Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economic Theories

Bachelor Thesis

Common stock evaluation

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BACHELOR THESIS ASSIGNMENT

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Business Administration

Thesis title

Approaches to common stock valuation

Objectives of thesis

The aim of the thesis is to analyze approaches to common stock valuation for entering the stock market. It describes the decision-making of the company through the IPO process. The first steps towards the stock market are one of the important units of any startup. Furthermore, the research identifies how the adoption of a specific stock valuation approach impacts the management of the company. Evolving the most effective approach to stock valuations using the example of a startup that is going through the process of entering the stock market. There are a lot of factors that go into determining the valuation of a company. Certainly, revenues are a big factor but they are not the only factor in the valuation of a company.

Methodology

Methodology of qualitative research: This material deals significantly and in detail mostly with a qualitative approach. It presents its characteristics, the form of a plan of qualitative research, including ethical issues. Describes the creation of a qualitative research project with the setting of research objectives, conceptual framework, research questions, methods of data acquisition, and analysis. In order to obtain the qualitative research material following methods were used: in-depth interview, ethnography, and case study research.

Methodology of quantitative research: The research requires constant support by the numerical data. Quantitative studies seek to establish general laws of behavior and phenomenon in a variety of settings and contexts. Research is used to put a theory to the test and determine whether it should be accepted or rejected. Data analysis is one of the triggers of the research. Statistics were used to summarise collected data, describing patterns, relationships, and connections. Along with graphical representation of data, factor analysis, descriptive statistics.

Methods used to achieve research goals: The various ways to estimate the unbiased value of a business in terms of present value and potential rather than just current revenues are known as stock valuation methods. These are calculated using objective measures that consider all aspects of a business, such as capital structure, earnings prospects, asset market value, and, in some cases, management analysis of a company.

Absolute and relative stock valuation methods are the two main types of stock valuation methods. Many absolute stock valuation techniques focus primarily on the company's cash flows, dividends, and growth rates. The dividend discount model (DDM) and the discounted cash flow model (DCF) are two absolute stock valuation methods that were mainly described in the research. Moreover, the Multiples Method, Market Valuation, and Comparable Transactions Method were used to identify the different approaches for valuations.

The proposed extent of the thesis

30-40

Keywords

Dividend Discount Model, Discounted Cash Flow Model, Cost of Equity, The IPO process, Impact on management, Stock Market, Market Valuation, Comparable Companies Analysis, Multiple methods

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Recommended information sources

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Prague on 10. 03. 2023

Declaration

I declare that I have worked on my bachelor thesis titled "**Common stock evaluation**" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break any copyrights.

In Prague on _____

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Acknowledgement:

I would like to thank my thesis supervisor for his advice and support. I appreciate the time of **Ing. Jana Kalabisová, Ph.D.** spent correcting my work and directing my thoughts back on track. I am happy to study from such a great teacher, and qualified specialist as **Ing. Jana Kalabisová, Ph.D.**

Common Stock Valuation

Abstract

The author of this thesis has zeroed in on the methodologies used to determine the value of shares in General Motors and Ford, two major players in the automotive sector. Because of this, assessing the current state of affairs and anticipating what could happen in 2026 will be a fascinating exercise. The author bases their arguments on the research and theory of prominent economists and financial experts. The valuation models and methodologies that will be used in the implementation section are discussed at length in the theoretical section. The author has made projections for the valuation using the three fundamental financial statements (Balance Sheet, Income Statement, and Cash Flow Statement), but acknowledges that there are numerous other factors to consider (such as macroeconomic factors of a selected company and the location in which it operates). The Free Cash Flow to Firm Model, the Free Cash Flow to Equity Model, and the Discounted Dividend Model were all taken into account. The other parameters, including Net Working Capital, Net Debt, and CAPEX, were either derived from these sources or manually entered by the analyst.

Keywords: Dividend Discount mode, Discounted Cash Flow Model, Cost of Equity, The IPO process, Impact on Management, Stock Market, Market Valuation, Comparable companies' analysis, Multiple methods.

Přístupy k oceňování kmenových akcií

Abstrakt

Autor této práce se zaměřil na metodiky používané ke stanovení hodnoty akcií General Motors a Ford, dvou hlavních hráčů v automobilovém sektoru. Z tohoto důvodu bude hodnocení současného stavu věcí a předvídání toho, co by se mohlo stát v roce 2026, fascinujícím cvičením. Autor své argumenty opírá o výzkumy a teorii významných ekonomů a finančních expertů. Oceňovací modely a metodiky, které budou použity v implementační části, jsou podrobně diskutovány v teoretické části. Autor vytvořil projekce pro ocenění pomocí tří základních finančních výkazů (rozvaha, výkaz zisku a ztráty a výkaz peněžních toků), ale uznává, že je třeba vzít v úvahu řadu dalších faktorů (jako jsou makroekonomické faktory vybrané společnosti a umístění v které provozuje). Byly zohledněny modely Free Cash Flow to Firm, Free Cash Flow to Equity Model a Discounted Dividend Model. Ostatní parametry, včetně čistého pracovního kapitálu, čistého dluhu a CAPEX, byly buď odvozeny z těchto zdrojů, nebo je zadal analytik ručně.

Klíčová slova: Dividendový diskontní model, model diskontovaných peněžních toků, náklady na vlastní kapitál, proces IPO, dopad na management, akciový trh, tržní ocenění, analýza srovnatelných společností, více metod.

Table of Content

List of Tables:

List of Formulas

Introduction

A common stock of any company, if bought by an investor, give the right to such investor to own a portion of assets, or when if the company pays out dividends, the investor is obliged to receive those as well. Thus, the common stock valuation method is an important skill for investors and financial analysts, which projects that a value of a certain stock will increase over time. As a result, the method utilized to estimate stocks directly affects how different common share prices are valued. This is a crucial factor that experts should consider before assessing a firm because different valuation methodologies may produce different outcomes.

The key objective in the modern economy is to properly control equity value, which includes securities, stocks, bonds, and assets. Dividend payments offer the way for shareholders to gain from a company's success. As a result, stock valuation is done at a given point. Since the stock market's value is based on the aggregate predictions of all participants, it is essential to examine an enterprise's potential to pay alongside a thorough review of its financial situation. Making informed judgments regarding investment plans and avoiding potential losses is aided by accurate stock price estimation. Typically, investors are concerned with the shares' fair market value. As a result, these businesses' primary objective is to improve stock valuation accuracy.

The thesis' primary objective is to carry out an evaluation method for **2 companies**. The thesis will be split into two main sections—theoretical and practical—to achieve this. The theoretical foundation for company valuation will be presented in the first section. The author would also describe different literature research on the subject of company valuation in order to achieve this, it would go through the valuation's foundation. The basic criteria and premises of value, as well as their distinctions and significance in the corporate valuation process, will be discussed by the author. In addition, many valuation technique classifications will be defined, and key valuation methodologies will be covered. In order to undertake the assessment process for Ford and General Motors companies, that operate in automotive industry, the author has chosen two methods: DCF (Discounted Cash Flow Model) and EVA (Economic value-added Model).

1 Objectives and Methodology

1.1 Objectives

The purpose of this thesis was to learn about the principles of valuation that are often used when making an approximation of a prospective stock price. The theoretical section's goal is to explain the key performance measures and forecasting methods used by the valuation models. The author has examined the Cash Flow to Firm mode, the Cash Flow to Equity mode, and the DDM mode while developing the method of assessment.

1.2 Methodology

The three financial statements of Ford Motor Company and General Motors Company were the primary sources of data used in the projected computation of price per share. The author has projected the Cash Flow to Firm and Cash Flow to Equity using the Balance Sheet Statement, Income Statement, and Cash Flow Statement. The BS statements included CAPEX information; the remainder of the indicators were computed using the theoretical framework. Predictions for market expansion ranged between 5.5% and 7.5% annually. The information was gathered from Yahoo's money-related sections. Each purchase was randomly selected for inclusion in the Excel file used for all computations. The author includes an Excel File with all of the relevant data as part of the bachelor's thesis. The author was motivated to write this review after reading (Christy, 2009), and the whole study is based on his work and the method by which (Christy, 2009) and (Hitchner, 2011) determined the intrinsic values of the business using the financial statements. The author himself used a practically same method. The data used to support the claims made in the thesis are accessible in the "Appendices" portion of the thesis, which may be found in the "Additional Materials" area of the is.czu.cz website.

2 Theoretical Part

This chapter is devoted to explaining the literature background of the different valuation concepts with magazines, research papers of a secondary matter, thesis, books and etc. Private firms apply different valuation concepts and models in order to precisely define the stock valuation methods, as it is usually requested by investors and etc.

Moreover, it is highly important to project for firms as well, in order to include that information in the financial letters of the company, to promote the future wealth and attract investors.

2.1 Evaluation concept

Valuation is a process which projects a future value of an asset, that indicates every asset in the world has its own value. Thus, it is quite important to precisely indicate the value of any asset. However, each asset falls into a special group, which is being amortized accordingly, for example by IFRS 16[1].

The valuation concept and its official numbers are needed in many cases, besides properly stated financial reports, the valuation concept is in big demands when companies are in the process of M&A[2] (Sherman, 2018).

Even though, there are many valuation standards and a lot of financial analysis apply different valuation models to project the share price of a certain company, still, there is a standard which is appraised by International Valuation Standards (IVS) which are ruled by International Valuation Standards Council (IVSC). Analysts usually obey those standards to add a confidence to their own evaluation and base those methods in their own works, when evaluating a company.

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[1] IFRS (16) - establishes principles for recognizing property, plant, and equipment as assets, measuring their carrying amounts, and measuring the depreciation charges and impairment losses to be recognized in relation to them. Property, plant, and equipment are tangible items that should be amortized annually.

[2] M&A – Merger and Acquisition is a term which refers to the consolidation of companies or their major businesses assets through financial transactions between companies.

However, for a good performance of evaluation, there are things to consider, and the following standards are stated in the **Table – 1.**

Table 1: Value standards

Value Standards	Value premises	Comment
Fair Market Value	Going Concern[3]	It considers the fact that, seller and buyer are ready to meeting at the price, which is agreed only between them. Usually, those type of transactions should not be complicated. Both parties are familiar with the physical traits of an asset and thus reflect the fair market value of such asset (Cochrane, 2005).
Investments Value	Liquidation	It is simply understood as the money which an investor is ready to pay for a certain asset or a firm.
Intrinsic Value		Commonly referred to as fundamental value, intrinsic value is the value derived from business 's core activities. The fundamental flaw in this criterion of value is that it only takes into account the company's "real" or "precise" worth (based on its operations and success), not an investors' willingness to pay. It is used more frequently with publicly listed corporations.

Source: Own processing, based on the (Pinto, J., Elaine, H., Robinson, T. and Wilcox, S., 2015).

It is worth mentioning, that price and value are equal, however, they should not. Thus, the value is deemed to be “Ahead-looking” assessment.

[3] Going Concern – is an accounting term used by auditors, accountants, and financial analysis. Mainly represents that the company will work efficiently in the future and plans to meet its obligations, pay-outs, within the next 12 months, and there is no need to think of liquidation in the coming year.

"Investors buy tomorrow's cash flow, not yesterday's or even today's." – Hitchner (2011).

Valuation itself is not an easy task to perform, even if the data are properly reported. Young et al. (1999) claims that there is not such a unique model which could be applied. Before making a valuation process, there is a wide range of steps to consider. First of all, it is highly important to analyse the business environment of the peer group, competitive analysis, (PESTLE, SWOT, and Porter's Five Forces, which implies the traits of marketing strategy), analysis of company's governance, financial statements, annual changes in numbers, horizontal analysis and vertical analysis. All the mentioned should be considered to assess a precise valuation. However, numeric data[4], requires more attention after all (Pinto, 2015).

2.2 Stock Market

The stock market, also known as the security market or equity market, is a financial arrangement among industry players for global production and trading issued shares. One of the key components of the global financial markets, it serves as a setting for drawing and allocating money through securities. The stock economy grows with the real economy, but in recent years, its size has outpaced actual economic growth indicator (Graham, B., Zweig, J., Baffet, W., 2005)

They also claim about market distinction and its primary and secondary source of stock issuance. The direct selling of the issued stocks from corporation of a body is called a primary distribution, however, the issuer who utilizes the money that earned from the sale to increase manufacturing, carry out more exploration, construct bridges, and other things. Any exchange of a securities that takes place after its initial issue is referred to as a secondary source – selling.

A private company's initial public offering (IPO) or the issuance of corporate or governmental bonds are two examples of primary markets.

[4] Numeric data – is meant the data which are presented in number formats, all financial statements (Balance Sheet Statement, Income Statements and Cash Flow Statements).

Baffet, et al., (2005) stated that the first issued stock should go an underwriting. That means that its entry into the market is done with the involvement of a bank and an underwriting agent. A private company usually requires those services in order to sell its shares of issued stocks to the public. There are two factors to consider when involving into such transaction:

- Reputation of the agent
- Favorable terms proposed by the bank

The complexity of such transaction eventually benefits the private company with the cash-flow and investors receives new investment opportunities, assuming that the prices of the received stock will go up. Bank always charges interest for such transactions and the agent takes a part of a commission for the completion of such deeds. An overall, all receive benefits (O'Hara et al., 1999)

The process of moving securities among market participants happens in the secondary market. The law of supply and demand is applied and the construction of the value of the securities in this situation since the issuers of the securities are not involved in the present reselling procedures. An investor or other market participant is driven to gain from owning an issued stock in the form of dividends and its pay-outs, a growth in market value, or payments on debt obligations in order to expand invested capital. There is a list of participants which act in own interests:

- Private and commercial investors,
- Hedge funds
- Speculators and traders

However, the market development and its growth gained popularity over time. However, it raised concerns about the security side as it more often became a subject of fraud, who acted

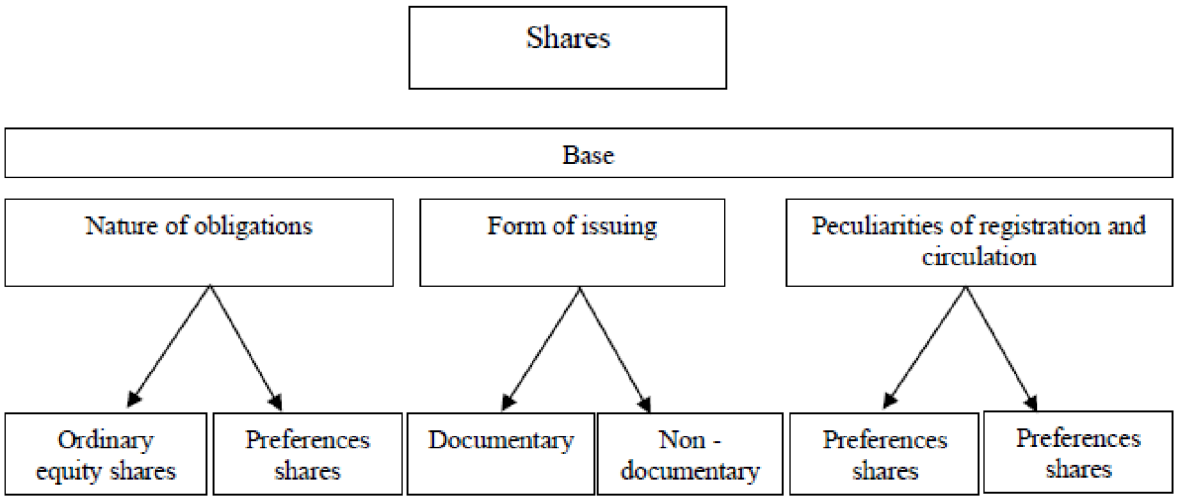
against investors or a govern state. However, USA has established the SEC[5], as a regulation of a stock market. This acts as a regulating activity against fraud on financial transactions.

2.2.1 Common Stocks

Today the variety of financial instruments is presented in the form of different primary stock options, such as: government and commercial bonds with different maturity, shares of companies issued to raise capital for its further business purposes, saving certificates and etc. There is a second order of instruments which is used by private firms to save its accounting system from Going – Concern, such instruments are presented in different options (derivatives), Future, options, swaps and etc. (Graham, Zweig and Baffet, 2005).

Common shares is the most known type which entails issuance of shares in large volumes, hence, more investors usually get it, for the hope of future growth (Tekin and Gumus, 2017).

Table 2: Classification of shares



Source: Aliyev (2021).

Financial analysts distinguish the advantages and disadvantages between different types of shares. Thus, the author also highlighted, based on the literature research, those two in the

[5] SEC – **Securities and Exchange Commission** that protects investors, promotes fairness in the securities markets, and shares information about companies and investment professionals to help investors make informed decisions and invest with confidence.

concise form, the author starts with the ordinary shares or “Stocks sold on public exchange”, defined by Campbell (2009).

Advantages of ordinary shares

- Provides with equal rights to managers to vote on general meetings of shareholders and other executive bodies who have the right to receive dividends
- Provides with the right to receive an information about the economic activities, its future plans and investments of the firm.
- Provides with the right to receive a proper information about the enterprise and its events, bankruptcy or other activities that might indicate a shot-down of the company

Disadvantages of ordinary shares

- If the company does not reach a certain level of profitability, the dividends will not be paid out
- Decision of the majority shareholders and executive bodies might actually vote for the refusal to pay - out its dividends as a part of obligations.
- In case of bankruptcy, an enterprise gives the last right to the remaining property.

Advantages of preferred shares

- Do not give the right to manage the firms or somehow impact its decisions
- Dividends are insignificant in comparison with the ordinary shares, especially when a company receives a certain level of profitability.

Disadvantages of ordinary shares

- Provides with the right to receive a small dividend when a company reaches at least some level of profitability
- Provides with the right to distribute the profit in dividends

- Provide the ability to vote in the company's insolvency, restructuring, or submission of constitution revisions and additions that limit or alter the rights of shareholders.

2.2.2 Factors to consider when making valuation method.

Company's share prices are heavily dependent on the macroeconomic factor of a certain state, where the company runs its operations. However, not only the macroeconomic factors, but also diverse external factors also impact on the share price and its development.

Macroeconomic factors are determined by the efficiency of county's development. The developed countries became unattractive for foreign direct investors, as its capitalization became lower in such countries. Rather, FDI's are focused on developing countries or in – transition, where the costs are low and thus, the capitalization is higher. The significant factors that should be considered are: GDP, Inflation rate (CPI), level of export, level of political stability as a part of PESTLE analysis, fluctuations in exchange rate, unemployment rate, level of average income and etc. Those factors are directly correlated with the development of a company's activities. However, macroeconomic indicators could be volatile and thus might not contributed to the model in a full power.

2.3 Valuation methods.

This part is devoted to explaining the common methods the are used to calculate the "Stock Valuation" and its "Future price per stock".

Since the author will apply in the empirical part the "Free cash to firm approach" and "Free cash to Equity" it is a good idea to explain those two methods in details, its indicators, and the way of computation.

2.3.1 Free Cash to Firm

According to Johann (2008) the "FCFF" is a value of money that are after deducting all of the company's operating expenditures, the amount of cash flow that is "free cash flow to the business" (FCFF) is the amount of cash flow that is left over from activities for payout. To be more explicit, the firm's free cash flow is the amount of funds that remains after all expenditures

related to depreciation, as well as taxation, capital investments, and acquisitions that have been accounted for and compensated.

Whether or not a corporation is profitable may be determined by looking at its free cash flow. This is after taking into account all of the costs and the returns on any investments. This is only one of the numerous signs that are considered in order to determine whether or not the firm is still performing successfully. One may make the case that the free cash flow of the business is the single most significant monetary indication that contributes to the stock value of the company. After deducting all of the company's expenditures, the presence of a positive free cash flow to firm value indicates that the company still has some cash available. A negative value indicates that the company has not earned sufficient income to pay its expenses and investments. This is shown by the fact that the value is negative. However, the formula is seen below:

Formula: 1: FCFF approach

$$\mathbf{FCFF = NI + NC + (1 \times (1 - TR)) - LI - IWC}$$

Whereas:

NI – net income,

NC – noncash expenses

I – interest

TR – tax rate of a given country.

LI – long – term investments

IWC – investments in working capital.

But, in addition to all of this method, there are additional approaches which can be employed to get at the same result. In the statement of cash flows that the firm has provided, you must be able to identify all of the figures that you want.

You will need to include the Net income and non-cash expenses in order to compute the formula that was just shown. After that, you will need to divide the total amount of tax by one and

multiply the interest by one. After that, take away your long-term investments as well as your investments in your working capital. The total free cash flow to the company may then be calculated using the following formula:

Formula: 2: FCFF approach - 2.

$$\mathbf{FCFF = NI + NC + (1 \times (1 - TR)) - LI - IWC}$$

CFO – cash flow from operations

IE – interest expense

CAPEX – capital expenditure.

Notes

The free cash flow that a business generates is one of the most substantial financial indicators used to determine the value of a company's shares. It is common knowledge that the value or price of a stock is, in many respects, a description of the predicted future cash flows of the firm in question. Regrettably, the prices of equities do not always reflect their true value (Christy, 2009). Shareholders can determine whether or not the prices of the stocks are reasonable if they are able to compute this amount (Elton, 2011). The fact that the business generates free cash flow shows, among other things, that it is in a position to make dividend payments to its shareholders. Before making any kind of payment, prospective investors in a firm need to ensure that they have this number in their possession first.

There are two stages of FCFF, whereas:

Formula: 3: Single Stage of FCFF at time

$$\mathbf{FCFF_t = FCFF_{t-1} (1 + g)}$$

FCFE – Free Cash Flow to Equity

r – equity rate of return.

g – growth rate.

The author will rely on this particular formula when calculating stock valuation. However, in this case, the author needs to calculate the Firm's value, where variables are similar and the formula is the following:

Formula: 4: Firm Value

$$\text{Firm Value} = \frac{FCFF_1}{WACC - g} = \frac{FCFF_0(1+g)}{WACC - g}$$

FCFF – free cash flow to firm,

WACC – weighted average cost of capital.

g – growth rate,

Note:

When determining the value of a company's shares directly, using a constant g, FCFEt = FCFEt-1 *(1+g). A two-stage model computation may one day be possible using the same method.

2.3.2 Free Cash flow to Equity

Free Cash Flow to Equity, often known as FCFE, is one of the Discounted Cash Flow valuation methodologies that may be used (together with FCFF) to determine the Stock's Fair Price. It is a measurement of how much "cash" a company can return to its shareholders and is determined after taxes, capital expenditures, and debt cash flows have been taken into consideration (Sujata, 2008). He claims that the mostly used formula to calculate the FCFE is the following:

Formula: 5: Free Cash Flow to Equity

$$\mathbf{FCFE = NI + D\&A - NWC - CapEx + NB}$$

Whereas:

NI – Net Income

D & A – depreciation and amortization

NWC – Change in Net Working Capital

CapEx – Capital Expenditures

NB – Net borrowings.

In order to calculate NEW – the following formula is used.

Formula: 6: Net Working Capital Change

$$\text{Net Working Capital} = \text{Current Assets} - \text{Current Liabilities}$$

All items are taken from the Balance Sheet Statement, the author will use the formula in the empirical part.

Note:

In contrast, only the lenders stand to gain from interest payments and principal reductions. Therefore, if there is no debt in the capital structure, the FCFE might be the same as the FCFF (Damodaran, 2012).

The fair value of FCFEs may be calculated using a discounted cash flow (DCF) model with leverage. In addition, the equity costs are the appropriate discount rate to utilize since, from a stakeholder perspective, the cash flows and the discount rate must be consistent (Christy, G.C., 2009).

While unlevered DCF and the FCFF method are employed in theory, reality varies widely by sector. One noteworthy example is financial institutions, whose primary source of revenue is interest income, making it impractical to isolate unlevered FCF given that the business model is predicated on financing (e.g., interest income, interest expense, provision for losses).

2.3.3 Discounted Cash Flow Model

In finance, a discounted cash flow (DCF) valuation is a sort of financial method used to ascertain the value of an investment by discounting its expected future cash inflows. The concept behind a discounted cash flow (DCF) model is that an organization's worth is dependent on its projected ability to produce cash flows for its stakeholders (Senith, 2019).

Formula: 7: DCF model

$$DCF = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \frac{CF_n}{(1+r)^n}$$

Whereas:

CF - Cash flow for the first period

N – number of periods

r – discount rate.

2.3.4 Terminal Value

The difference between the discount factor and the terminal growth rate is then used to determine the terminal value. Estimating the worth of a corporation beyond the projection period is what the terminal value does.

Formula: 8: Terminal Value

$$\textbf{Terminal Value} = [FCF \times (1 + g)] / (d - g)$$

FCF – free cash flow for the last forecast period

g – terminal growth rate

d – discount rate (which is usually the weighted average cost of capital)

Note

A company's terminal growth rate is the annual rate of expansion forecasted for the foreseeable future. Hence, will be applied in the empirical part. Its growth rate begins at the conclusion of the previous predicted cash flow cycle in a discounted cash flow model and runs into perpetuity. The growth rate at the end of a project is often similar to inflation over the long term but lower than the average growth rate of GDP across the project's lifetime. (Damodaran, 2012).

3 Practical Part

This part is devoted to the assessment of the future valuation stock in regards of an automotive industry in USA. The author considers three different reports of a financial matter, such as: Balance Sheet, Income Statement and Profit and Loss statement. There were two companies selected that operate in the same industry and moreover in the same country. Ford company and General Motors.

3.1 Ford Motor

Ford Motor Corporation (often referred to simply as "Ford" or "the Company") is an American vehicle manufacturer with headquarters in the Detroit district of Dearborn, Michigan. The Ford Motor Company was founded by Henry Ford on June 16, 1903. Its primary functions include the design, production, financing, marketing, and service of a broad variety of automobiles, including trucks, sport utility vehicles, and even premium models. Cars underneath the Ford and Lincoln brands are manufactured and distributed by the corporation. North America, Europe, South America, the Middle East and Africa, and Asia-Pacific are the five main regions in which Ford does business. Over 6.607.000 Ford automobiles were sold on a global wholesale basis in 2020.

Ford Motor Credit Company, LLC, a fully owned company, makes up the finance division. The credit division provides various forms of financing and financial products to vehicle dealers and, by extension, to other shops. The business receives income from both lease contract and retail instalment payments under this plan. A total of USD 13.11B in revenue was generated by the Financial Services division in 2017, making up 7.1% of overall revenue.

Table 3: Income Statement of Ford Motor

Indicator	30.12.2019	30.12.2020	30.12.2021	30.12.2022
Total Revenue	155 900 000	127 144 000	136 341 000	158 057 000
Growth Y-o-Y	n/t	-18,4%	7,2%	15,9%
Operating Revenue	155 900 000	127 144 000	136 341 000	158 057 000
Cost of Revenue	134 693 000	112 752 000	114 651 000	134 397 000
Gross Profit	21 207 000	14 392 000	21 690 000	23 660 000
Operating Expense	11 161 000	10 193 000	11 915 000	10 888 000

Selling General and Administrative	11 161 000	10 193 000	11 915 000	10 888 000
Other Operating Expenses	9 472 000	8 607 000	0	0
Operating Income	10 046 000	4 199 000	9 775 000	12 772 000
Operating Margin	6%	3%	7%	8%
Net Non-Operating Interest Income Expense	-9 712 000	-9 806 000	-6 794 000	-7 139 000
Interest Income Non-Operating	809 000	452 000	261 000	639 000
Interest Expense Non-Operating	10 521 000	10 258 000	7 055 000	7 778 000
Other Income Expense	0	4 491 000	14 799 000	-8 649 000
Net Income Common Stockholders	47 000	1 279 000	17 937 000	1 981 000

Source: Based on the Income statement of Ford Motor, own processing.

The company's year to year change in the total revenue is seen in the **Table – 3**. There is a quite high decrease of total revenue between 2019 and 2020 (-18,4 %), however followed by 7.2 % of an increase in the year of 2021, and eventually reached an increase of 15.9 %. Thus, we could observe the Covid – 19 impacts on the performance of the company, however, the company immediately recovered, based on its "*Income Available to Common Stockholders"*.

According to (Hitchner, J. R., 2011), it is important to consider a further growth, or further positive projection by looking at the financial statements of the company and auditing letters, which usually mentions the "Going – Concern" or "Subsequent Events" that indicate a risk of bankruptcy on a first place. In case if there are no findings in such "Letters" the operations of the company consider to be further active.

In our case, there were no such detections, hence the research might be carried on.

3.2 Assessment of "Ford Motor" corporation

Hence, the assumption is met, the author is able to make a projection for 5 years, based on the reports that are available from the year of 2019 up to 2022.

Table 4: Net Working Capital 2020 - 2019

Change in NWC			
Current Assets (Current Year)	116 744 000	Current Liabilities (Current Year)	97 192 000
Current Assets (Prior Year)	114 047 000	Current Liabilities (Prior Year)	98 132 000
Change in Current Assets	**2 697 000**	**Change in Current Liabilities**	-940 000
Change in NWC	**3 637 000**		

Source: Own computation.

Table 5: Net Working Capital change in 2021-2020

Change in NWC			
Current Assets (Current Year)	108 996 000	Current Liabilities (Current Year)	90 727 000
Current Assets (Prior Year)	116 744 000	Current Liabilities (Prior Year)	97 192 000
Change in Current Assets	**-7 748 000**	**Change in Current Liabilities**	-6 465 000
Change in NWC	**-1 283 000**		

Source: Own computation.

Table 6: Net Working Capital in 2022 – 2021

Change in NWC			
Current Assets (Current Year)	116 744 000	Current Liabilities (Current Year)	97 192 000
Current Assets (Prior Year)	114 047 000	Current Liabilities (Prior Year)	98 132 000
Change in Current Assets	**2 697 000**	**Change in Current Liabilities**	-940 000
Change in NWC	**3 637 000**		

Source: Own computation.

The author has computed the change in Net Working Capital for the consequent years of 2019, 2020, 2021 and the results are shown in the Table – 4,5,6.

Change in Net Debt, an indication of a company's ability to satisfy both long- and short-term financial commitments, is required for Free Cash Flow to Equity forecasting. The author,

though, used the overall debt figures in his subsequent calculations. The negative Change in Net Debt in 2021 is attributable to the author's focus on the next three years; nonetheless, this will only moderately affect the future prediction.

Table 7: Change in Net Debt 2019 - 2020

Change in Net Debt			
Cash (Current)	14 666 000	Cash (Prior)	14 662 000
Long Term Debt (Current Year)	162 998 000	Long Term Debt (Prior Year)	156 721 000
Current Year Net Debt	148 332 000	Prior Year Net Debt	142 059 000
Change in Net Debt	**6 273 000**		

Source: Own computation.

Table 8: Change in Net Debt 2020 - 2021

Change in Net Debt			
Cash (Current)	15 105 000	Cash (Prior)	14 666 000
Long Term Debt (Current Year)	139 485 000	Long Term Debt (Prior Year)	162 998 000
Current Year Net Debt	124 380 000	Prior Year Net Debt	148 332 000
Change in Net Debt	-23 952 000		

Source: Own computation.

Table 9: Change in Net Debt 2021 - 2022

Change in Net Debt			
Cash (Current)	15 757 000	Cash (Prior)	15 105 000
Long Term Debt (Current Year)	140 474 000	Long Term Debt (Prior Year)	139 485 000
Current Year Net Debt	124 717 000	Prior Year Net Debt	124 380 000
Change in Net Debt	337 000		

Source: Own computation.

Further, it is important to calculate the FCFF, which equals to (Operating Cash Flow – Capex). The computation is seen in the **Table – 10**.

Table 10: FCFF computation for Ford

Indicator	30.12.2019	30.12.2020	30.12.2021	30.12.2022
Operating Cash Flow	7 766 000	3 660 000	7 113 000	1 992 000
Capital Expenditures (CaPEX)	-7 632 000	-5 742 000	-6 227 000	-6 866 000
FCFF	15 398 000	9 402 000	13 340 000	8 858 000

Source: Own computation.

The following step is to calculate the FCFF on the base of Total Revenue in relation to CAPEX. The FCFE is calculated by: FCFF + Change in Net Debt, both indicators are available so the **Table – 11**, illustrates the results of the computation.

Table 11: FCFE computation for Ford

Indicator	30.12.2019	30.12.2020	30.12.2021	30.12.2022
FCFF	15 398 000	9 402 000	13 340 000	8 858 000
Change in Net Debt	0	6 273 000	-23 952 000	337 000
FCFE		15 675 000	-10 612 000	9 195 000

Source: Own computation.

Note:

The Change in Net Debt was not computed for the year of 2019, due to missing values of 2018.

Table – 12, illustrates the ratios in relation to Total Revenue. The growth forecast for the year 2019 is marked as "unknown" due to unavailability of the data. However, the rest of the indicators were calculated accordingly. See, the **Appendix – 1**.

Table 12: Given Indicator/ Total Revenue

Forecast	30.12.2019	30.12.2020	30.12.2021
Revenue Growth forecast	Unknown	-18,45%	7,23%
CoGS as a % of Revenue	86,40%	88,68%	84,09%
S&GA as a % of Revenue	7,16%	8,02%	8,74%
Interest Income as a % of revenue	0,52%	0,36%	0,19%
Interest Expense as a % of revenue	0,00%	8,07%	5,17%
Other Expense or Income	0,04%	0,00%	1,25%
Effective Tax Rate	0,00%	254,93%	273,78%
Normalized EBITDA		12,80%	17,12%
Minority Interest as a % of Revenue	0,03%	-1,01%	13,16%
D&A as a % of Revenue	5,45%	5,87%	4,37%
Change in NWC as a % of Revenue	0,00%	2,86%	-0,94%
Capex as a % of Revenue	-4,90%	-4,52%	-4,57%
Change in net Debt as a % of Revenue	0,00%	4,93%	-17,57%

Source: Own calculation.

In order to calculate the relative number, the author considered the percentage ration of a certain indicator for the projected year multiplied by the forecasted total revenue for the projected year, See, **Appendix – 1**, up until 2026.

Thus, the following steps are to calculate the CAMP, see **Table – 13**. All indicators and its sources are mentioned in the Table, section (Comments).

Table 13: CAMP for Ford.

CAPM		Comments
Risk - Free Rate	3,743%	Ford's risk-free rate, googled on 12.02.2023
Beta	1,52	Yahoo's rating beta for Ford on 12.02.2023
Market Return	7,51%	average, based on S&P 500
r	**9,5%**	

Source: Own calculation.

Table 14: Projection of Discounted Rate for Ford.

Company	Ford
r	9,5%
g	2%

Source: Own calculation.

Further the author had to calculate the Terminal Value for the year 2026, the value taken from the **Appendix – 2,** 7 932 943 USD.

The Terminal Value for the year of 2026, was the calculated in the following way:

Terminal Value = 7 932 943 * ((1 + 2 %)/(9,5 % – 2 %)) = 108 338 131

The Total Value = 7 932 943 + 108 338 131 = 116 271 074.

The projected equity value was calculated by the NPV formula, where the author needed to calculate the stream of terminal values and rate of return of 9,5 % from the **Appendix - 2**.

Table 15: Results of forecasting

Indicator	Value	Comment
Equity Value	79 158 844	Projected equity value for 2026
Share Outstanding	3 973 000	See, Appendix – 6.
Price Per Share	19,92	Intrinsic value for 2026
Current Price	12,73	Value for 2023
Buy / Sell	Buy	Suggesting, based on the calculation
Upside	57%	Growth rate for the period of 5 years

Source: Own processing, Excel.

The results would be compared with the second valuation method of General Motors.

3.3 General Motors

General Motors Company (GM or 'the company'), one of the world's leading automakers, was formed in 1908 and became a Delaware corporation in 2009. The following information was provided in regard to the 10K report that General Motors will be submitting in 2020. The initial assets included only Buick. The business has undergone a series of quiet transitions, including the consolidation or merger of Chevrolet, Cadillac, GMC, and Holden, and now it offers services on a global scale. After reorganizing its bankruptcy in 2009, GM returned to Wall Street in 2010. GM's activities had already consisted of GM North America, GM Europe, GM International Operations, GM South America, GM Financial, and Cruise up until this point. The business operations of General Motors, in specific, can be broken down into three primary groups: automotive, finance, and other. In the automotive industry, General Motors (GM) intended, manufactured, constructed, and sold cars, vans, and hybrids, in addition to accessories, including over 120 regions and countries in 2014. This included a full variety of models under GM's brand names, such as electric cars, mini cars, heavy-duty full-size trucks, compact cars, and convertibles. GM also sold apparel and components. The United States and other countries in North America make up some of GM's current markets. China and other nations in Asia, the Pacific, the Middle East, and Africa, as well as Latin America and other nations in South America, and Europe include the company's current customer base.

Income statement for General Motor

Table 16: Income Statement of General Motors

Indicator	30.12.2019	30.12.2020	30.12.2021	30.12.2022
Total Revenue	137 237 000	122 485 000	127 004 000	156 735 000
Y - o - Y		-10,7%	3,7%	23,4%
Operating Revenue	137 237 000	122 485 000	127 004 000	156 735 000
Cost of Revenue	123 265 000	108 813 000	109 126 000	135 754 000
Gross Profit	13 972 000	13 672 000	17 878 000	20 981 000
Operating Expense	8 491 000	7 038 000	8 554 000	10 667 000
Selling General and Administrative	8 491 000	7 038 000	8 554 000	10 667 000
Operating Income	5 481 000	6 634 000	9 324 000	10 314 000
Operating Margin	4,0%	5,4%	7,3%	6,6%
Net Non-Operating Interest Income Expense	-353 000	-857 000	-804 000	-527 000

Interest Income Non-Operating	429 000	241 000	146 000	460 000
Interest Expense Non-Operating	782 000	1 098 000	950 000	987 000
Other Income Expense	2 308 000	2 318 000	4 196 000	1 809 000
Pre-tax Income	7 436 000	8 095 000	12 716 000	11 597 000
Tax Provision	769 000	1 774 000	2 771 000	1 888 000
Net Income Common Stockholders	6 581 000	6 247 000	9 837 000	8 915 000
Net Income from Continuing Operation Net Minority Interest	6 732 000	6 427 000	10 019 000	9 934 000
Normalized EBITDA	22 256 000	21 743 000	25 146 000	24 110 000

Source: Based on the Income Statement, own processing in Excel.

The author follows the same procedures as for Ford, company. By looking at the financial reports and auditing notes, there is not identification of "Going Concern" or "Subsequent events" that could have led to "Bankruptcy". Hence, the computation could be carried on. The company's year to year change in the total revenue is seen in the **Table – 16**. There is a quite high decrease of total revenue between 2019 and 2020 (-10.7 %), however followed by 3.7 % of an increase in the year of 2021, and eventually reached an increase of 23.4 %. Thus, we could observe the Covid – 19 impacts on the performance of the company, however, the company immediately recovered, based on its "*Income Available to Common Stockholders"*.

Note:

The similar observation is seen in the **Table – 3**, for the Ford Company, a decrease above 10 percent and a quick recovery after *"Covid – 19"*.

3.4 Assessment of "General Motors"

The valuation of the company is strictly based on the confirmed assumption that the company will keep its operations in the near future. Considering the fact that its products, cars and accessories will be bought by consumers. The same projection of 5 years will be made in this chapter. The author applies similar formulas for "General Motors" however, the indicators are slightly different.

First of all, based on the balance sheet statement, the author computes the Change in NWC across 4 given years, from 2019 up to 2022.

Table 17: NWC Change in 2020

Change in NWC			
Current Assets (Current Year)	80 924 000	Current Liabilities (Current Year)	79 910 000
Current Assets (Prior Year)	74 992 000	Current Liabilities (Prior Year)	84 905 000
Change in Current Assets	**5 932 000**	**Change in Current Liabilities**	-4 995 000
Change in NWC	**10 927 000**		

Source: Own processing, Excel.

Table 18: NWC Change in 2021

Change in NWC			
Current Assets (Current Year)	82 103 000	Current Liabilities (Current Year)	74 408 000
Current Assets (Prior Year)	80 924 000	Current Liabilities (Prior Year)	79 910 000
Change in Current Assets	**1 179 000**	**Change in Current Liabilities**	-5 502 000
Change in NWC	**6 681 000**		

Source: Own processing, Excel.

Table 19: NWC Change in 2022

Change in NWC			
Current Assets (Current Year)	100 451 000	Current Liabilities (Current Year)	91 173 000
Current Assets (Prior Year)	82 103 000	Current Liabilities (Prior Year)	74 408 000
Change in Current Assets	**18 348 000**	**Change in Current Liabilities**	16 765 000
Change in NWC	**1 583 000**		

Source: Own processing, Excel.

The Change in Networking Capital is always positive which indicates that company is able to pay its short-term debt within a following year. The trend of General Motors is better - off, than in Ford.

Further, the author computes the Change in Net Debt which indicates an ability to pay its debt with an available cash at the end of the year.

Table 20: Change in Net Debt 2019 - 2020

Change in Net Debt			
Cash (Current)	8 010 000	Cash (Prior)	6 828 000
Long Term Debt (Current Year)	110 863 000	Long Term Debt (Prior Year)	104 334 000
Current Year Net Debt	102 853 000	Prior Year Net Debt	97 506 000
Change in Net Debt	**5 347 000**		

Source: Own processing, Excel.

Table 21: Change in Net Debt 2020 - 2021

Change in Net Debt			
Cash (Current)	7 881 000	Cash (Prior)	8 010 000
Long Term Debt (Current Year)	110 391 000	Long Term Debt (Prior Year)	110 863 000
Current Year Net Debt	102 510 000	Prior Year Net Debt	102 853 000
Change in Net Debt	**-343 000**		

Source: Own processing, Excel.

Table 22: Change in Net Debt 2021 - 2022

Change in Net Debt			
Cash (Current)	8 921 000	Cash (Prior)	7 881 000
Long Term Debt (Current Year)	115 666 000	Long Term Debt (Prior Year)	110 391 000
Current Year Net Debt	106 745 000	Prior Year Net Debt	102 510 000
Change in Net Debt	**4 235 000**		

Source: Own processing, Excel.

Those two indicators will contribute to the calculation of FCFF and FCFE. The author will count the FCFF first. However, the complete computation will be illustrated in the **Appendix 3 and 4,** such as ratios to Total Revenue and projected indicators based on the computed ratio.

Table 23: Free Cash Flow to Firm

Indicator	**30.12.2019**	**30.12.2020**	**30.12.2021**	**30.12.2022**
Operating Cash Flow	20 699 000	29 989 000	28 569 000	10 498 000

Capital Expenditures (Capex)	-7 592 000	-5 300 000	-7 509 000	-9 238 000
FCFF	28 291 000	35 289 000	36 078 000	19 736 000

Source: Own processing, Excel.

Table 24: Free Cash Flow to Equity

Indicator	**30.12.2019**	**30.12.2020**	**30.12.2021**	**30.12.2022**
FCFF	28 291 000	35 289 000	36 078 000	19 736 000
Change in Net Debt	0	5 347 000	-343 000	4 235 000
FCFE	28 291 000	40 636 000	35 735 000	23 971 000

Source: Own processing, Excel.

Note:

The Change in Net Debt was not computed for the year of 2019, due to missing values of 2018.

The **Table – 25**, illustrates the ratios that are need for a projection of 2026. Thus, some missing cells are due to unavailability of the data, for the year of 2018. Since, the author's research is limited, from 2019 up to 2021, some values were not calculated.

Table 25: Given Indicators/Total Revenue

Forecast	**30.12.2019**	**30.12.2020**	**30.12.2021**	**30.12.2022**
Revenue Growth forecast	unknown	-10,7%	3,7%	23,4%
CoGS as a % of Revenue	89,82%	88,84%	85,92%	86,61%
S&GA as a % of Revenue	6,19%	5,75%	6,74%	6,81%
Interest Income as a % of revenue	0,31%	0,20%	0,11%	0,29%
Interest Expense as a % of revenue	0,57%	0,90%	0,75%	0,63%
Other Expense or Income	0,70%	1,13%	1,83%	0,77%
Effective Tax Rate	10%	22%	22%	16%
Normalized EBITDA	16%	18%	20%	15%
Minority Interest as a % of Revenue	0,05%	0,09%	0,06%	0,14%
D&A as a % of Revenue	10,29%	10,46%	9,49%	0,00%
Change in NWC as a % of Revenue	unknown	8,92%	5,26%	1,01%
Capex as a % of Revenue	-5,53%	-4,33%	-5,91%	-5,89%
Change in net Debt as a % of Revenue	0,00%	4,37%	-0,27%	2,70%

Source: Own processing, Excel.

Further, the author takes an average on the base of 4 given years and calculates the growth year for the following years. The formula could be seen in the Appendix attached with the "Bachelor Thesis". However, for a better illustration, the author demonstrates it in the **Appendix – 3** and 4.

Exemplary explanation:

Forecast	30.12.2019	30.12.2020	30.12.2021	30.12.2022	31.12.2023	30.12.2024	30.12.2025	30.12.2026	30.12.2027
Revenue Growth forecast	unkown	-10,7%	3,7%	23,4%	3,20%	4,89%	8,80%	10,07%	6,74%

Source: Own processing.

The prognosis percentage for the year of 2023 was 3,20 % Afterwards, the author took and average for the 2020, 2021, 2022 and kept projection on average based on the past 3 years contributing to the following year with its average.

The following step is to calculate CAMP, for General Motors, see **Table – 26**, together with a discount rate, **Table – 27**.

Table 26: CAMP for General Motors.

CAPM		Comments
Risk - Free Rate	3,963%	Ford's risk-free rate, googled on 28.02.2023
Beta	1,38	Yahoo's rating beta for Ford on 28.02.2023
Market Return	7,51%	average, based on S&P 500
r	**8,9%**	

Source: Own processing.

Table 27: Projection of discount rate for General Motors

Indicator	**GM**
r	8,9%
g	2%

Source: Own processing.

Further the author had to calculate the Terminal Value for the year 2026, the value taken from the **Appendix – 4,** 38 244 974 USD.

The Terminal Value for the year of 2026, was the calculated in the following way:

Terminal Value = 38 244 974 * ((1 + 2 %)/(8,9 % – 2 %)) = 568 834 501

The Total Value = 38 244 974 + 568 834 501= 607 079 475

The projected equity value was calculated by the NPV formula, where the author needed to calculate the stream of terminal values and rate of return of 8,9 % from the **Appendix – 3**

Table 28: Results of forecasting

Indicator	Value	Comment
Equity Value	188 408 309,75	Projected Value for 2027
Share Outstanding	1 448 000	See, Appendix – 5.
Price Per Share	130,12	Intrinsic value for 2026
Current Price	39,32	Value for 2023
Buy / Sell	Buy	Suggestion by the author.
Upside	231%	Growth rate for the period of 5 years

Source: Own processing.

4 Discussions

The author has calculated the projection of a stock price for the year of 2027. There were two companies which operate in the industry, automotive. However, the results are different.

Considering the fact that General Motors is much of a bigger scope on a global level, its future projection resulted in a much higher increase than Ford's enterprise.

The odds are stacked against General Motors given how much competitors there is besides Ford. The automotive industry is massive and highly specialized. GM's competitors include not only companies that follow traditional operating patterns like BYD, FCA US, Daimler, and Toyota Motors, but also companies that follow innovative operating patterns like Tesla, as well as others, when it comes to the manufacturing and creation of electronic vehicles and autonomous vehicles. The number of competitors might vary, but generally speaking, they compete with one another for unique market sectors and work hard to keep customers loyal to their own brand. In a word, given these circumstances, GM is going to have to contend with a very competitive vehicle market.

In contrast, Ford faces the same challenges, however, Ford is being 3d within USA market. Clients are satisfied with Ford's products since the company employs specialists whose primary concentration is on producing high-quality goods. With about 5,953,000 cars sold in 2019, Ford Motor Company ranks third in terms of the worldwide market dominance of automobiles. This ranking was based on the company's global market share in 2017. (Global car sales analysis 2019). Nevertheless, considering the lowered "Costs of Revenue", Ford demonstrates more efficiency than GM.

Afterall, GM is winning most of the market which results in a much higher revenue, hence, cash of streaming, investment options and dividend payouts. It basically creates additional attraction for investors.

However, the research supposes a growth for both companies, because of COVID – 19, it is clearly seen on the BS, and IS, the effect, "the decrease" due to limited supply chain of materials as well as delivering its products around the globe. Both companies experienced a decline in

“Revenues” which indicates a vulnerability of both companies to such unexpected circumstance as “Pandemic”.

4.1 Summary of evaluation

The author base the calculation strictly on a given indicators and financial statements of the companies to the end of the year. However, considering the growth rate and its projection, the author was rather sceptical to evaluate a growth on a much higher rate. The average market rate of return was taken to calculate the **Terminal Value** for both companies, however, in the projection of “**Revenue Growth Forecast**” the author would include much less “Revenue growth forecast” for both companies.

Even though, both resulted in an increase of Price per share, for the year of 2027. Based on its Available stocks for the data of 28.2.2023.

Both prices, based on the calculation increase in values, meaning that, for today, it is better to buy the stocks of both companies and hold till 2027.

5 Conclusion

The Bachelor thesis was focused on evaluation of Common Stocks, of both automotive companies, Ford, and General Motors. The main objective of the thesis was fulfilled through describing the concept of “Evaluation” theory of “Stock Market” and factors that should be considered.

Moreover, the author has described the “Valuation methods” with the FCFE and FCFF and DCF models, that are commonly used to determine the future stock price of a certain company.

The author of this piece made use of the financial statements that Ford Motor company and General Motors that have released over the course of the last four years, ranging from 2019 all the way up to 20212. The author has mostly dealt with the Balance Sheet Statement, the Income Statement, and a Cash Flow Statement, but also has some experience with the auditing reports. The remainder of the indicators were derived either by calculation or by looking at market growth and related topics in published literature. Given that the market is not always predictable, it is in the best interest of investors to have a comprehensive understanding of the sector, including all of its supply chains and logistics. Fors Motors and General Motor have experienced a decline in its overall revenue for the period of 2019 and 2020 as a direct result of the current pandemic scenario. This is because of the worldwide lockdown, as well as the halt of supply chain and logistical operations in general.

Despite this, both companies were able to recover after such decline. Investors have a significant responsibility to educate themselves on the market as a whole in order to forestall declines in stock prices. Despite this, it is very vital to have a solid grasp of the market's psychology as well as its behaviour.

The author performed all of the calculations with the assistance of the three financial statements that were provided by the company. Excel is used for all of the calculations that need to be done. The appendix contains sections that may be examined at your convenience.

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Appendix – 1.

	30.12.2019	30.12.2020	30.12.2021	30.12.2022	30.12.2023	30.12.2024	30.12.2025	30.12.2026	30.12.2027
Revenue Growth forecast	-	-18,45%	7,23%	15,93%	7,50%	10,22%	11,22%	9,65%	10,36%
CoGS as a % of Revenue	86,40%	88,68%	84,09%	85,03%	85,93%	85,02%	85,33%	85,43%	85,26%
S&GA as a % of Revenue	7,16%	8,02%	8,74%	6,89%	7,88%	7,84%	7,54%	7,75%	7,71%
Interest Income as a % of revenue	0,52%	0,36%	0,19%	0,40%	0,32%	0,30%	0,34%	0,32%	0,32%
Interest Expense as a % of revenue	0,00%	8,07%	5,17%	4,92%	6,05%	5,38%	5,45%	5,63%	5,49%
Other Expense or Income	0,04%	0,00%	1,25%	0,08%	0,44%	0,59%	0,37%	0,47%	0,47%
Effective Tax Rate	0,00%	254,93%	273,78%	129,70%	14,00%	139,16%	94,29%	82,48%	105,31%
Normalized EBITDA		12,80%	17,12%	11,95%	14,00%	14,36%	13,44%	13,93%	13,91%
Minority Interest as a % of Revenue	0,03%	-1,01%	13,16%	-1,25%	2,19%	3,27%	4,34%	2,14%	2,98%
D&A as a % of Revenue	5,45%	5,87%	4,37%	4,11%	4,78%	4,42%	4,44%	4,55%	4,47%
Change in NWC as a % of Revenue	0,00%	2,86%	-0,94%	2,30%	1,41%	0,92%	1,54%	1,29%	1,25%
Capex as a % of Revenue	-4,90%	-4,52%	-4,57%	-4,34%	-4,48%	-4,46%	-4,43%	-4,46%	-4,45%
Change in net Debt as a % of Revenue	0,00%	4,93%	-17,57%	0,21%	-4,14%	-7,16%	-3,70%	-5,00%	-5,29%

Source: Own computation.

Note: Average growth years of the market, due to previous pandemic cases, we see the decrease by 18% which might impact the growth rate further.

Appendix – 2.

Indicator	30.12.2019	30.12.2020	30.12.2021	30.12.2022	30.12.2023	30.12.2024	30.12.2025	30.12.2026
Total Revenue	155 900 000	127 144 000	136 341 000	158 057 000	169 911 275	187 276 910	208 281 966	228 371 772
Growth Y-o-Y	n/t	0	0	0	0	0	0	0
Operating Revenue	155 900 000	127 144 000	136 341 000	158 057 000	169 911 275	187 276 910	208 281 966	228 371 772
Cost of Revenue	134 693 000	112 752 000	114 651 000	134 397 000	146 011 910	159 220 510	177 722 619	195 091 052
Gross Profit	21 207 000	14 392 000	21 690 000	23 660 000	23 899 365	28 056 400	30 559 347	33 280 720
Operating Expense	11 161 000	10 193 000	11 915 000	10 888 000	13 391 651	14 675 847	15 695 193	17 701 513
Selling General and Administrative	11 161 000	10 193 000	11 915 000	10 888 000	13 391 651	14 675 847	15 695 193	17 701 513
Operating Income	10 046 000	4 199 000	9 775 000	12 772 000	10 507 714	13 380 553	14 864 154	15 579 207
Operating Margin	0	0	0	0	0	0	0	0
Net Non-Operating Interest Income Expense	-9 712 000	-9 806 000	-6 794 000	-7 139 000				
Interest Income Non-Operating	809 000	452 000	261 000	639 000	538 743	569 814	712 061	733 233
Interest Expense Non-Operating	10 521 000	10 258 000	7 055 000	7 778 000	10 287 308	10 081 773	11 357 531	12 857 961
Other Income Expense	0	4 491 000	14 799 000	-8 649 000	750 828	1 102 929	768 823	1 065 697
Net Income Common Stockholders	47 000	1 279 000	17 937 000	1 981 000	9 536 480	8 978 844	10 588 708	11 792 264
Pre-tax Income	0	1 731 000	18 198 000	2 620 000	10 075 223	9 548 658	11 300 769	12 525 497
Tax Provision	-724 000	-160 000	-130 000	-864 000	1 410 531	1 370 910	1 518 485	1 744 973
Net Minority Interest	47 000	-1 279 000	17 937 000	-1 981 000	3 713 187	6 124 920	9 038 668	4 876 975
Normalized EBITDA	18 282 000	16 275 000	23 338 000	18 894 000	23 787 579	26 887 527	27 986 856	31 815 310
Net Income	-724 000	-160 000	-130 000	-864 000	n/a	n/a	n/a	n/a
Depreciation & amortization	8 490 000	7 457 000	5 960 000	6 493 000	8 124 255	8 278 184	9 240 618	10 382 048
Change in NWC		3 637 000	-1 283 000	3 637 000	2 390 415	1 727 259	3 214 646	2 947 955
Operating Cash Flow	7 766 000	3 660 000	7 113 000	1 992 000	7 144 372	7 921 836	7 544 457	9 179 066

Capital Expenditures (Capex)	-7 632 000	-5 742 000	-6 227 000	-6 866 000	-7 604 870	-8 356 930	-9 221 427	-10 174 346
FCFF	15 398 000	9 402 000	13 340 000	8 858 000	14 749 241	16 278 766	16 765 884	19 353 412
Change in Net Debt	0	6 273 000	-23 952 000	337 000	-7 034 738	-13 418 231	-7 700 839	-11 420 470
FCFE		15 675 000	-10 612 000	9 195 000	7 714 503	2 860 535	9 065 046	7 932 943
Terminal Value	0							108 338 131
Total	0	15 675 000	-10 612 000	9 195 000	7 714 503	2 860 535	9 065 046	116 271 074

Source: Own computation.

Appendix – 3.

Forecast	30.12.2019	30.12.2020	30.12.2021	30.12.2022	31.12.2023	30.12.2024	30.12.2025	30.12.2026	30.12.2027
Revenue Growth forecast	unknown	-10,7%	3,7%	23,4%	3,20%	4,89%	8,80%	10,07%	6,74%
CoGS as a % of Revenue	89,82%	88,84%	85,92%	86,61%	87,80%	87,29%	86,91%	87,15%	87,29%
S&GA as a % of Revenue	6,19%	5,75%	6,74%	6,81%	6,37%	6,41%	6,58%	6,54%	6,48%
Interest Income as a % of revenue	0,31%	0,20%	0,11%	0,29%	0,23%	0,21%	0,21%	0,24%	0,22%
Interest Expense as a % of revenue	0,57%	0,90%	0,75%	0,63%	0,71%	0,75%	0,71%	0,70%	0,72%
Other Expense or Income	0,70%	1,13%	1,83%	0,77%	1,11%	1,21%	1,23%	1,08%	1,16%
Effective Tax Rate	10%	22%	22%	16%	17,58%	19,39%	18,76%	18,00%	18,43%
Normalized EBITDA	16%	18%	20%	15%	17,29%	17,56%	17,51%	16,93%	17,32%
Minority Interest as a % of Revenue	0,05%	0,09%	0,06%	0,14%	0,08%	0,09%	0,09%	0,10%	0,09%
D&A as a % of Revenue	10,29%	10,46%	9,49%	0,00%	7,56%	6,88%	5,98%	5,10%	6,38%
Change in NWC as a % of Revenue	unknown	8,92%	5,26%	1,01%	3,80%	4,75%	3,70%	3,31%	3,89%
Capex as a % of Revenue	-5,53%	-4,33%	-5,91%	-5,89%	-5,42%	-5,39%	-5,65%	-5,59%	-5,51%
Change in net Debt as a % of Revenue	0,00%	4,37%	-0,27%	2,70%	1,70%	2,12%	1,56%	2,02%	1,85%

Source: Own computation.

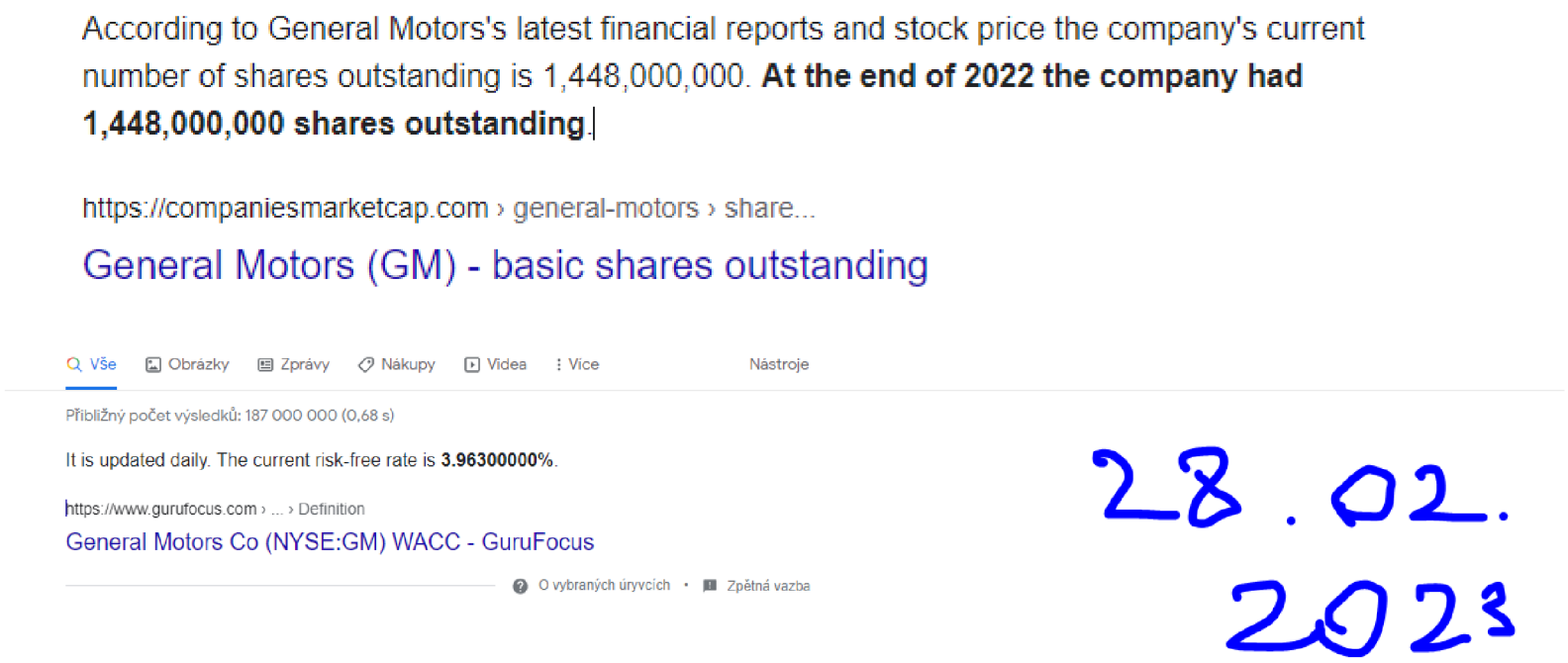
Appendix – 4.

Indicator	30.12.2019	30.12.2020	30.12.2021	30.12.2022	31.12.2023	30.12.2024	30.12.2025	30.12.2026	30.12.2027
Total Revenue	137 237 000	122 485 000	127 004 000	156 735 000	161 750 520	169 655 932	184 579 861	203 173 280	216 865 823
Y - o - Y		-10,7%	3,7%	23,4%	3,20%	4,89%	8,80%	10,07%	6,74%
Operating Revenue	137 237 000	122 485 000	127 004 000	156 735 000	161 750 520	169 655 932	184 579 861	203 173 280	216 865 823
Cost of Revenue	123 265 000	108 813 000	109 126 000	135 754 000	142 014 481	148 098 294	160 413 178	177 071 961	189 297 924
Gross Profit	13 972 000	13 672 000	17 878 000	20 981 000	19 736 039	21 557 638	24 166 682	26 101 319	27 567 899
Operating Expense	8 491 000	7 038 000	8 554 000	10 667 000	10 301 119	10 881 523	12 146 913	13 292 104	14 045 041
Selling General and Administrative	8 491 000	7 038 000	8 554 000	10 667 000	10 301 119	10 881 523	12 146 913	13 292 104	14 045 041
Operating Income	5 481 000	6 634 000	9 324 000	10 314 000	9 434 919,72	10 676 115,21	12 019 769,65	12 809 215,33	13 522 857,95
Operating Margin	4,0%	5,4%	7,3%	6,6%	6,37%	6,41%	6,58%	6,54%	6,48%
Net Non-Operating Interest Income Expense	-353 000	-857 000	-804 000	-527 000	-778 903	-912 117	-917 575	-940 959	-1 073 172
Interest Income Non-Operating	429 000	241 000	146 000	460 000	371 138	354 011	390 645	479 105	480 122
Interest Expense Non-Operating	782 000	1 098 000	950 000	987 000	1 150 041	1 266 128	1 308 220	1 420 064	1 553 294
Other Income Expense	2 308 000	2 318 000	4 196 000	1 809 000	1 789 755	2 049 840	2 268 171	2 191 367	2 505 952
Pre-tax Income	7 436 000	8 095 000	12 716 000	11 597 000	12 374 715,20	13 992 083,03	15 596 160,04	16 420 645,73	17 582 103,30
Tax Provision	769 000	1 774 000	2 771 000	1 888 000	2 175 718,09	2 713 353,26	2 926 055,71	2 956 351,87	3 241 229,20
Net Income Common Stockholders	6 581 000	6 247 000	9 837 000	8 915 000	10 062 979,94	11 120 487,35	12 494 835,79	13 252 734,05	14 136 778,18
Net Income from Continuing Operation Net Minority Interest	6 732 000	6 427 000	10 019 000	9 934 000	136 017,16	158 242,43	175 268,53	211 559,81	204 095,91

Normalized EBITDA	22 256 000	21 743 000	25 146 000	24 110 000	27 962 940,99	29 783 645,09	32 313 034,18	34 403 297,98	37 562 388,68
Net Income Common Stockholders	6 581 000	6 247 000	9 837 000	8 915 000	na	na	na	na	na
Depreciation & amortization	14 118 000	12 815 000	12 051 000	0	12 227 731	11 668 429	11 040 646	10 371 400	13 837 955
Change in NWC	n	10 927 000	6 681 000	1 583 000	6 143 099	8 054 172	6 836 696	6 734 762	8 438 223
Operating Cash Flow	20 699 000	29 989 000	28 569 000	10 498 000	18 370 831	19 722 601	17 877 342	17 106 162	22 276 179
Capital Expenditures (Capex)	-7 592 000	-5 300 000	-7 509 000	-9 238 000	-8 761 028	-9 140 163	-10 433 511	-11 352 536	-11 951 497
FCFF	28 291 000	35 289 000	36 078 000	19 736 000	27 131 859	28 862 764	28 310 852	28 458 699	34 227 675
Change in Net Debt	0	5 347 000	-343 000	4 235 000	2 748 697	3 603 797	2 886 583	4 108 876	4 017 299
FCFE	28 291 000	40 636 000	35 735 000	23 971 000	29 880 556	32 466 561	31 197 435	32 567 575	38 244 974
Terminal Value									568 834 501
Total	28 291 000	40 636 000	35 735 000	23 971 000	29 880 556	32 466 561	31 197 435	32 567 575	607 079 475

Source: Own computation.

Appendix – 5.


According to General Motors's latest financial reports and stock price the company's current number of shares outstanding is 1,448,000,000. **At the end of 2022 the company had 1,448,000,000 shares outstanding.**
https://companiesmarketcap.com › general-motors › share...
General Motors (GM) - basic shares outstanding
Vše
Obrázky
Zprávy
Nákupy
Videa
Více
Nástroje
Přibližný počet výsledků: 187 000 000 (0,68 s)
It is updated daily. The current risk-free rate is **3.96300000%**.
https://www.gurufocus.com › ... › Definition
General Motors Co (NYSE:GM) WACC - GuruFocus
O vybraných úryvcích
Zpětná vazba
28.02.
2023

Appendix – 6.

Ford Motor Annual Shares Outstanding (Millions of Shares)

2020	**3,973**
2019	4,004
2018	3,998
2017	3,998