

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics



Master's Thesis

Economic analysis of a selected company

Xiao Lige

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DIPLOMA THESIS ASSIGNMENT

Bc. Lige Xiao, BSc

Economics and Management

Thesis title

Economic Analysis of Selected Company

Objectives of thesis

The diploma thesis focuses on the economic analysis of Xiaomi Corporation in the years 2015 to 2019. The objective of this diploma thesis is to assess its overall economic situation using different tools of economic analysis to evaluate its financial status, competitiveness in the industry, the potential threat and new opportunities, etc. And according to the results of the analysis, submit proposals and measures for the future stability and development of the company.

Methodology

The economic analysis includes internal financial analysis and external environment analysis. Financial analysis is an analysis of the financial status of the selected company, which mainly focuses on evaluating its productivity, liquidity and stability of the company by analysing the financial statement. External environment analysis includes PEST analysis of the macro environment and POTER analysis of the industry's competitiveness. In the end, the diploma thesis will use SWOT analysis to analyse Xiaomi's strengths, weaknesses, opportunities and challenges in the context of the company's internal and external environment, and propose strategies based on the company's core competencies.

The proposed extent of the thesis

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Keywords

economic analysis, financial analysis, development strategy, proffitability, SWOT, PEST

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Davidson Wallace. Financial Statement Analysis: Basis for Management Advice. John Wiley & Sons: 2020. 217p. ISBN 9781119742326.

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Zhang Xinmin and Qian Aimin. Financial Statement Analysis. Beijing: Renmin University of China Press: 2019. 364p. ISBN 9787300271620.

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The Diploma Thesis Supervisor

Ing. Jiří Mach, Ph.D.

Supervising department

Department of Economics

Electronic approval: 28. 8. 2021

prof. Ing. Miroslav Svatoš, CSc.

Head of department

Electronic approval: 19. 10. 2021

Ing. Martin Pelikán, Ph.D.

Dean

Prague on 29. 03. 2022

Declaration

I declare that I have worked on my master's thesis titled "Economic analysis of a selected company" 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 28.03.2022

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Economic analysis of a selected company

Abstract

This diploma thesis selected Xiaomi Technology Co., Ltd. to do economic analysis. Xiaomi Technology Co., Ltd. is a global mobile Internet company with mobile phones, smart hardware and IoT platforms at its core. In 2020, the number of smartphone shipment of Xiaomi was 46.6 million worldwide, with a market share of 13.5%, ranking fourth globally and third in China.

This thesis is divided into the theoretical part and the practical part. The theoretical part explains the basic concepts and methods used. The practical part applies these methods to analyse the financial statement data of Beijing Xiaomi Technology Company Limited for the period 2016-2020. The results of the economic analysis show that Xiaomi's asset structure and debt structure have remained relatively stable. However, cash flow figures are volatile and Xiaomi's net cash flow from operations may face a large financial deficit.

In addition, Xiaomi may experience a decline in sales of mobile phone sales, due to factors such as increasing competitive pressure in the Chinese mobile phone market and the slowdown in macroeconomic growth following the COVID-19 pandemic. Therefore, the company should constantly build its own core competitiveness, towards the development of diversified competition mode.

Keywords: business, financial statements , financial analysis, profitability, liquidity, activity, economic analysis, SWOT, PEST

Ekonomická analýza vybrané společnosti

Abstrakt

Tato diplomová práce pojednává o ekonomické analýze společnosti Technology Co., Ltd.. Xiaomi Technology Co., Ltd. je globální mobilní internetová společnost s mobilními telefony, chytrým hardwarem a platformami IoT. V roce 2020 bylo celosvětově 46,6 milionů dodaných smartphonů Xiaomi s podílem na trhu 13,5 %, což je čtvrté místo na světě a třetí v Číně.

Tato práce je rozdělena na část teoretickou a část praktickou. V teoretické části jsou vysvětleny základní pojmy a používané metody. Praktická část aplikuje tyto metody na analýzu dat účetní závěrky společnosti Beijing Xiaomi Technology Company Limited za období 2016-2020. Výsledky ekonomické analýzy ukazují, že struktura aktiv a dluhová struktura Xiaomi zůstala relativně stabilní. Údaje o peněžních tocích jsou však nestálé a čistý peněžní tok společnosti Xiaomi z operací může čelit velkému finančnímu deficitu.

Kromě toho může Xiaomi zaznamenat pokles prodeje mobilních telefonů v důsledku faktorů, jako je rostoucí konkurenční tlak na čínském trhu mobilních telefonů a zpomalení makroekonomického růstu po pandemii COVID-19. Společnost by proto měla neustále budovat svou vlastní základní konkurenceschopnost směrem k rozvoji režimu diverzifikované konkurence.

Klíčová slova: obchod, finanční výkazy, finanční analýza, ziskovost, likvidita, aktivita, ekonomická analýza, SWOT, PEST

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List of abbreviations

GDP	Gross Domestic Product
IOT	Internet of Things
ROA	Return on Assets
ROE	Return on Equity

1 Introduction

In recent years, the number of mobile internet users has increased rapidly, gradually overtaking the scale of fixed internet users, and we have entered an era of rapid mobile internet development. Xiaomi, a technology company, has seen the Internet play a key role in the entire process of developing, promoting, and selling its mobile phone products. In less than four years of its existence, the company has reached the status of a leader in China's mobile phone industry in terms of mobile phone shipments, sales, market capitalization and market share. With the mobile internet has become the current backdrop for competition in the global information industry, Xiaomi needs to continue to build its core competencies and move towards a strategic model more suited to the business. In this context, managers and investors need to conduct an economic analysis to understand the economic situation of the company so that they can make better judgments and decisions.

Economic analysis includes internal financial analysis and external environment analysis. Internal financial analysis is mainly to analyze the financial situation of selected companies. Financial ratios and other financial analysis methods are used to evaluate productivity, liquidity, activity, and leverage. The external environment refers to the external factors, including policy, culture and technology, which are not fully controlled by an enterprise. In this part, PEST analysis is used to explain its macro environment, and Porter analysis is used to evaluate the competitiveness of the whole industry. Finally, the thesis will combine the internal financial analysis and external environment of Xiaomi mobile phone company, use the SWOT analysis method to analyze the company's strengths, weaknesses, opportunities and challenges, and put forward the development of strategic goals based on the core competitiveness of the enterprise.

Xiaomi Corporation is a leading mobile phone manufacturing company in China. This thesis provides an in-depth analysis of the overall economic situation of Xiaomi company and proposes some development strategies based on its specific situation, which are of great practical significance to the future development strategies of the growing Xiaomi company.

2 Objectives of work

Xiaomi Technology Co., Ltd. is a typical Internet company, i.e. it relies on the Internet to develop its mobile phone business. Since its establishment in April 2010, Xiaomi has been following the trend of mobile internet development, with the product concept of "built for enthusiasts", and has achieved the best price/performance ratio for smartphones, which has been affirmed by the industry and consumers and has greatly stimulated the market demand. In 2013, Xiaomi began to explore international markets and has entered six countries and regions so far. Xiaomi was named to the 2019 Forbes list of China's most innovative companies in June 2019, entered the 2019 World 500 list the following month, and was included in the 2020 Global Top 100 Innovations list, with patents such as AI among the top in the world.

The objective of this thesis is to assess the overall economic situation of Xiaomi Technology Limited from 2016 to 2020, including its financial position, industry competitiveness, opportunities and threats. And based on the results of the analysis, make some suggestions for its future development.

The first part of the thesis is the theoretical part. This part will provide basic explanations and definitions of economic analysis and its elements, such as concepts, functions, methods, users, etc., based on professional literature. The second part is the practical part, where calculations, discussions and analyses are carried out on the basis of statistics. At the same time, analytical methods such as SWOT, PEST, and Porter are used to process and summarise.

3 Literature Review

3.1 Use of an economic analysis on company level

3.2 Concept of Company

The company environment contains many elements is a complex and comprehensive concept, from the subjective and objective aspects can be divided into two aspects of the internal environment and the external environment. The company environment is an open system, its various factors are interdependent, interconversion, mutual constraints, the company's production, management, operation and other activities are carried out in the company environment, subject to the influence of its constituent factors. To define the company environment as a whole, the internal environment and the external environment combined and exist.

3.2.1 External environment of company

Classical strategic management theory classifies the external environment of a company into three main categories: the general environment, the industry environment and the competitor environment. The general environment is the general environment, which describes all factors in society that affect the industry and the company, including demographic, economic, political and legal, sociocultural, technological, global and natural environmental factors. The industry environment is based on Porter's Five Forces. The industry environment is represented by Porter's Five Forces model and includes factors such as the threat of new entrants, the intensity of competition between competitors, the threat of substitutes, buyer bargaining power and supply-side bargaining power. The competitor environment is used to analyze the future objectives, current strategies, industry perceptions and the strengths and weaknesses of key competitors. (Deng Haitao,1991,p56)

The purpose of analyzing the external business environment of a company is to find out the market opportunities that the external environment can provide for the company and the multiple threats that the external environment poses to the development of the company.

3.2.2 Internal environment of company

The internal environment of the company comprises factors within the company which impact the success and approach of operations. Unlike the external environment, the company has control over these factors. In other words, the internal environment refers to the culture, members, events and factors within an organization that has the ability to

influence the decisions of the organization, especially the behavior of its human resource. Here, members refer to all those people which are directly or indirectly related to the organization such as the owner, shareholders, managing director, board of directors, employees, and so forth.

The Internal Analysis of strengths and weaknesses focuses on internal factors that give an organization certain advantages and disadvantages in meeting the needs of its target market. Strengths refer to core competencies that give the firm an advantage in meeting the needs of its target markets. Any analysis of company strengths should be market-oriented/customer-focused because strengths are only meaningful when they assist the firm in meeting customer needs. Weaknesses refer to any limitations a company faces in developing or implementing a strategy. Weaknesses should also be examined from a customer perspective because customers often perceive weaknesses that a company cannot see. Being market-focused when analyzing strengths and weaknesses does not mean that non-market-oriented strengths and weaknesses should be forgotten. Rather, it suggests that all firms should tie their strengths and weaknesses to customer requirements. Only those strengths that relate to satisfying a customer's need should be considered true core competencies. (Deng Haitao, 1991, p60)

3.3 Economic analysis

3.3.1 Concept of economic analysis

Economic analysis is the study of economic systems. It may also be a study of a production process or an industry. The analysis aims to determine how effectively the economy or something within it is operating. An economic analysis of a company focuses mainly on how much profit it is making. They also evaluate how the economic scenarios would affect company decisions and the achievement of goals. Economic analysis is also made when evaluating specific projects in order to consider economic and financial feasibility. (Ken He, 2007, p3-9)

In business, economic analysis allows incorporating of elements from the economic environment such as inflation, interest rates, exchange rates and GDP growth into corporate planning. Every organization is an open system that impacts and is impacted by the external context. This means that a proper assessment of economic variables facilitates the identification of opportunities and threats that could affect the company's performance.

3.3.2 Purposes of economic analysis

Efficient business management contributes to the healthy development of an enterprise, and accurate and effective economic analysis can identify problems in the management of an enterprise and provide the management of the enterprise with appropriate improvement measures and recommendations. Economic analysis is used to

evaluate the past and current financial situation of a company and to identify possible problems and deficiencies in the management of the company or enterprise, as well as possible risks to the financial situation. Economic analysis can also be used to verify the accuracy of a company's strategic objectives in the early stages so that adjustments can be made to meet the needs of the market. Economic analysis can also be used to forecast the future direction of a company and provide investors and management with a basis for decision making. (William K., 2015, P78)

3.3.3 Users of economic analysis

Before the start of each analysis, it is necessary to determine to whom and for what purpose the analysis will serve. Because different entities may want to find out different facts about the same organization depending on what purpose the information will be used for. The users of the company's economic analysis are not only managers and related companies, but also its shareholders, investors; banks; suppliers, tax services, etc.

Typical users of the economic analysis are:

Managers: They usually use the information provided by the economic analysis to control the fulfillment of the goals and to decide on the further development of the company. Information is important for strategic and operational management. The evaluation focuses on complex or partial aspects of the business.

Investors: They analyze the assets and profitability of the enterprise to decide whether to invest; analyze the profitability, share price movements and development prospects to decide whether to transfer shares; analyze the level of profitability of assets, the risk of insolvency and competitiveness to examine the performance of the operator; analyze the financing situation to decide on the dividend distribution policy.

Creditors: They analyze the rewards and risks of the loan to decide whether to lend to a business; analyze its liquidity to understand the debtor's short-term solvency; analyze its profitability to understand the debtor's long-term solvency; evaluate its value to decide whether to cede the claim.

Suppliers: They analyze to see if the business can work with them in the long term; to find out what the level of sales credit is; and whether they should extend payment terms to the business.

Government: They use it to find out how well the business pays taxes; how well it complies with government regulations and market order; and the income and employment status of its employees. (Qi Lin, 2016, p15)

3.4 Financial analysis

3.4.1 Concept of financial analysis

Financial statement analysis is the process of finding useful information from financial statements based on the financial statements and other information of an enterprise, using special analytical tools and methods to effectively identify. The process of evaluating an enterprise's financial position, results of operations and cash flows in a comprehensive manner is based on the reasons for changes in the enterprise's operations and financial position. Different financial reports express different contents and play different roles. The purpose of financial reporting analysis is to convert a large amount of financial data into information that is useful for specific decision-making purposes and to evaluate the financial strength, performance, management efficiency and risks and prospects of a company. It provides a basis for decision-making by stakeholders. (Davidson Wallace, 2020, p12)

3.4.2 Sources of financial analysis

The three main sources of data for financial analysis are a company's balance sheet, income statement, and cash flow statement.

The balance sheet outlines the financial and physical resources that a company has available for business activities in the future. The balance sheet shows the position of the company's assets (assets) in monetary terms on the one hand and the sources of the company's assets (liabilities) in monetary terms on the other. It is based on the principle of equilibrium, i.e. assets must equal the sum of equity and liabilities. The balance sheet is published at a specific point in time, usually the last day of the accounting period.

In contrast to the balance sheet, the income statement provides information about a company's performance over a certain period of time. Although it does not reveal much about the company's current financial condition, it does provide indications of its future viability. The main elements of the income statement are revenues earned, expenses incurred, and net profit or loss. Revenues consist mainly of sales, though financial analysts may also note the inclusion of royalties, interest, and extraordinary items. Likewise, operating expenses usually consists primarily of the cost of goods sold, but can also include some unusual items. Net income is the "bottom line" of the income statement. This figure is the main indicator of a company's accomplishments over the statement period.

The cash flow statement is similar to the income statement in that it records a company's performance over a specified period of time. The difference between the two is that the income statement also takes into account some non-cash accounting items such as depreciation. The cash flow statement strips away all of this and shows exactly how much actual money the company has generated. Cash flow statements show how companies have performed in managing inflows and outflows of cash. It provides a sharper picture of a

company's ability to pay bills, creditors, and finance growth better than any other one financial statement.

3.4.3 Contents of financial analysis

Financial analysis is mainly based on the accounting statements provided by the company, such as the financial statements and notes thereto, which do not tell us much about the balances of accounting accounts in absolute dollar terms. In order to obtain different comparative data, it is necessary to use different calculation and combination methods to compare and analyse the collected accounting data indicators, to identify their relevance, and to predict and prevent possible negative consequences of these data based on their trends. The different objectives of financial analysis correspond to the corresponding methods of financial analysis. The following are some of the most commonly used methods of financial analysis.

1.The weighting method

The weighting method generally reveals the structural relationship between similar items in the same financial statements by calculating the weight of similar items in the total, thus reflecting the vertical relationship between the items in the financial statements. The ratio analysis will generally only involve items of the same type and will not be calculated between items, nor will the results be meaningful. The ratio of each asset to total assets is a financial indicator that is often analysed, and when total assets are taken as a unit, the ratio of each asset to total assets is the weighting factor for that asset. Other commonly used financial indicators include inventory weighting factors, liability weighting factors, owner's equity weighting factors, profit weighting factors, revenue weighting factors, cost weighting factors, etc. The weight coefficients of these data indicators in the total data can be determined by the ratio method, whereby the influence of the financial data on the total data is judged by the magnitude of the ratio weight coefficient. The weighting method therefore focuses on the weighting relationships between the same types of financial indicators.

2.The correlation ratio method

The correlation ratio method reflects the cross-sectional relationship between the relevant items in the financial statements, using a method that calculates the ratio between two different types of financial indicators that have an impact on each other. The ratio is a measure of the long-term solvency of an enterprise, such as the asset ratio, the interest coverage multiple, etc. In general, commonly used relevant ratios include: the asset debt ratio and the interest cover multiple, which reflect the long-term solvency of an enterprise;

the quick-freeze ratio and the liquidity ratio, which reflect the solvency of an enterprise; the inventory turnover rate and the accounts receivable turnover rate, which reflect the efficiency of an enterprise's asset management; and the return on total assets, which reflects the profitability of an enterprise.(Zhang Xianzhi,2001,P33-39)

3.The single analysis method

This method of analysis involves the aggregation and calculation of only one value. It reflects the operational status and economic profit and loss position of an enterprise by means of statistics and the calculation of a particular type of data. However, the single analysis method requires a high level of financial and accounting experience, as the criteria for determining the single analysis method are entirely artificial and based on data such as the soundness of the capital structure and liquidity ratios.

4.The comparative analysis

This method of analysis is a common method used in the practical analysis process. The financial items or financial indicators to be analysed are compared with comparable counterparts, including the company's own historical data, industry averages and industry leaders. The difference between them is calculated, and the factors contributing to the difference are further analysed to identify weaknesses and problems, and to explore the company's strengths and potential.(Zhang Xianzhi,2001,P33-39)

5.The trend analysis.

The trend analysis method compares the financial statements of a company over several consecutive accounting periods, comparing the direction and magnitude of changes in each financial item over these periods, and thus identifying trends. The trends can be used to analyse business behaviour and strategic business objectives. It is a viable method for making effective judgements about a company's strategic objectives and future development. The trend analysis method not only analyses the main factors that lead to changes, but also allows to determine whether the trends are favourable and to predict the future development.(Zhang Xianzhi,2001,P33-39)

6.The comprehensive analysis

A comprehensive financial analysis is usually a holistic evaluation of an enterprise's multifaceted situation using a comprehensive indicator, which has a more analytical meaning. The integrated analysis method is generally based on the above-mentioned

analysis methods, and incorporates the indicators of the enterprise's operation, debt servicing and profitability into a single integrated indicator to analyse the financial situation and operating results in a holistic manner.(Zhang Xianzhi,2001,P33-39)

4 Methodology

4.1 Financial analysis

Financial ratios have been advantageously more subjected to empirical analysis. The analytical significance of financial ratios has been examined with reference to corporate bankruptcy, and bond ratings and the relationship of individual financial ratios to industry averages. A Commonly used analytical tool for verifying the performance of a firm is ratio analysis.

While ratios are easy to compute, which in part explains their wide appeal, their interpretation is problematic, especially when two or more ratios provide conflicting signals. Indeed, ratios analysis is often criticized on the grounds of subjectivity, which is the analyst, must pick and choose ratios to assess the overall performance of a firm. (Eeroz EH, Raab R and Haag S, 2001)

4.1.1 Liquidity ratios

Ratios of short term liquidity measure the ability of the firm to meet recurring financial obligations (that is, to pay its bills). To the extent a firm has sufficient cash flow; it will be able to avoid experiencing financial distress. Accounting liquidity measures short term solvency and it often associated with net working capital, the difference between current assets and current liabilities. The most widely used measures of accounting liquidity are the current ratio and the quick ratio.(Baruch Lev,1969,P290-299)

Current ratio	= Current Assets/Current Liabilities	1
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It is a measure of a company's ability to pay off its short-term debt as it comes due. Though the ideal current ratio depends to some extent on the type of business, a general rule of thumb is that it should be at least 2:1. A lower current ratio means that the company may not be able to pay its bills on time, while a higher ratio means that the company has money in cash or safe investments that could be put to better use in the business.

The quick ratio	= Quick Assets (cash, marketable securities, and receivables) / Current Liabilities	2
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This ratio provides a stricter definition of the company's ability to make payments on current obligations. Ideally, this ratio should be 1:1. If it is higher, the company may keep too much cash on hand or have a poor collection program for accounts receivable. If it is

lower, it may indicate that the company relies too heavily on inventory to meet its obligations.

Cash ratio	= Cash/Current Liabilities	3
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It is the ratio of cash and cash equivalents, those are assets which can be converted into cash quickly, of a company to its current liabilities. It measures the ability of a business to repay its current liabilities by only using its cash and cash equivalents and nothing else.

4.1.2 Profitability ratios

One of the most difficult attributes of a firm to conceptualize and measure is profitability. The absolute level of profit may provide an indication of the size of the business, but on its own it says very little about company performance.

Profitability refers to management's performance in using the resources of a business. Many measures of profitability involve calculating the financial return that the company earns on the money that has been invested. Most entrepreneurs decide to start their own businesses in order to earn a better return on their money than would be available through a bank or other low-risk investments. If profitability measures demonstrate that this is not occurring—particularly once a small business has moved beyond the start-up phase—then the entrepreneur should consider selling the business and reinvesting his or her money elsewhere. It is important to note that many factors can influence profitability measures, including changes in price, volume, or expenses, as well the purchase of assets or the borrowing of money.

Net profit margin	=net profit/ sales	4
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A profit margins return the firm's ability to produce a product or service at a low cost or a high price. Profit margins are not direct measures of profitability because they are based on total operating revenue, not on the investment made in assets by the firm or the equity investors.

Gross profit margin	=gross profit/ sales	5
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A measure of a company's profitability that is expressed as a percentage of gross profit. The gross margin is not an exact estimate of the company's pricing strategy but it

does give a good indication of financial health. Without an adequate gross margin, a company will be unable to pay its operating and other expenses and build for the future.

Return on assets	=net profit/average total assets	6
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ROA is an indicator of how profitable a company is relative to its total assets. ROA provides an idea as to how proficient management is at using its assets to cause earnings. Calculated by dividing a company's annual earning by its total assets, ROA is demonstrated as a percentage. The higher the ROA, the more a company earns on a smaller investment.

Return on equity	=net profit/ equity	7
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ROE is the amount of net income returned as a percentage of shareholders equity. Return on equity evaluates a corporation's profitability by telling how much profit a company causes with the money shareholders have invested.

Asset Turnover	=net sales/ average total assets.	8
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Asset turnover is assessed by the asset turnover to know whether the company is using its assets effectively in generating sale revenue.

4.1.3 Leverage ratios

Leverage refers to the proportion of a company's capital that has been contributed by investors as compared to creditors. In other words, leverage is the extent to which a company has depended upon borrowing to finance its operations. A company that has a high proportion of debt in relation to its equity would be considered highly leveraged. Leverage is an important aspect of financial analysis because it is reviewed closely by both bankers and investors. A high leverage ratio may increase a company's exposure to risk and business downturns, but along with this higher risk also comes the potential for higher returns.

Debt ratio	=total liabilities/ total assets	9
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The debt ratio is calculated by dividing total debt by total assets. Debt ratios provide information about protection of firms to obtain additional financing for potentially

attractive investment opportunities. Some forms of debt may not appear on the balance sheet at all, such as pension liabilities or lease obligations.

Debt to equity ratio	=total debt / total equity	10
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It shows a firm's total debt in relation to the total dollar amount owners have invested in the firm.

Equity multiplier	=total assets/ total equity	11
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Equity multiplier is a financial leverage ratio that evaluates a company's use of debt to purchase assets.

4.1.4 Activity ratios

The ability of the firm to control its investment in assets.

Collection period	= days in period/ receivables turnover	12
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This indicates the average number of days that sales are outstanding. In other words, it reports the number of days it takes, on average, to collect credit sales.

Inventory turnover	= cost of goods sold/ average inventory	13
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The ratio of inventory turnover is calculated by dividing the cost of goods sold by year-end inventory.

Inventory period	= days in period/ inventory turnover	14
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It is measured how quickly inventory is produced and sold.

4.2 PEST analysis

The purpose of comparative analysis of external uncontrollable factors is to grasp the favorable opportunity, avoid risks, and improve the rapid response ability, innovation, change and sustainable development ability of enterprises. PEST analysis is a basic tool for

strategic external environment analysis, which is used to analyze the impact of the macro environment of an enterprise on its strategy. (Wang and Liu, 1997, 88-90)

PEST analysis refers to the analysis of the macro environment and represents the four categories of factors that influence the development of a company's strategy: Political, Economic, Social and Technological.

4.2.1 Political and legal environment

The political environment mainly includes the political system and institutions, the political situation, the attitude of the government, etc.; the legal environment mainly includes the laws and regulations made by the government. As one of the factors influencing corporate strategic decision making, the political environment has the following characteristics: the political environment directly affects the operating conditions of enterprises and it is difficult for enterprises to predict the changing trend of the national political environment. In addition, once the political environment affects enterprises, such changes are irreversible.

4.2.2 Economic environment

The economic factor examines outside economic issues that can play a role in a company's success. For this analysis, look at interest rates, exchange inflation, unemployment, gross domestic product, credit availability and rise and fall of the middle class. Lubrano noted it's important to look at what the Fed is doing in terms of the tax rate as "this is what your pocketbook/wallet lives on every day." Economic Factors take into account the various aspects of the economy, and how the outlook on each area could impact your business. These economic indicators are usually measured and reported by Central Banks and other Government Agencies. Economic Growth rates, Interest rates, Exchange Rates, Inflation.

4.2.3 Social-cultural environment

With the social factor, a business can analyze the socioeconomic environment of the given industry's market to understand how consumer needs are shaped and what brings them to the market for a purchase. Among the items that should be examined are demographics, population growth rates, age distribution, attitudes toward work and job market trends. "We look at what changes in culture and society are taking place. The drive to eat healthier, the drive to care for the environment, baby boomers staying in the

workforce longer, adults have fewer children later in life. All of these impact how consumers buy houses, cars, etc.," said Lubrano. PEST analysis also takes in consideration social factors, which are related to the cultural and demographic trends of society. Social norms and pressures are key to determining a society consumerist behavior. Factors to be considered are the following: Cultural Aspects, Health Consciousness,

Populations Growth rates, Age Distribution, Career Attitudes, and the Rate of change in technology.

4.2.4 Technical environment

Technology plays a huge part in business, and it can impact it either negatively or positively. With the introduction of new products, new technologies and services, a certain marketplace can have a tough time adjusting so it's important to assess the technology from all angles. Technological Factors are linked to innovation in the industry, as well as innovation of the overall economy. Not being up to date to the latest trends of a particular industry can be extremely harmful to operations. Technological Factors include the following: R&D-Activity, Automation, and Technological Incentives.

Specific items that need to be scrutinized include, but are not limited to, government spending on technological research, the life cycle of current technology, the role of the internet and how any changes to it may play out, and the impact of potential information technology changes. (Wang and Liu, 1997, 88-90)

Graph 1 PEST analysis model graphical representation



Source: <https://www.pinterest.com/>

4.3 SWOT analysis

A SWOT analysis is an organized list of company's greatest strengths, weaknesses, opportunities, and threats. Strengths and weaknesses are internal to the company. They can be changed over time but not without some work. Opportunities and threats are

external, they are out there in the market, happening whether like it or not. Companies can't change them. Existing companies can use a SWOT analysis, at any time, to assess a changing environment and respond proactively. New businesses should use a SWOT analysis as a part of their planning process. A SWOT analysis can be carried out for a product, place, industry, or a person.

A SWOT analysis is designed to facilitate a realistic, fact-based, data-driven look at the strengths and weaknesses of an organization, its initiatives, or an industry. The organization needs to keep the analysis accurate by avoiding pre-conceived beliefs or gray areas and instead focusing on real-life contexts. Companies should use it as a guide and not necessarily as a prescription. SWOT analysis is a technique for assessing the performance, competition, risk, and potential of a business, as well as part of a business such as a product line or division, an industry, or other entity. Using internal and external data, a SWOT analysis can tell a company where it needs to improve internally, as well as help develop strategic plans. The technique can guide businesses toward strategies more likely to be successful, and away from those in which they have been, or are likely to be, less successful. (Tang Taozhi, 2002, 23-25)

4.4 Porter's five forces analysis

The Five Forces is a framework for understanding the competitive forces at work in an industry, and which drive the way economic value is divided among industry actors.

First described by Michael Porter in his classic 1979 Harvard Business Review article, Porter's insights started a revolution in the strategy field and continue to shape business practice and academic thinking today. A Five Forces analysis can help companies assess industry attractiveness, how trends will affect industry competition, which industries a company should compete in and how companies can position themselves for success. Every industry is different, but the underlying drivers of profitability are the same in every industry. The Five Forces determine the competitive structure of an industry, and its profitability. Industry structure, together with a company's relative position within the industry, are the two basic drivers of company profitability. Analyzing the Five Forces can help companies anticipate shifts in competition, shape how industry structure evolves, and find better strategic positions within the industry. Industry structure changes over time, and is not static. Over time, buyers or suppliers can become more or less powerful. Technological or managerial innovations can make new entry or substitution more or less likely. Changes in regulation can change the intensity of rivalry, or affect barriers to entry. Choices by competition, such as new pricing or distribution approaches, can also affect the path of industry competition. Five Forces analysis is essential to anticipate and exploit industry structural change. (Fleisher, C. and Bensoussan, B, 2003)

The five forces are:

(1) Supplier power. An assessment of how easy it is for suppliers to drive up prices. This is driven by the number of suppliers of each essential input; uniqueness of their product or service; relative size and strength of the supplier; and cost of switching from one supplier to another. Strong bargaining power allows suppliers to sell higher priced or low quality raw materials to their buyers. This directly affects the buying firms' profits because it has to pay more for materials. Suppliers have strong bargaining power when:

- There are few suppliers but many buyers;
- Suppliers are large and threaten to forward integrate;
- Few substitute raw materials exist;
- Suppliers hold scarce resources;
- Cost of switching raw materials is especially high.

(2) Buyer power. An assessment of how easy it is for buyers to drive prices down. This is driven by the number of buyers in the market; importance of each individual buyer to the organization; and cost to the buyer of switching from one supplier to another. If a business has just a few powerful buyers, they are often able to dictate terms. Buyers have the power to demand lower price or higher product quality from industry producers when their bargaining power is strong. Lower price means lower revenues for the producer, while higher quality products usually raise production costs. Both scenarios result in lower profits for producers. Buyers exert strong bargaining power when:

- Buying in large quantities or controlling many access points to the final customer;
- Only a few buyers exist;
- Switching costs to other suppliers are low;
- They threaten to backward integrate;
- There are many substitutes;
- Buyers are price sensitive.

(3) Competitive rivalry. The main driver is the number and capability of competitors in the market. Many competitors, offering undifferentiated products and services, will reduce market attractiveness. This force is the major determinant on how competitive and profitable an industry is. In a competitive industry, firms have to compete aggressively for a market share, which results in low profits. Rivalry among competitors is intense when:

- There are many competitors;
- Exit barriers are high;

- Industry of growth is slow or negative;
- Products are not differentiated and can be easily substituted;
- Competitors are of equal size;
- Low customer loyalty.

(4) Threat of substitution. Where close substitute products exist in a market, it increases the likelihood of customers switching to alternatives in response to price increases. This reduces both the power of suppliers and the attractiveness of the market. This force is especially threatening when buyers can easily find substitute products with attractive prices or better quality and when buyers can switch from one product or service to another with little cost. For example, to switching from coffee to tea doesn't cost anything, unlike switching from car to bicycle.

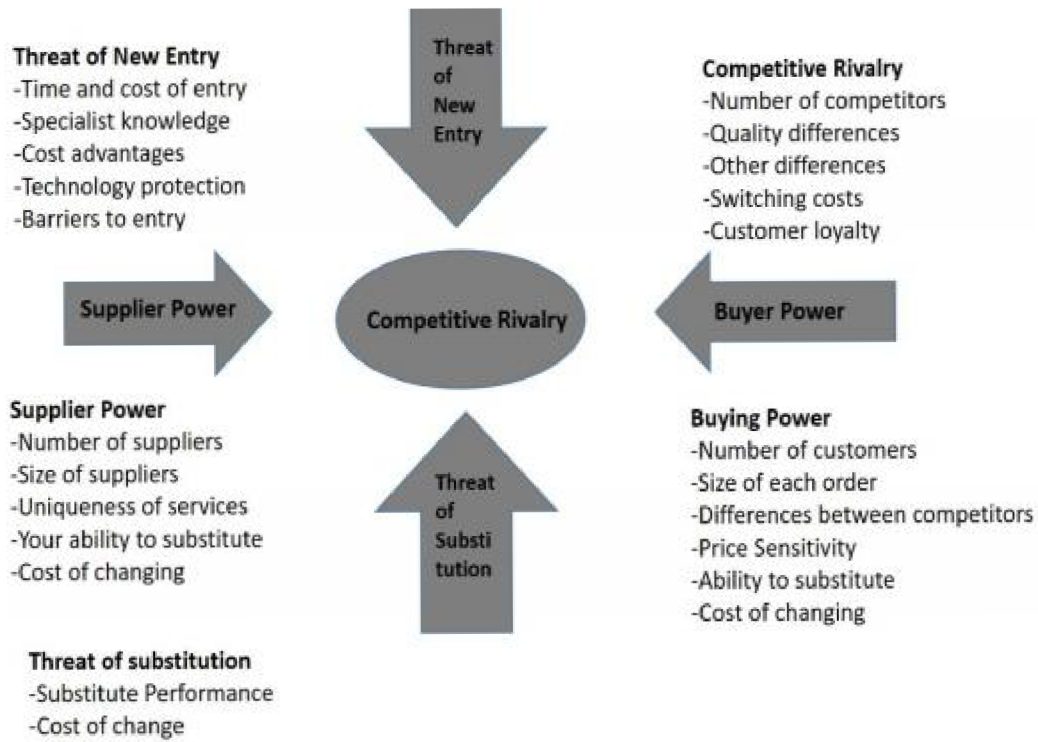
(5) Threat of new entrants. Profitable markets attract new entrants, which erodes profitability. Unless incumbents have strong and durable barriers to entry, for example, patents, economies of scale, capital requirements or government policies, then profitability will decline to a competitive rate. This force determines how easy (or not) it is to enter a particular industry. If an industry is profitable and there are few barriers to enter, rivalry soon intensifies. When more organizations compete for the same market

share, profits start to fall. It is essential for existing organizations to create high barriers to enter to deter new entrants. The threat of new entrants is high when:

- Low amount of capital is required to entry a market;
- Existing companies can do little to retaliate;
- Existing firms do not possess patents, trademarks or do not have established brand reputation;
- There is no government regulation;
- Customer switching costs are low (it doesn't cost a lot of money for a firm to switch to other industries);
- There is low customer loyalty;
- Products are nearly identical;
- Economies of scale can be easily achieved.

Five forces analysis helps organizations to understand the factors affecting profitability in a specific industry, and can help to inform decisions relating to: whether to enter a specific industry; whether to increase capacity in a specific industry; and developing competitive strategies.

Graph 2 Porter's five forces model



Source: Author's compilation

5 Practical Part

5.1 Company profile

5.1.1 Basic information

Beijing Xiaomi Technology Company Limited, a.k.a. Xiaomi company. It was established in April 2010 with a registered capital of 50 million yuan in Beijing. The company's name is unique in that the pinyin for "Mi" is "MI", which can be seen as an abbreviation for "Mobile Internet", indicating that Xiaomi is a mobile Internet company, or as an abbreviation for "mission impossible", suggesting that Xiaomi wants to accomplish the impossible mission. In addition, Xiaomi's new logo is a character of the heart in Chinese upside down, with one less dot, which means that users can save a little money.

Xiaomi is the first Chinese Internet mobile phone company that focuses on three services: hardware, software and Internet services. In its seventh year of business, Xiaomi's annual revenue exceeded 100 billion yuan and the company was listed on the Hong Kong Stock Exchange in 2018 and entered the World Top 500 in July 2019. Xiaomi is not only the fourth largest smartphone manufacturer in the world, ranking in the top five in the mobile phone market in more than 30 countries and regions, but is also the fourth technology company to have its own mobile phone chip development capability after Apple, Samsung and Huawei.

5.1.2 Main Products of the company

As an Internet mobile phone company, Xiaomi focuses on the integration of hardware, software and Internet services. The company's main business can be divided into two main parts: the core business and the expansion business.

Xiaomi Mobile Phones, MIUI and Mi Chat are the three core businesses of Xiaomi.

1. Xiaomi mobile phones are Xiaomi's main hardware products. In terms of design, the company attaches importance to simplicity and texture, with meticulous workmanship and a comfortable feel that is comparable to that of well-known mobile phone brands, and if you look at the various generations of Xiaomi mobile phones, you will find that their body thickness is decreasing and screen size is increasing, which is very much in line with today's mobile phone trends. In terms of hardware configuration, it pursues high quality and cooperates with world-renowned accessory manufacturers. For example, its processor uses the latest Qualcomm Snapdragon 8 Gen1 processor, which runs really fast. In addition, the signal of the Xiaomi phone is very strong, and wherever there is mobile phone signal coverage, its signal is almost full, ensuring good call quality. The Xiaomi phone comes with a 50 megapixel camera, a 5 megapixel macro lens, and a 13 megapixel ultra-wide

angle lens, which is both anti-shake and fast-focusing when shooting, giving photos and photography results on a par with professional filming equipment. This high standard of hardware configuration has won the approval of many mobile enthusiasts, while the pricing of the product is very affordable, according to industry analysis, it is almost close to the cost price, which shows that Xiaomi is committed to achieving the best value for money for its mobile products.

2. Xiaomi phones are equipped with a dual system, the independently developed MIUI system and the Android ecosystem, allowing users to choose according to their preferences. MIUI is a unique system for Xiaomi phones, based on Android, but different from it. MIUI is based on the core design concept of "minimalist aesthetics", which focuses on removing decoration, simplifying hierarchy and returning to the essence of operation. It focuses on removing decoration, simplifying hierarchy, returning to the essence of operation, facilitating user use, caring more about the content and functionality of the product than the form, and pursuing the construction of context, aiming to make users feel like they are there when they open an application. The MIUI system is designed to refine the essence, focus on content and restore context. Compared to Android, MIUI is simpler and more convenient, richer and more user-friendly, and has been recognised as one of the best systems for user interaction in the Chinese mobile market today. Since the first beta version was released on 16 August 2010, MIUI has been used by over 500 million users at home and abroad, covering 80 languages and supporting 221 countries and regions.

3. MiChat is a cross-operating system communication tool that allows you to communicate by voice messages and texts, send and receive pictures when the mobile network is on. As a newest and coolest application for smartphones in the 4G era, MiChat has ended the boring communication between mobile phone users in the 2G era, where people could only communicate with each other by phone, SMS and MMS. Users can use the MiChat software for free voice chat, text chat, handwritten chat and group chat, as well as for instant photo sharing, personalised doodles and voice blogging. Xiaomi Mobile has now launched MiChat for Android, IOS, Windows PC, Windows iPhone and Symbia system, which supports most new mobile phones and computers. In February 2014, MiChat was acquired by Beijing Wally Network Technology Co Ltd and the two teams formed "Xiaomi Entertainment". Xiaomi Entertainment company consists of two main businesses: games and movies, with Mi Chat as the main base, and content sources that integrated various businesses under Xiaomi's system, such as the e-reading company Duowatch, which Xiaomi acquired.

4. After 2013, Xiaomi began expanding its business around digital products with the launch of Xiaomi Box, Xiaomi TV, Xiaomi router, Xiaomi tablet and Xiaomi bracelet.

(1) Xiaomi Box is a high-definition Internet TV box, which allows you to watch a large number of domestic and international TV programmes for free without commercial interruptions through the "China Internet TV" integrated broadcasting platform operated by Future TV. Xiaomi box has a wealth of content resources and applications, and the system software is updated weekly. So far it is the number one selling product in the Tmall box category.

(2) On June 10, 2015, Xiaomi launched the new Xiaomi Router with the first BCM47091.4GHz dual-core CPU, making the router signal more stable and run faster. It mainly enables camera photo backup, movie offline download and online game acceleration. As a smart router, its exclusive mobile app that allows remote control of the router is a highlight of the Xiaomi router.

(3) Xiaomi Tablet is expected to be the best Android tablet in terms of user experience. It has the advantages of a good feel in the body frame, a good retina screen and a fast 4-core processor, and it comes with its own MIUI system, which optimises more than 100 functions in the native Android system, making the operating system more stable and convenient, and making office and entertainment software run more smoothly. The Xiaomi tablet has been well received by consumers since its release.

(4) Xiaomi Band is a new smart bracelet developed by Xiaomi. The bracelet has advanced accessories with features such as long battery life, high level of waterproof and resistance to extreme temperatures and corrosion. Xiaomi's bracelet can record exercise data and sleep quality, then analyse the data and make recommendations to maintain a healthy physical state, as well as having the ability to set alarms and call alerts. As a smart product, its price is very affordable that most consumers can afford it to monitor their health.

At the same time, there is a growing range of related products centred on Xiaomi phones, such as Xiaomi headphones, protective cases, mobile power, Xiaomi' theme software and more.

5.1.3 Business model of the company

The business model of a company is simply the way in which the company makes its profits and money, and the whole range of products and services that the company uses to make its profits and money forms a business model system. Choosing a good business

model generally means that the company is halfway to business success. A business model without any special features will not usually lead to spectacular successes and breakthroughs.

1. Xiaomi Mobile's mobile phone user profile is tailored for mobile phone enthusiasts, and "For enthusiasts" is the philosophy of Xiaomi company. Most of the mobile phone models on the market are targeted at the general public, with prices ranging from hundreds yuan to thousands yuan, and the users are workers, farmers, civil servants, white-collar workers and business people. Xiaomi Mobile's unique Internet infrastructure has been able to capture the needs of this unique group and has been able to launch high-performance mobile phones for enthusiasts and win the market quickly. Mobile enthusiasts are not all "rich, handsome and beautiful" white-collar workers, they are generally urban youths and young students who have a good understanding of the mobile phone industry and are interested in pursuing the latest mobile phone hardware and software. These groups spend much of their spare time communicating with friends and family on their mobile phones, shopping and entertaining themselves online with their mobile phones, and their curiosity about new things and time make them the most active group on the mobile Internet.

The marketing approach of Xiaomi is unique and differs from other traditional manufacturing companies. In terms of product types, Xiaomi does not have a large number of phones, and almost always launches one to two phones a year, in a manner very similar to that of Apple. This is one of the key features of Xiaomi phones. The software of Xiaomi phones, especially the mobile operating system, is developed with the participation of Xiaomi enthusiasts, and a new version of MIUI is released every week. The company's software experience has strengthened the bond between Xiaomi Mobile and Xiaomi Mobile users. Xiaomi is positioned as an enthusiast phone and its sales are mainly based on word-of-mouth marketing and experiential marketing. The fact that Xiaomi is a smartphone by nature means that its sales are closely linked to the Internet. From the first and second launches of Xiaomi phones, the company has leveraged the influence of its senior executives in the Internet industry to promote and market Xiaomi phones to the fullest extent. In addition to the enthusiastic Xiaomi enthusiasts, all the major print and Internet media would send their best people to cover the event, making the latest Xiaomi news a hot topic in the news media and on the Internet. In addition, Xiaomi also uses the microblogs of various Xiaomi celebrities to promote its products, and even uses celebrities who defame Xiaomi phones to counter-propagate them. Xiaomi's social media platforms on the internet have close to a billion followers.

Another marketing method used by Xiaomi is hunger marketing, which is in fact a form of experiential marketing. When the latest Xiaomi phones are first launched, they are usually sold selectively to senior Xiaomi forum users or Xiaomi phone buyers who have given quality feedback and good opinions about the company, especially during the initial

launch of the Xiaomi Project. These mobile phone players and enthusiasts, who have a deep affection for Xiaomi phones, are the first to tell Xiaomi about their experiences with their phones, urging the company to make improvements in the shortest possible time. This kind of starvation marketing is partly due to the lack of production of new products and partly due to the objective risk of delaying the launch of new products in large quantities, so that in case of product quality problems, at least the number of Xiaomi phones already on the market can be controlled and the company's reputation will not be reduced to a freezing point.

2. At the same time, Xiaomi is also an Internet company, mainly using the mobile Internet ecological platform built under Xiaomi's MIUI system, which is like a shop platform where online games, videos and movies, books and software, advertising and so on can be used as its goods to generate profits. On the one hand, Xiaomi develops its own internet products, adding wallpapers, music, novel reading, cloud services and other items that can be charged for to the MIUI system for consumers to choose from. On the other hand, it is to charge entry fees and commission rebates to the incoming software through application distribution. According to the person in charge, Xiaomi's network platform, which is already the fifth largest game affiliate platform in China, generates 20 million yuan in revenue from this segment every month.

To sum up, it can be concluded that Xiaomi's profit model is based on the intergration of hardware, software and mobile internet. It does not rely solely on the mobile phone itself to make profits, but more on the mobile phone to provide customer resources for its software and internet services, the latter being the source of its profits and the vitality of this internet mobile phone company. The latter is the source of its profitability and the lifeblood of this Internet mobile phone company.

5.2 Financial analysis

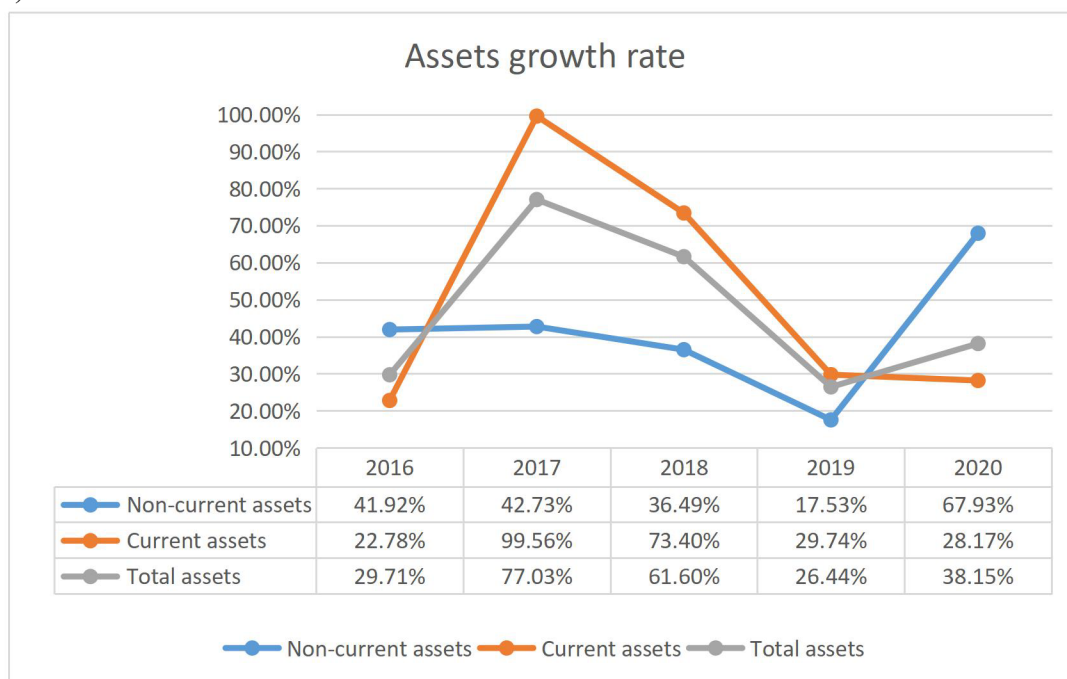
5.2.1 Horizontal analysis

Horizontal analysis compares the results of annual financial reports. It is very useful when analysing more than 2 long-term datas. There are a couple of ways of comparing in horizontal analysis. Firstly, we can compare changes in absolute values. Or we can calculate the change between the current period and the previous year and thus compare their percentage change over the calendar year. To calculate the relative change in t and t-1 for a specified time period (on an annual basis), the following formula can be used: The number of changes = indicator t - indicator(t-1), Percentage change = the number of changes * 100/indicator(t-1).

From graph 3 we can see, the growth rate of current assets reached a peak of 99.56% in 2017, and has been decreasing for the next three years. In particular, the growth rate in

2019 was significantly lower than in 2018. The change in the growth rate of total assets followed a similar curve to the change in the growth rate of current assets. This shows that the growth in total assets during these five fiscal years was mainly reflected in the increase in current assets. The growth rate in 2017 was approximately twice that of 2020. The growth rates in 2017 was 77.03% and in 2016 was 61.60%, respectively, were the highest over a five-year period. Then it began to decline in the next two years. After a significant decline in growth rates in 2019, the growth rate in 2020 rised a little more. In general, From 2016 to 2020, Xiaomi has achieved rapid growth in assets, and the huge asset scale has laid a foundation for xiaomi's business development and corporate transformation.

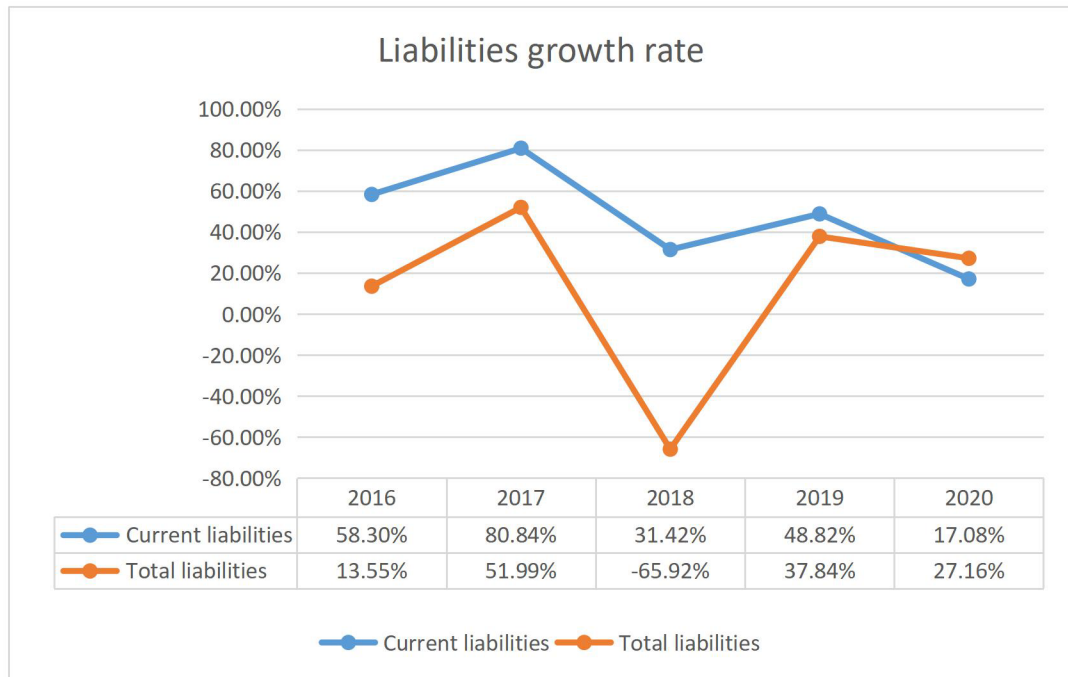
Graph 3 Growth Rates of Current Assets and Total Assets of Xiaomi Company Limited (2016-2020)



(Source: Xiaomi annual report 2016-2020, graph created by author.)

Graph 4 illustrates the dynamics of Xiaomi’s liabilities details. According to Graph 2, the trend in growth rates for total liabilities and current liabilities was generally consistent in 2016 and 2017, the remaining three years show a downward trend. The current liabilities growth rate in 2020 was only 17.08%. The highest points in 2017 were 80.84% and 51.99% respectively. It can be seen that from 2016 to 2017 Xiaomi Group pursued the use of liabilities as financial leverage to enable the company to expand production to gain benefits. However, since 2018, this trend has slowed down significantly, and even the growth rate of total liabilities in 2018 was -65.92%, indicating that Xiaomi Group began to gradually stabilize the liability scale from 2018 to 2020.

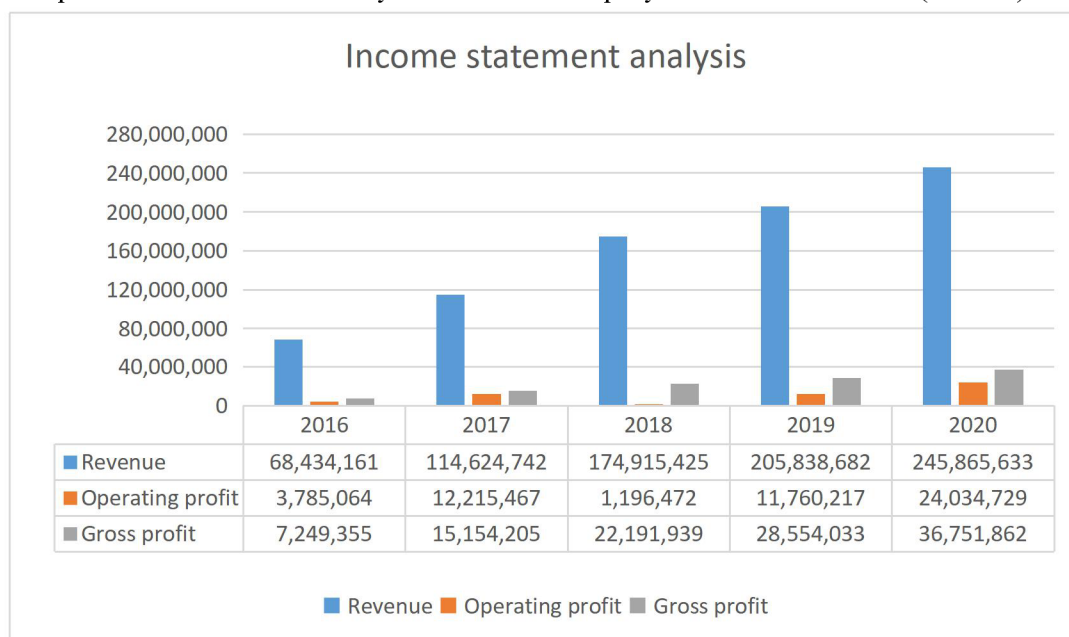
Graph 4 Growth Rates of Current Liabilities and Total Liabilities of Xiaomi Company Limited (2016-2020)



(Source: Xiaomi annual report 2016-2020, graph created by author.)

As we can see from Graph 5, the Company's revenue, operating profit and gross profit generally show a steady upward trend during the period 2016-2020, and reach the highest point in 2020. The figures were 245,865,633, 24,034,729 and 36,751,862 respectively, representing an increase of approximately 3.59 times, 6.35 times and 5.07 times respectively from 2016. In terms of numbers, the total operating revenue continues to grow steadily. In 2017, Xiaomi's revenue crossed the 100 billion threshold in less than 7 years. It can also be seen that operating profit and gross profit as a percentage of sales have increased in recent years.

Graph 5 Income Statement Analysis of Xiaomi Company Limited in 2016-2020 (In CNY)



(Source: Xiaomi annual report 2016-2020, graph created by author.)

5.2.2 Liquidity analysis

According to the table 1, in general, there was an upward trend for all liquidity ratios from 2016 to 2020. When looking at Xiaomi's current ratio, it indicates that the Xiaomi's business has maintained a safe level of current assets to meet its obligations, with the current ratio at 1.63 currently. For current ratio, 1.5 is an ideal value, the rates in 2019 and 2020 were closest to this value. If the value is above 1.0, it means the company is eligible to pay current liabilities by its current assets. So in case of current ratio, Xiaomi's performance is positive.

When analyzing quick ratio, there was still an upward trend for Xiaomi with the highest value of 1.25 in 2020. Cash ratio can explain how much current liabilities can be paid by cash or cash equivalent. When it's higher than 0.20, it's considered as a good sign for the company. Xiaomi's cash ratio ranged from 0.55 to 0.91. For Tech companies, this ratio is within a sensible range since there is an enough cash cushion without leaving too much capital idle or in low-earning investments.

Table 1. Xiaomi's liquidity ratios from 2016 to 2020

	2016	2017	2018	2019	2020
Current ratio	1.18	1.30	1.71	1.49	1.63
Quick ratio	0.85	0.95	1.24	1.14	1.25
Cash ratio	0.55	0.47	0.62	0.73	0.91

(Source: author's own calculation. Data from Xiaomi annual report 2016-2020)

5.2.3 Profitability analysis

Gross profit margin is usually used to compare the competitiveness of the products of the same industry, showing the pricing power of the company's products, the ability of controlling manufacturing costs and market share. The increase of gross profit margin indicates that the enterprise runs well and the market competitiveness is high.

According to Table 2, the gross profit margin of sales was in the upward trend from 2016 to 2020, while the operating profit margin was fluctuating. It increased rapidly from 5.53% to 10.66% in 2016 to 2017, dropped to 0.68% in 2018, and recovered to 5.71% in 2019. It continued to increase to 9.78% in 2020. Net profit continues to rise, indicating that Xiaomi company's profitability has improved.

The index of return on assets reflects the level of return on all assets of an enterprise, and reflects the profitability and input-output status of the enterprise. The ROA of Xiaomi company increased from 1.19% in 2016 to 11.34% in 2018, indicating that the level of asset operation has been improved compared with the increase in the input-output capacity of previous enterprises. The ROE index indicates the ability of an enterprise to obtain net income from its own capital. The ROE of Xiaomi company fluctuated greatly from 2016 to 2020, and the highest ROE ratio was 34.43% in 2017.

In 2020, Xiaomi's revenue grew 24.8% year-over-year, and also recorded strong growth in gross margin after adjusting net profit, which increased 12.51%. Its business segment delivered solid growth, reflecting the resilience of their business model in a very challenging market. Although under the impact of global Covid-19 pandemic, their global smartphone shipment maintained top-three position with a market share of 12.1%, and achieved the highest year-over-year shipment growth among the top five smartphone companies.

Table 2. Xiaomi's profitability ratios from 2016 to 2020

	2016	2017	2018	2019	2020
Gross margin	-42.34%	-37.11%	7.67%	4.32%	12.51%
Operating margin	5.53%	10.66%	0.68%	5.71%	9.78%
Profit margin	10.59%	13.22%	12.69%	13.87%	14.95%
Return on equity	16.69%	34.43%	19.00%	12.35%	20.40%
Return on assets	1.19%	-63.41%	11.34%	6.06%	9.58%

(Source: author's own calculation. Data from Xiaomi annual report 2016-2020)

5.2.4 Leverage analysis

In terms of debt ratio, Xiaomi company has a high ratio. According to Table 3, it can be found that the debt ratio of Xiaom ranged from 281% to 241% from 2016 to 2017, indicating that the total liabilities were more than two times of the total assets, which made it insolvent and the enterprise's long-term debt servicing capacity was weak. However,

from 2018 onwards, the debt ratio returned to normal values and the long-term debt to equity ratio also changed from negative to positive and continued to grow. The reason is that after the company went public in 2018, the fair value of convertible and redeemable preferred shares was included in the equity, which did not affect the debt, so the debt index returned to normal. It indicated that Xiaomi is able to strictly control the growth of corporate debt in the operation process and ensure stable long-term solvency.

Table 3. Xiaomi's leverage ratios from 2016 to 2020

	2016	2017	2018	2019	2020
Debt ratio	281%	241%	50.94%	55.53%	51.11%
Long-term debt to equity	-28%	-37.05%	86.93%	113%	87.02%

(Source: author's own calculation. Data from Xiaomi annual report 2016-2020)

5.2.5 Activity analysis

According to the Table 4, the inventory turnover, receivable turnover and payable asset turnover of Xiaomi all showed a downward trend from 2016 to 2020. The inventory turnover ratio, which briefly increased from 2016 to 2017, has the strongest liquidity. And it decreased significantly from 2017 to 2020 with the worst liquidity in comparison, thus showing that the inventory turnover rate of Xiaomi company decreased slightly. The decline of inventory turnover reflects the increase in Xiaomi's offline operating shops and the increase in inventory due to the increase in various ecological chain products under the diversified development.

The receivable turnover ratio changed significantly in 2017, decreasing from 38.45 in 2016 to 30.33 in 2017, turning to a slight upward trend in 2018 and 2019. It is due to the fact that as Xiaomi continued to expand in size and needs to provide longer credit periods to customers, accounts receivable will inevitably increase with the scale of operations, extending the accounts receivable period and resulting in a turnover ratio. The receivable turnover rate declined again in 2020 due to the impact of the epidemic.

In terms of payable turnover, there is an overall trend of slight fluctuations, with the Xiaomi company having the fastest turnover in 2017, indicating the highest efficiency and utilisation of asset operations, while in 2018 turnover began to decline and needs to be noted.

Table 4. Xiaomi's activity ratios from 2016 to 2020

	2016	2017	2018	2019	2020
Inventory turnover	7.02	7.81	6.67	5.71	5.68
Receivable turnover	38.48	30.33	31.61	32.80	25.33
Payable turnover	2.46	2.50	2.09	1.69	1.45

(Source: author's own calculation. Data from Xiaomi annual report 2016-2020)

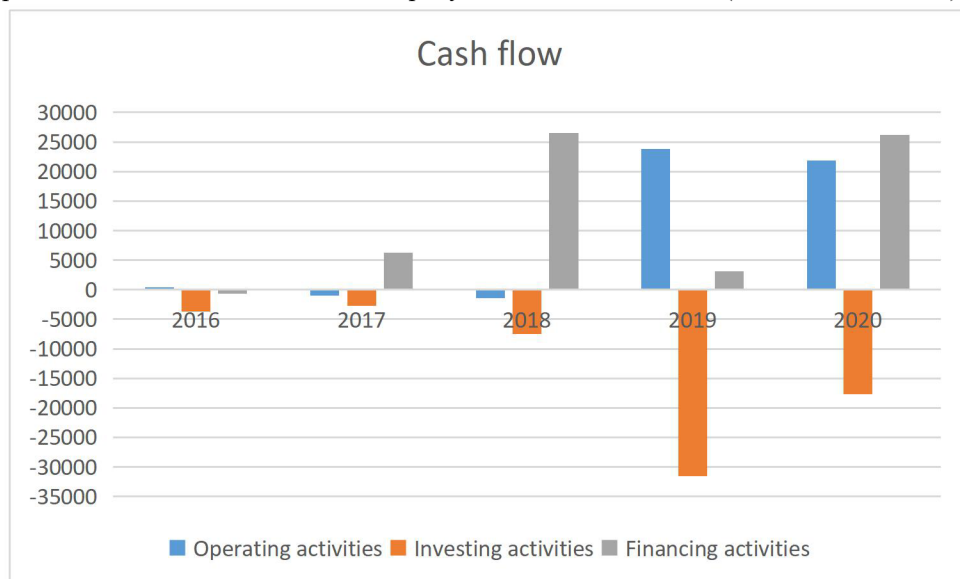
5.2.6 Cash flow analysis

According to graph 6, it seems that Xiaomi company's cash flow is not optimistic. In 2017, the net cash outflow of operating activities was 996 million yuan, and the net cash outflow of investment activities was 2,678 billion yuan. The cash outflow of operating activities and investment activities was mainly made up by 6,215 billion yuan of cash brought by financing activities, so there was still a balance in 2017.

In 2018, the net cash outflow from operating activities was 1,415 million yuan, the net cash outflow from investment activities was 7,508 million yuan And the net income from financing activities was 26,574 million yuan, mainly due to the fact that Xiaomi Group was listed in The Hong Kong Stock Exchange in 2018 and the net income from the issuance of ordinary shares related to the initial public offering was 23,249 million yuan, so there was also a balance in 2018.

Net cash generated from operating activities in 2019 and 2020 turned into cash inflows, which were 23,810 million yuan and 21,879 million yuan respectively. Net cash outflows used in investment activities also increased significantly, by 31,570 million yuan and 17,678 million yuan respectively. Net cash outflows from financing activities were relatively stable and did not change much compared to the previous two years.

Graph 6 Net Cash Flow of Xiaomi Company Limited in 2016-2020 (In millions of CNY)



(Source: own calculations, Xiaomi annual report 2016-2020, graph created by author.)

5.3 External environment overview

The Chinese mobile phone market has grown significantly over the past few years, but growth has been erratic, ranging from -1.0% to 6.3% (Statista Inc., 2019a). Going forward, growth is expected to slow down and intensify competition. Key players in the Chinese mobile phone market include domestic companies Huawei, Xiaomi and BBK Electronics, as well as the US company Apple. These companies are influential global technology companies with significant annual revenues and can invest heavily in technological innovation for this market. The two driving technological forces will be foldable smartphones and 5G capabilities.

Total revenue in the China mobile phone market grows at a compound annual growth rate (CAGR) of 3.7% from 2016- 2020 to reach US\$153.3 billion in 2019. In comparison, the Singapore and India markets grew at a compound annual growth rate (CARCs) of -3% and -3.7%, respectively, over the same period, to US\$2.9 billion and US\$25 billion in 2019 (Statista Inc., 2019a). The trend in the Chinese mobile phone market is dominated by the market leader Huawei. Huawei produces low-cost phones with similar characteristics to other market players and is therefore able to gain market share. In addition, the company has achieved significant growth in the mobile phone market through technological advantages such as foldable phones and the promise of 5G networks. As mobile phone penetration increases in China, major manufacturers are shifting their focus to selling more expensive, higher priced items. This is likely to be a driver of future growth as disposable income increases in China. Manufacturers like Huawei were initially known for offering cheap phones, but are now producing high quality handsets to compete with the likes of Apple and Samsung.

China's market performance is expected to slow with an expected CAGR of 1.5% over the five-year period 2019-2024, reaching a market value of 165 billion US dollars by the end of 2024. In comparison, the Singapore and India markets will grow at a CAGR of 3.8% and 4.1% respectively over the same period, reaching a value of 3.5 billion US dollars and 30.6 billion US dollars respectively in 2024 (Market Line, 2019).

In March 2020, the World Health Organization declared the novel coronavirus a pandemic. Although the exact impact of COVID-19 is difficult to assess due to the constant changes, it will have a negative impact on the market. However, as most of the value comes from contracts and monthly cards, the mobile phone market should be hit and will not be as severely affected as other products.

5.4 PEST analysis

5.4.1 Political factors

The national political and legal environment has a direct impact on the business conditions. Although it is difficult for enterprises to predict the changes in the national political and legal environment, they can judge the future development trend according to the latest policies and regulations promulgated by state departments and adjust the direction of their development in a timely manner. On the one hand, laws and regulations can restrict the behaviour of enterprises, on the other hand, they also protect the reasonable competition and legitimate rights of enterprises.

The mobile phone industry in China is developing rapidly. The Ministry of Industry and Information Technology of China has released “The Information and Communication Industry Development Plan (2016-2020)” and “The Internet of Things (2016-2020)”. In terms of core technologies, the plan specifically states, "Strengthen mobile Internet, Internet of Things, mobile intelligent terminal and other technologies and integrated application, enhance the ability of security and control, and promote the transformation and industrialization of core technology achievements. Support the research and development of 5G standards and technical trials, promote 5G spectrum planning and launch 5G commercialization. Strengthen service-oriented IoT transmission system architecture and communication technology research, and accelerate the application of IoT technology. Support the establishment of a dedicated test service platform for IoT, and strengthen the research and development of test equipment and systems related to the integration of IoT with mobile Internet, big data, cloud computing and other applications." As can be seen, this provides a strong support for enterprises to develop high technology.

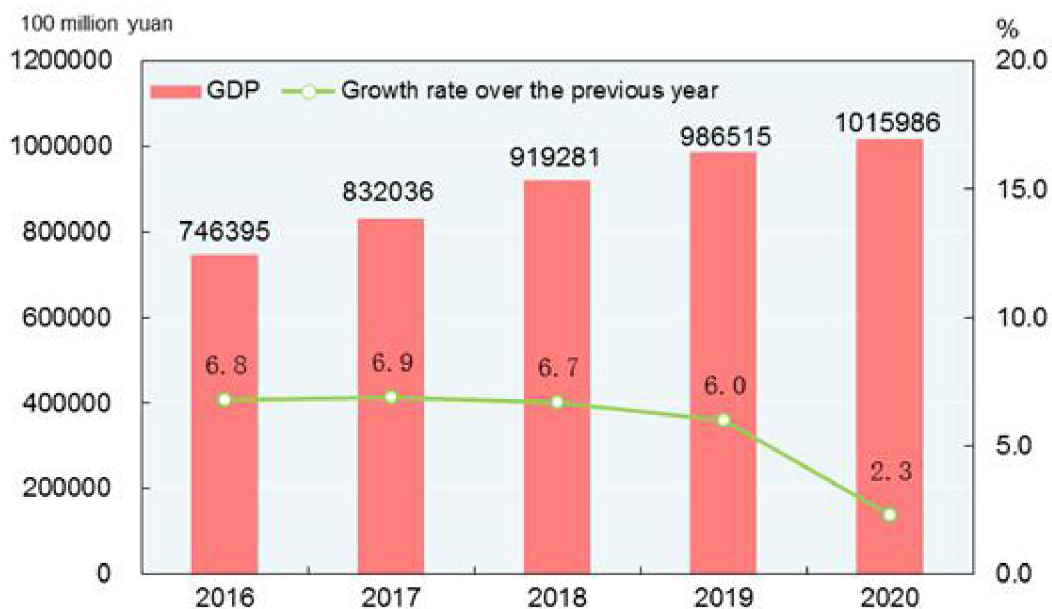
The country's strong support for the development of the telecommunications industry and high-tech industry has led to the rapid development of telecommunications terminals. For instance, in order to encourage technological innovation, China's tax policy gives tax incentives to enterprises in several aspects, such as the new Enterprise Income Tax Law, which stipulates that: "High and new technology enterprises that the State needs to support in a key way shall be subject to a reduced enterprise income tax rate of 15%"; preferential VAT policies for enterprises include: " General taxpayers selling computer software products developed and produced by them, or selling imported software to the public after localization and transformation, after levying the tax at the statutory rate, the part of the actual tax burden exceeding 3% shall be levied and refunded immediately"; the zero-rate VAT policy is applied to the export of high-tech products.

5.4.2 Economic factors

Higher national income is conducive to stimulating consumption. According to graph 7, China's economy is developing steadily from 2016-2020, with GDP reaching 1,015,986

billion yuan in 2020. According to the National Bureau of Statistics, China's per capita disposable income grew by 2.0 per cent year-on-year in nominal terms to reach 72,447 yuan in 2020, with urban residents' per capita disposable income growing by 7.8 per cent year-on-year in nominal terms to reach 123,251 yuan. (Statistical Communique of the National Economic and Social Development of the People's Republic of China, 2020) In addition, through government support and the orderly implementation of precise poverty alleviation, farmers' incomes have increased and their purchasing power has also improved. According to statistics, the consumption level index of rural residents has steadily increased at an annual rate of 9%, and the consumption potential of the rural market has gradually come to the fore.

Graph 7 GDP and its growth rate of China (2008-2015)



Source: Statistical Communique of the National Economic and Social Development of the People's Republic of China, 2020

From the perspective of the economic environment of the mobile phone industry, on the one hand, China's domestic market tends to be saturated and the competition is fierce. At present, the international well-known mobile phone brand manufacturers are mainly Apple, Samsung and so on. Their main characteristics are high brand awareness, large company scale, strong research and development ability and complete product line. For a long time, these well-known mobile phone manufacturers have occupied a dominant position in the global mobile phone market with strong research and development capabilities, design capabilities and high-quality products. At the same time, China's major mobile phone brands have gradually risen in recent years, especially Huawei and OPPO, whose shipments have increased significantly and their strength cannot be underestimated. According to Table 5, Huawei ranked first in mobile phone shipments in 2020, occupying

37% of the market share, while OPPO ranked second in mobile phone shipments, occupying 18% of the market share. Xiaomi ranked fourth for the second year in a row, with approximately 12% of the market share.

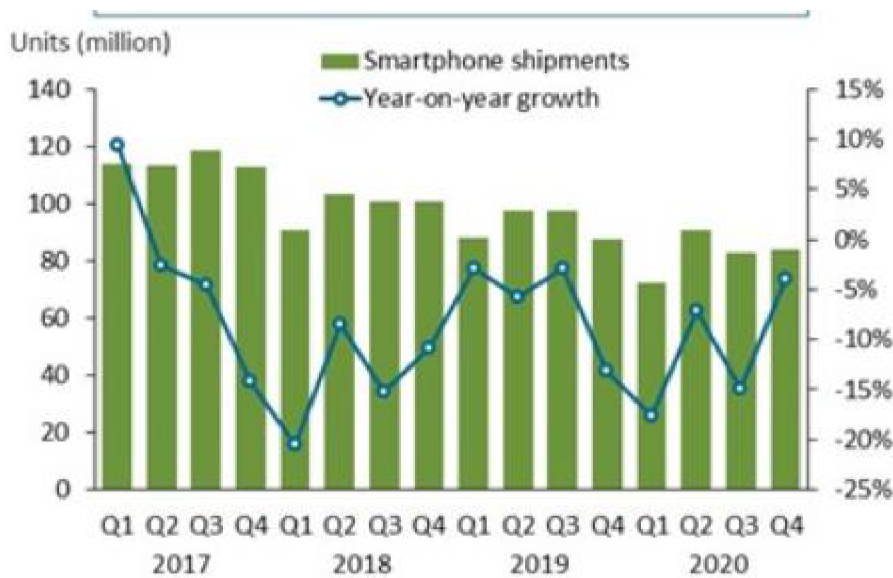
Table 5 China (mainland) smartphone shipments and annual growth in million (2020)

Vendor	2019 shipments	2019 market share	2020 shipments	2020 market share	Annual
Huawei	142.0	38%	123.3	37%	-13%
Oppo	65.7	18%	58.1	18%	-12%
Vivo	62.7	17%	57.8	18%	-8%
Xiaomi	38.8	10%	39.8	12%	3%
Apple	30.1	8%	34.4	10%	14%
Others	30.6	9%	16.9	5%	47%

Source: Canalys Smartphone Analysis (sell-in shipments), January 2021

On the other hand, according to graph 8, market research agency Canalys reported that by the fourth quarter of 2020, the shipments of smart phones in the Chinese mainland were 84 million yuan, down 4% year-on-year. As the penetration rate of smart phones has reached the ceiling, the mobile phone industry has entered the era of excess configuration. In addition, due to the upgrading of consumption, the proportion of middle and high-end mobile phones has increased, and the frequency of consumers to replace their mobile phones has slowed down significantly, resulting in the reduction of mobile phone shipments and the saturation of the domestic smart phone market.

Graph 8 Mainland China smartphones shipments Q1 2017 to Q4 2020

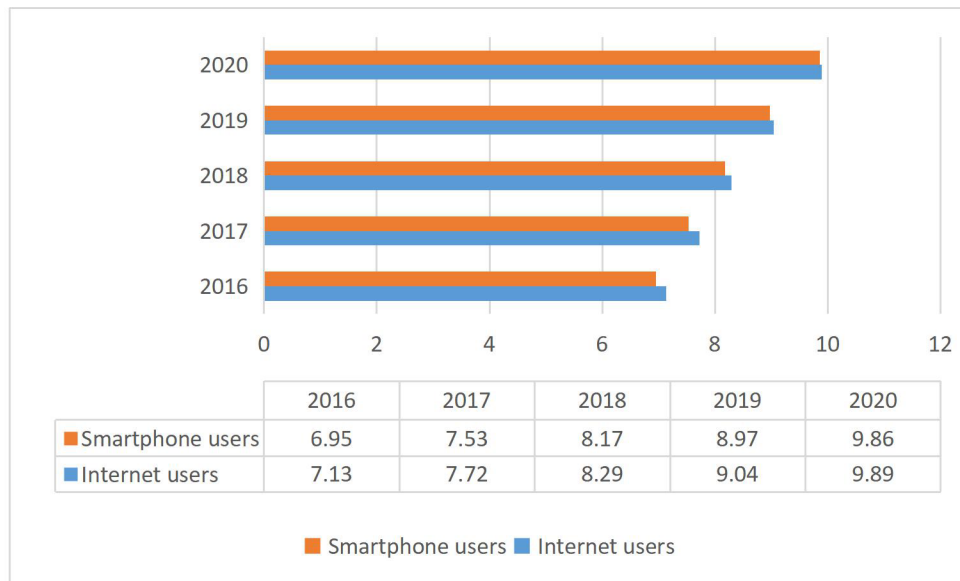


Source: *Canalys Smartphone Analysis (sell-in shipments), January 2021*

5.4.3 Social factors

Firstly, mobile phone penetration rate is high and users' lifestyle has changed. Due to the rapid spread of modern information resources and the gradual maturity of mobile Internet technology, mobile Internet and mobile phone industry has also developed rapidly. According to graph 9, until December 2020, the number of Internet users in China was 989 million, among which 986 million were mobile phone users. People on mobile Internet from unfamiliar, contact, familiar, to quickly accept, into a universal stage. Before, mobile phones were only used for voice and text communication, and services such as mobile shopping and mobile marketing were not well accepted by the public. However, with the continuous development of technology, mobile Internet-related services have been recognized by more and more users, and this recognition has gradually turned into a habit and formed a kind of dependence. Through smart phone shopping software, takeout software, taxi-hailing software and so on, people can easily solve the problem of clothing, food, housing and transportation. Mobile payment has become a normal in people's life, so China's smart phone market has also achieved unprecedented development in recent years.

Graph 9 The number of China's Internet users and smartphone users 2016-2020 (in hundred million)

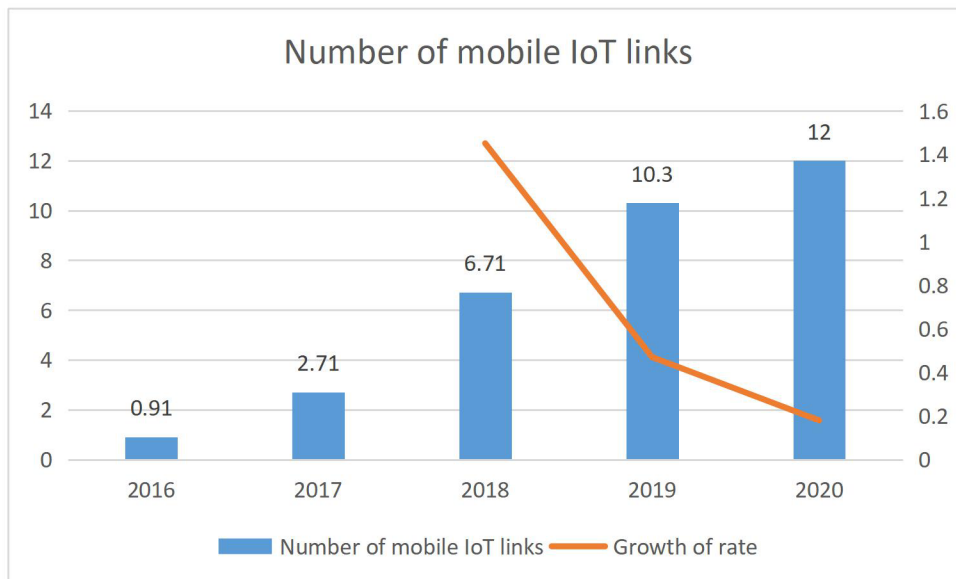


Source: China Industry Information Network., <https://www.chyxx.com/>,2020

Secondly, IoT devices are becoming more popular. The application areas of the Internet of Things cover all aspects. The application in infrastructure areas such as industry, agriculture, environment, transportation, logistics and security has effectively promoted the intelligent development of these areas, making the allocation of limited resources more reasonable, thus improving the efficiency and effectiveness of the industry. With the growing maturity of the Internet of Things (IoT), the price of IoT devices and infrastructure is falling, and various intelligent consumer devices are becoming more popular. More intelligent technologies are being integrated into people's daily lives: floor cleaning robots help us to complete basic household chores; smart speakers not only help people to place shopping orders automatically, but also control intelligent devices; intelligent monitoring makes home security systems more powerful. The Internet of Things has greatly improved people's quality of life. And this is all the change brought by the Internet of Things technology, the market development space is huge.

According to graph 10, China accounts for up to 30% of the world's Internet of Things connections. In 2019, China had 3,63 billion Internet of Things connections, among which the number of mobile Internet connections accounted for a large proportion, growing from 6,71 million in 2018 to 1,03 billion by the end of 2019. By 2020, the number of Internet of Things connections in China has reached 1,2 billion, with a compound annual growth rate of 14.1%.

Graph 10 Statistics on the number of mobile Internet of Things connections in China (2016-2020)



Source: China Industry Information Network., <https://www.chyxx.com/>, 2020

5.4.4 Technology factors

The advent of the 5G era brings new development opportunities for businesses. With the rapid development of mobile communication technology, the first generation of mobile communication technology (analogue mobile phone) has long been a thing of the past, and the second and third generations of mobile communication technology (2G and 3G) are becoming increasingly obsolete, gradually replaced by the newer 4G and 5G technologies, and the mobile internet has entered the era of fast internet access. On 6 June 2019, The Ministry of Industry and Information Technology of China officially issued 5G commercial licenses to China Telecom company, China Unicom company, China Mobile company and China Radio and Television company, and China has officially entered the 5G era. The main advantages of 5G networks are that they can transmit data at frequencies far higher than previous cellular networks, up to 10 G bit/s, 100 times faster than 4GLTE cellular networks; lower network latency, less than 1 ms, compared to 30-70 ms for 4G; and large network capacity, providing connectivity for hundreds of billions of devices to meet IoT communications, etc.

5.5 SWOT analysis

5.5.1 Strengths

Liquidity and solvency

In terms of overall analysis, the total assets of Xiaomi company showed a significant upward trend from 2016 to 2020. From the total disclosed assets of 39,137 billion yuan on the balance sheet date of 2016 to 183,629 billion yuan on the balance sheet date of 2020, up nearly six times. In 2018, the growth rate was the fastest, from 89.77 billion yuan at the beginning of the year to 145,228 billion yuan at the end of the year, an increase of 55,458 billion yuan, an increase of 61.78%. This is due to Xiaomi company's official listing on the Hong Kong Stock Exchange on July ninth, 2018. In general, from 2016 to 2020, Xiaomi company achieved rapid growth in assets, and the huge asset scale laid a foundation for Xiaomi's business development and corporate transformation.

In terms of current assets, the Xiaomi company grew from 24,953 million yuan in 2016 to 137,539 million yuan in 2020, an increase of 112,586 million yuan or 451.19%, with the growth in current assets increasing the size of total assets by 281.77%. This shows that the growth in total assets during these five fiscal years was mainly reflected in the increase in current assets. The Company's liquidity has increased significantly over these five years.

In terms of inventory, the proportion of xiaomi Company's inventory in current assets showed a declining trend, from 8,643 billion yuan in 2016, accounting for 34.64%, to 8,378 billion yuan in 2017, accounting for 27.35%. In 2019, the inventory reached 32,585 billion yuan, accounting for only 23.70%. It can be seen that The inventory level of Xiaomi company maintains a relatively healthy state, which is conducive to adapt to the rapid upgrading of the mobile phone industry.

In terms of current liabilities, According to Xiaomi's balance sheet for five years, although Xiaomi's liabilities have been on an upward trend in absolute terms each year, such a trend has slowed down significantly since 2018, with the increase in liabilities in 2018~2019 being only 1,286 million yuan. In these years, the trend of Xiaomi's liabilities from rapid increase to slowdown in growth can be seen, in 2016~2017 Xiaomi pursued the use of liabilities as financial leverage to enable the enterprise to expand production to gain benefits, in 2018~2019 Xiaomi began to gradually stabilize the scale of liabilities. Among the short-term borrowing items, after maintaining a stable scale of around 3 billion yuan in 2016~2018, Xiaomi's short-term borrowing reached 12,837 billion yuan in 2019, indicating that in 2018~2019, Xiaomi adjusted its current liability structure to make the enterprise's current liability structure more suitable for its development. In the balance sheet disclosed by Xiaomi, the item "total assets less current liabilities" is notable, and the value of the balance of Xiaomi's total assets less current liabilities has remained largely stable, which shows that Xiaomi's ability to repay its debts in the short term is considerable.

In terms of non-current liabilities, Xiaomi's non-current liabilities have fallen significantly over the five years, from 109,311 million yuan in 2016 to 9,791 million yuan in 2020. This reflects the decreasing debt pressure on Xiaomi company in the medium to long term.

A relatively complete MIUI ecosystem

The deeply customized MIUI system is a complete set of user experience design system independently created by Xiaomi on the basis of Android operating system according to the usage habits and preferences of Chinese users, which makes the mobile phone more in line with the usage habits of Chinese people and brings better operating experience to mobile phone users. Since the release of the first beta version on August 16, 2010, the number of active users of MIUI has exceeded 300 million worldwide. On September 26, 2019, MIUI officially released that the number of MIUI 11 early experience applicants exceeded 1 million within 60 hours, showing the popularity of MIUI. The complete MIUI ecosystem includes a series of functions such as application mall, MIUI Life, payment center, game center, video center, etc. Xiaomi company also allows enthusiasts to participate in the development and design of mobile phone system, and continuously improve product performance through users' feedback.

5.5.2 Weakness

Cash flow

In the cash flow from operating activities, the cash flow statement disclosed by Xiaomi company shows that the amount of cash flow from operating activities fluctuated from 2016 to 2019, with 4.531 billion in 2016, and negative in 2017 and 2018, at -996 million yuan and -1.415 billion yuan respectively. In 2019, net cash flow from operating activities amounted to 23,810 million yuan. During this period, the Xiaomi company invested heavily in market development, resulting in some years in which the company was "unable to make ends meet".

Hardware technology disadvantage, lack of patent technology

Because the Xiaomi company relies mainly on third-party OEM enterprises such as Foxconn and Inventec, it does not have hardware manufacturing plants and production lines. Xiaomi phones rely on third-party OEM enterprises for everything from screens, touch screen components, camera components to circuit boards. Both the quantity and capacity of processing are somewhat uncontrollable, and the capacity is somewhat overwhelming. Although on the last day of 2019, Lin Bin, one of the founders of Xiaomi, announced the official opening of Xiaomi's own R&D production line, which will mainly be used for the R&D and production of Xiaomi's flagship phones and to promote the development of hardware and software for automated equipment, as it has just been established, there will be no significant increase in production capacity, and it will still rely on third-party OEM enterprises to a considerable extent. Huawei, Oppo and Vivo, on the

other hand, have their own production lines and can anticipate market demand before the official launch of their mobile phones in order to produce the appropriate number of products. On the other hand, Xiaomi Group has not built up an extensive patent library. According to the spokesperson of the State Intellectual Property Office, Huawei ranked first with 4,510 invention patents granted in 2019, and Oppo ranked third with 2,614. Xiaomi, on the other hand, did not make the list, and its fragile IPR system has caused it to struggle in the international market process

5.5.3 Opportunity

Firstly, with the support from national policies and laws. It can be seen from the above mentioned Development Plan for Information and Communication Industry (2016-2020) issued by the Ministry of Industry and Information Technology that at present, the Chinese government is promoting the development of mobile communication in an overall way, actively expanding 5G network coverage and optimizing network structure. As of November 2019, 113,000 5G base stations had been opened across China, according to the Minister of Industry and Information Technology at the first World 5G Conference. The government has given strong support to the mobile Internet industry, providing a relatively relaxed policy environment and bringing development opportunities for enterprises.

Secondly, the overseas market is vast. With the continuous improvement of China's economic development level and consumption upgrade, smart phones are becoming more and more popular. Although the domestic market has been saturated, the foreign smart phone market still has considerable development potential. In 2020, Xiaomi's revenue from overseas markets increased 34.1 percent year-over-year to 122.4 billion yuan, accounting for 49.8 percent of its total revenue, according to the company's annual report. In addition, the company's products are very popular in India which has seen it rank first, for 13th consecutive period, in the fourth quarter of 2020 in terms of smartphone shipments with a market share of 27.4 percent according to Canalys. Instead of smartphones, Xiaomi is also eyeing the smart TV sector. Following the successful launch of its smart TV sets in India, Indonesia and Russia, the company also introduced them to France, Poland and other key markets in 2020 as it aims to further capture the overseas market opportunity.

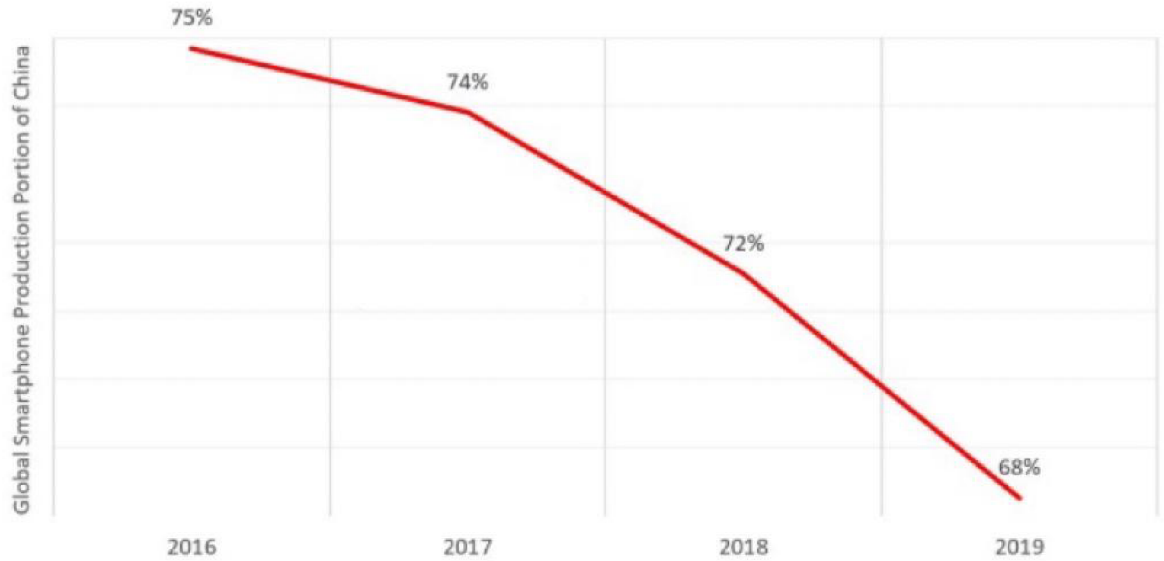
Thirdly, the intelligent ecosystem market has great potential. The MIUI system is the first product released by the Xiaomi Group, and it is the core competitiveness of the group, and Xiaomi's intelligent ecosystem is also built on the basis of the MIUI system, which has attracted a large number of It has attracted a large number of mobile phone users and has cultivated a loyal fan base, increasing user loyalty and thus many people will prefer Xiaomi phones when replacing their mobile phones.

5.5.4 Threat

On the one hand, the homogenization of products and the advantages are no longer obvious. The major mobile phone manufacturers have realized the importance of mobile phone systems and have begun to increase their investment in the research and development of mobile phone systems, and the operating experience of each mobile phone system has been substantially improved. Among them, rival Huawei has not only developed EMUI operating system based on Android, but also released its own property rights operating system, Hongmeng, which will be adapted to mobile phones, tablets, TVs, and even smart cars and other multi-terminal devices. At the same time, the rapid development of mobile phone hardware has also led to a smaller gap in experience, which has caused Xiaomi company's products to lose their original advantages. Without differentiation and innovation, and without too many eye-catching new products to stimulate consumers to buy new phones, it is easy for development to stagnate.

On the other hand, the mobile phone industry is highly competitive. The current Chinese domestic mobile phone market is close to saturation, and the oligopoly competition pattern in the smartphone market has been formed, with Huawei, OPPO, vivo, Xiaomi and Apple, the market share of the top five domestic mobile phone sales manufacturers, having reached 87.2% in 2018. At the same time, Huawei, OPPO and Vivo have also launched their own Internet brands, focusing on cost-performance strategies, and have continued to capture the market through brand advantages and massive advertising, leading to a considerable threat to Xiaomi's market. In overseas markets, according to market research firm Counterpoint, the top three brands in the Indian market in 2018 were Xiaomi, Samsung and Vivo, with market shares of 28%, 24% and 10% in that order. With India overtaking the US as the world's second largest smartphone market after China, competition among major mobile phone manufacturers has become extremely fierce.

Graph 11 Global smartphone production in China (2016-2019)



Source: Counterpoint Research

Table 6 SWOT analysis

<p>Strength</p> <ol style="list-style-type: none"> 1. Liquidity and solvency have been steadily increasing 2. A relatively complete MIUI ecosystem 	<p>Weakness</p> <ol style="list-style-type: none"> 1. Net cash flow is sometimes negative 2. Technology disadvantage
<p>Opportunity</p> <ol style="list-style-type: none"> 1. Overseas market 2. China's per capita disposable income has continued to increase 	<p>Threat</p> <ol style="list-style-type: none"> 1. Homogenization of markets 2. Chinese mobile phone market is highly competitive 3. The decrease of production in China

Source: Own analysis

5.6 Porter's five forces analysis

5.6.1 Bargaining power of suppliers

On the one hand, Xiaomi's core components are basically from foreign manufacturers. Xiaomi's suppliers include Qualcomm inc., that is one of the world's largest integrated circuit companies. It doesn't make phones and supplies them to anyone willing to pay. Acquiring hardware from them is often expensive, especially for new technology development products. Once suppliers increase prices, Xiaomi will be at a disadvantage.

At the same time, smartphones are growing so fast that they outpace the production capacity of upstream suppliers, and there are frequent shortages of upstream products. However, the core components of Xiaomi phones come from different manufacturers, not limited to one, which weakens the bargaining power of suppliers to some extent. On the other hand, its suppliers can choose from a wide range of partners. In addition to Qualcomm, there are SONY, Samsung and ESS, the world's top DAC manufacturer. To sum up, Xiaomi's mobile phone suppliers have strong bargaining power, which brings great pressure to the enterprise itself.

5.6.2 Bargaining power of buyers

The price of Xiaomi's phones is generally in the middle range, where consumers have gradually increased in number and become less sensitive to price in recent years and pay more attention to experience. Over the past 10 years, the company has updated and iterated on hundreds of phones. The company's goal is to replace computers with phones as the top smartphones. It is the ultimate in what consumers care about (high pixels, fast speed, good sound quality) and accurately understands what consumers want. Xiaomi mobile phone's target consumer positioning mainly tends to energetic, the pursuit of fashion trend of young groups, downward can be extended to students, upward can be extended to white-collar class. In addition, there are specific fan groups that support Xiaomi's brand and exclusive system. Once they value a particular feature of the product, their bargaining power is generally small. Xiaomi is mainly engaged in online channels, and the official quotation is determined, so there will be no big price fluctuation and consumers' bargaining power will not be high. However, there are many products with similar functions in the smart phone market, such as OPPO, which to some extent will increase consumers' consideration of similar models and enhance consumers' bargaining power for products.

5.6.3 Threat of new entry

There are two types of potential competitors in the smartphone market. The first category is Internet enterprises. For example, Qihoo 360 Has launched its own customized smart phones, but the overall sales volume is not high, and low-end products are the main products. Such potential competitors pose little threat. The second category is smartphone operating system providers. The vast majority of mobile phone operating systems in the domestic mobile phone market use Google's Android system. In the future, mobile phone operating system providers like Google and Microsoft are not excluded to produce their own smart phone products. Such potential competitors have strong strength.

5.6.4 Threat of new substitutes

Substitutes are those products that perform the same functions as products in their own industry. At present, two types of substitutable smartphones exist: one is smart

wearables and the other is the computerisation of smartphones. There are currently three trends in smart wearables. One is smart watches, the second is smart wearables represented by internet companies such as Google Glass, and the third is smart wearables based on mobile medical care, based on blood pressure and other aspects of detection. As an emerging category, it has changed the way people are used to using mobile phones. The future popularity and acceptability of this kind of device in the market are subject to further examination, and there is little threat in the short term. For the computerisation of smartphones, with the increasing screen size of smartphones and the gradual reduction of tablet screens, the integration of the two in the form of how to become a major challenge in the future, but the product is ultimately carried in the smartphone, and therefore does not have a greater threat.

5.6.5 Rivalry

The rapid development of China's mobile communications industry has provided a favourable space for the development of the communications manufacturing industry. On this basis, a large number of domestic mobile phone brands have emerged. However, due to the increasing level of technology and information technology, people's requirements for smartphones in various aspects are also growing, and the advantages of foreign brands in technology and quality have led to their rapid occupation of the domestic mobile phone market, with the market share of domestic mobile phones falling year by year, and domestic mobile phone companies facing huge competitive pressure. Domestic mobile phone brands such as Huawei, OPPO and Vivo are constantly launching new mobile phone products in order to meet the individual requirements of consumers, gain a larger market share and take advantage of the diversified market landscape.

According to the data, Huawei has held 38% of the market share in 2019 and 2020, ranked first among China's domestic phone brands, followed by Oppo, Vivo and Xiaomi. Xiaomi has always been a strong competitor to Huawei in terms of cost performance. Xiaomi is more focused on making low-cost, high-quality phones. In order to better discuss the economic situation of Xiaomi, this paper chooses to compare the analysis results of Huawei with Xiaomi's.

Huawei Technologies Co., Ltd. is a technology company dedicated to providing customers with the world's leading information and communication technology solutions, mainly engaged in consulting services and communication networks. It founded in 1987 and headquartered in Shenzhen, Guangdong Province, China, and it is a leading global provider of information and communication technology. Huawei mobile phone is huawei's consumer business, which started in late 2003. After more than ten years of development, it has set up 16 R&D centers in China, Germany, Sweden and the United States. In 2015, Huawei was included in the Brand Z List of the World's Top 100 Most Valuable brands, ranking the 16th in the technology sector.

According to the Table 7, Xiaomi's total current assets, total assets, and total liabilities were 25.49%, 28.93%, and 23.72% of those of Huawei, respectively. Xiaomi's total equity were 37.53% of Huawei.

Table 7 Balance sheet Comparison of two companies in 2020 (in million yuan)

	Xiaomi	Huawei	Xiaomi/Huawei (%)
Cash	21,119	172,898	12.21%
Accounts Receivable	10,161	74,741	13.59%
Inventories	42,667	167,667	25.45%
Other Current Assets	30,257	39,442	76.71%
Total Current Assets	176,283	691,394	25.49%
Total Non-Current Assets	77,397	185,460	41.73%
Total Assets	253,680	876,854	28.93%
Other Current liabilities	24,083	104,308	28.08%
Total Current Liabilities	107,927	392,332	27.51%
Other Non-Current Liabilities	2,344	3,769	62.19%
Total Non-Current Liabilities	21,739	154,114	14.11%
Total Liabilities	129,666	546,446	23.72%
Total Equity	124,014	330,408	37.53%

Source: Own calculations, data from Xiao Company Limited 2020 Annual Report and Huawei Company Limited 2020 Annual Report

According to the Table 8, Xiaomi's sales in 2020 were 27.58% of that of Huawei's. But the gross profit is only 11.23% of BYD. Both operating profit and net profit of Xiao were approximately third of Huawei's.

Table 8 Income statement Comparison of two companies in 2020

	Xiaomi	Huawei	Xiaomi/Huawei (%)
Sales	245,865	891,368	27.58%
Gross profit	36,751	327,132	11.23%
Operating profit	24,034	72,501	33.14%
Total profit before tax	21,633	72,304	29.91%
Net profit	20,312	64,649	31.42%

Source: Own calculations, data from Xiao Company Limited 2020 Annual Report and Huawei Company Limited 2020 Annual Report

According to Table 9, over the past five years, Xiaomi's average current ratio, average quick ratio and average cash ratio have all been slightly lower than that of Huawei, but have remained roughly flat. It indicates that the liquidity of Xiaomi is similar to that of Huawei, both of which are in a good state.

Table 9 Average liquidity ratios of Xiaomi and Huawei (2016-2020)

	Xiaomi	Huawei	Xiaomi/Huawei (%)
Current ratio	1.45	1.47	98.63%
Quick ratio	1.08	1.19	90.76%
Cash ratio	0.66	0.71	92.96%

Source: Own calculations, data from Xiao Company Limited 2016-2020 Annual Report and Huawei Company Limited 2016-2020 Annual Report

According to the Table 10, some profitability indicators of changan are similar to that of Huawei. For example, Xiaomi's operating margin ,ROE and ROA are 70%-80% Huawei's. The profit margin is higher that of Huawei,which indicating Xiaomi has good profitability.

Table 10 Average profitability ratios of Xiaomi and Huawei (2016-2020)

	Xiaomi	Huawei	Xiaomi/Huawei (%)
Gross profit margin	-10.99%	39.54%	-27.79%
Operating profit margin	6.47%	9.16%	70.63%
Net profit margin	13.06%	7.96%	164.07%
Return of equity	20.57%	26.22%	78.45%
Return of assets	7.04%	8.78%	80.18%

Source: Own calculations, data from Xiao Company Limited 2016-2020 Annual Report and Huawei Company Limited 2016-2020 Annual Report

According to the Table 11, the debt ratio and the Long-term debt to equity of Xiaomi was lower than that of Huawei. Generally, the lower ratio indicates the stronger solvency and the lower risk of financial loss. Therefore, the long-term debt repayment ability of Xiaomi is stronger than that of Huawei.

Table 11 Average leverage ratios of Xiaomi and Huawei (2016-2020)

	Xiaomi	Huawei	Xiaomi/Huawei (%)
Debt ratio	135.92%	199.01%	68.30%
Long-term debt to equity	44.38%	66.44%	66.80%

Source: Own calculations, data from Xiao Company Limited 2016-2020 Annual Report and Huawei Company Limited 2016-2020 Annual Report

Table 12 Average activity ratios of Xiaomi and Huawei (2016-2020)

	Xiaomi	Huawei	Xiaomi/Huawei (%)
Inventory turnover	6.58	4.09	160.88%
Account receivable turnover	31.71	6.28	590.76%
Account payable turnover	2.04	7.11	28.69%

Source: Own calculations, data from Xiao Company Limited 2016-2020 Annual Report and Huawei Company Limited 2016-2020 Annual Report

6 Discussion

The rapid development and success of Xiaomi's technology has raised eyebrows. Xiaomi Mobile is a smartphone manufacturer that entered the mobile phone market in 2011 (Safiya and Shylesh, 2019). In just three years it has grown from \$500 million to \$30 billion in sales. In 2020, Xiaomi sold 245 billion yuan mobile phones, which is up 19.4% year-on-year.

Xiaomi should continue to promote the "hardware + software + internet service" model, adhere to the development direction of Internet mobile phones, and build a "smartphone terminal + mobile Internet" ecological chain. In recent years, Xiaomi has maintained a high market share in the mid-range smartphone market, but lacks an edge in the most lucrative high-end smartphone market. With competition from WeChat, Xiaomi chat has only a small share of the attention and number of users compared to the overall market, and the outlook is not promising (Zhang and Zhou, 2018). However, Xiaomi Technology cannot abandon Xiaomi Chat for the time being. Xiaomi Chat has over 12 million registered users (Diana and Wilsa, 2017). What Xiaomi Chat is trying to do is to provide free and easy communication for users, while also providing them with a convenient way to chat. Based on these two experiences, Xiaomi can meet the expectations of consumers, thus adding more services and building a huge mobile internet (Zhang and Zhou, 2018).

Xiaomi's phones have won the attention of the market with their powerful configurations and high-end performance. According to the data published so far, the demand for Xiaomi's phones is very high. Xiaomi's corporate strategy does not have a clear positioning and long-term development plan. The profit model through software services can also be divided into multiple development directions. Building an entire industrial ecosystem and building a platform in depth is an optional path. But the current development direction of Xiaomi is very vague. One of the so-called software and services is the relatively immature Xiaomi chat, so the whole company urgently needs a clear development direction to guide the development of the whole company.

There are important reasons for Xiaomi's success: Xiaomi relies on the innovation of various models implemented by Internet thinking. Lei Jun, Chairman of Xiaomi Technology, admits that as a smartphone manufacturing company, the Internet is the wings of Xiaomi. The Internet is a way of thinking and a way of thinking about the future (Rawal et al. 2017). The so-called Internet spirit is about openness, transparency and cooperation. Xiaomi projects these key points into all aspects of design, marketing and value-added services, which then permeate Xiaomi's industry ecological chain. The "Xiaomi model" was born (Fortunato et al. 2019). In 2019, Xiaomi launched its "Ecological chain Plan" with the goal of replicating its model and expanding it to 100 companies, building the Xiaomi ecosystem through It aims to replicate its model and expand to 100 companies, building the Xiaomi mobile phone chain through software, hardware and services, and

entering new areas such as home and wearable devices. To date, a range of products including routers, cameras, smart bulbs and smart sockets have been released (Safiya and Shylesh, 2019).

Due to the fierce competition in China's mobile phone market, major domestic mobile phone brands have also begun to attack overseas markets to capture market share. For example, India is the second most populous country in the world and smart phones are not very popular. Many Indians still use feature phones and have the demand to exchange for smart phones, which making India potentially the largest emerging market for smart phones. Xiaomi quickly targeted this market. It only took three years from entering the Indian market for the first time in 2014 to becoming the mobile phone brand with the highest share in the Indian smartphone market through its cost-effective strategy. By 2019, Xiaomi's market share in India had reached 30.6 %, far outstripping other brands. There is plenty of room for Xiaomi to grow in India.

7 Conclusion

With the advent of the Internet of all things, the high-tech industry shows great vitality. Based on the data from 2016 to 2020, this paper conducts financial analysis and external environment analysis on Xiaomi. From the above analysis, we can draw the following conclusions.

Through the analysis of the macro and internal environment of Xiaomi, it can be seen that the Chinese government strongly supports the mobile Internet, Internet of Things and other high-tech industries, and the arrival of 5G era has brought new development opportunities for high-tech enterprises. At the same time, The characteristics of high cost performance of Xiaomi products and a relatively complete MIUI ecosystem also occupy a considerable advantage in the industry competition. In addition, in terms of the choice of competitive strategy, Xiaomi should focus on optimizing differentiation strategy as the domestic market becomes more and more homogenized, and the implementation of low-cost strategy is better. Therefore, it is of little significance to further pursue low-cost strategy. This paper believes that the industry in which Xiaomi is located has great development potential. However, the current market competition is also extremely fierce, for high-tech enterprises, hardware technology and patent research and development is crucial, Xiaomi still needs to invest more energy in patent technology research and development.

According to the analysis of Xiaomi's financial reports from 2016 to 2020, it can be seen that due to the continuous expansion of overseas market share and the all-pre-sale mode, Xiaomi's debt accounts receivable account has a high proportion. However, both the liquidity ratio and the quick ratio of the company remain in a reasonable range and have a rising trend, so the real solvency of the company is stronger than the data shown.

The high ratio of inventory turnover will reduce the level of inventory occupancy, it enable the company to have higher sales efficiency and inventory use efficiency, and also reduce the occupation of inventory to working capital. The inventory turnover rate of Xiaomi decreased from 7.81 in 2017 to 5.68 in 2020, and the company's inventory turnover rate slowed down. The company may be under increasing pressure to supply.

In terms of the current period, its sales revenue accounts for more than a quarter of its total revenue, so its profit can generate a large cash flow and has a strong ability to pay. The Company also has good profit sustainability. Gross margins have remained at around 9% in all years except 2016 and 2017, and are on an upward trend even under the impact of the 2020 epidemic, showing that its profits are both growing and avoiding large volatility.

To sum up, Xiaomi is a promising Internet company that meets the needs of contemporary economic development and has unique development capabilities. The company's financial indicators are good, its cash flow is strong, its revenue is increasing year on year and its overall development trend is good. Xiaomi should always adhere to the

principle of "let everyone enjoy the fun of technology, and make friends with users", and continue to build its own core competitiveness, towards a diversified competition model, in order to be invincible in the future market competition.

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9 Appendix

Balance Sheet of Xiaomi 2016-2020 (in million Yuan)

	2016	2017	2018	2019	2020
Cash	171,111	115,632	302,301	259,198	547,524
Accounts Receivable	44,880	54,695	55,984	69,485	1,016,101
Inventories	121,393	163,429	294,806	259,198	416,707
Other Current Assets	81,444	115,632	302,301	115,632	547,524
Total Current Assets	448,807	611,384	1,060,125	1,375,390	1,762,828
Total Non-Current Assets	223,429	287,313	392,153	460,901	773,969
Total Assets	611,384	898,697	1,452,279	1,836,292	2,536,798
Accounts Payable	247,309	340,033	462,872	595,279	721,988
Other Current liabilities	30,751	42,239	63,127	91,013	136,196
Total Current Liabilities	421,113	471,326	619,401	921,807	1,079,269
Long-term debt	77,764	72,513	78,561	47,868	106,348
Other Non-Current Liabilities	7,990	352	28,448	37,562	100,014
Total Non-Current Liabilities	159,016	1,699,477	120,376	97,908	217,393
Total Liabilities	452,279	2,170,804	739,778	1,019,715	1,296,663
Equity	702,856	1,272,106	712,501	816,576	12,401,351

Balance Sheet of Huawei 2016-2020 (in million Yuan)

	2016	2017	2018	2019	2020
Cash	123,047	175,347	184,106	170,684	172,898
Accounts Receivable	107,957	107,595	91,995	85,525	74,741
Inventories	73,976	72,352	96,545	167,390	167,667
Other Current Assets	27,916	25,371	28,042	29,126	39,442
Total Current Assets	355,502	405,261	530,114	703,893	691,394
Total Non-Current Assets	5,722	5,665	5,423	154,768	185,460
Total Assets	443,634	505,225	665,792	858,661	876,854
Accounts Payable	71,134	72,866	96,919	142,185	78,977
Other Current liabilities	145,448	95,825	87,683	106,005	104,308
Total Current Liabilities	239,271	267,685	359,250	446,255	392,332
Long-term debt	40,867	38,338	66,170	104,531	141,270
Other Non-Current Liabilities	1,073	1,702	4,161	3,157	3,769
Total Non-Current Liabilities	64,230	42,851	73,477	116,869	154,114
Total Liabilities	303,501	329,609	432,727	563,124	546,446
Equity	140,133	175,616	233,065	295,537	330,408

Cash Flow of Xiaomi 2016-2020 (in million Yuan)

	2016	2017	2018	2019	2020
Operating activities	5,273	9,956	14,145	238,103	13,527
Investing activities	15,651	26,777	75,080	3,157,013	10,505
Financing activities	67,573	621,493	265,741	31,212	22,375
Total cash flow	20,585	25,415	176,515	46,385	25,397

Cash Flow of Huawei 2016-2020 (in million Yuan)

	2016	2017	2018	2019	2020
Operating activities	49,218	96,336	74,659	91,384	35,218
Investing activities	28,524	24,657	93,880	145,001	30,793
Financing activities	10,851	16,936	26,926	37,744	1,653
Total cash flow	9,843	54,743	7,705	15,873	6,078