TECHNICAL UNIVERSITY OF LIBEREC
Faculty of Economics

Financial Performance Evaluation of Denso Manufactoring Czech s.r.o.

Master Thesis

Study programme:	N0413A050008 Business Administration
Study branch:	Management of Business Processes
Author:	**Bc. Abdel Rahman Dabdoub**
Thesis Supervisors:	Ing. Lenka Strýčková, Ph.D. Departmens of Finance a Accounting

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Master Thesis Assignment Form

Financial Performance Evaluation of Denso Manufactoring Czech s.r.o.

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- ARNOLD, Glen. 2013. *Essentials of corporate financial management*. 2nd ed. Harlow, England: Pearson. ISBN 978-0-273-75887-7.
- MCLANEY, E. J. 2011. *Business finance: theory and practice*. 9th ed. Harlow: Pearson/Prentice Hall, ISBN 978-0-273-75045-1.
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Abstrakt

Hodnocení finanční výkonnosti společnosti

Tato diplomová práce je zaměřena na hodnocení finanční výkonnosti vybrané společnosti. Cílem této diplomové práce je zhodnotit finanční výsledky společnosti DENSO MANUFACTURING CZECH s.r.o. na období 2016 - 2020 pomocí tradičních metod a na základě získaných výsledků navrhnout společnosti doporučení. Tato diplomová práce je rozdělena na dvě části, kde první část představuje teoretický základ pro analýzu. Druhá část představuje charakteristiku vybrané společnosti a uvádí výsledky provedených analýz. Hlavním zaměřením této diplomové práce je měření finanční výkonnosti společnosti DENSO MANUFATURING CZECH s.r.o. Návrhy a doporučení vycházejí ze zjištění praktické části diplomové práce a jsou uvedeny na jejím konci.

Klíčová slova

Finanční výkonnost, finanční analýza, společnost, ukazatele, poměry, bankrot.

Abstract

Evaluation of a Company's Financial Performance

This diploma thesis is focused on evaluating the financial performance of a selected company. The aim of this diploma thesis is to evaluate the financial performance of the company DENSO MANUFACTURING CZECH s.r.o. for the period 2016 – 2020 using traditional methods, and propose recommendations to the company based on the results obtained. This diploma thesis is divided into two parts, where the first part presents the theoretical basis for the analysis. The second part presents the characteristics of the selected company and presents the results of the analyses performed. The main focus of this diploma thesis is measuring the financial performance of DENSO MANUFATURING CZECH s.r.o. Proposals and recommendations are based on the findings of the practical part of the diploma thesis and are presented at the end of it.

Key Words

Financial performance, financial analysis, company, indicators, ratios, bankruptcy

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Contents

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List of Abbreviations

ASCZ	DENSO AIR SYSTEMS CZECH s.r.o.
CZ	Czech Republic
CZK	Czech crowns
D/E	Debt to equity
DMCZ	DENSO MANUFACTURING CZECH s.r.o.
EBIT	Earnings before interest and tax
EU	European Union
FA	Financial Analysis
GAAP	Generally accepted accounting principles
IFRS	International financial reporting standards
NACE	Statistical Classification of Economic Activities in the European Community
ROA	Return on Assets
ROCE	Return on capital employed
ROE	Return on equity
ROIC	Return on invested capital
TIE	Times interest earned

Introduction

Companies exist to provide value to their stakeholders; as such, a company that does not provide this value need not exist. This value that is expected by shareholders, managers, creditors, employees and investors is subjectively relevant to each individual and company. In order not to disappoint their stakeholders, companies employ methods of analyzing their own performance in order to remain competitive. Through these methods of evaluation, the company is able to avoid financial instability, and achieve its goals. Some of the more basic, but nonetheless important, methods of evaluating company performance come in the form of financial analysis.

The topic of this diploma thesis is to evaluate the financial position of the selected company, DENSO MANUFACTURING CZECH s.r.o. The goal of this work is to evaluate the financial position of the selected company using methods of financial analysis that will be applied to publicly available financial statements. The financial status will be assessed and suggestions will be proposed to improve the financial situation of the company on the basis of the results.

In order to accurately evaluate a company's performance, it is necessary to determine the methods that will be used. For this reason, this work is split into two parts, the first part being theoretical and the second practical. The theoretical part will deal with establishing the knowledge basis needed to accurately understand the financial statements and the information within them, as well as detail the methods of financial analysis that will be used. The practical section will deal with the application of these methods of financial analysis, and will conclude with a summary of the findings, followed by propositions based on the results acquired.

1 Defining Financial Performance of a Company

As mentioned in the introduction, different groups and individuals hold different expectations for companies. It is therefore apprehensible that these different parties hold their own perspective on the idea of "performance". In general, we can view the performance of a company in several ways. One way is to look at the financial performance – the revenue and profit of the company, the availability of cash in their bank accounts, their ability to repay debt on time, and so on. Another way of looking at performance could be non-financial – the way the company manages itself and its employees, the way the company behaves with its suppliers (such as punctuality), goodwill and customer credibility. Since business performance as a topic encompasses so many different perspectives, there is contest as to what can be assigned as an accurate definition.

Rajnoha, Lesnikova and Krajcik (2017) describe the numerous methods used to assess the performance of a company, from financial to non-financial measures. Through accepting the existence of a myriad of methods measuring business performance, we can conclude that broadly, business performance aims to evaluate the use of funds invested into a company, and to compare gathered data, borne as a result of business activities, according to a set of criteria (Wagner 2009).

The differences in methods of measuring performance are a result of the different needs interested parties have, often these parties are categorized in two ways: internal and external parties. Internal parties include company owners and managers, while external parties include stakeholders in the company, such as customers, suppliers, employees, banking and financial institutions. Every company has a duty to fulfill: to deliver value for money to all stakeholders (Neely, 2002). Additionally, there are external parties that receive special access to up-to-date information concerning company finances. These external parties are banks, and they use these financial records to evaluate the company's performance for the purpose of providing loans. To name a couple of examples, banks will typically assess the creditworthiness of a company, and evaluate the chances for bankruptcy before making their decision on what loans to provide (Vochozka, 2011). Comparatively to other stakeholders, banks receive special access to financial statements due to the importance of money to company operations, whereas the rest of the stakeholders will have to derive information from periodically published statements.

Suppliers of the business also have a vested interest in the stability and performance of said company. They do not, however, enjoy the premium access to current financial documents that banks do. They, like every other stakeholder save banking institutions, have to study the published accounting reports from the previous period. The combination of late access to accounting reports, and the fact that often supplier invoices mature over a long period of time may lead to disruptions in the flow of business or production due to the nature of performance being dynamic; a measure of performance is an instance in a continuous process (Neely, 2002).

Designating a company as successful is preceded by a holistic evaluation; one that takes into account all areas affecting business performance such as profit, productivity, efficiency, quality, ergonomics, safety and employee morale (Ferreras, 2021). The information concerning these listed elements of holistic evaluation are unfortunately hidden to external parties. As such, it must be considered that the analysis and evaluation of success, or performance, in this diploma thesis stems from non-current accounting data, and does not include a holistic evaluation such as the one described by Ferreras (2021). Accordingly, the measurement of performance, and subsequent analysis, will be purely financial by nature.

1.1 Development of Performance Measurement Methods

In the modern day, the methods of performance measurement are anything but rigid; on the contrary, the rapidly growing competition in international markets has led to companies striving for any measure of advantage afforded to them through the use of modern methods of performance measurement (Wagner 2009). Similar to other management disciplines, the theory behind performance measurement follows its practice. Over time, as economic and social conditions change, companies must adopt their practices to capitalize on new emerging opportunities, and mitigate new threats (Bititci, 2015).

According to Bititci (2015), the earliest form of performance management emerged in the late 13th century as double-entry book-keeping, and remained as is until the Industrial Revolution of the 19th century; after which, performance management began experiencing rapid changes. With the emergence of mass manufacturing, a system of wages became commonplace as opposed to piece-work payment, and the growing of industrial systems saw power and control be delegated as organizational complexity grew (Bititci, 2015).

In the early stages of globalization in the 1950's, more sophisticated approaches to managing productivity came to existence, such as quality control and variety reduction (Bititci, 2015). Yet even with these new emerging methods, the measurement of company performance still primarily focused on maximizing profits through volume of production (Wagner, 2009). Beyond the 1960's and through the 1980's, the focus of performance measurement shifted towards the side of demand. Quality, time, flexibility and customer satisfaction became important factors to consider when accessing performance (Bititci, 2015). This period also saw a shift in business strategies, where there was once an emphasis on current business strategy, there was now a new focus on future development, and a new continuous search for improvements to company competitive advantages (Wagner 2009).

By the end of the 20th century, and beginning of the 21st, performance measurement and management had become widespread, with a wide variety of organizations each implementing various measurement models and frameworks (Bititci 2015). Beyond the variety of models used, the notion of assessing a company as a complex system became commonplace. Performance management moved away from mathematical calculations to better grasp modern ideas, such as company success being influenced not only by economic factors, but also social, legal and demographic factors, among others. With the evolution of technology and increased access to previously unattainable information, the concept of competitive advantage has become a valued intangible asset (Wagner 2009).

The culmination of these historic developments in performance measurement are the methods that are familiar today. Performance management at the operational level is often carried out using performance indicators that are not measured financially (Neely, 2002). Despite the prevalence of these modern performance indicators, at the most senior levels financial performance remains a major consideration (Neely 2002). Additionally, Neely (2002) argues that despite non-financial measures of performance have experienced greater development over the past decades, financial performance measures remain some of the most important because they serve three main functions:

1. Financial measures of performance serve as tools for financial management in the provision and use of financial resources to support the broader goals of the company, and to allow for efficient and effective operation.

2. Financial measures of performance can be used as mechanisms for motivation and control within a company, by which is meant that financial information may provide insight into the way specific operations are managed, as well as their financial inputs and outputs.
3. Lastly, financial performance is a major objective of any business organization, and is used to measure the achievements of a company, and fulfill its obligations towards its shareholders. (Neely 2002).

A member of the public, and even employees not part of senior management, are rarely provided complete data concerning non-financial performance indicators; some may be published with annual reports, but its publishing is by no means mandated. The publishing of financial data, on the other hand, is a legal requirement of every company; and while there is a time-lag between when this information is available internally and when it is available publicly, it remains one of the most reliable sources of assessing the performance of a company as a whole from without.

2 Financial Analysis

Financial analysis (FA) is an integral part of corporate administration and governance. FA takes into account and evaluates a company's financial statements to analyze its position and performance, and to assess future financial performance (Subramanyam, 2014). It takes the information presented in these statements and simplifies it, turning it into a more comprehensible, and useful, form. FA moves within two different frames of time: the past and the future. This financial instrument assesses a company's track record to determine its ability to deliver on expected performance. From a future-oriented prospect, it aims to answer questions concerning future earning power or investment in new projects, for example (Subramanyam, 2014). In short, financial analysis aims to determine the strengths and weaknesses of a company, and its overall financial health using select indicators.

2.1 Users of Financial Data

The information resulting from FA serves the needs of many users, though they can be broadly categorized in two ways: internal users – these users are part of the company and include managers, owners and employees, and external users – users with an interest in the company but not part of it, such as customers, banks, regulators and suppliers (Vochozka, 2011).

The main users of the information derived from FA are naturally the internal users. Through this information the achievements of the company can be accurately measured and benchmarked. It allows the managers to stay on track towards fulfilling the goals promised to the owners, as well as providing the owners information concerning the value of their funds (McLaney, 2017).

In the role of external users, banks and other financial institutions provide sources of external financing to companies as creditors. Banks can use information derived from financial statements to assess the creditworthiness of a company and its likelihood of bankruptcy, as well as overall financial health, before issuing out a loan. This need for information on the financial health of a company extends to other external users that provide financing or services to the company as well, such as insurance companies (Brigham 2018).

Suppliers also have a vested interest in the financial health of the company they supply, because unlike banks where loans can be paid over longer periods of time, suppliers are conducting business

of their own and require payment in a timely manner. Suppliers typically provide short-term loans in the form cash or credit; while useful, this can quickly backfire once a company declares bankruptcy, as these suppliers can begin demanding higher interests, imposing stricter loan covenants, or move on to another business partner entirely (Brigham, 2019).

Financial health is imperative to retaining creditors, suppliers, customers and employees. Employees are implicitly providing a form of credit, as they often paid for their efforts afterwards – towards the end of the week or month, for example. A company with poor financial health that is unable to pay their employees with lose some of these creditors. Customers expect both quality and punctuality, and are interested in the staying power of the companies they deal with, and will be hesitant to do business with a company that isn't expected to endure. Lastly, regulators apply tools of FA to audit financial records and calculate relevant tax returns (Subramanyam, 2018).

2.2 Sources of Financial Data

An important prerequisite for FA is the availability of quality data, the source of which comes from publicly available financial statements. There are four integral financial statements, and they are:

- the balance sheet,
- the income statement (also called the profit and loss statement),
- the statement of cash flows (or cash flow statement),
- the statement of changes in equity.

These statements relate to one another and together provide a picture of a company's operations and financial position. They are typically part of a larger report called the annual report, which is a larger report issued to stock-holders that contains two types of information: a verbal section which describes the results of the company's operations from the previous year and discusses future developments that will affect operations, and an accounting section that presents the aforementioned financial statements (Brigham, 2019).

Both parts of the annual report are equally important to stock-holders, as they complement each other. The financial statements report what has happened to the assets, earnings, and dividends, while the verbal report explains why things turned out the way they did (Brigham, 2019).

While both parts are equally important, there isn't an emphasis on the structure of the verbal information as there is on the accounting information. Financial statements are published most often following two standards: the United States Generally Accepted Accounting Standards (US GAAP, or GAAP), and the International Financial Reporting Standards (IFRS) (Subramanyam, 2014). As the name suggests, the US GAAP is used predominantly in the United States. The IFRS on the other hand has been adopted by over 100 countries, including the members of the European Union (EU) (Schmidlin, 2014).

The objective of behind the development of the IFRS is for businesses around the world to adopt a common set of accounting rules, effectively unifying accounting standards so that financial figures and ratios can be compared without having to adjust them (McLaney, 2017, Schmidlin, 2014).

2.2.1 Balance Sheet

The balance sheet, also sometimes called the statement of financial position, is a statement on the matter of the wealth of a business, how much wealth is being held in each category, how much of the wealth is controlled by the business and how much is committed to outsiders, as well as the net wealth of the business (McLaney, 2017). Unlike other financial statements that provide a summary of a period of time, the balance sheet provides a "snapshot"; it shows the company position only at a specific point in time (Brigham, 2019).

A balance sheet has three major sections, those are the assets, the liabilities and the equity of a company. Assets are the things the company owns and can use to make their money with. Liabilities make up the money the company owes to outside sources, and equity is the value of what would be left if all of the assets were sold off and debts paid. The critical relationship between these categories is that the value of the company assets must always qual to the sum of its liabilities and equity (Vance, 2002).

$$Assets = Liabilities + Equity \quad (1)$$

Table 1: Structure of a balance sheet – Assets

Item Number	Item name	Current accounting period			Past acc. Period Net
		Gross	Correction	Net	
A.	**Fixed assets**				
A.I	Intangible fixed assets				
A.II	Tangible fixed assets				
A.III	Long-term financial assets				
A.IV	Long-term receivables				
B.	**Current assets**				
B.I	Stocks				
B.II	Short-term receivables				
B. III	Finances				

Source: own processing according to balance sheet of DENSO Czech s.r.o. (2018)

Table 2: Structure of a balance sheet - Liabilities

Item Number	Item name	Current accounting period			Past acc. Period Net
		Gross	Correction	Net	
A.	**Equity**				
A.I	Basic capital				
A.II	Profit				
B.	**Foreign Sources**				
B.I	Reserves				
B.II	Long-term liabilities				
B.III	Short-term liabilities				
B.IV	Tax liabilities and subsidies				
C.	**Accrued liabilities**				

Source: own processing according to balance sheet of DENSO Czech s.r.o. (2018)

As shown in table 1, assets are divided into two categories – fixed assets and current assets. Fixed assets, also called long-term assets, are assets that are expected to be used for more than one year. In the subcategories of fixed assets are tangible and nontangible assets. Tangible fixed assets include movable and immovable assets that will be used for more than one year, such as plant equipment or land. Intangible fixed assets include things such as software licenses or intellectual property such as patents and copyrights. Current assets are assets that should be converted to cash within a year, and include accounts receivable, inventory and cash equivalents (Brigham, 2019).

On the other side of the balance sheet are the equity and liabilities of the company. Similarly to assets, liabilities are split into short-term and long-term liabilities, with the difference being that short-term liabilities are expected to be paid off within one year, such as accounts payable and accrued wages and taxes. Long-term liabilities can include long-term debt and bonds that mature in more than one year (McLaney, 2017).

Equity shows how much shareholders have contributed to the wealth of the company. This is by a combination of shareholders specifically putting assets, usually cash, into the company in exchange for shares, and by allowing wealth generated by the company to remain there rather than taking it as dividends. This information can be found under the equity section of the balance sheet listed as retained earnings and reserves (McLaney, 2017).

2.2.2 Income Statement

In order to generate profit, production factors must be used to start business operations. Both revenues and expenses are recorded in the income statement, a financial statement that presents a summary of events that have affected the wealth of a business over a period of time; the balance of these two values represents the profit or loss for the period of time. Wealth in this context is not limited to cash, but includes all things that have economic value to the company, such as assets, credit or debt (McLaney, 2017).

Revenues come as a result of the company's financial performance, while costs manifest as consumed cash or inventory. Revenues and costs are divided into three groups in the income statement. The first group relates to the operating activities of the company, the second to the financial activities and the third group to any extraordinary activities the company may experience that falls outside its normal parameters for business (Schmidlin, 2014).

2.2.3 Cash Flow Statement

The purpose of the cash flow statement, or the statement of cash flows as it is sometimes called, is to provide information on the inflows and outflows of cash for a business for a period of time. While this may seem redundant, the income statement is not adjusted for non-cash items, and income is not cash; this leaves the cash-flow statement as the only statement to show the true cash flows to and from the company for the period of time, and cash is the most liquid asset, offering both liquidity and flexibility to a company (Subramanyam, 2014).

The cash flow statement, like the income statement, is split into three groups. The first grouping is by operating activities, which include all activities related to the company's normal ongoing operations. The second grouping is by investing activities. These activities are means of acquiring and disposing of non-cash assets, such as the purchase and sale of tangible or intangible assets, loans or securities. The third grouping is by financing activities, and these relate to changes in equity, withdrawing and servicing funds to support regular business activities (Brigham, 2019).

The cash flow statement can be prepared in one of two ways: using either the direct or indirect method. Both methods provide the same bottom-line results, but their format differs. Using the indirect method, net income is adjusted for non-cash income and operating cash flows. This can aid in predicting cash flows by first predicting income and the adjusting for leads and lags. This format is commonly used to initially illustrate preparation of the cash flow statement. The indirect method of computing the cash flow statement adjusts each income item for its related accruals and provides a better format to assess the amount of operating cash inflows and outflows (Subramanyam, 2014).

2.2.4 Statement of Changes in Equity

The statement of changes in equity, also called the statement of stockholders' equity or statement of shareholders' equity, is a statement that shows in detail the movement in shareholders' equity withing a given period. The statement of changes in equity lists the impact that net income, dividend payouts, buyback of shares, capital contributions and other comprehensive income will have on the components of shareholders' equity, such as retained earnings and share capital (Schmidlin, 2014).

If the company, at the end of a financial period, finds itself with excess funds it can pay them to shareholders in the form of dividends. However, shareholders have the option of allowing the funds to stay within the company as a form of investment. These funds are listed in financial statements as retained earnings. These represent claims against assets, rather than assets themselves. These retained earnings are used by management to purchase additional equipment or inventory, make improvements in plants and so on (McLaney, 2017).

2.3 Financial Indicators

There are a variety of tools fit to many needs available to help users analyze financial statements. For this section, two of the more commonly used, but nevertheless useful, tools will be described: horizontal analysis and vertical analysis.

2.3.1 Horizontal Analysis

Horizontal analysis, also called comparative financial statement analysis, is conducted by reviewing consecutive balance sheets, cash flow statements and income statements from year to year or period to period. The most important information revealed from this analysis is trend. A comparison of financial statements over several years can reveal the direction and extent of a trend. This is true for the overall financial position of the company, as well as for individual items on financial documents. There are two popular techniques to performing a horizontal analysis, they are called year-to-year change analysis and index analysis (Subramanyam, 2014).

Year-to-Year Change Analysis

For comparing financial statements over shorter periods of time, such as two to three years, year-to-year change analysis can be used, as it allows for more manageable and understandable results. One of the advantages of year-to-year change analysis is that results are presented in both absolute values as well as percentages, a welcome feature as percentage changes may not always accurately reflect their significance; a 50% change in a base amount of 10.000 Czech Crowns (CZK) will usually be less significant than a change of the same percentage in a base amount of 1 million CZK (Subramanyam, 2014).

While straightforward, problems may occur when computing year-to-year analysis. When a negative amount appears in the base period and a positive amount in the subsequent period, or the other way around, no meaningful percentage can be calculated. Similarly, when there is no amount in the base period, no percentage change is computable. Additionally, caution should be exercised when interpreting large percentage changes that can arise due to small base period amounts, or when an item is present in the base period and is not in the subsequent period; in this particular case, the change in percentages would show a 100% decrease (Subramanyam, 2014).

Index Analysis

Index analysis, or index-number trend analysis, can be used to cover longer periods of time, as using the year-to-year change analysis for periods longer than two to three years may become unwieldy. To perform an index analysis, a base period needs to be chosen, for all items, with a preselected index number typically set to 100. This base period will then become a frame of reference for future comparisons, so it is necessary to choose a base period in which business conditions are as close to normal as possible. Like year-to-year analysis, certain changes cannot be expressed accurately using index numbers, such as changes from negative amounts to positive amounts. Using an index number of 100, percentage changes can be calculated using the following formula (Subramanyam, 2014):

$$\frac{Current\ year\ balance}{Base\ year\ balance} \times 100 \qquad (2)$$

Using index analysis, only significant items on financial statements need be analyzed, though caution should be exercised when doing so, as to take into consideration the effects of external forces on the data used in the analysis, such as economic or industry factors. Where possible, these inconsistencies should be adjusted for. Additionally, the longer the period of time used for comparison, the more distorted of an image may be generated on any price level changes. On the upside, one outcome of such an analysis would be to provide insight into the policies of managers, and their ability to deal with obstacles and take advantage of opportunities during these periods (Subramanyam, 2014).

2.3.2 Vertical Analysis

The vertical analysis is perhaps more suitably used for interpreting the balance sheet. Vertical analysis, also called common-size financial statement analysis (due to being said to yield common-size financial statements), attempts to present the proportion of an account within a particular group or subgroup. In a balance sheet, the sum total of the assets, liabilities or equity can be expressed as 100%, with the accounts within these groups expressed as percentages of the total. For the income statement, the sales are often set at 100% with the remainder of the income statement accounts expressed as a percentage of the sales (Subramanyam, 2014).

When analyzing a balance sheet, vertical analysis stresses two factors: the sources of financing, along with the distribution of financing across liabilities and equity, and the composition of assets. Though the vertical analysis is more suited for analyzing the balance sheet, vertical analysis of an income statement is equally important. Both statements lend themselves to this analysis due to the relations of the individual items within them. With the balance sheet, the assessment of asset liquidity could be aided with the knowledge of what proportion of inventories are composed of current assets, for example. The income statement lends itself to vertical analysis, where each item is related to sales; since sales impact nearly all expenses, it may be useful to know what percentage of sales is represented by each item (Subramanyam, 2014).

2.4 Ratio Analysis

Alongside vertical and horizontal analyses, the use of ratios for FA is widely popular, though often misunderstood. Ratios can be discerned from publicly available financial statement, making them a go-to for many external users, and the data allows for assessment of the company itself, or to compare against competitors. Ratios provide reliable data; it is however the interpretation of this data that often gets misappropriated. The computation of a ratio is a simple arithmetic operation, but for the results to be meaningful the ratio must refer to an economically important relation within the financial documents (Subramanyam, 2014).

All of the ratios are important, but different companies may place different levels of importance on individual ratios depending on their needs, and though ratios may provide comprehensive oversight over the financial performance of a company, they are not regarded as the end point; rather, they focus on areas that may need investigation and improvement. One reason for calculating ratios is

to summarize complex accounting information into a small number of key indicators that allow for a quick overview, allowing managers to quickly define areas that may be problematic without wasting time pouring over every detail in their financial documents (McLaney, 2017).

Ratios are commonly split into five categories, those categories are:

- Liquidity ratios,
- Activity ratios,
- Debt management ratios,
- Profitability ratios,
- Market value ratios (Brigham, 2019).

The ratios naturally follow the content of the financial documents. Liquidity ratios are used to tell if the company will continue operating. Activity ratios assess the asset management of a company, and are necessary for the company to keep costs low. Debt management ratios do as the name suggests and assess the risk of the firm, as well as how much income needs to be paid out to debtors rather than stockholders. Profitability ratios combine the activity and debt management ratios to the show their effects on the return on equity (ROE) of the company. Lastly, market value ratios assess the company from the perspective of investors, and explores its potential prospects (Brigham, 2019).

2.4.1 Liquidity Ratios

Liquidity ratios help determine whether a company will be able to pay off its debts once they become due, and remain a viable organization. The subject of liquidity deals with liquid assets: an asset that is traded in an active market and can be quickly converted into cash. A full liquidity analysis requires the use of a cash budget; however, by relating cash and current assets to liabilities, liquidity ratio analysis provides a quick and easy to use measure of liquidity. Two of the most commonly used liquidity ratios are current ratio and quick or acid-test ratio. However, due to their static nature, the search for a more dynamic measure of liquidity has led to the development of the cash flow ratio. (Brigham, 2019, Subramanyam, 2014).

Current Ratio

The current ratio, also called the working capital ratio, sets all current assets (liquidities, receivables, inventories) in relation to short-term liabilities. Schmidlin (2014) suggest that the general target result for this ratio is within the region of 120% to 170%, explaining that current assets serve current business and are usually used within a year, and that this term of less than a year also characterizes short-term liabilities. There liabilities should, therefore, be adequately covered by their counterparts: the current assets.

Schmidlin (2014) continues that in order to fulfill the aforementioned criteria a ratio of 100% would be sufficient, but that would not be enough to account for current assets needed for day-to-day business. This, along with a lack of guarantee that assets can be liquidated at book value at short notice means a certain cushion is necessary. Hence the suggestion of a ratio in the regions of 120% and 170%; below this region would pose the risk of not being able to cover day-to-day business or short-term liabilities, and a ratio more than the proposed region means the company ties up too much capital and profitability can suffer as a result. The current ratio is defined as:

$$Current\ ratio = \frac{Current\ assets}{Current\ liabilities} \qquad (3)$$

While the current ratio is widely used and a useful measure of liquidity and short-term solvency, there are limitations to which it is subject. The current ratio does not measure or predict the pattern of future cash inflows and outflows, and it does not measure the adequacy of future inflows and outflows. It is a static measure of resources available at a specific point in time to meet current obligations. Though this may sound like discouragement to its use, the current ratio remains nevertheless widespread for several reasons. Reasons for its use include its simplicity in computation, its understandability and data availability. Its use derives from the creditor's disposition to viewing credit situations as conditions of last resort; though not practical on its own, the current ratio has its relevant use as an analysis tool in conjunction with other ratios (Subramanyam, 2014).

Quick ratio

The quick ratio, also known as the acid test ratio, is used to calculate a company's capability to pay its short-term liabilities with current assets, much like the current ratio, but on a more immediate level. The quick ratio's goal is to determine if there are sufficient liquid assets available to pay creditors should they demand payment for their claims immediately. While the aforementioned scenario is unlikely, the quick ratio may be one of the signs that a business may not be able to pay its liabilities on time, eroding the confidence of creditors and triggering demands for sooner or immediate payment (McLaney, 2017).

The formula for the quick ratio can be calculated in one of two ways (Schmidlin, 2014):

$$Quick\ ratio = \frac{Cash + Short\ term\ investments + Receivables}{Current\ liabilities} \qquad (4)$$

$$Quick\ ratio = \frac{Current\ assets - Inventories}{Current\ liabilities} \qquad (5)$$

Both formulas (4) and (5) will yield the same results when applied to the same data. They emphasize that the quick ratio deals with liquid assets, of which inventories are considered to be the least liquid; if sales slow down, inventories may not be able to be converted into cash as quickly as needed. Additionally, inventories are the assets on which losses are most likely to occur in the event of liquidation, giving importance to the use of the quick ratio to calculate a firm's ability to pay off short-term obligations with relying on the sales of inventories (Brigham, 2019).

For most companies, irrespective of industry, the quick ratio should theoretically exceed 1. On the other hand, a higher number may not be beneficial as it may signal that cash is being accumulated and not reinvested. The actual result of the quick ratio in practice will differ from industry to industry. In some industries, it may not be abnormal to regularly see a quick ratio lower than 1. The differences between the types of business are effectively adjusted in the definition of liquid

assets; for example, a supermarket will likely label liquid assets differently than a manufacturer. (McLaney, 2017).

Cash flow ratio

As mentioned in the introduction to liquidity ratios subchapter, the previous two ratios are considered static, and are do not recognize the importance of cash flows in meeting approaching obligations. Since liabilities are paid with cash, a comparison between cash flows and obligations is important; this has led to the cash flow ratio, a ratio comparing operating cash flow to current liabilities (Subramanyam, 2014).

$$Cash\ flow\ ratio = \frac{Operating\ cash\ flow}{Current\ liabilities} \quad (6)$$

The operating cash flow ratio measures how many times a company can pay off its current liabilities with cash generated during the same period of time. This ratio should be as larger than one, and ideally as large as possible. A result greater than one indicates that the company has generated enough cash to cover its current liabilities, while a result lower than one indicates the opposite. Like many ratios, the cash flow ratio benefits from contextualization; a company may have launched a project that compromises cash flow in the short term, but yields greater benefits in the long term. If a cash flow ratio was conducted in this situation, without further context, the viewer of the ratio may come to the incorrect conclusion that the company is in poor financial health (McLaney, 2017).

2.4.2 Profitability Ratios

"*Profit maximization is one of the foremost targets in business*" (Brigham, 2019).

Financial statements exhibit events of the past, but also serve as the basis for opinion on what is more important – the future. With liquidity ratios, it is possible to learn something about a company's policies and operations. With profitability ratios, we now focus on the financing policies ad operating decisions of companies. Profitability ratios assesses the effectiveness of a

company's ability to generate profit, and a popular method of doing so is to assess the amount of wealth generated against the amount of wealth invested (Brigham, 2019, McLaney, 2017).

Among the most frequently used profitability ratios include return on equity (ROE), return on assets (ROA), the operating and profit margins, return on capital employed (ROCE), asset turnover, and return on invested capital (ROIC).

Return on equity

ROE is a measurement of the performance of invested equity capital in comparison with income. It shows the return on the capital provided by shareholders, as well as the efficiency of its use. Shareholders naturally expect to earn a return on their money, and with the use of the ROE ratio they are able to tell how well a company has been able to use the money they have invested into it. The ROE of a specific company is usually compared to an industry average, or at the very least, the ROE of competitors. The comparative result of the ROE could signal a number of things to investors and shareholders. A lower-than-average ROE could cause shareholder to sell shares and reduce their stake in the company, due to the potential that assets are overvalued or capital is mismanaged. A higher ROE may signal future growth in dividend rates, causing shareholders to hold on to their shares and triggering increased interest from investors. The formula for calculating ROE can be found below. (Brigham, 2019, Schmidlin, 2014).

$$Return\ on\ equity\ (ROE) = \frac{Net\ Income}{Shareholder'sEquity} \qquad (7)$$

Return on assets

Return on assets (ROA) is a measurement of how profitable a company in relation to its assets; in other words, how efficient is a company at using its assets to generate income. Return on assets takes into account net income and puts it in relation with the total assets of the company (Schmidlin, 2014).

$$Return\ on\ Assets\ (ROA) = \frac{Net\ Income}{Total\ Assets} \quad (8)$$

Since ROA shows earnings generated from assets, the ROA between companies may be highly different. For this reason, it can be more beneficial when using ROA in comparative analysis to compare it to the ROA of previous years for the company, rather than to the ROA of competitors. Though in either case, if the ROA ratio yielded is unsatisfactory, use of further ratios or analyses is needed to understand the underlying problem(s), as calculating ROA is a high-level analysis (Vance, 2002).

Return on invested capital

The return on invested capital (ROIC) measures the total return a company has provided to its investors. Its calculation is used to assess the efficiency at allocating capital within its control, and provides a sense of how well a company is using said capital (Brigham, 2019).

$$Return\ on\ Invested\ Capital\ (ROIC) = \frac{EBIT\ (1 - T)}{Debt + Equity} \quad (9)$$

The ROIC formula is calculated by adjusting the operating the operating profit, also called earnings before interest and tax (EBIT), for taxes. In formula (9), T is equal to the effective tax rate. Once the operating profit is adjusted, it is then divided by the total invested capital, which is made up a sum of the company's debt and equity (Brigham, 2019).

Return on capital employed

Return on capital employed (ROCE) measures how successfully a company invests its capital. Its formula is calculated by dividing EBIT by capital employed, which is made up of total assets minus current liabilities (Schmidlin, 2014).

$$Return\ on\ Capital\ Employed\ (ROCE) = \frac{EBIT}{Capital\ employed} \qquad (10)$$

ROCE is used for analyzing profitability, since it provides the amount of profit a company generates against the capital it employs. Thus, a higher ROCE ratio indicates higher profitability. The ROCE may be especially useful when assessing the performance of companies in capital-intensive industries, as unlike ROE, it considers both debt and equity. ROCE may also be a useful indicator of stability when applied to previous financial statements of a company. A stable and rising ROCE trend within a company is favorable to investors over a volatile or downward trend (Schmidlin, 2014).

Operating margin

The operating margin, sometimes called return on sales or the EBIT margin, is calculated by dividing operating income (EBIT) by sales; this yields the operating profit per monetary unit of sales (Brigham, 2019).

$$Operating\ margin\ = \frac{EBIT}{Sales} \qquad (11)$$

Unlike some other ratios, the operating margin has no predetermined value to be compared against, and so generally the higher the operating margin the better, as a higher ratio illustrates that the company is efficient at converting sales into profit. Like ROCE, the operating margin benefits from a stable trend, is becomes a worrisome indicator to investors if it becomes variable from period to period. OM is important to investors because it shows how much of its profit is generated from core operations versus other means (McLaney, 2017).

Net profit margin

The net profit margin is a popular profitability ratio used to gauge the degree to which a company makes money. It is calculated by dividing net income by sales (Brigham, 2019).

$$Net\ profit\ margin = \frac{Net\ income}{Sales} \quad (12)$$

The net profit margin shows how much profit is made per unit of monetary value; in other words, how many cents on the dollar. This particular margin is influenced heavily by market position and cost control. A company that exhibits tight cost control, is in a favorable market position and has low levels of debt will display high levels of net profit margins. The ability to adjust prices and slash costs both also influence the net profit margins of companies. Additionally, when increases in revenue accompany increases in profit, this can be considered a sign of economies of scale. (Schmidlin, 2014).

Gross profit margin

The gross profit margin, or the gross margin, is one of the most prominent ratios used in financial analysis. It expresses the gross profit as a percentage of revenue, and is calculated using the following formula (Schmidlin, 2014):

$$Gross\ profit\ margin = \frac{Gross\ profit}{Revenue} \quad (13)$$

Schmidlin (2014) states that there are two distinct reasons for the important presence of the gross profit margin in financial analysis. The first reason is that the cost of sales, which is used to calculate the gross profit (sales minus cost of sales) is usually the largest expense in the income statement. The second reason is that despite a company's efficiency, it cannot survive without sufficient gross profit to pay for fixed costs, interest payments and taxes.

2.4.3 Activity Ratios

Activity ratios are used to identify how well a company is leveraging their assets to generate cash and revenue. Activity ratios, also called asset management ratios or efficiency ratios, are important because they measure the amount of each type of asset and help in determining whether the amount is too high or low in regard to current and projected sales. If a company has too many assets, the

cost of capital will be high and as a result, profits may suffer. On the other hand, if the amount of assets is too low, potential sales will be lost. As such, a balance must be maintained when it comes to the amount of assets a company possess, and that is exactly the purpose for activity ratios (Brigham, 2019).

Asset turnover ratio

Asset turnover ratio measure the value of a company's sales against the value of its assets. The asset turnover ratio can be used as an indicator of the efficiency in using assets to generate revenue. A high asset turnover ratio means that capital is flowing into the company quickly, and less capital is needed overall in order to achieve business goals (Schmidlin, 2014).

$$Asset\ turnover = \frac{Sales}{Net\ total\ assets} \qquad (14)$$

Generally speaking, the higher the asset turnover ratio, the better. A higher value of the ratio simply implies that the company is making more money per asset unit. This ratio cannot be applied haphazardly when performing a comparison analysis. The close relationship between business models and capital requirements means that the asset turnover ratio tends to be higher for companies in certain industries than other. As a result, should this ratio be used for comparisons, those comparisons should be within one industry. Alternatively, like some of the previously mentioned ratios, individual companies can use this ratio over a period of time to identify a trend (Schmidlin, 2014).

Inventory turnover ratio

The inventory turnover ratio shows how many times a company has replaced its inventory over a given period. Calculating inventory turnover can be beneficial to businesses, as knowing the number of days it takes to sell inventory on hand can aid in making better decisions regarding purchasing new inventory, manufacturing, and pricing (Brigham, 2019).

$$Inventory\ turnover\ ratio = \frac{Sales}{Inventories} \qquad (15)$$

Since inventory turnover measures how quickly a company sells its inventory, a low turnover ratio indicates slow sales and potentially excess inventory. This may be caused due to a problem with the goods sold, or lack of buyers for this particular product, among other possibilities. A high ratio indicates fast sales, or potentially insufficient inventories, in which case revenue is lost in the form of lost business. Companies should aim for a higher turnover ratio, as companies with higher turnover tend to perform better. There could be reasons, however, for a company aiming for a lower turnover rate than they can achieve. One such reason could be that holding costs for amassed inventory is less costly to the business of the company than lost business due to lack of inventory (Brigham, 2019).

Receivables turnover ratio

Receivables turnover ratio is used to measure how quick and effective a company is at collecting its receivables, or the money owed to it by customers. This ratio allows for the measurement of how well a company is at managing credit and how quickly it can collect on short-term debts. A higher ratio indicates a more efficient collection of receivables (Vance, 2002).

$$Receivables\ turnover = \frac{Sales}{Receivables} \tag{16}$$

A company's receivables turnover ratio should be monitored over time to determine whether there is a pattern has evolved. Likewise, it is important to compare the receivables turnover to competitors within the same industry to determine the current level of ratio, and work towards improving it should it be improved. In the case of a lower than industry turnover ratio, it may be an indication that the collection department of the company isn't efficient, or that the customers are having financial problems. It could also mean that payment terms are being granted too liberally, or there may be an accumulation of uncollectible receivables that should be written off (Vance, 2002).

2.4.4 Debt Ratios

Debt ratios, or debt management ratios, are used to determine the amount of risk a company is subjected to. This is because debt leverages a company's ROE if it earns more on its assets than the interest it has to pay for its debt. The use of debt as a source of capital can be dangerous if done haphazardly, though simultaneously, it is almost necessary for many companies. Interest paid is a cost item that reduces profit, and consequently, tax liabilities. Borrowing money tends to be less expensive than funding business through own equity, however it exposes the company to more risk. The key is to manage the level of debt, and that is the primary use for debt ratios (Brigham, 2019).

Companies with high debt ratios can typically expect higher returns when the economy is in a normal state, but may experience lower returns and possible bankruptcy should the economy face a recession. Due to these reasons, companies must decide how they want to balance higher expected returns versus increased risk through debt management. Determining the optimal amount is a difficult process that requires more information than debt ratios are able to provide; nevertheless, debt ratios provide a good starting point in the sense that they allow users to determine a company's current levels of debt (Brigham, 2019).

Debt-to-capital ratio

The debt-to-capital ratio is used the measure the leverage of a company. More specifically, it measures the relation between total debt and total capital. In this case, total debt is a sum of current liabilities, long-term debt and other liabilities, and total capital is a sum of total debt and shareholders' equity (Subramanyam, 2014).

$$Debt - to - capital\ ratio = \frac{Total\ debt}{Total\ capital} \qquad (17)$$

The debt-to-capital ratio is useful to investors and analysist because it provides an idea of the financial structure of a company, and whether it is suitable to invest in the company or not. The higher the debt-to-capital ratio, the riskier is the investment. This is because a higher ratio indicates

that the company is funded to a greater extent by debt than by capital. A high amount of debt presents higher liabilities to pay, and the potential risk of forfeiture if the loans cannot be paid on time (Subramanyam, 2014).

Times-interest-earned ratio

The times-interest-earned (TIE) ratio, also called the interest cover ratio, assesses whether the profit generated by a company is sufficient to pay interest. Investors and creditors use this ratio to determine the risk involved with a company's current debt. The TIE ratio is calculated by dividing a company's EBIT by their interest charges (Brigham, 2019).

$$TIE\ ratio = \frac{EBIT}{Interest\ charges} \tag{18}$$

Just like other debt ratios, the TIE ratio is an important indication of a company's health. Failure to pay interest will result in legal action by creditors, and may result in the company's bankruptcy; hence why stability is an important trend to look for when looking at the TIE ratios for a company over a longer period of time. Not unlike other ratios, a downward trend will signal investors to be wary, as a downward trend in TIE ratios indicates that the company might be unable to pay its future debts (Brigham, 2019).

Debt-to-equity ratio

Debt-to-equity (D/E) ratio is another ratio that is used to calculate a company's leverage, this time by dividing a company's total debt by shareholder's equity. The D/E ratio reflects the ability of a company to cover all of their outstanding debts with shareholders' equity in the event of a business downturn (Subramanyam, 2014).

$$Debt - to - equity\ ratio = \frac{Total\ debt}{Shareholders'\ equity} \tag{19}$$

Debt ratio

The debt ratio is another member of the debt-management ratios. The debt ratio is defined as the ratio of total debt to total assets. It can be viewed as the amount of debt for every monetary unit of assets (Brooks, 2015).

$$Debt\ ratio = \frac{Total\ liabilities}{Total\ assets}\ \ or\ \ \frac{Total\ assets - total\ equity}{Total\ assets} \qquad (20)$$

2.4.5 DuPont Analysis

ROE is widely considered to be the most important financial ratio used to analyze companies, this becomes more evident with the DuPont analysis, also known as the DuPont identity. The DuPont formula was developed by financial staff of the DuPont chemical company in the 1920's (Brigham, 2019). The DuPont analysis breaks down ROE into three key components: operating efficiency, measured by the profit margin, asset management efficiency, as measured by asset turnover, and financial leverage, measured by the equity multiplier. Multiplying all of these together yields return on equity (Brooks, 2015).

$$Profit\ margin = \frac{Net\ income}{Sales} \qquad (21)$$

$$Asset\ turnover = \frac{Sales}{Total\ assets} \qquad (22)$$

$$Equity\ multiplier = \frac{Total\ assets}{Total\ equity} \qquad (23)$$

$$ROE = Profit\ margin \times Asset\ turnover \times Equity\ multiplier \qquad (24)$$

One advantage of the DuPont analysis is that by breaking down the ROE, it can help steer focus on areas that affect ROE that may be less efficient. If asset management is underperforming due to high inventory levels, the company may want to review its inventory management operations. A reduction in inventories could free up cash that may be used in other areas that may increase sales. The DuPont analysis helps bring these situations to attention by breaking done the ROE ratio (Brooks, 2015).

The DuPont analysis, and other financial ratios as a whole, are not the only analysis tools useful for assessing a company, but they are among the most common. Ratios do not provide adequate information on their own; they are best used in conjunction with other analysis tools, and should be used in a systematic and focused approach. Ratios cannot provide users, investors, managers or shareholders with the entire picture, but they are useful in pointing them in the directions that warrant further investigation (Brooks, 2015).

2.5 Bankruptcy Models

Debt is commonplace in every industry; equity holders make use of debt as interest tax-shields. This does not come risk-free, as misusing debt can lead to the potential loss of the company through bankruptcy. Bankruptcy is the point where the value of a company reaches zero, or, the point where the value of the company's assets is equal to or less than the value of their liabilities. When a company goes bankrupt, its equity holders lose all of their value and the debt owners "own" the company. In practice, bankruptcy happens when a company is unable to make payments to debt holders. This can happen when a company has considerable debt, and high debt payments as a result, and experiences a lower or inconsistent cash inflow, causing it to default on debt payments (Brooks, 2015).

Bankruptcy has both direct and indirect costs. When a company experiences bankruptcy as a result of their inability to meet debt payments, and the legal process to turn over assets to debt holders takes place, this is the direct cost of bankruptcy. These costs also reduce funds available to pay debt holders with, due to administrative fees. Prior to bankruptcy, managers acting in the interest of shareholders will try to avoid it. This is where the indirect costs of bankruptcy take place. The company may lose customers' confidence in their products or services, and sales may suffer as a

result. They may also lose valuable employees during this time, and projects with long-term payouts may be discontinued in order to preserve cash now (Brooks, 2015).

Though many of the previously mentioned ratios could be used to assess the risk of bankruptcy of a company, a combination of ratios will yield more accurate results than when used individually. As such, models have been developed over the years that make use of multiple ratios to assess the financial situation of companies. These models include Altman's model and the IN model.

2.5.1 Altman Z-Score

One of the most popular bankruptcy models is the Altman Z-score, developed by professor Edward Altman in the 1960's for publicly traded American companies. The popularity of this model stems from its clarity and ease of use. The principle of the model is the sum of five ratios which are assigned different weights. If Z score (the result gained from the Altman model) equates to 2.99 or higher, then the company is regarded as not in danger of bankruptcy. If the Z score is between 2.98 and 1.81, the company sits in a so called "grey zone", where it is not in immediate risk of bankruptcy, but it is not financially healthy. If the Z score is below 1.81, this indicates severe financial problems and could mean bankruptcy for the company in the near future. The formula for the Altman model is as follows (Altman, 2006):

$$Z = 1.2\,X_1 + 1.4\,X_2 + 3.3\,X_3 + 0.6\,X_4 + 1.0\,X_5 \qquad (25)$$

Where:

X1 = Working capital / Total Assets

X2 = Retained Earnings / Total Assets

X3 = Earnings before Interest and Taxes / Total Assets

X4 = Market Value of Equity / Book Value of Liabilities

X5 = Sales / Total Assets

Z = Overall Score (Altman, 2006)

The above formula was originally designed by Altman for publicly traded companies, and cannot be applied to private companies. The issue is caused by the requirement for market value of equity, and simply substituting book value of equity cannot solve this problem, as that will cause all of the coefficients to change. An adapted model needs to be used for private companies; the revised Altman model is as follows (Altman, 2006):

$$Z' = 0.717\,X_1 + 0.847\,X_2 + 3.107\,X_3 + 0.42\,X_4 + 0.998\,X_5 \qquad (26)$$

Where:

X1 = (Current assets – Current liabilities) / Total Assets

X2 = Retained Earnings / Total Assets

X3 = EBIT / Total Assets

X4 = Book Value of Equity / Total Equity

X5 = Sales / Total Assets

Z' = Overall Score

For the revised private firm Altman model (Z'), a score of 2.90 and above signals that the company is in good financial health. A score between 2.89 and 1.23 is the "grey zone" in which the company is not in direct risk of bankruptcy, however it is financially unhealthy and at moderate risk. A score lower than 1.23 puts the company in the "distress zone"; the company is in extreme risk and the likelihood for bankruptcy is high (Altman, 2006).

2.5.2 IN model

The IN model was created by Inka and Ivan Neumaier to analyze the risk of bankruptcy of companies within the Czech Republic. The IN model was compiled on the basis of mathematical-statistical methods analyzing the data of companies within the Czech Republic. Over time, four

variants of the model were created – IN 95, IN 99, IN 01 and IN 05, in order of release, respectively. Only the most recent model, IN 05, will be featured here, and its formula is as follows (Růčková, 2015):

$$IN05 = 0.13A + 0.04B + 3.97C + 0.21D + 0.09E \quad (27)$$

Where:

A = Total Assets / Liabilities

B = EBIT / Interest payable

C = EBIT / Total assets

D = Sales / Total assets

E = Current assets / Current liabilities

For the IN05 model, the threshold zones are 1.6 and 0.9. If the IN05 score for a company exceeds 1.6, it is considered safe and not at significant risk of bankruptcy. If the IN05 score falls between 1.59 and 0.9, the company is considered to be in the "grey zone" which puts it at potential risk of bankruptcy. A score of less than 0.9 means that the company is in financial distress, and has a strong probability for bankruptcy (Růčková, 2015).

3 Measurement of Financial Performance of the Selected Company

This chapter contains the evaluation of the financial performance of the selected company, DENSO MANUFACTURING CZECH s.r.o. The evaluation will include the use of financial indicators and ratio analysis. To verify the financial health of the company, bankruptcy models will be applied.

3.1 Characteristics of the Selected Company

The company DENSO MANUFACTURING CZECH s.r.o. (DMCZ) is located in the Industrial Zone South in Liberec. DMCZ is a subsidiary of the DENSO corporation, headquartered in Karia, Aichi, Japan. The Denso corporation is a publicly traded company on the Tokyo stock exchange, and is part of the Toyota Group of companies. DMCZ is a limited liability company that experienced a merger with its sister company DENSO AIR SYSTEMS CZECH s.r.o. (ASCZ). ASCZ became DMCZ's subsidiary and in April of 2018, ASCZ ceased to exist. DMCZ's main business field is the manufacturing of car air conditioners, evaporators, condensers and radiators.

Table 3: Abstract from commercial register for DMCZ s.r.o.

Date of creation and registration:	12 July 2001
File number:	C 18069 held at the Regional Court in Ústí nad Labem
Company:	DENSO MANUFACTURING CZECH s.r.o.
Residence:	Heyrovského 476, Liberec XXIII-Doubí, 463 12 Liberec
Identification number:	254 32 338
Legal form:	Limited liability company

Scope of business:	Production, trade and services not specified in Annexes 1 to 3 of the Trade Licensing Act
Statutory body:	2 members
Executive:	SHINICHIRO YAMAJI
Executive:	KENICHI TOKUNAGA
Method of proceedings:	Each of the executives is entitled to represent the company independently in all manners and to sign on behalf of the company by attaching his signature to the company's business name.
Partner:	Denso International Europe B.V. 1382 JL Weesp, Hogeweyselaan 165, Netherlands Registration number: 32027898
Share:	Deposit: CZK 3 373 800 000 Paid: 100% Business share: 100% Type of share: basic share without special rights and obligations Master list: not issued
Basic capital:	CZK 3 373 800 000

Source: own processing according to online commercial register justice.cz

The Denso corporation has been expanding its influence thanks to its excellent quality products and pioneering research since its founding in 1949. Being one the world's largest suppliers of modern technologies systems and their components, the Denso corporation cooperated with major car manufacturers around the world in the fields of air conditioning, engine control systems, electronics, road control and road vehicle safety, as well as in the fields of informatics and

communication. Denso also uses its technologies and knowledge of industrial systems and air conditioning outside the automotive industry.

DMCZ is a subsidiary of the Denso corporation, but more specifically a subsidiary of their European branch, Denso International Europe B.V. DMCZ was established in 2001, and went through a period of construction with a total investment that would later reach CZK 3 billion. This construction was completed in fall of 2003, and after a six-month period of technology installation, startup and tuning processes were started. A ceremonial opening was held in May of 2004, with individual projects being launched that same year. Since the end of 2005, the production plant has been running at full capacity.

The main production program of DMCZ is the production of air conditioning units for passenger cars and their accessories, such as heaters, condensers and radiators. DMCZ works with leading car manufacturers across the world, some of these customers include Volkswagen, BMW, AUDI, DAIMLER, SUZUKI, ŠKODA AUTO and TOYOTA, among others. As of the publishing of the 2019 annual report, DMCZ has over 2500 employees.

3.2 Analysis of Financial Indicators

The analysis of financial indicators is divided into two parts: vertical and horizontal analysis. For these analyses, the balance sheets and profit and lost statements from the years 2015 to 2019 were selected. The statements used in these chapters are summarized. The full scope of the balance sheet is in appendices A and B, and the full scope of the profit and loss statement is in appendix C.

Table 4: Abbreviated balance sheet of DMCZ s.r.o 2016 - 2020

(In thousands of CZK)	2016	2017	2018	2019	2020
TOTAL ASSETS	**6 423 697**	**7 334 149**	**7 900 164**	**8 740 099**	**8 693 386**
FIXED ASSETS	**3 289 379**	**3 806 905**	**4 192 135**	**4 667 250**	**4 672 897**
Intangible fixed assets	22 179	9 372	10 463	9 303	9 995
Tangible fixed assets	3 267 200	3 797 533	4 181 672	4 657 947	4 662 902
CURRENT ASSETS	**2 651 539**	**2 970 084**	**3 166 004**	**3 542 694**	**3 337 027**
Inventories	1 100 329	1 321 234	1 421 593	1 549 142	1 343 794
Receivables	1 539 737	1 640 746	1 732 679	1 983 361	1 985 649
Accruals	**482 779**	**557 160**	**542 025**	**530 155**	**683 462**

(In thousands of CZK)	2016	2017	2018	2019	2020
TOTAL LIABILITIES	**6 423 697**	**7 334 149**	**7 900 164**	**8 740 099**	**8 693 386**
EQUITY	**2 203 835**	**2 880 541**	**3 348 816**	**3 206 659**	**2 759 612**
Profit funds	65 909	65 909	65 909	65 909	65 909
Economic result of previous years	-1 953 502	- 1 330 604	-653 898	-746 024	-964 971
Result of economic activities during standard financial period	622 898	676 706	468 275	-218 945	-447 045
DEBT RESOURCES	**4 210 301**	**4 420 356**	**4 511 881**	**5 450 325**	**5 858 265**
Reserves	517 116	428 720	381 392	382 750	430 497
Liabilities	3 693 185	3 991 636	4 130 489	5 067 575	5 427 768
Short-term liabilities	3 027 227	3 595 883	3 739 763	4 654 775	3 433 043
ACCRUALS	**9 561**	**33 252**	**39 467**	**83 115**	**75 509**

Source: own processing according to financial statements of DMCZ s.r.o. 2016 – 2020

Table 5: Abbreviated profit and loss statement of DMCZ s.r.o. 2016 – 2020

	(In thousands of CZK)	2016	2017	2018	2019	2020
I.	Sales of products and services	11 173 782	10 775 251	10 939 487	11 190 638	10 187 636
II.	Sales of goods	1 164 309	1 332 399	984 377	879 435	746 206
A.	Power consumption	10 175 870	9 840 427	9 901 445	10 043 714	8 889 934
B.	Change in the state of inventories of own activities	-24 510	-30 406	-45 764	-60 080	-27 256
D.	Personal expenses	971 447	1 041 630	1 259 079	1 561 603	1 475 490
E.	Adjustments of values in the operating area	415 394	476 808	553 736	666 499	725 127
III.	Other operating income	256 498	226 223	261 741	290 644	237 818
F.	Other operating expenses	337 192	169 999	218 934	234 131	261 441
*	**Operating profit**	719 196	835 415	298 175	-85 140	-153 076
*	**Financial results**	**71 026**	**19 323**	**296 190**	**-175 618**	**-291 315**
**	**Profit before tax**	**790 222**	**854 738**	**594 365**	**-260 758**	**-444 391**
L.	Income tax	167 324	178 032	126 090	-41 813	2 654
**	**Profit after tax**	**622 898**	**676 706**	**468 275**	**-218 945**	**-447 045**
*	**Net turnover for the accounting period**	**12 696 998**	**12 403 197**	**12 647 937**	**12 636 896**	**11 460 625**

Source: own processing according to financial statements of DMCZ s.r.o 2016 – 2020

3.2.1 Horizontal Analysis of the Balance Sheet

The horizontal analysis of the balance sheet was performed according to the explanations given in chapter 2.3.1. Both, year-to-year and index analysis were performed. For the index analysis, 2016 was chosen as the base year. For the year-to-year changes of the balance sheet, the results are shown in absolute and percent values in tables (6) and (7), and the index analysis of the balance sheet is shown in table (8). The analyses were performed on the abbreviated balance sheet for the period 2016 – 2020.

Table 6: Year-to-year changes in the abbreviated balance sheet, in absolute values

Periods	2016/2017	2017/2018	2018/2019	2019/2020
TOTAL ASSETS	**910 452**	**566 015**	**839 935**	**-46 713**
FIXED ASSETS	**517 526**	**385 230**	**475 115**	**5 647**
Intangible fixed assets	-12 807	1 091	-1 160	692
Tangible fixed assets	530 333	384 139	476 275	4 955
CURRENT ASSETS	**318 545**	**195 920**	**376 690**	**-205 667**
Inventories	220 905	100 359	127 549	-205 348
Receivables	101 009	91 933	250 682	2 288
Accruals	**74 381**	**-15 135**	**-11 870**	**153 307**

Periods	2016/2017	2017/2018	2018/2019	2019/2020
TOTAL LIABILITIES	**910 452**	**566 015**	**839 935**	**-46 713**
EQUITY	**676 706**	**468 275**	**-142 157**	**-447 047**
Profit funds	0	0	0	0
Economic result of previous years	622 898	676 706	-92 126	-218 947
Result of economic activities during standard financial period	53 808	-208 431	-687 220	-228 100
DEBT RESOURCES	**210 055**	**91 525**	**938 444**	**407 940**
Reserves	-88 396	-47 328	1 358	47 747
Liabilities	298 451	138 853	937 086	360 193
Short-term liabilities	568 656	143 880	915 012	-1 221 732
ACCRUALS	**23 691**	**6 215**	**43 648**	**-7 606**

Source: own processing according to financial statements of DMCZ s.r.o. 2016 – 2020

The year 2016 was by many measures a successful year for the company with may prospects for the future. Prior to the 2016 fiscal year, a newly constructed expansion to the factory was completed, which allowed for the reorganization of the working environment, to allow for more

efficient manufacturing. The offices at DMCZ also experienced major reorganization and expansion during this time. The combination of more streamlined production, a higher volume of production and a greater demand for existing manufacturers is reflected in the balance sheet in the years following 2016.

Table 7: Year-to-year changes in the abbreviated balance sheet, in percentages

Periods	2016/2017	2017/2018	2018/2019	2019/2020
TOTAL ASSETS	**14.2%**	**7.7%**	**10.6%**	**-0.5%**
FIXED ASSETS	**15.7%**	**10.1%**	**11.3%**	**0.1%**
Intangible fixed assets	-57.7%	11.6%	-11.1%	7.4%
Tangible fixed assets	16.2%	10.1%	11.4%	0.1%
CURRENT ASSETS	**12.0%**	**6.6%**	**11.9%**	**-5.8%**
Inventories	20.1%	7.6%	9.0%	-13.3%
Receivables	6.6%	5.6%	14.5%	0.1%
Accruals	**15.4%**	**-2.7%**	**-2.2%**	**28.9%**

Periods	2016/2017	2017/2018	2018/2019	2019/2020
TOTAL LIABILITIES	**14.2%**	**7.7%**	**10.6%**	**-0.5%**
EQUITY	**30.7%**	**16.3%**	**-4.2%**	**-13.9%**
Profit funds	0.0%	0.0%	0.0%	0.0%
Economic result of previous years	31.9%	50.9%	-14.1%	-29.3%
Result of economic activities during standard financial period	8.6%	-30.8%	-146.8%	-104.2%
DEBT SOURCES	**5.0%**	**2.1%**	**20.8%**	**7.5%**
Reserves	-17.1%	-11.0%	0.4%	12.5%
Liabilities	8.1%	3.5%	22.7%	7.1%
Short-term liabilities	18.8%	4.0%	24.5%	-26.2%

Source: own processing according to financial statements of DMCZ s.r.o. 2016 – 2020

The balance sheet item intangible assets experienced its largest change between 2016 and 2017. The decrease of almost 58% was caused by prepayments received for long-term intangible assets and unfinished intangible assets that were not repeated the following year. A smaller contribution to this substantial year-to-year decrease is the value of intangible results of development, that dropped by 70% from 2016 to 2017, evident in Appendix A.

Further expansions were started in April of 2017, to be completed in April of 2018. The reason for these expansions was to increase production of Heater Cores, which entailed the installation of another Heater Core line so that part of the production hall can be unified and used for heat

exchanger lines. Beyond technical matters, the expansion included amenities for employees such as a new rest area and expansion of the locker rooms. The total area added equated to 6400 m^2. This expansion, and the results of the prior expansion, are reflected in the significant increase in assets on the balance sheet. While intangible fixed assets decreased from 2016 to 2017, tangible fixed assets experienced a 16% increase, the largest in the five-year period selected. Of those tangible fixed assets, the largest changes year-to-year happened with buildings, responsible for 15% of the total increase, and prepayments for tangible fixed assets and unfinished tangible fixed assets, which were responsible for almost 58% of the total increase.

The effects of the previous expansion are evident in the current assets section of the balance sheet, as current assets grew by 12% from 2016 to 2017. An increase in production volume and efficiency is present in the details of the current assets; work in progress and semi-finished products dropped by 18%, while materials grew by 12%, goods and products by 27%, and prepayments for inventory by 112%, respectively. The effect of the expansions in 2016 and in April of 2017 are clear when it comes to the finances of DMCZ. From 2016 to 2017 cash on hand dropped by 10% and money in accounts dropped by almost 31%, as a result of investment in the expansion. This can be further corroborated by the 8% increase in liabilities during the same period, most of which is made up of short-term liabilities.

In 2018 DMCZ finalized a merging with its daughter company DENSO AIR SYSTEMS CZECH s.r.o. (ASCZ) that was acquired in September of 2017. The merging was finalized on April 1st, and ASCZ ceased to exist on that date. The merging allowed for the stabilization of the former company ASCZ, and for the integration of its employees in to DMCZ, including their salaries and personal conditions. The year 2018 also marks the year where the expansion started in April of the previous year was finished. In addition to the new 6400 m^2 area, DMCZ constructed an additional 150 parking spaces for its employees, along with bus stops.

Furthermore, construction on the integrated plant was started in 2018 in order to perform some modifications. The construction of a new car park with a capacity of 101 spaces was started, along with new driveways, a new chemical warehouse, loading ramps, tents for logistics and further expansion of meeting rooms. The largest indication of these events in the balance sheet are the increase in the item of tangible movable things and their files, which grew by almost 25% from 2017 to 2018, the significant increase in liabilities to employees, which grew by 36%, the liabilities

towards social security and health insurance, which grew by almost 34%, and the increase in other obligations, which grew by 205% for the period.

In 2019 DMCZ underwent extensive changes in organizational structure, for the purpose of clarifying responsibility for individual areas and speed up the company's ability to act. The change consisted in the division of production into two parts, along with major reorganization of the technology department, maintenance and the industrial engineering department. The year 2019 is the start of where the global pandemic caused by SARS-CoV-2 (COVID-19) negatively affects the sales of DMCZ.

The effects of COVID-19 started to affect DMCZ in the fourth quarter of the fiscal year, which meant that the company experience net positives in areas like total assets, which grew by almost 11% from 2018 to 2019. The signs of the negative impacts of the oncoming pandemic are also evident, however. 2019 marked the first time during the 5-year period where the amount of goods and products dropped; a decrease of almost 15% compared to the previous year. Prepayments for inventory also experienced a decrease of 38% for the same period. Additionally, the liabilities of DMCZ continued to rise while equity dropped for the first time during since 2016, by 4%. The largest contributor to the increase in liabilities for 2019 were the short-term liabilities, which grew by almost 25% compared to the previous year.

Progress for DMCZ slowed down further in 2020, as the COVID-19 pandemic had become increasingly widespread across the world, and severely so in DMCZ's home location of Czech Republic, rendering the local and global market unpredictable. For the first time since 2016, DMCZ experienced a loss in total assets; a decrease of 0.5%. The largest loss in assets compared to the previous year was in the current assets of DMCZ, where they experienced a decrease of almost 6%. In 2020 DMCZ's equity continued to fall, this time by a larger amount of almost 14%.

Table 8: Index analysis of abbreviated DMCZ balance sheet

	2016	2017	2018	2019	2020
TOTAL ASSETS	**100**	**114.2**	**123.0**	**136.1**	**135.3**
FIXED ASSETS	**100**	**115.7**	**127.4**	**141.9**	**142.1**
Intangible fixed assets	100	42.3	47.2	41.9	45.1
Tangible fixed assets	100	116.2	128.0	142.6	142.7
CURRENT ASSETS	**100**	**112.0**	**119.4**	**133.6**	**125.9**
Inventories	100	120.1	129.2	140.8	122.1
Receivables	100	106.6	112.5	128.8	129.0
Accruals	**100**	**115.4**	**112.3**	**109.8**	**141.6**

	2016	2017	2018	2019	2020
TOTAL LIABILITIES	**100**	**114.2**	**123.0**	**136.1**	**135.3**
EQUITY	**100**	**130.7**	**152.0**	**145.5**	**125.2**
Profit funds	100	100	100	100	100
Economic result of previous years	100	68.1	33.5	38.2	49.4
Result of economic activities during standard financial period	100	108.6	75.2	-35.1	-71.8
DEBT RESOURCES	**100**	**105.0**	**107.2**	**129.5**	**139.1**
Reserves	100	82.9	73.8	74.0	83.2
Liabilities	100	108.1	111.8	137.2	147.0
Short-term liabilities	100	118.8	123.5	153.8	113.4
ACCRUALS	**100**	**347.8**	**412.8**	**869.3**	**789.8**

Source: own processing according to financial statements of DMCZ s.r.o. 2016 – 2020.

The results of the index analysis presented in table 8 present a summary of the trend for the balance sheet of DMCZ for the five-year period. For the index analysis, 2016 was chosen as the base year due to the fact that major expansion was completed before the 2016 fiscal year, and would be a part of every consecutive fiscal year. Additionally, DMCZ experienced no abnormalities in its business within the year. The trend for the following years was a steady growth in the items of the balance sheet. Through the index analysis, it is evident that this growth would have continued through 2019 if the COVID-19 pandemic did not happen; the company saw increased receivables and assets, but suffered in equity. Through the index analysis, it is evident that from 2019 to 2020 DMCZ is on a downward trajectory. The largest decrease remains in the equity of the company, with a score of 125.2 in 2020, that brings the level of equity to below that which the company experienced three years prior in 2017.

3.2.2 Vertical Analysis of the Balance Sheet

Vertical analysis was performed on the abbreviated balance sheet, and the results are presented in table 9. The analysis is performed for the same period of five years from 2016 to 2020.

Table 9*: *Vertical analysis of the abbreviated balance sheet

	2016	2017	2018	2019	2020
TOTAL ASSETS	**100%**	**100%**	**100%**	**100%**	**100%**
FIXED ASSETS	**51.2%**	**51.9%**	**53.1%**	**53.4%**	**53.8%**
Intangible fixed assets	0.3%	0.1%	0.1%	0.1%	0.1%
Tangible fixed assets	50.9%	51.8%	52.9%	53.3%	53.6%
CURRENT ASSETS	**41.3%**	**40.5%**	**40.1%**	**40.5%**	**38.4%**
Inventories	**17.1%**	**18.0%**	**18.0%**	**17.7%**	**15.5%**
Receivables	24.0%	22.4%	21.9%	22.7%	22.8%
Accruals	7.5%	7.6%	6.9%	6.1%	7.9%

	2016	2017	2018	2019	2020
TOTAL LIABILITIES	**100%**	**100%**	**100%**	**100%**	**100%**
EQUITY	**34.3%**	**39.3%**	**42.4%**	**36.7%**	**31.7%**
Profit funds	1.0%	0.9%	0.8%	0.8%	0.8%
Economic result of previous years	-30.4%	-18.1%	-8.3%	-8.5%	-11.1%
Result of economic activities during standard financial period	9.7%	9.2%	5.9%	-2.5%	-5.1%
DEBT SOURCES	**65.5%**	**60.3%**	**57.1%**	**62.4%**	**67.4%**
Reserves	8.1%	5.8%	4.8%	4.4%	5.0%
Liabilities	57.5%	54.4%	52.3%	58.0%	62.4%
Short-term liabilities	47.1%	49.0%	47.3%	53.3%	39.5%
ACCRUALS	**0.1%**	**0.5%**	**0.5%**	**1.0%**	**0.9%**

Source: own processing according to financial statements of DMCZ s.r.o. 2016 – 2020.

Individual items on the balance sheet are compared to their respective total. For DMCZ, fixed assets make up the majority of the assets owned by the company, however current assets still make up a significant amount of the rest. Of the fixed assets owned by the company, an incredibly small proportion is in the form of intangible fixed assets, largely made up by software. The remaining of the fixed assets are tangible, and are made up of the land and buildings the company owns. The largest item that falls under the tangible fixed assets are the tangible movable items the company possesses, such as manufacturing machinery, and other machinery. Current assets see the items of

inventories and receivables share a similar weight between them, with receivables being the larger of the two.

The majority share of equity is made up of the company's basic capital. Though not listed in the tables above, it should be emphasized that besides the basic capital of the company, DMCZ does little to grow its equity. The liabilities of DMCZ are naturally high; upon closer inspection it becomes clear that the majority of the liabilities are short-term, which is typical for manufacturing companies with large inventory turnovers.

From the results of the vertical analysis, it may seem that DMCZ is within expectations when it comes to a manufacturing company. The combination of high amounts of fixed assets, and short-term liabilities indicate nothing out of the ordinary. Yet despite these seemingly healthy ratios, DMCZ has failed to positively contribute towards their equity during the selected five-year period. Though drastic improvement has been shown from 2016 to 2018, the trend begins to angle downwards again towards the end of the selected time period, likely due to the COVID-19 pandemic.

3.2.3 Horizontal analysis of the Profit and Loss Statement

The horizontal analysis of the profit and loss statement was performed according to the explanations in chapter 2.3.1. Both, year-to-year and index analysis were performed. For the index analysis, 2016 was chosen as the base year. For year-to-year changes in the profit and loss statement, the results are provided in both absolute values as well as percentages in tables 10 and 11. The results of the index analysis are shown in table 12. The analyses were performed on the abbreviated profit and loss statement for the period 2016 – 2020.

Table 10*: *Year-to-year changes in the abbreviated profit and loss statement, in absolute values

	(In thousands of CZK)	**2016/2017**	**2017/2018**	**2018/2019**	**2019/2020**
I.	Sales of products and services	-398 531	164 236	251 151	-1 003 002
II.	Sales of goods	168 090	-348 022	-104 942	-133 229
A.	Power consumption	-335 443	61 018	142 269	-1 153 780
B.	Change in the state of inventories of own activities	-5 886	-15 358	-14 316	32 824
D.	Personal expenses	70 183	217 449	302 524	-86 113
E.	Adjustments of values in the operating area	61 414	76 928	112 763	58 628
III.	Other operating income	-30 275	35 518	28 903	-52 826
F.	Other operating expenses	-167 193	48 935	15 197	27 310
*	**Operating profit**	**116 219**	**-537 240**	**-383 315**	**-67 936**
*	**Financial results**	**-51 703**	**276 867**	**-471 808**	**-115 697**
**	**Profit before tax**	**64 516**	**-260 373**	**-855 123**	**-183 633**
L.	Income tax	20 708	-51 942	-167 903	44 467
**	**Profit after tax**	**53 808**	**-208 431**	**-687 220**	**-228 100**

Source: own processing according to financial statements of DMCZ s.r.o. 2016 – 2020.

While the balance sheet of DMCZ may have been mostly expected, the profit and loss statement is significantly more chaotic. The most noticeable change in the profit and loss statement is the 1432% increase in financial results between 2017 and 2018. This change, however, is the reason both percentage changes and absolute changes are presented in tables 10 and 11; the absolute change in the years 2017/2018 was 276 867 thousand CZK, while the change in the years 2018/2019 was significantly larger at -471 808 thousand CZK.

The aforementioned value is a glimpse into the irregular patterns of the DMCZ profit and loss statement. In some areas, such as personal expenses, the trend behaves in an expected manner. Personal expenses grew steadily year over year for DMCZ until the 2019/2020 period, where it was negatively affected the by COVID-19 pandemic. In this case, it is understandable that personal expenses grew as the company constructed expansions for its manufacturing plant. However, in other cases, the trend does not seem to correspond to the happenings around the company, such as for the item sales of goods.

Table 11: Year-to-year changes in the abbreviated profit and loss statement, in percentages

	Periods	2016/2017	2017/2018	2018/2019	2019/2020
I.	Sales of products and services	-3.6%	1.5%	2.3%	-9.0%
II.	Sales of goods	14.4%	-26.1%	-10.7%	-15.1%
A.	Power consumption	-3.3%	0.6%	1.4%	-11.5%
B.	Change in the state of inventories of own activities	-24.0%	-50.5%	-31.3%	54.6%
D.	Personal expenses	7.2%	20.9%	24.0%	-5.5%
E.	Adjustments of values in the operating area	14.8%	16.1%	20.4%	8.8%
III.	Other operating income	-11.8%	15.7%	11.0%	-18.2%
F.	Other operating expenses	-49.6%	28.8%	6.9%	11.7%
*	**Operating profit**	**16.2%**	**-64.3%**	**-128.6%**	**-79.8%**
*	**Financial results**	**-72.8%**	**1432.8%**	**-159.3%**	**-65.9%**
**	**Profit before tax**	**8.2%**	**-30.5%**	**-143.9%**	**-70.4%**
L.	Income tax	13.2%	-29.2%	-133.2%	106.3%
**	**Profit after tax**	**8.6%**	**-30.8%**	**-146.8%**	**-104.2%**

Source: own processing according to financial statements of DMCZ s.r.o. 2016 – 2020.

Sales of goods experiences an increase of 14% from 2016 to 2017, however in the following year there is a decrease of -26%, bringing the level of sales of goods to below 2016 levels, and continues in a downward trend until 2020. A similar thing can be said for operating profit, which experiences a growth of over 16% in the period 2016/2017, but follows a downward trend for the Remainer of the selected period, until 2020.

Table 12: Index analysis of the abbreviated profit and loss statement

		2016	2017	2018	2019	2020
I.	Sales of products and services	100	96.4	97.9	100.2	91.2
II.	Sales of goods	100	114.4	84.5	75.5	64.1
A.	Power consumption	100	96.7	97.3	98.7	87.4
B.	Change in the state of inventories of own activities	100	-124.0	-186.6	-245.0	-111.2
D.	Personal expenses	100	107.2	129.6	160.8	151.9
E.	Adjustments of values in the operating area	100	114.8	133.3	160.4	174.6
III.	Other operating income	100	88.2	102.0	113.3	92.7
F.	Other operating expenses	100	50.4	64.9	69.4	77.5
*	**Operating profit**	**100**	**116.2**	**41.5**	**-11.8**	**-21.3**
*	**Financial results**	**100**	**27.2**	**417.0**	**-247.3**	**-410.2**
**	**Profit before tax**	**100**	**108.2**	**75.2**	**-33.0**	**-56.2**
L.	Income tax		113.2	80.1	-26.6	1.7
**	**Profit after tax**		**108.6**	**75.2**	**-35.1**	**-71.8**

Source: own processing according to financial statements of DMCZ s.r.o. 2016 – 2020.

The index analysis provides a clear view on these trends. For the index analysis, 2016 was chosen as the base year as major construction was finished before the start of the 2016 fiscal year that would influence all subsequent years, and no major events took play during said year. Signs of instability are littered throughout table 12. For instance, operating profit experienced a slight increase in 2017, and continued on a downward trend until 2020. A worrying trend is the year-on-year increase in personal expenses in parallel with stagnating sales of products and services and the slow decrease of sold goods from year to year, even predating the negative impacts of the COVID-19 pandemic.

3.2.4 Vertical Analysis of the Profit and Loss Statement

Vertical analysis was performed on the abbreviated profit and loss statement, and the results are presented in table 13. The analysis is performed for the same period of five years from 2016 to 2020.

Table 13: Vertical analysis of the abbreviated profit and loss statement of DMCZ

Periods	2016	2017	2018	2019	2020
Sales of products and services	88.7%	87.4%	89.8%	90.5%	91.2%
Sales of goods	9.2%	10.8%	8.1%	7.1%	6.7%
Other operating income	2.0%	1.8%	2.1%	2.4%	2.1%
TOTAL INCOME	100%	100%	100%	100%	100%
Power consumption	85.7%	85.6%	83.3%	80.7%	78.5%
Change in the state of inventories of own activities	-0.2%	-0.3%	-0.4%	-0.5%	-0.2%
Personal expenses	8.2%	9.1%	10.6%	12.5%	13.0%
Adjustments of values in the operating area	3.5%	4.1%	4.7%	5.4%	6.4%
Other operating expenses	2.8%	1.5%	1.8%	1.9%	2.3%
TOTAL EXPENSES	100%	100%	100%	100%	100%

Source: own processing according to financial statements of DMCZ s.r.o. 2016 – 2020.

Individual items on the profit and loss statement are compared to their respective total. For a clearer view, the profit and loss statement was divided into income and expenses. The full scope of the profit and loss statement can be found in attachment C. For DMCZ, the large majority of the company's income comes from the sales of products and services, and the majority of the expenses come from power consumption.

For the period under review, sales of products and services makes up over 80% of total income for the company in 2016, and increases to make up over 90% of income by 2020. The sales of goods increase somewhat between 2016 and 2017, but ultimately experience a downward trend until 2020, though the total decrease between 2016 and 2020 is less than 3%. The company experiences some mild fluctuations in other operating income, though again, the difference between the beginning and end of the selected period is a change of around 1%.

In terms of expenses, power consumption makes up over 80% of DMCZ's expenses for the selected period until 2020. The level of power consumption is constant for the years 2016 and 2017, but then experiences a slow but steady decline of just over 2% every year until 2020. This slow decrease is accompanied by a steady increase in personal expenses. While personal expenses made up about 8% of total expenses in 2016, they would grow to represent 13% of the company's total expenses. Same can be said for adjustments of values in the operating area, which almost doubled from 3.5% in 2016 to 6.4% in 2020.

Other items with a low share of total income or total expenses include other operating income, change in the state of inventories, and other operating expenses. All of the aforementioned items did not change significantly throughout the period of five years; thought there was some mild fluctuation, they all remained with a share of less than 5% of their respective categories.

3.3 Analysis of Financial Ratios

As with the analysis of financial indicators, the analysis of financial ratios uses calculation procedures to measure the ratios of certain items in financial documents. The data for these analyses are taken from the financial statements of DMCZ. The balance sheet and profit and loss statement can be found in attachments A, B, and C; the cash flow statement is in attachment D. Similarly to the previous chapters, a period of five years was selected for these analyses, the period of 2016 to 2020.

3.3.1 Liquidity Ratios

Liquidity ratios allow for the assessment of a company's ability to meet its obligations. The resulting ratios are provided in table 14, which includes three liquidity ratios. The values of the items are taken from their respective financial statements, and are in thousands of CZK.

Table 14: Liquidity ratios 2016 - 2020

Periods	**2016**	**2017**	**2018**	**2019**	**2020**
Current assets	2 651 539	2 970 084	3 166 004	3 542 694	3 337 027
Current liabilities	3 027 227	3 595 883	3 739 763	4 654 775	3 433 043
Current ratio	**0.876**	**0.826**	**0.847**	**0.761**	**0.972**
Inventories	1 100 329	1 321 234	1 421 593	1 549 142	1 343 794
Quick ratio	**0.512**	**0.459**	**0.466**	**0.428**	**0.581**
Operating cash flow	1 294 710	1 358 679	918 300	573 391	503 740
Operating cash flow ratio	**0.428**	**0.378**	**0.246**	**0.123**	**0.147**

Source: own processing according to financial statements of DMCZ s.r.o. 2016 – 2020.

The current ratio was calculated according to formula (3). The recommended values are between 120% and 170%, or 1.2 and 1.7 when not adjusted to percentages. If a company scores lower than the recommended values, they run the risk of being unable to pay their liabilities. A score higher than the recommended values indicates that the company is economically inefficient. The current ratio of DMCZ is lower than the recommended values for the entirety of the selected period; the

closest it has been to the recommended value was in 2020, with a score of 0.972. This score represents the highest current ratio that DMCZ has achieved over this five-year period, in part due to possessing more current assets compared to earlier years, but mainly due to the sharp drop in current liabilities for the company in 2020.

Taking a look at the trend of the current ratio, it is evident that the company has been on a downward slope due to current liabilities outpacing the acquiring of current assets. In 2020, the company decreased their current liabilities significantly and in turn increased their long-term liabilities as can be seen in the liabilities section of the balance sheet in attachment B. This change is likely due to the onset of the COVID-19 pandemic, and the company's choice to reduce its current liabilities in favor of long-term liabilities due to the unpredictable nature of the market at the time.

Formula (5) was used to calculate the quick ratio. The recommended value for the quick ratio is above one. The resulting ratios for DMCZ are well below the recommended value of one, signaling a risk for creditors of the company. The reason once again is the significantly high value reported for the liabilities of the company. The majority of DMCZ's assets are made up of fixed assets, as can be seen in attachment A; this makes the company's overall assets less liquid in the short term.

The last selected liquidity ratio is the operating cash flow ratio, calculated using formula (6). The operating cash flow ratio assesses the ability of the company to repay its liabilities through its operating cash flow, as opposed to assets in the previous ratios. Once again, the recommended value is one or greater. DMCZ's operating cash flow ratios are significantly below this threshold. This ratio benefits from contextualization, as a company may sacrifice cash flow in the short-term in favor of long-term benefits. This may be the case for DMCZ. Prior to the beginning of the 2016 fiscal year, major construction was finished on the plant. Between 2017 and 2018, further construction was conducting on expanding the plant, as well as the merger with ASCZ was started and completed. These events unfortunately predate the global pandemic of COVID-19 which negatively impacted industries across the world, including DMCZ.

The trend of the liquidity ratios indicates that DMCZ would struggle to pay off their liabilities at the current state. Though the ratios trend downwards, there is a slight increase during 2020, suggesting a potential recovery. It is difficult to tell purely through liquidity ratios and the selected

time period whether DMCZ is in serious financial trouble, or has been simply unlucky with the timing of their plant expansions.

3.3.2 Profitability Ratios

Profitability ratios evaluate the efficiency of a company's invested resources, and general inputs. For some comparison, table 15 shows the value of certain profitability ratios available for the industry, with the exception of the year 2020. Table 16 provides the profitability ratios of DMCZ and shows the four selected ratios. Data taken from financial statements provided in the table are in thousands of CZK.

DMCZ falls under the category of C within the CZ-NACE classification, which is the general classification for manufacturing. DMCZ falls under specific classification 29, the manufacturing of motor vehicles, trailers and semi-trailers was chosen, as the activities of DMCZ belong into this subcategory; to be exact, DMCZ's activities fall under CZ-NACE classification number 29.3: manufacturing parts and accessories for motor vehicles and their engines (czso.cz).

Table 15: Profitability ratios for the industry 2016 – 2019

Period	2016	2017	2018	2019	2020
ROE	19.01	19.36	15.24	14.61	-
ROA	9.05	8.55	6.6	6.15	-
ROS	4.89	4.61	3.52	3.22	-

Source: own processing according to czso.cz

Table 16: Profitability ratios for DMCZ 2016 – 2020

Period	2016	2017	2018	2019	2020
Net income	622 898	676 706	468 275	-218 945	-447 045
Equity	2 203 835	2 880 541	3 348 816	3 206 659	2 759 612
ROE	**28.26**	**23.49**	**13.98**	**-6.83**	**-16.20**
Assets	6 423 697	7 334 149	7 900 164	8 740 099	8 693 386
ROA	**9.70**	**9.23**	**5.93**	**-2.51**	**-5.14**
EBIT	790 222	854 738	594 365	-260 758	-444 391
Sales	11 173 782	10 775 251	10 939 487	11 190 638	10 187 636
ROS	**7.07**	**7.93**	**5.43**	**-2.33**	**-4.36**
Capital employed	3 396 470	3 738 266	4 160 401	5 197 405	5 260 343
ROCE	**23.27**	**22.86**	**14.29**	**-5.02**	**-8.45**

Source: own processing according to financial statements of DMCZ s.r.o. 2016 – 2020.

Generally, the higher the profitability ratios of a company, the better. Return on equity (ROE) compares the earnings of the company against the resources invested by the owners, and was calculated using formula (7). It follows, then, that ROE is an important indicator for owners. During the selected period, DMCZ achieved its highest ROE in 2016, significantly higher than that of the industry at the time. The industry would reach its highest ROE in 2017, during which DMCZ achieved its second-highest rating, still well above the industry average. The year 2018 marked the first year that DMCZ did not meet the industry average ROE, and continued to receive lower ratings year-on-year. This decline can also be observed in the industry averages, though not with the sharp decline that DMCZ experienced.

Return on assets (ROA) was calculated according to formula (8). Within the selected period, DMCZ achieved its highest ROA in 2017. Compared to the industry, the company performed well in 2016 and 2017, surpassing the industry average slightly. In 2018, the ROA of DMCZ dipped below the industry average for the first time, but not by a significant amount. By 2019 and 2020, DMCZ had fallen into the negatives, similarly to their ROE.

Formula (11) was used to calculate the company's return on sales (ROS). DMCZ achieved its highest ROS in 2017, and was above the industry average for the period 2016 – 2018, after which the ROS fell into the negatives for the years 2019 and 2020, similarly to the ROA and ROE of the company.

The company's return on capital employed (ROCE) was calculated using formula (10). Not unlike previous profitability ratios, the company boasts a high ROCE in the years 2016 and 2017, with a respectable ratio in 2018. The highest ROCE for DMCZ reached in the year 2016. The company suffered a drastic drop in the years 2019 and 2020, sending the ROCE into the negatives.

3.3.3 Activity Ratios

Activity ratios express the efficiency with which a company uses its assets. Efficiency is determined by the number of turnovers per year when compared to previous data or within an industry. The resulting data is presented in table 17, and is broken down by activities of assets, inventory and receivables. Data taken from financial statements is in thousands of CZK, and asset turnover times are in days.

Table 17: Activity ratios 2016 – 2020

Period	2016	2017	2018	2019	2020
Sales	11 173 782	10 775 251	10 939 487	11 190 638	10 187 636
Assets	6 423 697	7 334 149	7 900 164	8 740 099	8 693 386
Asset turnover	**1.74**	**1.47**	**1.38**	**1.28**	**1.17**
Asset turnover time	**206.96**	**245.03**	**259.98**	**281.17**	**307.20**
Inventories	1 100 329	1 321 234	1 421 593	1 549 142	1 343 794
Inventory turnover	**10.15**	**8.16**	**7.70**	**7.22**	**7.58**
Inventory turnover time	**35.45**	**44.14**	**46.78**	**49.84**	**47.49**
Receivables	1 539 737	1 640 746	1 732 679	1 983 361	1 985 649
Receivables turnover	**7.26**	**6.57**	**6.31**	**5.64**	**5.13**
Receivables turnover time	**49.61**	**54.82**	**57.02**	**63.80**	**70.17**

Source: own processing according to financial statements of DMCZ s.r.o. 2016 – 2020.

Table 18: Inventory turnover time for manufacturing industry in Czech Republic

(In days)	2016	2017	2018	2019	2020
Inventory turnover time	43	43	46	46	-

Source: own processing according to czso.cz

Asset turnover was calculated according to formula (14). As with profitability ratios, for activity ratios generally the higher, the better. An asset turnover ratio of at least 1 is recommended. DMCZ reaches this recommended value and exceeds it throughout the selected period. There is an observable trend sloping downwards, where the highest asset turnover ratio for DMCZ was in 2016 and the lowest in 2020. Asset turnover time represents the number of days required to pay for assets from sales. The turnover times correspond to the turnover ratios, and are steadily increasing, with the lowest turnover time in 2016, and the longest in 2020. Asset turnover decreases throughout the selected period by 67% from 2016 to 2020, and asset turnover time increases by 100.24 days for the same period.

Inventory turnover is calculated according to formula (15). From the beginning of the period, a decline is present. The greater the inventory turnover, the greater the contribution to profit generation. The largest inventory turnover ratio of DMCZ was in 2016 with a ratio of 10.15. Although inventory turnover for DMCZ declined for the duration of the period, it remained relatively close to the industry standard in terms of inventory turnover time. Table 18 presents the average turnover time for the manufacturing industry in the Czech Republic, data for years 2016 – 2019 are available. The shortest cycle of inventory turnover for DMCZ was 35.45 days, notably

shorter than the industry average of 43 days. Despite crossing over the industry average in 2017, and every subsequent year, the inventory turnover time for DMCZ remains in close proximity to industry averages throughout the period.

For receivables turnover, it is advantageous to have as many turnovers per year as possible. The receivables turnover for DMCZ was calculated using formula (16). Receivables turnover follows a pattern of decline throughout the period much like previous ratios. From 2016 to 2020, the receivables turnover time increased by 21 days; a 42% increase compared to turnover time in 2016. Despite this decline, DMCZ shows a short cycle of debt collection, with the shortest turnover time of 49.61 days in 2016, and longest turnover time of 70.17 days in 2020.

3.3.4 Debt Ratios

Debt ratios are divided into indicators of indebtedness and debt capacity indicators, or, how much debt is the company in and how well can it handle its debt. Debt ratios represent the share of debt resources within a company's financial structure. These ratios examine whether a company is able to repay the liabilities it incurred through the use of debt resources. The resulting values are in table 19. Values taken from financial statements are in thousands of CZK.

Table 19: Debt ratios of DMCZ

Period	2016	2017	2018	2019	2020
Assets	6 423 697	7 334 149	7 900 164	8 740 099	8 693 386
Total debt	3 693 185	3 991 636	4 130 489	5067575	5 427 768
Debt Ratio	**0.57**	**0.54**	**0.52**	**0.58**	**0.62**
Equity	2 203 835	2 880 541	3 348 816	3 206 659	2 759 612
Debt-to-equity ratio	**1.68**	**1.39**	**1.23**	**1.58**	**1.97**
Total capital	5 897 020	6 872 177	7 479 305	8 274 234	8 187 380
Debt-to-capital ratio	**0.63**	**0.58**	**0.55**	**0.61**	**0.66**
EBIT	790 222	854 738	594 365	-260 758	-444 391
Interest charges	18 012	10 815	6 462	3 789	1 454
Times interest earned	**43.87**	**79.03**	**91.98**	**-68.82**	**-305.63**

Source: own processing according to financial statements of DMCZ s.r.o. 2016 – 2020.

The first selected ratio is the debt ratio, which was calculated according to formula (20). The debt ratio measures the extent of a company's leverage, and can be interpreted as the proportion of a company's assets that are financed by debt. A ratio higher than 1 shows that a significant portion

of debt to asset ratio; in other words, the company has more liabilities than assets. A ratio less than 1 shows that a portion of company assets are funded by equity. DMCZ achieved ratios below 1 throughout the period. The lowest debt ratio that DMCZ experienced was in 2018, and the highest in 2020, though the difference between the lowest and highest ratio is minimal; DMCZ showed a stable debt ratio throughout the period.

The second selected ratio is the debt-to-equity ratio, calculated using formula (19). The debt-to-equity (D/E) ratio reflects the ability of a company to cover all of their outstanding debts with shareholders' equity in the event of a business downturn. A ratio of 1 indicates that stockholders and creditors contribute equally to a company's assets. A ratio less than 1 indicates that stockholders contribute more than creditors, and the opposite is true for a ratio greater than 1. A ratio of 1 is generally considered satisfactory. DMCZ's D/E ratio remains above 1 throughout the period. The lowest D/E ratio the company experienced was in 2018, with the highest in 2020. A trend is visible where the D/E ratio of DMCZ was falling until its lowest point in 2018, before climbing again to its highest point in 2020, surpassing any previously recorded ratio for the period.

Another ratio for measuring a company's dependance on debt financing is the debt-to-capital ratio, calculated using formula (17). Debt-to-capital identifies how dependent a company is on debt to finance its operations. A ratio greater than 1 indicates that the company has more debt than capital, and is at considerable risk of bankruptcy. A ratio less than 1 indicates the company has more capital than debt, and is less risky to invest in or provide a loan to. DMCZ remains below a ratio of 1 for the entirety of the period. It experiences it lowest debt-to-capital ratio in 2018, and highest in 2020. Alike to the company's D/E ratio, there is a downward trend until 2018, after which the ratio climbs again.

Times interest earned was calculated using formula (18). Times interest earned (TIE) measures a company's ability to meet debt obligations with its income. During the period selected, there is a growing trend for DMCZ's TIE ratio, from 2016 to 2018. In 2019 and 2020 the company suffered a substantial decrease in its TIE, indicating that the company was no longer able to pay its interest expenses from its income.

3.3.5 DuPont Analysis

ROE provides useful insights about a company's performance. The Du Pont analysis is a method of breaking down ROE into three components: profit margin, asset turnover and financial leverage via equity multiplier. The first two components assess the operations of a company. Generally, the larger they are, the better. The third component assesses the company's financial activities; the way a company uses debts to finance its assets. Since it measures financial leverage, the higher this amount is, the higher the risk of the company defaulting. The resulting values are in table 20. Values taken from financial statements are in thousands of CZK.

Table 20*: *Du Pont analysis of DMCZ

Period	2016	2017	2018	2019	2020
Net income	622 898	676 706	468 275	-218 945	-447 045
Sales	11 173 782	10 775 251	10 939 487	11 190 638	10 187 636
Profit margin	**0.056**	**0.063**	**0.043**	**-0.020**	**-0.044**
Assets	6 423 697	7 334 149	7 900 164	8 740 099	8 693 386
Asset turnover	**1.74**	**1.47**	**1.38**	**1.28**	**1.17**
Equity	2 203 835	2 880 541	3 348 816	3 206 659	2 759 612
Equity multiplier	**2.91**	**2.55**	**2.36**	**2.73**	**3.15**
ROE	**28.26**	**23.49**	**13.98**	**-6.83**	**-16.20**

Source: own processing according to financial statements of DMCZ s.r.o. 2016 – 2020.

As can be seen in table 20, DMCZ's profit margin is remarkably small, contributing little to its overall ROE. The profit margin reached its highest point in 2017, and achieved its lowest point in 2020. 2019 and 2020 are the only years where DMCZ's profit margins were in the negatives. In the period from 2016 to 2017, the company saw a profit margin increase partly due to an increase in net income, but also due to a decrease in sales. The profit margin began to decrease in 2018 and onwards due to decreases in net income for the company; though there were some mild fluctuations in sales for DMCZ, the remained for the most part stable in comparison to net income.

The company experienced its highest asset turnover in 2016, and has experienced a steady decline for the remained of the period. This downward trend is perpetrated by the year-on-year growth in the company assets. DMCZ acquired additional assets every year from 2016 to 2019, with 2020 being the only year where the company assets did not reach a higher amount compared to the previous year. Though asset turnover has decreases over the entire period, the specific

circumstances do not put DMCZ in immediate trouble. What this trend shows is the company amassing assets, yet being unable to efficiently use them to generate revenue.

The equity multiplier, or financial leverage, of DMCZ was at its highest in 2020, and lowest in 2018. The equity multiplier decreased year-by-year from 2016 to 2018, before increasing in 2019 and 2020, where it reached its highest value. With scores higher than 1, DMCZ employs significant debt to finance its assets.

Table 20 shows the significance of the Du Pont analysis. Though ROE was assessed in a previous chapter, here its components are broken down, and it is possible to evaluate their individual weights. DMCZ achieved its highest ROE in 2016. In absolute values, it possessed the least amount of assets and equity comparative with the rest of the period. Through the Du Pont analysis it is clear that despite the company not possessing the highest levels of financial statement items for the period, DMCZ was utilizing its resources efficiently during this year. The gradual decline of the company's ROE can therefore be attributed to two major factors: a stagnation in the company's ability to utilize its assets to generate revenue, and its sharp decline in generating income, leading to an increased dependence on external sources.

3.4 Bankruptcy Models

Bankruptcy models are used to assess a company's financial situation and health. Specifically, the Altman Z-score model and IN05 index model are applied to DMCZ. The reason for choosing these models is that they are suitable to assess Czech companies that are not publicly traded. These analyses were applied to the financial statements of DMCZ for the years 2016 – 2020.

3.4.1 Altman Z-Score

The first bankruptcy model is the Altman Z-score. The Altman model uses five indicators, and their associated weights, to examine the financial health of a company. As the selected company, DMCZ, is not a publicly traded company, a revised Altman formula was used for the calculation. This revised formula holds different weights for each indicator, and has a different limit for scoring the health of a company. The results of the calculation are presented in table 21. Values labeled a1 – a5 are the individual weights for the revised Z-score calculation, and values labeled X1 – X5 are the results for each indicator that is part of the calculation. The revised Z-score model was

calculated using formula (26). The values of items taken from financial statements are given in thousands of CZK.

Table 21*: *Altman Z-score of DMCZ 2016 – 2020

Period	2016	2017	2018	2019	2020
a1	0.717	0.717	0.717	0.717	0.717
Current assets	2 651 539	2 970 084	3 166 004	3 542 694	3 337 027
Current liabilities	3 027 227	3 595 883	3 739 763	4 654 775	3 433 043
Total assets	6 423 697	7 334 149	7 900 164	8 740 099	8 693 386
X1	**-0.042**	**-0.061**	**-0.052**	**-0.091**	**-0.008**
a2	0.847	0.847	0.847	0.847	0.847
Retained earnings	-1 953 502	-1 330 604	-653 898	-872 594	-1 091 541
Total assets	6 423 697	7 334 149	7 900 164	8 740 099	8 693 386
X2	**-0.258**	**-0.154**	**-0.070**	**-0.085**	**-0.106**
a3	3.107	3.107	3.107	3.107	3.107
EBIT	790 222	854 738	594 365	-260 758	-444 391
Total assets	6 423 697	7 334 149	7 900 164	8 740 099	8 693 386
X3	**0.382**	**0.362**	**0.234**	**-0.093**	**-0.159**
a4	0.420	0.420	0.420	0.420	0.420
Equity	2 203 835	2 880 541	3 348 816	3 206 659	2 759 612
Debt resources	4 210 301	4 420 356	4 511 881	5 450 325	5 858 265
X4	**0.220**	**0.274**	**0.312**	**0.247**	**0.198**
a5	0.998	0.998	0.998	0.998	0.998
Sales	11 173 782	10 775 251	10 939 487	11 190 638	10 187 636
Total assets	6 423 697	7 334 149	7 900 164	8 740 099	8 693 386
X5	**1.736**	**1.466**	**1.382**	**1.278**	**1.170**
Z'	**2.039**	**1.887**	**1.805**	**1.256**	**1.094**

Source: own processing according to financial statements of DMCZ s.r.o. 2016 – 2020

The interpretation of the result is based on the classification into the appropriate category based on the achieved results:

- Z' > 2.9 The company is financially stable
- Z' 2.89 – 1.23 The company is at moderate risk
- Z' < 1.23 The company is financially unstable

Table 21 shows the results DMCZ achieved over the period 2016 – 2020. In no year did the company surpass the 2.9 score that should reflect financial stability. On the contrary, DMCZ has achieved results that would put the company in the "grey zone" from 2016 to 2019, and achieved a result below the lower threshold of 1.23 in 2020, signaling that the company is financially unstable and at considerable risk of bankruptcy. The results overall are, therefore, relatively negative.

Throughout most of the period, DMCZ was within the middle zone of the Z-score, putting its financial future into ambiguity. In 2016, the company scored its highest with a Z-score of 2.039, and its lowest of 1.094 in 2020. A Z-score in the middle range does not mean that a company is at high risk of bankruptcy, but it does mean that the company is not at its healthiest. In the case of DMCZ, this is the case for the scores prior to 2020. It could be argued that in this particular case, the middle-range Z-scores of DMCZ are, in fact, negative as the period where they scored spans four years, and throughout this period the Z-scores are decreasing year-by-year.

The drop in Z-score during the period of 2016 – 2020 can be attributed to two main factors; these two factors are the decreasing EBIT and increasing assets of the company. From 2016 to 2017, the EBIT for DMCZ grows, and so does not contribute to the decline in Z-score. The company does however acquire a greater amount of assets while decreasing the value of sales in 2017. In the following years, the company's EBIT experiences sharp drops, the value of assets continues to grow and the value of sales experiences slight fluctuations, but stagnates over the entire period.

3.4.2 IN05 Index

The second bankruptcy model is the IN05 index. The IN05 index is one of the most well-known Czech indices created by the Neumaier couple. It is a combination of a creditworthiness and bankruptcy models, and is the latest version of the model, superseding the IN01 index model. Together with the Altman model, they are among the most accurate models that can be applied to companies within the Czech Republic. The results of the IN05 index are presented in table 22. Values labeled a1 – a5 are the individual weights for the calculation, and values labeled X1 – X5 are the results for each indicator that is part of the calculation. The IN05 index was calculated using formula (27). The values of items taken from financial statements are given in thousands of CZK.

Table 22: IN05 index for DMCZ

Period	2016	2017	2018	2019	2020
a1	0.13	0.13	0.13	0.13	0.13
Total assets	6 423 697	7 334 149	7 900 164	8 740 099	8 693 386
Liabilities	3 693 185	3 991 636	4 130 489	5 067 575	5 427 768
X1	**0.226**	**0.239**	**0.249**	**0.224**	**0.208**
a2	0.04	0.04	0.04	0.04	0.04
EBIT	790 222	854 738	594 365	-260 758	-444 391
Interest payable	18 012	10 815	6 462	3 789	1 454
X2	**1.755**	**3.161**	**3.679**	**-2.753**	**-12.225**
a3	3.97	3.97	3.97	3.97	3.97
EBIT	790 222	854 738	594 365	-260 758	-444 391
Total assets	6 423 697	7 334 149	7 900 164	8 740 099	8 693 386
X3	**0.488**	**0.463**	**0.299**	**-0.118**	**-0.203**
a4	0.21	0.21	0.21	0.21	0.21
Sales	11 173 782	10 775 251	10 939 487	11 190 638	10 187 636
Total assets	6 423 697	7 334 149	7 900 164	8 740 099	8 693 386
X4	**0.365**	**0.309**	**0.291**	**0.269**	**0.246**
a5	0.09	0.09	0.09	0.09	0.09
Current assets	2 651 539	2 970 084	3 166 004	3 542 694	3 337 027
Current liabilities	3 027 227	3 595 883	3 739 763	4 654 775	3 433 043
X5	**0.079**	**0.074**	**0.076**	**0.068**	**0.087**
FINAL RESULT	**2.913**	**4.246**	**4.593**	**-2.310**	**-11.886**

Source: own processing according to financial statements of DMCZ s.r.o. 2016 – 2020

The interpretation of the result is based on the classification into the appropriate category based on the achieved results:

- IN05 > 1.6 The company is financially stable
- IN05 1.6 – 0.9 The company is at moderate risk
- IN05 < 0.9 The company is financially unstable

The results of the IN05 index differ somewhat to the results gathered through the Altman Z-model, but a similar trend is present. For the years 2016 – 2018, the company is in no risk of bankruptcy; in fact, according to the results of the IN model, DMCZ is considered to be financially stable for that period. These changes, however, for the years 2019 and 2020, where the IN05 score drops drastically, into the negatives, signaling that the company is in financial distress, and has a strong probability for bankruptcy.

The highest value achieved by DMCZ was a score of 4.593 in 2018, and the lowest score of -11.886 was achieved in 2020. The largest contributing factor to the scores received as a result of the IN05 index are the company's EBIT and interest payables, with the accumulation of assets contributing as well, to a lesser degree. The accumulation of assets and stagnation of sales for DMCZ is a reoccurring theme, and is evidently a long-term problem for the company as it is present throughout the five-year period. For the IN05 model specifically, the highest scores that DMCZ achieved were a result of a high EBIT in relation to interest payables.

The company's EBIT grey from 2016 to 2017, while its interest payable decreased every year for the period. Even though the company's EBIT decreased from 2017 to 2018, the difference between it and interest payable remained substantial enough to drastically influence the overall index score for the year. The severe shift in the company's EBIT from 2018 to 2019 was the driving force that drove the index score towards a dangerous low.

4 Summary and Recommendations for the Company DMCZ s.r.o.

The structure of the balance sheet and profit loss statements for the selected period of 2016 – 2020 was examined by performing an analysis of absolute indicators. The main finding is that the total assets of DMCZ s.r.o. consist mainly of fixed assets. Fixed assets make up 51% - 53% of the company's total assets. Tangible fixed assets make up over 99% of fixed assets for the entire period; intangible fixed assets account for less than 1% of fixed assets for the period. In terms of liabilities, debt resources make up 57% - 67% of total liabilities. The highest ratio of 67% was reached in 2020. These values represent that the company's assets are financed mainly from debt and other external sources.

The company uses significant amounts of debt resources, which is reflected in the vertical analysis of the company's financial statements. Most of these debt resources are made up of the company's liabilities. Short-term liabilities are the largest item in the debt resources, and contribute 58% - 85% to its value. The company has reserves, but they represent only 7% - 14% of the company's liabilities, meaning the company may struggle to cover any unplanned expenses.

Liquidity ratios achieved results that are below the recommended values. The company is therefore not very liquid. The company encountered problems with the current, quick and operating cash flow ratios. For the entire period, DMCZ possessed more liabilities than assets, resulting in a current ratio score below the recommended. The more conservative quick ratio bears similar results, the overwhelming amount of liabilities that the company possess cannot be adequately covered through its liquid assets. The operating cash flow ratio is no different. In none of the years during the period was the cash flow of the company adequate to cover its current liabilities.

During the period, the company transitioned from positive income to negative, incurring losses towards the end of the period. In the case of ROE, the company achieved and surpassed industry standards in the years 2016 and 2017, falling behind the industry for the remainder of the period. The above average ROE for the first two years of the period can be attributed to a high net income, comparative to other years, and a relatively low equity as a result of unrecovered losses from previous years. Towards the end of the period, net income for the company falls, while equity rises, leading to below average ROE.

The ROA and ROS of DMCZ share this experience. ROA remains above industry average for 2016 and 2017, and ROS for one year more in 2018. ROA first falls below average in 2018 due to stagnating sales and falling EBIT, before entering the negatives towards the end of the period. ROS follows suite in 2019 and 2020, again due to the company's losses. The company's ROCE was on a slight downward trend due to its growing assets and falling EBIT, but remained positive until it fell drastically due to being affected by the company's losses.

Activity ratios presented some favorable results for DMCZ. Asset turnover for the company surpassed the recommended value of 1 for the entirety of the period. This was due to the strong sales the company has over the entire period, though it should be mentioned that the asset turnover ratio is on a downward slope. A recurring theme for the company is the acquisition of additional assets year-on-year, while sales remain relatively stable. The company's inventory turnover time was shorter than the industry average, mainly due to the size of the inventories. Inventory turnover time did surpass industry average during the period, but it did not deviate by more than 4 days at most. DMCZ turned over its receivables more often and quick towards the beginning of the period as opposed to the end. This change can be attributed to the growth of the company's receivables, caused primarily by an increase in active accounts and trade receivables.

The debt ratios for DMCZ provide mixed messages. The debt ratio signals a positive result for the company, as it would be able to cover all of its liabilities with its assets. The company's debt-to-equity ratio is not so positive, as the company lacks the equity needed to cover all of its liabilities. The debt-to-capital ratio for the company remains below the threshold of 1 throughout the period. Times interest earned is the only value that experiences drastic changes throughout the period. Prior to 2019, the value remained positive and was rising. This growth was attributed less so to the company's fluctuating EBIT, and more so to the declining level of interest charges for the company. Despite interest charges in 2019 and 2020 being the lowest they have been throughout the period; the negative EBIT causes the times interest earned value to also plummet.

Bankruptcy models were used to assess the financial health of the company, namely the Altman model and the IN 05 index. The Altman modes showed that the financial future of DMCZ was ambiguous until 2019, and was at moderate risk of bankruptcy. The Z'-score of the year 2020 determined that the company was below the recommended range and is financially unstable. Prior to 2020, there was a declining trend in the Z'-score of the company. The largest contributing factor

is once again the growing assets of the company and the stagnating sales. The IN05 index results portrayed the company as financially stable from 2016 to 2018 before jumping to financially unstable in 2019 and 2020. The largest influence foe this change in results was the company's EBIT, and the losses they incurred in 2019 and 2020.

The results of the financial ratio analysis result in a recommendation for DMCZ to increase the ratio of external sources in the form of long-term loans in order to off-set the losses incurred in the years affected by the COVID-19 pandemic. By arranging for loans, the company can cover additional costs that negatively affected its earnings and bring better results in the profitability indicators. Throughout the entire period, DMCZ showed a low debt ratio, meaning that the company can afford to take on these additional liabilities. Furthermore, the company's debt-to-equity ratio could be improved through these loans, as the company's equity has been negatively impacted throughout the period by unrecovered losses from previous years; covering additional costs of the company could allow it to retain more earnings and improve their overall equity. Securing the loan should not be difficult, as the company was not at risk of bankruptcy before the extraordinary conditions brought by the pandemic, as can be seen in the Altman evaluation and the IN 05 index results.

Taking non-financial information into account, DMCZ was gearing towards rapid growth prior to the onset of the global pandemic caused by COVID-19. The company had sacrificed some short-term earnings in order to expand their production capacity, merge with a sister company, and restructure in order to fulfill their business obligations more efficiently. These actions are not uncommon and can take a number of years to complete, during which the company's business may suffer, in order to secure better long-term results. DMCZ was unfortunate to undergo these processes right before the global pandemic affected the world, and by extension, the supply chain. Unlike some other industries, DMCZ was further hindered due to the nature of their business; production cannot be done long-distance, employees need to be present in the manufacturing facilities.

The culmination of all of these factors is a short-term solution for the immediate problems the company is facing. The period selected for the evaluating of DMCZ can be viewed as abnormal, due to the transitionary nature of the company's activities, and the abnormal situations in industries globally. With that being the case, DMCZ is in a strong position for recovery within the next few

years. Furthermore, the non-financial strengths of the company should also be considered. DMCZ is a daughter company to its global company based in Japan, DENSO. The company is fully owned by the parent company, and is located strategically in the Industrial Zone South of Liberec. The company is also close to the borders of Germany and Poland, and has ready access to international highways. With major customers local to Europe such as Volkswagen, BMW, Porsche, and Audi, and with the backing of a global parent company with a presence in 35 countries, DMCZ is unlikely remain in a slump for too long.

Through the company's annual reports, it is made clear that the slow-down caused by the pandemic has been used efficiently to re-organize the company internally in order to streamline production. It is equally important to consider that DMCZ is a part of the supply chain for global auto-manufacturers and takes residence in a geographically strategic location. The company sits in a unique position where it may suffer in the short-term due to abnormalities with causes beyond the industry but remains a strong candidate for long-term growth.

DMCZ's greatest challenge is adapting to the requirements of its corporate customers, which in turn need to adapt the end customers. An issue that has emerged in the beginning of the pandemic is the lack of technological infrastructure across the world, as work had to be shifted to on-line forms. The effects of this realization are evident in the rapid growth of technological companies, and the incorporation of technology into places where it was once absent, or lacking. The same has taken place in the automotive industry, where just like other forms of shopping, the customer moved was forced from the showroom to the online website. Automotive industries invested heavily into improving online shopping, and DMCZ should consider following suit.

The company is in prime form to become an industry leader, thanks to expansions and improving manufacturing efficiency. DMCZ has however not made any significant investments into their software, as is seen on the balance sheet. Despite the effects of the pandemic subsiding, and work slowly returning to normal, the company should look to follow in the footsteps of their customers and invest substantially towards improving their online presence and communication. This extends beyond simply updating their website. Possessing up to date and new software can allow for certain tasks to be automated or monitored without the need for physical presence, allowing for more efficient allocation of staff.

5 Conclusion

This diploma thesis is focused on the evaluation of the financial performance of the company DENSO MANUFACTURING CZECH s.r.o. Financial statements were used to obtain an overview of the financial situation of the company. This financial data was supplemented by additional information made available through annual reports. The period reviewed was 2016 – 2020; a five-year period to ascertain an accurate image of the company's position. The aim of the diploma thesis was to evaluate the financial health of the company and possibly propose recommendations that would contribute to the improvement of the financial performance of the company.

The theoretical part of this diploma thesis contains two main chapters. In the first chapter, the concepts of financial performance and financial analysis were explained. The second chapter focuses on the sources of financial data, its users, and the tools of financial analysis, including the methods by which financial performance can be measured. These tools included financial indicators, various ratios, and bankruptcy models.

The third chapter contains the characteristics of the selected company, and is the start of the practical part of this diploma thesis. This chapter contains the entirety of the practical part of this thesis, and begins with basic information about the company, such as field of business, prominent persons, product portfolio and history of the company. The main part of the practical part is the evaluation of the company's performance.

The obtained results were compared over time, and where applicable, against the average of the industry. It was found that the company was foregoing short-term profitability in order to expand its manufacturing capacities; this is present in the balance sheet of the company, as most of its assets are made up of fixed assets. Despite this, the company was competitive on an industry level prior to the outbreak of the global pandemic caused by COVID-19. This is most evident in the profitability ratios of the company. Bankruptcy models placed the company at moderate to low risk of bankruptcy prior to the period affected by the pandemic; these scores were likely to be higher if not for the company's efforts at expansion during the selected period. Both bankruptcy models place the company at a high risk towards the end of the period.

The fourth and last chapter of this diploma thesis consists of a summary of the achieved results and recommendations based on the analyses performed. The main recommendation for the company

was to increase its use of external resources, namely in the form of long-term loans in order to cover the losses incurred during the period affected by the pandemic. Unfortunately, due to the nature of manufacturing and the inability to do it remotely, combined with the international clientele of the company, DMCZ, and the manufacturing industry as a whole, suffered significantly more in the wake of the global pandemic than companies with other forms of business.

The recommendation for DMCZ is rather short due to the need to consider more than just financial data. By all measures, the company was performing well and above industry average prior to the end of the selected period. Though financial analysis indicates severe financial trouble, the company was not alone in this regard, and is well-poised to fully recover in the short future. This conclusion is based on the strong financial position of the company in the past, as well as the slowly recovering economies of the world; namely, the quickly recovering automotive industry.

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List of Appendices

Appendix A: Balance Sheet of DMCZ s.r.o. 2016 – 2020 – ASSETS

	(In thousands of CZK)	2016	2017	2018	2019	2020
	TOTAL ASSETS	**6 423 697**	**7 334 149**	**7 900 164**	**8 740 099**	**8 693 386**
B.	**FIXED ASSETS**	**3 289 379**	**3 806 905**	**4 192 135**	**4 667 250**	**4 672 897**
B.I.	**Intangible fixed assets**	**22 179**	**9 372**	**10 463**	**9 303**	**9 995**
B.I.1.	intangible result of development	3 888	1 153	9	0	0
B.I.2.	Royalties	6 572	7 684	7 926	6 706	7 580
B.I.2.1.	Software	6 572	7 684	7 926	6 706	7 580
B.I.4	Other long-term intangible assets	0	0	0	140	115
B.I.5.	Prepayments for long-term intangible assets and unfinished long-term intangible assets	11 719	535	2 528	2 457	2 300
B.I.5.2.	Unfinished intangible assets	11 719	535	2 528	2 457	2 300
B.II.	**Tangible fixed assets**	**3 267 200**	**3 797 533**	**4 181 672**	**4 657 947**	**4 662 902**
B.II.1.	Land and buildings	1 086 008	1 167 198	1 166 955	1 503 904	1 549 578
B.II.1.1.	Land	100 762	100 762	100 762	114 621	114 621
B.II.1.2.	Buildings	985 246	1 066 436	1 066 193	1 389 283	1 434 957
B.II.2.	Tangible movable things and their files	1 720 471	1 863 875	2 329 636	2 665 033	2 701 347
B.II.5.	Prepayments for tangible fixed assets and unfinished tangible fixed assets	460 721	766 460	685 081	489 010	411 977
B.II.5.1.	Prepayments for tangible fixed assets	116 806	148 399	122 353	108 070	111 412
B.II.5.2.	Unfinished tangible fixed assets	343 915	618 061	562 738	380 940	300 565
C.	**CURRENT ASSETS**	**2 651 539**	**2 970 084**	**3 166 004**	**3 542 694**	**3 337 027**
C.I.	**Inventories**	**1 100 329**	**1 321 234**	**1 421 593**	**1 549 142**	**1 343 794**
C.I.1.	Materials	549 288	615 433	647 944	865 168	863 819
C.I.2.	Work in progress and semi-finished products	115 611	94 339	138 945	174 719	129 504
C.I.3.	Products and goods	367 335	466 846	495 806	423 357	270 264
C.I.3.1.	Products	113 270	132 520	92 783	146 733	186 636
C.I.3.2.	Goods	254 065	334 326	403 023	267 624	83 628
C.I.5.	Prepayments for inventory	68 095	144 616	138 898	85 898	80 306
C.II.	**Receivables**	**1 539 737**	**1 640 746**	**1 732 679**	**1 983 361**	**1 985 649**
C.II.1.	**Long-term receivables**	**0**	**0**	**0**	**35 143**	**32 489**
C.II.1.4.	Deferred tax asset	0	0	0	35 143	32 489
C.II.2.	**Short-term receivables**	**1 539 737**	**1 640 746**	**1 732 679**	**1 948 218**	**1 953 160**
C.II.2.1.	Trade receivables	1 232 222	1 211 558	1 202 822	1 486 023	1 340 462
C.II.2.2.	Receivables - controlled or controlling person	542	0	0	137	64
C.II.2.4.	Receivables - other	306 973	429 188	529 857	462 058	612 634
C.II.2.4.3.	State - tax receivables	79 748	83 149	110 786	128 643	53 319
C.II.2.4.4.	Short-term prepayments	9 852	10 442	10 890	30 186	27 948
C.II.2.4.5.	Estimated accounts active	200 611	324 687	272 693	295 193	523 165

C.II.2.4.6.	Other receivables	16 762	10 910	135 488	8 036	8 202
C.IV.	**Finances**	**11 473**	**8 104**	**11 732**	**10 191**	**7 584**
C.IV.1.	Cash on hand	827	743	432	1 157	705
C.IV.2.	Money in accounts	10 646	7 361	11 295	9 034	6 879
D.	**Accruals**	**482 779**	**557 160**	**542 025**	**530 155**	**683 462**
D.1.	Deferred expenses	193 640	229 056	214 260	232 501	392 025
D.2.	Complex costs of future periods	289 139	328 104	327 765	297 654	291 437

Appendix B: Balance Sheet of DMCZ s.r.o. 2016 – 2020 – LIABILITIES

	(In thousands of CZK)	2016	2017	2018	2019	2020
	TOTAL LIABILITIES	**6 423 697**	**7 334 149**	**7 900 164**	**8 740 099**	**8 693 386**
A.	**EQUITY**	**2 203 835**	**2 880 541**	**3 348 816**	**3 206 659**	**2 759 612**
A.I.	**Basic capital**	**3 373 800**	**3 373 800**	**3 373 800**	**3 373 800**	**3 373 800**
A.I.1.	Basic capital	3 373 800	3 373 800	3 373 800	3 373 800	3 373 800
A.II.	Premiums and capital funds	94 730	94 730	94 730	731 919	731 919
A.II.2.	Capital funds	94 730	94 730	94 730	731 919	731 919
A.II.2.1.	Other capital funds	94 730	94 730	94 730	731 919	731 919
A.III.	**Profit funds**	**65 909**	**65 909**	**65 909**	**65 909**	**65 909**
A.III.1.	Other reserve funds	65 909	65 909	65 909	65 909	65 909
A.IV.	**Economic result of previous years**	**-1 953 502**	**- 1 330 604**	**-653 898**	**-746 024**	**-964 971**
A.IV.1.	Retained earnings or unrecovered losses of previous years	-1 953 502	- 1 330 604	-653 898	-872 594	-1 091 541
A.IV.2.	Other economic results of the past years	0	0	0	126 570	126 570
A.V.	**Result of economic activities during standard financial period**	**622 898**	**676 706**	**468 275**	**-218 945**	**-447 045**
B.+C.	**DEBT RESOURCES**	**4 210 301**	**4 420 356**	**4 511 881**	**5 450 325**	**5 858 265**
B.	**Reserves**	**517 116**	**428 720**	**381 392**	**382 750**	**430 497**
B.II.	Income tax reserves	168 245	82 543	0	0	0
B.IV	Other reserves	348 871	346 177	381 392	382 750	430 497
C.	**Liabilities**	**3 693 185**	**3 991 636**	**4 130 489**	**5 067 575**	**5 427 768**
C.I.	Long-term liabilities	665 958	395 753	390 726	412 800	1 994 725
C.I.4.	Trade payables	0	6 925	6 925	0	0
C.I.6.	Liabilities - controlled or controlling person	595 210	297 330	274 644	412 800	1 994 725
C.I.8.	Deferred tax liability	70 748	91 498	109 157	0	0
C.II.	**Short-term liabilities**	**3 027 227**	**3 595 883**	**3 739 763**	**4 654 775**	**3 433 043**
C.II.4	Trade payables	909 747	986 161	778 232	1 117 957	826 109
C.II.6.	Liabilities - controlled or controlling person	1 108 326	1 326 464	1 560 703	1 969 793	936 356
C.II.8.	Other liabilities	1 009 154	1 283 258	1 400 828	1 567 025	1 670 578
C.II.8.3.	Liabilities to employees	48 676	51 474	70 048	72 908	65 106
C.II.8.4.	Liabilities from social security and health insurance	28 573	30 742	41 170	42 119	33 205
C.II.8.5.	State - tax liabilities and subsidies	16 934	5 287	8 638	152 941	96 538
C.II.8.6.	Estimated accounts payable	911 889	1 192 461	1 270 899	1 156 520	1 201 810
C.II.8.7.	Other obligations	3 082	3 294	10 073	142 537	273 919
D.	**ACCRUALS**	**9 561**	**33 252**	**39 467**	**83 115**	**75 509**
D.2.	Deferred revenue	9 561	33 252	39 467	83 115	75 509

Appendix C: Profit and Loss statement of DMCZ s.r.o. 2016 – 2020

	(In thousands of CZK)	2016	2017	2018	2019	2020
I.	Sales of products and services	11 173 782	10 775 251	10 939 487	11 190 638	10 187 636
II.	Sales of goods	1 164 309	1 332 399	984 377	879 435	746 206
A.	Power consumption	10 175 870	9 840 427	9 901 445	10 043 714	8 889 934
A.1.	Cost of goods sold	1 012 789	1 230 377	898 483	814 662	594 854
A.2.	Material and energy consumption	7 790 882	7 257 965	7 679 718	7 717 758	6 900 238
A.3.	Services	1 372 199	1 352 085	1 323 244	1 511 294	1 394 842
B.	Change in the state of inventories of own activities	-24 510	-30 406	-45 764	-60 080	-27 256
C.	Activation	0	0	0	-10	0
D.	Personal expenses	971 447	1 041 630	1 259 079	1 561 603	1 475 490
D.1.	Labor costs	717 712	769 361	931 336	1 144 988	1 083 195
D.2.	Social security costs, health insurance and other costs	253 735	272 269	327 743	416 615	392 295
D.2.1.	Costs of social security, health insurance	239 824	256 702	312 143	385 045	358 479
D.2.2.	Other costs	13 911	15 567	15 600	31 570	33 816
E.	Adjustments of values in the operating area	415 394	476 808	553 736	666 499	725 127
E.1.	Adjustments to the value of intangible and tangible fixed assets	417 435	457 016	523 896	712 175	729 750
E.1.1.	Adjustments to the value of long - term intangible and tangible assets - permanent	417 435	457 016	523 896	715 754	722 537
E.1.2.	Adjustments to the value of long - term intangible and tangible assets - temporary	0	0	0	-3 579	7 213
E.2.	Adjustments to inventory values	-2 927	9 254	36 704	-41 862	-13 730
E.3.	Adjustment to receivables values	886	10 538	-6 864	-3 814	9 107
III.	Other operating income	256 498	226 223	261 741	290 644	237 818
III.1.	Revenues from sold fixed assets	67 483	41 736	65 302	69 858	32 954
III.2.	Revenues from sold materials	109 346	98 618	86 027	69 503	96 919
III.3.	Other operating income	79 669	85 869	110 412	151 283	107 945
F.	Other operating expenses	337 192	169 999	218 934	234 131	261 441
F.1.	Residual value of sold fixed assets	26 084	35 104	15 242	24 567	15 819
F.2.	Residual value of materials sold	116 520	101 849	98 830	77 660	109 248
F.3.	Taxes and fees	18 820	22 824	23 440	34 655	23 873
F.4.	Reserves in the operating area and complex costs for future periods	133 328	-30 734	35 553	31 154	59 081
F.5.	Other operating expenses	42 440	40 956	45 869	66 095	53 420
*	**Operating profit**	719 196	835 415	298 175	-85 140	-153 076
I.	Adjustments to the value of reserves	0	0	1	0	0
VI.	Interest income and similar income	9	0	0	0	0
VI.2.	Other interest income and similar income	9	0	0	0	0

J.	Cost of interest and similar expenses	17 335	10 012	5 859	3 070	1 480
J.I.	Cost of interest and similar expenses - controlled or controlling persons	17 335	10 012	5 859	3 070	1480
VII.	Other financial income	102 400	69 324	462 332	276 179	288 965
K.	Other financial costs	14 048	39 989	160 282	448 727	578 800
*	**Financial results**	**71 026**	**19 323**	**296 190**	**-175 618**	**-291 315**
**	**Profit before tax**	**790 222**	**854 738**	**594 365**	**-260 758**	**-444 391**
L.	Income tax	167 324	178 032	126 090	-41 813	2 654
L.1.	Income tax due	168 245	157 282	108 431	-10 366	0
L.2.	Income tax deferred	-921	20 750	17 659	-31 447	2 654
**	**Profit after tax**	**622 898**	**676 706**	**468 275**	**-218 945**	**-447 045**
***	**Profit or loss for the accounting period**	**622 898**	**676 706**	**468 275**	**-218 945**	**-447 045**
*	**Net turnover for the accounting period**	**12 696 998**	**12 403 197**	**12 647 937**	**12 636 896**	**11 460 625**

Appendix D: Cash Flow statement of DMCZ s.r.o. 2016 – 2020

	(In thousands of CZK)	2016	2017	2018	2019	2020
P.	**Initial state of cash and cash equivalents**	**6 528**	**11 473**	**8 104**	**11 732**	**10 191**
Z.	Profit or loss from ordinary activities before tax	790 222	854 738	594 365	-260 758	-444 391
A.1.	Adjustments for non-cash transactions	504 488	503 941	323 935	834 149	948 131
A.1.1.	Depreciation of fixed assets	417 435	457 016	523 896	715 754	722 537
A.1.2.	Change in provisions and reserves	98 605	17 098	65 055	-47 897	50 337
A.1.3.	Profit (loss) from the sale of fixed assets	-41 399	-6 632	-50 060	-45 291	-17 135
A.1.5.	Expenses and interest income	17 326	10 012	5 859	3 070	1 480
A.1.6.	Corrections on other non - cash transactions	12 521	26 447	-220 815	208 513	190 912
A.*	**Net operating cash flow before changes in working capital**	**1 294 710**	**1 358 679**	**918 300**	**573 391**	**503 740**
A.2.	Change in working capital	-115 544	-83 230	-80 103	44 725	-525 430
A.2.1.	Change in receivables and accrued assets	219 012	-191 237	88 168	-100 183	-47 070
A.2.2.	Change in liabilities and accrued liabilities	-254 570	353 691	-16 346	261 189	-688 163
A.2.3.	Changes in stock	-79 986	-245 684	-151 925	-106 281	209 803
A.**	**Net operating cash flow before tax and extraordinary items**	**1 179 166**	**1 275 449**	**838 197**	**618 116**	**-21 690**
A.3.	Paid interest	-18 012	-10 815	-6 462	-3 789	-1 454
A.4.	Interest received	9	0	0	0	0
A.5.	Paid income tax for ordinary activities	0	-242 984	-236 361	-72 891	0
A.***	**Net cash flow from operating activities**	**1 161 163**	**1 021 650**	**595 374**	**541 436**	**-23 144**
B.1.	Expenses associated with the acquisition of fixed assets	-654 348	-987 399	-965 101	-1 087 282	-645 788
B.2.	Income from the sale of fixed assets	67 483	41 736	65 302	69 858	32 954
B.***	**Net cash flow from investing activities**	**-586 865**	**-945 663**	**-899 799**	**-1 017 424**	**-612 834**
C.1.	Change in financing liability	-569 353	-79 356	308 053	474 447	633 371
C.***	**Net cash flow from financing activities**	**-569 353**	**-79 356**	**308 053**	**474 447**	**633 371**
F.	Net currency of cash and cash equivalents	4 945	-3 369	3 628	-1 541	-2 607
R.	Final state of cash and cash equivalents	11 473	8 104	11 732	10 191	7 584