VSB - TECHNICAL UNIVERSITY OF OSTRAVA

FACULTY OF ECONOMICS

DEPARTMENT OF FINANCE

Finanční analýza společnosti McDonald's

Financial Analysis of McDonald's

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Ostrava 2018

VŠB - Technical University of Ostrava
Faculty of Economics
Department of Finance

Bachelor Thesis Assignment

Student: **Qiaoling Wu**

Study Programme: B6202 Economic Policy and Administration

Study Branch: 6202R010 Finance

Title: Financial Analysis of McDonald's Company
Finanční analýza společnosti McDonald's

The thesis language: English

Description:

1. Introduction
2. Description of the Financial Analysis Methodology
3. Characterization of McDonald's Company
4. Financial Analysis of the Company
5. Conclusion
Bibliography
List of Abbreviations
Declaration of Utilisation of Result from the Bachelor Thesis
List of Annexes
Annexes

References:

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Extent and terms of a thesis are specified in directions for its elaboration that are opened to the public on the web sites of the faculty.

Supervisor: **doc. Ing. Tomáš Tichý, Ph.D.**

Date of issue: 24.11.2017
Date of submission: 11.05.2018

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The declaration

"Herewith I declare that I elaborated the entire thesis, including all annexes independently."

Ostrava dated ..02..05..2018

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Contents

1 Introduction

Financial analysis is a process of selecting, evaluation and interpreting financial data. It is an aspect of the overall business finance function that involves examining historical data to gain information about the current and future financial health of a company. Financial analysis can be applied in a wide variety of situations to give business managers the information they need to make critical decisions. The ability to understand financial data is essential for any business manager. Finance is the language of business. Business goals and objectives are set in financial terms and their outcomes are measured in financial terms. Among the skills required to understand and manage a business is fluency in the language of finance—the ability to read and understand financial data as well as present information in the form of financial reports.

The objective of this thesis is to analyze the financial situation of McDonald's between 2012 and 2016. McDonald's is an American fast food company, founded in 1940 as a restaurant operated by Richard and Maurice McDonald, originating in Southern California. And it is also the world's largest fast food chain, serving over 69 million customers daily in over 100 countries across approximately 36,900 outlets as of 2016.

Thesis is divided into five parts. The first chapter is introduction. The second chapter is description of the financial analysis methodology. The third chapter is financial characterization of McDonald's. The fourth chapter is financial analysis of financial characterization of McDonald's. And the last chapter is summarization.

In Chapter 1, there is an introduction about the whole thesis. This part mentions the topic and goal of this thesis and makes a brief introduction about each chapter.

Chapter 2 first shows methodologies in financial analysis. We will describe three basic financial statements, including balance sheet, income statement (profit/loss statement), cash flow statement, which summarize information about the company. The reasons why those statements are important are that they collect data and are also the basis for other financial analysis. Then we can compare and calculate these data using common-size analysis. At last, we will describe financial ratio analysis which contains five kinds, they are: profitability ratios, liquidity ratios, solvency(leverage) ratios, assets management ratios and pyramidal decompositions.

In Chapter 3, there is an introduction about characterization of McDonald's from several

aspects: history, major events, organizational structure and so on. As McDonald's was born in the United States, it was listed on the New York Stock Exchange in 1965 for the initial public offerings.

In Chapter 4, the methods of Chapter 2 will be used to calculate and analyze McDonald's financial situation. And this part is the most important among whole thesis. Because in this chapter, we will know the McDonald's specific financial situation from different aspects by calculating profitability ratios, liquidity ratios, solvency ratios, activity ratios and make conclusion from these calculation results. And we will also use pyramidal decompositions to conduct further analysis of McDonald's return on equity by decomposing this ratio.

2 Description of the Financial Analysis Methodology

In this chapter, we will describe financial analysis methodology that will be used in flowing chapters. We divided this chapter into three parts. First, we will introduce the three main statement, balance sheet, cash flow statement, and income statement. The next parts, we will explain common-size analysis, it includes vertical common-size analysis and horizontal common-size analysis. Third, we will introduce financial ratio analysis and DuPont analysis.

Financial analysis is a tool used by managers and investors, but first thing is to get statements materials, because financial analysis is based on the financial statements. In fact, there are some problems with financial statements of annual reports, companies always tend to portray past performance and future prospects in a very favorable light. So inventors should find the mistakes that reports trend to minimize or ignore through the analysis. In addition, financial ratios which formed from sets of financial statement are very important in analysis, because each ratio is designed to explain some aspect of how the business is doing.

Main sources of this chapter are from Jae K. Shim, Joel G. Siegel et al. (2007)

2.1 Financial statement

Financial statement is a kind of summary report that shows how a firm has used the funds entrusted to it by its stockholders (shareholders) and lenders, and what is its current financial position. The three basic financial statements are the (1) balance sheet, which shows firm's assets, liabilities, and net worth on a stated date; (2) income statement (also called profit & loss account), which shows how the net income of the firm is arrived at over a stated period, and (3) cash flow statement, which shows the inflows and outflows of cash caused by the firm's activities during a stated period. Also called business financials. Scientific and reasonable financial statement analysis can help the company managers, creditors, shareholders to understand the overall financial situation of listed companies and forecast the company's prospects. At last, they can make further decisions.

2.1.1 Balance sheet

An accounting statement summarizes the information about what a company owns (its assets), the value of these assets and mix of capital used for financing these assets. Reflecting the financial condition of a business at a particular date. It is mainly based on the closing balance of the General Classification Account and its secondary accounts and detailed breakdown accounts.

According to the accounting equation:

$$Assets \ = \ Liabilities \ + \ Owners'\ Equity \qquad (2.1)$$

the balance sheet is divided into the left and right sides:

the left side is the asset side, listing the closing amount of company's current assets, fixed assets, intangible and deferred assets, and so on.

The right side is the liability and owner's equity, and shows the closing amount of each item of the company's current liabilities, long-term liabilities, owner's equity, etc. The two sides of the table have the same total count.

Table 2.1 Structure of balance sheet

Balance Sheet	
Assets (Property)	Liabilities & Equity (Capital)
Fixed Assets	Equity
	Long Term Liabilities (Loans)
Current Assets	Current Liabilities

Source: ManagementMania

Available on: https://managementmania.com/en/balance-sheet

The balance sheet is vital for several reasons. Most importantly, it can help answer questions about whether or not a business is thriving. Is your company experiencing

unprecedented growth, or do you need to take steps to increase revenue? Check your balance sheet. You'll see what your company owns against what it owes, thereby getting a sense for where you currently stand.

2.1.2   Income Statement

An income statement (P/L statement) is a company report that indicates the income or the amount of profit generated by a company over a certain period (usually one year), the reasonable cost of selling a good, and the profit (net income) left after the cost is eliminated. It compares the company's revenues, company cost and company expenses.

The basic equation underlying the income statement is:

$$Revenues - costs(expenses) = net\ income/loss \qquad (2.2)$$

Table 2.2 income statement which works best for a smaller business

Revenue		XXX
Expenses:		
Change in finished goods inventories	XXX	
Raw materials used	XXX	
Employee benefits expense	XXX	
Depreciation expense	XXX	
Telephone expense	XXX	
Other expenses	XXX	
Total expenses		XXX
Profit before tax		XXX

Table 2.3 format works best for a larger organization that has multiple departments

Revenue	XXX
Cost of sales	XXX
Gross profit	XXX
Administrative expenses	XXX
Distribution expenses	XXX
Research and development expenses	XXX
Other expenses	XXX
Total expenses	XXX
Profit before tax	XXX

Source: Accounting Tools - The income statement

Available on:

The main components of the income statement are:

- *Revenues.* These are the amounts earned through the sale of goods and the providing of services.

- *Expenses.* These include the cost of goods sold, SG&A expenses, and interest expense.

- *Certain gains and losses.* One example is the disposal of a noncurrent asset for an amount that is different from its book value.

The income statement best measures a company's profitability when the accrual basis of accounting is used. Under this method the revenues are the amounts earned (not the cash received in the period). The expenses are the amounts that best match the revenues and the time period (not the cash that was paid during the period). The income statement's bottom line (revenues and gains minus expenses and losses) is reported as net income or earnings. The income statement of a corporation with stock that is publicly traded will also report the earnings per share of common stock. The income statement is also known as the statement of operations, results of operations, statement of earnings, and P&L (for profit and loss statement).

2.1.3 Cash flow statement

The official name for the cash flow statement is the statement of cash flows. It reflects the impact of an enterprise's business activities, investment activities and financing activities on its cash and cash equivalents over a certain period of time (monthly, quarterly or annual). In brief, it refers to the changes in cash movements.

The cash flow statement reports the cash generated and used during the time interval specified in its heading. The period of time that the statement covers is chosen by the company. For example, the heading may state "For the Three Months Ended December 31, 2017" or "The Fiscal Year Ended September 30, 2017".

The cash flow statement organizes and reports the cash generated and used in the following categories:

1.Operating activities	- converts the items reported on the income statement from the accrual basis of accounting to cash.
2. Investing activities	- reports the purchase and sale of long-term investments and property, plant and equipment.
3. Financing activities	- reports the issuance and repurchase of the company's own bonds and stock and the payment of dividends.
4. Supplemental information	- reports the exchange of significant items that did not involve cash and reports the amount of income taxes paid and interest paid.

Source: Accounting Coach

Available on: https://www.accountingcoach.com/cash-flow-statement/explanation/1

Because the income statement is prepared under the accrual basis of accounting, the revenues reported may not have been collected. Similarly, the expenses reported on the income statement might not have been paid. You could review the balance sheet changes to determine the facts, but the cash flow statement already has integrated all that information. As a result, savvy business people and investors utilize this important financial statement.

Here are a few ways the statement of cash flows is used.

1.The cash from operating activities is compared to the company's net income. If the cash from operating activities is consistently greater than the net income, the company's net income or earnings are said to be of a "high quality". If the cash from operating activities is less than net income, a red flag is raised as to why the reported net income is not turning into cash.

2.Some investors believe that "cash is king". The cash flow statement identifies the cash that is flowing in and out of the company. If a company is consistently generating more cash than it is using, the company will be able to increase its dividend, buy back some of its stock, reduce debt, or acquire another company. All of these are perceived to be good for stockholder value.

3.Some financial models are based upon cash flow.

2.2 Common-size analysis

Sometimes items on company's financial statement are being displayed as a percentage of a common figure. This is called common-sized financial statement. It is being done in order to make it easier to analyze a company in dynamics and compare it with other firms, making the

comparison more meaningful. Common-size analysis can be applied to all three main statements of a company. Both of balance sheet, income statement and cash flow statement can be the object of common-size analysis.

Horizontal financial statement analysis (also referred as trend analysis) is the comparison of company's financial report information over some periods of time. Applying horizontal analysis to firm's statements makes it comfortable to estimate its performance over time. Vertical is the analysis of items of the company's statements when one item is being compared to the base item. While the horizontal analysis aims to estimate the dynamics, vertical is commonly applied for a single period. The reason for performing it is the necessity to estimate the relative proportions of different assets and finance sources elements.

The main benefit of the common-size statement analysis is the ability to perform vertical analysis for a single period, and horizontal analysis over some periods, such as several quarters or years. Looking through the common-size financial statement of a company allows the investor or creditor to indicate some certain tendencies in company's performance, that may have a big influence on the whole business in future. This analysis also gives us an insight into the company's strategy, and the ability to define possible ways of its development.

2.2.1   Vertical common-size analysis

Vertical analysis is one of several methods a business uses to review the accounts on its financial statements. A business performs vertical analysis on an income statement by first converting it to a "common size" income statement, a format that shows each item as a percentage of sales revenue. By comparing each item to sales, your small business can analyze its accounts on a relative basis and more easily spot important changes from period to period.

To conduct a vertical analysis of balance sheet, the total of assets and the total of liabilities and stockholders' equity are generally used as base figures. All individual assets (or groups of assets if condensed form balance sheet is used) are shown as a percentage of total assets. The current liabilities, long term debts and equities are shown as a percentage of the total liabilities and stockholders' equity.

To conduct a vertical analysis of income statement, sales figure is generally used as the

base and all other components of income statement like cost of sales, gross profit, operating expenses, income tax, and net income etc. are shown as a percentage of sales.

In a vertical analysis the percentage is computed by using the following formula:

$$Percentage \; of \; base = \frac{Amount \; of \; individual \; iten}{Amount \; of \; base} \times 100 \qquad (2.3)$$

A basic vertical analysis needs an individual statement for a reporting period but comparative statements may be prepared to increase the usefulness of the analysis.

2.2.2 Horizontal common-size analysis

Horizontal analysis (also known as trend analysis) is a financial statement analysis technique that shows changes in the amounts of corresponding financial statement items over a period of time. It is a useful tool to evaluate the trend situations.

The statements for two or more periods are used in horizontal analysis. The earliest period is usually used as the base period and the items on the statements for all later periods are compared with items on the statements of the base period. The changes are generally shown both in dollars and percentage.

Dollar and percentage changes are computed by using the following formulas:

$$Dollar \; change = Amount \; of \; the \; iten \; in \; comparison \; year - Amount \; of \; the \; iten \; in \; base \; year \qquad (2.4)$$

$$Percentage \; change = \frac{Dollar \; change}{Amount \; of \; the \; iten \; in \; base \; year} \times 100 \qquad (2.5)$$

Horizontal analysis may be conducted for balance sheet, income statement, schedules of current and fixed assets and statement of retained earnings.

2.3 Financial ratio analysis

Financial ratios are mathematical comparisons of financial statement accounts or categories. These relationships between the financial statement accounts help investors, creditors, and internal company management understand how well a business is performing and of areas needing improvement.

Financial ratios are the most common and widespread tools used to analyze a business' financial standing. Ratios are easy to understand and simple to compute. They can also be used to compare different companies in different industries. Since a ratio is simply a mathematically

comparison based on proportions, big and small companies can be use ratios to compare their financial information. In a sense, financial ratios don't take into consideration the size of a company or the industry. Ratios are just a raw computation of financial position and performance.

Ratios allow us to compare companies across industries, big and small, to identify their strengths and weaknesses. Financial ratios are often divided up into seven main categories: profitability, liquidity, solvency, activity, and DuPont analysis. Different ratios are used for analyzing different financial situation.

2.3.1 Profitability ratios

Operating profit margin (OPM) or return on sales ratio is the ratio of operating income of a business to its revenue. It is profitability ratio showing operating income as a percentage of revenue.

Operating margin ratio is calculated by the following formula:

$$OPM = \frac{EBIT}{Rev} \left(or \ \frac{op}{Rev} \right) \tag{2.6}$$

= indicator, how well the company manages its operations, i.e. how well the revenues are being generated and operating costs controlled

= measures operating profit per one unit of revenues

Earnings before interest and tax (EBIT) is same as operating income. Both operating income and revenue figures can be obtained from the income statement of a business.

Net profit margin (NPM) is the most basic profitability ratio that measures the percentage of net income of an entity to its net sales. It represents the proportion of sales that is left over after all relevant expenses have been adjusted.

Net profit margin is used to compare profitability of competitors in the same industry. It can also be used to determine the profitability potential of different industries. While companies in some industries are able to generate high net profit margin, other industries offer very narrow margins. It depends on the extent of competition, elasticity of demand, production differentiation, etc. of the relevant product or market.

Net profit margin is calculated by the following formula:

$$NPM = \frac{EAT}{Rev} \qquad (2.7)$$

= measures net profit (as a percentage) per one unit of revenues

Return on assets (ROA) is the ratio of annual net income to average total assets of a business during a financial year. It measures efficiency of the business in using its assets to generate net income. It is a profitability ratio.

The formula to calculate return on assets is:

$$ROA = \frac{EBIT}{A} \left(or \; \frac{OP}{A} \right) \qquad (2.8)$$

= measures net profit (or operating profit) as a percentage for every unit of company′s assets

Return on equity(ROE) (also called return on shareholders' equity) is the ratio of net income of a business during a year to its average shareholders' equity during that year. It is a measure of profitability of shareholders' investments. It shows net income as a percentage of shareholder equity.

The formula to calculate return on equity is:

$$ROE = \frac{EAT}{Equity} \qquad (2.9)$$

= measures a firm's efficiency at generating profits from every unit of shareholders' equity

2.3.2 Liquidity ratios

Current ratio is one of the most fundamental liquidity ratios. It measures the ability of a business to repay current liabilities with current assets.

Current assets are assets that are expected to be converted to cash within normal operating cycle, or one year. Examples of current assets include cash and cash equivalents, marketable securities, short-term investments, accounts receivable, short-term portion of notes receivable, inventories and short-term prepayments.

Current liabilities are obligations that require settlement within normal operating cycle or next 12 months. Examples of current liabilities include accounts payable, salaries and wages payable, current tax payable, sales tax payable, accrued expenses, etc.

Current ratio is calculated using the following formula:

$$Current\ Ratio = \frac{Current\ Assets}{Current\ Liabilities} \qquad (2.10)$$

= measures amount of current assets for every unit in current (i.e. short-term) liabilities

Quick ratio (also known as asset test ratio) is a liquidity ratio which measures the dollars of liquid current assets available per dollar of current liabilities. Liquid current assets are current assets which can be quickly converted to cash without any significant decrease in their value. Liquid current assets typically include cash, marketable securities and receivables. Quick ratio is expressed as a number instead of a percentage.

Quick ratio is a stricter measure of liquidity of a company than its current ratio. While current ratio compares the total current assets to total current liabilities, quick ratio compares cash and near-cash current assets with current liabilities. Since near-cash current assets are less than total current assets, quick ratio is lower than current ratio unless all current assets are liquid. Quick ratio is most useful where the proportion of illiquid current assets to total current assets is high. However, quick ratio is less conservative than cash ratio, another important liquidity parameter.

The following is the most common formula used to calculate quick ratio:

$$Quick\ Ratio = \frac{Current\ Assets - Inventories}{Current\ Liabilites} \qquad (2.11)$$

= is more stringent test of company´s liquidity

= current assets are adjusted for inventories due to the fact, that it is generally less liquid (must be first sold before any cash is collected).

Cash ratio is the ratio of cash and cash equivalents of a company to its current liabilities. It is an extreme liquidity ratio since only cash and cash equivalents are compared with the 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.

$$Cash\ Ratio = \frac{Cash + Market\ Securities}{Current\ Liabilities} \qquad (2.12)$$

= here we work with the assets that are in the form of cash (ketable securities can be sold immediately at the market within a few hours (or days)

2.3.3 Solvency ratios

Debt ratio (also known as debt to assets ratio) is a ratio which measures debt level of a business as a percentage of its total assets. It is calculated by dividing total debt of a business by its total assets.

Debt ratio finds out the percentage of total assets that are financed by debt and helps in assessing whether it is sustainable or not. If the percentage is too high, it might indicate that it is too difficult for the business to pay off its debts and continue operations.

Debt ratio is calculated using the following formula:

$$Debt\ Ratio = \frac{Total\ Debt\ （Total\ Liability）}{Total\ Assets} \tag{2.13}$$

= what percentage (proportion) of the company's assets is financed by debt (liabilities)

Debt-to-equity ratio is the ratio of total liabilities of a business to its shareholders' equity. It is a leverage ratio and it measures the degree to which the assets of the business are financed by the debts and the shareholders' equity of a business.

Debt-to-equity ratio is calculated using the following formula:

$$Debt\ To\ Equity\ Ratio = \frac{Total\ Debt\ （Total\ Liability）}{Equity} \tag{2.14}$$

= similar to debt ratio; relates the amount of the company's debt relative to company's equity

Interest coverage (also called times interest earned ratio) is an indicator of the company's ability to pay off its interest expense with available earnings. It is a measure of a company's solvency, i.e. its long-term financial strength. It calculates how many times a company's operating income (earnings before interest and taxes) can settle the company's interest expense. A higher times interest earned ratio indicates that the company's interest expense is low relative to its earnings before interest and taxes (EBIT) which indicates better long-term financial strength, and vice versa.

Interest coverage is calculated by dividing earnings before interest and tax (EBIT) for a period with interest expense for the period as follows:

$$Interest\ Coverage = \frac{EBIT}{Interest\ Paid}\left(or\ \frac{Operating\ Profit}{Interest\ Paid}\right) \tag{2.15}$$

= for example, if debt-to-equity ratio is higher than one, the company uses more debt for

assets financing than equity

= it tells the extent to which the company´s operating profit is able to meet current interest payments = for example if IC is 5 then 20 % (i.e. 1/5) of company´s operating profit is consumed by interest paid

2.3.4   Activity ratios

Average collection period(ACP) is a strong indication of a firm's liquidity over the accounts receivable, which is the money that customers owe to the company, as well as of the company's credit policies. A short average collection period suggests a tight credit policy and effective management of accounts receivable, which both allow the firm to meet its short-term obligations.

Average collection period is calculated using the following formula:

$$Average\ Collection\ Period = \frac{Accounts\ Receivable}{Revenues} \cdot 360 \qquad (2.16)$$

= measures the conversion of accounts receivable into cash

= i.e. how long (how many days) it takes to collect the company´s receivables

Conversely, a long ACP indicates that the company should tighten its credit policy and improve the management of accounts receivable to be able to meet its short-term obligations.

Accounts receivable turnover(ART) is the ratio of net credit sales of a business to its average accounts receivable during a given period, usually a year. It is an activity ratio which estimates the number of times a business collects its average accounts receivable balance during a period. The ratio is intended to evaluate the ability of a company to efficiently issue credit to its customers and collect funds from them in a timely manner.   A high turnover ratio indicates a combination of a conservative credit policy and an aggressive collections department, as well as a number of high-quality customers. A low turnover ratio represents an opportunity to collect excessively old accounts receivable that are unnecessarily tying up working capital. Low receivable turnover may be caused by a loose or nonexistent credit policy, an inadequate collections function, and/or a large proportion of customers having financial difficulties.

Accounts receivable turnover is calculated using the following formula:

$$Accounts\ Receivable\ Turnover = \frac{Costs\ Of\ Goods\ Sold}{Average\ Inventory} \qquad (2.17)$$

= how many times the accounts receivable is rolled over during a year

Inventory turnover(IT) is an efficiency ratio which calculates the number of times per period a business sells and replaces its entire batch of inventories. It is the ratio of cost of goods sold by a business during an accounting period to the average inventories of the business during the period.

Dividing the total cost of inventories sold during a period (which equals cost of goods sold) by the cost of average inventories balance maintained by a business gives us dollars of sales made per dollar of cash tied up in inventories.

Inventory turnover ratio is calculated using the following formula:

$$Inventory\ Turnover = \frac{Costs\ Of\ Goods\ Sold}{Average\ Inventory} \tag{2.18}$$

= is a measure of the number of times inventory is sold or used in a time period such as a year

Total assets turnover(TAT) compares the sales of a company to its asset base. The ratio measures the ability of an organization to efficiently produce sales and is typically used by third parties to evaluate the operations of a business. Ideally, a company with a high total asset turnover ratio can operate with fewer assets than a less efficient competitor, and so requires less debt and equity to operate. The result should be a comparatively greater return to its shareholders.

The formula for total asset turnover is:

$$Total\ Assets\ Turnover = \frac{Revenues}{Total\ Assets} \tag{2.19}$$

= it is an efficiency ratio which tells how successfully the company is using its assets to generate revenue

= for example, TAT of 1,5 means Each unit invested in assets generates revenues of 1,5.

2.3.5   DuPont analysis

The Dupont Corporation developed this analysis in the 1920s. The name has stuck with it ever since. The Dupont analysis also called the Dupont model. It is a financial ratio based on the return on equity ratio that is used to analyze a company's ability to increase its return on equity. In other words, this model breaks down the return on equity ratio to explain how

companies can increase their return for investors.

The Dupont analysis looks at three main components of the ROE ratio:

- Profit Margin
- Total Asset Turnover
- Financial Leverage

Based on these three performances measures the model concludes that a company can raise its ROE by maintaining a high profit margin, increasing asset turnover, or leveraging assets more effectively.

First, we need to decompose the return on equity ratio(ROE) by three component ratios:

$$ROE = \frac{EAT}{Equity} = \frac{EAT}{Revenues} \cdot \frac{Revenues}{Total\ assets} \cdot \frac{Total\ assets}{Equity} \qquad (2.20)$$

EAT / $Revenues$ = net profit

margin $Revenues$ / $Total\ assets$ = assets turnover

$Total\ assets$ / $Equity$ = financial leverage

If we want to separate the effects of taxes and interest, we can decompose the profit margin as follows:

$$\frac{EAT}{Revenues} = \frac{EAT}{EBT} \cdot \frac{EBT}{EBIT} \cdot \frac{EBIT}{Revenues} \cdot \frac{Revenues}{Total\ assets} \cdot \frac{Total\ assets}{Equity} \qquad (2.21)$$

EAT / EBT = tax burden

EBT / $EBIT$ = interest burden

$EBIT$ / $Revenues$ = operating margin

After substitution into DuPont analysis we get,

$$ROE = \frac{EAT}{Equity} = \frac{EAT}{EBT} \cdot \frac{EBT}{EBIT} \cdot \frac{EBIT}{Revenues} \qquad (2.22)$$

$$ROE = Tax\ burden \cdot Interest\ burden \cdot EBIT\ margin \cdot Assets\ turnover$$
$$\cdot Financial\ leverage$$

Next, we will introduce influence quantification, which includes method of gradual changes, logarithmic decomposition method and functional decomposition method.

Methods of gradual changes works with absolute changes in component ratios, in the

case of decomposition with 3 component ratios:

$$\Delta x_{a_1} = \Delta a_1 \cdot a_{2,0} \cdot a_{3,0} \tag{2.23}$$

$$\Delta x_{a_2} = a_{1,1} \cdot \Delta a_2 \cdot a_{3,0} \tag{2.24}$$

$$\Delta x_{a_3} = a_{1,1} \cdot a_{2,1} \cdot \Delta a_3 \tag{2.25}$$

Symbols:

x – basic ratio

Δx – absolute change in the basic ratio

a – component ratio

Δa – absolute change in the component ratio

Δx_{a_1} – absolute change in the basic ratio caused by the change in the first (a_1) component ratio

Logarithmic decomposition method is easier when we calculate than methods of gradual changes. Because we only need one formula when we calculate regardless of how many component ratios we have. Impact of i-th component ratio on the change in the basic ratio is calculate as follows:

$$\Delta x_{a_i} = \frac{lnl_{a_i}}{lnl_x} \cdot \Delta x \tag{2.26}$$

Symbols:

x– basic ratio

Δx– absolute change in the basic ratio

$l_x = \frac{x_1}{x_0}$ – index of change in basic ratio

$l_a = \frac{a_{i,1}}{a_{i,0}}$ – index of change in component ratio

Functional decomposition method works with the relative changes in basic and component ratios which is applicable regardless of the signs of the relative changes. The formula is computed as follows:

$$\Delta x^{relat} = R_x = \frac{x_1 - x_0}{x_0} \tag{2.27}$$

$$\Delta a_i^{relat} = R_{a_i} = \frac{a_1 - a_0}{a_0} \tag{2.28}$$

Impact (influence) of the i-th component ratio on the basic ratio (in the case of three

component ratios)

$$\Delta x_{a_1} = \frac{1}{R_x} \cdot R_{a_1} \cdot (1 + \frac{1}{2} \cdot R_{a_2} + \frac{1}{2} \cdot R_{a_3} + \frac{1}{3} \cdot R_{a_2} \cdot R_{a_3}) \tag{2.29}$$

$$\Delta x_{a_2} = \frac{1}{R_x} \cdot R_{a_2} \cdot (1 + \frac{1}{2} \cdot R_{a_1} + \frac{1}{2} \cdot R_{a_3} + \frac{1}{3} \cdot R_{a_1} \cdot R_{a_3}) \tag{2.30}$$

$$\Delta x_{a_3} = \frac{1}{R_x} \cdot R_{a_3} \cdot (1 + \frac{1}{2} \cdot R_{a_1} + \frac{1}{2} \cdot R_{a_2} + \frac{1}{3} \cdot R_{a_1} \cdot R_{a_2}) \tag{2.31}$$

Integral decomposition method is similar as in the case of functional method, and generally, the influence of j-th component ratio is given as

$$\Delta x_{a_j} = \frac{R_{a_j}}{R_x} \cdot \Delta x \tag{2.32}$$

3 Characterization of McDonald's Company

In this chapter, we will describe the financial characteristics of McDonald's company. The financial characteristics of a company can reflect the company's current and future financial situation. Therefore, knowing the company's financial characteristics is quite necessary for conducting financial analysis of a company. Then, we will mainly focus on two parts: basic introduction of McDonald's and common-size analysis of McDonald's.

3.1 Overview of the McDonald's

McDonald's was founded in 1940 as a restaurant operated by Richard and Maurice McDonald, in San Bernardino, California, USA. They rechristened their business as a hamburger stand. The first time a McDonald's franchise used the Golden Arches logo was in 1953 at the opening of Phoenix, Arizona, USA. In 1955, Ray Kroc, a businessman, joined the company as a franchise agent and proceeded to purchase the chain from the McDonald brothers. McDonald's had it's original headquarters in Oak Brook, Illinois, but has approved plans to move its global headquarters to Chicago by 2018.Although McDonald's is known for its hamburgers, they also sell cheeseburgers, chicken products, french fries, breakfast items, soft drinks, milkshakes, wraps, and desserts. In response to changing consumer tastes and a negative backlash because of the unhealthiness of their food, the company has added to its menu salads, fish, smoothies, and fruit. The McDonald's Corporation revenues come from the rent, royalties, and fees paid by the franchisees, as well as sales in company-operated restaurants. According to a BBC report published in 2012, McDonald's is the world's second largest private employer (behind Walmart with 1.9 million employees), 1.5 million of whom work for franchises.

3.1.1 Organizational Structure of McDonald's

McDonalds leadership team is headed by the President and CEO, who is aided by seven executive vice presidents and one senior vice president, each overseeing a specific aspect of the business. Mr. Steve Eastbrook is the President and CEO since early 2015. Eastbrook introduced substantial changes in McDonalds organizational structure in July 1, 2015 in order to improve the efficiency of the global operations.

Chart 3.1 McDonald's leadership team and its organizational structure.
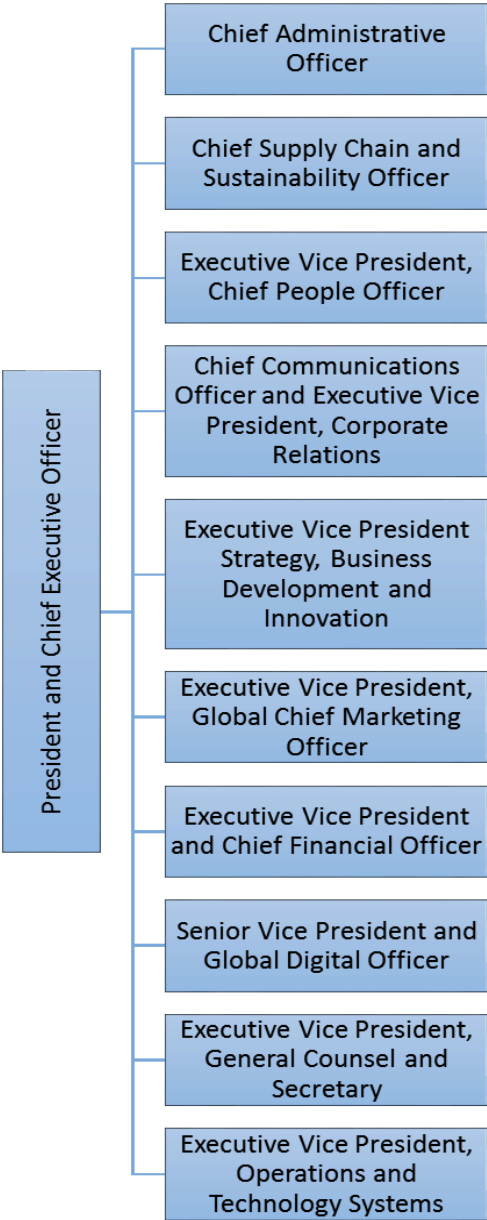
Source: McDonalds Leadership and McDonalds Organizational Structure

Available on: https://research-methodology.net/mcdonalds-leadership-and-mcdonalds-organizational-structure/

Organizational culture of McDonald's can be classified as divisional. McDonald's business operations are divided into the following four divisions according to their geographical location:United States，Europe，Asia/Pacific, Middle East and Africa ("APMEA") and Other countries.

Each division above possesses its own departments such as IT, finance, marketing and others. Moreover, the most recent changes in McDonalds organizational structure effective from July 1, 2015 increased the emphasis on the international markets clarifying the roles of executives responsible for growth in international markets. Specifically, as it is illustrated in figure below, the responsibility for overseeing international operations is distributed among four senior executives at President level.

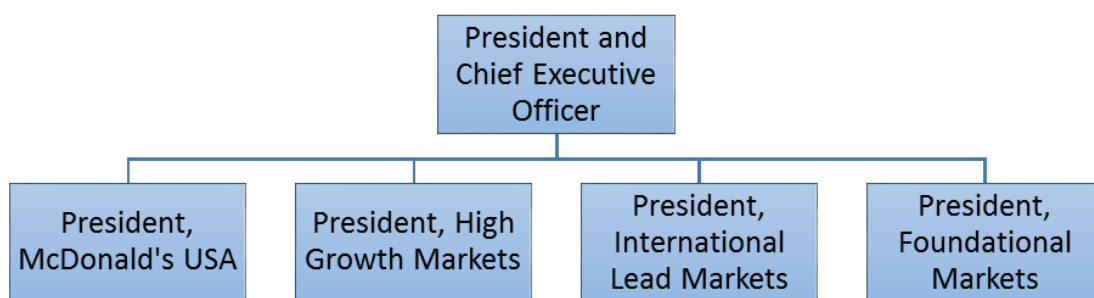Chart 3.2 McDonalds leadership structure in international markets

Source: McDonalds Leadership and McDonalds Organizational Structure
Available on: https://research-methodology.net/mcdonalds-leadership-and-mcdonalds-organizational-structure/

USA is the largest segment for McDonald's and it accounted for more than 40 per cent of the operating income in 2014.

High Growth Markets refer to markets that have relatedly higher potential in terms of restaurant expansion and franchising. High growth markets accounted to about 10 per cent of McDonald's operating income for 2014 and include China, Italy, Poland, Russia, South Korea, Spain, Switzerland and the Netherlands.

International Lead Markets relate to markets that are already established such as Australia, Canada, France, Germany and the U.K. The income generated from international lead markets in 2014 accounted to about 40 per cent of McDonald's total income for the same year.

Foundational Markets refer to "the remaining markets in the McDonald's system, each of which has the potential to operate under a largely franchised model".

3.1.2 Major events of McDonald's

In 1954 Ray Kroc, seller of milkshake machines, visits the hamburger restaurant of the McDonald brothers in California. He is impressed by the fast service and high quality. On 15 April 1955, Kroc opened its first McDonald's restaurant in Des Plaines, Illinois.

The Netherlands gets its first McDonald's restaurant in 1971, in Zaandam. This is also the first restaurant in Europe. There are now more than 240 McDonald's restaurants in the Netherlands. The menu has been constantly adapted to the wishes of the guests over the years. But the formula has always remained the same: a friendly and quick service, high quality products, a spotless restaurant and an attractive price.

1971

FIRST McDonald's RESTAURANT IN THE NETHERLANDS

On August 21 the first restaurant in the Netherlands opens its doors at the Vermiljoenweg in Zaandam. This is also the first McDonald's restaurant on the European mainland. In addition to the Hamburger you will also find Appelmoes, the McKroket, Chicken Superbout and even Pea soup on the menu. The potatoes for French fries are still peeled by hand.

1981

McDonald's BECOMES PARTNER OF THE RONALD MCDONALD CHILD FUND

This fund helps families with a sick or disabled child with the Ronald McDonald Houses. Parents, brothers and sisters of children who stay for a long time in a hospital, rehabilitation center or psychiatric institution stay here. Because a sick child can not live without his parents. Meanwhile, McDonald's and the Ronald McDonald Children's Fund have been together for more than 30 years.

1986
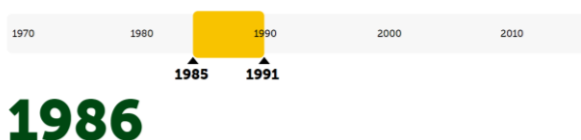
HAPPY MEAL IN THE NETHERLANDS

The first time that Dutch children can order a Happy Meal.

1987

FIRST MCDRIVE IN THE NETHERLANDS (HOUSE TER HEIDE)

It turned out to be a success. Meanwhile, even 19 restaurants have a Side by Side Drivelan.

1999

INTRODUCTION MCKROKET

The Muckraked is on the menu again. This was one of the first products that guests could enjoy when McDonald's came to the Netherlands in 1971.

2005

START RESTYLING RESTAURANTS

The restaurants get a more contemporary look, in which guests can enjoy themselves in a comfortable way. Meanwhile, 88% of the restaurants have been converted. Thanks to the renovation, the restaurants are also more sustainable, mainly due to energy and water saving. The renovated restaurants each emit at least 9 tons less CO_2 per year.

2010

INTRODUCTION QUALITY SCOUTS PROGRAM

Quality Scouts are ordinary people from all over the Netherlands who take a look behind the scenes at McDonald's. They follow a product from the country to the restaurant. They are not paid and have no ties with the company. In their reports they tell exactly what they hear and see themselves.

2015

JUNE - START PILOT TABLE SERVICE

McDonald's starts with table service in 10 restaurants. McDonald's Table Service offers guests the opportunity to have their order served at the table. A service employee from

McDonald's will personally serve the guest's order at the table after a choice has been made to the Easy Order Kiosk. With Table Service, McDonald's is taking an important step forward in the restaurant experience for guests.

JUNE - INTRODUCTION GLUTEN FREE BURGER

At more than 50 McDonald's restaurants, guests can order a gluten-free Burger, Cheeseburger and Quarter Pounder. Without gluten and 100% delicious! McDonald's is proud to use the certificate Gluten-free from the Dutch Celiac Association.

OCTOBER - INTRODUCTION MAESTRO BURGER

The Maestro Burger is a tough burger with two 100% Angus Beef burgers, a luxury sesame poppy seed roll, served with a slice of naturally ripened cheddar cheese, crispy lettuce, red onion rings, bacon, ketchup and Wild Mustard sauce.

NOVEMBER - 1500TH SUCCEEDED BY THE McDonald's ACADEMY

The McDonald's Academy has started since September 2009. This is the unique training program specifically for McDonald's employees. Since the establishment of the McDonald's Academy (September 2009), no less than 1,500 graduates have earned a recognized MBO diploma.

DECEMBER - GIFT CALENDAR

In this month, McDonald's launched the Gift Calendar, a unique advent calendar, where participants could win several discounts, free products, fun giveaways or big prizes. With the McDonald's Gift Calendar, you got a free Hamburger on Tuesday 8 December when you sang 'Oh pine tree'.

Available on: https://www.mcdonalds.nl/over-mcdonalds/geschiedenis

3.1.3   McDonald's industry position

Western fast-food chain expansion, the trend of convergence of Chinese and Western enhanced. The international fast-food brand enterprises represented by McDonald's is rapidly expanding in China, and its development speed is obviously accelerated. By the end of 2004, there were over 600 McDonald's in China, an increase of 800 and 300 respectively over 2000, with an average annual opening of 200 and 80 shops. The annual business scale exceeded 11

billion yuan and 6 billion yuan respectively, The amount of more than 800 million yuan to become China's fast food and catering industry leader, the role of the industry and the impact of expanding. The field of fast-food innovation, development space continues to extend the expansion.

3.1.4   McDonalds' markets around the world

As mentioned in the last part of this series, McDonalds (MCD) operates in the U.S., Europe, Asia or Pacific, Middle East, and Africa (or APME), and other countries and corporate (or OCC). Since all these markets have different culture and taste preferences, a one-size fits all strategy may not necessarily work in the restaurant industry. Investors can gain exposure using to the industry through the PowerShares Dynamic Leisure and Entertainment ETF (PEJ) and the PowerShares Dynamic Food & Beverage ETF (PBJ).

McDonalds opened its first international restaurants in Canada and Puerto Rico in 1967. It has expanded into other markets swelling to a total of 119 countries in 2014. The previous chart shows the search results on Google Maps for McDonalds' restaurants all around the world. Each red dot, which increases in number as you zoom in on a country, is a McDonalds restaurant.

- U.S. market

In McDonalds' home and the oldest market, the U.S. alone had 14,278 locations at of 2013. It has a presence in almost every state. It competes with Yum Brands (YUM), Wendy's (WEN), and other chains. As a result, the room for growth is limited. This is evident in comparable sales, which decreased by 1% month-over-month (or MoM) as of May 31, 2014.

- European market

With 7,602 stores, Europe is the largest market for company-operated restaurants and the second largest market for franchised restaurants. McDonalds has focused on adding more value and premium additions to its menu. It also launched new items such as blended-ice. McDonalds also improved efforts to provide a better customer experience by introducing self-order kiosks. MoM comparable sales for this segment were up 0.4% as of May 31, 2014.

- APMEA market

McDonalds operates 9,918 stores in APMEA. This market segment is very diverse in tastes.

McDonalds has been careful to customize its offerings. These include, rice burgers in Hong Kong, the McCurry and Pizza Puff in India, the shrimp patty burger and Teriyaki burgers in Japan, the Bulgogi burger in Korea, pita bread sandwiches in the Middle East, and grilled chicken sandwiches in the African market. MoM comparable sales for this segment were up 2.5% as of May 31, 2014.

3.1.5 McDonalds' business segments

McDonalds (MCD) and its competition, Yum! Brands (YUM) and Burger King (BKW), use the franchise model as well as the company-operated model—the two most common models in a restaurant industry, the PowerShares Dynamic Leisure and Entertainment ETF (PEJ) and the PowerShares Dynamic Food & Beverage ETF (PBJ)—to operate their restaurants across the world. McDonalds categorizes its markets in four segments—U.S., Europe, Asia or Pacific, Middle East, and Africa (or APMEA), and other countries and corporate (or OCC).

Revenues as of FYE 2013 (in Million)
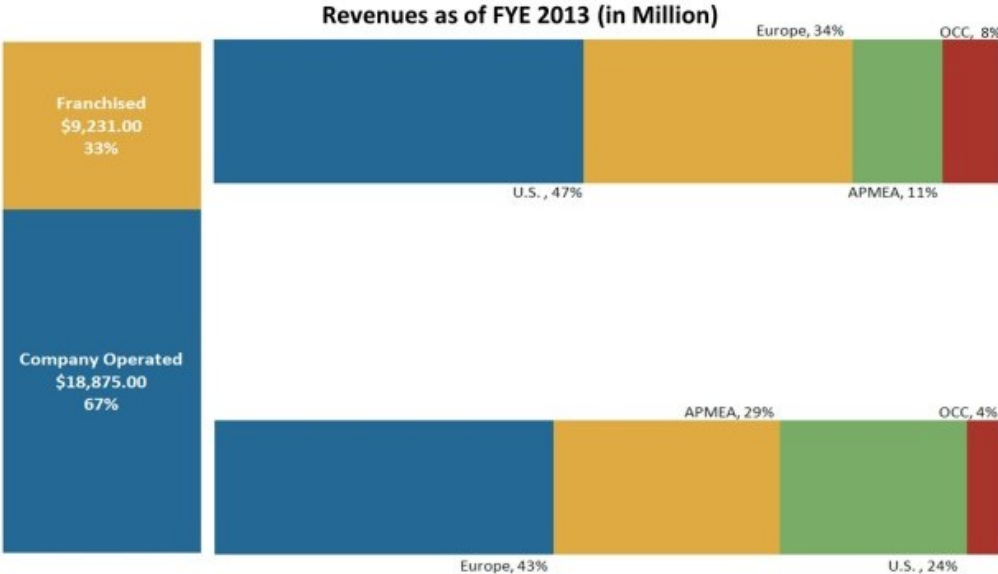
About 81% of McDonalds' restaurants are franchised and only 19% are company owned restaurants. Under the franchising umbrella, McDonalds has a conventional franchise and license agreement. Under the conventional franchise agreement, McDonalds provides capital for location, which it then owns. Each franchise provides portions of capital for seating, equipment, decor, signs, and re-investments in the business. Under the license agreement, the licensees provide capital for the location.

● Revenue breakdown

McDonalds divides its revenues into company-operated and franchised. In the previous chart, McDonalds earned 67% of its revenues from company owned restaurants at the end of December, 2013. McDonalds earned only 33% of revenues from franchise. Revenue contribution was highest from Europe, at 43%, under the company owned model and highest from in the U.S., at 47%, under the franchise model. Let's look at why franchises contribute to only one third of the revenues and whether it's better than company-owned.

● Franchise margins

With the franchise model, McDonalds earns revenues from rents and royalties based on the percent of sales and initial fees from new restaurants. McDonalds also earns revenues from a new franchised term, which could last for as much as 20 years. With the licensing model, McDonalds doesn't earn revenues from rent, although it takes its share of revenues on a percentage basis. Due to low commodity and operating costs, franchises have higher operating profit margins. As of fiscal year, 2013, franchised margins, calculated as revenues from franchise less the company's occupancy cost—rent and depreciation over revenues from franchise, were 82.4% compared to company operated margins, which were 17.5%.

3.1.6   Company values

Companies in the restaurant industry, which investors can access through the exchange-traded funds (or ETFs) like the PowerShares Dynamic Leisure and Entertainment (PEJ) and the PowerShares Dynamic Food & Beverage (PBJ), use various strategies to differentiate themselves from the competition. McDonald's delivers an experience to its customer through its trademark "quality, service, cleanliness, and values (or QSC&V)." To deliver this experience it uses what it calls a "Plan to Win" strategy supported by its three-legged stool approach. Plan to Win is a strategic initiative that focuses on customer experience through the five Ps–People, Product, Place, Price, and Promotion. Three legs being the owners or operators, suppliers, and company employees. Without these three legs, the stool won't stand firm.

3.1.7 Ambition of McDonald's

Our purpose goes beyond what we sell. We're using our reach to be a positive force. For our customers. Our people. Our communities. Our world

Good food: We promote choices. Real ingredients. Great taste. Transparency.

Good people: We create opportunity. Encourage diversity. Offer training. Facilitate teamwork. Reward achievement.

Good neighbor: We champion happy, healthy kids. Keep families together through Ronald McDonald House Charities. Commit to reducing our footprint. Using less energy. And recycling more.

3.2 Common-size analysis of McDonald's Company

From Chapter 2, as is known to us all, common-size analysis statements can be used to examine correlation between relative items over the time and how many proportions of different items are in the same statement. In this part, we will conduct common-size analysis for McDonald's which includes vertical and horizontal common-size analysis. The following Tab.3.1 and Tab.3.2 are shown as the simple balance sheet and income statement of McDonald's from 2012 to 2016.

Table 3.1 Simple balance sheet of McDonald's from 2012 to 2016(In millions dollar)

	2012	**2013**	**2014**	**2015**	**2016**
Current assets	4,922.1	5,050.1	4,185.5	9,643.0	4,848.6
Long-term assets	30,464.4	31,576.2	30,095.9	28,295.7	26,175.3
Total assets	35,386.5	36,626.3	34,281.4	37,938.7	31,023.9
Current liabilities	3,468.3	2,950.4	2,747.9	3,170.0	3,403.1
Long-term liabilities	15,158.7	15,798.9	17,055.6	26,196.1	27,942.8
Total liabilities	18,627.0	18,749.3	19,803.5	29,366.1	31,345.9
Shareholders' equity	15,293.6	16,009.7	12,853.4	7,087.9	-2,204.30

Source: Annual Report of McDonald's

As is shown in the Tab.3.1, the total assets of McDonald's are not always inscreasing. The

tendency of total assets is variable，which was the highest in 2015 and the lowest in 2016. Current assets are the main factor affecting total assets. As can be seen in the table, the current assets in 2015 have doubled compared to the previous year. That is why the total assets of 2015 became the highest value in five years. The total liabilities of McDonald's have increased year by year because of the increase of long-term liabilities year by year. The first three years of thoes five years current liabilities decline first and then resume growth. In addition, shareholders'' equity is declining every year and finally becomes negative in 2016.

Table 3.2 Simple income statement of McDonald's from 2012 to 2016(In millions dollar)

	2012	2013	2014	2015	2016
Revenues	27567	28106	27441	25413	24622
Operating expenses	18,962	19,342	19,492	18,267	16,877
EBIT	8605	8764	7949	7146	7745
Interest	526	560	577	590	879
EBT	8079	8204	7372	6556	6866
Taxation	2614	2618	2614	2027	2180
EAT	5465	5586	4758	4529	4686
Dividend received	2,897	3,115	3,216	3,230	3,058

Source: Annual Report of McDonald's

From table 3.2, we can easily find out that from 2012 to 2013, revenues of McDonald's have increased constantly, but from 2013 to 2016, revenues decreased. But other factors such as EBIT and net profit grew from 2012 to 2013, fell from 2014 to 2015 with a large amount, and finally rebounded slightly in 2016. In fact, we can see that the taxation increased from 2012 to 2016，especially in 2016,however,the net profit was not the lowest in that year. Because the impact of taxation far from the impact of operating expenses, it means that even though the taxation increased, the net profit can still increase because of the decline of operating expenses.

3.2.1   Vertical common-size analysis of McDonald's company

Vertical analysis focuses on the analysis of internal structure, here, we will use vertical common-size analysis to analyze the balance sheet and separate the balance sheet into assets and liabilities & equity.

From Tab 3.2, we can find that the cash and equivalents took a big proportion of the current assets from 2012 to 2016.

Table 3.3 The proportion of each item in total assets from 2012 to 2016 (%)

	2012	2013	2014	2015	2016
Long-term assets	86.09	86.21	87.79	74.58	84.37
Current assets	13.91	13.79	12.21	25.42	15.63
Cash and equivalents	6.60	7.64	6.06	20.26	3.94
Accounts and notes receivable	3.89	3.60	3.54	3.42	4.75
Inventories, at cost, not in excess of market	0.34	0.34	0.32	0.26	0.19
Prepaid expenses and other current assets	3.08	2.21	2.28	1.47	1.82
Assets of businesses held for sale	0.00	0.00	0.00	0.00	4.92
Total assets	100	100	100	100	100

Source: Own calculation

Chart.3.1 Vertical common-size analysis of assets from 2012 to 2016

Source: Own elaboration

Combined with the above Tab 3.3 and Chart 3.1, we can see that from 2012 to 2016, the proportion of long-term assets in total assets was always higher than the proportion of current assets in total assets. The capital structure didn't change too much, it was kept almost in the same level, but suddenly it doubled in 2015 for the huge increasing of cash and equivalents on the sale of property in the US. Short-term assets are a very important form of assets for businesses. Generally speaking, it is the guarantee for enterprises to carry out normal production and business activities, and it is also the most important manifestation of the short-term solvency of enterprises. But from the profit point of view, high proportion of liquid assets is not a good thing, because long-term assets are the part that can really bring more profits to the company. And as for the proportion of long-term assets, generally the lower result of it is better because too high proportion of long-term assets will cause some problems such as maintenance costs. So, from the Chart 3.1, we can find out that the structure of current and long-term assets is not healthy enough, the proportion of current asset was too low compared to long-term assets. McDonald's needs a proper balance between the two sides.

Table 3.4 The proportion of each item in total equity and liabilities from 2012 to 2016 (%)

	2012	**2013**	**2014**	**2015**	**2016**
Current liabilities	10.05	8.49	8.41	8.70	11.87
Long-term liabilities	44.77	45.45	52.23	71.86	95.67
Total liabilities	54.83	53.94	60.64	80.56	107.55
Shareholders' equity	45.17	46.06	39.36	19.44	-7.55
Total equity and liabilities	100	100	100	100	100

Source: Own calculation

Chart.3.2 Vertical common-size analysis in equity and liabilities from 2012 to 2016
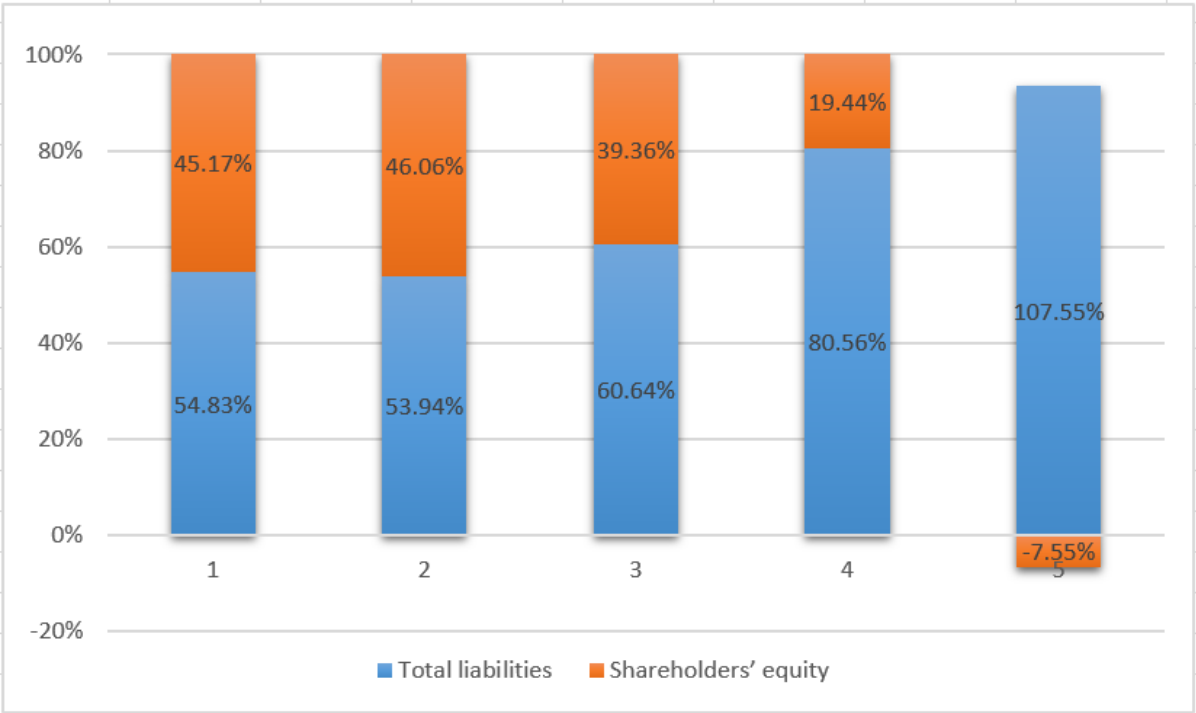
Source: Own elaboration

From Tab 3.4 we can see the proportion of current liabilities was much higher than the proportion of long-term liabilities during these years. However, it was not so good for McDonald's or other company. Because the maturity of current liability is shorter than long-term liability's, which means that too much current liabilities will increase the debt burden of the company.

And in Chart 3.2 we can see that between 2012 and 2015, the proportion of liability in

equity and liabilities was always higher than the proportion of equity. It means that McDonald's main way of raising funds is borrowing money. And even though the proportion of total equity in equity and liabilities increased a little bit in 2013, it quickly declined in the next four years and became negative in 2016. The overall trend was declining.

Table 3.5 The proportion of each item in expenses from 2012 to 2016 (%)

	2012	2013	2014	2015		2016
Company-operated restaurant	78.12	78.38	76.18	74.12		71.52
Franchised restaurants-occupancy	7.84	8.17	8.46	8.73		9.68
Selling, general & administrative	12.60	12.01	12.40	12.91		13.43
Impairment and other charges(credit)	-1.25	-1.38	0.09	1.11		0.43
Interest	2.70	2.82	2.88	3.13		4.95

Source: Own calculation

Chart 3.3 Vertical common-size analysis of expenses from 2012 to 2016
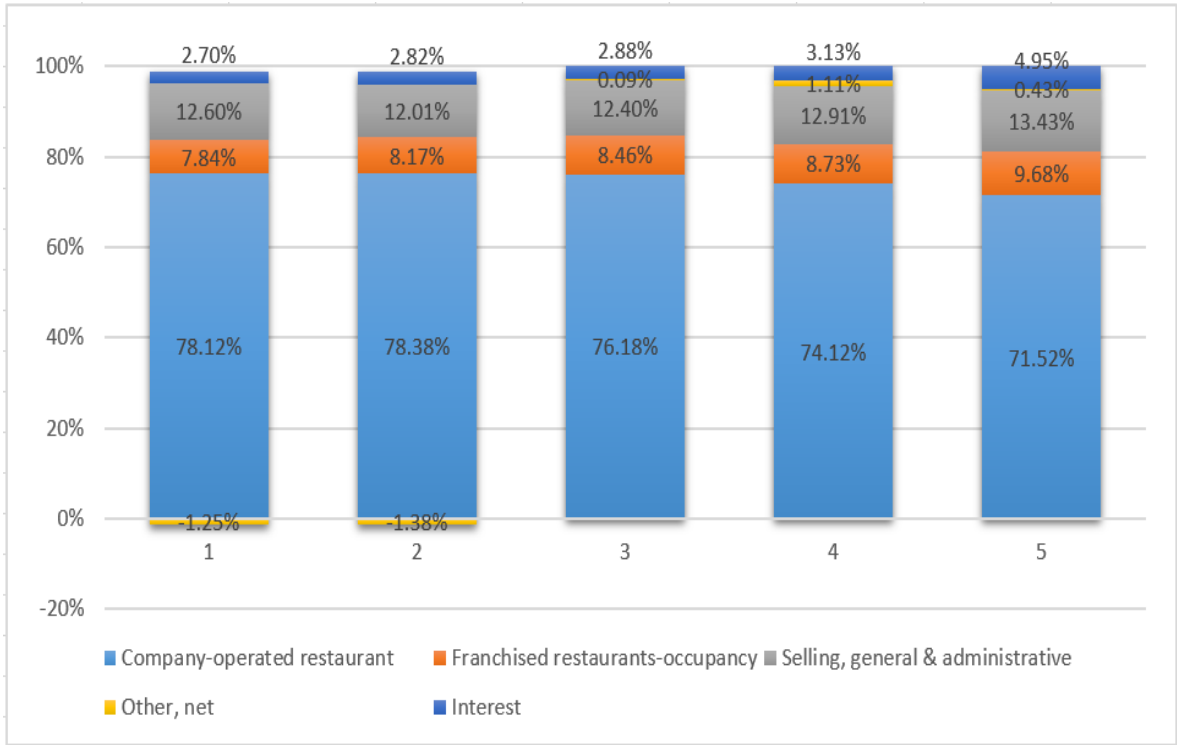
Source: Own elaboration

From the above Tab 3.5 and Chart 3.3, we can see that even if the expense on Company-operated restaurant was decreasing it is still the highest proportion of total expenses during these years. And the proportion of selling, general & administrative expenses were relatively stable during these years. The proportion of interest in total expenses was raising during these years, because due to the operation of McDonald's in 2015, there have been many problems in the Asian region, resulting in an increase in loans and liabilities.

3.2.2 Horizontal Common-size analysis of McDonald's Company

Horizontal analysis, also called time series analysis, focuses on trends and changes in numbers over time. Horizontal allows you to detect growth patterns, cyclicality, etc. and to compare these factors among different companies. In this part, we choose some benchmarks during the 5 years, Then, we need to calculate the absolute change of each item. In the end, the percentage change of them are compared. The following Tab.3.6 shows the absolute change of each item in balance sheet. Tab.3.7 shows the percentage change of each item in balance sheet.

Table 3.6 Absolute change of each item in balance sheet (In millions dollar)

	2012/2013	2013/2014	2014/2015	2015/2016
Long-term assets	1,111.8	-1,480.3	-1,800.2	-2,120.4
Current assets	128.0	-864.6	5,457.5	-4,794.4
Total assets	1,239.8	-2,344.9	3,657.3	-6,914.8
Long-term liabilities	-517.9	-202.5	422.1	233.1
Current liabilities	640.2	1,256.7	9,140.5	1,746.7
Total liabilities	768.2	392.1	14,598.0	-3,047.7
Shareholders' equity	716.1	-3,156.3	-5,765.5	-9,292.2

Source: Own calculation

Table 3.7 Percentage change of each item in balance sheet (%)

	2012/2013	2013/2014	2014/2015	2015/2016
Long-term assets	3.65	-4.69	-5.98	-7.49
Current assets	2.60	-17.12	130.39	-49.72
Total assets	3.50	-6.40	10.67	-18.23
Long-term liabilities	-14.93	-6.86	15.36	7.35
Current liabilities	4.22	7.95	53.59	6.67
Total liabilities	3.83	1.88	68.73	-8.50
Shareholders' equity	4.68	-19.71	-44.86	-131.10

Source: Own calculation

From Tab 3.6, we can see that between 2012 and 2016, only current liability increased every year. Items such as current assets, shareholders' equity increased just grew in the first year and then declined in the next four years. As for the long-term assets, total assets, long-term liabilities and total liabilities sometimes increased and sometimes decreased by compared with the year before. Then we will explain the reasons why they changed in those ways.

The reason why long-term liability increased year by year was because the increase of almost both long-term assets and current assets or the increase in long-term liabilities is greater than the decrease in current liabilities. And the increase of the long-term liabilities was mainly because McDonald's needed more money to build and run new restaurant.

From Tab 3.8, we can see that there was a significant decline of percentage change of shareholders' equity from 2012/2013 to 2015/2016. And specially from 2014/2015 to 2015/2016, the growth speed compared to the previous year was negative every year.

Then, we will conduct horizontal common-size analysis of income statement. The following Tab.3.8 shows the absolute change of each item in income statement. And the Tab.3.9 shows the percentage change of each item in income statement.

Table 3.8 Absolute change of each item in income statement (In millions dollar)

	2012/2013	2013/2014	2014/2015	2015/2016
Revenues	539	-665	-2028	-791
Operating expenses	380	150	-1,225	-1,390
EBIT	159	-815	-803	599
Interest	34	17	13	289
EBT	125	-832	-816	310
Taxation	4	-4	-587	153
EAT	121	-828	-229	157
Dividend received	218	101	14	-172

Source: Own calculation

Table 3.9 Percentage change of each item in income statement (%)

	2012/2013	2013/2014	2014/2015	2015/2016
Revenues	1.96	-2.37	-7.39	-3.11
Operating expenses	2.00	0.78	-6.28	-7.61
EBIT	1.85	-9.30	-10.10	8.38
Interest	6.46	3.04	2.25	48.98
EBT	1.55	-10.14	-11.07	4.73
Taxation	0.15	-0.15	-22.46	7.55
EAT	2.21	-14.82	-4.81	3.47
Dividend received	7.53	3.24	0.44	-5.33

Source: Own calculation

From Tab 3.9, we can see that revenue of McDonald's increased from 2012/2013 and then decreased from 2013/2014 to 2015/2016. As a fast food chain company, the food safety issues that have occurred in the Asia Pacific region have had a huge impact on them in those years. So as one of the giants of the fast food industry, this has seriously weakened the industry's competitiveness with KFC and Burger King.

Then we can see that operating expense always increased first two years and declined last three years. Because in order to make up for the loss caused by food safety problems and market expansion and transfer in 2015, McDonald's sold some restaurants in the United States. Moreover, it also developed a series of new strategic goals

The overall trend of interest was increasing. As we have mentioned about Tab 3.6 and, Tab 3.7, the total liability was growing every year, especially in 2015/2016, and then it has dropped a little bit in 2016, but huge debts will inevitably lead to changes in interest rates. Then as a result, the interest increased.

The changes in both of taxation and EAT amount for those five years first presents a parabola. Absolute change of them first is positive, the middle is negative, and finally the positive growth is resumed again in 2016.

4   Financial Analysis of the Company

In this chapter, we will conduct financial analysis by calculating some financial ratio and by using DuPont analysis which both are already mentioned in chapter 2 to estimate the financial condition of McDonald's.

4.1 Profitability ratios of McDonald's Company

From this part, we will calculate the results of operating margin, net profit margin, return on assets, and return on equity to analyze the profitability of McDonald's from 2012 to 2016. And we have to calculate these ratios by using Formula (2.6), (2.7), (2.8), (2.9).

4.1.1   Operating profit margin

Tab 4.1 shows the operating profit margin of McDonald's, Chart 4.1 shows the trend of operating profit margin of McDonald's.

Table 4.1 Operating profit margin of McDonald's from 2012 to 2016 (%)

	2012	**2013**	**2014**	**2015**	**2016**
Operating income	8605	8764	7949	7146	7745
Total revenues	27567	28106	27441	25413	24622
Operating profit margin	31.21	31.18	28.97	28.12	31.46

Source: Own calculation

Chart 4.1 Trend of operating profit margin from 2012 to 2016

Source: Own elaboration

From Tab 4.1, we can see that operating profit margin of McDonald's declined from 2012 to 2015, but increased sharply from 2015 to 2016. The overall trend of operating income and total revenues waa decreasing.The reason why there was adecline of operating profit margin from 2012 to 2015 was because the decrease in revenues was much greater than the icrease in operating income. The data from chapter 3 shows the percentage change of revenues of 2015/2016 was -3.11%, however, the percentage change of EBIT of 2015/2016 was 8.38%. So, it was not hard to understand why there was a significant growth from 2015 to 2016.

Operating margin measures how much profit a company makes on a dollar of sales, after paying for variable costs of production such as wages and raw materials, but before paying interest or tax. It is calculated by dividing a company's operating profit by its net sales. As we know, the higher the operating profit margin is, the better for the company. So, we can see that McDonald's performed best in the way of generating revenues with controlling operating costs well in 2012，2013，2016 ,especially in 2016,and performed worst during 2014 to 2015.
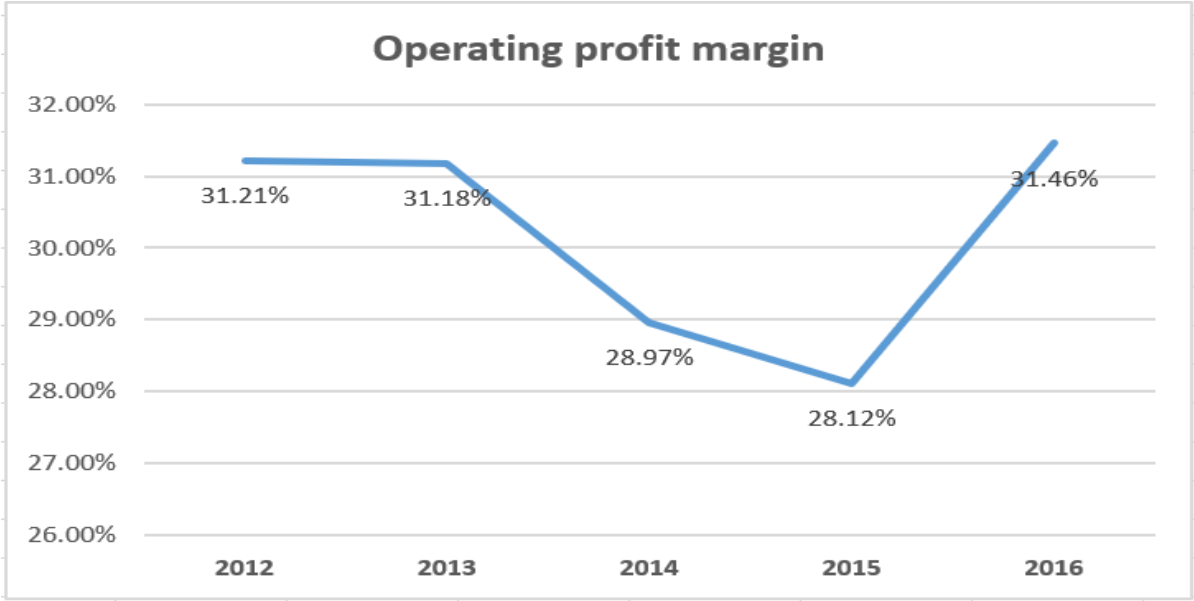
4.1.2　Net profit margin

Tab 4.2 shows the net profit margin of McDonald's, Chart 4.2 shows the trend of net profit

margin of McDonald's.

Table 4.2 Net profit margin of McDonald's from 2012 to 2016 (%)

	2012	**2013**	**2014**	**2015**	**2016**
Net income	5465	5586	4758	4529	4686
Total revenues	27567	28106	27441	25413	24622
Net profit margin	19.82	19.87	17.34	17.82	19.03

Source: Own calculation

Chart 4.2 Trend of net profit margin from 2012 to 2016
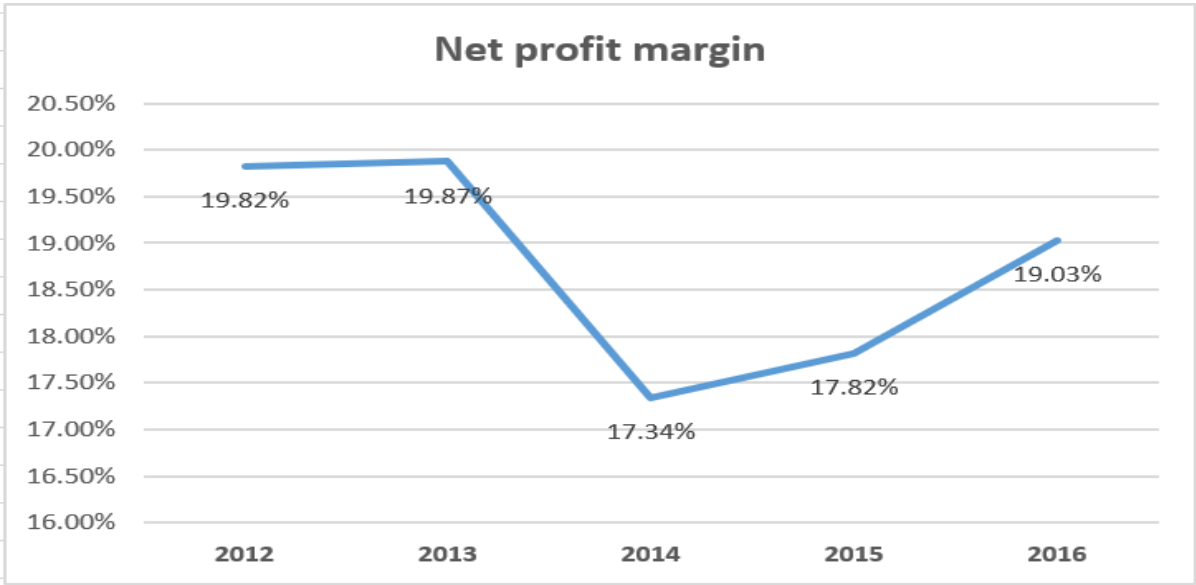
Source: Own elaboration

From Tab 4.3, we can see that net profit margin of McDonald's increased from 2012 to 2013 and 2014 to 2016,and decreased between 2013 and 2014.The reason why it raise again from 2014 was that the decrease in revenues was much more dramatic than the decrease in net income during 2013 to 2014. We can find the data from chapter 3, the percentage change of revenues of 2012/2013 was -2.37%, nevertheless, the percentage change of EAT of 2012/2013 was -14.82%. But net profit margin raised sharply from 2014 to 2016. because that there was a significant rised of net incime from 2014 to 2016, and the revenue always decreased from 2012

to 2016. So, according to the formula of the net profit margin, it was obvious that the net profit margin would increase from 2014 to 2016.

As we have mentioned in chapter 2, the profit margin ratio directly measures what percentage of sales is made up of net income. In other words, it measures how much profits are produced at a certain level of sales.This ratio also indirectly measures how well a company manages its expenses relative to its net sales. That is why companies strive to achieve higher ratios. They can do this by either generating more revenues why keeping expenses constant or keep revenues constant and lower expenses. So, if the ratio is high, it means that there is much more money generated as revenues switch into profit. It's also a piece of good news for a company. From the above Tab 4.2 and Chart 4.2 we can learn that in 2013, the ability that McDonald's generated profit from revenues was the best during these years and in 2014, it was the worst.

4.1.3 Return on assets

Tab 4.3 shows the return on assets of McDonald's, Chart 4.3 shows the trend of return on assets of McDonald's.

Table 4.3 Return on assets of McDonald's from 2012 to 2016 (%)

	2012	**2013**	**2014**	**2015**	**2016**
Operating income	8605	8764	7949	7146	7745
Total aassets	35386	36626	34227	37939	31024
Return on assets	24.32	23.93	23.22	18.84	24.96

Source: Own calculation

Chart 4.3 Trend of return on assets from 2012 to 2016
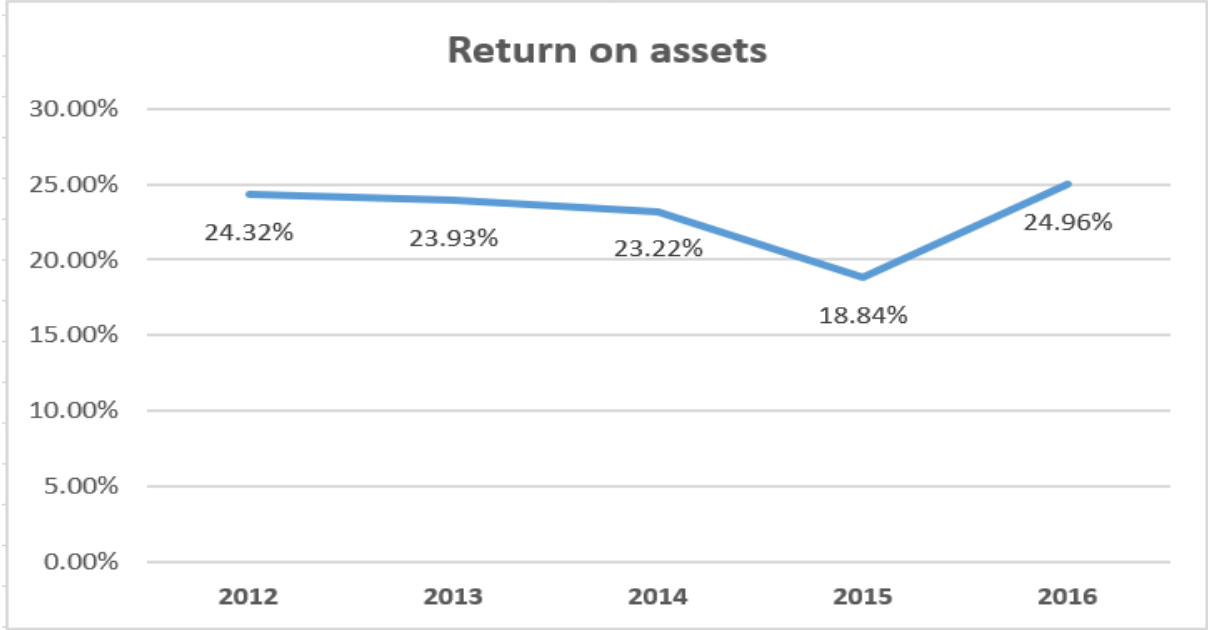
Source: Own elaboration

From Tab 4.3, we can see that return on assets of McDonald's decreased from 2012 to 2015 but rising sharply from 2015 to 2016. The reason why there was a growth of return on assets from 2015 to 2016 was because that although overall trend of total assets was decreased, the increase in operating income won' t be able to cover the decrease in total assets. We can see the data from chapter 3, the percentage change of total assets of 2015/2016 was -18.23%, however, the percentage change of operating incom of 2015/2016 was 8.38%. So, it was not hard to understand why there was a rise from 2015 to 2016.

The return on assets ratio measures how effectively a company can earn a return on its investment in assets. In other words, ROA shows how efficiently a company can convert the money used to purchase assets into net income or profits. As we have explained in chapter 2, the higher return on assets is, the better for the company. Because the company will earn more money with less investment. So, from both of the Tab 4.3 and Chart 4.3, we can see that McDonald's performed best in the way of gaining profit in 2012 and 2016, and performed worst in the way of gaining profit in 2015 during these years.

4.1.4 Return on equity

Tab 4.4 shows the return on equity of McDonald's, Chart 4.4 shows the trend of return on equity of McDonald's.

Table 4.4 Return on equity of McDonald's from 2012 to 2016 (%)

	2012	2013	2014	2015	2016
Net income	5465	5586	4758	4529	4686
Total equity	15294	16010	12853	7088	(2204)
Return on equity	35.73	34.89	37.02	63.90	-212.61

Source: Own calculation

Chart 4.4 Trend of return on equity from 2012 to 2016
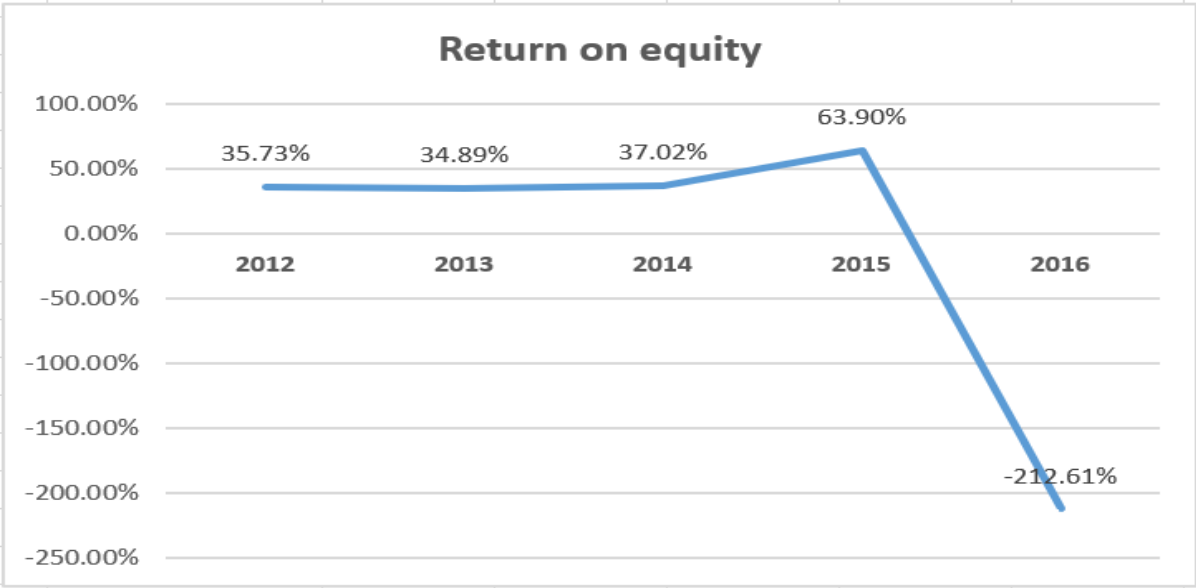
Source: Own elaboration

From Tab 4.4, we can see that the general trend of return on equity from 2012 to 2016 was opposite to return on assets of McDonald's. The return on equity increased from 2012 to 2015, but declined sharply from 2015 to 2016. The reason why there was a rise of return on equity from 2012 to 2015 was because that the decrease in total equity was much more greater than the decline in net income. We can see the data from chapter 3, the percentage change of equity

of 2015/2016 was -131.10%, however, the percentage change of net income of 2015/2016 was 3.47%. So, it was easy to understand why there was a decline from 2015 to 2016. And the reason why there was a raise of return on equity from 2012 to 2015 was because that there was a significant decreasing of total equity from 2012 to 2015. So, according to the formula of return on equity, it was clear that the return on equity would rise from 2012 to 2015.

Return on equity measures how efficiently a firm can use the money from shareholders to generate profits and grow the company. Unlike other return on investment ratios, ROE is a profitability ratio from the investor's point of view—not the company. In other words, this ratio calculates how much money is made based on the investors' investment in the company, not the company's investment in assets or something else.

That being said, investors want to see a high return on equity ratio because this indicates that the company is using its investors' funds effectively. Higher ratios are almost always better than lower ratios, but have to be compared to other companies' ratios in the industry. So from the above Tab 4.2 and Chart 4.2, it was easily to find out that McDonald's performed best in the way of generating profit with the money invested by shareholders in 2015 and performed worst in 2016 during these years.

4.2 Liquidity ratios of McDonald's Company

In this part, we will analyze liquidity of McDonald's by using some liquidity ratios Liquidity is not only a measure of how much cash a business has. It is also a measure of how easy it will be for the company to raise enough cash or convert assets into cash. Liquidity ratios include current ratio, quick ratio and cash ratio. First, we will analyze current ratio of McDonald's. And we have to calculate these ratios by using Formula (2.10), (2.11), (2.12).

4.2.1   Current ratio

Tab 4.5 shows the current ratio of McDonald's, Chart 4.5 shows the trend of current ratio of McDonald's.

Table 4.5 Current ratio of McDonald's from 2012 to 2016 (%)

	2012	2013	2014	2015	2016
Current asset	4,922.1	5,050.1	4,185.5	9,643.0	4,848.6
Current liability	3403.1	3170.0	2747.9	2950.4	3468.3
Current ratio	1.45	1.59	1.52	3.27	1.40

Source: Own calculation

Chart 4.5 Trend of current ratio from 2012 to 2016
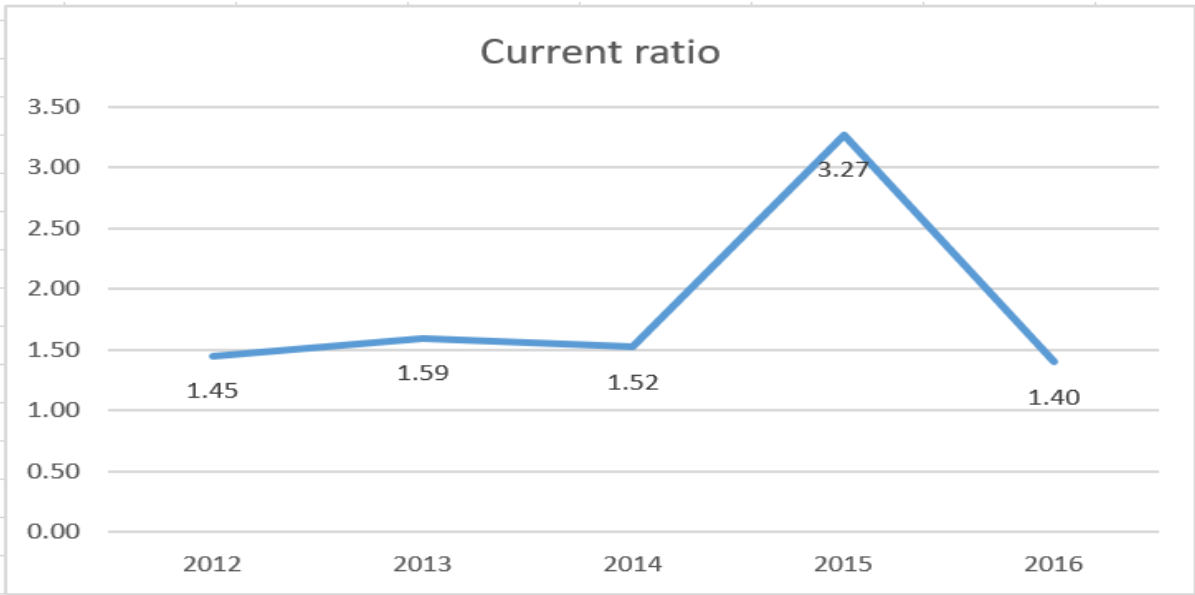
Source: Own elaboration

From Tab 4.5 we can see that current assets were always more than current liabilities during these years. Because current ratio was always bigger than 1. From Chart 4.5 we can see that the

Overall trend of current ratio was raise duiring the five years especially in 2015/2016. We can see the figures in chapter 3. The percentage change of current assets in 2015/2016 was -49.72%, but the percentage change of current liabilities in 2015/2016 was 17.55%.

The current ratio helps investors and creditors understand the liquidity of a company and how easily that company will be able to pay off its current liabilities. This ratio expresses a firm's current debt in terms of current assets. A higher current ratio is always more favorable

than a lower current ratio because it shows the company can more easily make current debt payments. So, we can see that McDonald's was the most capable to pay for its obligations in 2015 during these years.

4.2.2   Quick ratio

Tab 4.6 shows the quick ratio of McDonald's, Chart 4.6 shows the trend of quick ratio of McDonald's.

Table 4.6 Quick ratio of McDonald's from 2012 to 2016 (%)

	2012	**2013**	**2014**	**2015**	**2016**
Current asset	4,922.1	5,050.1	4,185.5	9,643.0	4848.6
Inventory	121.7	123.7	110.0	100.1	58.9
Current liability	3403.1	3170.0	2747.9	2950.4	3468.3
Quick ratio	1.41	1.55	1.48	3.23	1.38

Source: Own calculation

Chart 4.6 Trend of quick ratio from 2012 to 2016

Source: Own elaboration

From Chart 4.6, we can see that the general trend of quick ratio was similar to the trend of

50

current ratio from 2012 to 2016. But the changes of quick ratio were not as much as current ratio.Compared to the whole, the value can be said to be moving down horizontally.

4.2.3 Cash ratio
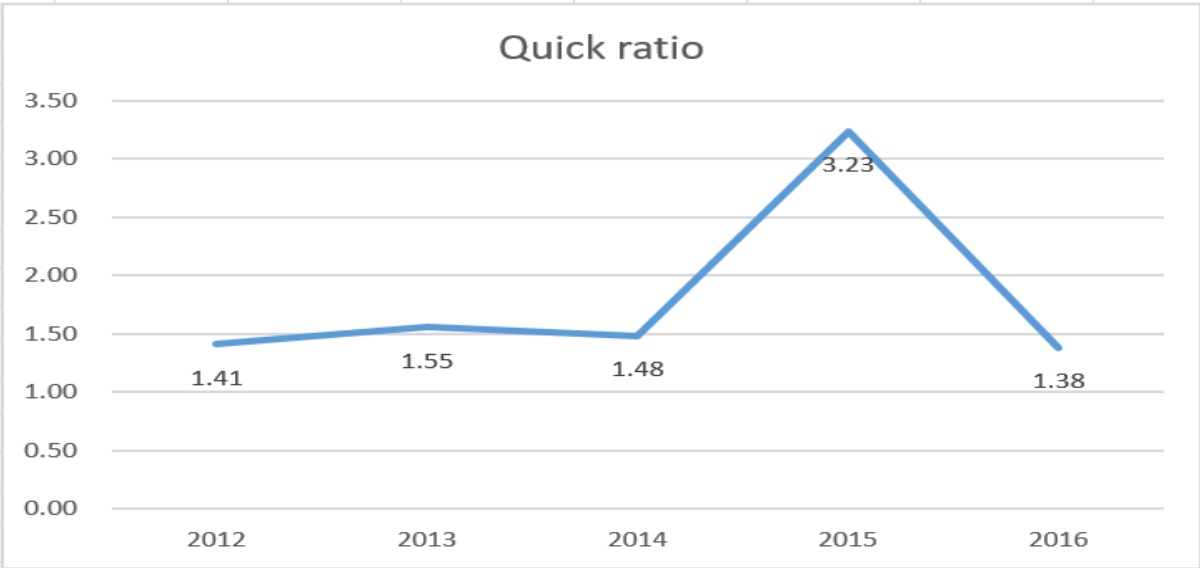
Tab 4.7 shows the cash ratio of McDonald's, Chart 4.7 shows the trend of cash ratio of McDonald's.

Table 4.7 Cash ratio of McDonald's from 2012 to 2016 (%)

	2012	2013	2014	2015	2016
Cash+marketable securities	2,336.1	2,798.7	2,077.9	7,685.5	1,223.4
Current liability	3403.1	3170.0	2747.9	2950.4	3468.3
Cash ratio	0.69	0.88	0.76	2.60	0.35

Source: Own calculation

Chart 4.7 Trend of cash ratio from 2012 to 2016
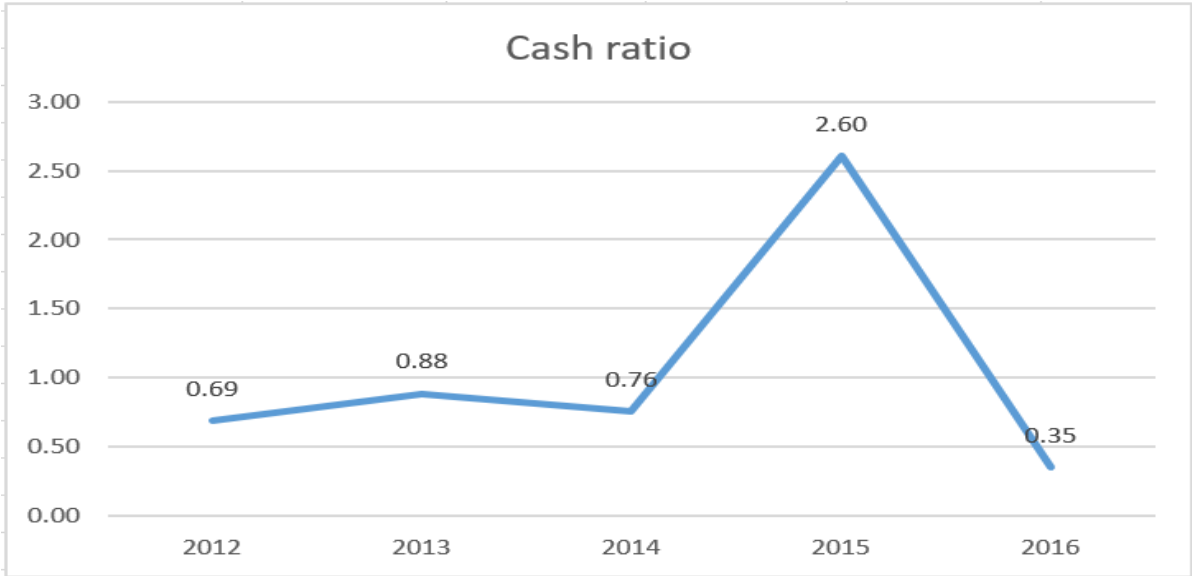
Source: Own elaboration

From Chart 4.7, we can see that the general trend of cash ratio from 2012 to 2016 was similar to current ratio and quick ratio. But the cash ratio except in 2015 was lower than 1 which meant that cash and market securities are lower than current liabilities. And we can see that

cash ratio was really high in 2015. Because the amount of cash and market securities was very high in 2015. It was 7,685.5 (1000 dollar) ,which is more than three times compared with the previous year.

As we have known , the higher cash ratio is, the stronger ability of the company to cover its short-term debts. So in 2015, McDonald's had the strongest ability to pay for the short-term debts and had the weakest ability to pay for the short-term debts in 2016 during these years.

4.3 Solvency ratio of McDonald's Company

In this part, we will analyze solvency of McDonald's by using some solvency ratios Solvency ratios show a company's ability to make payments and pay off its long-term obligations to creditors, bondholders, and banks. Better solvency ratios indicate a more creditworthy and financially sound company in the long-term. First, we will analyze debt ratio of McDonald's. And we have to calculate these ratios by using Formula (2.13), (2.14), (2.15).

4.3.1   Debt ratio

Tab 4.8 shows the debt ratio of McDonald's, Chart 4.8 shows the trend of debt ratio of McDonald's.

Table 4.8 Debt ratio of McDonald's from 2012 to 2016

	2012	**2013**	**2014**	**2015**	**2016**
Debt ratio	0.568	0.563	0.625	0.813	1.071
Total debts	20092.9	20616.6	21428.0	30850.8	33228.2
Total assets	35386.5	36626.3	34281.4	37938.7	31023.9

Source: Own calculation

Chart 4.8 Trend of debt ratio from 2012 to 2016
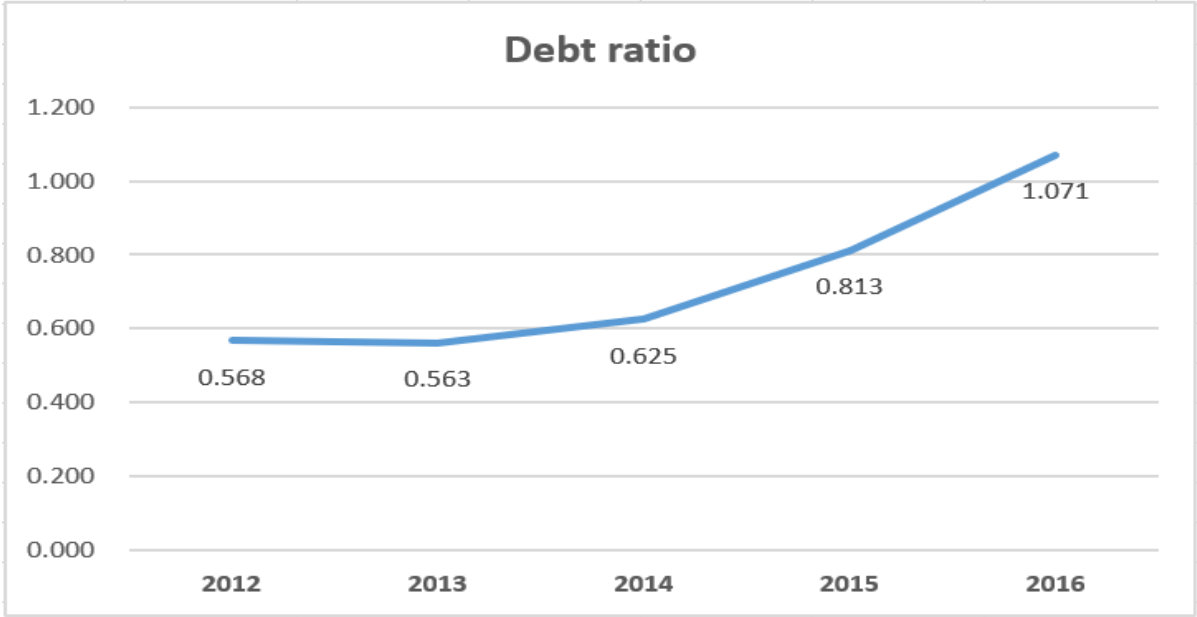
Source: Own elaboration

From Tab 4.8 we can see that there was a huge increasing of overall debt ratio from 2012 to 2016 for the total debt growth is greater than the total assets.The the general trend of total debt and debt ratio should have become similar,and the reason why the debt ratio kept rising in 2016 was that the company sold some of their restaurant which caused total asset significant decreasing in that year.

As we have known ,the higher cash ratio is, the stronger ability of the company to cover its short-term debts. So in 2016, McDonald's had the strongest short-term solvency and had the weakest ability to pay for the short-term debts in 2012 during these years

4.3.2   Debt-to-equity ratio

Tab 4.9 shows the debt to equity ratio of McDonald's, Chart 4.9 shows the trend of debt to equity ratio of McDonald's.

Table 4.9 Debt to equity ratio of McDonald's from 2012 to 2016

	2012	**2013**	**2014**	**2015**	**2016**
Debt-to-equity ratio	1.31	1.29	1.67	4.35	-15.07
Total debts	20092.9	20616.6	21428	30850.8	33228.2
Equity	15293.6	16009.7	12853.4	7087.9	-2204.3

Source: Own calculation

Chart 4.9 Trend of debt to equity ratio from 2012 to 2016
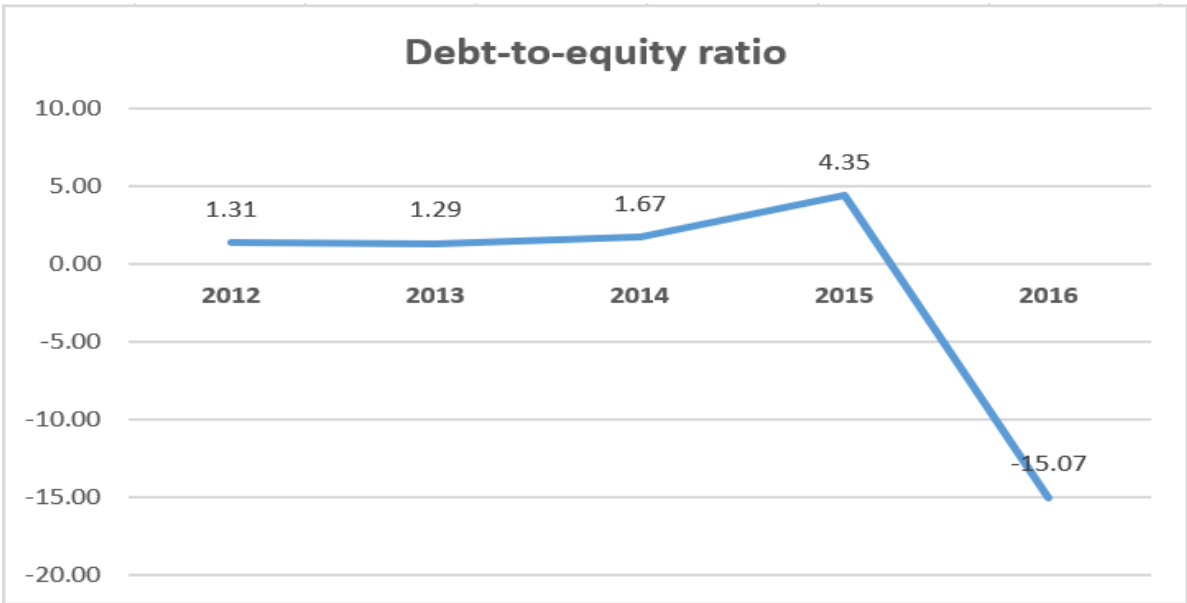
Source: Own elaboration

We can see from the Chart 4.9 that the general trend of debt to equity ratio from 2012 to 2016 was completely different with the trend of debt ratio. It grew slowly from 2012 to 2015 and a huge decrease happened from 2015 to 2016. Due to the increase in total debts and the decrease in total equity, debt-to-equity ratio reached its maximum value in 2015. However, since the total equity became negative in 2016, this caused its dramatic decline that year.

As we have mentioned, the high debt-to-equity ratio means the high-risk and high-return financial structure, on the contrary, the low debt-to-equity ratio means low-risk, low-return financial structure. In general, it's better for company if the company's debt to equity ratio is lower than 1.But in the normal operating situation, the minimum value of debt-to-equity ratio

is greater than 1,which means the long-term financial status of McDonald's, is not good.

4.3.3   Interest coverage

Tab 4.10 shows the interest coverage of McDonald's, Chart 4.10 shows the trend of interest coverage of McDonald's.

Table 4.10 Interest coverage McDonald's from 2012 to 2016

	2012	2013	2014	2015	2016
Interest coverage	16.12	16.45	14.80	11.15	9.25
EBIT	8605	8764	7949	7146	7745
Interest paid	533.7	532.7	537.2	640.8	837.5

Source: Own calculation

Chart 4.10 Trend of interest coverage from 2012 to 2016
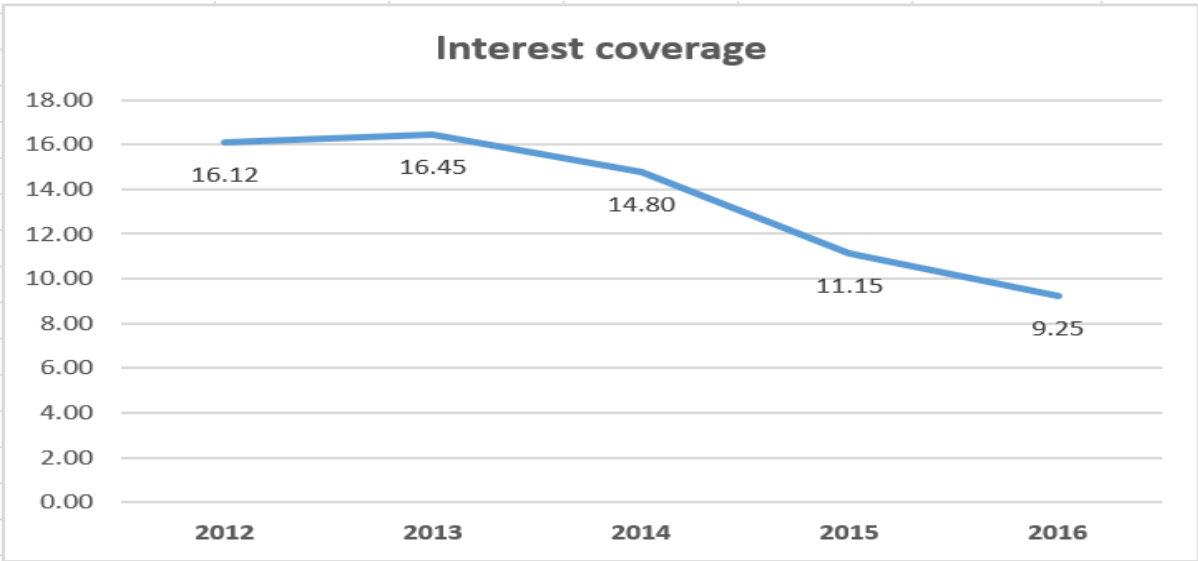
Source: Own elaboration

From Chart 4.10, we can see that the general trend of iinterest coverage is decreasing. In Tab. 4.10 we can know that the interest paid rising every year especially in 2016.Even though EBIT is slowly growing, it has declined from 2013 to 2015 which means the growth of EBIT almost has no influence on it interest coverage.

As we have leaned,under normal circumstances, if interest coverage is higher than 1, company has the ability to repay interest; if interest coverage is lower than 1, company did not have enough funds to repay interest, thus there is a serious solvency risk. It's not hard to find that McDonald's has a strong power to repay its interest.

Solvency of a company is a very important factor for both shareholders, creditors and investors. And in summary of above solvency ratios, we can see that the solvency condition of McDonald's is   good but not godd enough during these years.

4.4 Activity ratios of McDonald's Company

In this part, we will analyze how efficiency of McDonald's is to operate and generate revenues by using its assets and leverage. Activity ratios measure the amount of resources invested in a company's collection and inventory management. Because businesses typically operate using materials, inventory and debtors, activity ratios determine how well an organization manages these areas. It gauges an organization's operational efficiency and profitability. Activity ratios are most useful when compared to competitor or industry to establish whether an entity's processes are favorable or unfavorable. First, we will analyze average collection period of the company. And we have to calculate these ratios by using Formula (2.16), (2.17), (2.18), (2.19).

4.4.1   Average collection period (ACP)

Tab 4.11 shows the average collection period (ACP) of McDonald's, Chart 4.11 shows the trend of average collection period of McDonald's.

Table 4.11 Average collection period (ACP) of McDonald's from 2012 to 2016

	2012	2013	2014	2015	2016
Average collection period	17.96	144.99	15.93	18.40	21.55
Accounts receivable	1375.3	1319.8	1214.4	1298.7	1474.1
Revenues	27567	28106	27441	25413	24622

Source: Own calculation

Chart 4.11 Trend of average collection period (ACP) from 2012 to 2016
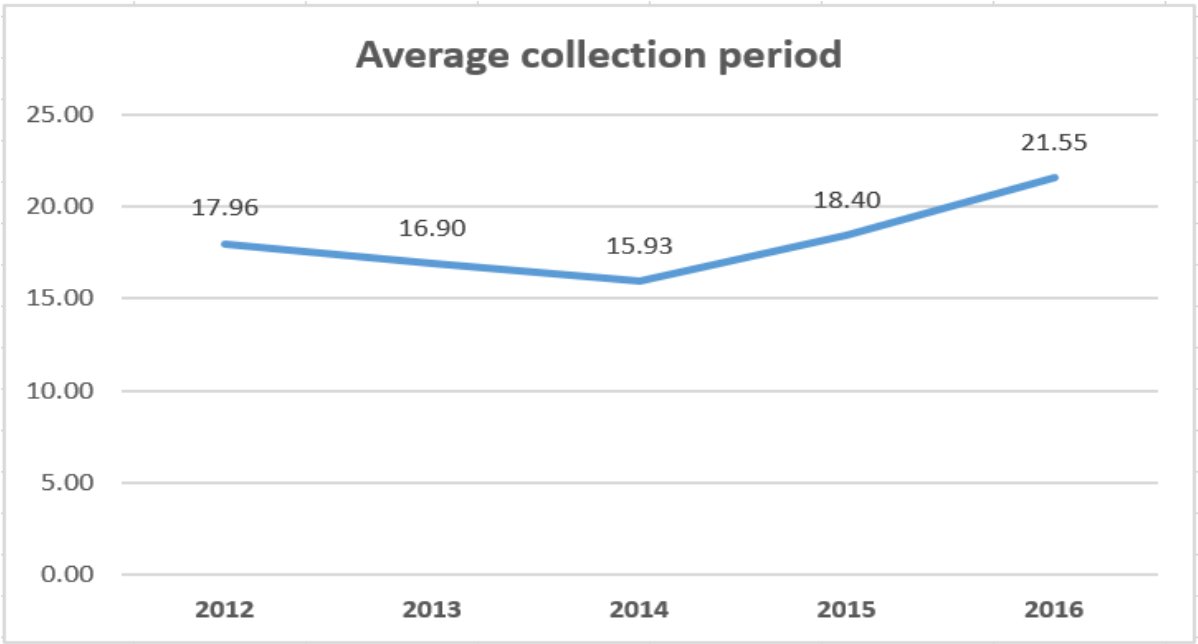
Source: Own elaboration

As we have mentioned in chapter 2, the average collection period is the average number of days required to collect invoiced amounts from customers. This measure is used to determine the effectiveness of a company's credit granting policies and collection efforts.Then, from the Chart 4.11 we can see that average collection turnover first decreased in two years and the began to increased,but the general trend of it was raising during these years. And the ratio also reached the lowest value in 2014 because that the accounts receivable also reached the lowest value with almost the biggest one rrevenues.

Actually, the higher the ratio is, the worse for the company, because the company can not receive these current assets as soon as possible, which will also reduce the company's power of

keeping liquidity. So, the possibility of bad debts receivable of McDonald's was relatively big during these years.

4.4.2 Account receivable turnover (ART)

Tab 4.12 shows the account receivable turnover (ART) of McDonald's, Chart 4.12 shows the trend of account receivable turnover of McDonald's.

Table 4.12 Account receivable turnover (ART) of McDonald's from 2012 to 2016

	2012	**2013**	**2014**	**2015**	**2016**
Account receivable turnover	20.04	2.48	22.60	19.57	16.70
Revenues	27567	28106	27441	25413	24622
Accounts receivable	1375.3	1319.8	1214.4	1298.7	1474.1

Source: Own calculation

Chart 4.12 Trend of account receivable turnover (ART) from 2012 to 2016
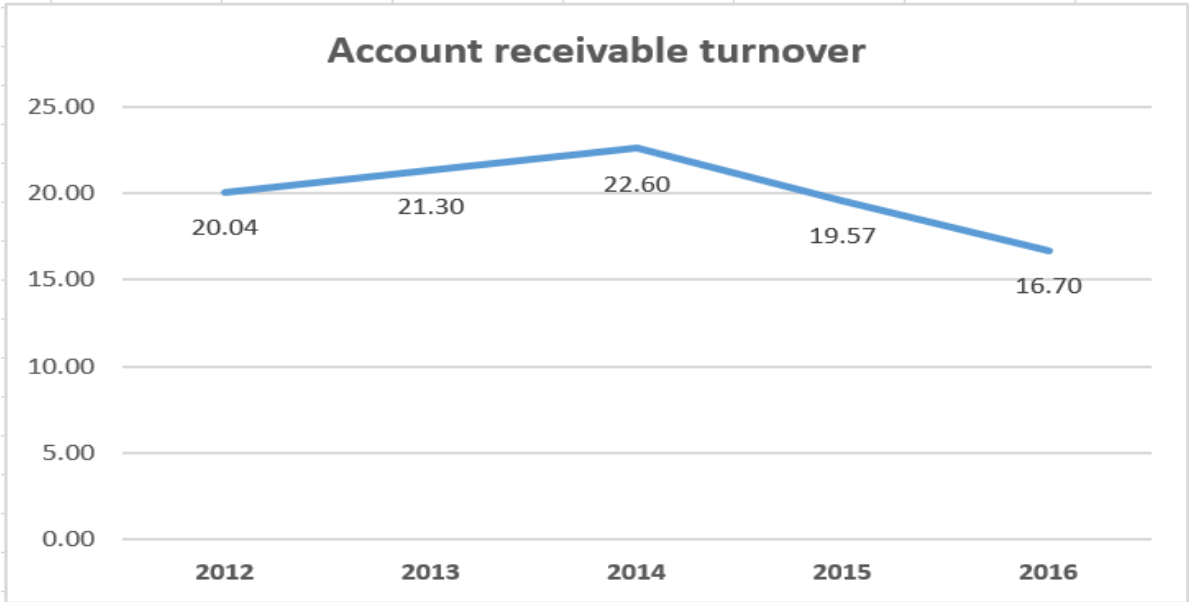
Source: Own elaboration

As we have mentioned in chapter 2, account receivable turnover means the number of times the accounts receivable are rolled over during a year. So, we can see the results from

Chart 4.12 that this ratio corresponds to average collection period. The general trend of account receivable turnover of McDonald's was first increasing then decreasing during these years. The lower the collection period is, the higher the turnover will be. Otherwise, the company's working capital will be sluggish in the accounts receivable, which will also affect the normal cash flow operation. So, the account receivable turnover of McDonald's in 2014 reached the highest value.

combining with average collection period and account receivable turnover, we can make a brief summary, the period that McDonald's could collect receivables was about half a month, and McDonald's can also collect those receivables about 22 times a year.

4.4.3   Total assets turnover (TAT)

Tab 4.13 shows the total assets turnover (TAT) of McDonald's, Chart 4.13 shows the trend of total assets turnover of McDonald's.

Table 4.13 Total assets turnover (TAT) of McDonald's from 2012 to 2016

	2012	2013	2014	2015	2016
Total assets turnover	77.90%	76.74%	80.17%	66.98%	79.36%
Revenues	27567	28106	27441	25413	24622
Total assets	35386	36626	34227	37939	31024

Source: Own calculation

Chart 4.14 Trend of total assets turnover (TAT) from 2012 to 2016
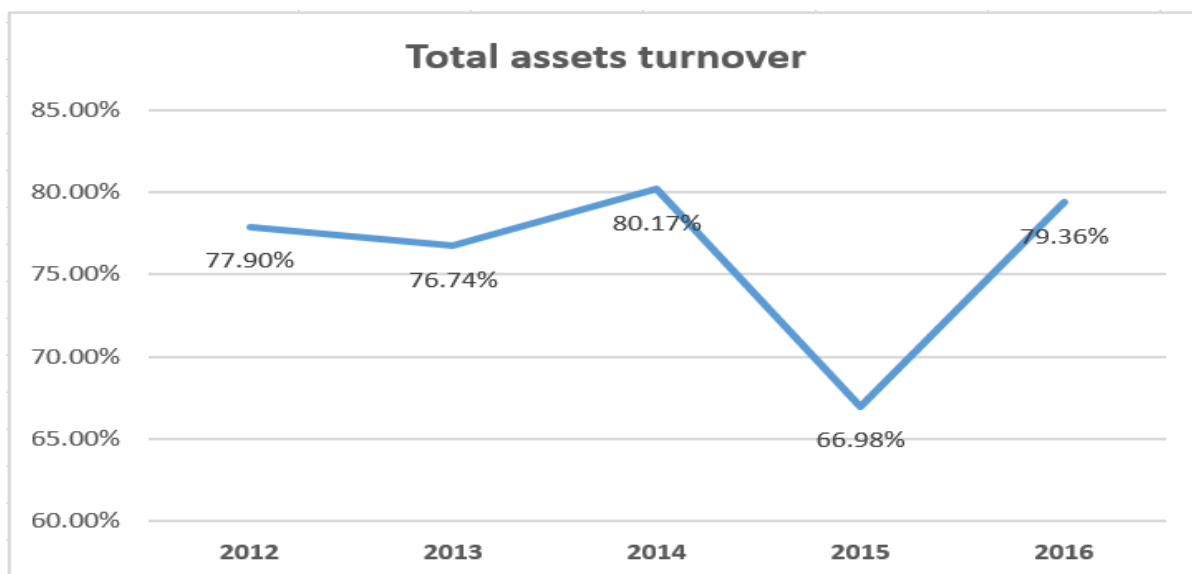
Source: Own elaboration

We can see from Chart 4.14 that total assets turnover of McDonald's was very volatile. The lowest point of total assets turnover was in 2015, for the reason that the total asset reached the largest amount in these five years. The higher this ratio is, the better for company. Because the ratio shows how greatly the company can generate revenues through using assets. But according to the assets turnover of McDonald's, we can see that no matter in which year, each unit invested in assets could only generate revenues of lower than 1.

4.5 DuPont analysis of McDonald's Company

In this part, we will analyze the profitability of McDonald's by using DuPont analysis. This model was developed to analyze ROE and the effects different business performance measures have on this ratio. So, investors are not looking for large or small output numbers from this model. Instead, they are looking to analyze what is causing the current ROE. For instance, if investors are unsatisfied with a low ROE, the management can use this formula to pinpoint the problem area whether it is a lower profit margin, asset turnover, or poor financial leveraging.

According to formula, we need some data which has been shown in Table 4.14 to calculate three component ratios.

Table 4.14 The value of each items in decomposition of ROE

	2012	2013	2014	2015	2016
Net profit margin	0.1982	0.1987	0.1734	0.1782	0.1903
Tax burden	0.3573	0.3489	0.3702	0.6390	-2.1261
Interest burden	0.9389	0.9361	0.9274	0.9174	0.8865
EBIT margin	0.3121	0.3118	0.2897	0.2812	0.3146
Assets turnover	0.7790	0.7674	0.8017	0.6698	0.7936
Financial leverage	2.3137	2.2877	2.6630	5.3526	-14.0762
ROE	0.3573	0.3489	0.3702	0.6390	-2.1261

Source: Annual Report of McDonald's Table 4.15 Absolute change of each items in decomposition of ROE

	2012/2013	2013/2014	2014/2015	2015/2016
Net profit margin	0.0025	-0.1276	0.0278	0.0679
Tax burden	-0.0236	0.0610	0.7261	-4.3275
Interest burden	-0.0030	-0.0093	-0.0108	-0.0337
EBIT margin	-0.0011	-0.0710	-0.0293	0.1186
Assets turnover	-0.0150	0.0448	-0.1645	0.1848
Financial leverage	-0.0112	0.1640	1.0100	-3.6298
ROE	-0.0236	0.0610	0.7261	-4.3275

Source: Own calculation

Table 4.16 Gradual changes of ROE between 2012 and 2013

	2012	2013	2012/2013(Δa)	$\Delta X a_i$	Order
Net profit margin (a_1)	0.1982	0.1987	0.0025	0.0045	3
Assets turnover (a_2)	0.7790	0.7674	-0.0150	-0.0069	1
Financial leverage (a_3)	2.3137	2.2877	-0.0112	-0.0017	2
Sum				-0.0041	

Source: Own calculation

$$\Delta Xa_1 = 0.0025 \cdot 0.7790 \cdot 2.3137 = 0.0045$$

$$\Delta Xa_2 = 0.1987 \cdot (-0.0150) \cdot 2.3137 = -0.0069$$

$$\Delta Xa_3 = 0.1987 \cdot 0.7674 \cdot (-0.0112) = -0.0017$$

We can see that the results of the sum of gradual changes is equal to the absolute change of ROE (-0.0041) between 2012 and 2013.

Table 4.17 Gradual changes of ROE between 2013 and 2014

	2013	**2014**	**2013/2014(Δa)**	**ΔXa_i**	**Order**
Net profit margin (a_1)	0.1987	0.1734	-0.1276	-0.2240	**1**
Assets turnover (a_2)	0.7674	0.8017	0.0448	0.0178	**2**
Financial leverage (a_3)	2.2877	2.6630	0.1640	0.0228	**3**
Sum				-0.1834	

Source: Own calculation

$$\Delta Xa_1 = (-0.1276) \cdot 0.7674 \cdot 2.2877 = -0.2240$$

$$\Delta Xa_2 = 0.1734 \cdot 0.0448 \cdot 2.287 = 0.0178$$

$$\Delta Xa_3 = 0.1734 \cdot 0.8017 \cdot 0.1640 = 0.0228$$

We can see that the results of the sum of gradual changes is equal to the absolute change of ROE (-0.1834) between 2013 and 2014.

Table 4.18 Gradual changes of ROE between 2014 and 2015

	2014	**2015**	**2014/2015(Δa)**	**ΔXa_i**	**Order**
Net profit margin (a_1)	0.1734	0.1782	0.0278	0.0594	**2**
Assets turnover (a_2)	0.8017	0.6698	-0.1645	-0.0781	**1**
Financial leverage (a_3)	2.6630	5.3526	1.0100	0.1206	**3**
Sum				0.1018	

Source: Own calculation

$$\Delta Xa_1 = 0.0278 \cdot 0.8017 \cdot 2.6630 = 0.0594$$

$$\Delta Xa_2 = 0.1782 \cdot (-0.1645) \cdot 2.6630 = -0.0781$$

$$\Delta Xa_3 = 0.1782 \cdot 0.6698 \cdot 1.0100 = 0.1206$$

We can see that the results of the sum of gradual changes is equal to the absolute change of ROE (0.1018) between 2014 and 2015.

Table 4.19 Gradual changes of ROE between 2015 and 2016

	2015	2016	2015/2016(Δa)	ΔXa_i	Order
Net profit margin (a_1)	0.1782	0.1903	0.0679	0.2434	3
Assets turnover (a_2)	0.6698	0.7936	0.1848	0.1882	2
Financial leverage (a_3)	5.3526	-14.0762	-3.6298	-0.5482	1
Sum				-0.1165	

Source: Own calculation

$$\Delta Xa_1 = 0.0679 \cdot 0.6698 \cdot 5.3526 = 0.2434$$

$$\Delta Xa_2 = 0.1903 \cdot 0.1848 \cdot 5.3526 = 0.1882$$

$$\Delta Xa_3 = 0.1903 \cdot 0.7936 \cdot (-3.6298) = -0.5482$$

We can see that the results of the sum of gradual changes is equal to the absolute change of ROE (-0.1165) between 2015 and 2016.

Table 4.21 Gradual changes of ROE between 2012 and 2016

	2012/2013	2013/2014	2014/2015	2015/2016
Net profit margin (a_1)	0.0045	-0.2240	0.0594	0.2434
Assets turnover (a_2)	-0.0069	0.0178	-0.0781	0.1882
Financial leverage (a_3)	-0.0017	0.0228	0.1206	-0.5482
Sum	-0.0041	-0.1834	0.1018	-0.1165

Chart 4.15 Gradual changes of ROE between 2012 and 2016
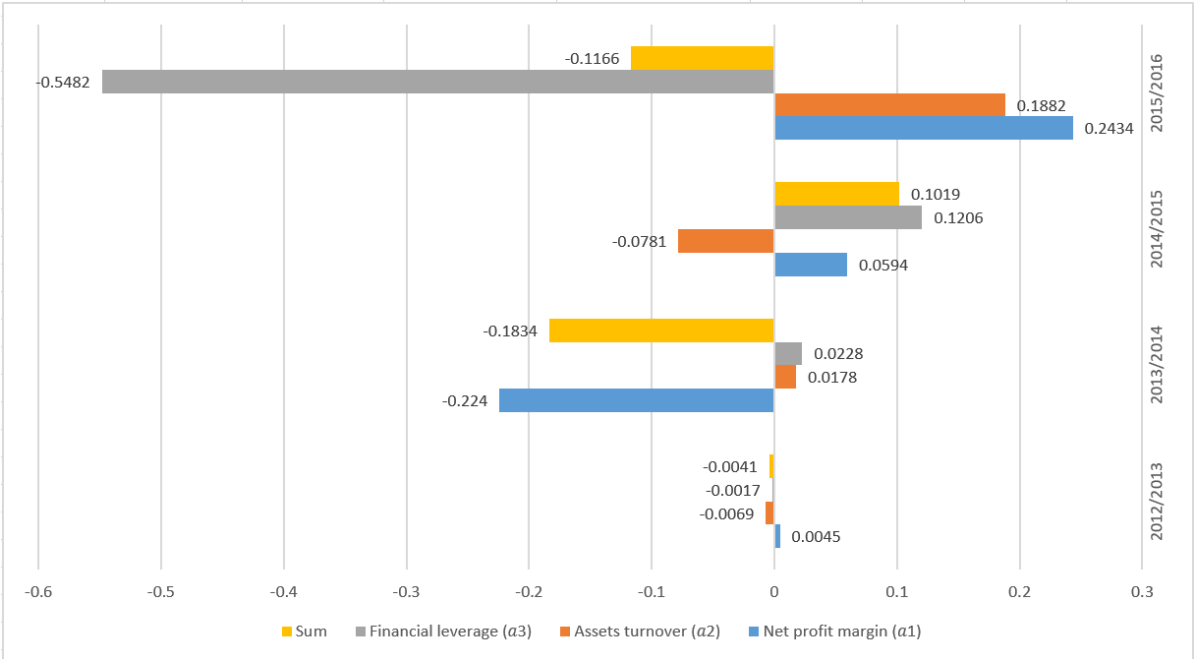
Source: Own elaboration

After putting together all of results, we can see from Chart 4.15 that assets turnover was always the component ratio which influenced ROE most. However, the effect was sometimes positive and sometimes negative. Morever, net profit margin was always the weakest ratio to influence ROE from 2012 to 2016, except 2013/2014. Although these ratios could be negative and positive during these years, and even there was no ratio could always be the strongest or weakest one to influence ROE during these years. We can see clearly from Chart 4.15 that in general, assets turnover was relatively the strongest ratio to affect ROE and net profit margin was the weakest from 2012 to 2016

5   Conclusion

Financial analysis is based on some basic data from financial statement, then calculate some financial indicators which are mainly related to profitability, liquidity, and solvency according to some formulas. Whether you are a manager or an investor, at least you need to figure out what you are willing to analyze. After that, what matters most is that we need to conduct real analysis of these results, the way of analyzing refers to make comparison which is very important but also very fundamental. The comparison contains many aspects: comparing indicators with last year's results, comparing indicators with competitors, even the general industry. Then, after comparison, whatever conclusion is drawn, managers and investors can use these final results to adjust their behaviors and achieve idealized state.

The goal of this thesis is to analyze financial condition of McDonald's from 2012 to 2016. Ultimately, we will forecast the future development of McDonald's and put forward some reasonable proposals for its operation.

After all of the calculations and analysis, we acquired lots of information about McDonald's financial situation, the efficiency of its normal operation and management and the how well they used its capital, etc. We had a general recognition of McDonald's. Then, we drew a conclusion of each chapter and finally made recommendations for future development of McDonald's.

In Chapter 4, we could find out that McDonald's performed very well in solvency and activity parts. McDonald's account receivable turnover was high, reflecting its strong ability to collect receivables. There means little financial risk of McDonald's from 2012 to 2016.

In summary, conducting financial analysis is indeed necessary and beneficial for any company and investors and creditors of this company. After the Fuxi incident, McDonald's could be described as bad fortune. Having experienced a very tragic 2014, its performance in 2015 was not optimistic either. After our whole analysis for McDonald's between 2012 and 2016, it is obviously that 2015 was a turning point in the development of McDonald's. We could clearly see that in 2015 the McDonald's net profit was only 4529 million dollar which was the lowest during these years in Tab 3.2. Because McDonald's was exposed in July 2014 with a scandal of using expired raw materials. With the increase of consumers' health awareness, McDonald's has already been branded with "junk food" labels which made this company have

trouble in fighting for a turnaround in the face of rising costs and fierce competition. And in the same year, consumers were repeatedly exposed to foreign foods such as hair, metal, screws, etc., and the reputation of McDonald's was hit hard. Moreover, the loss in 2015 was 34.7 billion yen in Japan which became the highest deficit in its history. But consumer attitudes are the easiest to change. In the next few years, McDonald's can rely on a large number of image campaigns and advertising campaigns to make a big turn.

Closing the store is also a good choice. McDonald's can "retreat into progress" and further increase its store closure. After all, it had closed more than 350 stores in the United States, Canada and other places. In addition, stores that are underperforming in Japan and in China can also be closed, in order to reduce its operating and maintenance costs. From tab 3.6 and tab 3.7 we can see that total shareholder equity began to decline since 2013, McDonald's could try new business models, improve McDonald's operations, optimize restaurant ownership portfolio, control corporate spending, and accelerate shareholder return.

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Extent and terms of a thesis are specified in directions for its elaboration that are opened to the public on the web sites of the faculty.

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List of Abbreviations

A - Asset

ACP - Average collection period

ART - Account receivable turnover

EAT - Earning after taxes

EBIT - Earning before interest and taxes

EBT - Earning before taxes

GPM - Gross profit margin

IT - Inventory turnover

NPM - Net profit margin

OPM - Operating profit margin

REV - Revenue

ROA - Return on assets

ROE - Return on equity

TAT - Total assets turnover

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List of Annexes

Annex 1: Balance sheet of McDonald's

Annex 2: Income statement of McDonald's

Annex 1: Balance sheet of McDonald's. (million dollar)

	2012	2013	2014	2015	2016
ASSETS					
Current assets					
Cash and equivalents	2,366.1	2,798.7	2,077.90	7,685.5	1,223.4
Accounts and notes receivable	1,375.3	1,319.8	1,214.40	1,298.7	1,474.1
Inventories, at cost, not in excess of market	121.7	123.7	110.00	100.1	58.9
Prepaid expenses and other current assets	1,089.0	807.9	783.20	558.7	565.2
Assets of businesses held for sale	--	--	--	--	1,527.0
Total current assets	4,922.1	5,050.1	4185.5	9,643.0	4,848.6
Other assets					
Investments in and advances to affiliates	1,380.5	1,209.1	1,004.50	2,516.3	725.9
Goodwill	2,804.0	2,872.7	2,735.30	2,516.3	2,336.5
Miscellaneous	1,602.7	1,747.1	1798.6	1,869.1	1,855.3
Total other assets	5,787.2	5,828.9	5,538.4	5,178.1	4,917.7
Property and equipment, at cost	38,491.1	40,355.6	39,126.1	37,692.4	34,443.4
Accumulated depreciation and amortization	(13813.9)	(14608.3)	(14568.6)	(14574.8)	(13185.8)
Net property and equipment	24,677.2	25,747.3	24,557.5	23,117.6	21,257.6
Total assets	35,386.5	36,626.3	34,281.4	37,938.7	31,023.9
LIABILITIES AND EQUITY					
Current liabilities					
Accounts payable	1,141.9	1,086.0	860.1	874.7	756.0
Income taxes	298.7	215.5	166.8	154.8	267.2

Other taxes	370.7	383.1	330.0	309.0	266.3
Accrued interest	217.0	221.6	233.7	233.1	247.5
Accrued payroll and other liabilities	1,374.8	1,263.8	1,157.3	1,378.8	1,159.3
Current maturities of long-term debt	--	--	--	--	77.2
Liabilities of businesses held for sale	--	--	--	--	694.8
Total current liabilities	3,403.1	3,170.0	2,747.9	2,950.4	3,468.3
Long-term debt	13,632.5	14,129.8	14,989.7	24,122.1	25,878.5
Other long-term liabilities	1,526.2	1,669.1	2,065.9	2,074.0	2,064.3
Deferred income taxes	1,531.1	1,647.7	1,624.5	1,704.3	1,817.1
Shareholders' equity (deficit)					
Preferred stock	--	--	--	--	--
Common stock	16.6	16.6	16.6	16.6	16.6
Additional paid-in capital	5,778.9	5,994.1	6,239.1	6,533.4	6,757.9
Retained earnings	39,278.0	41,751.2	43,294.5	44,594.5	46,222.7
Accumulated other comprehensive income	796.4	427.6	(1,519.7)	(2,879.8)	(3,092.9)
Common stock in treasury, at cost	(30576.3)	(34179.8)	(35177.1)	(41176.8)	(52108.6)
Total shareholders' equity (deficit)	15,293.6	16,009.7	12,853.4	7,087.9	(2,204.3)
Total liabilities and equity	35,386.5	36,626.3	34,281.4	37,938.7	31,023.9

Annex 2: Income statement of McDonald's. (million dollar)

	2012	2013	2014	2015	2016
Revenues	27567	28106	27441	25413	24622
Operating expenses	18,962	19,342	19,492	18,267	16,877
EBIT	8605	8764	7949	7146	7745
Interest	526	560	577	590	879
EBT	8079	8204	7372	6556	6866
Taxation	2614	2618	2614	2027	2180
EAT	5465	5586	4758	4529	4686
Dividend received	2,897	3,115	3,216	3,230	3,058