

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economic Theories



Master's Thesis

Financial analysis of KazMunayGas

Bc. Sergazy Dinaliyev

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DIPLOMA THESIS ASSIGNMENT

Bc. Sergazy Dinaliyev

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Thesis title

Financial analysis of KazMunayGas

Objectives of thesis

The aim of this research is to review methods that can be used to analyze the financial position of a company and evaluate them in respect to the selected company KazMunayGas within defined time of 2014 -2020.

Methodology

The thesis consists of two main chapters – a practical chapter and a theoretical chapter.

The theoretical part consists of literature review that describes the sources of financial data which can be used to inform financial health of a company. The literature review is based on the sources available domestically and foreign scientific literatures. The literature review mainly reveals the methods of financial analysis and methods for appraising strategic capital expenditure projects and strategic direction for a company. The literature review thus is mainly focused on ratio indicators, absolute indicator, and differential indicators.

The practical part consists of an interpretation of the financial statement of the selected company KazMunayGas to assess the current viability of the organization. The findings are compared with industry averages and recommended values. The obtained results are helpful for the formulation of future business strategy for the selected company.

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Kazakhstan, Gazprom, KazMunayGas, financial statements, comparison, profitability, ratios, analysis

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The Diploma Thesis Supervisor

Ing. Pavel Srbek, Ph.D.

Supervising department

Department of Economic Theories

Electronic approval: 27. 3. 2022

doc. PhDr. Ing. Lucie Severová, Ph.D.

Head of department

Electronic approval: 28. 3. 2022

doc. Ing. Tomáš Šubrt, Ph.D.

Dean

Prague on 28. 03. 2022

Declaration

I declare that I have worked on my master's thesis titled "Financial analysis of KazMunayGas" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the master's thesis, I declare that the thesis does not break any copyrights.

In Prague on 29.03.2022

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Financial analysis of KazMunayGas

Abstract

This diploma thesis presents financial analysis of selected company, KazMunayGas, which is the largest oil and gas company in Kazakhstan and held by the government. The goal of an analysis is to develop an understanding of the KMG's external and internal environments. The thesis analyzes the effectiveness of the company's financial and economic activities for the period of 2014-2020. KazMunayGas is a vertically integrated oil and gas corporation that manages the entire production cycle, from hydrocarbon exploration and production to transportation and processing, as well as specialized services. The study involves both theoretical and practical components. The theoretical section defines fundamental terms, theories, and methods and the purpose of financial analysis. The major part of the theoretical review explains financial analysis methods such as vertical and horizontal analysis, ratio analysis, and as well as differential indicators. The practical part includes a description of the KMG's profile and an overview of the industry. The obtained outcomes are compared to recommended indicators and industry averages using the methods described in theoretical part. The obtained outcomes are required for an evaluation of the KMG's financial health and the specification of recommendations are important for future development.

Keywords: Kazakhstan, KazMunayGas, financial analysis, financial statements, vertical and horizontal analysis, ratio analysis, DuPont analysis.

Finanční analýza společnosti KazMunayGas

Abstrakt

Diplomová práce představuje finanční analýzu vybrané společnosti KazMunayGas, která je největší ropnou a plynárenskou společností v Kazachstánu a drží ji vláda. Cílem analýzy je rozvinout pochopení vnějšího a vnitřního prostředí KMG. Práce analyzuje efektivnost finanční a ekonomické činnosti společnosti za období 2014-2020. KazMunayGas je vertikálně integrovaná ropná a plynárenská společnost, která řídí celý výrobní cyklus, od průzkumu a těžby uhlovodíků až po přepravu a zpracování, stejně jako specializované služby. Studium zahrnuje teoretickou i praktickou část. V teoretické části jsou definovány základní pojmy, teorie a metody a účel finanční analýzy. Převážná část teoretického přehledu vysvětluje metody finanční analýzy, jako je vertikální a horizontální analýza, poměrová analýza a také diferenciální ukazatele. Praktická část obsahuje popis profilu KMG a přehled oboru. Získané výsledky jsou porovnány s doporučenými ukazateli a průmyslovými průměry pomocí metod popsanych v teoretické části. Získané výsledky jsou potřebné pro hodnocení finančního zdraví KMG a specifikace doporučení jsou důležité pro budoucí blaho společnosti.

Klíčová slova: Kazachstán, KazMunayGas, finanční analýza, finanční výkazy, vertikální a horizontální analýza, poměrová analýza, DuPont analýza.

Table of content

1 Introduction.....	11
2 Objectives and Methodology	12
2.1 Objectives.....	12
2.2 Methodology	12
3. Literature Review	13
3.1 Importance Financial Analysis.....	13
3.2 Users of Financial Analysis	14
3.3 Methods of Financial analysis.....	17
3.3.1 Horizontal Analysis and Vertical Analysis	17
3.3.2 Vertical Analysis	18
3.4 Ratio analysis	19
3.4.1 Profitability ratios.....	20
3.4.3 Leverage Ratios	22
3.4.4 Activity ratios	25
3.5 Differential indicators as methods of Financial Analysis	27
3.5.1 Net working Capital	27
3.5.2 Cash Conversion Cycle	28
3.6 The Financial Statements	29
3.6.1 Balance Sheet	30
3.6.2 The Profit and Loss Account (Income statement).....	33
3.6.3 Cash Flow Statement.....	34
3.6.4 Statement of Shareholder's Equity.....	36
3.7 DuPont Analysis	37
4 Practical Part.....	38
4.1 KazMunayGas overview	38
4.2 Introduction to oil and gas industry of Kazakhstan.	40
4.3 Financial Statements Analysis	43
4.3.1 Vertical Analysis of Financial Statements	44
4.3.2 Vertical Analysis of Profit & Loss Statement	48
4.3.3 Horizontal Analysis of Financial Statements of KMG.....	50
4.4 Ration Analysis	57
4.4.1 Liquidity ratios	57
4.4.2 Leverage ratios	61
4.4.3 Profitability ratios.....	65
4.4.4 Activity ratios	69
4.4.5 Differential Indicator Analysis.....	75
4.5 DuPont Analysis	78

5 Discussion and conclusion 79
6 References 84
7 List of figures and tables 86

1 Introduction

None of business organizations can run without finance. There must be sound financial condition of every business organization for making investments and run an organization in a profitable way. This matter of fact applies to various industrial companies' operating around the world. So, in terms of oil producing companies like KazMunayGas in Kazakhstan should have well balanced financial and management problems. It is essential to figure out the various forms of finance available, cost and benefit of those finances, risk associated with the forms of finance and investment, plans for growth and investment etc. These findings reveal the strengths and weakness of the operating company. For obtaining all these financial data or information for taking financial decision, managers need to deal with various financial statements.

Financial data and information of a business organization are reflected in the form of financial statement. Generally, stockholders, managers, owners, Officers, Internal Departments, Employees Internal Auditor etc. in an organization are the main users of financial data. They try to figure out if performance of the business needs to be improved. Whether business needs more investment or sells the part of investment currently being held. However, their overall concern is running business industry effectively with sound financial health.

In this diploma thesis of Financial Analysis of KazMunayGas, some widely practiced methods of financial analysis are used to measure the current financial health for the period of 2014-2020.

The theoretical part describes the sources of financial data which can be used to inform financial health of a company. The theoretical part thus is mainly focused on ratio indicators, absolute indicator, and differential indicators.

The practical part consists of an interpretation of the financial statement of the selected company KazMunayGas to assess the current viability of the organization. The findings are compared with industry averages and recommended values. The obtained results are helpful for the formulation of future business strategy for the selected company.

2 Objectives and Methodology

2.1 Objectives

The aim of this research is to review methods that can be used to analyze the financial position of a company and evaluate them in respect to the selected company KazMunayGas within defined time of 2014 -2020.

The findings are based on the research questions:

- Whether the selected company is financially healthy and profitable?
- What possible solutions can be recommended incase if it is not?

2.2 Methodology

The thesis consists of two main chapters – a practical chapter and a theoretical chapter.

The theoretical part consists of literature review that describes the sources of financial data which can be used to inform financial health of a company. The literature review is based on the sources available domestically and foreign scientific literatures. The literature review mainly reveals the methods of financial analysis and methods for appraising strategic capital expenditure projects and strategic direction for a company. The literature review thus is mainly focused on ratio indicators, absolute indicator, differential indicators, and absolute financial analysis method.

The practical part consists of an interpretation of the financial statement of the selected company KazMunayGas to assess the current viability of the organization. Whether to understand the financial health of the entity the following methods were used: horizontal and vertical analysis, financial ratio analysis, and as well as DuPont analysis.

In financial ratio analysis were implemented such as profitability, activity, liquidity and leverage ratios.

The findings are compared with industry averages and competitor Gazprom. The obtained results are helpful for the formulation of future business strategy for the selected company.

3. Literature Review

The theoretical part of the thesis is a resource that describes the basic theoretical facts needed for a thesis. Basically, the theoretical data presented in this chapter in the form of literature review is meant to provide the basis for a proper financial analysis. The financial statements, methods, indicators, and some of the importance's of financial data analysis, are covered in the literature review.

3.1 Importance Financial Analysis

Whether a business entity is operating successfully is reflected through its financial position, that is represented by its financial statement. Basically, business entities are relied on financial statements such as consolidated statement of balance sheet, consolidated statement of cash flows, consolidated statement of income statements, the statement of stockholders' equity(Fraser et al., 2016).

Financial analysis allows any business entity to make informed and effective decisions with their financial resources for their successful business operation. The various definitions of financial analysis have been proposed by various scholars to give a clear insight into ratio analysis. Financial analysis is the process of determining the profit from separate season or venture(Fried lob and Schleifer, 2003). The definition implies that business entities do operate to earn profit and that is why their financial concern is earning profit.

Alexander (2018) discusses over the traditional concept of financial analysis as an ability to understand and evaluate financial statements and financial performances. Financial statement is the analytical tool and is generally used for assessing the performance of a business entity, but it is problematic in terms of ratio interpretation because of interpretation of ratios depending upon level of expertise.

Financial analysis is the process of selection, evaluation and interpretation of financial data and other important information to help in evaluating the operating performance and financial condition of a company or an industry(Peterson and Fabozzi, 1999). In essence it can be inferred that financial analysis is understanding of present and future financial health of a business entity.

3.2 Users of Financial Analysis

The accounting cycle delivers financial information to a broad variety of people with varying goals in evaluating the data. Internal users, external users, and the government have always been originally considered as the three key users of accounting data. Each group utilizes financial data in a particular way and expects the data to be provided in a different way.(White et al., 2002) They try to figure out if performance of the business needs to be improved. Whether business needs more investment or sells the part of investment currently being held. However, their overall concern is running business organization strategically and successfully.

External users and internal users are the two types of groups of financial reporting.

Internal
Managers
Employees
Owners

Source: Borovikova, 2020

Accounting system provides managers and owners with crucial accounting data that helps them make decisions. Managerial accounting is the term that describes this form of accounting.(White, et al., 2002)

The following are some examples of how internal users use accounting records:

- Evaluating how managers has handled the business's duty for resource preservation and enforcement.
- Determining when and how much to loan or reinvest the company's resources
- Influencing expansion or downsizing choices

External
Customers
Shareholders
Creditors
Investors
Government
Competitors

Source: Borovikova, 2020

The record of a company' financial history used by external entities, commonly referred to as financial accounting, serves a variety of goals. External users of accounting data are divided into six categories, each with its own set of interests in the organization and specific issues it seeks answers to. (Gerald I. White, Ashwinpaul C. Sondhi and Haim D. Fried, 2002)

These following are some examples of how accounting data is used by external users:

- Investors have a responsibility to information how a business manages its assets.
- Tax returns and other papers are frequently generated by accountants for the federal and state governments.
- Accounting data may be used by banks or lending organizations to help them make judgments about whether to lend money to a company.
- Accounting data would also be used by stakeholders to determine investment decisions.

Generally, stockholders, managers, owners, Officers, Internal Departments, Employees Internal Auditor etc. in an organization are the main users of financial data.

Some needs of financial data analysis to a business organization in relation to the formulation of business strategy can be explained as follows:

Better Decision Making, Planning and Forecasting: MaLaney and Atrill (2008) state that Assets, Debts, shareholder's capital, other various types of loans that are due to a business are reflected in the balance sheet and looking at these figures, mangers can plan and decide on sources of extra funding in a business in order to expand their business. Similarly, looking

at the profit figure of a business organization, debts that are to be paid off and provisions that are made for various reserves, decisions for quantum of dividend payment are drawn.

For smooth and effective performance of any business organization effective decision making and strategic planning is essential. It is essential to evaluate the amount of money company is making, the fund that is needed, the reserves needed to set aside and the way to increase sales and boost financing. The room for evaluation of cash performance is served by working capital statements, fund flow statements, cash flow statements, and trading account (MaLaney and Atrill, 2008). From recent financial position and past earnings record of business organization, future performance of business can be forecasted.

Basically, financial data obtained through financial statements in a business organization is necessary to make decisions regarding acquisition, expansion, financing and investment (Kacprzyk, 2005).

Monitor and Judge Business performance: There is cutthroat business competition pertaining around the world. Hence, in order to gain competitive advantage in the business market, it is essential to monitor and judge ongoing business performance and compare with competitor's performance. If the performance level is not up to the level with competitor immediate strategic changes are to be formulated. The performance level of a business entity in terms of financial operations is obtained by monitoring financial data available in financial statements. Financial statements provide the data and information for monitoring and judging business performance (Palepu and Healy, 2013).

Budgeting: A budget is a tool in a business entity that is used for financial planning and performance measurement purposes such as spending on fixed assets, controlling operations (Imarticus, 2019). When the budget is prepared consciously and is used effectively, it results in organizational systematic productive management. When the organizations fail in their budgeting it might lead to conflicting and contradictory plans as well as waste of resources (Shim and Siegel, 2012). The budget is prepared by analyzing and studying historical information, current trends, and industry norms. The basis for budgeting is financial information obtained through financial data. These financial data and information recorded in the financial statements of a business organization are used in determining expected revenue, costs, profits, cash flow, and production purchases and so forth.

3.3 Methods of Financial analysis

Financial statement analysis is a method of analyzing a company's financial situation in order to make decisions. It permits external stakeholders to assess the company's financial performance and competitive advantage. Financial analysis is evaluating a company's effectiveness and make suggestions for how it might improve in the future using financial data. (Ciaran Walsh, 2003)

3.3.1 Horizontal Analysis and Vertical Analysis

Horizontal analysis is a type of financial statement analysis that compares past data throughout many accounting periods, such as ratios or expenditures. Horizontal analysis can utilize exact or percentage measurements, with the figures in each subsequent period given as a percentage of the basis year's value, with the standard amount listed as 100 percent (Wahlen et al., 2015). The horizontal analysis also can be inferred as Base-year analysis.

$$\text{Horizontal Analysis (\%)} = \frac{\text{Amount in Comparison year} - \text{Amount in Base year}}{\text{Amount in Base year}} \times 100$$

Basic principles of horizontal analysis can be listed as follows:

- Horizontal analysis is a technique for examining a business's performance records throughout time.
- It's frequently shown as a percentage change during the same budget item the previous year.
- Users of financial statements can readily find tendencies and growth patterns using horizontal analysis.
- Horizontal analysis compares a company's financial and growth performance to that of its adversaries.
- If particular historical timeline of terrible result is selected as a reference, horizontal analysis can be modified to make the current cycle appear better.

Traders and investors can use horizontal analysis to see how it has been pushing a firm's financial position over time and detect trends and growth. Analysts can use this form of analysis to evaluate relative changes in various line items over time and project them into the future.

Crucial company performance indicators, including as profit margins, stock turnover, and return on equity, can be used to spot major challenges and strengths. For instance, earnings

per share (EPS) may have increased as the cost of goods sold (COGS) has dropped or as sales have increased gradually.

3.3.2 Vertical Analysis

Vertical analysis is a type of financial analysis where each component is expressed as a percentage of the statement's base figure which is to say that each assets in balance sheet is shown as percentage of total assets and each liabilities is shown as percentage of total liabilities and equity(Cagan, 2007).Vertical analysis of a cash flow statement reveals every cash inflow and outflow as a percentage of overall cash inflows.

Basic principles:

- Vertical analysis makes the relationship between individual items on an accounting record and the bottom line, stated as a percent, easier to comprehend.
- When used in combination with horizontal analysis, which evaluates the finances of a particular time period, vertical analysis might become a highly powerful tool.

Vertical analysis allows comparing financial information from one company to another and throughout industries significantly easier. That's because the fractions of account balances can be seen. Also, it allows us to compare past years for regression analysis, which compares quarterly and annual numbers over a period of years to see if performance indicators are increasing or worsening.

For instance, one may observe how various expense line items in the financial statements contribute to company profits and also whether efficiency is steadily increasing over the years by displaying them as a percentage of sales. As a result, comparing a company's financial performance to that of its competitors gets simpler. Financial statement proportions are explicitly shown in a distinct line on financial statements that feature vertical analysis. Such financial statements, which include thorough vertical analysis, are referred to as common-size financial statements and are utilized by several businesses to convey more information about their financial status. Comparative financial results, which include columns evaluating every item to a previously disclosed period, are frequently included in common-size financial statements.

Table 1: Horizontal and Vertical Analysis comparison

Horizontal vs Vertical Analysis	
Horizontal analysis is an essential analysis method wherein the volumes of financial data collected over a specific time period are analyzed line - by - line in addition to making associated conclusions.	Vertical analysis is a financial statement analytical technique in which each line item is presented as a percentage of another item to aid outcome.
Main Purpose	
Horizontal analysis' primary goal is to compare line items in order to estimate changes over time.	Vertical analysis is mostly used to evaluate percentage changes.
Effectiveness	
When comparing corporate performance to previous financial years, horizontal analysis becomes more effective.	When comparing firm outcomes with other organizations, vertical analysis is more useful.

Source: Made by author, 2022

What the difference between Horizontal and Vertical Analysis?

If we reflect to the table above, we consider the primary distinction between horizontal and vertical analysis is how financial data from statements is retrieved for decision-making. Horizontal analysis is a line-by-line method to analyze financial data throughout time. Vertical analysis is concerned with making comparisons of ratios derived from financial data. Either of these strategies use the same financial statements and are very vital for making well-informed decisions that influence the organization.

3.4 Ratio analysis

Financial ratios are used to make comparisons between different aspects of a company's performance or how the company stacks up within a particular industry or region. Financial ratios depict relationship between the income generations as per to the investment made in assets which provide information about whether the organization has accumulated large amount of debt, has left with too much inventory or receivables are pending(Weil et al., 2014). Ratio analysis of financial statement ratios can be considered as useful analytical tools for accessing profitability and risk.

As financial ratios give the picture of changing financial trend in the organization, ratio analysis is helps in analyzing financial health and identifying the ways to improve

financial health of an organization. This gives a clear picture of current viability of the organization.

Some of the important financial ratios that a business entity can look at to assess the current viability of the organization are discussed below:

3.4.1 Profitability ratios

Profitability ratios are basically used to measure the financial viability of the organization. Moreover, profitability ratios provide the basis for trend analysis in the company. By comparing the ratios over certain number of years, financial trend of the company can be identified. Profitability ratios are calculated from income statement of the company. Profitability ratios are great source of information for investors or analysts as they show the ability of the company in generating profits from corporate assets and from owner's investments.

The common profitability ratios are:

- net profit margin ratio,
- return on total assets ratio
- return on equity ratio

Net Profit margin ratio: The net profit margin ratio measures the percentage of profit made from business operations. The net profit ratio is calculated in terms of net income obtained after deducting all the operating expenses including interest expense, taxes, and preferred stock dividends from revenues and is calculated as net income divided by net sales(Weil et al., 2014).

$$\text{Net Profit Margin Ratio} = \frac{\text{Net Income}}{\text{Net Sales}}$$

If the profit margin ratio is higher, it suggests that a business is efficient to convert its sales into profits and business organization is running smoothly. The low margin ratio suggests that the business is operating on high cost and the management might need to cut back on some expenditure.

Return on total assets ratio: Return on total assets ratio shows the ability of the organizational management on utilizing organizational various assets to generate net income

and return on assets is calculated by dividing net income with average total assets (Weil et al., 2014).

$$\text{Return on total assets (ROA)} = \frac{\text{Net Income}}{\text{Total Assets}}$$

Recommended value: ROA > 0

The value of ROA depends upon the type of business organization. If the organization is capital intensive, it needs to acquire expensive infrastructures and the ROA tends to be low. ROA tends to be high if the organization is service based. For example, we can see that consulting organizations need fewer solid assets for their business operation and results in high ROA.

Return on Equity ratio (ROE): Weil et al., (2014) state that return on equity ratio is used to measure the ability of the business organization to make profit in relation to the investment made by its investors and it gives information to the shareholders regarding the dollars being generated by the organizations on each of their invested dollars. It is calculated as earning after tax or net income divided by shareholders' equity.

$$\text{Return on Equity (ROE)} = \frac{\text{Net Income}}{\text{Shareholder's equity}}$$

Recommended value: ROE > 0

If ROE is higher, it shows that the organization is more capable to utilize capital in effective manner. The organization that is producing higher ROE is likely to provide better shareholder returns in the long run.

3.4.2 Liquidity ratios

Liquidity ratios are used to measure the ability of the business to meet its short-term financial obligations through available cash and easily convertible assets. The common liquidity ratios are:

- **current ratio**
- **quick ratio**
- **operating cash flow ratio**

Current ratio: Current ratio is also known as working capital ratio. The current ratio measures the ability of the organization to generate cash to meet short-term financial commitments and it is calculated by dividing current assets by current liabilities (Bragg, 2007).

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

The higher current ratio reveals that the organization is highly capable to pay its obligation on time. If, current liabilities exceed current assets then current ratio is below 1. In this case, the company may have problems paying its bills on time.

Quick ratio: Acid test ratio synonymously known as quick ratio is used to measure the ability of the organization to access cash quickly to support to pay immediate demands. Cash, cash equivalents, current accounts receivable, marketable securities, etc. are quick assets that can be turned into cash in minimum time. In the quick ratio, inventory is excluded from the current assets proportion and is calculated as current assets less inventories divided by current liabilities (Bragg, 2007).

$$\text{Quick ratio} = \frac{\text{Current assets (excluding inventories)}}{\text{Current liabilities}}$$

As from the above formula we can see that through quick ratio calculation a business entity can have better understanding of a company's very short-term ability to generate cash from more liquid assets, such as accounts receivable and marketable securities.

Operating cash flow ratio: The operating cash flow ratio is a measurement of how quickly a company's current liabilities are paid by cash generated by activities. (Ciaran Walsh, 2003) This ratio can be used to determine a company's short-term liquidity. Because earnings are more easily manipulated, cash flow is regarded a cleaner or more accurate indicator than net income.

$$\text{Operating cash flow ratio} = \frac{\text{Operating cash flow}}{\text{Current liabilities}}$$

A high figure, larger than one, implies that a business has earned more cash than is required to pay down its current liabilities in a given time period.

A negative operating cash flow ratio shows that the company hasn't made enough cash to repay its existing liabilities. A low ratio may indicate that the company requires more cash, according to investors and analysts.

3.4.3 Leverage Ratios

Leverage ratios reveal the extent of long-term debt being used by the organization to support the business operations. Moreover, these ratios specify the degree of success of business operation in the long run. Various factors determine whether Debt ratios can be

good, bad, or indifferent, depending the stakeholders demand (Rist and Pizzica, 2015). For example, a high total debt ratio may be useful for stockholders not wanting to dilute their shares but bad for the creditors of the company. The common leverage ratios are:

- **Debt to equity**
- **Debt to assets or Debt ratio**
- **Interest coverage ratio**

Debt to Equity ratio: Fridson and Alvarez (2002) states that debt to equity ratio is the ratio of total debt to total equity and is calculated dividing total debt by total equity. The ratio indicates percentage of organization's financing that comes from creditors and investors.

$$\text{Debt to Equity ratio} = \frac{\text{Total Liabilities}}{\text{Total Equity}}$$

A higher debt to equity ratio implies that more creditor financing (bank loans) is used than investor financing (shareholders). If debt to equity ratio is 1, it means that investors and creditors have an equal stake in the business assets. Thus, a lower debt to equity ratio is favorable for the organization. Lower ratio indicates that the business organization is more financially stable. If the organizations have higher debt to equity ratio, it is conceived riskier to creditors and investors than companies with a lower ratio (Fridson and Alvarez, 2002). Creditors perceive higher debt to equity ratio risky for them as it shows investors haven't funded the operations as much as creditors have. Similarly, higher the ratio investors perceive that the company isn't performing well so they don't want to fund the business operations.

Debt to assets ratio/ debt ratio: This is the ratio of total debt (total liabilities) to total assets. It is calculated dividing total debt by total assets (Fridson and Alvarez, 2002).

$$\text{Debt Ratio} = \frac{\text{Total Debt (total liabilities)}}{\text{Total Assets}}$$

This ratio measures the amount of total assets that are financed by creditors (bank loans) instead of investors (shareholders).

Debt ratio is a measure of a business's financial risk. If the ratio is high, the risk is that the business organization's total assets may not be sufficient to pay off its debts and interest thereon. Low debt ratio is perceived favorable to business organization as it shows that the company's assets are sufficient to meet its obligations. However, very low debt ratio

may be the cause of underutilization of a major source of finance, so it must be carefully analyzed.

Thus, debt to assets ratio is a critical indicator of long-term financial sustainability of a business.

Interest Coverage ratio: The interest coverage ratio is a measure of the number of times a company could make the interest payments on its debt with its EBIT represented as ratio of EBIT to interest expenses (Palomino et al., 2019). It determines how easily a company can pay interest expenses on outstanding debt.

$$\text{Interest coverage ratio} = \frac{\text{EBIT}}{\text{Interest Expense}}$$

The interest coverage ratio is a measure of the number of times a company could make the interest payments on its debt with its EBIT. It determines how easily a company can pay interest expenses on outstanding debt.

The lower the interest coverage ratio, the higher the company's debt burden and the greater the possibility of bankruptcy or default. A lower ICR means less earnings are available to meet interest payments and that the business is more vulnerable to increases in interest rates. When a company's interest coverage ratio is only 1.5 or lower, its ability to meet interest expenses may be questionable. An interest coverage ratio below 1.0 indicates the business is having difficulties generating the cash necessary to pay its interest obligations (i.e., interest payments exceed its earnings (EBIT)).

What do Leverage and Liquidity ratios measure and reflect?

Based on description above when using leverage and liquidity ratios, there are a few things to keep in mind. This involves utilizing both sets of ratios—liquidity and leverage—to achieve a full view of a company's financial performance; simply relying on one set of ratios to evaluate a company's financial health may result in a false picture of its finances. It's also essential to compare apples to apples. Such ratios differ greatly from one industry to another. Financial ratio comparisons between two or more companies are only useful if both participate in the very same industry. Lastly, it's critical to assess trends. You can assess if the business's position is strengthening or declining by looking at the trajectory of these ratios over the period. Negative outliers should be examined closely to see whether they're

the product of a one-time occurrence or if they signal a decline in the company's characteristics.

Leverage and liquidity are both vital, and strong businesses are both stable and have enough cash on hand. To assess a company's financial performance, a variety of liquidity and solvency measures are utilized, the most prevalent of which are detailed here.

3.4.4 Activity ratios

According to Periasamy(2010) activity ratios are the indication of the rate or number of times at which different assets are converted into sales. Activity ratios are also termed as turnover ratios or efficiency ratios which deal with various aspects of financial statements to comply with interest of different stakeholders in the business entity. Activity ratios are used in measuring the changes over several periods and monitor the progress of the business entity.

Inventory turnover ratio

We understand inventories as stock of raw materials, work in progress and finished goods. According to Periasamy (2010) inventory turnover ratio is the measurement of extent to which an entity utilizes its investment in stock in trade. From the inventory turnover ratio, the relationship between cost of goods sold and average inventory at cost price or relationship between sales and average inventory is revealed. Inventory turnover gives information to an entity about how many times the stock or inventory has been sold in a particular period (Peterson and Fabozzi, 2003). This ratio is also known as stock turnover ratio. Alongside of inventory calculation, inventory turnover period is calculated by entities to know in how many days a certain inventory is sold out which is termed as inventory turnover period (Peterson and Fabozzi, 2003). The formulas for computing inventory ratio and inventory turnover are as follows:

$$\text{Inventory turnover ratio} = \frac{\text{sales}}{\text{average inventory}}$$

$$\text{Inventory turnover period} = \frac{365 \text{ (days in a year)}}{\text{inventory turnover ratio}}$$

Where:

$$\text{Average inventory} = \frac{(\text{opening inventory} + \text{closing inventory})}{2}$$

One of the advantages of using inventory ratio is, it gives the measurement whether investment in stock is within the required limit or not. On the other hand, it also provides information on operational efficiency of the entity by examining efficient use of investment in stock in trade.

Receivables turnover ratio

Peterson and Fabozzi (2003) states that the receivable turnover ratio is used to measure how effectively an entity is extending its credit sales to customers in order to increase its sales. In case if customers are not able to pay the credit sales amount, the entity might suffer from bad debts. According to Periasamy (2010) business entities use receivable turnover ratio to measure their liquidity positions and identify the relationship between receivables and sales. It shows the number of times the receivables of an entity are turned over in a particular period of time.

Along the receivable turnover ratio, receivable turnover period is calculated to find out the average collection period which reveals the extent of converting debt to cash (Periasamy, 2010). The formulas for computing receivable turnover ratio and receivable turnover period are as follows:

$$\text{Receivables turnover ratio} = \frac{\text{Net sales}}{\text{average account receivables}}$$

$$\text{Receivables turnover period} = \frac{365 \text{ (days in a year)}}{\text{Receivables turnover ratio}}$$

A business entity having higher turnover ratio with shorter inventory or debt collection period indicates favorable situation for the entity which means that debtors are paying the debts in time. Whereas entity having lower turnover ratio and higher collection period shows an unfavorable situation for the company which means payments are delayed by trade debtors.

Payables turnover ratio

In payable turnover ratio which is also known as account payable ratio consists of sundry creditors and bills payable represented as account payable. The payable turnover ratio shows the relationship between net credit purchase and average account payable indicating the number of payment times made to the suppliers for the purchases made in credit (Periasamy, 2010).

Payables turnover ratio and payable turnover period are two ratios calculated together to measure the efficiency of payables relating to purchases made in credit. The two ratios are computed as follows:

$$\text{Payables turnover ratio} = \frac{\text{Net Credit Purchases}}{\text{average account payable}}$$

$$\text{Payables turnover period} = \frac{365 \text{ (days in a year)}}{\text{Payables turnover ratio}}$$

The significance of these ratio calculations is that higher the payables turnover ratio, the company is considered making payments promptly to the creditors and vice versa.

Total Assets turnover ratio

Total assets turnover ratio is generally used to reflect the general productivity level of a business entity in terms of sales made by total assets in a particular period. Peterson and Fabozzi (2003) states that total assets turnover ratio shows the number of times that value of assets of an entity generates its sales during the year.

The value of 1 is considered standard ratio measurement and higher turnover ratio is considered more favorable to an entity than the lower assets turnover ratio. If the ratio is lower, it is the indication that the entity is not using its assets to the optimum level (Periasamy, 2010). Assets turnover ratio is computed as follow:

$$\text{Assets turnover ratio} = \frac{\text{sales}}{\text{Average Assets}}$$

What does Activity ratio measure and reflect?

If we describe overall the Activity Ratio is a strong predictor of how successfully a corporation is operated since it measures how quickly assets can be converted into cash or sales. Evaluate and compare ratios with the other businesses in the industry is generally a good idea. Activity ratios are especially effective when comparing two competitive businesses in same industry to see how one company compares to its competitors. Activity ratios, on the other hand, can be used to analyze a company's financial development throughout several financial period and spot changes over time. These figures can be integrated to create a future-looking assessment of a performance of the company.

3.5 Differential indicators as methods of Financial Analysis

3.5.1 Net working Capital

We are known that working capital plays a vital role in determine the short-term financial health as well as efficiency of a business entity. The business entities having limited cash flows should not be investing in working capital whereas business entities

having adequate cash flows should be investing in working capital in order to enhance the business performance (Afrifa, 2016).

It is essential for entities to measure their net working capital in order to know the viability whether they are able to pay their short-term liabilities with their current assets. According to Knauer and Wöhrmann (2013) net working capital equals current assets less current liabilities represented as:

$$\text{Net working capital} = \text{current assets} - \text{current liabilities}$$

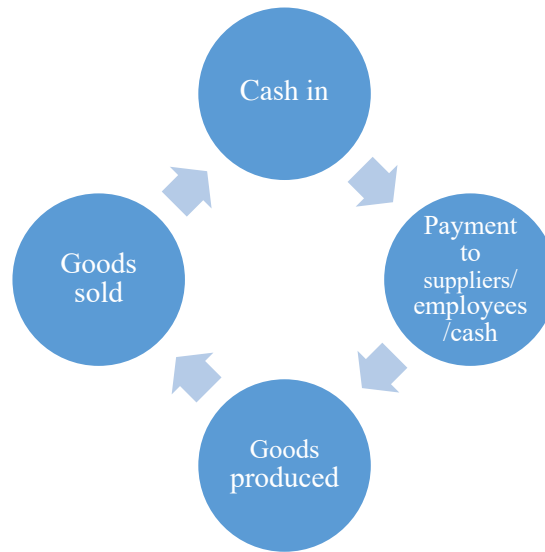
We can conclude from the above definition and notion of working capital that net working capital that when a business entity has positive working capital, it is able to pay-off its short-term liabilities whereas, business entities having negative working capital reflects that the entity is not able to meet its short-term liabilities with its available current assets. As principle, the higher the net working capital balance, will more probable your organization is to be able to meet its present obligations.

3.5.2 Cash Conversion Cycle

Sometimes business entities are entitled to acquire inventory on credit resulting them as accounts payable. Similarly, business entities also tend to sell their products in credit letting their transaction as an account receivable. The cash transaction is not involved until and unless the entities pay their account payable and receive their account receivable. In this regard, the cash conversion cycle (CCC) is used to measure the time between outlay of cash and cash recovery.

According to Richards and Laughlin (1980) cash conversion cycle reveals the time period required to convert a dollar of cash disbursements back into dollar of cash inflow from the entities' regular course of operation. Liquidity flow measures such as inventory conversion period, receivables conversion period and payables deferral period have huge impact on cash conversion cycle. Cash conversion cycle calculation period usually varies from 90 days in a quarter or 365 days in a year but shorter the time length it is better (Bragg, 2007).

Figure 1: Cash conversion cycle procedure



Source: StockEdge, 2022

Cash conversion Cycle can be calculated as: $CCC = DIO + DSO - DPO$

Where,

CCC- Cash Conversion Cycle

DIO – Days of Inventory Outstanding. The average number of days of inventory clearance.

DSO -Days of Sales Outstanding. The average number of days of sales collections.

DPO -Days Payables Outstanding. The average number of days taken to pay bills

3.6 The Financial Statements

Four sources of financial data comprised in financial statements which can be used to inform business strategy are discussed here. Basically, firms prepare four principal financial statement to report the results of their activities: balance sheet, income statement, statement of comprehensive statement of cash flows and fifth shareholder's equity (Wahlen et al., 2015). The following four sources of financial data are discussed.

- **Balance Sheet**
- **The profit and Loss account (Income statement)**
- **Cash flow statement**

3.6.1 Balance Sheet

Wahlen et al., (2015) state that Balance Sheet is the accounting equation of Assets, Capital, and Liabilities, which displays resources of the firm (assets) and claims of those resources (liabilities and shareholder's equity). It is denoted by equality equation as:

$$\text{Assets} = \text{Capital (owner's equity)} + \text{Liabilities}$$

Table 2: Balance Sheet

Assets	
Non-Current Assets	Current
<p>I. Intangible Assets:</p> <ul style="list-style-type: none"> • Intellectual Property: patents, franchise, copyrights • Goodwill • Brand Equity • Licensing • R&D 	<p>I. Inventory:</p> <ul style="list-style-type: none"> • Raw material • Products • Uncomplete production • Merchandise
<p>II. Tangible Assets:</p> <ul style="list-style-type: none"> • Land • Equipment • Vehicles • Inventory • Buildings 	<p>II. Receivables</p> <ul style="list-style-type: none"> • Customers • Tax receivables • VAT • Deferred receivables • Estimated receivables
<ul style="list-style-type: none"> • Long-term financial assets: • Long-term investments (stocks, bonds) 	<p>III. Current financial assets:</p> <ul style="list-style-type: none"> • Cash, Bank accounts

Source: (Anastasia Borovikova, 2020)

Table 3: Equity and Liabilities

Equity/Liabilities
I. Equity <ul style="list-style-type: none">• Capital: registered capital, own shares fund• Capital funds: share premium• Reserves: legal reserves• P/L: retained earnings, accumulated losses
II. Liabilities <ul style="list-style-type: none">• Provision• Liability-debts• Accruals

Source: (Anastasia Borovikova, 2020)

The notion of this equation is that total cost of asset acquired should always be equal to the sum of total capital and liabilities. Let's take a closer look to the constituents of Total Assets, Capital, and Liabilities.

Total assets (TA) comprise of: Current Assets (CA), Fixed Assets (FA) and Intangible Assets (IA) (Label, 2006).

- Current Assets are easily convertible in cash within short period of time basically within one year. Cash Balances, Trade Debtors (Receivables), Inventories (Stocks) and Prepayments are the examples of Current Assets (Wilson, 2010).
- Tangible or non-current assets which cannot be easily converted into cash are called fixed assets. For example, Land & Building, Fixtures and Furniture Plant & Machinery etc. come under fixed assets (Wilson, 2010).
- Intangible assets are non-physical assets which add value to the firm's business operation. Good will, Patent, Copyright are typical examples of intangible assets (Label, 2006).

Total Capital comprises of Shares and other Reserves (Retained earnings) whereas, Total Liabilities is comprised of Current Liabilities and long-term liabilities.

- current liabilities are short term loans that a firm is obliged to pay within one year. Trade Creditors (Payables: salary, insurance), Short-term borrowings taxes, accruals, interest payable etc. are example of current liabilities.
- Long-term liabilities or non-current liabilities are obligations to pay after one year or more. Long-term Borrowings, loan, Other Long-term Liabilities, Pensions.

Balance sheet is also known as Statement of Financial position which shows the financial position of a firm in a particular moment of time. In terms of financial position, it shows business assets, liabilities and net worth available in the firm and reveals financial strength or weakness of the firm there by allowing calculating liquidity of the firm through liquidity ratios like Current ratio, Debt Equity ratio, acid test ratio/quick ratio and operating cash flows to maturing obligations.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$\text{Debt – to – Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Shareholder's Equity}}$$

$$\text{Quick Ratio} = \frac{\text{Current Assets (Current Assets – Stock)}}{\text{Current Liabilities}}$$

$$\text{Operating cash flows} = \frac{\text{Cash generated from operations}}{\text{Current Liabilities}}$$

The figures thus available from the calculation give basis for tracking the availability of selling the current assets, and short-term repaying capacity of the firm etc. (McLaney et al; 2008). Higher the ratios, we can consider firms having sound financial operations.

Let, Cash generated from operation to maturing obligation ratio of XYZ company during the year ended is $251/291 = 0.9$ times. The ratio thus obtained shows that the operating cash flows for the period are not sufficient to cover the current liabilities at the end of the year (McLaney et al., 2008).

Hence, Balance Sheet is a basis for managing whole a business firm in a controlled way as it covers the record of Bank account, Accounts payable, Accounts receivable, Owners draw account, etc. Balance sheet serves as a mirroring tool of the firm's assets that it owns and, capital and liabilities it owes at the stated date.

However, Balance Sheet is not complete enough to make effective financial decisions. Balance Sheet is calculated at given period of time. In this case, if decision is made based on calculation of that period the result may be unfavorable. For example, a company's cash position at year-end may appear very high, implying strong liquidity reserves and firm may be intent to distribute a large portion of that cash elsewhere, which could mislead analysis. Similarly, fixed assets in the balance sheet are recorded based on their historical cost but coming to market value, the actual price is deducted by depreciation. For example, machine worth of 100000, then 5 years later depreciated to 70000 may not rely with market value. In fact intangible assets, like good will, patent, copy right, and the factors like Skills, technical experience, strategic partnerships etc. also can add value to the business operation, but these factors are ignored in Balance Sheet (Label, 2006).

3.6.2 The Profit and Loss Account (Income statement)

The Profit and Loss account which in short term is referred as P/L Account shows the net profit and loss of a business firm over a particular period of time by carrying down the gross profit on the credit side and gross loss on the debit side obtained through trading account. The trading account shows the income from sales and the direct costs of making those sales including the balance of stocks at the start and end of the year (McLaney et al., 2008).

McLaney et al., (2008) have explained that in P/L Account only the indirect expenses and indirect revenues of the current year are taken in account. All indirect expenses are transferred on the debit side of this account and all indirect revenues on credit side. If the total of the credit side exceeds the debit side, the result is "net profit" and if the total of the debit side exceeds the total of the credit side, the result is net loss. The Following indirect expenses are accounted in P/L Account at the debit side:

- Office and Administration Expenses: salaries of manager, accountant and office clerks, office rent, office stationery, office electric charges, office telephone etc.
- Selling and Distribution Expenses: expenses related to the sale of goods i.e., advertisements, carriage outward, salesmen's salaries and commission, discount allowed, traveling expenses, bad debts, packaging expenses, warehouse rent etc.

The following indirect incomes are shown in the credit side of the profit and loss account:

- Gross profit as per trading account

- Cash discount received
- Interest received from bank
- Interest received from other sources
- Profit on sale of fixed assets
- Commission received
- Rent received
- Miscellaneous Incomes

In case if it is accounted that business is suffering from net loss, the P/L account gives the idea of figuring out where the money is being over expense and thus, helps in controlling indirect expenses. But P/L account also has some limitations. It does not provide complete picture of firm's financial position because data sample of the business are usually small and prepared at regular intervals by estimating what proportion of the life profit of the company has been earned in a particular period. It does not provide information on future firm's financial prediction and is only limited to past performances.

The Income Statement provides summary of an entity's revenues that is earned from sales of products and services and expenses incurred to earn the revenue for a specific period of time, such as a month, a quarter, or a year (Label, 2006). The bottom line of using Income Statement basically is to concentrate on the Net Income which is Revenue obtained detecting Expenses.

3.6.3 Cash Flow Statement

Cash flow statement or the statement of cash flow is another source of financial data which shows the inflow and outflow of cash in terms of receipts and payments over certain period of time (McLaney et al., 2008). From the statement of cash flows we can obtain the information about sources and uses of cash in an business entity computed basically on three business activities such as operating, investing and financing activities (Wahlen et al., 2015).

- Cash from operating activities
- Cash from investing activities
- Cash from financing activities

Cash flows from operating activities: This section of cash flow statement shows the net inflow or outflow of cash from trading operations after deducting tax and financing cost. (McLaney et al., 2008). From this statement it can be understood that operating cash flows

are related to operating activities of a business entity. Sources and uses of cash from business activities made through sections such as account receivable, account payable, depreciation, tax payment, and inventory are reflected through cash from operating activities (Broome, 2004).

CFO can be calculated as:

Cash Flow from Operating Activities = EBIT + Depreciation - Taxes + Change in Working Capital.

Cash Flows from Investment activities: This section of cash flow statement is concerned with cash receipt and cash payments made from the transaction of non-current assets or long term assets(Broome, 2004). The statement implies that cash flow statement from investing activities reveals changes in the balances of long-term or non-current assets accounts such as:

- Long-term Investments
- Land
- Buildings
- Equipment
- Furniture & Fixtures
- Vehicles

Cash flows from financing activities: This section of the cash flow statement takes into account of the long-term financing of the business and shows the net cash flows from raising and or paying back long-term finance (McLaney et al., 2008).

Thus, Cash flow statement from financing activities reveals changes in balances of the long-term liability and stockholders' equity accounts, such as:

- Notes Payable (generally due after one year)
- Bonds Payable
- Deferred Income Taxes
- Preferred Stock
- Paid-in Capital in Excess of Par-Preferred Stock
- Common Stock
- Paid-in Capital in Excess of Par-Common Stock
- Paid-in Capital from Treasury Stock
- Retained Earnings

- Treasury Stock

In overall, Cash flow statement serves as a basis for understanding the source of money within organization and the areas where money is being spent. The amount of future incoming and outgoing cash that has been recorded on credit is not considered in cash flow. Thus, Cash flow statement gives clear picture of cash available (liquidity) there by facilitating creditors to determine funding for debt payments as well as operating expenses. If a firm is making more cash flow in comparison to expenses, dividends can be increased, debts are reduced and even stocks can be bought back. Despite its advantages, Cash flow from the activities has its limitations too. As it only shows the cash available, actual profit and loss cannot be calculated. This also makes difficulty in data interpretation for example, whether the company should be investing more in a plant or paying off debt. Information in Cash flow Statement is limited for highly accurate estimations that can often prove to be wrong. Different firms have different terms and condition of purchases and hereafter, inter firm comparison becomes misleading.

3.6.4 Statement of Shareholder's Equity

Another important source of financial data serving as informative source for strategic business decision making is Statement of Shareholder's equity which shows the value of shareholder's equity either is increased or decreased from beginning of a given accounting period to the end of that of period (McLaney et al., 2008). In general, shareholder's equity is the difference between firm's total assets and total liabilities. The owners have claim over all assets that is not required to meet the claims of creditors (Wahlen et al., 2015).

The statement of Shareholder's equity considers of the components of various stocks like as:

- preferred stock
- common stock
- treasury stock
- additional paid –up capital
- retained earnings
- unrealized gains or losses

As a source of firm's financial information for strategic decision making, the statement of Shareholder's equity permits shareholders to look at their investment trending. If there is increased base of shareholder's equity, credibility of company towards investors and creditors goes on fostering which enables company to exercise its effective

performances with financial freedom. It also empowers firms to take decision on issuing future stock shares.

Like as other financial statements, statements of shareholder's equity also hold some limitations. As, dividends are to be paid without deducting taxes the information presented in the statement does not serve accurate net figure.

3.7 DuPont Analysis

Jack Alexander (2018) explained that the DuPont analysis (also referred as such DuPont identity or DuPont model) is a tool for assessing basic performance established by DuPont. DuPont analysis is an approach for evaluating the various sources of return on equity (ROE). The segmentation of ROE enables shareholders to concentrate on particular important financial parameters to find strengths and weaknesses.

This helps an investor to see which business statements are primarily responsible for changes in ROE. This type of research design could be used by an investor to evaluate the operating performance of two similar companies.

$$\text{DuPont Analysis} = \text{Net profit margin} \times \text{AT} \times \text{EM}$$

Where:

$$\text{Net Profit Margin} = \frac{\text{Net Income}}{\text{Revenue}}$$

$$\text{Asset Turnover} = \frac{\text{Sales}}{\text{Average Total Assets}}$$

$$\text{Equity Multiplier or Leverage} = \frac{\text{Average total assets}}{\text{Average Shareholder's equity}}$$

The return on equity (ROE) metric is net income divided by shareholders' equity. If we compare the Dupont analysis is simply an enlarged version of the ROE. The return on equity (ROE) analysis simply reflects how successfully a corporation manages shareholder capital.(Jack Alexander, 2018)

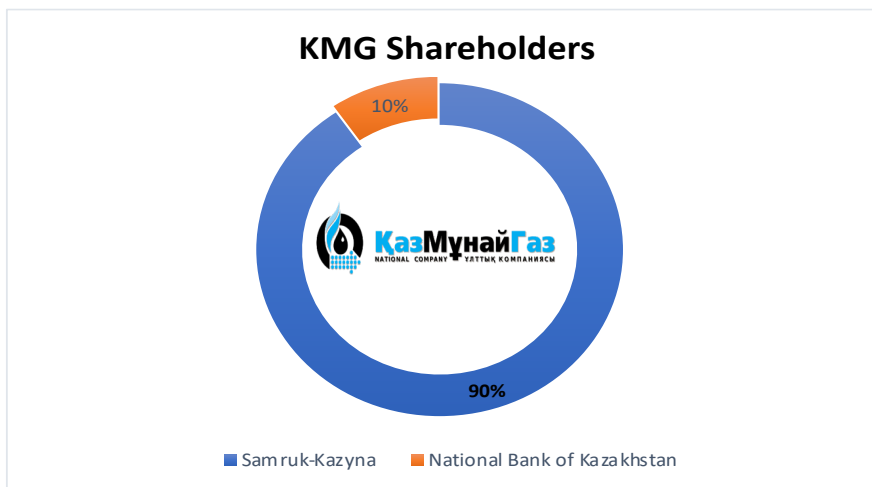
Market participants can use a Dupont analysis to learn more about what drives changes in ROE, as well as why a ROE is regarded high or low. That example, a Dupont analysis can assist determine whether ROE is driven by revenue, asset utilization, or debt.

4 Practical Part

4.1 KazMunayGas overview

Kazakhstan is among the world's top gas and oil producers. The National Oil and Gas Corporation "Kazakhoil" and the National Company "Oil and Gas Transportation" merged in 2002 to become the KMG company. KMG is a vertically integrated oil and gas corporation that manages the entire production cycle, from hydrocarbon exploration and production to transportation and processing, as well as specialized services. Kazakh provider for hydrocarbon exploration, extraction, processing, and transportation, serving the state's interests in Kazakhstan's oil and gas industry. The National Welfare Fund "Samruk-Kazyna" with **90,42%** and the National Bank of the Republic of Kazakhstan with **9,58%** are KMG's shareholders.

Figure 2: KazMunayGas shareholders



Source: Official site of KazMunayGas, 2022

JSC "Samruk-Kazyna" — is an investment holding whose only shareholder is the Kazakhstan's Government. It was founded in 2008 with the goal of improving Kazakhstan's national welfare and reforming its economy. The fund's total assets are estimated to be more than \$94 billion.

Companies in the oil and gas, transportation and logistics, chemical and nuclear industries, mining and metallurgical complex, energy, and real estate sectors make up the Fund's portfolio.

The KazMunayGas group has 184 firms as of June 2020.

According to the National Statistics Committee of the Republic of Kazakhstan (2020) the National Company is responsible for 26% of the country's oil and gas condensate output, as well as 15% of natural and related gas production. KazMunayGas controls more than a quarter of Kazakhstan's market for oil / gas extract production, as well as a leading position in oil refining and natural gas pipeline transportation. Kazakhstan's main pipelines transmit 56 percent of the country's oil and 79 percent of its gas.

KazMunayGas has a pre-emptive right to exploit subsoil in critical subsoil areas and a 50% share in the execution of new contracts for the development of offshore fields as a national business.

Headquarter of KMG: Kunayev 8, 010000 Nur-Sultan, Republic of Kazakhstan.

CEO: Alik Serikovich Aidarbaev

Kazakhstan's position in the world:

In terms of estimated oil and gas reserves, the country ranks 12th in the world.

In terms of estimated natural gas reserves, the country ranks 27th in the globe.

The world's 13th leading oil producer

The world's 32nd greatest natural gas producer.

Natural resource reserves:

Oil production – 42 years

Gas production – 40 years

KazMunayGas operation shares in Kazakhstan:

15% share of gas extraction

25% share of oil extraction

78% petroleum refining operations

60% oil transportation

81% gas transportation

4.2 Introduction to oil and gas industry of Kazakhstan.

The oil and gas sector in Kazakhstan is usually regarded as the primary industry, determining the key trends in the nation's economic growth and development, and having one of the most significant influences on Kazakhstan's well-being. This situation is justified by Kazakhstan's vast oil and gas reserves, as well as the country's overall level of production of these raw commodities and the matching export volumes. According to various estimations, Kazakhstan's total oil and gas reserves are believed to be 11-12 billion tons, while daily oil and gas condensate output climbed from 0.52 million barrels (0.7 percent of global supply) to 1.97 million barrels from 1997 to 2020 (1.9 percent of world supply). At the same time, the volume of Kazakh oil and gas condensate exports climbed from 47.1 million tons in 1999 to 69.8 million tons in 2020.

Table 4: The world oil information

Countries	Proved reserves, bn barrels	Share in global reserves, %	Reserves life (reserves/production ratio), years
1. Venezuela	304	17,60%	*
2. Saudi Arabia	298	15,70%	63,6
3. Canada	170	10,20%	*
4. Iran	156	9,30%	*
5. Iraq	145	8,80%	*
6. Russia	108	6,10%	26,1
7. Kuwait	102	6,00%	89
8. UAE	98	5,80%	72,2
9. Libya	69	2,80%	*
10. USA	48	2,90%	11,4
11. Nigeria	37	2,20%	43
12. Kazakhstan	30	1,90%	42

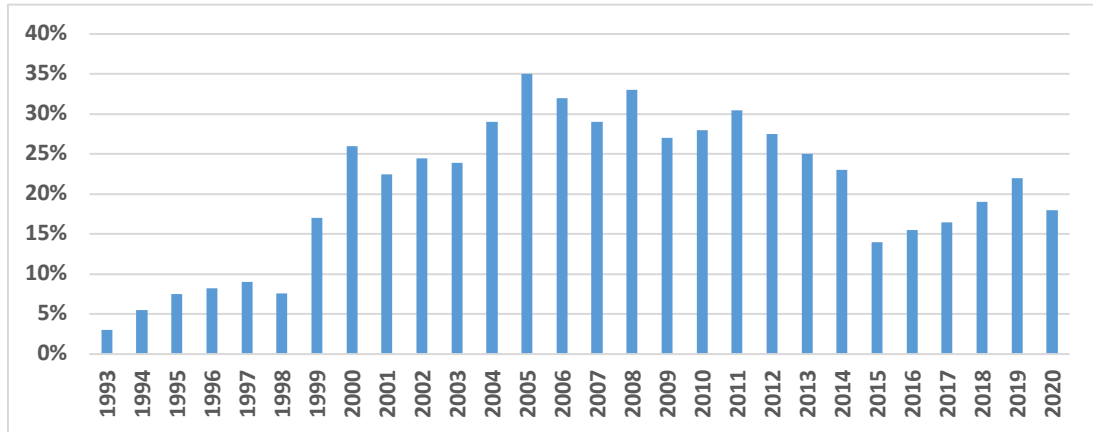
Source: BP Statistical Review, 2020

Reflecting to the table above, in terms of oil reserves, Kazakhstan is ranked 12th in the world in 2019. National Statistics The oil and gas sector accounts for a large share of the country's total tax income and also export earnings, and it is the industry of most foreign direct investment interest (FDI).

The Republic of Kazakhstan is among the world's most important suppliers of hydrocarbon raw materials. Kazakhstan exports the vast majority of its hydrocarbons (about 85%).

Kazakhstan's major crude oil trading partners are European countries such as Italy, the Netherlands, France, Austria, Switzerland, and many others, along with China.

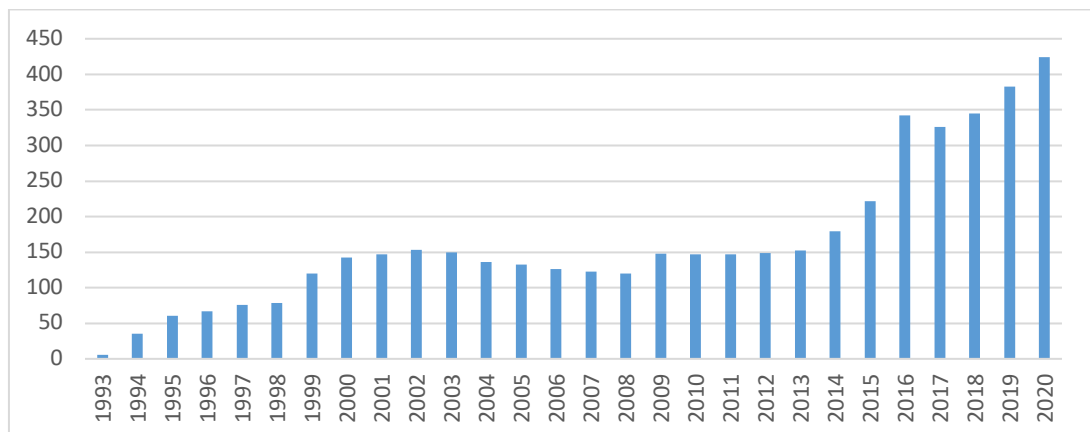
Figure 3: Share of output of the oil and gas industry in GDP



Source: Committee of Statistics of the Republic of Kazakhstan, 2021

The size of Kazakhstan's oil and gas business is enormous when compared to the size of the total economy, namely nominal GDP. So, if the oil and gas industry's output accounted for a little more than 0% of GDP from 1990 to 1992, by 2005 it had risen to 35% and then started to fall. At the end of 2018, oil and gas accounted for about 20% of GDP. In general, evidence shows that during times of crisis, the oil and gas industry's percentage of the economy's output begins to fall. For instance, it happened in 1998, 2001, 2009, and 2015.

Figure 4: The exchange rate KZT to USD



Source: The National Bank of the Republic of Kazakhstan, 2021

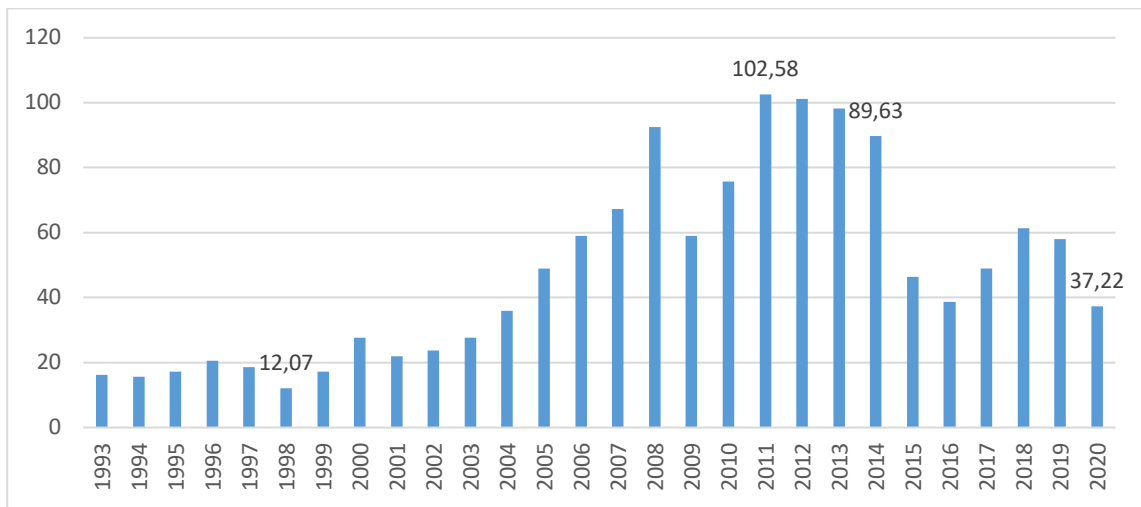
Kazakhstan's oil and gas industry, which is the most profitable in terms of production among other businesses, attracts most of the foreign direct investment. By the meantime, the oil and gas sector were profitable at 49% in the 4Q of 2019, compared to 23% in the country. Kazakhstan drew **289.6 billion** US dollars in gross foreign direct investment up to 2020, 25.8% of which was concentrated directly in oil and gas, and another 26.9% in exploration, which also pertains to the oil industry to a greater extent.

When it comes to employment in the oil & gas sector, it's important to note that there were 47,560 individuals employed in the industry at the end of 2020. Only the extraction of metals and minerals (83,449 people), food production (51,157 people), and the metallurgical industry are ahead of the oil and gas sector in this category among the mining and manufacturing industries (81,155 people).

At the same period, the oil and gas sector pay the highest wages. As a result, in 2020, the monthly average wage within that industry was 704 thousand tenge. The fact that this industry has the highest rate of labor productivity, which is characterized by a huge production with a comparatively small number of employees, explains the high rate of compensation (compared to other industries).

The huge volumes of accrued and transferred tax payments from firms in this industry to the budget and extrabudgetary funds govern the amount of output and, in general, all operations of the oil and gas industry. According to data from the q3 of 2019, the amount of taxes assessed in the mining business, which includes the oil and gas industry, totaled 1,052 billion tenge (\$2,5 billion), or 47% of the national level. At the same time, most taxes in the oil and gas business are paid by corporations (30%) and subsoil clients (taxes and special payments) (41%).

Figure 5: Oil prices



Source: BP Statistical Review, 2021

Considering given above, the oil & gas industry continues to play an obviously important and high position in Kazakhstan. Simultaneously, an analytical examination of how variations in the production of the oil and gas industry have a "shock" impact on Kazakhstan's important macroeconomic parameters is essential. It seems to be especially vital to understand how well a shift in oil and gas extraction trends can affect economic development and inflationary dynamics.

4.3 Financial Statements Analysis

The approach of vertical and horizontal analysis is used to analyze financial reports in the present research. Vertical analysis results can be presented as a common-size statement, which is a balance sheet report stated in percentages.

4.3.1 Vertical Analysis of Financial Statements

Table 5 Vertical analysis of Assets

Year	2014	2015	2016	2017	2018	2019	2020
Intangible assets	5,20%	3,04%	2,93%	2,75%	2,59%	2,49%	2,24%
Fixed assets	48,60%	24,76%	24,85%	25,09%	32,22%	32,12%	30,19%
Financial assets	16,02%	33,67%	32,78%	28,85%	35,34%	40,09%	44,62%
Trade and other receivables	2,05%	4,99%	4,76%	5,02%	4,56%	4,37%	4,67%
Investment Properties	0,31%	0,27%	0,25%	0,20%	0,17%	0,07%	0,16%
Other non-financial assets	0,39%	0,25%	0,17%	1,04%	0,31%	0,64%	0,18%
Tax assets	0,90%	0,40%	0,61%	0,72%	0,70%	0,95%	0,64%
Deferred tax assets	1,05%	1,00%	0,61%	0,49%	0,81%	0,52%	0,40%
Non-Current Assets	74,53%	68,37%	66,96%	64,17%	76,69%	81,25%	83,10%
Cash and cash equivalents	9,31%	7,18%	7,39%	8,89%	10,98%	7,56%	7,82%
Trade and other receivables	2,40%	1,01%	2,54%	4,06%	5,06%	4,34%	3,80%
Financial assets	9,97%	11,30%	12,11%	12,51%	4,60%	4,80%	2,80%
Inventories	2,21%	1,17%	0,83%	0,81%	2,23%	2,00%	1,56%
Other non-financial assets	1,59%	10,97%	10,16%	9,56%	0,44%	0,05%	0,92%
Current Assets	25,47%	31,63%	33,04%	35,83%	23,31%	18,75%	16,90%
Total Assets	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%

Source: Data from KazMunayGas, own calculation; 2022

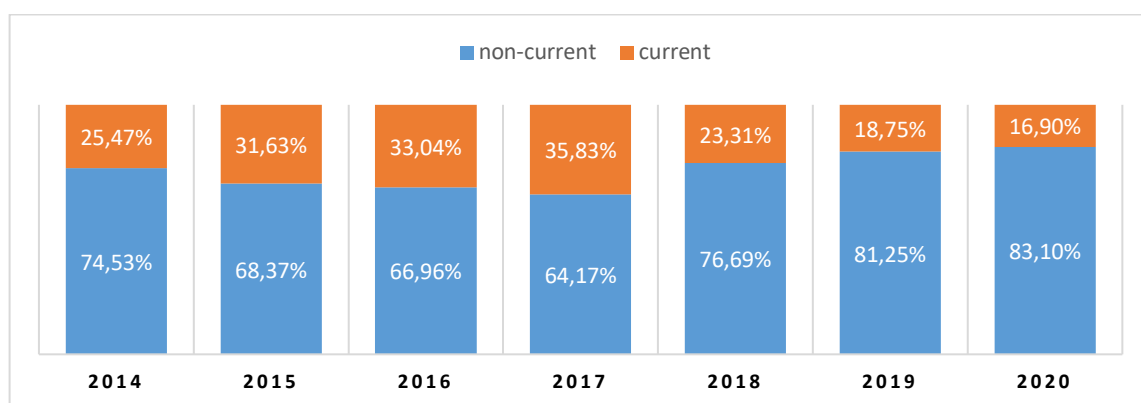
The purpose of performing a vertical balance sheet analysis is to demonstrate that each element impacts the actual figures.

Non-current assets have the greatest impact on the growth of total assets and proportion of non-current assets to current assets has remained nearly constant over time, as seen in the table above. As can be observed, fixed and financial assets account for the majority of assets. Despite the difficult situation during the Covid-19 period, KMG showed the maximum of non-current assets which reached their maximum value in 2020, accounting for 83.1 percent of total assets. Even though KMG has decreased its fixed assets by almost 2% in 2020 versus last year, the main considered thing here is that financial assets increased rapidly to 44,62%

which also is the biggest value in the sequence under consideration. On the other hand, the lowest indicator of non-current assets falls on 2017 (64,17%), since the largest indicator that affects is financial assets has fallen versus 2016 by 4% from 32,78% to 28,85%. 2015 shows the smallest indicator in terms of fixed assets (property, plant, and equipment) of 24,76% meaning that it fell rapidly by almost 25% comparing to 2014, so it triggered the fall in non-current assets by 6% versus last year, however the financial assets (mostly investments) are doubled and shows 33,67%.

Financial assets of the company past 7 years have been increasing rapidly, since it grew up from 16,02% in 2014 to 44,62% the reason is that KMG has increased its investments into joint ventures and associate's companies.

Figure 6: Proportion of non-current/current assets



Source: own calculation, 2022

Taking everything into account, it's possible to infer that KazMunayGas is aggressively acquiring property, and the information provided above obviously demonstrates financial investments. Non-current assets are expected to continue to have a leading position in the future, judging by the current corporate structure.

Table 6: Vertical analysis of Equity&Liability

YEAR	2014	2015	2016	2017	2018	2019	2020
Share in capital	6,30%	6,50%	5,86%	5,30%	6,68%	6,51%	6,25%
Additional paid capital	2,57%	2,28%	2,05%	1,82%	0,30%	0,29%	0,06%
Other capital	0,02%	0,03%	0,00%	0,00%	0,00%	0,00%	0,00%
Currency trans. reserve	5,08%	13,12%	11,55%	9,70%	12,86%	12,30%	14,65%
Retained earnings	29,72%	27,91%	26,62%	26,15%	31,65%	38,84%	38,47%
Non-controlling interest	6,28%	7,03%	6,75%	6,50%	0,59%	0,27%	-0,49%
Equity	49,97%	56,87%	52,83%	49,46%	52,07%	58,21%	58,94%
Loans	27,46%	27,38%	22,77%	25,39%	27,87%	25,45%	25,37%
Acquisition of interest	4,48%						
Provisions	2,08%	1,40%	1,17%	1,13%	1,68%	1,94%	2,07%
Deferred tax liabilities	2,20%	2,04%	2,23%	2,33%	3,50%	3,62%	3,79%
Lease liabilities	0,10%	0,08%	0,10%	0,08%	0,05%	0,26%	0,31%
Prepayment			6,22%	4,34%	3,50%		
Other long-term liabilities	0,15%	0,20%	0,44%	0,35%	0,33%	0,31%	0,42%
Long-term liabilities	36,47%	31,10%	32,93%	33,62%	36,92%	31,58%	31,96%
Loans	7,59%	2,77%	3,08%	5,71%	0,24%	1,80%	2,47%
Provisions	0,57%	1,09%	0,79%	0,59%	0,72%	0,74%	0,43%
Income tax payable	0,03%	0,04%	0,02%	0,06%	0,10%	0,09%	0,06%
Trade payables	2,64%	1,62%	2,19%	2,43%	4,61%	4,74%	3,66%
Other taxes payable	0,91%	0,37%	0,29%	0,59%	0,77%	0,62%	0,89%
Lease liabilities	0,01%	0,01%	0,01%	0,01%	0,02%	0,08%	0,12%
Prepayment			2,10%	2,48%	2,80%		
Other current liabilities	1,67%	1,35%	1,00%	1,08%	1,72%	2,15%	1,47%
Liabilities – assets for sale	0,13%	4,78%	4,75%	3,98%	0,04%		
Current liabilities	13,55%	12,04%	14,23%	16,92%	11,01%	10,21%	9,10%
Total Equity and Liability	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%

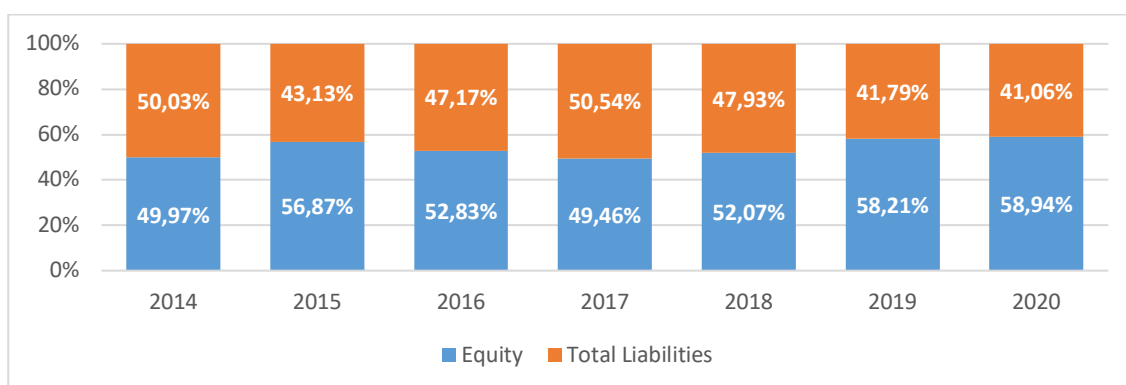
Source: Own calculation based on KMG's annual report.

Accounts are compared to total liabilities and equity in a vertical analysis of liabilities.

According to the suggested information in a table above, capital is clearly the primary source of funding for the company over the entire period. With the exception in 2018, the value of

the share capital as a whole did not change, and the maximum level reached is 6.68%. It's important to keep in mind that retained earnings are on the rise trend, reaching a high of 38.84% in 2019. On the other hand, the KazMunayGas lost money in 2016, with total retained earnings of 26.62%. Due to the situation on the oil market during covid-19, it could be expected that the company's revenues would show a historical minimum, but as we can see, the analysis gives us very impressive and not the worst result which accounted of 38.47%, however the volume of retained earnings is not so large compared to pre-Covid times. Matter fact that total liabilities play an important part in the company's liquidity. Throughout the time, portion of liabilities' share has been declining and reached its minimum of 41.78% in 2019 also, reached its maximum of 50.04% in 2014. The proportion of long-term and short-term debt was calculated using data from the statement of financial position. Based on data it's obvious that long-term liabilities account for a major portion of total liabilities, while short-term liabilities are insignificant when compared to long-term liabilities and in 2020, the lowest level of short-term liabilities was recorded, accounting for 9.1% of total liabilities whereas the highest was in 2017 accounting for 16.92%. Also, important to note that long-term debts were reached its maximum in 2014% and it can be explained by the fact that in that year there was a sharp collapse in oil prices, which led to the devaluation of the national currency (fell by 40%). From 2012 to 2019, the figure below depicts the proportional connection between liabilities and equity.

Figure 7: Equity&Liability



Source: Own calculation based on KMG's annual report.

The following conclusions can be formed based on this proportion: total liabilities and equity capital have about similar proportions. However, it is obvious that total liabilities were KazMunayGas' primary source of funding in 2014 and 2017.

4.3.2 Vertical Analysis of Profit & Loss Statement

Table 7: Profit&Loss vertical analysis

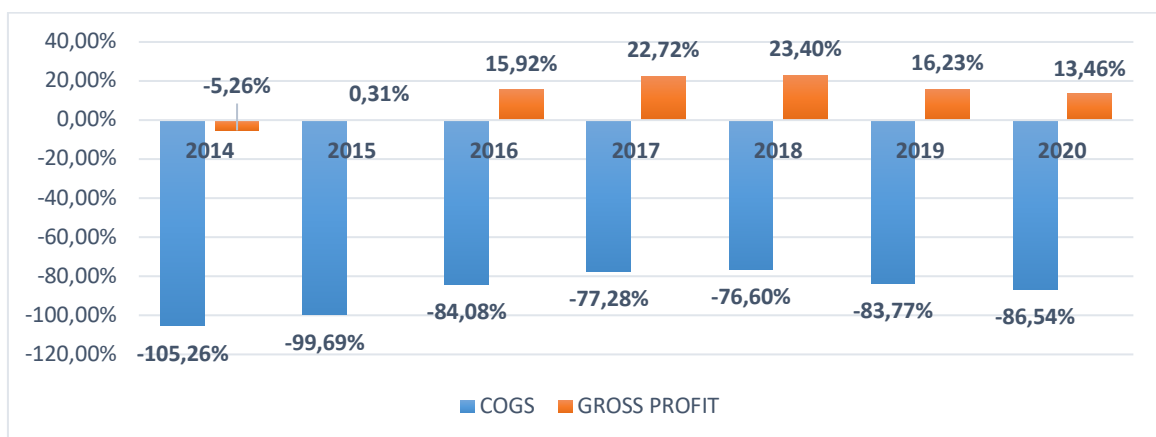
Year	2014	2015	2016	2017	2018	2019	2020
Revenue	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
COGS	-105,3%	-99,7%	-84,1%	-77,3%	-76,6%	-83,8%	-86,5%
GROSS PROFIT	-5,3%	0,3%	15,9%	22,7%	23,4%	16,2%	13,5%
Operating Income	-75,3%	-44,2%	-1,3%	8,5%	8,0%	-	-
Foreign exchange	7,2%	42,9%	-0,7%	1,4%	-0,5%	0,1%	-0,5%
Financial income	5,1%	15,8%	9,0%	2,6%	2,3%	3,5%	2,4%
Finance cost	-16,8%	-18,1%	-12,4%	-6,4%	-6,1%	-4,6%	-6,5%
Depreciation	-0,5%	-0,01%	-0,01%			-4,9%	-7,9%
Share of joint venture activities	40,7%	10,3%	14,5%	8,7%	10,2%	12,1%	11,2%
Impairment of loans granted and investments	-0,1%	-1,9%	-0,4%	-0,3%	-0,0%	-2,2%	-6,0%
EBIT	-39,6%	4,8%	8,8%	15,0%	13,9%	20,2%	6,1%
Income tax expenses	-12,7%	-21,2%	-8,8%	-4,0%	-4,0%	-3,3%	-2,3%
PROFIT/LOSS from continuing activities	-52,2%	-16,3%	-36,8%	11,0%	9,9%	16,9%	3,8%
Discounted operations	71,2%	61,5%	19,4%	-0,1%	0,0%	0,0%	0,0%
PRTOFIT FOR YEAR	6,3%	45,2%	19,4%	11,0%	9,9%	16,9%	3,8%

Source: Own calculation based on KMGs' annual report.

Table above illustrates the findings of the vertical analysis of the Profit&Loss statement of for the years 2014 through 2020 and shows that certain items affect the sales revenue. As seen revenues also expenses are compared to revenue and displayed as a proportion on the Income Statement and possible to claim that the company can generate a gain from its operations. The company's steadiness is reflected in the results; however, the big decline was in 2014 in terms of gross profit and fell to its minimum for the whole period of -5,3 % in 2014 however as it's shown the indicator started rehab by 2015 with 0,3%. The reason was that in 2014, oil prices almost halved due to the lifting of sanctions on Iran and the refusal of giant producers to cut production, which led to a great collapse in the oil and gas industry. A gross margin of approaching below zero % indicates that sales are insufficient to pay the costs of producing goods or providing services. When there is no gross profit, it has a direct impact on cash flow, which has a negative impact on the company and makes it unable to

meet its obligations. However, we see that even though in 2014 the gross profit shrank down deeply by the total profit it showed the indicator of 6,3% caused by mostly from discounted operations which reached its maximum for the whole period of 2014-2020 and showed 72,2%. If we reflect to company's EBIT absolutely possible to state that the company's indicator doing well except 2014 with negative indicator of -39,6% due to low operation income of -75,3% which is also the biggest among all years and recovered by 2015 with 4,8% further following a positive direction with the best result of 20,2% in 2019. KMGs' net income showing positive direction with the lowest value in 2020 with 3,8% and its obvious due to covid-19 outbreak which led to a big shrank on oil consumption and the oil price declined to \$37 per barrel to its minimum since 2004. Summing up, we can state that the company's major declines are mainly due to oil and gas prices, caused primarily by geopolitical factors such as sanctions against Russia, since the economy, including the oil sector of Kazakhstan, is very connected by nodes and any unfavorable event associated with Russia strikes immediately on all economic-forming sectors of Kazakhstan.

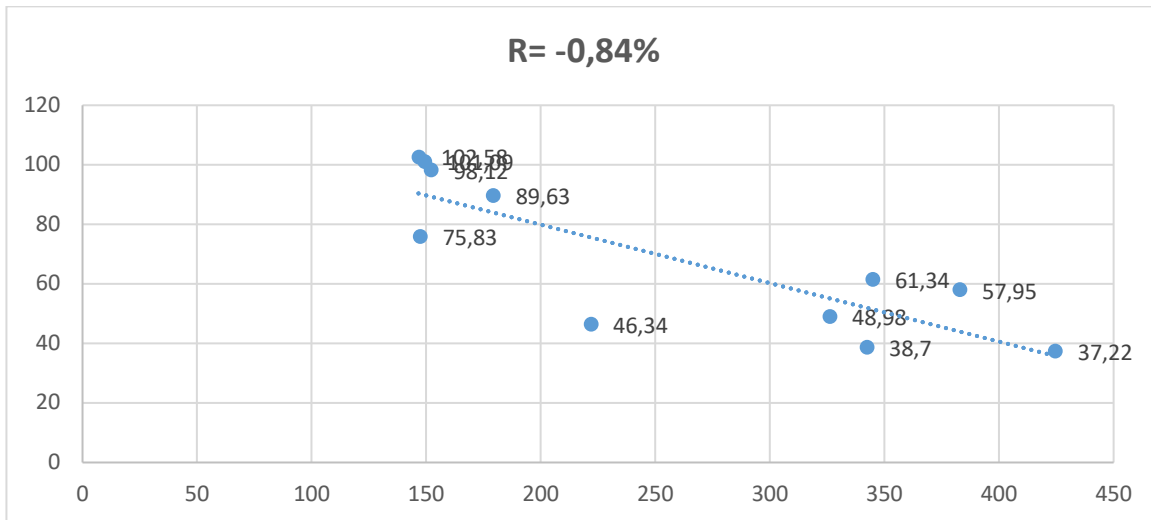
Figure 8: The relationship between COGS and Gross profit



Source: Own calculation based on KMGs' annual reports

As it's seen, the table above gives a general overview that the higher the cost of goods sold, the lower the profit. This is primarily due to a drop in demand, which leads to a drop in the price of oil, which affects the efficiency of the profit from the company's operation

Figure 9: The Correlation coefficient between oil price and KZT



Source: Own calculation based on the data of the Central Bank of Kazakhstan; 2021

Reflecting to the graph above, it becomes obvious how oil prices affect the entire economy of Kazakhstan. Based on the result from Spearman's correlation coefficient amounted to $r = -84\%$, we defined that our correlation between oil price and KZT has a negative relationship meaning that if oil price is lowering whereas the KZT rate increasing, therefore we can state that there is a tight negative relationship between these two variables. It is clear that the economy of Kazakhstan is sitting on an oil needle and any shocks in the prices of oil resources and geopolitical conditions have a harsh effect on the national currency.

4.3.3 Horizontal Analysis of Financial Statements of KMG

The implementation of horizontal analysis of the Balance Sheet to identify major changes in the company's financial position is the second stage the analysis. Such study is required to assess the company's financial situation and follow significant changes in the numbers acquired. The outcomes in terms of total assets for the period 2014-2020 are shown in the following table.

Table 8: Horizontal analysis of assets (in million USD)

Year	2014	2015	2016	2017	2018	2019	2020
Intangible assets	2567	1466	1017	1131	1053	917	772
Property, Plant, Equipment	23975	11958	8631	10304	13098	11816	10420
Other financial assets	7902	16261	11385	11850	14367	14750	15404
Trade and other receivables	1011	2412	1654	2063	1852	1608	1613
Investment Property	152	132	86	84	70	25	54
Other non-financial assets	193	118	60	426	128	237	63
Tax assets	442	191	210	297	284	349	223
Deferred tax assets	520	485	210	200	328	193	138
Non-Current Assets	36761	33022	23254	26354	31181	29894	28688
Cash and cash equivalents	4593	3466	2567	3651	4466	2781	2699
Trade and other receivables	1182	489	882	1669	2057	1595	1313
Other financial assets	4919	5458	4207	5137	1869	1766	965
Inventories	1088	566	289	334	906	735	537
Other non-financial assets	784	5299	3530	3925	179	20	319
Current Assets	12566	15278	11475	14716	9477	6897	5834
Total Assets	49327	48300	34730	41070	40658	36791	34521

Source: Own calculation based on KMGs' annual reports

Reflecting to the table above we are able to say that company's performance having positive trend, however with declining up to 2016. So as seen in 2016 had a significant decrease on its non-current assets versus last year from 33022 in 2015 to 23254 (-29,5%) in 2016 reaching its minimum throughout the time presented in the analysis mostly due to decline in financial assets and fixed assets as well hit the indicators. In case of fixed assets (property, plant, and equipment) 2014 has showed the maximum among the years with 23975, however, halved at the very next year in 2015 and accounted for 11958 due to devaluation and crisis in Kazakhstan which led by mostly sanctions imposed against Russia and increasing oil production. Nevertheless, the minimum came to year of 2016 with 8631. Despite the covid-19 outbreak non-current assets in difficult 2020 showed pretty good result with 28688 declined by just 4% which is important to mention. In terms of financial assets

which is major share, it's obvious to state that the maximum was reached in 2015 with 16261 due to increasing its participation on long-term investing activities and on the contrary the minimum was shown in 2014 accounting for 7902. However, financial assets showed a very pleasant indicator in 2020 with 15404 even exceeding 2019 which was 14750 (4% growth). Summing up the non-current assets, we can state that it has declined from 36761 in 2014 to 28688 in 2020 (-28%). Financial assets throughout the time from 2014 to 2020 has doubled from 7902 to 15404 (by 195%) and fixed asset contracted from 2014 up to 2020 by -57% from 23975 to 10420. Cash and cash equivalents had its best in 2014 with 4593 further declining up to 2016 with the lowest value of 2567, presuming that the devaluation effect where KZT rate has shrunk by 91%. So, short-term financial assets had declined as its seen from 4919 in 2014 to 965 in 2020 and showing best result in 2015 with 5458, overall short-term financial assets has shrunk by 80% which a huge contraction. Current assets had started its downward trend from 2017 to 2020 with me minimum indicator of 5834 from the past 7 years. The best result in current assets was in 2015 accounting for 15278 due to increasing its investments on joint venture activities and on assets which were classified for sale. Total assets had its best in 2014 with 49327 and its minimum in covid year 2020 with 34521, however total assets barely declined versus last year and similar to the year 2016, where it was discussed earlier that the oil price has reached its minimum since 2004. Overall total assets contracted by 28% throughout the time from 2014-2020, however the indicators fell not as much as oil prices themselves. Even under the influence of difficult circumstances, starting from 2014 and even in the covid 2020, we can state that despite all these unfavorable conditions, the company was able to resist, albeit with losses.

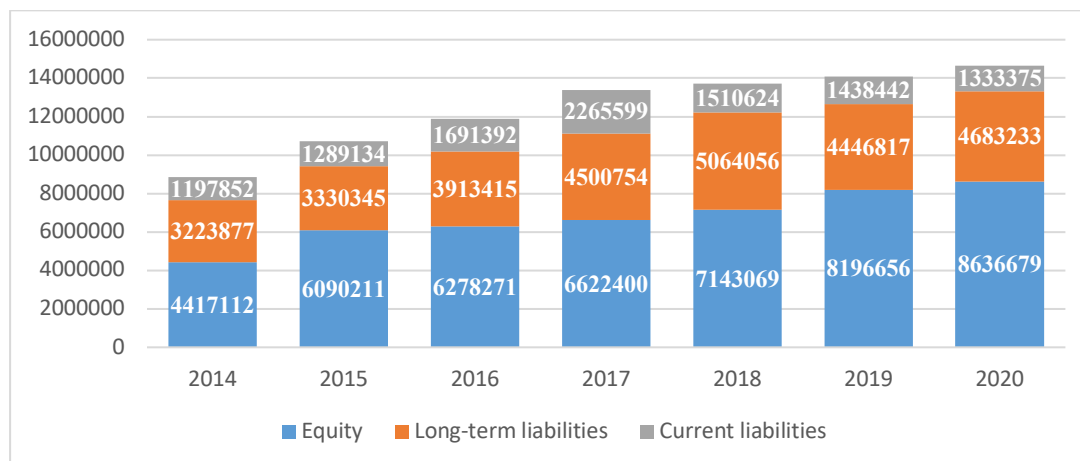
Table 9: Horizontal analysis of Equity&Liabilities

YEAR	2014	2015	2016	2017	2018	2019	2020
Share in capital	557072	696396	696377	709345	916541	916541	916541
Additional paid capital	226761	243655	243655	243876	40794	40794	8981
Other capital	2106	3111	222	83	83	83	58
Currency trans. reserve	448740	1405326	1372772	1298442	1764108	1731747	2146035
Retained earnings	2627271	2988543	3163685	3500636	4341063	5469236	5636705
Non-controlling interest	555162	753180	801560	870018	80480	38255	-71641
Equity	4417112	6090211	6278271	6622400	7143069	8196656	8636679
Loans	2427191	2932323	2706101	3399488	3822648	3584076	3716892
Acquisition of interest	396345						
Provisions	183531	150428	139372	150638	229797	273589	303154
Deferred tax liabilities	194794	218369	264600	312013	479598	509462	555894
Lease liabilities	9078	8039	12260	10767	6550	35996	45499
Prepayment			738572	581578	480250		
Other long-term liabilities	12939	21186	52509	46271	45213	43694	61794
Long-term liabilities	3223877	3330345	3913415	4500754	5064056	4446817	4683233
Loans	670530	296546	366439	763956	33059	253428	361556
Provisions	50330	116509	94394	78812	98471	103538	63235
Income tax payable	2251	4115	2302	7705	13272	13011	8967
Trade payables	233654	174016	260137	325120	632739	667861	536922
Other taxes payable	80534	40015	34014	79168	105026	86666	130263
Lease liabilities	755	1121	1211	1171	2656	10922	16971
Prepayment			249968	332330	384199		
Other current liabilities	147782	144414	119042	144405	236163	303016	215461
Liabilities – assets for sale	11739	512224	563884	532932	5039		
Current liabilities	1197852	1289134	1691392	2265599	1510624	1438442	1333375
Total Liabilities	4421728	4619480	5604806	6766353	6574680	5885259	6016608
Total Equity and Liability	8838841	10709691	11883077	13388753	13717749	14081915	14653287

Source: Own calculation based on KMGs' annual reports

Reflecting to the table above, we can state Total Equity and Liability has risen by 65,7% over the period analyzed. It's seen that the biggest result came to 2020 where it reached its maximum since 2014 with 14653287. The equity of the company can be seen to have started rising from its low in this analysis in 2014 showing 4417112 and quickly rose to 6090211 in 2015 and grew by 38% thanks in large part to operations such as Currency translation reserve and non-controlling interest. In general, it can be seen that the following years, the equity added pace to growth and reached its maximum in 2020 and amounted to 8636679.

Figure 10: Equity&Liabilities proportion



Source: Own calculation based on KMGs' annual reports

If we compare the growth of the Equity rate in the entire history of analysis from 2014 to 2020, then the growth was almost 96%. It is important to note that the main triggers for growth were the share in the capital and Retained earnings, so the share in the capital grew during the entire analysis by 65% from 2014 to 2020 and retained earnings by as much as 115% and even despite the hard times, capital is an indicator of the well-being of the company, it grew at a very fast pace.

Long-term liabilities grew but in a moderate way. For instance, the indicators had a growth character until 2018 and reached their maximum at 5064056 but then it began to decrease. This was mainly due to Deferred Tax Liabilities which grew 54% from 312013 to 479598 in 2018. Generally speaking, long-term liabilities in this analysis show growth of 45% over the entire period, largely due to growth in factors such as loans and deferred tax liabilities. Regarding to current liabilities, it can be determined that growth over the entire period increased slightly by only 11%. However, starting from 2014 and until 2017, the indicators were rapidly growing and reached a maximum of 2265599 compared to 2014, the indicator increased by 89% and the lion's share came from short-term loans and trade payables. Important to mention that short-term loans decreased by almost 47% from 2014 to 2020 and amounted to 361556. In general, if we talk about the whole total of the company's liabilities can be concluded that it reached its maximum in 2017 with an indicator of 6766353 and an increase of 21% compared to a year earlier. Speaking about the minimum, we can state that this figure fell on 2014 from 4421728. Throughout the entire period of analysis, the total liability increased by 36%, which can be called a moderate increase.

Table 10: Horizontal analysis of Income statement

Year	2014	2015	2016	2017	2018	2019	2020
Revenue	1051289	1093806	1857435	4793763	6988964	6858856	4556037
COGS	-1106561	-1090380	-1561746	-3704457	-5353492	-5745955	-3942668
GROSS PROFIT	-55272	3426	295689	1089306	1635472	1112901	613369
Operating Income	-791242	-483584	-24754	406398	558749		
Foreign exchange	76108	469509	-12894	67055	-38320	8479	-23935
Financial income	53937	172979	167892	122574	161027	240889	109753
Finance cost	-176226	-198337	-230383	-306355	-427655	-317433	-297551
Depreciation	-4992	-86	-93			-337433	-360283
Share of joint venture activities	427704	112807	270191	414950	715685	827979	511195
Impairment of loans granted and investments	-1100,8	-20312	6850	14777	168	-150751	-274348
EBIT	-415813	52977	163108	719399	969318	1384631	278200
Income tax expenses	-133033	-231528	-163791	-190285	-279260	-226180	-106303
PROFIT/LOSS from continuing activities	-548846	-178551	-682988	529114	690058	1158451	171897
Discontinued operations	748061	673234	360854	-3666	3453	6	
PRTOFIT FOR YEAR	199215,1	494683	360171	525448	693511	1158457	171897

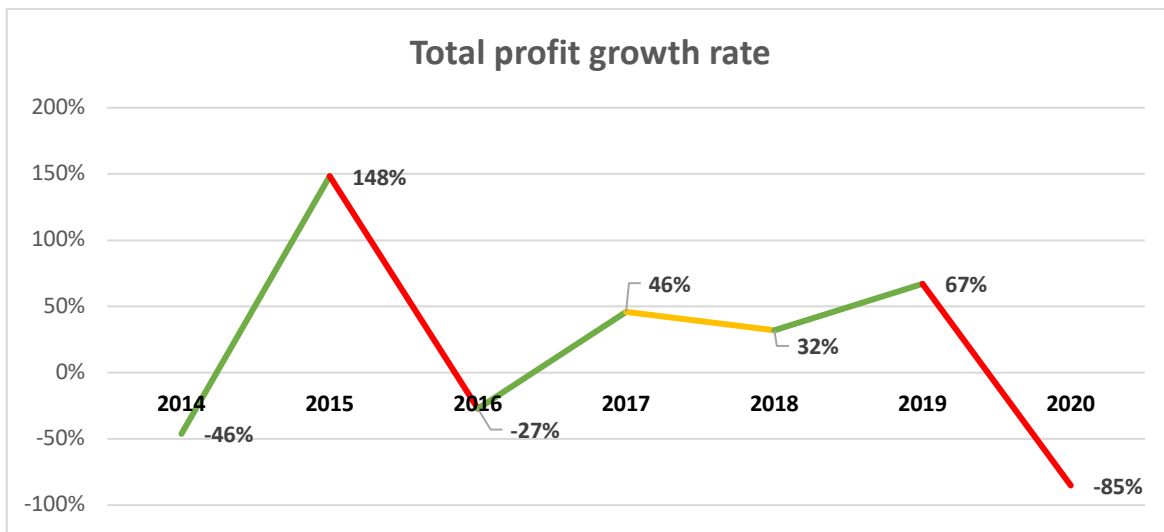
Source: Own calculation based on KMGs' annual reports

The income statement of an enterprise shows whether the company is profitable or losing money over a period of time. In the case of KMG, it can be stated that the company's profit varied greatly, which cannot be said to be stable for such a level of the company. Since KMG is an oil company, it can be said that it is highly dependent on oil sales revenues.

Revenue from the sale of oil had an increasing character until 2019 and reached 6858856 while the minimum figure was recorded in 2014 with an income of 1051289 and increased to its maximum of 550% and in general, and moreover the revenue for 2019 in the company is considered a historical maximum with day of foundation of KMG. But since 2020 was one of the most difficult times for KMG of the last decade, oil revenues fell by 33.5% compared to 2019 and amounted to 4556037 and again, a big loss came from a drop in demand and provoked a record drop in oil prices. EBIT (earnings before interests and tax) were acting as revenues showing it's the biggest loss in 2014 amounting -415813, however at the very next year showing a huge growth perspective and having an increasing indicator up to 2019 with 1384631 which is the best result on entire history. The main reasons were the increase in a diversified portfolio of assets in oil and gas production and the expansion

of investments in other companies in the industry by 18% compared to last year. The total profit is mostly determined by the amount of money spent. If expenses exceed income, it may imply potential profitability issues. As it can be seen in 2014 the expenses were exceeding the revenues from sales, however on the final situation, we may say saved the total profit from discontinued operations which was the highest in entire analysis. It's obvious to state that the total income still has a positive character in the following years and reached its maximum in 2019 and amounted to 1158457.

Figure 11: The growth rate of KMG



Source: Own calculation based on KMGs' annual reports

Total profit fell in 2014 by 46 percent compared to last year, the main reasons being the collapse in oil prices and devaluation. The reasons for this devaluation were factors such as problems with the country's balance of payments due to imports of consumer goods, increased speculation amid devaluation expectations, due to which the National Bank was forced to support the tenge with interventions, and the government's decision that the Kazakh tenge was going to "free float".

However, KMG was able to return positive growth of 148% in 2015. As it seen that there was a big decline in 2015 and growth fell to a negative -27%, this is due to the fact that a large package of sanctions against Russia was introduced, and this hit KMG, because the KMG exports 80 percent of its supplies to European countries through the Russian pipeline. Nevertheless, in 2020, due to high volatility in the industry as well as covid-19, KMG suffered a severe downturn and revenue decreased by 85% compared to last year, of course,

the reasons are obvious, and as expected due to covid, there was a big disruption in the oil supply chain and almost many industries went into sleep mode, which led to a large decline in demand.

4.4 Ration Analysis

The goal of a ratio analysis is to evaluate a company's financial performance using a variety of ratios. The preceding chapters discussed the structure of the items contained in the balance sheet and income statement; nevertheless, the purpose of this chapter is to compare some of these variables to one another in order to acquire helpful information in establishing the company's financial status. The following are the ratios that will be used in this chapter:

- Liquidity ratios
- Leverage ratios
- Profitability ratios
- Activity ratios

4.4.1 Liquidity ratios

A liquidity ratio is a financial measure which is used to assess a company's capabilities to fulfill its short-term financial obligation. The measure is used to evaluate if a company's current assets, or liquid assets, can pay off its current liabilities.

Table 11: Current ratio

Year	KMG	Gazprom	Industry average
2014	1,845	1,83	1,06
2015	2,942	1,902	1,102
yoy change %	59%	4%	4%
2016	2,522	1,692	1,106
yoy change %	-14%	-11%	0%
2017	1,925	1,442	0,911
yoy change %	-24%	-15%	-18%
2018	1,762	1,707	1,092
yoy change %	-8%	18%	20%
2019	1,834	1,556	1,042
yoy change %	4%	-9%	-5%
2020	1,835	1,542	1,012
yoy change %	0,07%	-0,90%	-2,88%

Source: Own calculation

The current ratio shows as to how much of company's short-term assets would be required to pay down its short-term liabilities. In order to be able to calculate the ratio the statement of financial position provides all of the formula's components. Throughout the analysis, we can notice that the company's short-term assets prevail at a fairly high level, which is a great advantage. In 2015 and 2016 the figures were at the level of 2.5 and 2.942 which means the company owns 2.5 and almost 3 times more short-term assets than short-term liabilities. It can be seen that the largest increase was 59% in 2015 compared to 2014, the main reasons being the acquisition of several oil and gas transportation and processing companies. Comparing with Gazprom, it is clear that KMG outperforms its competitor throughout the analysis. The average analysis score for KMG is 2.095 from 2014-2020, while Gazprom's score is 1.66, which is about 20% lower. Comparing the critical crisis year of 2020, we can determine that the indicator of the entire oil industry decreased by -2.88%, Gazprom by -0.90%, and KMG almost remained at the level of the previous year and did not lose a single position. Directly on the basis of these criteria, it could be stated that throughout the entire period, KazMunayGas has higher liquidity ratios than the industry average and its competitor Gazprom.

Table 12: Quick ratio

Year	KMG	Gazprom	Industry average
2014	1,702	1,480	0,751
2015	2,690	1,520	0,832
yoy change %	58%	3%	11%
2016	2,432	1,305	1,042
yoy change %	-10%	-14%	25%
2017	1,820	1,039	0,87
yoy change %	-25%	-20%	-17%
2018	1,582	1,351	0,96
yoy change %	-13%	30%	10%
2019	1,634	1,152	0,85276
yoy change %	3%	-15%	-11%
2020	1,75	1,253	0,892
yoy change %	7%	9%	5%

Source: Own calculation

The fast ratio is used to assess an organization's ability to get cash rapidly in order to meet immediate needs. Any figure greater than 1.0 is a good quick ratio. A fast ratio of 1.0 or higher indicates that your company is healthy and capable of meeting its obligations. Reflecting to the table above we state that the lowest indicator was in 2018 accounted for 1,582 and decreased by the record 25%. However, it's obvious that even the Gazprom has declined by 20 and the industry by 17% respectively. If we talk about the best result, it was in 2015 with 2,690 increasing by 58% versus last year whereas the Gazprom barely grown by 3%. Even though the KMG's growth rate was declining 3 years in a row the average is amounted to 1,94 for the entire period whereas the Gazprom had almost 1,3 which is 33% less. Comparing with the industry average, it's definitely KMG beats seriously, which cannot be overlooked. In 2020 KMG had a ratio amounted to 1,75 and has grown by 7% versus last year where Gazprom had 1,253 with growth rate of 9%, however, in 2019 Gazprom had a solid decline of -15% and the industry itself had -11% growth as well but KMG was able to keep its growth, albeit at a minimal level, but in a positive way.

Table 13: Cash ratio

Year	KMG	Gazprom	Industry average
2014	0,687	0,502	0,18
2015	0,596	0,32	0,21
yoy change %	-13%	-36%	17%
2016	0,519	0,34	0,301
yoy change %	-13%	6%	43%
2017	0,525	0,32	0,23
yoy change %	1%	-6%	-24%
2018	1,019	0,062	0,24
yoy change %	94%	-81%	4%
2019	0,740	0,267	0,19
yoy change %	-27%	331%	-21%
2020	0,859	0,231	0,22
yoy change %	16%	-13%	16%

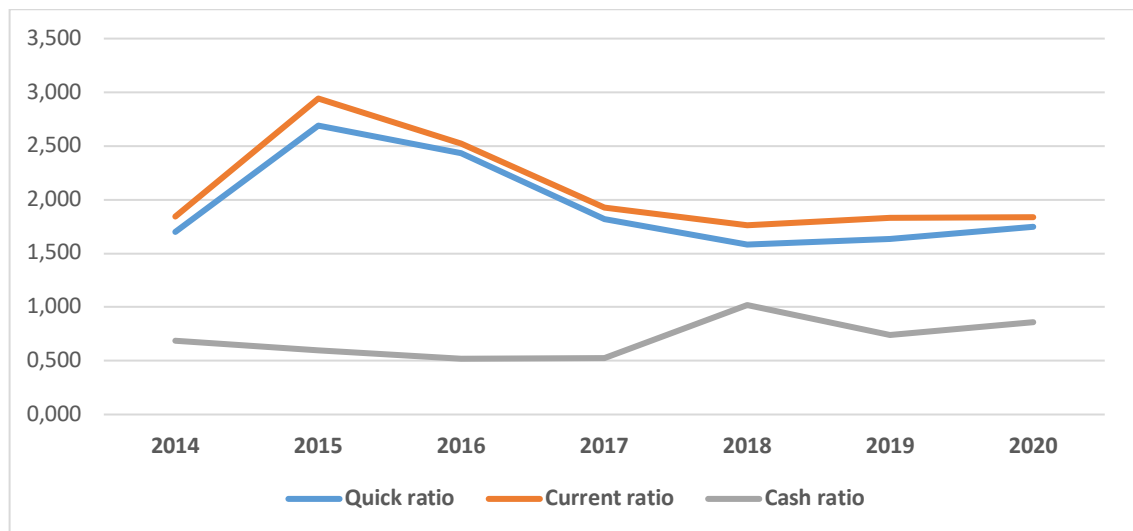
Source: Own calculation

Basically, quick ratio and cash ratio has the same goal to assess a business's ability to repay any short-term loans. Cash ratio only considers a company's most liquid assets: cash and cash equivalents, the cash ratio is more cautious and stringent, and it considers as a good when the ratio fluctuates between 0.5 and 1. Therefore reflecting to the table above we absolutely can state the KMG's cash ratio is outperforming Gazprom since the lowest value of KMG is 0,525 in 2017 whereas Gazprom had it 0,062 in 2019. Talking about the best result it was in 2018 amounting for 1,019 with the growth rate of record 94% where Gazprom had the worst and declined by -81% versus last year. However, KMG's indicators were declining in 2015 and 2016 by -13% each year, where Gazprom and in industry average were having positive growth respectively. The biggest KMG's decline came in 2019 with -27%, considering the industry average was declining by -21%.

In 2020, surprisingly, KMG was able to maintain a strong growth of 16% to its 0,859, while Gazprom suffered a significant decline of -13% to 0,231 while the industry posted an identical growth of 16% to KMG with 0,22. Based on the foregoing, we can conclude that

KMG's ability to repay short-term debts remains at a high level, even considering the crises in such years as 2014-2015 and 2020.

Figure 12: Liquidity ratios



Source: Own calculation

Reflecting to the graph above, we can state that, as discussed earlier, quick and current ratios have a similar character, they both peaked in 2015, then a smooth decline began until 2018 and moved to a growth stage starting from 2019. Speaking of cash ratio, there was a decline until 2017, however, it returned to aggressive growth by reaching its maximum starting from 2018.

4.4.2 Leverage ratios

The leverage ratio category is essential because organizations employ a combination of equity and debt to support their operations and knowing how much debt a company has can help determine whether it will be able to pay off its loans when they are due.

Debt to equity ratio

The debt-to-equity (D/E) ratio is calculated by dividing a company's total liabilities by its shareholder equity to determine its financial leverage. Although the ideal debt-to-equity ratio varies by industry, the common agreement is that it should not exceed 2.0.

In case of KMG, reflecting to the table 14 we can assume that company is not relying on borrowings. The biggest ratio came to year 2014 with 1,025 while Gazprom had a quite minimum of 0,34 which is 70% less. Based on the analysis the KMG's ratio had a decreasing character which is good, since it's using own sources to finance the operations. Therefore, by 2015 it declined to -26% and amounted to 0,761 meaning KMG reduced total liabilities. However, by the next year in 2016 ratio has grown up by 18% where the Gazprom had declined by -17% and the industry average -28%. Reflecting to the year 2020 we state despite the crisis KMG well managed its liabilities and the ratio has decreased by 3% whereas the Gazprom declined by -14% and the industry average by -17%.

Overall, the average ratio for KMG is 0,86 and for Gazprom 0,39 which is less by 55%.

Table 14: Debt to equity ratio

Year	KMG	Gazprom	Industry average
2014	1,025	0,34	0,63
2015	0,761	0,401	0,47
yoy change %	-26%	18%	-25%
2016	0,901	0,331	0,34
yoy change %	18%	-17%	-28%
2017	0,982	0,419	0,57
yoy change %	9%	27%	68%
2018	0,960	0,462	0,56
yoy change %	-2%	10%	-2%
2019	0,720	0,43	0,71
yoy change %	-25%	-7%	27%
2020	0,700	0,37	0,59
yoy change %	-3%	-14%	-17%

Source: Own calculation

Comparing KMG and Gazprom it's obvious that Gazprom doing it a way better which meaning Gazprom relying less on loans and using more own resources for financing, and even comparing to the industry average KMG is also below above the average.

Table 15: Interest ratio

Year	KMG	Gazprom
2014	3,125638	6,1349203
2015	0,22881466	0,81734611
yoy change %	-93%	-87%
2016	0,99583005	4,37228774
yoy change %	335%	435%
2017	3,78063957	4,52131357
yoy change %	280%	3%
2018	3,47102342	4,63969842
yoy change %	-8%	3%
2019	6,12181006	4,71001366
yoy change %	76%	2%
2020	2,6170475	6,10796543
yoy change %	-57%	30%

Source: Own calculation

The interest coverage ratio is a metric that assesses a company's capacity to manage its debt. For a corporation with reliable, continuous revenues, an interest coverage ratio of at least two (2) is generally considered the minimum acceptable number.

Reflecting to the table above we state obvious outstanding performance of Gazprom compared to KMG. So, the biggest decline came to the year of 2015 for both entities amounting for 0,23 in case of KMG and 0,817 for Gazprom, meaning that the interest expense was almost the same amount as EBIT, which is critical, since there is a limited amount of earnings available to cover the debt interest payment. From 2017 KMG had a quite positive ratio rate and for the next 3 years, the indicator was above 3.4, which means that EBIT was 3 times higher than interest expenses, but Gazprom as seen at the same time had it higher than 4 which is much better. Reflecting to the best result of KMG came to 2019

amounting to 6,12 with growth rate of 76% versus last year and mainly due to increasing in financial operations and increasing the shares on joint ventures. In 2020 the ratio rate has fallen by -57%, since the revenue sales has contracted a lot due to contra-measures taken against covid which led to disruption of supply and chain, however Gazprom was doing quite well since the ratio has grown up by 30%, we assume that this is due to the fact that the Russian government at the beginning of March 2020 announced an increase in oil production with the OPEC countries, regardless of demand and oil price. Regarding the average interest ration of KMG is 2,91 throughout the entire analysis whereas Gazprom had 4,47 which is 53% less than its competitor. These indicators are higher since Russia, in particular Gazprom, has a large share of oil fields in Kazakhstan (approximately 10-15%), moreover, KMG transports all its products through the Russian pipeline and KMG products are sold further to European countries under the Gazprom brand.

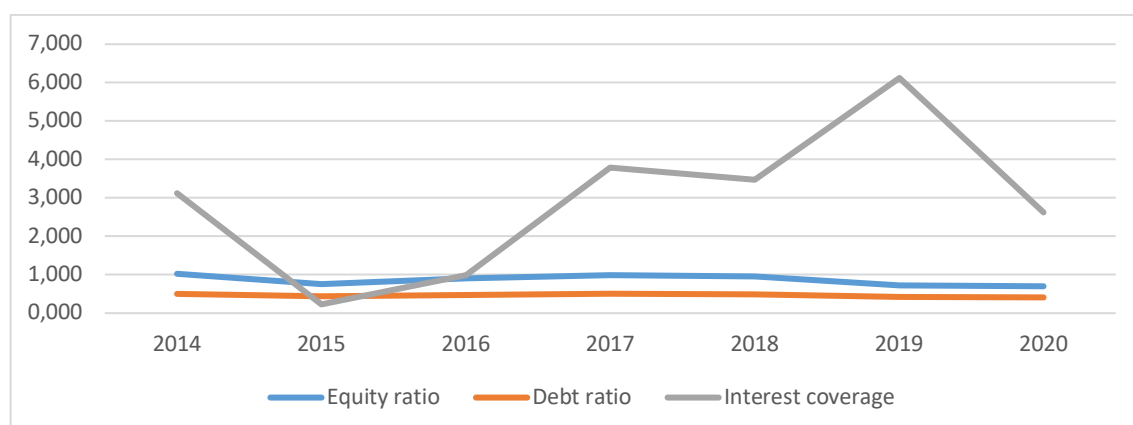
Table 16: Debt ratio

Year	KMG	Gazprom	Industry average
2014	0,502	0,3	0,54
2015	0,440	0,33	0,59
yoy change %	-12%	10%	9%
2016	0,481	0,26	0,62
yoy change %	9%	-21%	5%
2017	0,501	0,29	0,56
yoy change %	4%	12%	-10%
2018	0,492	0,3	0,5
yoy change %	-2%	3%	-11%
2019	0,420	0,29	0,5
yoy change %	-15%	-3%	0%
2020	0,41	0,31	0,52
yoy change %	-2%	7%	4%

Source: Own calculation

A company's debt ratio displays whether it has loans and, if so, how the credit financing compares to its assets. Debt ratios of 0.4 or lower are considered preferable from a risk standpoint, whereas debt ratios of 0.6 or higher make borrowing money more difficult. Referring to table 16, we can confidently conclude that the debt ratio varies in a good level, since the minimum indicator is 0.41 and the maximum is 0.502. The collected findings demonstrate the company's liabilities being stable. This indicated the company's preference funding from equity capital. Despite this, a coefficient in 2014 indicated that liabilities were the primary source of funding. When it comes to risk, a bigger proportion of equity capital lowers the risk to creditors. As a result, the debt ratio is a crucial signal for lenders, who want a ratio coefficient of preferably less than 0.5. Gazprom reflected results below than KMG for all analyzed time series. On contrary, industry average depicted those liabilities are the main source of financing from 2014-2015.

Figure 13: Leverage ratios



Source: Own calculation

Based on the graph above, possible to state that equity and debt ratios are quite smooth, however the interest coverage ratio more volatile however, the higher the better for the interest coverage ratio, for equity and debt ratios, on the contrary, the lower the better.

4.4.3 Profitability ratios

Profitability ratios evaluate a company's ability to profit from sales, operations, balance sheet assets, and shareholders' equity. Ratios also show how effectively a business generates profit and value for its shareholders

Table 17: Net profit margin

Year	KMG	Gazprom
2014	18,9%	8,7%
2015	45,2%	7,5%
yoy change %	138,7%	-13,8%
2016	19,4%	13,0%
yoy change %	-57,1%	73,4%
2017	11,0%	13,1%
yoy change %	-43,5%	1,1%
2018	9,9%	15,1%
yoy change %	-9,5%	15,6%
2019	16,9%	16,1%
yoy change %	70,2%	6,4%
2020	3,8%	5,9%
yoy change %	-77,7%	-63,4%

Source: Own calculation

The net profit margin, or simply net margin, is a percentage of sales that indicates how much net income or revenue is created. A good margin varies greatly depending on the industry and company size; however, a 10% net profit margin is regarded typical, a 20% margin is rated strong (or "good"), and a 5% margin is considered poor.

The analyzed data shows that the indicators are mostly more negative with a decline in growth, but on the other hand, we can see that all indicators are in the medium and higher group. Thus, the best indicator falls on 2015 with 45.2% and with an increase of as much as 138.7%, while for Gazprom it generally fell by 13.8% and amounted to 7.5 compared to last year. Such a jump in KMG is due to the fact that the company increased its income from financial and foreign exchange operations, as well as large cash flows from discontinued operations. Speaking about the minimum, we can notice, as expected, it happened in 2020 and the coefficient was 3.8 percent and with a large decline in growth by -77.7% and a similar situation is observed in Gazprom, where the coefficient was 5.9% and from negative growth by -63.4%. In general, comparing these two companies, it is obvious that KMG shows a much better result, although Gazprom has more stable growth than KMG, whose growth is very volatile.

Table 18: Return on Assets

Year	KMG	Gazprom	Industry average
2014	2%	1%	9,6%
2015	5%	5%	-39%
yoy change %	105%	410%	-141%
2016	3%	6%	-17%
yoy change %	-34%	18%	-56%
2017	4%	4%	-5%
yoy change %	29%	-93%	-69%
2018	5%	8%	-0,2%
yoy change %	26%	100%	-96%
2019	8%	6%	2%
yoy change %	66%	-29%	1300%
2020	1%	2%	1%
yoy change %	-86%	-67%	-58%

Source: Own calculation

Return on assets (ROA) is a metric that measures how well a company generates money from its assets. A ROA of 5% or more is considered acceptable, while a return on assets of 20% or more is rated excellent. In general, the higher the ROA, the more profit-generating efficiency the company has. Considering KMG, we can state that there are no negative values, while the industry average was having a big decline up to 2018 (except 2014). In terms of the best result KMG was capable to show it in 2019 amounting at 8% with 66% of growth and exceeding Gazprom which had a 6% but showing a decline of -29% versus last year. Reflecting to 2020 KMG had a huge decline of 86% and showing 1% of the ratio while Gazprom had less decline than KMG with 67% and amounting to 2%, but the less decline showed the industry average with -58% and amounting to 1% respectively. If we compare the average value, then KMG has 4% and Gazprom has 4.5%, we can conclude that both of these companies quite effectively convert the invested money into net profit.

Table 19: Return on Equity

Year	KMG	Gazprom	Industry average
2014	4,9%	2,0%	9,0%
2015	10,1%	7,0%	4,8%
yoy change %	106,1%	250,0%	-46,8%
2016	6,0%	10,0%	2,4%
yoy change %	-34,2%	42,9%	-50,6%
2017	8,0%	7,0%	5,4%
yoy change %	33,3%	-30,0%	128,3%
2018	10,0%	11,0%	6,0%
yoy change %	25,0%	57,1%	11,3%
2019	15,0%	9,0%	3,8%
yoy change %	50,0%	-18,2%	-36,9%
2020	2,0%	5,5%	1,7%
yoy change %	-86,7%	-39,4%	-55,8%

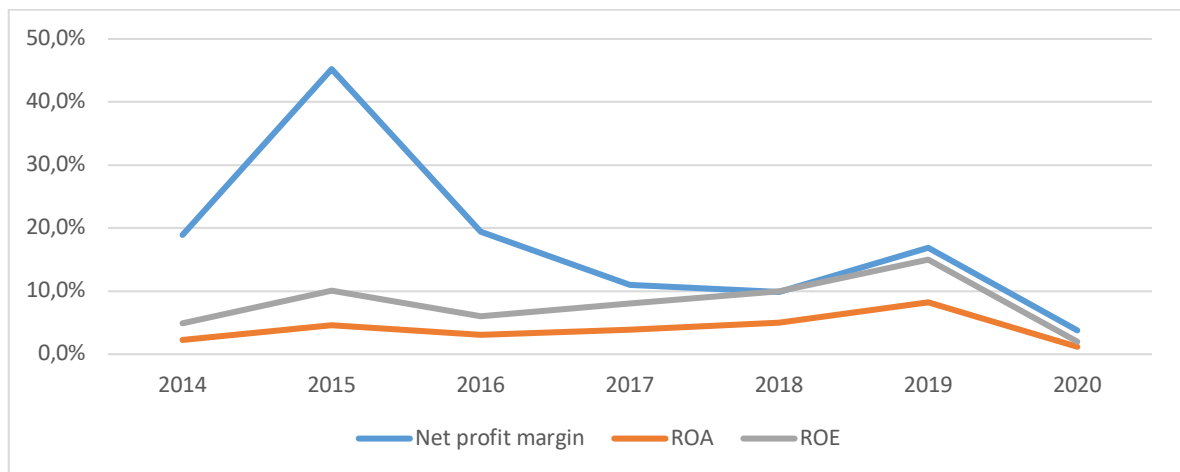
Source: Own calculation

The return on equity is a measure of a company's effectiveness and efficiency in generating profits.

The ROE is particularly useful for comparing the performance of organizations in the same industry. ROE of 10% – 15% are often regarded as satisfactory. Considering the results, this can be inferred that the obtained values only met the standard in 2015, 2018, and 2019. This indicates that the KMG made great use of the shareholders' equity in the entity during these years and earned a good profit. In terms of the highest indicator was obtained in 2019 with 15% and grew by 50% versus last year whereas the Gazprom declined by -18,2% and amounted to 9% of return, meaning that 1 USD got back 0,15 USD of profit. The lowest result was recorded in 2014 with 4,9% of return and 2020 where the ROE shrank by -86,7% and amounted to 2% while the Gazprom had similar situation showing it's the lowest in 2014 with 2%, meaning that KMG managed the shareholder's equity properly. This kind of shrank could be explained by crisis in both years in oil and gas industry, devaluation of national currency and of course geopolitical conditions. Considering Gazprom in 2020 had less declined with -39,4% and amounted to 5,5%. On the contrary the industry showed its

maximum in 2014 with 9% of return, however the 2020 showed a decline of 55,8% and was 1,7% of return versus last year. Considering the crisis in 2020 we can state that KMG had suffered more than Gazprom and industry as well. Comparing the KMG with Gazprom, we state that KMG was exceeding its competitor in 2014, 2015, 2017 and 2019. Considering the comparison with the industry average, the average return on sales of KMG is 8% annually while industry had a 4,7%.

Figure 14: Profitability ratio



Source: Own calculation

Reflecting to the table above, despite the crisis it's seen that net profit margin peaked in 2015 due to financial operations, however, the crisis made itself felt the very next year and it declined up to 2018. Also, the ROA and ROE were having a similar path as net profit margin, however, they started growth path from 2016 up to 2019 reaching the maximum. As explained earlier the 2019 was the most profitable year in KMG's history.

4.4.4 Activity ratios

An activity ratio is a type of financial instrument that shows how effectively a company is raising income and cash from its balance sheet items. Activity ratios are especially effective when comparing two competitive businesses within the same industry to see how one company compares to its competitors. All required data was taken from the financial statements as Balance sheet and Profit and Loss.

Table 20: Asset turnover ratio

Year	KMG	Gazprom	Industry average
2014	0,25	0,77	0,31
2015	0,21	0,7	0,2
yoy change %	-16%	-9%	-35%
2016	0,32	0,69	0,23
yoy change %	52%	-1%	15%
2017	0,77	0,7	0,29
yoy change %	141%	1%	26%
2018	1,03	0,8	0,35
yoy change %	34%	14%	21%
2019	0,94	0,68	1,29
yoy change %	-9%	-15%	269%
2020	0,8	0,67	0,99
yoy change %	-15%	-1%	-23%

Source: Own calculation

Basically, we can with the asset turnover ratio assesses a KMG's assets' ability to generate income or sales and usually the if the indicator is equal to 1 or above accepted as satisfactory. In this case, KMG performed the worst in 2015 with 0.21 and a drop of as much as -16% while Gazprom posted 0.7 and a drop of only -9% compared to last year. But comparing with the industry, we can conclude an optimistic character, as KMG showed a little more than the average. Further, we see that KMG's indicators grew steadily until 2019, reaching their maximum in 2018 with a mark of 1.03 and a whopping 141% growth compared to 2017.

Based on data given above its possible to state that the indicators are not particularly encouraging, since it is clear that the average mark of the KMG is 0.62, while Gazprom has all 3.5, however, it is clear that Gazprom uses assets more intensively in the activities of the organization and, accordingly, shows much higher business activity.

Table 21: Inventory turnover ratio

Year	KMG	Gazprom	Industry average
2014	10,82	16,2	22,4
2015	16,5	14,5	19
yoy change %	52%	-10%	-15%
2016	35,2	16,9	12
yoy change %	113%	17%	-37%
2017	39,3	17,3	15,5
yoy change %	12%	2%	29%
2018	45	17,6	18,8
yoy change %	15%	2%	21%
2019	49,5	16	87,2
yoy change %	10%	-9%	364%
2020	32,2	14	45
yoy change %	-35%	-13%	-48%

Source: Own calculation

With inventory turnover ratio we will be able to find out how many times during the 2014-2020 the KMG used the available average stocks. This indicator characterizes the quality of reserves and the effectiveness of their management. The lowest indicator for the entire period of the analysis for KMG was 2014 with a mark of 10.82 at that time, and Gazprom with 16.2 and the industry with 22.4 showed a big gap compared to KMG. Such minimum mean insufficient warehouse management, and the accumulation of unusable commodities. Nevertheless, KMG's performance only improved year on year at a rapid pace until 2020 and reached its maximum in 2019 with a mark of 49.5 and an increase of 10% and the alike situation has been seen in industry as well where the indicator more than tripled (+364%) but if we talk about the KMG's growth, it was in 2016 when the growth amounted to 113%. However, high turnover is not always a healthy sign, as it can represent stock exhaustion, which can cause production disruptions. Talking about the biggest decline, it was in 2020 for everyone with no exception, since KMG's declined by -35% where Gazprom by -13% and the industry contracted the most -48%, and KMG's performance is relatively better than the industry over the entire period of analysis. Overall, comparing KMG and Gazprom, it

becomes obvious that KMG is far ahead of its competitor twice as much, since the average for KMG is 32.4, while for Gazprom it is 16.1.

Table 22: Payables Turnover Ratio

Year	KMG	Gazprom	Industry average
2014	9,5	17	20
2015	12,42	17,8	16,6
yoy change %	31%	5%	-17%
2016	16,6	16,3	13,3
yoy change %	34%	-8%	-20%
2017	19,2	13	12,4
yoy change %	16%	-20%	-7%
2018	22	15,6	15
yoy change %	15%	20%	21%
2019	21,5	16,4	12,3
yoy change %	-2%	5%	-18%
2020	16,65	12,2	10
yoy change %	-23%	-26%	-19%

Source: Own calculation

Basically, with payables turnover ratio we find out for how fast a KMG pays its suppliers and contractors back. Therefore, larger turnover ratio is preferred to creditors, while a low ratio is more beneficial for the organization, allowing it to use the balance of existing accounts payable as a free source of funding for current operations. Based on the analysis above, we can state that the worst period for KMG in paying debts was 2014 with a ratio of 9.5 compared to Gazprom in the same period, the ratio was 17 which is 79% more than KMG, which means that KMG repaid debts 79% slower than its competitor. We assume that KMG took a long time to pay its debts due to the fact that 2014 was a crisis caused by falling oil prices and devaluation of national currency and it is assumed that the company deliberately tightened its debts in order to use the assets to overcome the crisis. As for the average value of the industry, KMG lagged in 2014 by as much as 110%. Further, figures until 2019 only grew at a rapid pace and improve the speed of ability to repay debts and the

maximum was reached in 2018 with a mark of as much as 22 with a growth of 16% while Gazprom suffered very volatile indicators. In general, summing up, we can say that KMG's performance was a level higher, and smoother compared to the industry and Gazprom, even in 2020 KMG showed a result much higher with 16.65 and even with a decline of -23%.

Table 23: Receivables Turnover ratio

Year	KMG	Gazprom	Industry average
2014	12	8,2	7,4
2015	20,4	7,6	5,65
yoy change %	70%	-7%	-24%
2016	14,2	9	5,02
yoy change %	-30%	18%	-11%
2017	21,6	8,1	6,7
yoy change %	52%	-10%	33%
2018	26	7,5	7,2
yoy change %	20%	-7%	7%
2019	32	8,7	24
yoy change %	23%	16%	233%
2020	27	8	15
yoy change %	-16%	-10%	-38%

Source: Own calculation

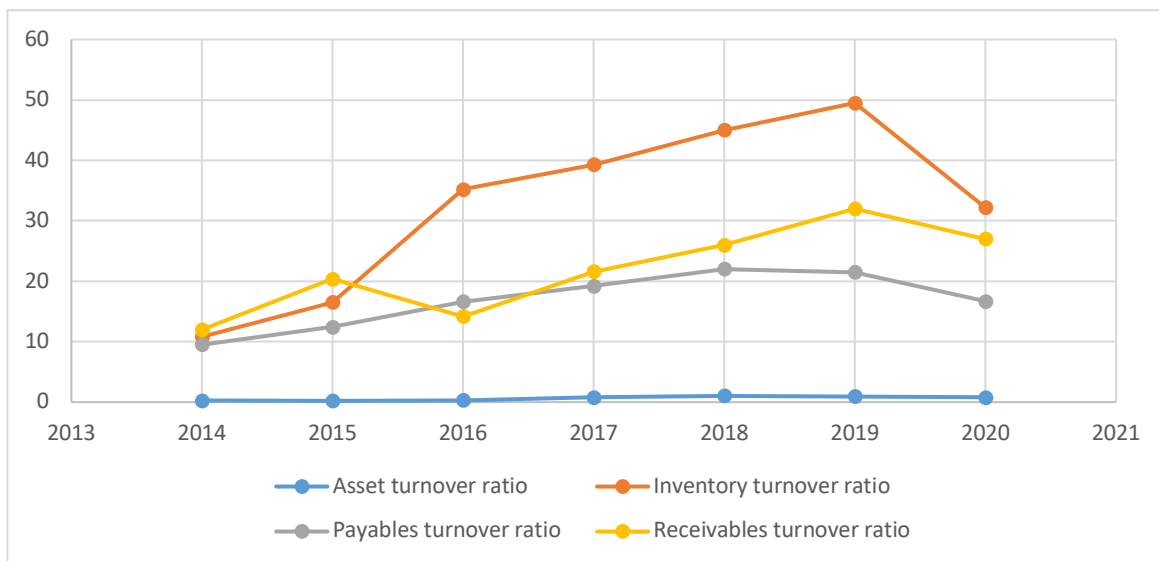
Reflecting to the receivable turnover ratio evaluates how rapidly a KMG's receivables are repaid, or how soon it received the payment from clients for the commodities (works, services) it has sold.

In whatsoever scenario, the greater the KMG coefficient, i.e., the faster purchasers pay back their debts, the better for the company. Based on the analysis in the table 22, we can conclude that KMG's score ranged from a low of 12 to a high of 32, while Gazprom ranged from 7.5 to 9. Speaking about the minimum, we can say that KMG had a big delays payment from its customers and buyers 2014 with a mark of 12, while Gazprom had the same minimum in 2018 with 7.5. If we focus on the highest growth, then this happened in 2015, when KMG had as much as 70% and amounted to 20.4 compared to Gazprom, the same happened in 2016 with an increase of 18% and in parallel this was the best result for Gazprom in this

analysis. Regarding the KMG's best result in terms of payment ratio from the customers and buyers, it was in 2019 with a growth of 20% and from 32, while the industry had a very solid jump with a growth of 233% and equated to 24 compared to last year. Judging by the results of the crisis year in 2020, we can safely say that even in the covid state of the year, the debt repayment rate for KMG buyers decreased by only -16% and amounted to 27, while Gazprom decreased by -10% and amounted to 8, and the industry decreased by as much as - 38% and amounted to 15.

Looking at the result of the analysis, it becomes obvious that KMG has shown in the result much more than Gazprom and industry, since the average value of KMG was 21.9 while Gazprom had 8.15 and industry 10.15. In other words, it can be said that KMG buyers repaid their debts many times faster even in times of crisis compared to their closest competitors

Figure 15: Activity Ratio



Source: Own calculation

Having a general picture, based on Chart 16, we came to the conclusion that the most unsuccessful and unfavorable year throughout the entire analysis was 2014, however, that KMG began to grow sharply the very next year, but having its declines in some cases already in 2016. in general, the entire analysis shows the same changes and it can be seen that it began to fall in 2020 due to anomalous drops in oil prices, demand for oil and the geopolitical component.

4.4.5 Differential Indicator Analysis

Differential indicators are primarily used to track and evaluate a company's liquidity and for this net working capital and cash conversion cycle are used for a more accurate picture. Required data is received through the financial statements of the entities for the period 2014-2020.

Table 24: Net working capital (in millions USD)

Year	KMG	Gazprom	Industry average
2014	5881	26782	4792
2015	9464	24109	1560
yoy change %	61%	-10%	-67%
2016	6532	21505	1220
yoy change %	-31%	-11%	-22%
2017	7766	16535	1987
yoy change %	19%	-23%	63%
2018	5095	24002	4265
yoy change %	-34%	45%	115%
2019	3139	22895	3633
yoy change %	-38%	-5%	-15%
2020	2693	19054	2983
yoy change %	-14%	-17%	-18%

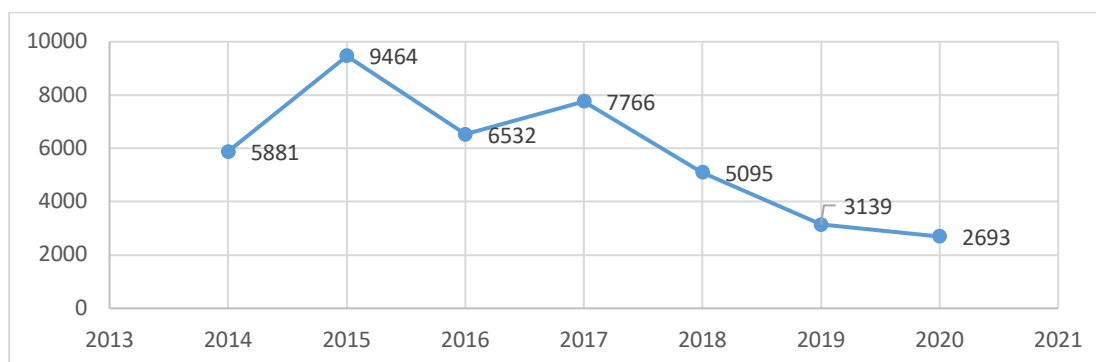
Source: Own calculation

The balance between the KMG's most liquid assets and liabilities that must be paid off in the near future is depicted by net working capital. The calculation of NWC is by subtracting current liabilities from current assets of the company. Based on the analysis from table 23, we see that the result is positive throughout the entire analysis, which means that the KMG already has assets in the short term, from which its liabilities can be paid, since the current assets exceed the current liabilities. Comparing KMG and Gazprom, it becomes clear that Gazprom is far ahead, however, if the NWC is excessively high, it's inconsistently utilizing current liabilities and instead pulls long-term liabilities to fund its asset meaning that it indicates an irrational distribution of money and may be an indirect factor of not the best profitability. The analysis shows that KMG's figures fell until 2020, with the exception of

2017. From 2014 to 2020, KMG's NWC fell by more than -54%, while Gazprom's ratio fell only by -28% at the same time industry average fell by -38%.

It is clear that Gazprom's capabilities are superior to KMG and NWC shows in the short term that Gazprom's ability to make current payments and use money for its development is greater.

Figure 16: Net working capital



Source: Own calculation

As it's seen, starting from 2017, NWC indicators began to fall very steeply, this signifies that the increase in current assets have outpaced the increase in current liabilities.

Table 25: Cash conversion cycle

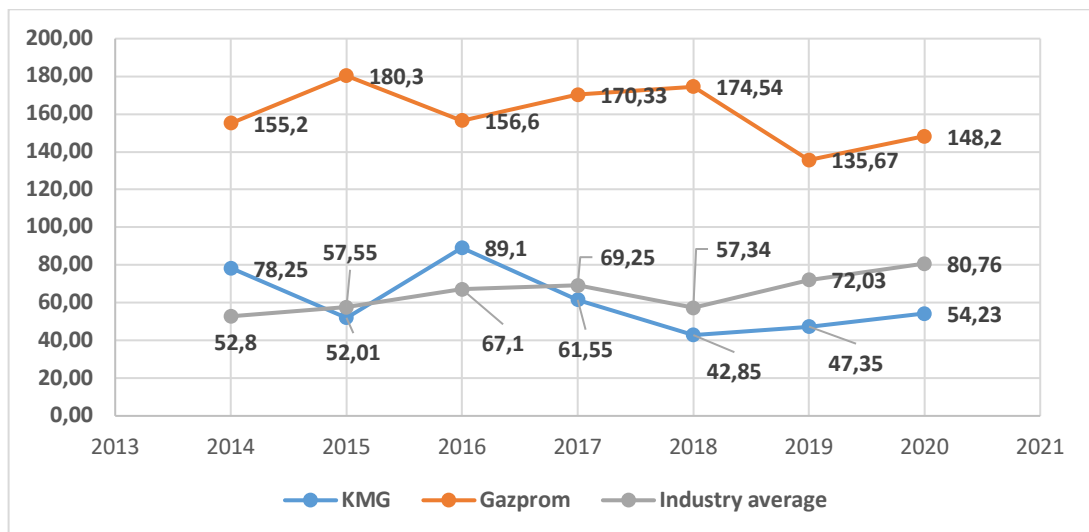
Year	KMG	Gazprom	Industry average
2014	78,25	155,2	52,8
2015	52,01	180,3	57,55
yoy change %	-34%	16%	9%
2016	89,1	156,6	67,1
yoy change %	71%	-13%	17%
2017	61,55	170,33	69,25
yoy change %	-31%	9%	3%
2018	42,85	174,54	57,34
yoy change %	-30%	2%	-17%
2019	47,35	135,67	72,03
yoy change %	11%	-22%	26%
2020	54,23	148,2	80,76
yoy change %	15%	9%	12%

Source: Own calculation

Cash conversion cycle is the period during which funds circulate from the resources (raw materials, materials, and labor) are purchased until the finished product is sold and money is received and important to note the outcomes are shown in days. A short cash cycle helps the KMG to fast return its current asset investment. The organization benefits from a shorter cycle. Following this logic, you can see how KMG outperforms its rival Gazprom and the industry in this context. KMG this period was shorter than that of Gazprom throughout the analysis. Even if we compare the worst indicator, for KMG it was 89.1 days in 2016, while for Gazprom it was 180.3 days in 2015. This means that it took KMG 89.1 days to return the money invested in current assets at the same time for Gazprom it was half a year or 180.3 days. The lower the period, the better for the company.

If, in general, comparing KMG, Gazprom and the industry, it becomes absolutely clear that KMG is far ahead of Gazprom, since its average period is 160 days, while the industry has 65 days, and the best result is KMG's and is 60 days which is by 63% quicker in return on investment in current assets.

Figure 17: Cash conversion cycle (in days)



Source: Own calculation

4.5 DuPont Analysis

The technique to delve deeper into the KMG and check if there are any commonalities is to use DuPont Analysis. DuPont analysis dissects ROE to find which elements are most responsible for variations in ROE. The elements such as profit margin, asset turnover and leverage those can be further evaluated. DuPont analysis aids in identifying the causes of variations in ROE and, as a result, suggests corrective steps for management.

Table 26: DuPont analysis

Year	2014	2015	2016	2017	2018	2019	2020
ROE	9%	17%	12%	17%	20%	27%	5%
Net profit margin	0,189	0,452	0,194	0,11	0,099	0,169	0,038
Asset turnover	0,25	0,21	0,32	0,77	1,03	0,94	0,8
Leverage	2,00	1,76	1,89	2,02	1,96	1,72	1,70

Source: Own calculation

Based on the analysis given in the table 25, it's possible to conclude that KMG's ROE mostly was having an increasing trend since 2014-2016, however, in 2016 ROE declined by 5% comparing to 2015, since there was a big shrank in net profit margin which declined from 45,2% to 19,4% and had the biggest impact, however, at the same year the KMG has leveraged its asset turnover more effectively and it has grown by 52% and leverage has grown by 7% versus last year. From 2017 to 2019 KMG's efficiency in term of ROE has been increasing with a positive trend and it reached its maximum by 2019 with 27% the biggest trigger was due to net profit margin which increased from 10% in 2014 to almost 17%, even though if asset turnover and leverage decreased its positions comparing to last year. On the other hand, the lowest performance was seen in 2020 amounted to 5%, where it decreased by -22% versus last year. This poor performance can be explained mostly due to net profit margin which declined by -78% and amounted to 3,8% and showed the biggest impact since the other indicators as asset turnover and leverage have decreased less. In conclusion, KMG did take substantial steps to improve revenues, as evidenced by the data, but these efforts did not outperform the negative impact of rising operational expenses.

5 Discussion and conclusion

KMG was subjected to a detailed financial analysis. A review of the oil business was undertaken, as well as a study of KMG's structure and operations. Since it was compared to heavyweight Gazprom, the results show that KMG is a formidable competitor in the CIS region's oil industry. Mostly often, the corporation expands by acquiring new Kazakh oil and gas enterprises. KMG's financial findings show various significant highlights in terms of the company's financial condition and financial results, and it aided in thoroughly answering research questions. As a result, based on the analysis, sensible conclusions may be drawn with the addition of steps that can help the organization perform better in a highly competitive market. The achieved outcome might be a great source of information for the KMG's top management since it can provide them with an overview of their current condition as well as a peek of their direct opponents' efficiency. The financial analysis's findings can be summarized in the following way:

Various factors of the financial position statement and income statement have been revealed through horizontal and vertical analysis. KMGs' asset structure form for the entire period of the analysis demonstrates a highly predominance of non-current assets over current assets. The meaning of it can be explained as the KMGs' liquidity has been declining, since the non-current assets have become less likely to be transformed into cash quickly.

General look on liabilities and equity revealed that the equity-to-liabilities ratio did not vary over time. During this whole time, capital has been the primary source of funding. However, according to the author, cumulative liabilities were a much more important source of financing than equity in 2014. A proportion of retained earnings has risen steadily. The proportion of short-term liabilities has declined over the years, while the share of long-term liabilities has raised.

Strong concentrations of total equity as a percentage of total assets indicate a relatively stable financial future. It could be interpreted as a positive indication, especially if a financial crisis is imminent.

Income statement analysis has showed that biggest fall came in 2014 and the fact that the cost of goods sold surpassed the sales resulted in a negative gross profit of -5.3%, however, the KMG still managed to get back on track with a positive 0.3% in 2015. KMGs' EBIT

showed its lowest in 2014 as well, due to insufficient sales, showed stable growth until 2019 and peaked at 20.2%.

Regarding the ratio analysis, it significantly contributed to understand KMG's financial position and financial performance for the period of 2014-2020.

KMG's current ratio was greater than 1.5 and throughout the entire analysis of 2014-2020, KMG showed better ratios than the industry average and Gazprom. KMG is easily defined by a solid level of current liquidity ratio as a solvent entity that able of repaying its current liabilities. Based on the analysis, the author proposes having the coefficient values for future activitie, because the high liquidity ratio defines the solid liquidity of the KMG's assets of 2014-2020.

Throughout the entire period of 2014-2020, KazMunayGas' quick ratio indices were above than Gazprom and the industry average outcomes. KMG describes itself as a strong payable entity with a solid quick liquidity ratio, owing to its ability to cover short-term liabilities with liquid funds. Based on the analysis, the author proposes to save the coefficient values for future activities based on the company's activities in 2014-2020.

Liquidity ratio defined that the most favorable was in 2015, since the quick and current ratios have showed the maximum. After 2015, the quick and cash ratios began to deteriorate until 2018 except the cash ratio, it indeed increased at the same year, however, comparing to Gazprom, KMG has definitely outperformed through entire analysis.

Activity ratio. Asset turnover ratio showed that high efficiency in asset utilization was just in 2018, ATR is accepted satisfactory where the indicator is equal or above 1. Comparing to Gazprom author states based on the analysis, competitor's efficiency was a high better where the average for the entire period was 3.5 for Gazprom, whereas KMG had only 0.62. However, KMG managed to maintain indicators of average significance compared to the industry average. It's obvious that KMG had less intensive use of assets in the organization's activities and, as a result, much less business activity.

In terms of payable turnover ratio, the higher rate is considered to be satisfactory. The most favorable turnover of accounts payable was seen in 2018 (22), on the contrary the lowest was noted in 2014 (9,5) due to is due to KMG's inability to pay back fast its debts to suppliers and contractors due to low revenue, which led by economic and political factors in the oil industry of Kazakhstan, as falling oil prices and devaluation of national currency, nevertheless, KMG's payable turnover ratio was a way higher than Gazprom's.

In terms of leverage ratios, throughout the entire analysis, KMG's debt-to-equity ratio was greater than the industry average and Gazprom. The equity ratio for the entire duration sequence demonstrated the benefit of equity capital as a main type of funding for KMG for the period of 2014-2020. In general, it shows that KMG uses more external sources of financing than the industry average and Gazprom. KMG mostly used equity to finance, giving it a minor advantage over liabilities. Nonetheless, even if the equity having an advantage, liabilities are unquestionably a very important source of funding for KMG. Throughout the period, KMG had a higher reliance on liabilities than both Gazprom and the industry average.

Debt-to-equity of KMG showed that the minimum indicator is 0.41 and the maximum is 0.502, author can confidently conclude that the debt ratio varies at a good level. The findings show that the company's liabilities are stable. This indicated the company's preference for equity funding. Regardless, a 2014 coefficient indicated that liabilities were the primary source of funding.

Interest coverage of KMG was lower than its competitor Gazprom almost for the entire period of analysis, except 2019, where KMG outperformed Gazprom. 2015 had the biggest decline in terms of interest ratio, due to the low sales revenue, where the gross profit was accounted for -5.3% loss, further led to the shrank of the EBIT to -39.6% which was biggest decline in the entire period of KMG history. However starting from 2016 KMG returned to its steady growth. Even despite the crisis in 2020, KMG was able to keep the indicator above (2), therefore it could be understood to mean that KMG is now more likely to survive a rise in interest rates, which is a well sign for the entity.

Taking into account the net profit margin, it's obvious that the declining scenario came from years of 2016-2018, due to lowering the financial operations, however the biggest margin KMG showed in 2015. The reason is that the sales revenue were the minimum, but the financial operations reached one of the highest level, therefore it triggered a high level of net profit margin.

Return on equity of 10% – 15% are often regarded as satisfactory. Based on the analysis the result may considered as satisfactory met only in years 2015, 2018, and 2019. Talking about the highest return, it was in 2019 with 15% with a growth of 50% comparing with 2018 where the return was 10%. Meaning that during these years, KMG used the entity's shareholders' equity highly effectively and in return gained a solid profit. Comparing with

the industry average return, KMG outperformed through entire analysis with average return of 8% whereas for the industry's average was just 4,7%.

Finally, the DuPont analysis assisted in shedding light, whether to understand the primary drivers of changes in ROE. In 2014 and 2015 the main trigger of the ROE change was net profit margin, since the asset turnover was in low level, due to poor KMG's sales performance during 2014-2016. However, it's important to note that in 2015 the ROE was 17% which is considered as satisfactory, as it was said earlier the net profit margin was only factor amounted to 45,2%, since the asset turnover and leverage declined versus last year. Taking into account of the best performance was in 2019, again, this phenomenon can be explained by the fact that the net profit margin played a role, and this affected the result as a whole. Speaking about the average ROE value, we can assume that the company is financially stable, since the average return value is 15.2%, based on this following research question can be answered:

- **Whether the selected company is financially healthy and profitable?**

We discovered the following as a result of an analysis of the entity's key financial indicators. KMG's financial position as of December 31st 2020, is better than that of half of all large enterprises engaged in the wholesale trade of solid, liquid, and gaseous fuels and similar products. At the same time, the KMG's financial situation deteriorated in 2020. Comparing the financial performance of the Organization with the averages for all activities leads to the same conclusion. The financial position of KMG is better than that of most organizations of the Republic of Kazakhstan comparable in terms of the scale of their activities.

- **What possible solutions can be recommended incase if it is not?**

Beyond the current crisis, and into the late 2030s, the macroeconomic environment is likely to present even more challenges. The first factor to consider is supply and demand. Based on British Petroleum's outlook author anticipates that demand for hydrocarbons, particularly oil, will rise and peak in the 2030s, before gradually declining. Oil refineries' capacity will be rendered obsolete, and profits will inevitably fall. To prevent the worst scenario in oil and gas industry, even despite the financial stability of the company, the author suggests:

1. Portfolio transformation and a major reallocation of capital to realize the highest return opportunities. A company must make tough decisions on key issues across its entire asset base. It should redirect capital away from areas of lower returns to areas that are most aligned with a strategy to create maximum utility value and unique advantages for the future.

2. Decisive mergers and acquisitions. According to the author, a new era of mergers, asset spin-offs, and the establishment of even more subsidiaries in Kazakhstan and neighboring countries has begun. It might be time to get serious about mass consolidation and rationalization.
3. Through a redesign of the operating model, set the environment for a significant increase in efficiency and cost competitiveness. Overhead costs at KMG are now more than double what they were in 2009. Most of the time, these are bureaucratic overheads that aren't necessary to improve security and reliability but are guaranteed to slow down decision-making. Author believes that general and administrative expenses, as well as operating costs, can be cut by 30-50 percent further.
4. Rethinking strategic partnerships to ensure supply chain sustainability. Author assumes that KMG even now should seek to ensure the long-term viability of their businesses, primarily by introducing new models of commercial relations and interactions that involve the formation of a supplier ecosystem in order to radically simplify standards, processes, and interfaces, reduce costs, and improve the overall system's speed and quality.
5. Development of a future organizational model, including a new approach to personnel management and a new organizational structure. Oil and gas companies are no longer regarded as the most desirable employers in many countries. It has become increasingly difficult for them to attract not only top scientists and technologists, but also the best new talent for work in advanced - including digital - technologies and commercial activities.

The industry's fundamentals have shifted, and the new reality's rules will be harsh. However, if KMG is willing to continue to outperform, it should direct resources toward acquiring and expanding strong portfolios of assets and projects, innovate, and use advanced operating models, possibly far ahead of today's standard practice, in order to exceed expectations and win. It's time to think strategically and take decisive action.

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7 List of figures and tables

List of figures

Figure 1: Cash conversion cycle procedure.....	29
Figure 2: KazMunayGas shareholders	38
Figure 3: Share of output of the oil and gas industry in GDP.....	41
Figure 4: The exchange rate KZT to USD	41
Figure 5: Oil prices.....	43
Figure 6: Proportion of non-current/current assets.....	45
Figure 7: Equity&Liability	47
Figure 8: The relationship between COGS and Gross profit.....	49
Figure 9: The Correlation coefficient between oil price and KZT	50
Figure 10: Equity&Liabilities proportion.....	54
Figure 11: The growth rate of KMG	56
Figure 12: Liquidity ratios.....	61
Figure 13: Leverage ratios.....	65
Figure 14: Profitability ratio.....	69
Figure 15: Activity Ratio.....	74
Figure 16: Net working capital.....	76
Figure 17: Cash conversion cycle (in days).....	77

List of tables

Table 1: Horizontal and Vertical Analysis comparison.....	19
Table 2: Balance Sheet	30
Table 3: Equity and Liabilities	31
Table 4: The world oil information	40
Table 5 Vertical analysis of Assets	44
Table 6: Vertical analysis of Equity&Liability	46
Table 7: Profit&Loss vertical analysis	48
Table 8: Horizontal analysis of assets (in million USD)	51
Table 9: Horizontal analysis of Equity&Liabilities.....	53
Table 10: Horizontal analysis of Income statement.....	55
Table 11: Current ratio	58
Table 12: Quick ratio.....	59

Table 13: Cash ratio	60
Table 14: Debt to equity ratio	62
Table 15: Interest ratio	63
Table 16: Debt ratio	64
Table 17: Net profit margin.....	66
Table 18: Return on Assets	67
Table 19: Return on Equity.....	68
Table 20: Asset turnover ratio.....	70
Table 21: Inventory turnover ratio	71
Table 22: Payables Turnover Ratio.....	72
Table 23: Receivables Turnover ratio	73
Table 24: Net working capital (in millions USD).....	75
Table 25: Cash conversion cycle.....	76
Table 26: DuPont analysis	78