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Abstract (EN)

Corporate share repurchases or stock buybacks have been on the rise in the previous decades. Several academics have examined the motivation of corporate executives to do buybacks and their potentially harmful effects on long-term investments and R&D. Still, only a few have examined their impact on the welfare of employees. This master thesis aims to investigate the relationship between stock buybacks and the welfare of employees. In this context, the welfare of employees is defined as the satisfaction of employees with their working conditions, most importantly, compensation.

To test the hypothesis that higher usage of stock buybacks leads to deterioration of employees' welfare, financial data from American companies and reviews of employees were collected. The information about the usage of stock buybacks, compensation of CEOs, and ratings of employers were used to evaluate the relationship between stock buybacks and employees' satisfaction with their compensation. The results showed a small effect in the direction of the hypothesis: stock buybacks and higher CEO pay ratio were associated with lower satisfaction of employees with their compensation.

These results suggest that employees' welfare is more likely to be better in companies that use fewer funds on stock buybacks. On this basis, the regulation of stock buybacks should be considered by legislators; however, other reasons for lower wages and dissatisfaction with compensation should be examined.

Abstract (DE)

Aktienrückkäufe von Unternehmen haben in den vergangenen Jahrzehnten zugenommen. Mehrere Wissenschaftler haben die Motivation von Unternehmensleitern zu Rückkäufen und ihre potenziell schädlichen Auswirkungen auf langfristige Investitionen und Forschung und Entwicklung untersucht. Dennoch haben nur wenige ihre Auswirkungen auf das Wohlergehen der Arbeitnehmer untersucht. Ziel dieser Masterarbeit ist es, den Zusammenhang zwischen Aktienrückkäufen und dem Wohlergehen der Mitarbeiter zu untersuchen. In diesem Zusammenhang wird das Wohlergehen der Mitarbeiter als die Zufriedenheit der Mitarbeiter mit ihren Arbeitsbedingungen, vor allem der Vergütung, definiert.

Um die Hypothese zu testen, dass eine stärkere Nutzung von Aktienrückkäufen zu einer Verschlechterung des Wohlergehens der Mitarbeiter führt, wurden Finanzdaten von amerikanischen Unternehmen und Bewertungen von Mitarbeitern gesammelt. Die Informationen über die Nutzung von Aktienrückkäufen, die Vergütung von CEOs und die Bewertungen von Arbeitgebern wurden verwendet, um den Zusammenhang zwischen Aktienrückkäufen und der Zufriedenheit der Mitarbeiter mit ihrer Vergütung zu bewerten. Die Ergebnisse zeigten einen kleinen Effekt in Richtung der Hypothese: Aktienrückkäufe und eine höhere CEO-Vergütungsquote waren mit einer geringeren Zufriedenheit der Mitarbeiter mit ihrer Vergütung verbunden.

Diese Ergebnisse deuten darauf hin, dass das Wohlergehen der Mitarbeiter in Unternehmen, die weniger Mittel für Aktienrückkäufe verwenden, wahrscheinlich besser ist. Auf dieser Grundlage sollte die Regulierung von Aktienrückkäufen vom Gesetzgeber erwogen werden; es sollten jedoch andere Gründe für niedrigere Löhne und Unzufriedenheit mit der Vergütung geprüft werden.

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List of abbreviations

CEO	Chief Executive Officer
USA	United States of America
R&D	Research and Development
US	United States
UK	United Kingdom
SEC	Securities and Exchange Commission
EPS	Earnings Per Share
EC	European Commission
ROE	Return On Equity
ESO	Employee Stock Option
GM	General Motors
GE	General Electrics
WDL	Wrongful Discharge Law
MB	Mitbestimmungsindex
CSR	Corporate Social Responsibility

1. Introduction

In my master thesis, I examine the impact of using corporate buybacks motivated by enhancing CEO compensation on employees' welfare. Corporate buybacks are a widespread practice in many countries, and there are several reasons why they are used (Murugaboopathy and Dogra, 2021). A simple explanation of corporate buybacks is that it is the practice of using the corporate funds or debt to buy back company shares to concentrate its ownership in the hands of fewer people or protect the corporation from a hostile takeover. A common reason for this practice is to increase the share price when the stock is underpriced. It is the simple economic logic behind this idea. Fewer shares with the same demand mean they become scarcer, increasing their price. Stock buyback usage is usually a short-term way to increase the share price, but its long-term effect is somewhat questionable. It is also a way of distributing profits to shareholders, together with dividends (Damoradan, 2015).

Many corporate executives have compensation packages based not only on the base salary and bonuses but also on long-term incentives, which means they are incentivized to increase the share price and, therefore, the value of shareholders' assets. It is in the best interest of executives to increase the share price with available options, and one of them is performing stock buybacks (Cheng, Harford, and Zhang, 2015). Notably, the corporative executives in the USA are known for their high compensation, and the most significant part of it comes from the long-term incentives. Some CEOs do not even have the base salary, and their entire income comes from short-term and long-term incentives (Melin, 2021). It means they receive payment only in the case of satisfying financial results.

However, the question is whether stock buybacks are the right way to use retained earnings. Retained earnings are usually used to pay dividends to shareholders, invest in production capacities or research, increase employees' salaries, and so on. In this matter, spending the retained earnings on buying own stocks seems unreasonable. Mainly in today's competitive world, corporations are expected to invest as much as possible in R&D and skilled workforce to enhance their competitiveness and, therefore, increase their market share. Moreover, the most important is the question of employees' welfare. Some stakeholders assume that funds used on stock buybacks should be used to increase employees' salaries and improve their standard of life (Palladino and Lazonick, 2021).

1.1 Motivation

My motivation to write this thesis originated from my interest in compensation theories and social inequality. Several articles, news reports, and opinions cover the issue of CEO compensation in the USA and the reason behind its significant increase in past decades. Especially the CEO-to-employee pay ratio. This ratio was 299-to-1 among S&P 500 companies and even 741-to-1 in the consumer discretionary sector (McDonald's, Starbucks) in 2019. This ratio rises every year, opening a gap between the majority of the population and the few wealthiest people in the country (Jackson, 2021). Politicians on both sides of the political specter use this fact as a reason for new legislative changes and critique of the current economic system, which should be reformed and be more concerned about ordinary employees. One of the significant proposed changes includes the regulation of corporate stock buybacks. Democrat senator Elizabeth Warren sees them as a form of market manipulation, which inflates executive pay and does not lead to a better quality of the company or its production. Funds used on stock buybacks be reinvested in businesses or employees (Franck, 2021). Republican senator Marco Rubio proposed to end tax advantages of buybacks over dividends and claims that the end of this preference could increase capital investment. This proposal came after the 2017 tax law, which decreased tax rates for the corporations and was followed by the spike in stock buybacks. The first full year since the tax law took effect, US companies announced more than $1 trillion of buybacks (Egan, 2019).

Another critic comes from academics, such as Lenore Palladino, Heitor Almeida, or William Lazonick. They are the harshest critics of stock buybacks and consider them a value extraction tool since they do not create any real value for the economy and particularly for the employees, only for the shareholders and management (Lazonick and O'Sullivan, 2002). There are several opinions like this. Therefore, I have decided to analyze this issue by looking at the actual data from US companies and finding out if there is any evidence that using stock buybacks leads to a worse situation for the employees and their welfare. This could be fewer job capacities, lower growth of salaries, or less favorable working conditions.

1.2 Research question

Since my thesis topic is about CEO compensation related to stock buybacks and its subsequent impact on the welfare of employees, I must look at the evidence proving the

motivation of corporate executives to use stock buybacks to influence the stock prices and therefore increase their compensation packages, which mainly consist of stock options. With these compensation packages based on creating value for the shareholders, executives could want to divert funds from capital investments, R&D, or production capacities to reward shareholders in the form of stock buybacks or dividends. It also helps them get higher compensation. Several studies link usage of buybacks to higher CEO compensation.

So, the question is whether CEOs use stock buybacks in large quantities to enhance their compensation while diverting resources from other fields, such as R&D and capital investment. Furthermore, does the relationship between CEO compensation and stock buybacks lead to worse conditions for employees? Does it lead to a decrease in employees' welfare and their satisfaction with an employer? And are employees more satisfied in companies that use fewer stock buybacks or none?

1.3 Methodology

In this thesis, I will first introduce the compensation schemes of executives and compensation theories, which are used in most modern companies. With compensation theories come compensation packages, so there needs to be the introduction of basic components of CEO compensation and what they depend on and what fraction of total compensation they usually represent. After the theoretical introduction of compensation, I will provide several examples of CEO compensation in American companies and in companies around the world.

Once the theoretical background for CEO compensation is set, there is a large section on corporate stock buybacks. I will define buybacks, history, usage, advantages and disadvantages, regulations, and rules. Legislation around stock buybacks is different worldwide, so their use in major developed economies will also be compared. I will also look at the possible adverse effects of stock buybacks on the financial health of the companies and the overall economy.

Lastly, this study will examine the link between CEO compensation and buybacks and its potential impact on a company's investment decisions. Furthermore, I will look at the relationship between stock buybacks and the welfare of employees. Since there are few studies on this issue, I will conduct my research with data from S&P 500 companies, consisting of information on buybacks, salaries of employees and CEOs, and various indicators of employees' satisfaction.

2. Literature overview

2.1 Compensation of management

The executive compensation plan, which is well designed and structured, is essential while it rewards both agents and principals. In this case, both corporate executives and shareholders. On the contrary, poorly designed compensation plans waste corporate resources without motivating the executives to perform better and sometimes even incentivize executives to reduce the shareholder value like cutting back profitable investments. Good executive compensation plans are also crucial in compensation levels throughout the company. It affects the compensation of lower management, which is often dependent on upper-management compensation (Tosi and Gomez-Mejia, 1994).

2.1.1 Agency theory

In most modern corporations, the ownership and management functions are separated. There are mainly two reasons why separation of ownership and management occurs. Firstly, there are individuals with already existing businesses (e.g., inherited stake at the company) but without sufficient skills and experience to run this business. Secondly, there might be a situation where an individual has ideas with great potential and necessary skills but lacks adequate funds and therefore seeks outside investors. Capital markets provide both individuals with the means to transact business.

But the separation of ownership and management functions can lead to several disagreements and conflicts. Typical conflict arises from the motivations of the owner and company executives. While owners (shareholders) concentrate on maximizing the value of their stake in the company, management focuses on maximizing their welfare based on the trade-off between their wealth and effort. There is also a risk that management will misuse the corporate resources for their benefit in some cases. A most common conflict is based on the scenario in which executives overlook profitable investments because these investments require a lot of effort. The costs associated with separation of ownership and management are called agency costs. Reduction and control of these costs are essential to increase the wealth of both owners and executives. The mechanism, which helps to mitigate those conflicts s arising from the separation of the ownership, includes monitoring by large shareholders and board of directors, equity ownership by executives, or well-designed compensation contracts incentivizing executives to increase shareholder value (Jensen and Meckling, 1976).

In the case of monitoring by the board of directors, there are some limitations, while they cannot evaluate every decision made by executives. Moreover, if they do not have a significant investment in the corporation, their incentives are often not aligned with large shareholders. The presence of large shareholders can mitigate the problem while they have resources and incentives to monitor executives. If the executives are the owners simultaneously, incentive conflicts are mitigated as their interests are aligned. When executives are made shareholders, they are interested in increasing the company's share price. Unfortunately, the executives cannot afford large amounts of shares as their employers, while their resources are limited. Furthermore, when their limited resources are combined with risk aversion, it may not be in the best interests of other shareholders for an executive to have a large amount of the company's stock (Balsam, 2002).

The market mechanism mitigates the incentive conflicts, especially in the managerial labor market. The mechanism provides executives with incentives to perform well to increase their market value to other employers. However, those incentives could be reduced by non-compete agreements, which prohibit executives from working for other companies for a particular period after leaving their current employer. It means that executives will not be concerned about their value to other companies. Another way to align the interests of owners and executives is to use *compensation packages*. Properly designed compensations packages can be a valuable tool for alleviating the conflict between shareholders and executives. Executives will be rewarded for activity, which increases the share price and, therefore, shareholders' wealth. While it seems like a great way to mitigate conflicts between shareholders and executives, shareholders have only limited capabilities to observe executives' actions while their information is incomplete. Therefore, compensation based solely on actions is complex; it must be tied to measures representing managerial effort such as share price or revenue (Balsam, 2002).

2.1.2 Owner-manager conflict

In most situations, information asymmetries exist when signing a contract between individuals. The same happens in the case of hiring a manager by the owner of the company. In modern corporations, the ownership and management roles are usually separated. This separation has two reasons. First, business owners do not desire to manage the corporations or have no required skills. Secondly, mainly in the case of start-ups, some individuals know how to run the business but lack the necessary capital and therefore must seek outside investors. However, this separation of the management and ownership

functions can lead to potential conflicts. For example, while owners are more concerned with maximizing the long-term value of the corporations, managers often look at their well-being. It means that the owner cannot see the manager's effort and where this effort leads to. Those asymmetries develop subsequently, while they are unknown when signing the contract. After the owner signs the contract with the manager, he cannot observe his effort and the manager ends up having more information than the owner. The problem of information asymmetries is anticipated, so both parties are trying to design the optimal contract, which mitigates the difficulties caused by information asymmetries. Designing the optimal contract is known as the *principal-agent problem* or *owner-manager conflict* (Balsam, 2002).

The informational problems are known to arise from two different sources, one source of the issues is *hidden actions,* and another one is *hidden information*. The *hidden actions* problem, also called moral hazard, is when the owner cannot observe the manager's actions. For example, when the owner plans to hire a manager for a project, the project's output is partly affected by the manager's actions. Designing the contract is relatively straightforward in case of observability of the manager's actions, while it would simply specify the actions that need to be taken by the manager. In case of unobservability of the manager's actions, those actions cannot be effectively specified due to the owner's inability to verify the fulfillment of the manager's obligations. The owner must design the compensation scheme, incentivizing the manager to take the desired actions. *The hidden information* is when the manager's effort is entirely observable, but the manager is aware of better opportunities for the firm (Balsam, 2002).

One study concludes that using a consistent model measure of compensation and theory estimation proves that CEO executive compensation corresponds to the principal-agent theory when the situation and corresponding variables are precisely identified, modeled, and estimated. In addition, the research shows that, on average, 80% of total executive compensation comes from a risk premium, which is paid to settle agency problems (Gayle, Li, and Miller, 2018).

2.1.3 Other executive compensation theories

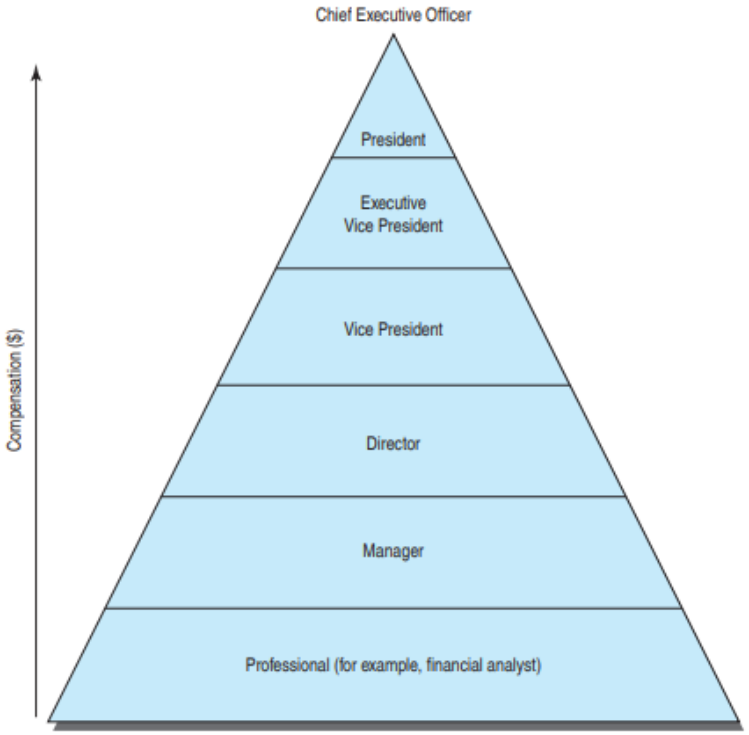
The agency theory explains the importance of a compensation package in case of providing the incentives to executives and at the same time alleviating the problems associated with the conflict between owners and executives. That is why *academics often use agency*

theory to explain executive compensation. However, other theories explain and influence executive compensation, such as tournament theory, social comparison, class hegemony, *or efficiency wage* theories.

In *tournament theory*, executive compensation is regarded as a prize in the competition. This competition consists of a series of tournaments, where managers compete for promotion to CEO. Competitors must pass several levels (A higher level means higher pay and more benefits) to win the ultimate prize, a promotion to CEO, and a lucrative compensation package. *Figure 1* shows the prize levels of the compensation pyramid, where higher levels in the pyramid come with higher compensation. The higher the level, the smaller the chance of winning the competition since there are fewer positions at higher levels in the corporate hierarchy. This theory contrasts agency theory because executive compensation provides incentives not to the executives but rather to their subordinates. The lower-level managers have incentives to perform well to be promoted to higher positions and receive higher compensation. Thus, executives end up with almost no incentives and may be paid more than their actual marginal product or value to the company. Nevertheless, their compensation serves as the motivation for lower-level managers to increase their productivity. So, the compensation scheme is not based on the absolute level of output of the executive rather his relative position within the company (Lazear and Rosen, 1981).

Same as agency theory, the tournament theory is widely used to explain the compensation schemes in corporations. There is evidence that tournament theory is better for explaining executive compensation than agency theory. Nader Elsayed and Hany Elbardan (2018) found strong evidence of a more significant influence of executive compensation on firm performance than the pay-performance framework. These findings reinforce the tournament theory rather than agency theory, whose problems can be mitigated by extra managerial monitoring. In this case, evidence shows that larger boards pay executives significantly more than smaller boards, while larger boards are considered a sign of weak corporate governance.

Figure 1 CEO compensation as a tournament



Source: Lazear and Rosen, 1981

According to *social comparison theory*, employees compare themselves to other similar employees to evaluate their value through their accomplishments. They use demographic characteristics and occupation as the basis for their comparison. As a result, employees tend to value themselves better and choose social comparisons accordingly. Compensation committees play an essential role in setting the executive compensation, and their members usually use their pay as a reference point when setting the pay of executives (O'Reilly, Main, and Crystal, 1988).

Class hegemony theory argues that executives work together in boards composed primarily of CEOs, and they can achieve their own goals rather than the interests of shareholders. So "board input is primarily used to legitimize high executive pay, reflecting a shared commitment to protect the privileges and wealth of the managerial class" (Gomez-Mejia, 1994).

According to *efficiency wage theory*, CEOs are already receiving a premium in their salary, which is the incentive to perform well. If the CEO does not exert effort, he may be fired, which means he gets a position with a lower salary. The premium is why CEOs work hard

because the consequence of low effort is losing their job. This effort increases the CEO's productivity and, in the same way, decreases turnover (Prendergast, 1999).

2.1.4 Executive compensation components

The executive compensation package usually consists of many components. Various components of compensation reflect the motivation and risk effects, and costs. It is essential to construct a balanced compensation package because there must be a trade-off between components that maximize the executive's net profit and the company's profit. The compensation package structure is often adjusted to current tax legislation, and therefore it needs to receive considerable attention. Most executive compensation packages have these five components:

- Base salary,
- short-term incentives or bonuses,
- long-term incentives and capital appreciation plans,
- employee benefits,
- perquisites.

When it comes to the typical compensation structure in large companies, the base salary is only a fraction of total compensation. However, the trend shows that companies increasingly emphasize incentives at the expense of base salaries (Melin and Sam, 2020). This means that companies make decisions on compensation packages to ensure profitability.

2.1.4.1 Base salary

Base salary is a fixed contractual amount of compensation that does not depend on the CEO's performance. Still, in some cases, good performance can lead to a better salary in the future. The compensation committee plays a critical role in determining the salary, composed of a board of directors. This committee usually analyses data from comparably sized firms. The most common approach to how executive compensation committees determine the salary is to identify significant competitors and set the CEO's compensation at a level between the best and worst of these comparison groups. Where precisely the salary falls in this range depends on various factors (Milkovich, Newman, and Gerhart, 2014).

2.1.4.2 Bonuses

Bonus is a form of compensation paid annually conditional on preceding years' performance (individual, group, or corporate). The performance is measured by objective factors such as net profit or sales; in some cases, customers' satisfaction may be used to measure performance. Bonuses are a significant part of executive compensation designed to motivate the short-term performance of management. Most top executives receive bonuses, even in an economic downturn (Gandel, 2021). This fact is caused by conditioning the bonuses on estimates of high sales, and unexpected events such as natural disasters or civil unrest should not influence executives' bonuses. However, basing executives' bonuses on short-term results is often criticized as it does not motivate executives to work on long-term goals. As a result, CEOs could approve great decisions for short-term results but may have long-term unfavorable consequences. This subjectivity leads companies to introduce new measures for their bonus schemes (Milkovich, Newman, and Gerhart, 2014).

2.1.4.3 Long-Term Incentive and Capital Appreciation Plans

The most common form of long-term incentives is *stock options*. Holders of *stock options* have a right to buy one or more shares of stock at a fixed price over a specified period. Those options only have value when the share price is higher than the fixed (exercise) price. The exercise price is predominantly set on the date when the stock option is granted. Executives are motivated to make decisions that influence the share price in the long term. If the corporation does not perform well, executives' stock options become worthless. On the other hand, executives can make significant profits when the corporation's share price rises significantly.

Another form of long-term incentive is *stock grants*. Those are stocks given to their employees by corporations. Unlike *stock options, stock grants* do not have an exercise price. It means that stock grants have value every time their price is above zero. As a result, stock grants always have a higher value than stock options for the same number of shares. There are restricted and unrestricted stock grants. Restriction means that an employee cannot sell the shares until he has worked for the corporation for a certain period. Another form of regulation is a performance-based restriction (Balsam, 2002).

Some companies use fewer common forms of stock-based compensation, such as stock *appreciation rights* or *phantom stock plans*. *Stock appreciation rights* provide income to

executives determined by increasing the value of a specified number of shares over a designated period. They are very similar to stock options, but the difference is that the claims do not have to be bought and then sold to receive profit. Instead, holders simply receive the difference between the current share price and the exercise price. Most corporations offer *stock appreciation rights* with *stock options* in one compensation package. The executive chooses whether to exercise stock option or stock appreciation rights at the exercise time. *A phantom stock plan* is a compensation arrangement made by the board of directors. The executive receives a bonus equivalent to the increase in the value of the corporation's shares over a period of time. The holder must meet two conditions to convert phantom shares into actual shares. The first condition is that the executive must be an employee of the corporation for several years (specified in the arrangement). The second condition is that the executive must retire from the corporation. Only when he meets those two conditions, he receives the amount equal to the difference between the value of the phantom shares at the conversion time and the value of the phantom shares from the date the corporation granted it (Martocchio, 2017).

2.1.4.4 Employee benefits and perquisites

Employees' benefits are usually based on the employee's income level, which means executives will receive higher benefits than the average employee. Common benefits include life insurance, health insurance, childcare, pension benefits, domestic partner benefits. Beyond these common benefits, executives receive additional benefits such as additional life insurance, supplementary pension income, or broader coverage of health-related costs. *Perquisites* or so-called perks are usually items like corporate cars or flights with corporate airplanes, sponsored trips, free entries to entertainment or dining facilities, or club memberships (Martocchio, 2017).

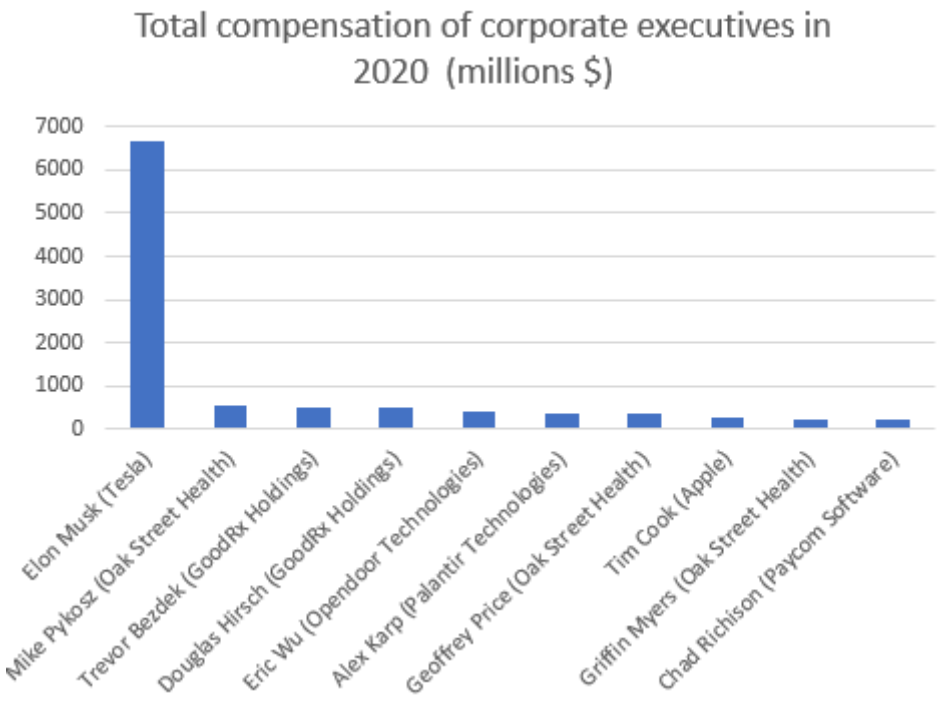
2.1.5 CEO compensation in the USA

The United States of America is the most robust economy globally (Silver, 2021), with the most-valued stock market (Statista Research Department, 2022). It is home to the largest corporations since 7 out of 10 largest corporations are in the USA (Szmigiera, 2021). Therefore, it is very likely that the best-paid executives will be CEOs of American corporations. According to Bloomberg, the ten best paid corporate executives in 2020 are from US corporations (Melin, 2021). Their total compensation is shown in *Figure 2.* Well-developed capital markets, market-oriented economies, and high-earning corporations make favorable conditions for the high compensation of CEOs. Corporations try to

increase their market value, and one way to achieve it is to motivate professional executives with constantly increasing compensation. Compared to average employees in the economy, those compensation packages were 351 times higher in 2020.

Furthermore, CEO compensation grew faster in recent decades than in the stock market. From 1978 to 2020, CEO compensation rose by 1322%, while S&P 500 rose by 817%. More interesting is that CEO compensation also grew during the COVID-19 pandemic, which was associated with the economic crisis. While the economy was struggling and unemployment was rising, realized CEO compensation grew by 18.9%. Another trend shows changes in CEO compensation composition. The composition is shifting away from stock options to stock awards. Overall, stock options and stock awards were 73.1% of total compensation in 2016 and 83.1% in 2020. The reason why corporations shift from stock options to stock awards is simple. CEOs can only make gains with stock options but do not realize losses (Mishel and Kandra, 2021). According to Bloomberg, the highest-paid CEO in 2020 was Tesla founder and CEO Elon Musk. His total compensation was 6.658 billion dollars and consisted mainly of option awards. The list continues with Mike Pikosz from Oak Street Health with total compensation of 568 million dollars and CEO of GoodRx Holdings Trevor Bezdek with total compensation of 497 million dollars (Melin, 2021).

Figure 2 The highest-paid CEOs and executives in the world, 2020



Source: Bloomberg

There are significant differences between the compensations of CEOs when it comes to the size of the corporation or the industry. Corporations with higher revenue naturally give their executives higher salaries. Using data from Aon's Total Compensation Measurement database, which consists of data from 178 companies, we can see that executives of companies with higher revenue have higher all components of their compensation package. While the average base salary of a CEO of a company with revenue under 1 billion dollars is 672,980$, the average base salary of a CEO of a company with revenues above 10 billion dollars is almost twice as much. When it comes to long-term incentives, the difference is even more significant. In the case of a company with revenue under 1 billion dollars, long-term incentives are 261% of base salary. In comparison, in companies with revenue above 10 billion dollars, executives receive long-term incentives worth 708% of their base salary. When we looked at the medium target total compensation in 2020, it was 12.756 million dollars in the case of large companies and 1.2 million dollars in smaller companies (Allen and Harden, 2020).

Apart from the company's size, the type of industry also plays a role. The highest-paid CEOs are in manufacturing, retail, and financial services. The average target total compensation of a CEO in manufacturing was 8.385 million dollars, 8.303 million dollars in retail, and 8 million dollars in financial services. What is more interesting is the composition of the compensation package in different industries. While long-term incentives are higher in manufacturing than in financial services, short-term incentives are higher in the case of financial services. Nevertheless, base salary remains very similar across all industries (Allen and Harden, 2020).

2.1.6 CEO compensation across the world

Media, academics, and politicians often criticize CEO compensation in the USA. The one argument against high salaries is that non-US executives earn less. Europe is the most used example supporting this argument. Furthermore, CEOs of European corporations indeed earn significantly less than their counterparts in the USA. Wages in the European Union, for example, are much lower. Wages plus incentives for French CEOs, the highest-paid EU executives, average about $2 million in a sample of the 300 largest European companies. UK salaries for CEOs are about one-half of their American counterparts, and other European executives fall even farther behind. There are many reasons for this difference. The crucial determinants of CEO compensation are government regulations, shareholder interests, stock options, or the size of the firms (Milkovich, Newman, and Gerhart, 2014).

The analysis, which examined publicly available CEO pay data for 429 large companies in Japan, France, Germany, the U.K., and the U.S, shows the gap between the CEO compensation in the USA and the rest of the world. While the average base salary is relatively similar in all examined countries, long-term incentives are undoubtedly higher in the USA. For example, the average total compensation paid to prominent company CEOs in the USA in 2019 was 13.238 million dollars compared to 6.314 million dollars in Germany and 1.719 million dollars in Japan. (Morita, Ogawa, Sato, and Brown, 2020).

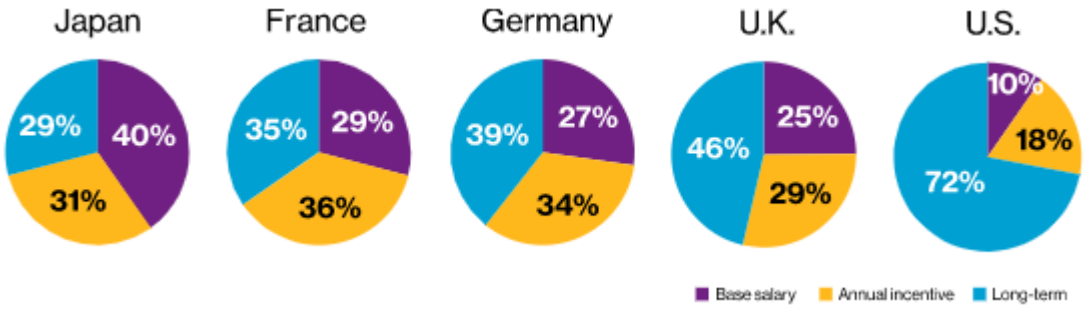
Germany is the best example for comparison of CEO compensation in Europe and the USA. It is a highly developed market-oriented economy, where many multinational corporations have headquarters. Corporations such as Volkswagen, Bayer, Daimler, and Siemens have similar revenues to big American corporations, so the assumption would be that these CEOs are paid similarly to their American counterparts. In fact, on average, they are paid half their actual compensation.

One explanation could arise from the fact that people in Germany think CEOs should be paid less. According to academic research conducted by Kiatpongsan and Norton (2014), people in Europe think CEOs should be paid less compared to average employees. But shareholders usually do not determine the compensation of CEOs based on public opinion. However, those public opinions impact their political representation and consequent legislature. This legislature is often based on social equality and fair compensation ideas, which means that the regulations influence shareholders' decisions.

On the other hand, American CEOs are said to take more risks than German CEOs. This comes from the fact that American CEOs' compensation package is more dependent on short-term and long-term incentives, and base salary plays only a minor role, as is shown in *Figure 3.* This means CEO pay is intimately tied to their company's share price. With a thriving economy and high-performing market indices, the possibility of a significant increase in share price is very high. While the American S&P 500 index has grown more than 105% in the last five years, the German stock index DAX has raised less than 48%. Therefore, we can assume that share price-dependent compensation in the USA has increased more substantially than Germany. The discrepancy is due to the stock that the board gives U.S. CEOs to ensure they will act in the organization's best interest. Since most U.S. CEOs aren't the founder or part of a family-run company, boards give the new

boss incentives by connecting the CEO's success to the company's success. German CEOs have fixed pay structures, so fewer highs and fewer lows (Kiatpongsan and Norton, 2014).

Figure 3 CEO pay mix 2019



Source: Forbes

Furthermore, German employees have more representation on the board. International Trade Union Confederation made a rating of countries based on the government support to trade unions. On a scale one-to-five, the USA scored 4, which indicates" systematic violations of rights" from governments or companies engaged in "serious efforts" to prevent improvement in labor conditions. On the other hand, Germany scored one, which indicates that "collective labor rights are typically guaranteed" (Derousseau, 2014, p.1, para 5). In Germany, the corporate board of directors' representation is split between shareholders and employees. This gives employees the ability to raise their pay and, at the same time, oversee CEO salaries (Derousseau, 2014).

2.2 Corporate buybacks

Companies have always returned cash to their shareholders, mainly in the form of dividends. Dividends are an easy way to satisfy shareholders when the company is doing well. That is because dividends can also be used to measure the company's performance or the share price. However, in recent decades, companies started to shift from dividends to another form of payment. One of these forms is corporate buyback or stock repurchase. Corporations in the USA have been increasingly using them since the 1980s to either complement the dividends or substitute them altogether.

2.2.1 Definition

Corporate stock buyback refers to when the company is repurchasing its own stocks. The company pays its shareholders the market value of the share and therefore regains the ownership previously held by numerous investors. Those shares are purchased on the open

market or directly from the investors. Companies usually use their retained earnings to reduce the number of outstanding shares. After the repurchase, the company can either cancel the repurchase shares or keep them as treasury stock to be reissued in the future (Atkins, 2013).

There are more ways of repurchasing the stocks, and it largely depends on the company's intentions, if it wants to buy back their shares at the prevailing market price or buy them more in the more formal sense through a tender offer. Three widely used approaches to buying back stocks include:

- **Repurchase of tender offers**: In the case of the tender offer, the company specifies the intended price at which they want to buy back their shares, the number of shares it intends to buy, and the period for which the offer will be open. The shareholders are then invited to submit their shares for repurchase, and in the case of an insufficient amount of submitted shares, the company can withdraw the offer. As this is a more formal approach, it is widely used in the case of significant repurchases.
- **Open market repurchases**: In this already mentioned way of repurchasing the shares, the company buys shares at the current market price in the open market. This is a less formal way, as the company does not publicly announce its intentions. Still, it must comply with SEC (Securities and Exchange Commission) requirements to prevent possible price manipulation or insider trading. In addition, this way is more flexible than the tender offer since companies do not have to repurchase their shares in a specified period, and they can choose the number of shares being repurchased. Therefore, open market repurchases are widely used for smaller repurchases.
- **Privately negotiated repurchases**: In this case, companies privately negotiate the price with large company shareholders. This approach is used rarely, and the most common reason is when managers want to consolidate control of the company (Damoradan, 2015).

2.2.2 Reasons for stock buybacks

Stock buybacks are used to return cash to shareholders, and companies do it primarily because of the advantage. Advantages of using stock buybacks instead of dividends include:

- Stock buybacks are one-time payments, while dividends are regularly paid. This may be better for companies, which are uncertain about their future cash flows, and therefore they use their excess cash to repurchase stock.
- Repurchasing stocks gives the company much more flexibility than paying the special dividend since it can be spread over a longer period. Also, the decision to repurchase stocks might be reversed and does not have to be completed.
- Insiders may increase their control in the company by repurchasing stocks and reducing the number of shares outstanding.
- Stock buybacks are also a way to support the share prices if they are under threat. However, it is only possible in the case of a drop not backed by fundamentals, such as a decrease in earnings. In that case, stock buybacks provide only temporary relief. Announcing stock repurchase can also positively affect share prices because the company looks more financially healthy and attracts more investors.

Apart from advantages for companies, there are few benefits for shareholders. The most significant benefit of stock buybacks is the tax advantage. While dividends are taxed at ordinary tax rates, earnings resulting from price appreciation of shares are taxed at capital gains rates, which are smaller. The shareholders also have the option not to sell their stocks back to the company and therefore do not realize the capital gains in the period of stock repurchase. Receivers of dividends do not have this option. Another advantage is that stock repurchases provide cash only to shareholders who need it. The shareholders who need money can sell their shares back to the company, and others may decide to keep their shares (Damoradan, 2015).

In summary, the advantages of stock buybacks come from their flexibility and selectiveness. In addition, it is a great way to stabilize or increase the equity value in times of distress. The stock buyback also allows managers to eliminate troublesome shareholders and consolidate their control over the company. Lastly, there are also benefits for shareholders in the form of tax advantages.

2.2.3 History of stock buybacks

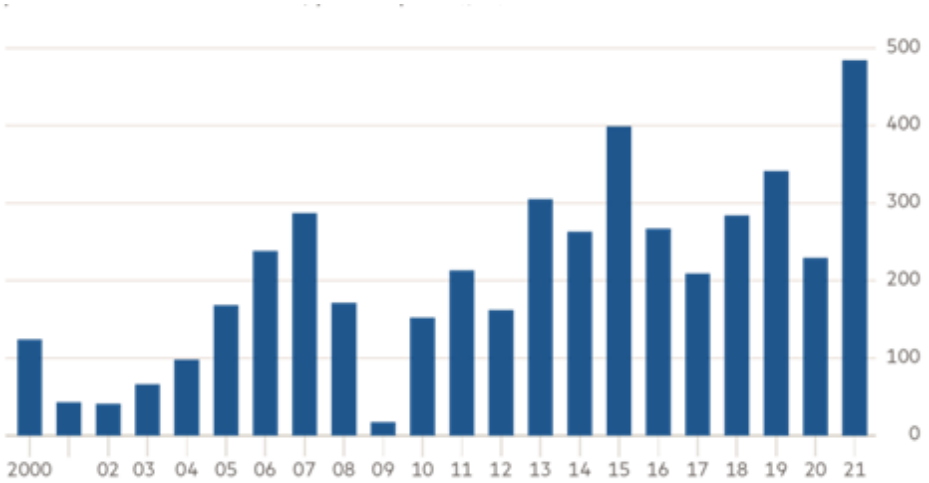
Stock buybacks were not always legal per se. In 1932, the New York Times reported that "*many cases of abuse are alleged*" among companies carrying out new stock buyback procedures. *"The purchases permit many cases of abuse, such as the use of the corporation's funds to buy shares owned by directors, officers and other persons friendly*

to the management," which is known as insider trading. In 1934 president F.D. Roosevelt signed The Securities and Exchange Act of 1934 to stop this manipulation and insider trading. This act did not forbid companies to do stock buybacks, but it prohibited anything which could manipulate the stock prices. So, stock buybacks brought the risk of being investigated by the SEC. Since then, it has been more difficult for corporations in the USA to do stock buybacks (Hyerczyk, 2021). Without the possibility of stock buybacks, companies had only three options to reinvest their retained earnings. They could use them to pay out dividends to the shareholders, reinvest them back in the companies or increase the employees' salaries. Some economists believe that was the reason for high economic growth and growth in productivity during the post-World War 2 period.

In the 1980s, during the presidency of Ronald Reagan, the newly appointed chief of SEC changed the policy towards a more investor-friendly approach. Companies could repurchase their shares on the open market with almost no limits after the SEC instituted Rule 10b-18 of the Securities Exchange Act in 1982. Under the rule, senior executives can repurchase stocks up to a specified dollar amount over a certain period, and the company must publicly announce its stock repurchase program. Once the company's intention is publicly announced, executives can buy many of its shares. Still, they cannot exceed 25% of the previous four weeks' average daily trading volume.

Moreover, companies must report total quarterly repurchases, so it is difficult to properly determine whether they have exceeded the 25% threshold without looking at the daily repurchases. This can be done only through a special investigation. Still, evidence shows that SEC has launched only a few investigations despite a substantial increase in stock buybacks over the past decades. This legal loophole meant that stock buybacks were back, and their usage was even higher than before The Securities and Exchange Act of 1934. This is primarily because of the tax benefits and their ability to increase the stock price. In the early 80s, stock buybacks were almost negligible; after 20 years, 449 companies listed on the S&P 500 between 2003 and 2012 spent 54% of their earnings on stock buybacks, which accounted for 2.4 trillion dollars. *Figure 4* shows the volume of stock buyback authorizations in the last 20 years. In some extreme cases, companies spent more than 100% of their profits on stock buybacks, which means that companies were borrowing money to buy back their shares (Lazonick, 2014).

Figure 4 Buyback authorizations announced, 2021 to April 30 ($bn)



Source: Goldman Sachs Global Investment Research

2.2.4 Popularity of stock buybacks

Since 1982 annual stock buybacks have increased enormously, and there is now a dominant form of payout in US corporations. There are many explanations for this phenomenon. The study of Skinner (2008), which examined three decades after deregulation of stock buybacks, looks at the three groups of firms that emerged since 1980. The first group paid annual dividends and regularly conducted stock buybacks. The second group only did buybacks and did not pay any dividends. The last group paid annual dividends but did almost no stock buybacks. Firms that paid annual dividends did that primarily because of their history. However, over time, corporate executives did more stock buybacks, and paying dividends was in smaller magnitude, which made their dividend policy more conservative. While factors like excess cash, undervaluation, or dilution due to stock options explained the timing of the stock buybacks, their magnitude was determined by their earnings. Over time, the number of firms that do only stock buybacks increased while dividend-payers became less significant. This trend is primarily popular among technology firms (Dell, Oracle, Cisco), which are unlikely to pay dividends and distribute more cash to shareholders through stock buybacks.

Other studies point out the reasons why firms choose stock buybacks instead of dividends. One of the reasons is their flexibility. Stock buybacks and their amount are apparently more volatile than dividends, and they depend on business cycles. During the 1980s, when markets were rising, stock buyback activity was at its peak, later dropped during the recession at the beginning of the 1990s and then surged again. In the same period,

dividends were less volatile, suggesting that dividends are paid out of stable cash flows, while stock buybacks are done mostly in cases of temporary cash flows. Stock buybacks do not necessarily succeed dividends but are instead complement to dividends. When operating cashflows are high, firms are more likely to pay more dividends. On the other hand, firms with high non-operating cash flows and higher volatility of cash flows conduct more stock buybacks (Jagannathan, Stephens, and Weisbach, 2000). Firms are also more likely to increase the dividend payments in response to stable positive cash flow shocks and use stock buybacks in case of more transient positive cash flow shocks (Guay and Harford, 2000). Therefore, stock buybacks give managers greater flexibility to reduce the volume and frequency of payouts, which is not possible with regular dividends. Another reason for using stock buybacks is their tax efficiency since stock buybacks and dividends are not taxed in the same manner. Throughout history, the personal income tax rate was higher than capital gains tax (DeAngelo, DeAngelo, and Skinner, 2009).

Managerial stock incentives also influence the corporate payout policy. The study finds that managerial share ownership creates incentives to increase payouts, mainly at the companies with the most severe agency problems. There is also evidence that management stock options lead to higher usage of stock buybacks rather than dividends. Both types of payouts increase with free cash flows and decrease with external financing costs. The combination of stock buybacks and dividends is primarily determined by the need for flexibility (Fenn and Liang, 2001).

2.2.5 Potential risks for the economy

Stock buybacks can have a slightly positive impact on the whole economy. The effect of the stock buybacks is much more related to the financial economy, as they lead to an increase in share prices and, therefore, the overall growth of stock market indices. This fact can have a positive effect on the real economy as well. It was proven that increases in the stock market positively affect consumer confidence, consumption, and overall spending (Segal, 2021). This phenomenon is called the **wealth effect**. This theory suggests that people tend to spend more when the value of their assets rises. Consumers feel more confident about their wealth, supported by a feeling of financial security. Even if their fixed income and costs remain the same, they feel richer and tend to be more spendthrift (Sussman, 2019).

The potential risk of stock buybacks is that companies spend too much cash on stock repurchase programs. Subsequently, fewer funds are left for other areas, such as new technologies, research, development, capital investments, establishing new operations, or creating new jobs. On average, in 2002, companies used to reinvest 20% of their operating returns into their businesses; that amount has dropped by half—to just 10% in 2016 (Gutierrez and Phillipon, 2017). This lack of funds for further development might have a negative impact on long-term shareholder value. Manconi, Peyer, and Vermaelen (2019) have examined the potential risk of stock buybacks destroying long-term value. The study looked at buyback announcements made by companies in U.S. and non-U.S. countries. On average stock, buybacks are associated with positive short-term returns followed by long-term excess returns. However, not all buybacks are the same, and those associated with the undervaluation of stock price have higher subsequent returns.

Looking at the shareholder value, stock buybacks can be considered an engine for its maximization. This practice can subsequently influence a firm's investment decisions. Stock-based compensation of executives motivates firms to use their resources on stock buybacks, which boost stock prices instead of actual investments. With a large part of total compensation consisting of stocks and stock options, executives have an incentive to create value for shareholders using buybacks instead of investing in R&D or employment. The empirical research shows that stock buybacks have a negative effect on capital investment, especially in large firms.

Furthermore, stock buybacks occur more often when executive compensation packages include more stock options. While there is a positive relationship between a firm's market valuation and stock buybacks, the effect on long-term performance is ambiguous. For example, resources, which are invested in stock buybacks to boost stock prices and, therefore, shareholder value, could be invested in the company's future growth. On the other hand, the lack of real investment could lead to lower productivity and wages, decreasing long-run competitiveness, and in the long run, adverse effects on aggregate demand and stock price (Turco, 2018).

Stock buybacks are often driven by the motivation to increase the earnings per share (EPS). It is very often used by firms that miss their EPS forecast. Those EPS-motivated stock buybacks are linked to reductions in investments, employment, and decreased cash holdings. Executives are often willing to trade off investments for stock buybacks if it

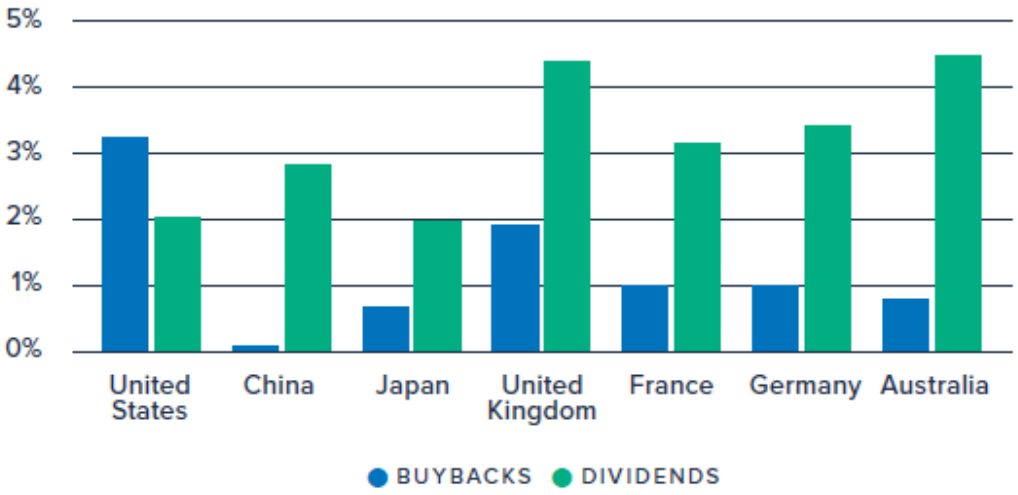
allows them to meet EPS forecasts. The evidence implies that companies that use stock buybacks regularly reduce investment in capital and employment and hold fewer cash reserves. However, stock prices reactions are less favorable to earnings announcements when the company cuts R&D expenses and jobs to finance the stock buybacks. While, on average, this practice does not help increase shareholder value, EPS-motivated stock buybacks often bring adverse effects on long-term value and performance, which comes from the reduction in real investments such as R&D and employment (Almeida, Fos, and Kronlund, 2016).

Furthermore, companies are funding stock buybacks by corporate bonds, which can negatively impact the company's credit quality. According to JPMorgan Chase, the proportion of stock buybacks funded by debt reached 30% in 2017. Commonly, companies take on debt to finance their investments in production capabilities, generating higher earnings in the future. Still, it may be seen as bad management to take on debt to fund stock buybacks since stock buybacks as open-market repurchases do not contribute to productive capabilities or generate higher revenues. Not only investments in equipment and plants, but also investments in human capital, meaning training employees and expanding their knowledge and skills, generate profits. The investment in the knowledge base is key to innovations in products and gaining an advantage in a competitive market. However, only 43% of companies listed in the S&P 500 Index recorded any R&D expenses, and just 38 companies made 75% of those R&D expenses. That lack of investments in productive capabilities and excessive distribution to shareholders in the form of stock buybacks may cause disruption in the growth dynamic based on productivity linked to pay of the labor force (Lazonick, Sakinc, and Hopkins, 2020). So, the biggest issue of stock buybacks is their potential negative impact on its employees.

2.2.6 Stock buybacks around the world

Stock buybacks are not just a matter of the US. In fact, they are common all around the world. However, stock buyback regulations are not as loose as in the US. That is why stock buybacks are the most common form of profit distribution in the USA, while other countries use dividends instead, as shown in *Figure 5.*

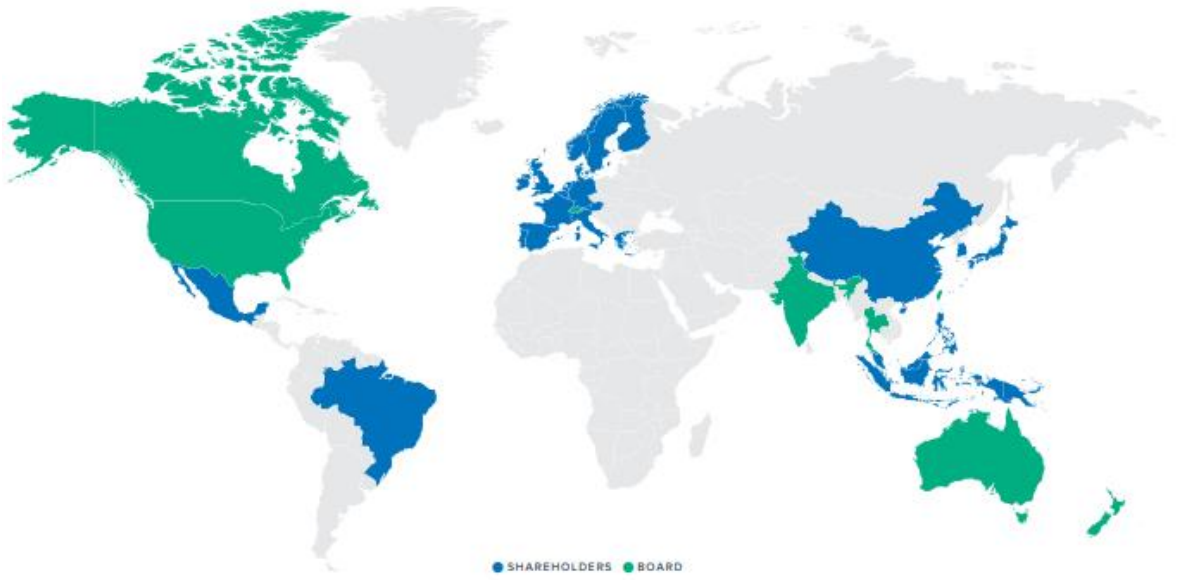
Figure 5 2018 Dividends and Buybacks as a Percentage of Total Country Market Cap



Source: FCLTGlobal analysis of MSCI ACWI data

Figure 6 shows whether share repurchases are approved by the board of directors or shareholders. Until the late 1990s, stock buybacks were either prohibited or very hard to implement in most European countries, except for the UK. In countries like Germany or France, stock buybacks were deregulated after the changes between 1988 and 2000. In 2003, The European Commission introduced a new regulation on activities related to stock buyback programs. This regulation was supposed to separate stock buybacks from insider trading or market manipulation (abuse). Therefore, the new rule defines stock buybacks as an effective tool in market stabilization, and market manipulation regulations should not be applied to buyback programs (EC Directive 2003/6/EC and EC Regulation 2273/2003). With this regulation, companies could carry out stock buybacks programs as long as they complied with necessary conditions and restrictions. The law became valid and binding for all EU member states without any further involvement of the national authorities. However, national authorities had to establish transparent monitoring mechanisms to prevent abuses. In April 2014, the previous regulations relating to insider trading and market manipulation were replaced with an updated EU regulation. It was followed by a supplementing text published in 2016, which updated the 2003 directive on buyback programs. Although European Commission regulation brought more flexibility to companies having stock repurchase activity, country-specific rules for stock buybacks are still prevalent (Sakinc, 2017).

Figure 6 Party Approving Share Repurchases



Source: FCLTGlobal analysis of MSCI ACWI data

For instance, in the UK, stock buybacks were legalized by the Companies Act in 1981 with numerous restrictions. It means that buybacks were legalized one year before introducing Rule 10b-18 in the USA. The restrictions include an authorization period when a company can repurchase its shares, which is between two consecutive annual general meetings, usually 12 months. Companies must publish their share repurchase decision on the next business day, and the announcement must include every detail (Crawford and Wang, 2012). The repurchase of shares cannot exceed 15% of total outstanding shares. Moreover, the price of the repurchased shares should not be more than 5% above the average price for the five business days before the repurchase day, and repurchased shares must be canceled (Kim et al., 2004)

Stock buybacks were wholly prohibited in Germany before the change of regulation in 1998. Companies cannot repurchase more than 10% of nominal share capital. The repurchase can be financed only with the funds, otherwise distributed to shareholders in the form of dividends. There is also an authorization period, which is 18 months after authorization by the annual general meeting of shareholders, and their decision must be announced to the public (Hackethal and Zdantchouk, 2006). Regarding the volume of repurchased shares, repurchase prices limits, and process of repurchasing, the announcement is very similar to the EC regulation.

One of the strictest regulations of stock buybacks is in Sweden. Public companies in Sweden were not allowed to use stock buybacks until March 2000. The reason why they were permitted is the fact that US and European companies were long allowed to use this financial tool to restructure a company's capital structure. Other common reasons included capital structure flexibility, better usage of excess cash, or protection against hostile take-overs. Permission of stock buybacks had strong opposition, and their main argument was that stock buybacks are a tool to manipulate the share prices (Peterson et al., 2003). Stockholm Stock Exchange has stringent rules on implementing and disclosing share repurchase programs. The Board of directors is obliged to announce the decision to initiate a repurchase program right away, and the announcement is always flowed by the actual repurchase. Another rule prohibits buying own shares 30 days before publishing interim reports, and repurchase transactions must be disclosed daily (Råsbrant, 2013).

Despite the differences between the US and EU legislation regarding the stock buybacks, repurchase activity in Europe increased and followed the US trend after regulatory changes in the 2000s. However, the extent of stock buybacks in Europe is still limited compared to the US, and the most common form of profit distribution is through dividend payments. The volume of dividend payments is very similar to the USA. Together with stock buybacks, payouts to shareholders were very similar to US companies until the financial crisis in 2008. Since then, European companies could not fully recover, and their total shareholder value distribution compared to the US dropped. While in 2009 average total payout to shareholders in the most significant European and US companies were around 900 million $, six years later, US companies paid out almost twice as much (Sakinc, 2017).

In Japan, stock buybacks were prohibited before the Commercial Code amendment in 2001. The Commercial Code of 1899 clearly stated that a "*company cannot acquire its own shares or take them in pledge."* Furthermore, the code considers stock buybacks as illogical and impossible since a company cannot be a member of itself. Article 520 of the Japanese Civil Code provides that one person cannot own debt and corresponding claim since they offset each other, violating the confusion principle. In 1938, due to rapid changes in the Japanese economic structure, exceptions for the use of stock buybacks were introduced. In the 1990s, pressure from various business communities increased, supported by challenging economic and financial situations. Due to long-lasting stock price decline and the danger of hostile takeovers, the government decided to deregulate stock buybacks. It was expected that companies would heavily use stock buybacks after the deregulation

since the majority (79,7% in 2011) of institutional investors urged companies to carry out more buybacks. However, most companies (62,2%) were against the usage of stock buybacks, and they preferred paying dividends rather than doing buybacks (Kobayashi and Irome, 2012). In recent years, stock buybacks have surged as the cash-rich companies are under constant pressure from investors and the government to improve governance and boost returns. *Figure 7* shows a constant increase in stock buybacks volume in the years preceding the covid-19 pandemic. In contrast to other countries, such as the US, the government in Japan encourages corporations to use their internal reserves to perform stock buybacks to increase their ROE (Tomisawa and John, 2019).

Figure 7 Volume of corporate buybacks in Japan

Source: Bloomberg

Like other countries, Indian companies were prohibited from buying back their own shares before the late 1990s. The main reason for justifying the prohibition of stock buybacks was the concern about improper use of the company's resources by speculative executives to gain control of the company and use it for their advantage. However, with rising globalization and more severe problems of the Indian stock market in the 1990s, opinions about the danger of stock buybacks changed. In 1998 the government decided to introduce stock buybacks to help restore investors' confidence (Chakraborty, 2008). Conditions for stock buybacks include a maximum limit of buybacks (up to 25% of the aggregate paid-up capital and free reserves), debt-to-equity ratio limits (cannot be higher than 2:1), or the period when company shall not make any offer of buyback (12 months since the last

request). Stock buybacks did not reach high values in the first years after the deregulation in 1998, and only one company opted for the buybacks. Still, it changed after the liberalization of rules in 2001-2002, when 29 companies went for the buybacks. Before the financial crisis buyback trend slowed down to only seven companies opting for buybacks, and this number has been slowly increasing since then. In 2019, the number of buybacks rose to 63 and recorded a high total value of more than 7 billion $. Those buybacks were primarily done by software services companies, indicating that these companies had a lot of cash. Also, the state-run companies reached the highest value of stock buybacks in 2019 (Shankaraiah, 2021).

2.3 Stock buybacks and CEO compensation

In recent years, several studies have analyzed the effect of stock buybacks on CEO compensation. The idea is that by doing stock buybacks, stock prices increase, and in the same way, CEO compensation increases. Since the CEO compensation package in the largest US corporations consists mainly of long-term incentives, such as stock options, a higher stock price means higher compensation. This leads to an incentive to perform stock buybacks because corporate executives can increase the shareholder's wealth as well as their own. Therefore, it might be more beneficial to do stock buybacks instead of paying dividends as a form of profit distribution.

The study examines the executives' decisions to perform stock buybacks and if it is affected by incentives to manage diluted EPS. The evidence shows that corporate executives perform more stock buybacks when the dilutive effect of outstanding employees' stock options (ESO) on diluted EPS increases. Stock dilution is the case when a corporation increases the number of outstanding shares and therefore decreases ownership of existing shareholders. The second reason why corporations do more stock buybacks is when earnings are below the required level for achieving the desired EPS growth rate. Another part of the study focuses on the association between stock buyback decisions and ESO exercises. There is, in fact, no association, and results show that stock buybacks decisions are driven by incentives to manage diluted and not basic EPS (Bens, Nagar, Skinner and Wong, 2003).

The dilutive effect of ESO plans on diluted EPS provides an explanation of executives' decisions to perform stock buybacks. The executives are more likely to perform stock buybacks when their expected earnings are lower than the levels required to sustain

previous growth rates of EPS. The executives' incentives to control diluted EPS influence companies' decisions to perform stock buybacks. There is an important finding that the dilutive effect of ESOs on stock buybacks is more pronounced in companies with high price-to-earnings ratios. Other ESO measures, such as the overall extent of companies compensating employees with options the extent of companies compensating their executives with options, do not explain the motivation to perform stock buybacks. This means that executives' decisions are driven mostly by their financial reporting incentives. The evidence describes why financial reporting incentives determine companies' financial policy decisions (Bens, Nagar, Skinner, and Wong, 2003).

The study also shows that CEOs with more ESOs prefer stock buybacks but are aware that investors favor dividends and therefore substitute stock buybacks for dividends only to the extent CEOs personally hold ESOs. This means that CEOs' holdings of ESOs explain stock buyback decisions. However, it is not only the simple holding of ESOs influences their decision. The model decomposes the ESOs into exercisable and unexercisable. The coefficient of management options is only significant and positive when the options are unexercisable (Bens, Nagar, Skinner, and Wong, 2003).

Another study from 2015 examined the effect of tying a CEO's bonus to earnings per share (EPS). Using a large sample of CEO bonus structures, it was proven that a company is more likely to do stock buybacks when CEO's bonus is directly tied to EPS. When EPS is below a certain threshold, which is necessary for the bonus award, the effect on stock buybacks is even more visible.Nevertheless, there is no sign of long-run abnormal returns in the case of companies conducting bonus-driven stock buybacks (Cheng, Harford, and Zhang, 2015).

The study mentioned above compared two groups. Those with CEO bonus tied to EPS, and those without it. In the EPS-tied group, the frequency of buybacks was 52%, while the frequency of buybacks in the counterpart group was 41%. Not only was the frequency of buybacks higher in the first group, but the dollar amount and volume were higher. However, EPS-tied firms are also different from the other group. EPS-tied firms are usually larger and more profitable and do not only perform more stock buybacks but also have higher dividend payout ratios and leverage ratios, which means those firms are more mature.

Nevertheless, the characteristics-adjusted comparison supports the hypothesis that firms with EPS-tied CEO bonuses perform more stock buybacks. The evidence also shows that stock buybacks are more common when a firm's actual EPS growth is below the expected EPS threshold. Another result of the study shows the relationship between CEO bonuses and stock buybacks. When the bonus is tied to EPS, CEOs in firms with stock buybacks receive higher bonuses than their counterparts in firms without stock buybacks. However, stock buybacks by themselves do not guarantee higher bonuses for CEOs when EPS is not a factor in the bonus structure. Therefore, evidence shows that compensation packages can incentivize CEOs to do more buybacks (Cheng, Harford, and Zhang, 2015).

Executives' options and the necessity to reach a certain level of EPS are not the only reasons why CEOs prefer using buybacks. It is also a matter of their executive power and opportunity to exploit the free cash flows. Powerful CEOs view dividends adversely since dividend payments strip them of these opportunities to exploit free cashflows. The study of Chintrakan, Chatjuthamard, Tong, and Jiraporn (2018) examines the relationship between the power of CEOs and the probability of paying out dividends. The effect of CEO power on dividends is evident from the study. Firms with powerful CEOs are significantly less likely to pay dividends. In addition, more powerful CEOs prefer paying dividends less often and in smaller sizes. CEO power, however, does not influence the stock buybacks, although the stock buybacks can take away the free cash flows from CEOs in the same way as dividends do. In summary, CEOs do not prefer stock buybacks to dividends payouts because they deprive them of the free cash flows, but because of the flexibility of stock buybacks, which puts less restrictive constraints on them than inflexible dividend payouts. Unlike dividends, stock buybacks are more considered by CEOs regarding their size and timing.

Palladino (2019) examines the hypothesis of whether corporate insiders exploit the situation when they are performing stock buybacks using corporate funds. He assumes that corporate insiders sell their personal shareholdings more often when performing stock buybacks. The author finds that net sales of insiders, higher than 100,000 dollars, are twice as common in buyback quarters than in non-buybacks. Evidence shows that a 10% change in stock buybacks is associated with a 5% change in corporate insiders' selling off their personal shareholdings. It reveals that corporate insiders increase the use of corporate funds to perform stock buybacks. At the same time, they are benefiting from higher share prices. The corporate executives have the power to perform stock buybacks in a manner

that helps the shareholders and gives management the ability to benefit from it. These results indicate that corporate executives are exploiting the regulatory loopholes regarding the regulation of stock buybacks. This brings space for more strict rules for stock buybacks and corporate insiders.

2.4 Stock buybacks and their impact on employees

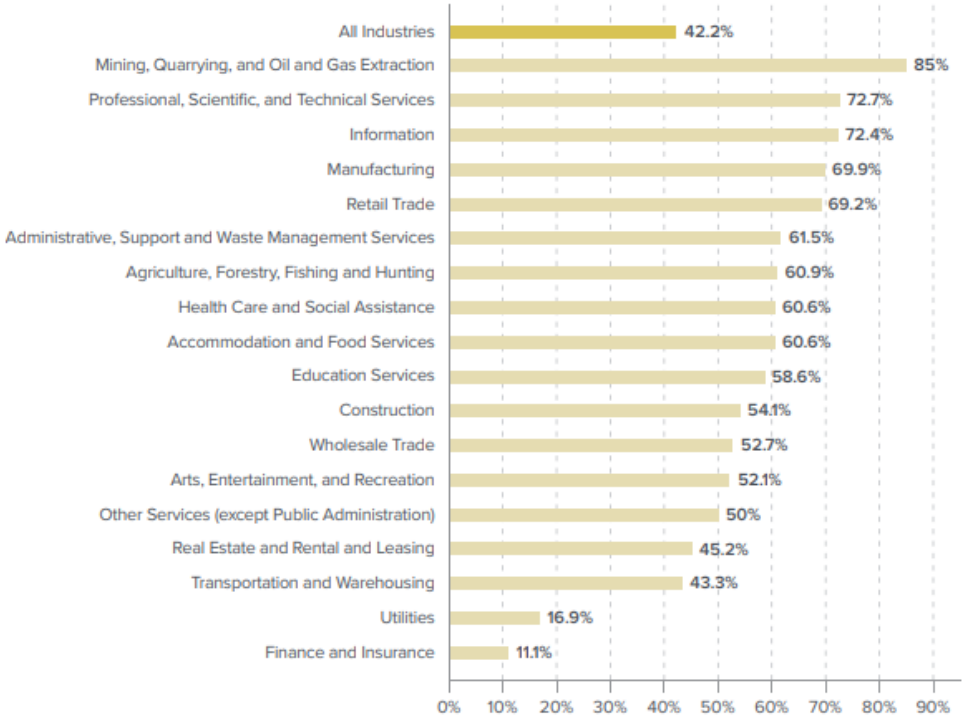
As written before, tying CEO compensation to the stock's market value and related indicators incentivizes CEOs to increase the value of the stocks. At the same time, their long-term incentives, such as granted options, make a large part of their total compensation. This can be achieved by using corporate buybacks, which are also heavily used as the form of profit distribution to shareholders. However, academics like Palladino or Lazonick, or some politicians (mainly from the Democratic party) do not see this practice as a good form of profit distribution and point out its negative impact on ordinary employees and their welfare.

2.4.1 Negative impact of stock buybacks on employees

This issue is discussed in the joint publication of the National Employment Law Project and the Roosevelt Institute. Data from 2015 to 2017 show that US companies spent almost 60% of their net profit on buybacks. Mainly restaurant industry has managed to exceed this value, and the buybacks reached 136,5% of its net profits, which means it spent more on stock buybacks than it made in profits. The most worrying fact is that people employed in the restaurant industry are usually the lowest-paid employees. While these employees fight for higher wages and demand increasing minimum wage to at least 15 dollars a month, employers borrow money or use their cash reserves to fund stock buybacks. The companies which spent most on the stock buybacks are McDonald's, YUM Brands, Starbucks, Restaurant Brands International, and Domino's Pizza. Those five companies could increase their average employees' wages by 25% if their corporate funds were spent on salaries instead of stock repurchase programs. In the case of Starbucks, every employee could get additional 7000 dollars. Nevertheless, this is not narrowed down to a few companies or specific industries. Most companies around several sectors spent more than 50% of their profits on buybacks from 2015 to 2017. This is shown in *Figure 8*, where only a few industries spent less than half of their profits on buybacks. Retail companies such as Walmart, CVS, DEPOT, Lowe's, and Target spent 87% of their profits on stock repurchase programs. As the result, the average employee in those companies could get 56% more every year. The top spenders in the food manufacturing industry are PepsiCo,

Mondelez International, Kraft Heinz, Archer Daniels Midland, and Tyson Foods. If these companies used their buyback expenses on their employees, they could raise the average employee's salary by 79% (Tung and Milani, 2018).

Figure 8 Share of companies spending more than half of profits on stock buybacks by industry (2015-2017)



Source: Standard and Poor's Compustat database, 2015-2017.

Palladinno and Abdela (2018) looked at the case of Walmart. It is the largest American corporate employer with more than 1.5 million employees. In 2017, it used $14.4 billion on shareholder payouts, mostly on stock buybacks. It was also authorized to spend 20 billion on stock buybacks in 2018 and 2019. Its profits were only $9.8 billion in 2017. This means Walmart was willing to take on debt or spend cash reserves to satisfy shareholders.

Meanwhile, wages of ordinary employees are low, starting at $11 an hour in 2017. If the stock buyback program was prohibited and the funds would be redirected to employees' wages, 1 million low-wage employees could get a rise of $5.66. This would significantly improve their income and could lead to increased productivity or consumption of their families.

In 2017, the Trump administration announced The Tax Cut and Jobs Act of 2017 (TCJA), which was meant to decrease the overall taxation in the USA and decrease corporate tax to

a flat tax of 21%. The main idea of this reform was to boost the economy while believing that corporations would use saved funds to invest in capital equipment, boosting employee productivity and increasing employees' wages. However, according to CNBC's survey among economists, strategists, and fund managers, corporations did not plan to spend those funds on salaries and improving working conditions. Employees were estimated to get just 12 cents of every dollar of tax cut gains. About 22% of gains were meant to be spent on stock buybacks and 14% on dividends. This means shareholders and executives would subsequently profit more from the tax reform than ordinary employees (Liesman, 2018).

Critics of stock buybacks often use General Motors as an example for their negative impact on employees and job creation. In 2018, General Motors announced cutting more than 14000 jobs and closing five factories in its restructuring. These measures would bring $6 billion in cash, for a net savings of $4.5 billion in cash by 2020. CEO Mary Barra told investors that it would stabilize the long-term value of the corporation and make it more profitable and resilient. This could be seen as a reasonable step when facing financial difficulties, but GM was not saving that much money in previous years. According to the Securities and Exchange Commission, the company has spent $10.6 billion since 2015 on buybacks. This is almost double what laying off employees would save (Ivanova, 2018).

Stock buybacks motivated by executives' compensation have consequences that affect corporate policies regarding the distribution of profits. The evidence suggests that firms that perform stock buybacks subsequently reduce employment capacities and capital investment. While stock buybacks bring positive stock market reactions, these announcements have worse effects when firms cut actual variables to help finance stock buybacks, in particular, R&D and employment. Results show that companies are willing to trade off jobs and investments for stock buybacks motivated by higher executive compensation. On average, this trade-off is not harmful to overall shareholder value. Still, EPS-motivated stock buybacks can negatively affect value and performance if they are associated with contemporary cuts in real investments.

Especially, EPS-driven stock buybacks lead to a decrease in investments in R&D and their employees. A reduction in investment in employees means not only lower wages but also fewer funds for their working conditions, safety measures, or additional training and education (Almeida et al., 2016).

In his book, Corporate Governance and Sustainable Prosperity, Lazonick (2002) sees the extensive usage of stock buybacks instead of using cash funds to reinvest in the company as the significant orientation change. Executives changed their objective from retaining and reinvesting to downsizing and distributing. Since the 1950s, top managers have started to shift from the rest of the managerial organization. This was due to a new form of compensation — stock options, which were increasingly used. In the 1970s, during the downturns in the stock market, corporate boards increased executives' salaries even if the corporations were not performing well since executives could not be blamed for the general downturn in the stock market. This trend was stressed in the 1980s with deregulation of the stock market and financial policies. That allowed repurchasing stock to boost stock prices. For many US corporations, stock buybacks became a common way they allocated profits, and the amount of money used for this purpose was staggering. For example, General Electric spent $14.6 billion on stock buybacks from 1994 to 1998. This amount was rising since the 1980s, when the new CEO, Jack Welch, took office and began with downsizing (Lazonick, O'Sullivan, 2002). General Electric and its CEO Jack Welch left a legacy of caring primarily for the value for shareholders and not necessarily for employees. 1953 GE paid out 36 cents on each dollar in sales to employees and only 3.9 cents to shareholders in the form of dividends. In the 80s and 90s, 80 cents went to shareholders in the form of dividends and stock buybacks for every dollar of profits. At the same time, GE has canceled 170,000 jobs, while company stock outperformed the market. In 2009, when GE was hit hard during the financial crisis, Jack Welch admitted that maximizing shareholder value was a bad idea (Tong, 2020).

The preference of shareholders in the distribution of corporate profits is often called shareholder primacy by many academics. This was first introduced by Berle and Means (1932) in their book The Modern Corporation and Private Property. This idea was then extended by Milton Freedman (1962), who claimed that corporations' highest purpose is to maximize profits for their shareholders. They blame this preference for growing income inequality and the low wages of ordinary employees. This is in strong contrast with the booming high-profit US economy with low unemployment, which should provide for all, so low wages should not be the case in a wealthy developed country such as the USA. While shareholder wealth has skyrocketed in the last years, wages have grown only a few percent. This is due to the choice of some large corporations to use more than 100% of their profits on payments to shareholders. Those wealthy corporations should have enough

resources to pay higher wages, improve their employees' social security, provide more benefits, or create more job opportunities. The shareholder primacy could be curbed by the regulative measures, which include restricting stock buybacks (or banning them) and introducing a new, more inclusive corporate governance model, which includes more stakeholders (employees) (Palladino, 2019).

Lazonick and Palladino (2021) see open-market stock buybacks as the tool of a value-extracting economy, where companies do not focus on real value but only on the corporation's market value. This view of corporate governance widens income and wealth inequality in the country by the inadequate distribution of corporate funds to those who own most of the stocks. This is a trend set on by the Reagan era of liberalization of the economy and loosening buybacks regulation. The practice of open-market stock buybacks should be reoriented toward more innovations and sustainable prosperity. Authors do not claim that just banning stock buybacks can solve the problem of income inequality and the pay gap between CEOs and employees. Still, it is essential as a first step toward building the real economy. Although corporate buybacks are subject to SEC rule 10b-18, these regulations do not limit the overall volume. Large corporations can use "safe harbor," which shields them from possible charges of stock-price manipulation. Because these corporations have a lot of power, since they employ a large part of the US workforce, they set trends for the whole country's economy. Therefore, tightening the regulations and supervision of stock buyback activity is essential.

2.4.2 Labor power and stock buybacks

One way to curb the negative effect of stock buybacks on job creation, employees, and their welfare is the unionization of employees. Using unionization rates as a proxy for labor-power, we can see a statistically significant negative correlation between buybacks ratios and unionization rates. This is consistent even if other variables are considered, such as company- and industry-fixed characteristics. Evidence shows that companies with more substantial labor power tend to do fewer stock buybacks. The effect is more significant when employees of the company have a better bargaining environment. Specifically, this correlation is more pronounced in states without right-to-work legislation and the states with higher representation of the Democratic Party, industries where wage expenditures represent a more significant portion of total material expenditures, and companies with more intangible capital or concentrated business operation. Although there is a negative relationship between unionization rates and stock buybacks, the negative effects of stock

buybacks can be alleviated if the stock buybacks are used aligned with employee interests, for instance, in the case of a potential hostile takeover of the firm, which could lead to layoffs and wage cuts. Another issue when stock buybacks could be beneficial to employees is when employees hold stock options and stock buybacks are used to prevent the dilutive effect of stock options. On the other hand, when stock buybacks are entirely used for the cash distribution to shareholders, there is a high probability that employees would want to strike (Chen, Chen, and Wang, 2015).

Employment protection and labor laws are also good determinants of the overall usage of stock buybacks. One of the common ways to protect employees is the adoption of Wrongful Discharge Laws (WDLs). Wrongful termination in violation of public policy is a judge-made rule that prohibits employers from firing employees who oppose certain unlawful or unethical activities of the firm. The introduction of these laws results in the credible rise of employment protection and discharge costs. The most relevant law among WDLs is the good-faith exception (applies when a court finds that an employer fired an employee out of bad faith or malice). The adoption of good faith exception leads to an increase in total payouts and usage of stock buybacks. This is more pronounced for companies with higher cash flows and excess cash as well as for better-governed companies with more robust investor protection. Results show that the adaption of WDLs increases discharge costs and strengthens employees' positions, potentially leading to a wealth transfer from shareholders to employees. In addition, companies try to alleviate the rent extraction of employees and therefore increase stock buybacks to discourage wrongful termination lawsuits and shirking (Dang, Cesari, and Phan, 2021).

Evidence from outside the USA shows that employees on the board positively impact company investment policy, especially long-term investments. For example, research conducted with data from German companies between 2006-2007 uses Mitbestimmungsindex (MB-ix), which is a co-determination strength index used as a more differentiated measure of employee influence in corporate governance and provides a better indicator than most quantitative studies. The long-term investment is measured as capital expenditures over the company's total assets. The research indicates strong evidence for a positive relationship between MB-ix and the capital expenditure rate. In other words, the stronger power of employees leads to greater long-term investments. On the other hand, more institutional investors on board reduce the capital expenditures and focus more on short-term financial performance. As a result, those investors pressure

companies to invest in short-term investments or distribute available resources to shareholders in the form of stock buybacks or higher dividends (Vitols and Scholz, 2019).

2.4.3 Proposed regulation of stock buybacks

The core idea of regulating the stock buybacks comes from the conception that stock buybacks are the reason why corporations spend less money on employees' salaries and more money is spent on the compensation of corporate executives. This leads to growing income inequality, has other harmful effects on the economy, and exacerbates social problems. Proponents of these ideas call for more regulations, including limiting the size and timing of stock buybacks, stronger voice of employees' representatives in corporate boards, in some extreme cases, even entirely banning stock buybacks. Others want to give corporations extra tax breaks when they reinvest their funds to R&D and employees instead of doing buybacks. *Figure 9* shows that the share of total assets spent on wages decreased gradually, while the share of total assets spent on stock buybacks and dividends increased.

Figure 9 Profits, wages, and shareholder payments as a fraction of total assets

	1975	1985	1995	2005	2015
Profits	3.30%	1.19%	2.65%	3.23%	2.56%
Payments	1.56%	1.96%	2.62%	3.34%	3.45%
Stock Buybacks	0.05%	0.64%	0.61%	0.61%	1.39%
Dividends	1.51%	1.32%	2.01%	2.07%	2.06%
Wage Bill	18.0%	16.4%	17.2%	12.7%	11.6%

Source: Standard and Poor's Compustat database

Lazonick and Palladino (2021) propose a new reform of the stock market policy, which would prohibit open-market share repurchases under the Securities and Exchange Act while keeping private repurchase transactions. This prohibition would end market manipulation of stock prices through stock buyback activity. It is the most straightforward approach to end the practice of stock buybacks. Another approach would be to weaken the adverse incentives stemming from buyback activity by introducing limits on buybacks. The current value of 25% of the average daily trading volume is not enough and must be lowered far below the value. Other limitations would include bans on stock-buybacks activity when corporations had recent layoffs, or the employees' salaries were below a certain threshold. If the legislative process does not pass it, the Securities and Exchange

Commission has the authority to set rules regulating stock buybacks and can put limits on buyback transactions. This would limit the ability of corporate insiders to use buyback transactions for their own benefit. The Commission should also focus on the personal incentives of executives, which could stem from the buyback activity. For example, it should not be allowed to trade personal holdings of insiders during a quarter when buybacks have been executed. This is already a practice in the most advanced financial markets worldwide. The least limiting measure, which could be taken, is to introduce mandatory real-time disclosure of buyback activity to ensure that companies are complying with the current regulations.

The president of the USA, Joe Biden, proposes a new buyback tax, which is a part of the plan "Build Back Better," which needs to raise 1,75 trillion dollars on economic and climate package. The plan sees the buybacks as how corporate executives enrich themselves instead of investing in employees. This proposal includes a 1% tax on buybacks, The Democrats in the Senate propose an even higher tax, 2%. However, it is unclear whether this plan would impact buyback activity since this tax rate is not very high (Alpert, 2021).

2.4.4 Arguments against negative effects of stock buybacks

While many studies, working papers, and testimonies go against the usage of stock buybacks because of their potential negative impact on long-term investments, job creation, and employees' wages, some strongly disagree. Kahle and Stulz (2020) find that although the volume of stock buybacks has increased significantly in the 2000s and capital expenditures have decreased, it does not mean there is a causality. The firm's characteristics simply explain it. Firms founded before the 2000s are larger and older today, so they have higher operating cash flows and higher free cash flows than younger firms. The increase of free cash flows results from fewer investments, such as intangible assets. Therefore, companies can use more money to fund payouts. Smaller firms must spend more money on R&D and intangible assets s because they must build the intangible capital required to operate successfully.

If there is a weak link between stock buybacks and capital expenditures, there is probably also a weak link between stock buybacks and wages. Evidence from the 2010s shows that buybacks soared to their highest point in history, but wages also grew at their fastest rate in decades. Moreover, this increase was not only pushed by rising compensations of

executives, but also lowest-paid employees got a raise. *Figure 10* shows an increase in wages among lower-paid employees since 2007. A grey area is the period of the financial crisis. If stock buybacks meant smaller wage growth and exploiting employees, this wage increase would not be seen (Smith, 2021).

Figure 10 Growth of hourly wages by wage level

Source: Department of Labor, Goldman Sachs Global Investment Research

2.5 Corporate investment decisions from stakeholders' perspective

In order to analyze the issue of decision-making of management when it comes to usage of stock buybacks, research needs to be conducted on the general decision-making of executives on investments and stakeholder governance of the firm. While executives usually focus on maximizing their well-being and the satisfaction of shareholders, other stakeholders in the firm also have their interests. The investment decisions of executives directly influence them. Those stakeholders are employees who also look at their well-being but are often under-represented in investment decision-making. Those issues are further explained by corporate governance. In the previous chapter, the shareholder theory of corporate governance was introduced. This theory says that the only duty of the company is to maximize profits and the value of shareholders' wealth. This was a very traditional view of the company's purpose, while investors buy shares to earn as much profit as possible. If a company did anything else apart from earning the profits, executives would be removed, or the investors would sell their shares and invest them somewhere

else. Shareholder wealth maximization is widely accepted as the appropriate goal for financial decision-making. However, wealth maximization has been criticized by a number of opponents for overlooking the exploitation of employees and other stakeholders and encouraging short-term managerial decision-making thinking (Danielson, Heck and Shaffer, 2008). Another approach to corporate governance is the stakeholder theory.

2.5.1 Stakeholder theory of corporate governance

The stakeholder theory of corporate governance focuses on the effect of corporate activities on all stakeholders in the company, not just shareholders. In this case, executives should consider the interests of all stakeholders when it comes to the governance process. Therefore, executives should try to mitigate conflicts between the interests of stakeholders. In general, stakeholders are divided into two groups; internal and external stakeholders. Internal stakeholders are executives and employees directly involved in the corporate governance process. On the other hand, external stakeholders are not directly involved in the company, e.g., auditors, creditors, suppliers, customers, government, and the public. Therefore, the theory leads to the situation when all these stakeholders engage in the corporate governance process and expect the company to bring some desired value (Freeman, 1984).

Harrison and Wicks (2013) look at the notion of value, which has been over-simplified and narrowed to focus on economic returns. However, stakeholder theory brings a more complex view of the value from the perspective of other stakeholders. The authors developed a four-factor perspective of value that includes more than the economic value that stakeholders seek. First, all stakeholders determine their own utility function. Furthermore, based on this utility function, they decide whether to engage with the firm and how they act when they are engaged in transactions. The four factors, defined in the perceived utility function of stakeholders, are 1) stakeholder utility associated with actual goods and services, 2) stakeholder utility associated with organizational justice, 3) stakeholder utility from affiliation, and 4) stakeholder utility associated with perceived opportunity costs. Each category is essential as they are associated with the motivation of stakeholders to engage in activities that create value for the firm.

The firm’s physical goods and services are the most prominent part of the stakeholder utility function. This includes financial compensation in many forms. Suppliers give up goods and services in exchange for financial payment. Investors provide capital and face

uncertainty, hoping they will receive high returns. Employees spend their time and effort in exchange for wages and other benefits. Governments provide infrastructure and workforce in exchange for tax revenues and employment. Organizational justice is also important, as people need to feel they are treated fairly and just. Employees are more likely to provide more effort at work when they are paid more than their opportunity costs.

Nevertheless, it is not simply financial remuneration that matters. There is also distributive justice, which is associated with economic factors. Employees might get a good wage but still, get less they expected based on distributive justice. Organizational Affiliation is also part of the stakeholders' utility. Stakeholders need to identify with the company, as explained in social identity theory, which says that people tend to classify themselves into social categories, which help them understand who they are. Suppose a company has characteristics and values employees identify with. In that case, employees feel more connected with the company and provide more effort, time, and energy. They develop a feeling of ownership and a sense of responsibility. The last factor represented in the model is associated with the opportunity costs. For example, members of the company's community compare the amount of value they receive from tax revenues and employment opportunities to other similar companies. Other stakeholders, such as customers, suppliers, and investors, make similar comparisons (Harrison and Wicks, 2013).

Harrison, Bosse, and Phillips (2010) examine the potential advantages of stakeholder theory. Allocating more resources than necessary to satisfy the needs and demands of stakeholders would lead to their willingness to participate in the firm's productive activities. This managerial behavior unlocks extra potential for value creation. Managing for stakeholders helps to develop a trusting relationship between a firm and its stakeholders based on distributional, procedural, and interactional justice principles. Stakeholders are more likely to share the information about their utility functions with the management therefore the firm can allocate the resources to areas that will best satisfy their needs. This information also brings competitive advantages in the form of incentives for innovation and better dealing with changes in the environment.

There is also a necessity to introduce the concept of Corporate Social Responsibility (CSR). It is complicated to define the core ideas of CSR, which are widely accepted. CSR is about ensuring that a business operates responsibly toward society. It is done in the pursuit of 'some social good, beyond the interests of the firm' (McWilliams and Siegel,

2001, p.117). Examples of CSR actions include adopting progressive human resource management beyond legal requirements, recycling, reducing pollution, supporting local businesses, or introducing products with social characteristics (McWilliams and Siegel, 2001). The CSR and the stakeholder theory are distinct; however, there is some overlap between them. Especially in the case of CSR activities associated with the firm's core activities. From stakeholders' perspective, there is an overlap in dealing with local and surrounding communities and partially with employees and customers. From a corporate responsibility perspective, there is an overlap in a business's social responsibility to societal stakeholders (Dmytriyev, Freeman, and Hörisch, 2021).

The study of Ayuso, Rodriguez, Garcia and Arino (2007) examines the firm-level characterization of the stakeholder approach to corporate governance. There were three dimensions: CSR function at the board level, board diversity, and stakeholder engagement. The CSR presence on the board is positively associated with dealing with primary and secondary stakeholders. In addition, stakeholder engagement with employees and external stakeholders and board diversity positively impact company profitability.

Most of the people affected by the decision-making and behavior of public corporations in the USA do not have any voice in their governance. Since governments do not wish to regulate those entities for various reasons, stakeholders cannot shape corporate behavior themselves. However, one group of stakeholders has unlimited rights in corporate governance. This group consists of shareholders. As a consequence of this corporate governance model, executives are forced to focus on short-term stock prices, sometimes at the expense of other stakeholders.

In contrast, the governance in corporations in continental Europe focuses more on obligations to their stakeholders. For example, in Germany, corporations must incorporate employees' viewpoints into their decision-making. This is done through the strong representation of unions in supervisory boards. Seeing the role of the government in protecting stakeholders' interests, many advocates try to introduce those rules into American corporate governance. However, introducing the same model into America is not realistic since Germany's system is a product of political and economic history. Nevertheless, it is still possible to introduce some features of the German model into the American corporate governance model while preserving the shareholder-centric model. The comparative study finds that stakeholder interests can be incorporated into the

American corporate governance system without undermining economic welfare or disrupting the country's legal system (Jackson, 2011).

2.5.2 Executives' investment decisions

One of the most important groups of company stakeholders is executives. As explained in the previous chapters, these executives are appointed by shareholders and are expected to represent their interests. Their primary interests are maximizing the value of shareholder value and paying dividends. This could direct their focus on investments, which bring short-term growth rather than sustainable long-term growth. However, it is not straightforward, and executives make their decisions based on various factors. The paper of Du and Lin (2011) examines the impact of newly appointed CEOs on company investment decisions and whether the relationship is affected by equity-based compensation like stock options, corporate governance provisions, and other CEO characteristics. If the compensation of new CEOs is significantly based on stock options, they tend to invest more in R&D and marketing. The study also finds that CEOs following a forced turnover while having shorter tenure invest more in R&D and marketing. Therefore, the results of the study are consistent with the managerial incentive effect and the dismissal effect.

Not just newly appointed CEOs invest more in R&D. CEOs, who are also founders of the companies, tend to invest more in R&D, and their companies have higher capital expenditures and focus more on mergers and acquisitions than successor-CEO firms. Founder-CEO-led companies also have higher valuations and better stock market performance. The investment behavior of the founder-CEO-led companies is consistent with the behavior and characteristics of the CEO. Therefore founder-CEO has a more significant impact on corporate decisions making. The evidence shows that those larger investment expenditures do not lead to overinvestment but are used to undertake positive NPV projects. That may explain the higher valuation of founder-CEO companies, which were founded in the 1990s (Fahlenbrach, 2009).

So, there is evidence that newly appointed CEOs and founder-CEOs make their decisions differently than more established CEOs and focus more on capital investments and R&D. Apart from these reasons for CEO behavior, there are studies that examine the impact of personal characteristics of CEOs on their decisions making. Characteristics, such as the education of the CEO, can have a significant effect on orienting firm policies. Managerial optimism can increase investment cash flow sensitivity and help to explain distortions in

corporate investment policy. Other personal characteristics influence the cash-flow investment relationship. The educational background of CEOs can have an impact on investment cash flow sensitivity. CEOs with financial education behave more rationally regarding running investment cash flow sensitivity. A possible explanation is that managers with financial education have the theoretical background to make investment decisions more rationally (Mohamed, Souissi, Baccar, and Bouri, 2013). Another essential characteristic of the CEO is his confidence to make investment decisions. Particularly managerial overconfidence. The overconfidence of the CEO is measured by holding his stock options beyond a theoretically calibrated benchmark for exercise, holding it until the last year before expiration, and buying stocks of his company in the first years. There is a positive relationship between the overconfidence of CEOs and investment cash flow sensitivity. This overconfidence is more significant in equity-dependent firms (Malmendier and Tate, 2004). An important factor of decision-making is the age of the CEO. There is evidence that younger CEOs tend to invest more in R&D, and it is more pronounced when they also have significant career experience in marketing or engineering (Barker and Mueller, 2002).

However, what drives CEOs to make socially responsible decisions? One theory says that executives with more robust takeover protection are more likely to care more for the non-shareholder stakeholders as they do not feel pressure from shareholders. Catering to other stakeholders might contribute to the firm's long-term value instead of short-termism triggered by the threat of hostile takeovers. The study finds that an increase in protection against hostile takeovers leads to greater corporate attention to the environment and community but has no effect on employees or customers (Kacperczyk, 2008). The possible explanation of the constrained ability to focus on other stakeholders is pressure from institutional investors, who focus mainly on short-term results. So, CEOs are challenged to persuade shareholders that investments associated with CSR bring value to the company (Rehbein, 2014). Another explanation, why CEOs choose CSR investments is their political affiliation. Liberal CEOs are more likely to invest in CSR than conservative CEOs (Chin. Hambrick, and Trevino, 2013). Not only does political affiliation drives CEOs to invest in CSR, but also their gender. Female executives are more willing to sacrifice financial return to make investment decisions associated with CSR; however, the statistical support for this hypothesis (Theis and Nipper, 2021).

2.5.3 CSR and corporate payout policy

Corporate social responsibility primarily affects the investment decisions taken by executives, as was stated in the previous chapter. Nevertheless, investment in social and environmental projects is only one part of the decision-making of CSR executives. CSR also influences the way corporations to distribute their profits. The study of Benlemlih (2019) examines the impact of CSR on paying dividends. The author finds that high CSR firms pay more dividends than low CSR firms. This conclusion is further supported by an analysis of individual components of CSR. Those components are associated with a high dividend payout. Also, the stability of dividend payout is influenced by CSR. Dividends are adjusted more quickly in socially irresponsible firms. The study of Cheung, Hu, and Schwiebert (2016) examines two CSR views of dividends. In the first case, CSR firms are likely to pay fewer dividends because of the lower cost of equity, so firms hoard cash rather than pay dividends. In the second case, CSR leads to positive NPV projects that increase earnings and hence dividends. The analysis shows no relationship between CSR and the tendency to pay dividends, but CSR firms have a higher dividend payout ratio. So, CSR does not influence whether to pay dividends but what dividends to pay.

CSR also influences whether to use dividends or stock buybacks as a form of payout. There is evidence that socially responsible firms engage more in payout policy and CSR performance positively affects both dividend payments and stock buybacks. However, high CSR firms prefer stock buybacks when choosing between paying dividends and doing buybacks. This finding is associated with large stock options holdings and good corporate governance, motivating CEOs to buybacks instead of paying dividends. The substitution effect between stock buybacks and dividends is more substantial for high CSR performance (Samet and Jarboui, 2017). Another study examines the effect of CSR disclosures on a firm's decision to do stock buybacks. The study finds that total CSR disclosures are positively related to the number of buybacks.

Furthermore, the effect of CSR disclosures is stronger than the effect of CSR performance. In the case of the environmental dimension of CSR, both disclosure and performance are significant. This analysis implies that firms that do stock buybacks are more socially responsible than those that do not (Mahoney, Brickner, and Lagore, 2021).

2.6 Summary of literature and hypothesis

Based on the previous studies and literature, I can assume that CEOs are motivated to do stock buybacks. It is not only motivated by their effort to improve financial indicators, such as EPS, but also by incentives to enhance their compensation, which increasingly depends on stock options (Bens, Nagar, Skinner, and Wong, 2003). The motivation to do buybacks is further enhanced when the power of CEOs is higher since they prefer stock buybacks instead of dividends, which strip them of their ability to exploit free cash flows (Chintrakan, Chatjuthamard, Tong, and Jiraporn 2018). The decisions to use company's funds on stock buybacks also have a negative effect on capital expenditures and R&D. This leads to positive short-term returns but does not improve the long-term value of the company if those stock buybacks are accompanied by cutting down investments in R&D and employment (Manconi, Peyer, and Vermaelen 2019; Almeida, Fos, and Kronlund, 2016). Lazonick, Sakinc, and Hopkins (2020) found out that only a few large companies listed in S&P invest in R&D and believe that may disrupt the growth dynamic based on productivity linked to pay of the labor force.

Furthermore, there is evidence that the more substantial power of employees, especially a higher unionization rate, leads to fewer stock buybacks since employees do not prefer spending the company's funds on stock buybacks, which are meant for profit distribution to shareholders. There is also a higher probability of strikes when companies spend too much on stock buybacks (Chen, Chen, and Wang, 2015). Evidence from outside the US, namely Germany, shows that a higher level of influence of employees on board leads to fewer stock buybacks and more productive investments (Vitols and Scholz, 2019). Cases like General Motors and General Electrics show extreme situations when companies use excessive amounts of funds to buy back their shares while laying off thousands of workers, which brings doubts about the motivation of these companies (Lazonick, O Sullivan, 2002; Tong, 2020; Ivanova, 2018).

I also looked at the investment decisions from a stakeholder perspective and examined what drives executives to make investments, which are beneficial to other stakeholders apart from shareholders. It is clear that other stakeholders, especially employees, are more satisfied when their compensation is fair and just compared to others. This is called distributive justice (Harrison and Wicks, 2013). Stakeholder theory is closely associated with Corporate Social Responsibility. More socially responsible companies include other stakeholders in their decision-making (Dmytriyev, Freeman, and Hörisch, 2021). When it

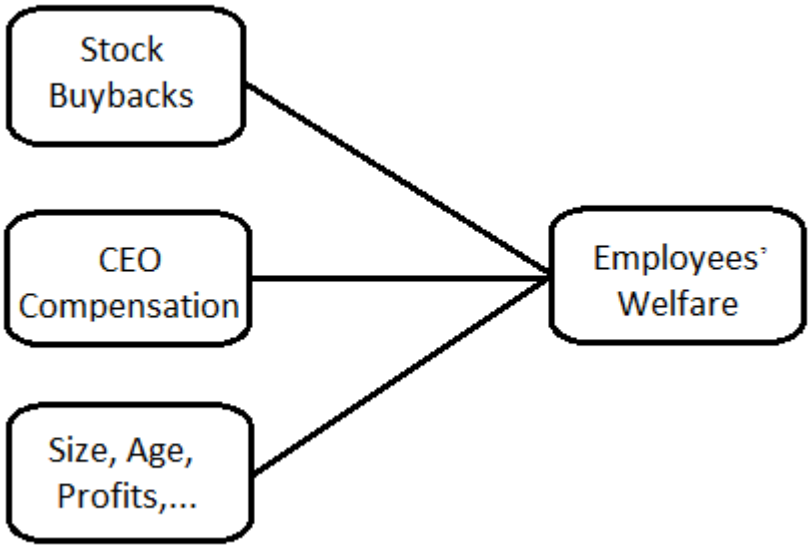
comes to payout policy, companies with higher CSR scores often have higher dividend payout ratios, but it does not influence the likelihood of paying dividends (Cheung, Hu, and Schwiebert, 2016). An interesting finding points out that companies with higher CSR performance tend to prefer stock buybacks instead of paying dividends (Samet and Jarboui, 2017). Executives often decide based on their personal characteristics, tenure, relationship with the company, or education. Younger CEOs or CEO-founders spend more funds on R&D and marketing, which means they focus on long-term value (Du and Lin, 2011; Fahlenbrach, 2009). Also, overconfidence drives CEOs to do more irrational decisions (Mohamed, Souissi, Baccar and Bouri, 2013; Malmendier and Tate, 2004).

The opponents of stock buybacks propose banning or limiting open-market share repurchases and demand more stakeholders on corporate boards like in European countries. They do so because they view stock buybacks as a value-extracting tool, diverting the company's funds from real investments and wages. Based on the previous studies, I formulated my hypothesis. I assume that employees view stock buybacks negatively and are more satisfied with their employer when executives decide to use the company's funds aligned with their interests. Employees should feel more fairly treated when their compensation is set justly and know their superiors do not exploit profits to increase their wealth. Accordingly, I formulate the following hypothesis (shown in *Figure 11*).

Hypothesis 1: Executives' buyback decisions have a negative impact on employees' welfare.

Hypothesis 2: Executives' compensation has a negative impact on employees' welfare.

Figure 11 Hypothetical relationship between satisfaction of employees and stock buybacks, CEO compensation, and other independent variables



In the next part, I will examine whether a higher average portion of profits spent on stock buybacks leads to lower satisfaction of employees with their employer. I also test if executive compensation has a negative effect on employees' welfare. That is why I need to look at the overall rating of corporations from employees' perspectives.

3. Data and empirical research

In this section, I analyze the research question, which is based on two hypotheses mentioned above that excessive usage of stock buybacks leads to a negative effect on the overall welfare of employees. So, if the free cash reserves of the firm are used on repurchasing its own shares, those funds will miss somewhere else. Moreover, those places where funds could be used more wisely include capital expenditures in the form of new production capacities, R&D, and the creation of new and more qualified jobs. Proving this hypothesis will require analyzing various data samples, mainly from the S&P 500 firms, regarding their financial results, usage of stock buybacks, reviews from employees, and compensation comparison. With the collected data, I can proceed to test these samples and examine the correlation between my indicators of stock buybacks usage and indicators of employees' satisfaction and welfare.

3.1 Data collection

I have chosen S&P 500 companies for my dataset. The type of data used as the sample is cross-sectional, as they include information about many companies at one point in time. Specifically, there are 100 companies, where every sector is represented according to the Global Industry Classification Standard (GICS). This classification includes energy, materials, industrials, consumer discretionary, consumer staples, health care, financials, information technology, communication services, utilities, and real estate. While there could be differences in corporate payout policies among mentioned sectors, it is better to include all of them to avoid possible sampling bias. For example, buybacks are concentrated primarily on tech companies since those companies have the largest cash flows and, therefore, enough resources to repurchase shares (Pisani, 2021). Companies in my dataset are large and, in most cases, older. This is because new companies do not usually spend that much money on stock buybacks, as their cash flows are smaller, resources limited, and need to invest more in capital expenditures and R&D. As for the period, I have chosen the year 2019 as this was the year before the Covid-19 pandemic and this crisis did not disrupt the market. The primary source of financial data is Yahoo Finance; the salary data source comes from the website Salary.com. Data of employees' satisfaction comes from the Glassdoor website, where current and former employees rate review employers and give them ratings.

3.2 Data description

Yahoo Finance provides financial data. Specifically, information from annual reports of the companies (income statement, balance sheet, and cash flow statement). The most important information is the amount of money spent on the repurchase of capital stock (stock buybacks) compared to the company's net income since this ratio serves as a proxy for stock buyback usage. Salary.com provides information about CEO pay, median employee pay, and CEO pay ratio. This data comes from annual proxy statements to the SEC. I chose Glassdoor as the source of information about employees' satisfaction. It is one of the largest job search engines and review sites, including thousands of anonymous employees' reviews. The employer is rated on a scale of 1 to 5 stars, where five is the best, and one is the worst.

There are six categories of employees' satisfaction: Culture & Values, Diversity & Inclusion, Work/Life Balance, Senior Management, Compensation and Benefits, and

Career Opportunities. Since my master thesis examines the impact of stock buybacks on the welfare of employees, I examine various types of ratings of employers to find a suitable proxy for the welfare of employees. In the previous chapters, most critics of stock buybacks pointed out the low salaries of employees in the companies, which used most of their profits on stock buybacks. The strongest argument against stock buybacks was that funds spent on stock buybacks could be used on employees' salaries. That would improve their quality of life and satisfaction.

Furthermore, compensation and benefits are the most common reasons people choose a job. Therefore, I select the rating of benefits and compensation as the proxy for the welfare of employees. The satisfaction with benefits and compensation tells us about the monetary benefits of working for the company, which is the most common reason people choose the employer. (Statista Research Department, 2014).

Table 1 shows a description of the companies used in the sample. Since companies listed on S&P 500 are large companies, those values will be higher, so there will be no small companies in the dataset. The mean total assets of 100 companies are $154.062 billion, and the minimum is $1.382 billion. The mean age of all companies in the dataset is 80, and the mean number of employees is 108440. The table shows that there are differences within sectors regarding age, size, and revenues. More importantly, there are differences among sectors regarding their usage of stock buybacks since, in some industries, stock buybacks are close to zero (e.g., Real estate and Energy). There are companies from every sector in S&P 500, and their number is chosen accordingly to the representation of each sector.

Table 1 Description of companies in the sample

	Sample	Mean age	Mean Number of employees	Mean Total assets(million)	Mean Revenue(million)
All companies	**100**	**80**	**108440**	**154062,53**	**47984,81**
Communication serv	5	51	101128,40	146697,60	80732,40
Consumer Discretior	15	72	171734,40	63178,20	56937,87
Consumer Staples	10	102	301204,00	77969,80	98796,90
Energy	5	92	25651,20	129313,80	82548,20
Financials	10	101	99738,10	909654,10	48118,10
Healthcare	10	69	37050,00	51745,60	20769,20
Industrials	15	90	90642,60	51578,93	33557,20
Information technol	10	44	154021,10	121759,50	72133,80
Materials	10	120	27688,70	25309,10	13824,20
Real estate	5	38	1642,60	27733,40	3796,20
Utilities	5	63	13841,20	60358,20	13849,80

Variables used in my analysis include the age of the companies and total assets as a proxy for the company's size. Stock buybacks/profits (BB/Profits) to profits represent the usage of buybacks, and CEO pay ratio represents the difference between median salary and CEO salary. I chose stock buybacks/profits as a proxy for the use of stock buybacks because of previous studies and reports, which pointed out that companies could spend their profits on salaries instead of stock buybacks, and the percentage of profits spent on stock buybacks was used as a proxy (Tung and Milani, 2018). CEO pay ratio is used in the analysis since CEOs are proved to be motivated to do stock buybacks, which enhance their compensations. This compensation has grown significantly, while the median salary of employees has grown considerably less at the same time. (Mishel and Kadra, 2021).

3.3 Model

The company's rating of benefits and compensation is the dependent variable, and average buyback size compared to profits is used as the independent variable. Apart from that, I include CEO-pay-ratio as another independent variable since my thesis is also about the CEO compensation motivated stock buybacks. There are also two additional control variables. One of them is the company's age and the logarithm of the company's total assets as a proxy for the size of the company. The model is as follows:

1. $Rating\ of\ benefits\ and\ compensation\ \ = const + b_1 Buybacks\ vs\ Profits + b_2 CEO\ payratio + b_3 Age + b_4 Log\ total\ assets + \varepsilon$

The multivariate regression model is used to identify the relationship between the employer's rating and independent variables. I am using the ordinary least squares (OLS) method to examine the relationship.

I checked for heteroskedasticity and multicollinearity to see if conditions for OLS regression were met. For the heteroskedasticity check, I used the Breusch-Pagan test. The Lagrange multiplier statistic for the test is 7.922, and the corresponding p-value is 0.1605. We do not have sufficient evidence that heteroscedasticity is present in the regression model. A simple method to detect multicollinearity in a model is by using something called the variance inflation factor or the VIF for each predicting variable. The highest value is 4.896, so it is an acceptable result.

3.4 Results

Table 2 shows descriptive statistics of variables used in my analysis. There are means of all variables and their correlation coefficients. The asterisk in the table indicates statistical significance (p-value < 0.05). Under this condition, there is a statistically significant correlation between CEO pay ratio and rating of benefits and compensation.

Table 2 Correlation matrix of variables

	Mean	Rating_benefits_ and_compensation	BB/Profits	CEOpayratio	Age	Lg_Total_ assets(million)
Rating_benefits_ and_compensation	3.837	1				
BB/Profits	617	-0.181	1			
CEOpayratio	313.450	-0.288*	0.110	1		
Age	80	-0.030	0.130	0.134		
Lg_Total_assets (million)	4.637	0.193	0.193	0.113	0.226*	1

I examine the effect of stock buybacks and CEO compensation on the rating of benefits and compensation. *Table 3* shows the results of OLS regression showing there is weak evidence against the null hypothesis that the coefficient of stock buybacks is equal to zero (no effect). There is a weakly significant relationship between employees' satisfaction with their benefits and compensation and stock buybacks (if we consider a 0.1 significance level). Still, there is a strong negative relationship between the rating of benefits and compensation and the CEO pay ratio. There is also a significant relationship between the rating of benefits and compensation and the company's size (Lg_Total_assets). R-squared of the model is 0.159, suggesting that approximately 16% of the variance for a dependent variable is explained by the independent variables.

Table 3 Regression results of the model (unstandardized beta coefficients)

Variables	*Coefficients*	*Standard Error*	*t Stat*
Age	-0.0002	0.0007	-0.24
Lg_Total_assets(million)	0.1285**	0.0525	2.05
BB/Profits	-0.0605*	0.0373	-1.62
CEOpayratio	-0.0003***	0.0001	-3.08
Constant	3.3960***	0.2390	14.21
R-square		0.1594	
Adjusted R-square		0.1240	
Observations		100	
*** p<0.01, ** p<0.05, * p<0.1			
The dependent variable is rating of compensation and benefits			

These results show that my hypothesis cannot be rejected, and stock buybacks might influence the welfare of employees, as the rating of benefits and compensation decreases when companies use a more significant portion of their profits on stock buybacks. This means that employees are less satisfied with their compensation, and therefore, their welfare is worsened when companies do more stock buybacks. However, the unstandardized regression coefficient of the buyback variable is very low, which means that the effect of stock buybacks is not strong. The regression shows that the coefficient for stock buybacks in percentage points is -0.0605. The coefficient indicates that if the company used 100% of profits on stock buybacks, we could expect the rating to decrease by an average of 0.0605 points while holding other predictors in the model constant. Results from *Table 4* shows regression analysis results with standardized beta coefficients to compare the effects of independent variables. In this case, the CEO pay ratio has a more significant effect on employees' satisfaction than stock buybacks. Furthermore, the stock buybacks effect is less significant than the effect of total assets (size of the company).

Table 4 Regression results of the model (standardized beta coefficients)

Variables	*Std. Coefficients*	*Standard Error*	*t Stat*
Age	-0.0239	0.0978	-0.24
Lg_Total_assets(million)	0.2375**	0.0963	2.45
BB/Profits	-0.1545*	0.0953	-1.62
CEOpayratio	-0.2946***	0.0957	-3.08
Constant	4.30e-09***	0.0936	0.00
R-square		0.1594	
Adjusted R-square		0.1240	
Observations		100	
*** p<0.01, ** p<0.05, * p<0.1			
The dependent variable is rating of compensation and benefits			

4. Conclusion and limitations

In my master thesis, my primary goal was to examine the possible impact of stock buybacks on the welfare of employees. This motivation came from the claims of CEOs using excessive profits on stock buybacks, which are motivated by higher compensation of CEOs and satisfying shareholders. However, spending the company's funds on stock buybacks could lead to insufficient funding for employees' wages and working conditions. Indeed, the total amount of money spent on corporate stock buybacks has increased in the past years, and so has the total compensation of CEOs. In contrast, the average salaries of employees have increased by a significantly smaller margin.

Several studies have proven the relationship between corporate stock buybacks and CEO compensation, mostly comprised of stock options, which depend on the market value of the company's shares. CEOs were more likely to do stock buybacks when the company's EPS was below a certain threshold, so the motivation was driven by reporting reasons (Bens, Nagar, Skinner, and Wong, 2003). Also, managerial power is associated with higher amounts of money spent on stock buybacks since powerful CEOs spend the company's funds on stock buybacks rather than on dividends (Chintrakan, Chatjuthamard, Tong, and Jiraporn, 2018). This practice also has a negative impact on investment in R&D and capital expenditures, primarily in large companies (Turco, 2018; Almeida, Fos, Kronlund, 2016). Although stock buybacks are motivated by enhancing the stock prices, they react less

positively to earnings announcements when the company cuts R&D expenses and jobs to finance the stock buybacks (Almeida, Fos, Kronlund, 2016).

Although there are no studies that directly link corporate stock buybacks to employees' welfare, many articles and reports point out excessive usage of stock buybacks in retail companies and restaurants. In contrast, employees in this sector have meager salaries (Tung and Milani, 2018). Other authors look at the evolution of stock buyback usage and employees' welfare in time, suggesting that stock buybacks have risen significantly since the deregulation of financial markets. In contrast, wages have increased disproportionately (Tung and Milani, 2018). The exciting finding was that more substantial power and representation of employees in the board leads to less money spent on stock buybacks, suggesting that employees do not favor stock buybacks and would rather see the company's funds spent on long-term investments (Chen, Chen, and Wang, 2015; Vitols and Scholz, 2019). In contrast to these findings, Mahoney, Brickner, and Lagore (2021) found that companies with higher CSR performance do more stock buybacks.

I have conducted my research on companies using stock buybacks to examine the potential effects of stock buybacks on the welfare of employees. As a determinant of employees' welfare, I used the rating of employees' satisfaction with their benefits and compensation and the portion of profits spent on stock buybacks as the determinant of stock buyback usage. I found only a weak relationship between employees' satisfaction and stock buyback usage. Hence, suggesting that stock buybacks might affect employees' welfare, considering their salaries and benefits. This means I did not find enough evidence to reject my hypothesis that more stock buyback worsens employee welfare.

Moreover, I found that the CEO pay ratio influences employees' satisfaction more than stock buybacks. Higher CEO pay ratio is associated with lower satisfaction of employees with their compensation. Looking at the data, some companies, especially utilities and real estate, spend almost no money on stock buybacks. However, employees' satisfaction in those companies is not higher than those that spend billions of dollars on stock buybacks.

Although this master thesis shows that CEOs use stock buybacks since they are motivated to improve financial indicators and, consequently, their compensations. The direct impact of stock buybacks on employees' welfare is ambiguous. In my analysis of US companies, I found some evidence for the hypothesis that a higher share of profits leads to employees' dissatisfaction with their compensation, but further research would be needed, including

more detailed data, which examine employees' welfare. Stock buybacks also do not have to be the only reason why wages grow slower than expected, and many employees are dissatisfied with their compensation and working conditions. Other possible explanations are the representation of employees in the companies' boards, unionization rates, market concentration and competitiveness, legal minimum wage, and taxation. Therefore, it is also essential to look at the purpose of using stock buybacks.

In many cases, stock buybacks are in the interest of employees. For instance, when the company's share price is underpriced, or there is a potential risk of a hostile takeover. Therefore, there needs to be further research on the purpose of using stock buybacks and decisions, which lead to stock buybacks.

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Appendix

Explanation of variables

Variable	Explanation
Age	Age of the company in years. The founding year is set according to the date when the company was officially founded.
Lg_Total_assets(million)	The logarithm of total assets in the balance sheet is a proxy for the company's size.
BB/Profits	Stock buybacks/Net income is used to measure how much of the profits company spends on stock buybacks. A value higher than 100% means that the company uses other funds (e.g., debt) to buy back its shares.
CEOpayratio	CEO total compensation/median salary of an employee is used to measure the difference between the income of the CEO and the median salary of an ordinary employee. E.g., a CEO pay ratio of 100 means that the CEO earns 100 times more than his employee with a median salary.
Rating_benefits_and _compensation	The measure of employees' satisfaction with their salary and benefits is determined by recent employee feedback. Anonymized employees review their experience in the company with a focus on their compensation and benefits. Glassdoor calculates company ratings using a proprietary rating algorithm, emphasizing the recency of reviews so that job seekers can get the most recent information about the employer. Reviews of employees must be approved to be included in the calculations, and emphasis is put on full-time and part-time employees rather than temporary employees.