vacuum technique**

Atlas Copco supplies vacuum products, exhaust management systems, valves and related products. They are used in chemical industries, food packaging and paper handling. Their manufactures are located in United Kingdom, Czech Republic, Germany, South Korea, China and Japan. Applications include manufacturing of semiconductors, flat panel displays, chemicals and pharmaceuticals as well as packaging, pick-up and conveying (Atlascopcogroup.com, 2019).

- **Industrial technique**

This technique supplies industrial power tools, assembly systems, quality assurance products, software and service through a global network. They include tightening, bolting, riveting, adhesive dispensing, quality assurance products, material removal. It is useful to improve customers' sustainable productivity in the automotive and general industries, maintenance and vehicle service. The manufactures are located in Sweden, Germany, United States, United Kingdom, France, Japan and Hungary (Atlascopcogroup.com, 2019).

- **Power technique**

This type of area provides air, power and flow solutions through products, for example, mobile compressors, pumps, light towers and generators. They provide specialty rental and services through global network. It can be used in manufacturing, construction, oil and gas and exploration drilling. The demand for air, power and flow solutions has a lot of participants offering a wide range of products for different

applications. The Power Technique business area focuses on a select number of applications (Atlascopcogroup.com, 2019).

5.2. Absolute indicators

This part will explain financial performance of Atlas Copco group by using horizontal and vertical analysis. The balance sheet and profit and loss statement will be used in this part.

5.2.1. Horizontal analysis

5.2.1.1. Horizontal analysis of Assets

In this part, fixed assets, current assets and total assets will be used to analyse for the period 2014-2017. Table 1 represents the absolute change in million SEK (Swedish krona) in three items by using formula (2) and data from appendix 1 to compare years 2015, 2016 and 2017 with base year 2014.

Table 2 shows the percentage change of fixed assets, current assets and total assets from 2014 to 2017. It is calculated by using formula (3) to see the percentage change of each year in comparison with base year 2014.

Table 1: Horizontal analysis of assets, absolute change in million SEK

	2015	2016	2017
Fixed assets	334	5 554	1 885
Current assets	-2 605	5 057	18 572
Total assets	-2 271	10 611	20 457

Source: Author's calculation based on data from Atlas Copco group's financial reports.

Table 2: Horizontal analysis of assets, percentage change

	2014	2015	2016	2017
Fixed assets	100%	100.68%	111.26%	103.82%
Current assets	100%	95.34%	109.04%	133.20%
Total assets	100%	97.84%	110.08%	119.43%

Source: Author's calculation based on data from Atlas Copco group's financial reports.

Both table 1 and 2 give the same information about the change of each item in the balance sheet for the period 2014-2017. First of all, from 2014 to 2015, we can see that there was a slight increase of fixed asset by 334 million SEK or 0.68% (from 49337 MSEK in 2014 to 49671 MSEK in 2015). However, 2605 MSEK decrease in current assets (from 55944 MSEK in 2014 to 53339 MSEK in 2015). As a result, the total assets decreased by 2271 MSEK or 2.16% in 2015. The reason for that fall was due to a net decrease in working capital and in property, plant and equipment.

In the next year 2016, both fixed assets and currents assets rose greatly by 5554 MSEK and 5057 MSEK or 11.26% and 9.04% respectively. Consequently, the group's total assets increased by more than 10% in 2016 in comparison with 2014. The reason for this big increase in 2016 was due to higher intangible fixed assets and financial current assets. Especially, technology-based intangible assets were expanded as owners reinvested in research projects.

The last year in this period 2017 remarked the biggest increase of total assets from 2014 to 2017. From table 1 and 2, we can see that current assets went up significantly by 33.2% and fixed asset raised slightly by approximately 4%. Therefore, the total assets increased by nearly 20% or 20457 MSEK. According to the company's annual report, the reason was because of financial current assets in 2017 was nearly 2.5 times bigger than in 2014. Atlas Copco's financial current assets was increased sharply due to much higher value of cash and cash equivalents.

The strong operating cash generation explains the majority of the increase. The need for investment in property, plant and equipment were moderate, most investments were related to machining equipment for core manufacturing activities.

5.2.1.2. Horizontal analysis of Equity and Liabilities

Table 3 and 4 below shows the change of equity and liabilities in absolute value and percentage for the period 2014-2017. Formulas 2 and 3 will also be used to calculate these differences.

Table 3: Horizontal analysis of equity and liabilities, absolute change in million SEK

	2015	2016	2017
Equity	-4003	2424	9970
Liabilities	1732	8187	10487
Total equity + liabilities	-2 271	10 611	20 457

Source: Author's calculation based on data from Atlas Copco group's financial reports.

Table 4: Horizontal analysis of equity and liabilities, percentage change

	2014	2015	2016	2017
Equity	100%	92.11%	104.78%	119.64%
Liabilities	100%	103.18%	115.01%	119.23%
Total equity + liabilities	100%	97.84%	110.08%	119.43%

Source: Author's calculation based on data from Atlas Copco group's financial reports.

From the table 3 and 4, we can see that even in 2015 it was a decline in total equity and liabilities, however in the overall, it had been moving upward over the period of time. To be specific, in 2015 equity dropped by nearly 8% (4003 MSEK) due to a decrease in retained earnings, while the liabilities went up by more than 3% (1732 MSEK) due to much higher income tax. As a result, it would be not really good financial performance for Atlas Copco in 2015.

Fortunately, in 2016 the total equity and liabilities raised slightly by 10.8% (10611 MSEK) in comparison with base year 2014. In 2017, they also recorded an increase in both equity and liabilities by approximately 20% (20457 MSEK). It was due to the investment in innovation and equipment, which would make the productivity better.

5.2.1.3. Horizontal analysis of Profit and Loss statement

The horizontal analysis of profit and loss statement will explain the change between current years in comparison with base year 2014. Formula 2 and 3 and appendix 2 will be used in this part to calculate the change for the period 2014-2017. Table 5 and 6 below help to demonstrate the change in absolute value and in percentage.

Table 5: Horizontal analysis of Profit and Loss statement, absolute change in million MSEK

	2015	2016	2017
Revenues	8440	7635	22700
Cost (Sales)	3362	2568	9436

Source: Author's calculation based on data from Atlas Copco group's financial reports.

Table 6: Horizontal analysis of Profit and Loss statement, percentage change

	2014	2015	2016	2017
Revenues	100%	109.01%	108.15%	124.22%
Cost (Sales)	100%	105.73%	104.38%	116.08%

Source: Author's calculation based on data from Atlas Copco group's financial reports.

From table 5 and 6, it is clearly seen that over the period of time, the revenues and cost had been growing without any fall. In particular, the revenues in 2015 increased by 8440 MSEK (from 93721 MSEK in 2014 to 102161 MSEK in 2015) or 9%. Similarly, the cost also raised by 5.73%. In 2016, the revenues and cost recorded an increase, however it was slightly less than in 2015. In 2017, the revenues raised significantly by more than 24% (22700 MSEK) and the cost was 16% (9436 MSEK) more than in 2014.

The reason for the raising tendency was due to the fact that the company invested more money in innovation and equipment. By using retained earnings to invest in better technology, they would get higher revenues.

According to their official annual report in 2017, the orders from customers grew in all major areas. When they opened the new business area in 2017, which is Vacuum Technique, had achieved the biggest growth. More than 40% of revenues were from

service (spare parts, maintenance, repairs, consumables, accessories and rental). These revenues are more stable than the sales from equipment.

5.2.2. Vertical analysis

This part will explain the vertical analysis of Atlas Copco group using balance sheet and profit and loss statement. The purpose of vertical analysis is to compare individual items to the basis item.

5.2.2.1. Vertical analysis of Assets

Vertical analysis of assets will focus on the changes of every single item in assets to compare with total assets within a year, it means how many percentage of each item contribute to the total assets of each year. Table 7 will explain how single items in assets had changed over the period.

Table 7: Vertical analysis of assets, percentage change

	2014	2015	2016	2017
Total assets	100%	100%	100%	100%
Fixed assets	46.86%	48.22%	47.36%	40.74%
Intangible fixed assets	31.53%	32.54%	32.64%	27.96%
Tangible fixed assets	11.98%	11.67%	11.12%	9.91%
Financial assets	3.35%	4.01%	3.60%	2.87%
Current assets	53.14%	51.78%	52.64%	59.26%
Inventories	17.44%	16.41%	14.59%	14.65%
Receivables	24.71%	25.23%	23.89%	23.95%
Financial assets	10.98%	10.14%	14.15%	20.67%

Source: Author's calculation based on data from Atlas Copco group's financial reports.

During the period, Atlas Copco group's fixed assets were less than half of the total assets. The amount of fixed assets raised slowly in 2015 (from 46.86% in 2014 to 48.22% in 2015), however in 2016 and 2017 it went down to 47.36% and 40.74% respectively.

The main item in fixed assets was intangible fixed assets, due to the decrease of this item, the total fixed asset would also decrease.

The proportion of intangible fixed assets was nearly 3 times higher than tangible fixed assets, the reason was because the company invested more in innovation and solution. Intangible fixed assets of Atlas Copco included goodwill, technology-based, trademarks, marketing and customer related intangible assets.

Unlike fixed assets, current assets only decreased in 2015, then it grew gradually from 53.14% in 2014 to 59.26% in 2017. Receivables had the biggest proportion in current assets, it included trade receivables and income tax receivables. In current assets, there were two items that decreased, inventories and receivables. However, financial assets reached double proportion in 2017 than in 2014 (from 10.98% in 2014 to 20.67% in 2017). This was due to the raise of cash and cash equivalents.

5.2.2.2. Vertical analysis of Equity and Liabilities

Table 8: Vertical analysis of Equity and Liabilities, percentage change

	2014	2015	2016	2017
Total equity + liabilities	100%	100%	100%	100%
Equity	48.21%	45.38%	45.88%	48.29%
Share capital	0.75%	0.76%	0.68%	0.63%
Other paid-in capital	5.73%	6.22%	5.69%	5.58%
Reserves	4.03%	3.06%	5.22%	4.24%
Retained earnings	37.53%	35.18%	34.23%	37.78%
Non-controlling interests	0.17%	0.15%	0.06%	0.07%
Liabilities	51.79%	54.62%	54.12%	51.71%
Non-current liabilities	26.40%	26.41%	25.60%	22.94%
Current liabilities	25.39%	28.21%	28.51%	28.77%

Source: Author's calculation based on data from Atlas Copco group's financial reports.

In this part, vertical analysis of equity and liabilities will be explained from 2014 to 2017 in table 8. In overall, the proportion of equity was less than half of the total equity and liabilities and during the period, both equity and liabilities remained stable, there was no big change in the amount of them.

To be specific, in 2015 and 2016 there was a slight decline of equity, from 48.21% in 2014 to around 45%. Then, it went up to more than 48% in 2017. The most significant item of equity was retained earnings as it had the biggest proportion, which were more than one third of the total equity and liabilities. It means over the years, the company had been doing well and getting profit, the profit earned was also used to reinvest in innovation and technology.

In contrast, liabilities increased in 2015 and 2016, then decreased slightly in 2017, but in the overall, these items did not have significant difference during the period. The share of current and non-current liabilities were almost equal to each other.

5.2.2.3. Vertical analysis of the Profit and Loss statement

Table 9 in this part represents the vertical analysis of the profit and loss statement from 2014 to 2017. From this table, it is clearly seen that over the year, the cost of sales declined gradually from 62.6% in 2014 to 58.5% in 2017. According to the financial report in 2017, the decline of cost was due to the efficient and responsible use of resources, such as energy and water consumption. When revenues is seen as 100%, the decrease in cost would make the gross profit increase, from 37.4% in 2014 to 41.5% in 2017.

There are some operating expenses that need to be deducted from gross profit, they are marketing expenses, administrative expenses, research and development expenses and other operating expenses. Among these types of expenses, the marketing expenses were the largest amount, which took nearly 11% of the total revenues. The operating profit also increased gradually during the period from 18.15% in 2014 to 20.79% in 2017. The operating profit was affected positively by currency, but negatively by acquisitions.

Earnings before tax and interests (EBIT) is calculated after deducting financial expenses and adding financial income from operating profit. As we can see from the table

9, the amount of added value (financial income) was more than the amount of deducted value (financial expenses), therefore the proportion of EBIT would be a little higher than operating profit.

Table 9: Vertical analysis of Profit and Loss statement, percentage change

	2014	2015	2016	2017
Revenues	100.00%	100.00%	100.00%	100.00%
Cost of sales	62.60%	60.72%	60.42%	58.50%
Gross profit	37.40%	39.28%	39.58%	41.50%
Marketing expenses	10.48%	10.77%	10.90%	10.67%
Administrative expenses	6.05%	6.22%	6.73%	6.63%
Research and development expenses	3.13%	3.22%	3.05%	3.20%
Other operating income	0.61%	0.46%	0.75%	0.93%
Other operating expenses	0.20%	0.23%	0.12%	1.15%
Operating profit	18.15%	19.31%	19.53%	20.79%
Financial income	0.33%	0.43%	0.30%	0.26%
Financial expenses	0.24%	0.16%	0.13%	0.27%
EBIT	18.25%	19.58%	19.70%	20.78%
Interest expenses	1.08%	1.15%	1.14%	0.92%
Profit before tax	17.17%	18.42%	18.55%	19.87%
Income tax expenses	4.18%	6.95%	4.95%	5.47%
Profit for the year	12.99%	11.48%	13.60%	14.40%

Source: Author's calculation based on data from Atlas Copco group's financial reports.

In order to get the net profit, interest and income tax expenses have to be subtracted from EBIT. From 2014 to 2017, interest expenses fluctuated more or less 1% of the total revenues, the highest interest was in 2015 with 1.15% (1178 million SEK), the lowest interest was in 2017 with 0.92% (1068 million SEK). The income tax expenses were about 5 times more than interest expenses. In 2014, it was recorded the lowest value of income tax with just only 4.18% of the revenues, however in the next year it climbed to nearly 7%, after that it decreased by 2% in 2016, then increased again in 2017 with 5.47% of the total revenues. Atlas Copco has always tried to follow the laws and regulations where it operates, the company acknowledge the importance of tax payments to advance economic development.

In the overall, 2017 had the biggest proportion of profit during the observed period. Net profit after deducting all expenses was 14.4% of the total revenues (or 16762 million SEK). According to the official report of Atlas Copco group in 2017, the company's orders grew in all major geographic regions. Furthermore, the business climate in 2017 was more favourable than the previous years. Vacuum technique, the new business area from 2017 had the biggest growth.

5.3. Ratio indicators

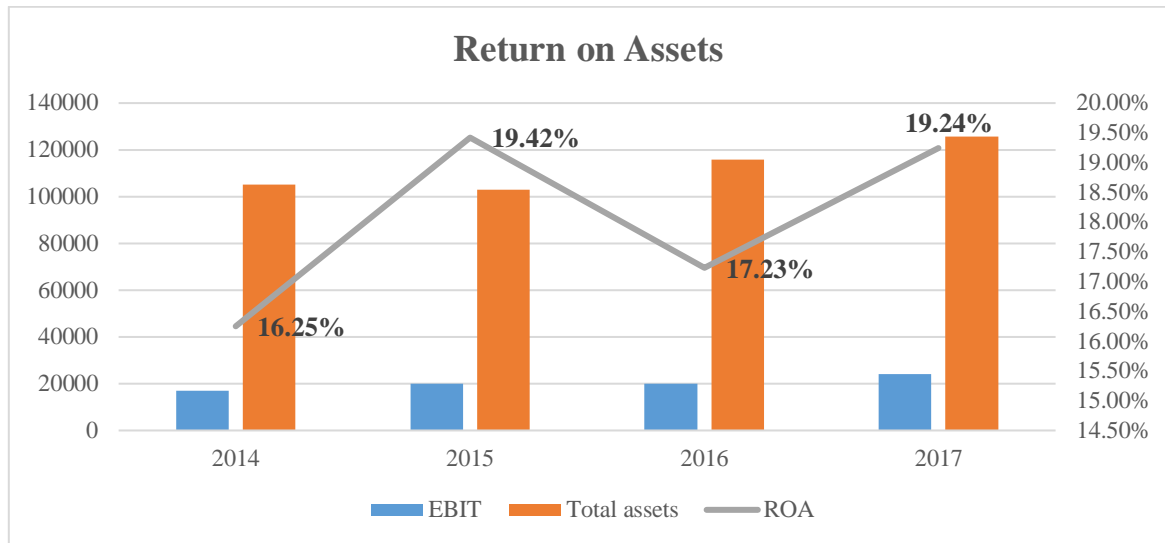
5.3.1. Profitability ratios

In order to measure the company's effectiveness, we need to understand the profitability ratios. In this part, return on assets, return on equity, gross profit margin, operating profit margin, net profit margin and earnings per share will be explained. Data used in this part can be found in appendix 1 and 2.

Return on Assets (ROA)

Return on assets shows how effectively the company can do to manage assets and how the business can earn profit from assets invested. In order to calculate this ratio, the formula 4 will be used in the table 10 by simply take earnings before interest and tax expenses divided by total assets. The amount of EBIT and total assets are in million Swedish krona (MSEK).

Graph 1: Return on Assets



Source: Author’s calculation based on data from Atlas Copco group’s financial reports.

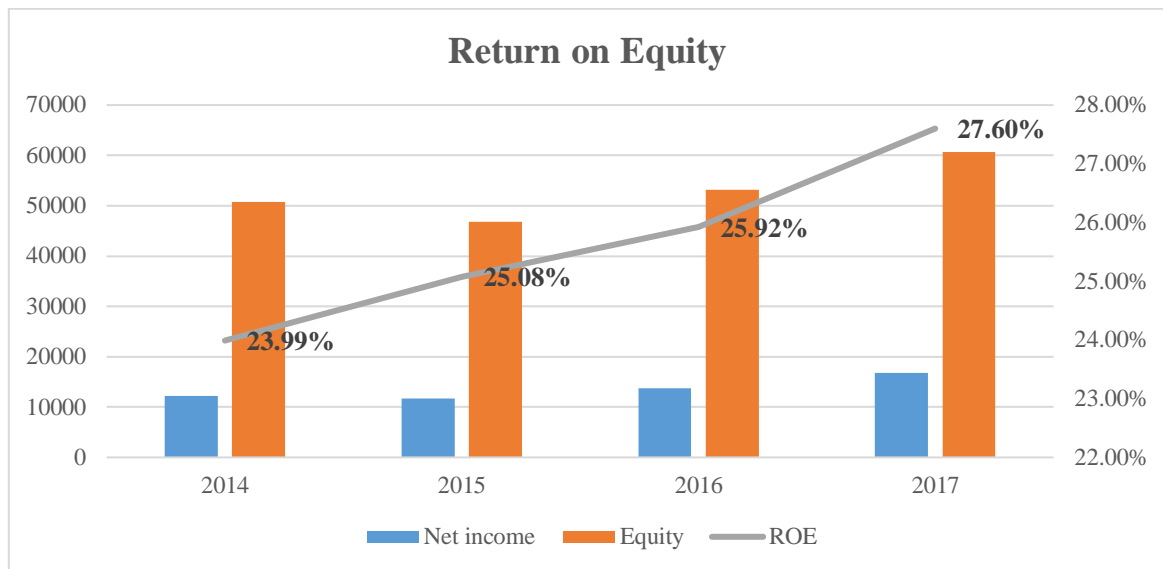
As we can see from the graph, the lowest point was in 2014 with 16.25% and the highest was recorded in 2015 with 19.42%. In general, ROA ratio fluctuated during the period of time. In particular, 2014 resulted the smallest amount of profit during period, thus the return on assets was only 16.25%. It means that for each Swedish knona of assets invested, the company earned only 0.16 krona.

In 2015, the profit increased by nearly 3000 million SEK and the total assets were less than in 2014, therefore the return on assets reached the highest number 19.42%. It means Atlas Copco could earn 0.19 krona for each krona invested in assets. The following year 2016 shows the decline in profit and increase in assets in comparison with 2015, as a result the return on assets was 2% lesser than in 2015. Particularly, the company just got 0.17 krona for each krona invested in total assets. However, 2016 recorded the increase in both profit and assets because Atlas Copco opened a new business area. The return on assets in 2017 was 19.24%, it can be explained that each krona investment in assets resulted 0.19 krona in profit.

Return on Equity (ROE)

Return on equity shows the ability to generate profit from common stockholders’ investment in the company. Graph 1 will indicate the return on equity of Atlas Copco from 2014 to 2017 by using the formula 5, net income and equity in this table are in million Swedish krona (MSEK).

Graph 2: Return on Equity



Source: Author's calculation based on data from Atlas Copco group's financial reports.

From the graph above, it is clearly seen that there is an upward trend of ROE ratio, from 23.99% in 2014 to 27.6% in 2017. In 2014, the return on equity was nearly 24%, it means for each krona invested, the investors could get 0.24 krona in profit. In 2015, we can see the decline in both net income and equity, however ROE ratio was still higher than 2014 with 25.08%. Then in 2017 the company reached 27.6% in ROE ratio, thus the investors or shareholders could earn 0.276 krona for one krona invested in Atlas Copco.

The increasing trend of ROE over the years shows that Atlas Copco had a stable growth. In other words, profit was generating more and more from common stockholders' investment. This was a good result for the current investors as well as future investors.

Gross profit margin

Table 10 below represents gross profit margin of Atlas Copco. Over the years, we can see that the result had increasing gradually from 37.4% in 2014 to 41.5% in 2017. In other words, for each Swedish krona of revenues, the company's gross profit raised from 0.374 krona in 2014 to 0.415 krona in 2017.

Table 10: Gross profit margin

	2014	2015	2016	2017
Gross profit	35052	40130	40119	48316
Sales	93721	102161	101356	116421
Gross profit margin	37.40%	39.28%	39.58%	41.50%

Source: Author's calculation based on data from Atlas Copco group's financial reports.

Operating profit margin

In table 11, operating profit margin is performed to measure the percentage of each sales remaining after deducting operating expenses. Similar to gross profit margin, operating profit margin represents the growth over the observed period. In 2014, the operating profit was 18.15% of the revenues, it means 0.18 krona were earned from each krona of sales. In 2017, for each krona of sales, Atlas Copco's operating profit was nearly 0.21 krona. As mentioned, in 2017 Atlas Copco opened a new business area which generated more profit for the company.

Table 11: Operating profit margin

	2014	2015	2016	2017
Operating profit	17015	19728	19798	24200
Revenues	93721	102161	101356	116421
Operating profit margin	18.15%	19.31%	19.53%	20.79%

Source: Author's calculation based on data from Atlas Copco group's financial reports.

Net profit margin

In order to measure the percentage of each sales remaining after deducting all costs and expenses, net profit margin in table 12 will be used to explain this situation. From the table, we can see that unlike gross profit margin and operating profit margin, net profit margin recorded the decline in 2015. In particular, the net profit margin was nearly 13% in 2014 and decreased to 11.48% in 2015, this is due to much higher income

tax, the income tax in 2015 was about two times higher than in 2014. However, in 2016 and 2017 it increase to 13.6% and 14.4% respectively.

Table 12: Net profit margin

	2014	2015	2016	2017
Net profit	12175	11723	13785	16762
Revenues	93721	102161	101356	116421
Net profit margin	12.99%	11.48%	13.60%	14.40%

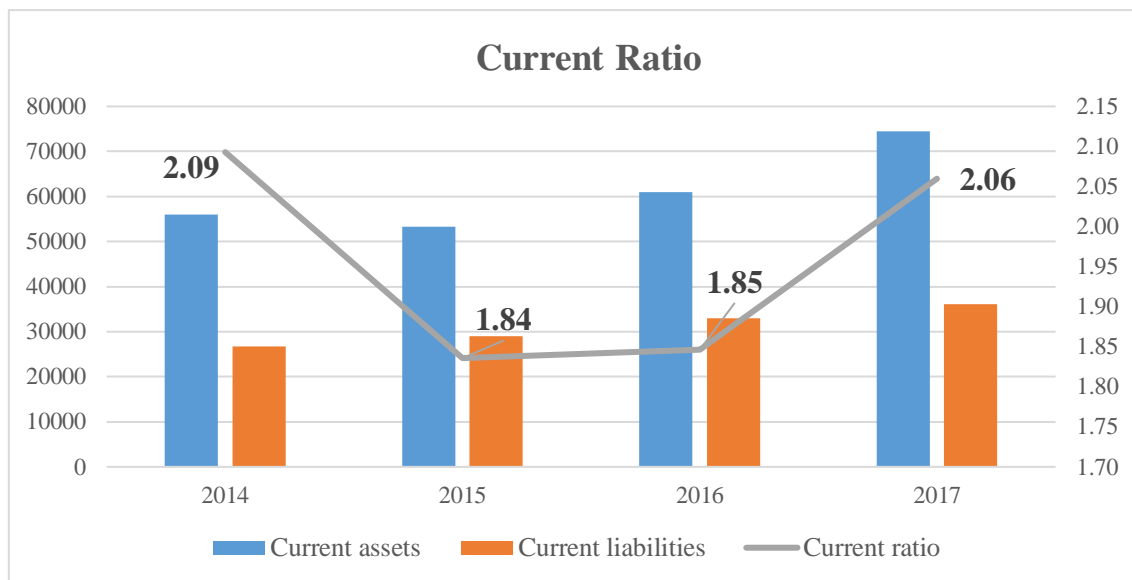
Source: Author's calculation based on data from Atlas Copco group's financial reports.

5.3.2. Liquidity ratios

In this part, we will look at Atlas Copco's ability to fulfil its short-term obligation at maturity. Current ratio, quick ratio and cash ratio will be presented.

Current ratio

Graph 3: Current ratio



Source: Author's calculation based on data from Atlas Copco group's financial reports.

Graph 3 represents the current ratio of Atlas Copco from 2014 to 2017, it is calculated by simply taking current assets divided by current liabilities. From this graph, it is clearly seen that current ratio reached the highest point in 2014, then it declined in

2015 and 2016, after that it grew and reach 2.06 in 2017. The reason for its decrease in 2015 and 2016 was because of higher income taxes.

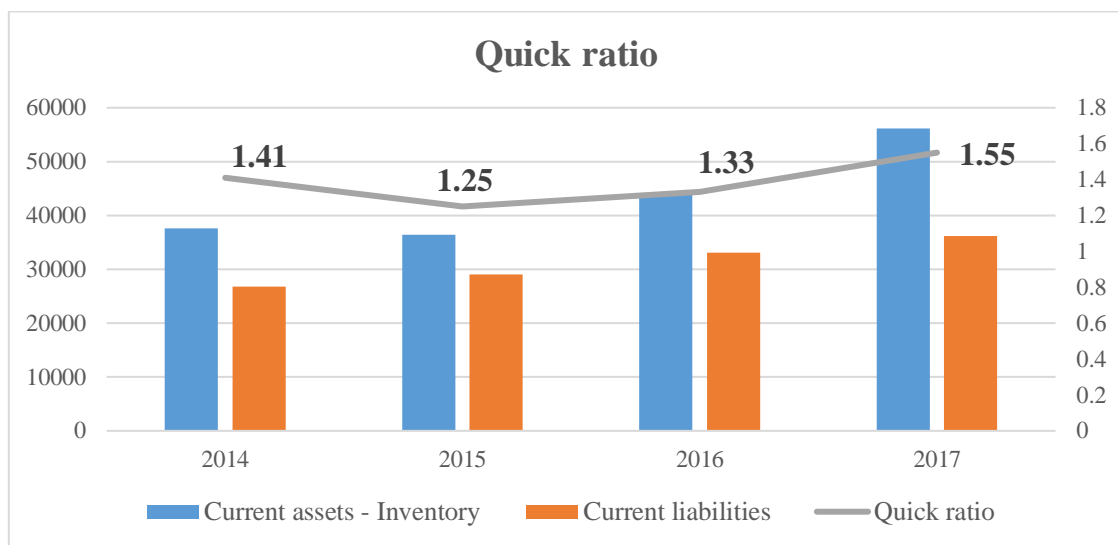
Even the current ratio was fluctuating during the time, but these ratios were still higher than 1, it means the current assets were much higher than the current liabilities. Therefore, the company could be able to pay off its debts.

Quick ratio

Graph 4 in this part shows how quick ratio had change from 2014 to 2017, this ratio is similar to current ratio except it does not include inventory. Generally, we can see that they all were greater than 1, it means the company can meet its current obligations and the assets could be converted easily into cash to satisfy the current liabilities.

In 2014, the quick ratio was 1.41, however in 2015 it fell down to 1.25. After that increased again in 2016 and 2017 with the quick ratios were 1.33 and 1.55 respectively.

Graph 4: Quick ratio

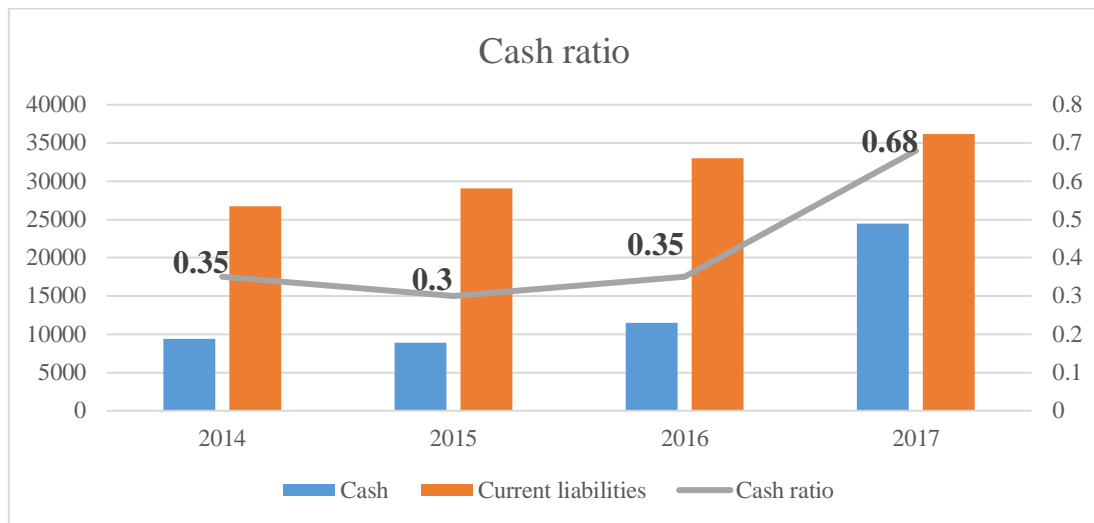


Source: Author's calculation based on data from Atlas Copco group's financial reports.

Cash ratio

Table 5 in this part represents cash ratio by comparing cash and current liabilities, this ratio is very useful to evaluate company's liquidity. From this ratio, we can see the ability of Atlas Copco to pay off its current liabilities by using only cash.

Graph 5: Cash ratio



Source: Author's calculation based on data from Atlas Copco group's financial reports.

We can see the growing trend over the years even there was a small decrease in 2015. Particularly, in 2014 the cash ratio was 0.35, then it fell down to 0.3 in 2015. From then, it started to increase in 2016 with 0.35.

Especially, there was a huge growth in 2017 with 0.68, it means Atlas Copco could be able to pay 68% of current liabilities just using its cash and cash equivalents.

4.3.3. Activity ratios

Total assets turnover ratio

Table 13 shows the total assets turnover of Atlas Copco and the ability to generate profit from its assets. From the table we can see that the results were fluctuating over the period of time, in 2014 the ratio was nearly 0.9, it means that the company needed more than one year to turn its total. In 2015, it raised to approximately 1 then decreased to 0.87 in 2016. Then, in 2017 the total assets turnover ratio was recorded at 0.93 means it took about 396 days to make total assets turn over. The reason why it took a lot of time to make total assets to turn over was due to the fact that Atlas Copco's products usually take more time to produce. Its products are mainly for industrial areas.

Table 13: Total assets turnover ratio

	2014	2015	2016	2017
Revenues	93721	102161	101356	116421
Total assets	105281	103010	115892	125738
Total assets turnover ratio	0.89	0.99	0.87	0.93
Time of total assets turnover	410	369	420	396

Source: Author's calculation based on data from Atlas Copco group's financial reports.

Inventory turnover ratio

In general, Atlas Copco's inventory turnover ratio was fluctuating over the period of time. In 2014, the company could sell and renew the inventories 3.19 times or it took 114 days to make inventories turn over. In 2015 and 2017, the results were the same that the company's inventory turnover was 3.7 times. In other words, inventories were produced and sold every 99 days.

Table 14: Inventory turnover ratio

	2014	2015	2016	2017
Cost of goods sold	58669	62031	61237	68105
Inventory	18364	16906	16912	18415
Inventory turnover ratio	3.19	3.67	3.62	3.70
Time of inventory turnover	114	99	101	99

Source: Author's calculation based on data from Atlas Copco group's financial reports.

Fixed assets turnover ratio

This ratio shows the amount of fixed assets' turnovers in one year during the observed period. The results increased from 1.9 in 2014 to 2.27 in 2017, it means in 2014 the fixed assets could be able to turn over nearly 2 times. In 2017 it would turn over 2.27 times or it took 161 days to make fixed assets to turnover.

Table 15: Fixed assets turnover ratio

	2014	2015	2016	2017
Revenues	93721	102161	101356	116421
Fixed assets	49337	49671	54891	51222
Fixed assets turnover ratio	1.90	2.06	1.85	2.27
Time of fixed assets turnover	192	177	197	161

Source: Author's calculation based on data from Atlas Copco group's financial reports.

5.3.4. Stability ratios

Debt to equity ratio

In this part, debt to equity ratio of the company is presented in the table 16 by taking total liabilities divided by total equity. From the table we can see the ratio was higher than 1 over the years means that more assets were financed by debt.

During this period, the lowest point was in 2014 and 2017 with 1.07. In 2015 and 2016 the debt to equity ratio was higher with 1.2 and 1.18 respectively, it means it would generate more risk for the creditors as the company depended on external creditors more than its investors.

Table 16: Debt to equity ratio

	2014	2015	2016	2017
Total liabilities	54528	56260	62715	65015
Total equity	50753	46750	53177	60723
Debt to equity ratio	1.07	1.20	1.18	1.07

Source: Author's calculation based on data from Atlas Copco group's financial reports.

Interest coverage ratio

Table 17 below shows the interest coverage ratio of Atlas Copco by using earnings before taxes and interests divided by interest expenses. This ratio explains the ability of the firm to pay interest obligations.

From this table we can see an upward trend from 2014 to 2017. The first 3 years recorded the small increase from 16.9 in 2014 to 17.21 in 2016, however in 2017 it grew to 22.66. This is a good sign to the business as the higher the result the better. This is due to the increase in income over the years when they decided to open Vacuum Technique are in 2017, while the interest expenses remained stable without big difference.

Table 17: Interest coverage ratio

	2014	2015	2016	2017
EBIT	17103	20001	19965	24197
Interest expenses	1012	1178	1160	1068
Interest coverage ratio	16.90	16.98	17.21	22.66

Source: Author's calculation based on data from Atlas Copco group's financial reports.

5.4. Spider analysis

In this part, spider graph will be used to compare financial situation of Atlas Copco and its competitor from 2014 to 2017. There are five indicators used to explain, they are ROA, ROE, current ratio, quick ratio and debt to equity ratio. The data in this part can be found in appendix 3.

5.4.1. Overview of Atlas Copco's competitor

In order to compare the overall financial situation of Atlas Copco, we need to choose one of its strong competitors, in this case Illinois Tool Works was chosen to compare with Atlas Copco.

Illinois Tool Works also has a strong base and history as it was founded more than 100 years ago in Chicago. They focus on manufacturing, specialize in industrial equipment, consumables and related service businesses. Their products can be found all over the world, in deep-sea oil rigs, bridges, wind turbines, aerospace technology, healthcare, automotive industry and mobile devices (Itw.com, 2019).

Similar as Atlas Copco, Illinois Tool Works also emphasizes on innovation. Nowadays, this is a global company with more than 48000 employees in 55 countries

with total revenues 14.8 billion dollars in 2017 (Itw.com, 2019). Therefore, this is the reason why Illinois is a good example to compare with Atlas Copco.

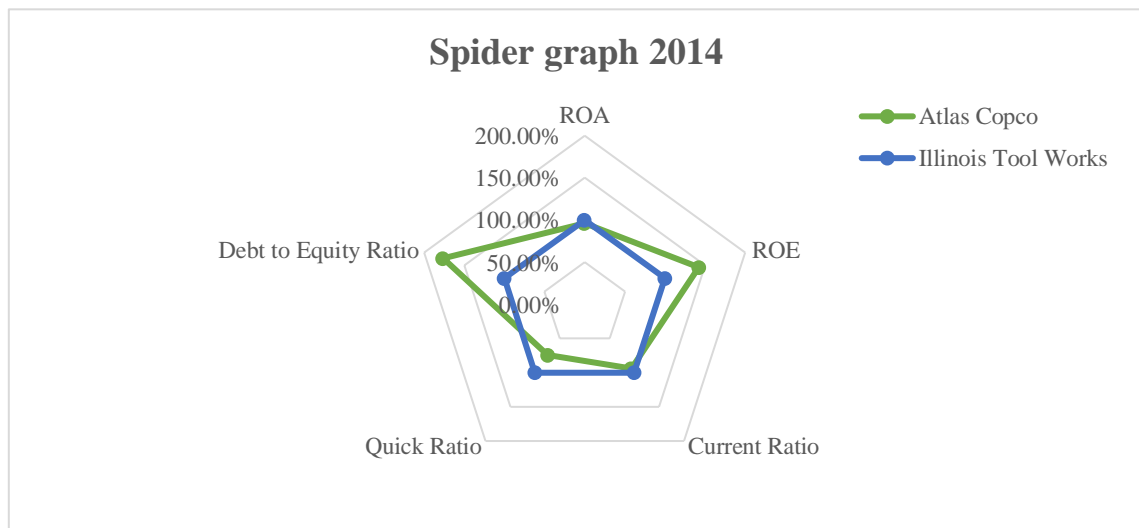
5.4.2. Spider graph

Year 2014

Graph 6 represents the results of five indicators from two companies. In this graph, we can see that two companies had the similar ROA ratio, however Atlas Copco (AC) had more advantage in ROE with nearly 1.5 times bigger than Illinois. It means AC was better in generating profit from equity.

Illinois had better results in current ratio and quick ratio than Atlas Copco means Illinois had more ability to pay off its debt when it came due. The last indicator: debt to equity ratio, Atlas Copco in 2014 was far more than Illinois, it can be explained that more creditor financing was used than investor financing in Atlas Copco, thus it put Atlas Copco into more risk than Illinois.

Graph 6: Spider graph 2014



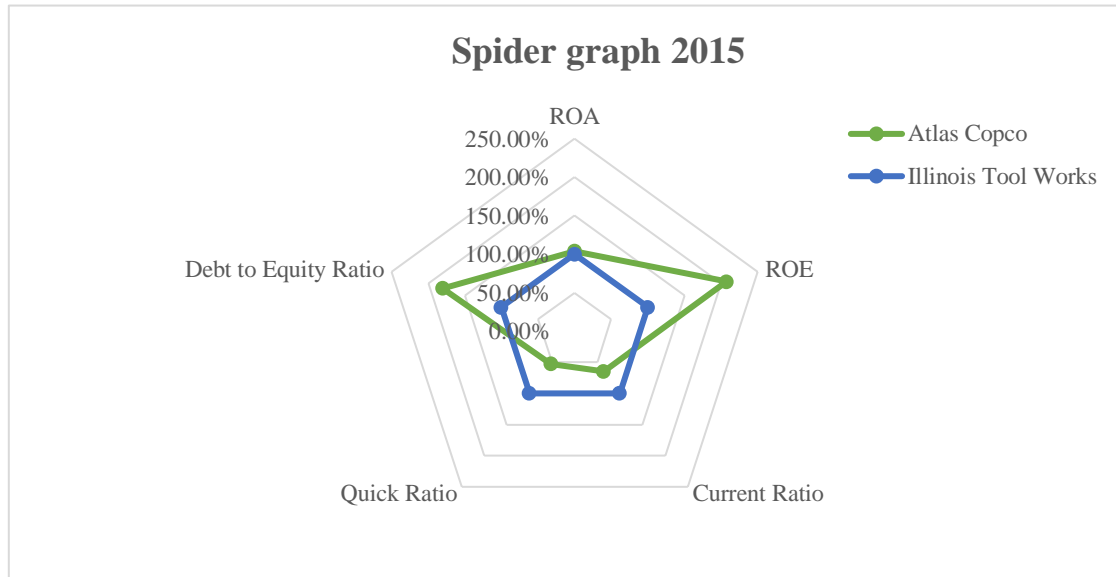
Source: Author's calculation based on data from Atlas Copco group's financial reports.

Year 2015

From graph 7 and from calculation in appendix 3, we can see that Atlas Copco had more proportion in profitability ratios, which are ROA and ROE, especially ROE of

Atlas Copco was two times larger than Illinois, it shows AC company had making a good profit for owners and shareholders in this year.

Graph 7: Spider graph 2015



Source: Author's calculation based on data from Atlas Copco group's financial reports.

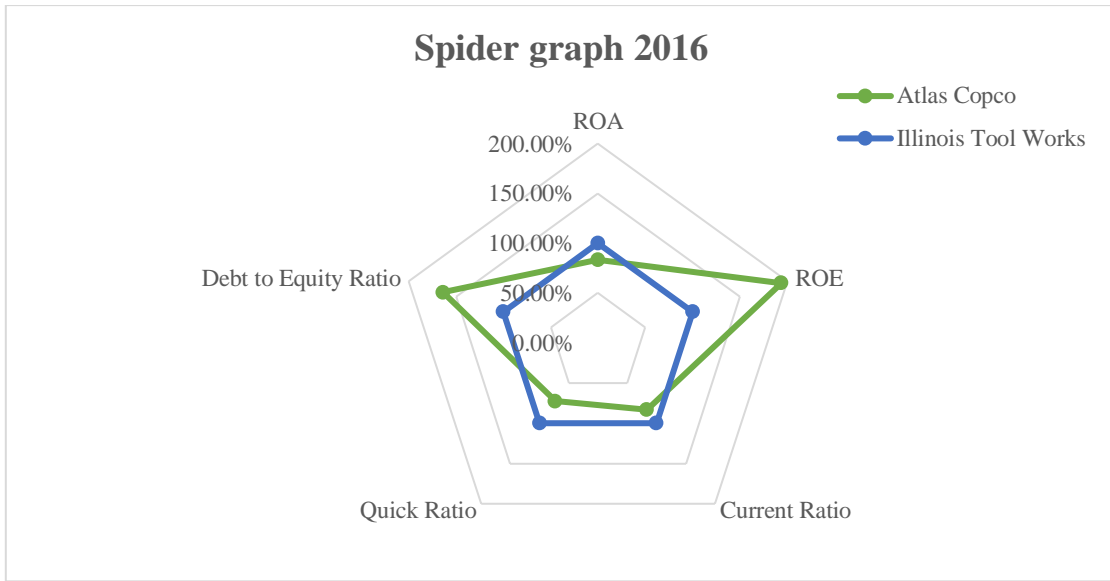
However, Illinois had greater results in liquidity ratios and leverage ratio as its current ratio and quick ratio was higher than AC, its debt to equity ratio was nearly double than Illinois's ratio. Therefore, AC would create more risk for the creditors as it depends more on external creditors and investors.

Year 2016

The graph 8 shows more advantages for Illinois than Atlas Copco, as we can see in this year Illinois had better result in ROA, which did not happen previous years. It means Illinois now could manage their assets more effectively as they generated more profit from assets invested.

ROE ratio gave a good point to Atlas Copco, so we can see that over the years Atlas Copco had been always beneficial for the owners or investors because its return on equity had been increasing. However, quick ratio and current ratio of Illinois were still larger than Atlas Copco, so Illinois could be able to satisfy its short-term obligations faster than Atlas Copco.

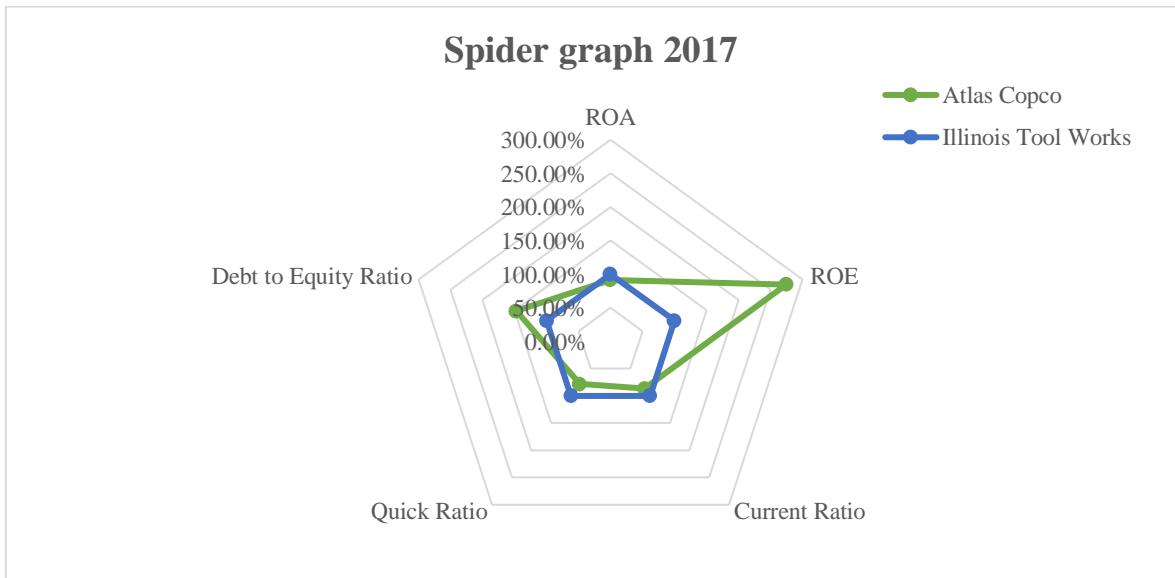
Graph 8: Spider graph 2016



Source: Author's calculation based on data from Atlas Copco group's financial reports.

Year 2017

Graph 9: Spider graph 2017



Source: Author's calculation based on data from Atlas Copco group's financial reports.

The last year 2017 is presented in graph 9 above. ROA of Illinois was 1.79% higher than Atlas Copco, however ROE of Atlas Copco was nearly 2.75 times bigger than

Illinois, which was an excellent result for Atlas Copco as they remained strong in generating profit from common stockholders' investment.

The difference of liquidity ratio between two companies had shortened. As we can see from the graph, current ratio and quick ratio of Illinois were still higher than Atlas Copco, but not as much as previous years. It happened the same for debt to equity ratio that even Illinois still had more advantage, however the distance had become shorter.

6. DISCUSSION AND CONCLUSION

This bachelor thesis aims to evaluate the financial analysis of Atlas Copco group by using a variety of methodology to identify its financial performance. The analysis was accessed during the period 2014-2017 with all the data was taken from the company's annual reports.

The first part focused on theory and methodology, it started with explanation of absolute indicators, including horizontal and vertical analysis of the balance sheet and income statement. Then followed by financial indicators, they are profitability ratios, liquidity ratios, activity ratios and stability ratios. Each ratio was explained by both description and formula. After that, spider analysis was described to help us have a better view of the company in comparison with its competitors. The next part was practical part by analysing financial analysis of Atlas Copco group by describing about the company and evaluating its financial performance by using indicators from the first part.

From the observed period, the horizontal and vertical analysis showed that Atlas Copco's total assets had been increasing over years, as well as total equity and liabilities. Their revenues were recorded the same result as it moved forward due to the increase in investment and opening new business area. The company's expenses had declined gradually due to the efficient and responsible use of resources, such as energy and water consumption. However, the income tax expenses were quite high, especially in 2015 with almost 7% of the total revenues.

Profitability ratios were showing a good sign. Return on assets was improving even it was fluctuating during the time period, it still remained increasing to prove that the company can manage its total assets well and more profit was earned from investing in assets.

Return on equity had a stable growth without any fall, it is a good information for owners and common stockholders as their investment in the company would be beneficial. This raising trend of ROE during the years shows that Atlas Copco had a stable growth. In other words, profit was generating more and more from common stockholders' investment. This was a good result for the current investors as well as future investors.

Gross profit margin, operating and net profit margin gave the same trend of going forward. However, net profit margin in 2015 had dropped because of higher income tax. The profit and loss statement of Atlas Copco in 2015 recorded that the income tax was nearly two times bigger than in 2014.

Liquidity ratios include current ratio, quick ratio and cash ratio were recorded the growing movement, except the decrease in 2015. Therefore, Atlas Copco was able to pay off its short-term financial obligations. Among these three indicators, current ratio was more favourable as it showed higher result, thus the company could pay its obligations by current assets. This information would be interesting to the potential investors. Cash ratio in the first three years was less than 0.4, which might put the company at risk. In other words, if the company had to pay all current liabilities in a short time, they would have sold or liquidated some other assets. Fortunately, 2017 recorded the double growth in cash ratio.

Activity ratios revealed that it was not a good result as it took a lot of time to make assets and inventory turnover. Especially, in total assets, in order to make it turnover, it would take more than one year. In other words, the average time that total assets would turnover was 0.92 during one year. The inventory turnover ratio was better than total assets, but still it was able to turnover only 3.5 times during one year on average. The reason for its slow turnover was due to the fact that Atlas Copco is manufacturing industrial equipment, therefore it would take more time than other industries to make assets turnover.

Debt to equity ratio does not seem to be good as the results during period were greater than 1, especially in 2015 and 2016, it reached to 1.2. As a result, Atlas Copco would generate more risk for the creditors as the company had to depend more on external creditors than its investors.

Interest coverage ratio was quite high for Atlas Copco, and it remained increasing from 16.9 in 2014 to 22.66 in 2017. The earnings before interest and tax expenses had been increasing, while the interest expenses did not change much. Therefore, interest coverage was increasing over the years. It shows that the company was capable of paying interest obligations.

Spider analysis helps to compare Atlas Copco with its competitive company, which is Illinois Tool Works. From 2014 to 2017, it is clearly seen that Atlas Copco had more advantages in profitability ratios while Illinois had better outcomes in liquidity ratios and leverage ratio. Therefore, Atlas Copco was able to manage its equity well over the time, and the distance in ROE between two companies became larger from 2014 to 2017. However, Illinois was better at paying its short-term and long-term obligations when it came due. Graphs in this part showed that Illinois had better results in current ratio, quick ratio and debt to equity ratio than Atlas Copco. It means in the same type of industry, Illinois could be less risky than Atlas Copco for the creditors. But, the good thing is the distance of liquidity ratios and stability ratios between two companies was shortened. So, Atlas Copco was improving its financial performance through the years.

In conclusion, from all the results analysed in this bachelor thesis, I am confident to say that Atlas Copco is a stable, healthy and growing company that would generate profit in the future to attract more potential investors to build a stronger development. Atlas Copco can improve their performance by developing more in higher innovation and focusing on people and the environment in the future. I believe that with its code of practice, concentration on innovation, development and sustainability, the company would be able to archive higher result and maintain the world leading position in sustainable productivity solutions.

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8. APPENDIX

Appendix 1: Simplified balance sheet of Atlas Copco group 2014-2017 in million SEK

Appendix 2: Simplified Profit and Loss Statement of Atlas Copco group 2014-2017 in million SEK

Appendix 3: Spider graph calculation

Appendix 1: Simplified balance sheet of Atlas Copco group 2014-2017 in million SEK

	2014	2015	2016	2017
Total assets	105 281	103 010	115 892	125 738
Fixed assets	49 337	49 671	54 891	51 222
Intangible fixed assets	33 197	33 520	37 828	35 151
Tangible fixed assets	12 610	12 023	12 888	12 457
Financial assets	3 530	4 128	4 175	3 614
Current assets	55 944	53 339	61 001	74 516
Inventories	18 364	16 906	16 912	18 415
Receivables	26 015	25 985	27 685	30 117
Financial assets	11 565	10 448	16 404	25 984
Total equity + liabilities	105 281	103 010	115 892	125 738
Equity	50 753	46 750	53 177	60 723
Share capital	786	786	786	786
Other paid-in capital	6 037	6 405	6 599	7 021
Reserves	4 239	3 157	6 053	5 332
Retained earnings	39 513	36 243	39 667	47 500
Non-controlling interests	178	159	72	84
Liabilities	54 528	56 260	62 715	65 015
Non-current liabilities	27 798	27 205	29 672	28 844
Current liabilities	26 730	29 055	33 043	36 171

**Appendix 2: Simplified Profit and Loss Statement of Atlas Copco group 2014-2017
in million SEK**

	2014	2015	2016	2017
Revenues	93721	102161	101356	116421
Cost of sales	- 58669	- 62031	- 61237	- 68105
Gross profit	35052	40130	40119	48316
Marketing expenses	- 9825	- 10998	- 11044	- 12423
Administrative expenses	- 5668	- 6354	- 6824	- 7719
Research and development expenses	- 2933	- 3287	- 3096	- 3723
Other operating income	580	473	764	1088
Other operating expenses	- 191	- 236	- 121	- 1339
Operating profit	17015	19728	19798	24200
Financial income	313	437	300	309
Financial expenses	- 1237	- 1342	- 1293	- 1380
EBIT	17103	20001	19965	24197
Interest expenses	- 1012	- 1178	- 1160	- 1068
Profit before tax	16091	18823	18805	23129
Income tax expenses	- 3916	- 7100	- 5020	- 6367
Profit for the year	12175	11723	13785	16762

Appendix 3: Spider graph calculation

	2014	2015	2016	2017
ROA				
Atlas Copco	16.25%	19.42%	17.23%	19.24%
Illinois Tool Works	16.89%	18.72%	20.69%	21.04%
ROE				
Atlas Copco	23.99%	25.08%	25.92%	27.60%
Illinois Tool Works	16.87%	12.07%	13.39%	10.05%
Current Ratio				
Atlas Copco	209.29%	183.58%	184.61%	206.01%
Illinois Tool Works	223.09%	283.78%	221.85%	238.39%
Quick Ratio				
Atlas Copco	141.00%	125.00%	133.00%	155.00%
Illinois Tool Works	189.62%	237.92%	182.86%	198.43%
Debt to Equity Ratio				
Atlas Copco	107.44%	120.34%	117.94%	107.07%
Illinois Tool Works	60.93%	66.76%	71.98%	72.65%