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Ownership structure, executive pay and dividend policy. Empirical evidence from Italian publicly traded companies.

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## **Abstract**

The main purpose of this thesis is to provide a better understanding of the world of corporate governance with particular regard to executive compensation.

This thesis is composed of two parts, the first one, that includes two chapters, is going to cover the role of corporate governance in the world of publicly traded companies, and the second one is going to focus on the importance of the executive compensations in today's corporate world; meanwhile the second part is going to deal with an empirical analysis of the relation between dividend policy and executive compensation for Italian publicly traded companies.

In particular the first chapter is characterized by a wide view on the world of corporate governance, that is one of the most studied theme in economic literature, and sheds light on the history of it, the many factors that contribute to shape the corporate governance practices and the cross-country and legal families differences that tend to have a huge impact on the way companies adapt their corporate governance practices.

On the other hand, the second chapter is characterized by an extensive analysis of the theme of executive pay; specifically the main elements analyzed are the problems related to the measure of executive pay, the agency problem, that is the most common approach used by scholars and academic to face the relation between executives and shareholders, the history of executive compensation and the factors that shape executive compensation.

The third and last chapter, is going to deal with the econometric analysis of models that try to explain the relation between dividend policy and executive remuneration. These analysis are preceded by a brief presentation of the institutional context in Italy and by a detailed examination of the previous works published on the subject. These models are based on previous works published on the subject that emphasizes the theoretical frame necessary to base the analysis.

## **CHAPTER 1**

### **1.1) A comprehensive analysis on corporate governance**

The topic of corporate governance is a vast theme that has a long history. In fact this subject incorporates managerial accountability, board composition, dimensions and structure and finally shareholder rights. Before starting a description of the history of corporate governance is important to point out a precise definition, because it is fundamental to deeply understand the nature and the impact of this phenomenon. Among the various definitions that it is possible to find in the economic literature there are two the are widely accepted and largely known, one by provided by Shleifer and Vishny in 1997 that says: "It (CG) deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investments" and one provided by Zingales in 1997 that says :"(CG) is the complex set of constraints that shape the negotiation of quasi-rents generated by a corporation".

#### **1.1.1) History of corporate governance**

Although the expression "Corporate Governance" appeared for the first time on the Federal Register, the official journal of the federal government just in 1976, it is possible to date back the birth of the concept of Corporate Governance to the formation of the major chartered companies like the Levant Company, the East India Company and the Hudson's Bay Company. So the topic of Corporate Governance has existed since the use of corporate form created the possibility of conflicts between investors and managers. The modern history of Corporate Governance starts immediately after World war II when American companies experienced an extended period of time of prosperity and rapid growth. During this time span the internal governance was not a priority and the expression corporate governance was not in use. Stockholders and retail investors who dominated share registers "were known for their indifference to everything about the companies they own except dividends and the approximate price of stocks" (Livingstone, *The American Stockholder*, 1958:81). Between the '50s and the '70s the rules designed by the Securities and Exchange Commission (S.E.C) were intended principally as a tool to assist investors and shareholders in making investment decisions. Indeed in US the S.E.C brought the theme of internal governance on to the official reform agenda in the mid-1970s. As said before, the expression Corporate Governance first appeared in the Federal Register in 1976; in that years the S.E.C began to deal with managerial accountability issues as a matter of interest, in fact "in 1974 it brought proceedings against three outside directors of Penn Central, a railway company which had diversified into pipeline, hotels, industrial parks, and commercial real estate, alleging that they had misrepresented the company's financial situation by failing to discover a broad range of misconduct perpetrated by Penn Central executives" (Schwartz, *Penn Central: A Case Study of Outside Director Responsibility Under Federal Securities Law* 1976. 399-401). "Penn Central had gone bankrupt in 1970 and received a lot of criticism by many for its board passivity" (Seligman, *The*

Transformation of Wall Street: A History of the Securities and Exchange Commission and Modern Corporate Finance, 1982: 536-37) that provoked losses to stockholders estimated in billions of US dollars.

At the end Stuart T. Saunders, who was Penn Central chairman, David C. Bevan, former chief financial officer, and three other former directors were charged with making false and misleading statements about the carrier's financial condition to the S.E.C., to stockholders and to the investing public (The New York Times, 1976).

The discovery in the mid-1970 of widespread illegal payment to foreign officials imposed a new level of control carried out by the S.E.C; this more effective set of checks was understandable, considering that few of the outside directors of the companies involved in this situation knew that the enterprises they were directing were paying bribes and committing actions against the federal laws. Outside directors were unable to control efficiently and effectively the actions of senior executives that were aware of numerous falsifications of corporate records.

The pervasive corporate bribery represented according to a 1976 S.E.C report, "frustration of our system of corporate accountability" (Seligman, 1970:130-31) and "the federal agency resolved most cases with settlements where the companies involved accepted to make some board-level changes, such as the appointment of additional outside directors and the creation of a audit committee" (Sommer, The Impact of the SEC on Corporate Governance, 1977: 130-31).

These new approach carried on by the S.E.C was opposed by many executives belonging to different corporations, in fact in 1977 the chairman of the New York Stock Exchange (N.Y.S.E) stated that the most difficult challenge facing US private enterprises might be "The prospect of pervasive government supervision and control over corporate governance and management" (Chicago Tribune, 1977). Despite this statements and many similar the agency held that year six weeks' worth of hearings into "shareholders participation in the corporate electoral process and corporate governance generally", receiving, during this arduous process a wide range of information from over 300 corporations, public interest groups and law firms.

After this hearings the agency abstain from committing major innovative changes, with the exceptions of key reforms requiring publicly traded firms to disclose information regarding the independence of their directors and the use of audit, nomination and compensations committee. In 1977 Harold Williams, who was appointed S.E.C chairman by President Jimmy Carter made speeches in which he claimed that an ideal board would only have one managerial appointee (the CEO, Chief Executive Officer). Rather than force his view in the world of corporations he suggested voluntary reforms by corporations and self-regulation.

Nevertheless the first legal theorization of the term "Corporate Governance" was provided by Ralph Nader, Mark Green and Joel Seligman' book Taming the giant in 1976 in which they proposed an image of corporate governance based on a more important role of shareholders in managing the corporations' decisions. In the same book the authors argued that in corporations "checks upon management have all but disappeared" resulting in "irrational decisions, hurried decisions, decisions based upon inadequate factual analysis or executive self-favoritism" (Nader, Green and Seligman, Taming the Giant Corporation, 1976: 77),

The first progresses can be recorded in 1980 when Senator Metzenbaum introduced to Congress the Protection of Shareholders' Rights Act, a bill that prescribed minimum federal standards of corporate law for large public companies and made mandatory the presence of a director majority on boards, requiring the establishment of audit and nomination committees composed exclusively of independent directors and giving the shareholders the right to nominate candidates for election to the board of directors.

"An American Bar Association corporate law sub-committee, animated by "current concerns in areas of public policy and emerging trends of corporate governance", issued in 1976 a Corporate Director's Guidebook that recommended a substantial outside director representation on boards and the exclusion of executive directors from audit, compensation and nominating committees" (Small, *The 1970s: The Committee on Corporate Laws Joins the Corporate Governance Debate* 2011 : 133). A rapid political change to the right, embodied by Ronald Reagan 's election in 1980, effectively changed the parameters of public and political debate surrounding the movement for corporate governance reform that had a growing support in the years before. During Ronald Reagan's presidency the Congress became more conservative and was less eager to pass legislation concerning the themes related to corporate governance.

This choice reflects how the political cycles have effects on the market and regulation. Likewise the S.E.C seemed unlikely to achieve major reforms with John Shad, Reagan's choice as chairman, saying in 1981 that his predecessor Harold Williams "was identified very much with corporate governance, and I hope to be identified with capital formation "(Wall Street Journal, 1981).

The American Law Institution (ALI), a private organization composed by practicing lawyers, academics and judges tried to modernize the approaches to law regarding corporate governance, organizing conferences and releasing in 1982 their first output, Tentative Draft No.1 (Los Angeles Times, 1981). The reaction from corporate world was hard and posed a threat to the implementation of the project. The agency cost theory had enormous influence in this context, with some corporate law professors expressing their appreciation for the results displayed in scientific papers by Jensen and Meckling (1976) and Fama (1980) that proposed various market-oriented limitations on the exercise of managerial discretion; in particular the work of Jensen and Meckling focused on the research of the ownership structure that allow the minimization of agency costs and the maximization of the corporate value. After a decade spent attempting to improve the existing laws in terms of Corporate Governance the version of the ALI's Principles of Corporate Governance: Analysis and Recommendations published in 1994 was modified to the point where the contents were so similar to the existing laws that even the most boisterous detractors were satisfied.

One group that played a particularly important role for the development of Corporate Governance's laws was the institutional shareholders; during the '80s they acquired more voting power, that "rose from 16% in 1965 to 47% in 1987 and again to 57% in 1994" (Useem, *Investor Capitalism: How Money Managers are Changing the Face of Corporate America*, 1996: 25-26), this meant that they began to develop a corporate governance agenda that included the market for corporate control as a fundamental aspect to deal with. This interest in the market for corporate control was justified by the aggressive reactions that 1980s executives, faced by unwelcome takeover bids, used for

detering hostile takeover offers. Among the different tools exploited for avoiding changes in corporate control the most common ones were greenmail payments and poison pills. Generally, institutional investors often hold a remarkable amount of shares in takeovers and they wanted to protect the possibility to sell their stocks in response to a premium-priced bid.

In the latest part of the '90s institutional investors broadened their corporate governance agenda in many ways. "One change was the development and publication of policy statements and guidelines used as a benchmark for the evaluation of directors and boards" (Wilcox, 1997: 49). "Many major public pension funds also began to urging boards to remove underperforming chief executives and between 1991 and 1993 a lot of companies such as Westinghouse, American Express, IBM, Kodak and General Motors started complying" (Pound, *The Rise of the Political Model of Corporate Governance and Corporate Control*, 1993: 1006,1059). Furthermore institutional investors put pressure on companies to overcome the traditional executive pay arrangements, moving from a biased "pay-for-size" system to a more proper "pay-for-performance" system. The main consequence of this new approach to executives' pay was a skyrocketing increase of equity-based compensation, in most cases stock options, that would improve remarkably CEO pay-to-performance sensitivity.

Overall during the 1990s the potential for a rebalanced relationship between shareholders and executives ultimately went unfulfilled in large measure and the institutional shareholders rarely acted in tandem when interacted with companies. Therefore "institutional shareholders activism was restricted to occasionally behind-the-scene discussions with executives regarding shareholders votes on controversial corporate governance practices" (Kahan and Rock, *Hedge Funds in Corporate Governance and Corporate Control*, 2007: 1042-45, 1056-57).

The rise of institutional shareholders whetted the focus on basic questions concerning the allocation of power within corporations and provoked a shift towards shareholders rights and shareholder returns . These factors fueled the attractiveness of many economists that were late considering Corporate Governance and the problems related worth of interest.

A 1981 review of the published proceedings of the American Assembly's 1978 symposium on "Corporate Governance in America" observed " the focus of the book is so alien to the concerns of the academics economist that one's first reaction is to dismiss this book as another example of the mushiness we so often attribute to our colleagues in management" (Carrol, *Review: Running the American Corporation*, 1981:1168). In a 1988 corporate governance review , 0 out of 110 publications on corporate governance were from a major economics or finance journal. Meanwhile a 2001 Review of Financial and Economics survey of 25 years' worth of corporate governance literature observed the "sheer volume of papers that have been written on the subject makes the prospect of surveying corporate governance a daunting task" (Denis, *Twenty-Five Years of Corporate Governance Research...and Counting* ,2001:191).

Although, at the time and nowadays, the most widely cited papers on agency cost theory were the ones written by Jensen and Meckling in 1976 and by Fama in 1980, the lack of an explicit mention to "corporate governance", was seen by many, including the

famous economist Oliver Williamson as a “failure to address the economics of corporate governance in microanalytic terms” (Williamson, *Corporate Governance*, 1984:1197).

The main problem related to the work done on agency costs theory was the inability to explain why widely held corporations thrived in spite of the apparent handicap of a separation of ownership and control. The implicit message was that there was not a corporate governance problem to solve, which was by the way the same critique addressed to ALL's reform efforts. In the 1992 presidential address to the American Finance Association Jensen argued “For those with a normative bent, making the internal control systems of corporations work is the major challenge facing economists and management scholars in the 1990s (Jensen, *The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems*, 1993: 873).”

The 1990s can be considered as a period of transition in fact, while in the 1980s the word “governance” was becoming part of the economists' lexicon, by the early 1990s corporate governance was even being characterized as a “rapidly evolving social science (Wall Street Journal, 1993).” This transition could be clarified by the growing shareholder orientation of corporate governance with institutional investors worried about takeover defences, board structure and executives' pay being framed in corporate governance terms. So the expression “corporate governance” became increasingly associated with the preservation and promotion of shareholder value.

While in the 1980s and the 1990s corporate governance was a theme focused mainly on American corporations, at the beginning of the 21st century there had been “an explosion of research on corporate governance around the world”(Denis and McConnell, *International Corporate Governance*, 2003: 2) .

This new international perspective was a product of the declining and recessionary conditions which the U.S companies were facing during the 1990s; the competitive threat posed by German and Japanese companies boosted the number of research exploring the causes of this phenomenon and proposing solutions to the crisis; one of the commonly accepted point of view was that competition existed between governance systems as well as products.

According to many scholars the most serious problem faced by U.S. executives was the preference of good performances in the short period, represented by the quarter's earnings, that penalized the global performances in the long period. This “time horizon” problem did not arise in Germany and Japan due to their different corporate governance system.

In Europe, Britain was the first country that imported these new practices and applied to the financial market; as a matter of fact in 1991 the accountancy profession, the London Stock Exchange and Financial Report Council established the Committee on the Financial Aspect of Corporate Governance, that was mainly created because at that time, a relevant number of British public companies collapsed in circumstances attributable to a lack of managerial accountability.

Sir Adrian Cadbury was the Committee chairman and in 1992 the work of the Committee was summarized in a report; the Cadbury report was rapidly gaining success internationally so the Committee decided to redact a Code of Best Practice that was added as an appendix to the London Stock Exchange's listing rules, with listed companies becoming obliged either to comply with the provisions of the Code or

explain why they had failed to do so. This Code was used for structuring the development of corporate governance around various countries in the world. Interest in the Cadbury Code coincided with a new approach to the debate regarding the comparative analysis of different national corporate governance systems. The interest surrounding corporate governance was steadily increasing worldwide and the new international prominence of U.S. companies fueled a "movement" that indicated the American overtures to corporate governance was the one to follow. This "movement" put roots in Europe and Japan, nations whose companies were facing an increasing number of corporate governance controversies including the German mining group Metallgesellschaft, the Spanish bank Banesto and the Italian conglomerate Ferruzzi (Berglöf, *Reforming Corporate Governance: Redirecting the European Agenda*, 1997: 93). Another factor that helped the development of corporate governance and a more shareholder-oriented view was the liberalization of capital markets; European firms were seeking capital to restructure in response to the aggressive cross-border competition and turned to equity market as a source of funding, this appeal to market corresponded to a more responsible behavior towards shareholders.

A report by management consultancy McKinsey & Co showed that virtuous behaviors were awarded in terms of capital, in fact institutional investors would pay a premium close to 30% for shares well-governed in companies based in countries with weak shareholder protection (Financial Times, 2000).

The beginning of the 21st century was characterized by a sharp decline of U.S. stock market due to the bursting of the "dot.com" bubble and some scandals in public companies as Enron and WorldCom, all these elements led to a discredit of the American model of corporate governance and consequently made more difficult to sell it abroad (Los Angeles Times, 2002).

The 2008 financial crisis and the scandals regarding executives' pay raised some question about the effectiveness of corporate governance in modern companies.

In conclusion, it is possible to say that nowadays the theme of corporate governance is one of the most studied in the field of economics, with many major scholars and researchers producing papers and analytical works, and it is widely understood that it plays an important role in the modern corporate world but some events, like the 2008 financial crisis, proved that the corporate governance it is not a topic whose understanding is complete and moreover highlighted that the possibility of conflicts between investors and managers will continue to be a matter of concern and study as long as business activity is conducted through the corporate form.

## **1.2) The factors that impact Corporate Governance**

After this brief analysis concerning the history of corporate governance, the following sections are going to deal with the factors that affect the implementation and application of some of the main corporate governance guidelines. Before starting this classification it is fundamental to point out that, as Zingales argued in 1997, there are many institutions that affect the way in which quasi-rents are distributed; these institutions can fit in two different categories internal mechanisms and external mechanisms. The distinction between them is the main topic of the following sections,

whose focus is going to be on the importance of these mechanisms, their functioning and the problems related to them.

### **1.2.1) Internal Factors**

The internal factors can be defined as that ones on which the corporation can directly take actions. It is possible to include in this category the following mechanisms:

- The board, particularly the composition, the size and the role of independent executives;
- The presence of Blockholders in the board, as the founder, large shareholders or institutional shareholders, and shareholders activism as a way in which shareholders can influence corporate decisions;
- The capital structure and the disciplinary role played by debt;
- The executives' pay scheme, in particular the pay-performance sensitivity and the labor market for CEOs;

The following sections are going to cover in great detail the aforementioned factors.

#### **1.2.1.1) The board**

The Board of Directors is an elected group of individuals that represent the shareholders. It can be defined as the representative body of shareholder democracy. The board usually meets at regular intervals to discuss and implement policies and to oversight the work done and the progress of the company. Every public company must have a board of directors.

Generally the structure and the power owned by a board are defined in the corporation bylaw.

The bylaws determine the number of board members, the methodology in which the board is elected (e.g by shareholder vote at an annual meeting or by a nominating committee), and how frequently the board meets. Currently there is not a mandatory number of member to appoint to the board, but usually this number ranges from 3 to 31 members. Many researches , including Lipton and Lorsch (1992) and Jensen (2010) ,highlighted that in most cases every additional member after the ninth one reduces the effectiveness of board decision-making. In fact large board meet difficulties on different level, from organizational ones, like scheduling meetings, to strategic ones; in large boards often some good ideas can be ignored and most importantly some hesitations may be not recognized. In particular Lipton and Lorsch proposed some reforms related to board size, that should allow an increased effectiveness. Their suggestions are based on a reduction of the number of directors (they consider 8 or 9 members an ideal number), that allow members of the board to know each other better, and to have more productive discussions that would allow them to reach a more shared consensus. Some scholars argued that a less numerous board could lack a large range of viewpoint and the heterogeneity necessary. A common rejoinder to this critique is that 5 or 6 independent directors carefully selected can provide a breadth of perspective and the diversity required in the current corporate world. This approach should be accompanied by other rules like the establishment of annual updates to the criteria to be

followed in selecting future directors. A better method to replace directors that do not longer meet their responsibilities is to establish a term limit and a mandatory retirement age for independent directors. Another common problem in large board is the increase of director free-riding because the cost of not contributing in a proper way to the firm falls in proportion to board size (Lipton and Lorsch, 1992). The relationship between board size and performance is a vast theme that has been submitted to multiple studies, these results are summarized in **Table 1**. The Table is structured like this: the first column reports the author(s) of the study, the second column reports the year in which the study was conducted, the third column reports the country of the corporations analyzed, the fourth column reports the time period considered in the study, the fifth column reports the number of unique firms considered, the sixth column reports the number of observations, the seventh column reports the econometric model used, finally the last two columns report the effects of board size on two performance measures: Tobin's Q and profitability. Tobin's Q is defined as the ratio between the market value of the firm and the replacement value of a company's assets.

Study	Year	Country	Time period	# unique firms	# observations	Econometric model	Performance measure	
							Tobin's Q	Profitability
Bozec	2005	Canada	76-00	25	459	OLS		-
Canyon & Peck	1998	Denmark	92-95	22	88	GMM	-	- *
Bennedsen et al.	2008	Denmark	99	6,850	6,850	OLS/IV		- * / -
Eisenberg et al.	1998	Finland	92-94	879	879	OLS/IV		- * / - *
Canyon & Peck	1998	France	92-95	60	240	GMM	-	- *
Postma et al.	2003	Holland	97	94	94	IV	- *	- *
Canyon & Peck	1998	Italy	92-95	21	84	GMM	-	- *
Mak & Kusnadi	2005	Malaysia	99-00	230	230	OLS	- *	
Haniffa & Hudaib	2006	Malaysia	96-00	347	1,735	OLS	- *	+ *
Canyon & Peck	1998	Netherlands	92-95	31	124	GMM	- *	- *
Mak & Kusnadi	2005	Singapore	99-00	230	230	OLS	- *	
Loderer & Peyer	2002	Switzerland	80-95	169	330	OLS	- *	+
Beiner et al.	2004	Switzerland	01	165	165	OLS/IV	- / -	-
Beiner et al.	2006	Switzerland	02	109	109	OLS/IV	+ * / + *	
Canyon & Peck	1998	UK	92-95	481	1,924	GMM	- *	- *
Lasfer	2004	UK	90-91/96-97	1,424	1,798	OLS	- *	
Yermack	1996	US	84-91	452	3,400	OLS/FE	- * / - *	- *
Vafeas	1999	US	90-94	307	307	OLS	- *	
Adams & Mehran	2005	US	86-99	35	472	FE/IV	+ * / +	
Wintoki	2007	US	91-03	>6,000	>16,000	OLS/FE/GMM		- * / - * / -
Cheng et al.	2008	US	84-91	350	2,199	OLS	- *	- *
Coles et al.	2008	US	92-01	Not reported	8,165	OLS	- *	
de Andres et al.	2005	10 OECD countries	96	450	450	OLS/IV	- * / - *	+

**Table 1.**

This Table shows the findings of different previous studies on the impact of board size on performance. OLS stands for Ordinary Least Squares regression models. FE stands for Fixed Effects regression models. IV stands for Instrumental Variable models. GMM stands for Generalized Method of Moment models. \* denotes statistical significance at 10% level or better. Source: Lipton and Lorsch, 1992

There are many elements that should be considered analyzing this table, on one hand according to the vast majority of studies there is a negative relationship between board size and performance measures, on the other hand there are two studies (Beiner et al., 2006 and Adams and Mehran, 2005) that find different results. The presence of endogeneity make difficult examining the impact of board dimension on performance measures. Specifically there are two different scenarios that can create endogeneity, the first one manifests itself when board size may be determined simultaneously with firm performance in any given period, in this case this phenomenon is called simultaneous

endogeneity, the second one manifests itself when board size may be determined by past performance, in this case this phenomenon is called dynamic endogeneity. Wintoki (2007) claims that the appropriate model to use for eliminating these sources of endogeneity is the GMM estimator and applied this regression model in his study; however the results, in this case were not consistent with the previous literature.

Another factor that plays an important role in the evaluation of board efficiency is the composition of the board itself. There are two categories of directors, inside directors and outside ones. The inside directors are members who also have some connection to the organization like CEO, employee or major shareholder. Usually these members have a better knowledge about the market position and the financial situation of the corporation.

Frequently inside directors are:

- A chief executive officer who can also be chairman of the board;
- Other executives of the organization like the chief financial officer (CFO);
- Large shareholders.

Then there are the outside directors who are members of the board who have not connections with the organization, usually these members are referred to as independent directors. Their position is really important for the definition of the balance of power inside the board. In fact outside directors should bring experience to the board and monitoring the work of insiders to prevent actions that do not benefit directly the corporation. For becoming an independent director there are some requirements to fulfill, for example the NYSE and NASDAQ that a member of the board could qualify as independent if he or she has "no material relationship" with the listed company either directly or as a partner, shareholder or officer of an organization that has relationship with the company. Some countries require even tougher requirements to meet for becoming an independent director, in Italy for instance in order to being eligible as an independent director an individual should stick to the following rule:

- He or she must not be a relative to any director;
- He or she must not provide, or provided in the past, a service to the company or its subsidiaries;
- He or she must not have a job position, in every work field, that could create a conflict of interests with the society.

Theoretically these independent directors should monitor and put pressure the management carrying on the interests of the corporation and shareholders. However the lack of information, and the fact that they are paid by the corporation, make independent directors weak in defending shareholder interests.

There are, by the way, some positive effects related to the presence of independent directors in the board, various empirical studies found evidence that it is more probable that a manager is fired after bad results, there are positive price reactions after the nomination of an independent director.

Santella, Paone, Drago (2006) proved in their paper that not every Italian listed company strictly follow the recommendations regarding independent directors suggested by the Italian Code of Conduct (Codice Preda) as shown in **Table 2** (Santella, Drago, Paone, how independent are independent directors? The case of Italy 2006).

	<b>Preda</b>		<b>EC (7 criteria)</b>		<b>EC (11 criteria)</b>	
	percentage	cumulative percentage	percentage	cumulative percentage	percentage	cumulative percentage
<b>no</b>	16.27	16.27	16.15	16.15	12.55	12.55
<b>ns</b>	26.06	42.32	24.14	40.29	35.95	48.50
<b>yes</b>	57.68	100	59.71	100	51.50	100

**Table 2.**

Table 2 shows in the columns 2 and 3 the percentage of directors that comply with the best practices regarding independent directors suggested by the Italian Code of Conduct. The remaining columns show the compliance of independent directors of Italian listed companies with the EU recommendations. There are three different kinds of rates: “yes” means that is possible to verify the fulfillment of the requirements, “ns” means that is not possible to verify the compliance to the criteria, “no” means that is possible to verify from company disclosure the inadequacy to the criteria.

Source: Santella, Drago, Paone, 2006

In addition **Table 2** shows the percentage of Italian listed companies that do not embrace the best practices suggested by the EU.

In conclusion, the Board of Director is a very important mechanism of corporate governance and its correct work is a critical factor for the proper functioning of the company.

### **1.2.1.2) Blockholders, institutional investors and shareholder activism**

Monitoring managers and executives can be extremely difficult for a shareholder, in fact in this case arise the problem of free-riding, that is a phenomenon in which the cost of an action fall on the individual and the benefit of that action fall on every shareholder. To summarize, shareholders have not the right incentives to monitor and put pressure on executives and managers. This duty of monitoring executives can be carried on by blockholders, who are owner of a large block of company's shares and institutional investors who are economic operators that make significant investments in a systematic and cumulative way. Usually in a company this two type of investors overlap, meaning that a blockholder in most cases is an institutional investor.

Blockholder are a really diverse group of investors that includes bank, insurance companies, hedge funds, mutual funds and private equity.

Blockholders and institutional investors are prevalent across corporations around the world, multiple studies confirm that around 96 % of US firms (**Figure 1.2.1**) contains at least one of them (defined blockholder an economic operator that owns at least 5% of the shares).

These large investors can exert their influence in two different way, the first is through direct intervention, commonly referred to as “voice”, the second is an indirect way, commonly known as “exit” following the “Wall Street Rule”, taking the “Wall Street Walk” (Edmans, Blockholders and Corporate Governance: 24). Through the fist mechanism (the voice) blockholders can “suggest strategic changes in the way the corporation is

managed via public shareholder proposal or private letter to the management” (Edmans, Blockholders and Corporate Governance, 2014: 24).

Instead the second mechanism can take place in two different moments. It can be



**Figure 1.2.1**

This figure highlight the growing ownership percentage of Institutional Investors over time in US stock market. This trend is in constant growth since the 1950s.

Source: OECD

exerted in the form of a threat of an “exit” prompting managers to maximize value, or can be exerted selling shares pushing deep down the share price and therefore inflicting a punishment to the managers whose behaviors blockholders did not appreciate.

Another relevant advantage in having blockholders and institutional investors they can facilitate take-overs, a mechanism that help replacing poor-performing managers with good-performing managers. Although these powers can be used for maximizing the company’s value, they can also be used for worsening some agency problems. For example, they can form an alliance with insiders and usually they can have a passive role in the management of the company. Another problem is the following one they can maximizing the company’s value ex post but the threat of intervention could reduce company’s value ex ante because their presence could restrict managerial initiative. Moreover blockholders can extract private benefits buying products at inflated prices from other companies they own.

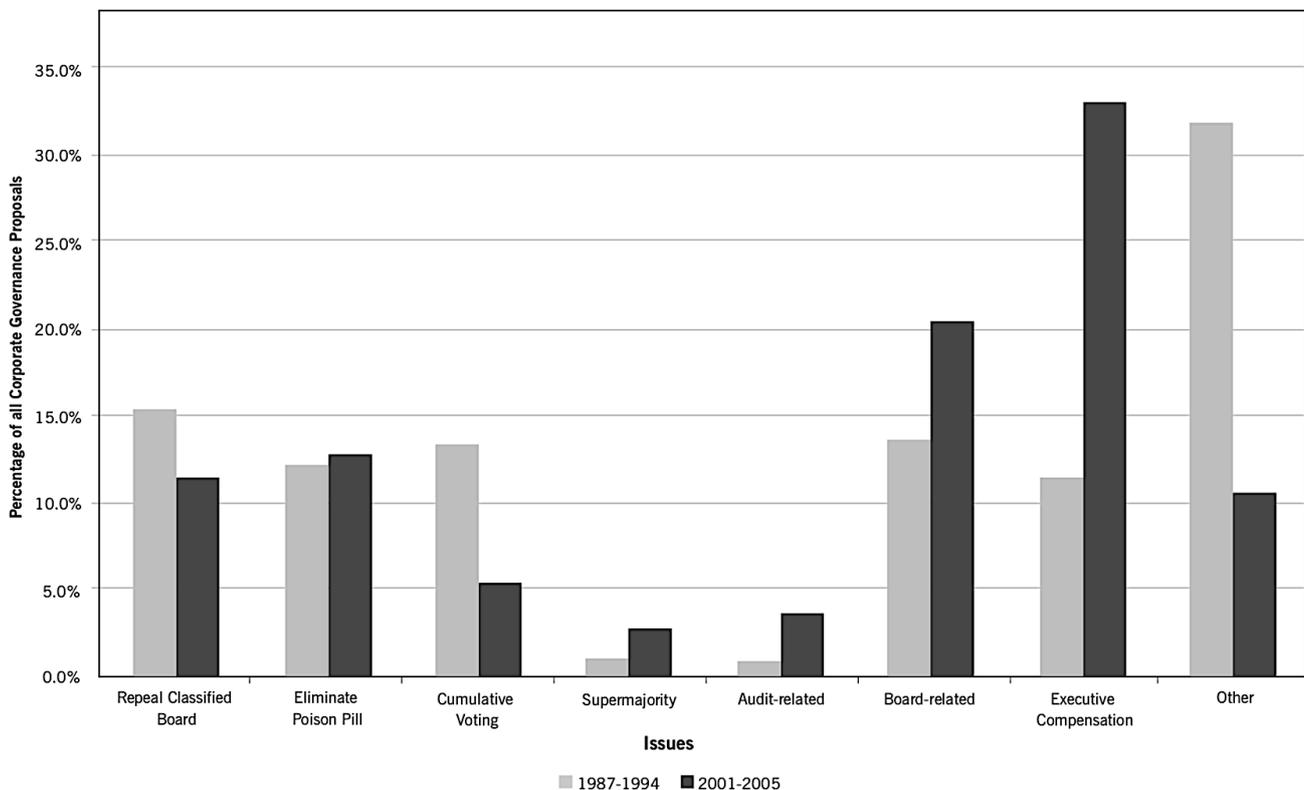
These type of investors are distinguished by their particularly high level of activism. Shareholder activism is usually referred to as the attempts made by a person or a group of people to exert their rights as shareholder of a publicly traded company to bring

some changes within the corporation. Briefly, it can be seen as a response to potential gains from addressing the agency conflict at the core of publicly traded companies with absentee owners (Stuart L. Gillan and Laura T. Starks, *The evolution of shareholder activism in the United States*, 2007:58).

The shareholder activist usually start to manifest for greater support of workers' right or for a more sensible environmental corporate policy or, in most cases, for poor-performing managers and executives. These behavior can be carried on by large investors that can gain control of the company and try to replace the management for improving performances.

There are many examples of shareholder activism that brought changes in corporate views and decisions, for instance in 1970 a federal court decision allowed a shareholder proposal forbidding the sell of napalm by the company Dow Chemical; after that a growing number of shareholder proposal on companies' social responsibility started to appear; another famous case is the campaign against the golden parachute of Jeanne-Pier Garnier CEO of GlaxoSmithKline, the biggest drugmaker in UK, consisting in 22 million of pounds, rejected by shareholders under the idea that you don't get rewarded for failure (The Guardian, 2003).

The issues considered worth of discussing by shareholder activists, evolved over time, as shown in **Figure 1.2.2**, and included problems like executive compensation, elimination of poison pill and cumulative voting.



**Figure 1.2.2**

This Figure shows the percentage of all Corporate Governance proposals, the problem they refers to, and their evolution over time in terms of proposals put forward.

Source: Gillan, Starks, 2007.

The main sponsors for Corporate Governance proposals are Union funds, public pensions funds and unaffiliated individuals.

These analysis led to a question: does shareholder activism work?

The answer to this question is not easy, many factors contributed to changes in corporate tendencies and behaviors and not all of them can be attributed to shareholder efforts to resolve problems. In other words the, it is not possible to say with a reasonable degree of scientific certainty that there is a casual link between shareholder activism and changes in governance.

The IRRC (Independent Regulatory Review Commission) found that between 1973 and 2004 just 10% of the proposals won majority support, but, surprisingly, more than half of that "shareholder victories" occurred between 2000 and 2004.

In conclusion it is evident that the presence of blockholders and institutional investors and their growing interest in contributing ,directly or indirectly, in decisions of the firms regarding the overall management is an important way through which shareholders can try to avoid the perpetuation of bad corporate practices.

### **1.2.1.3) Capital Structure and Debt**

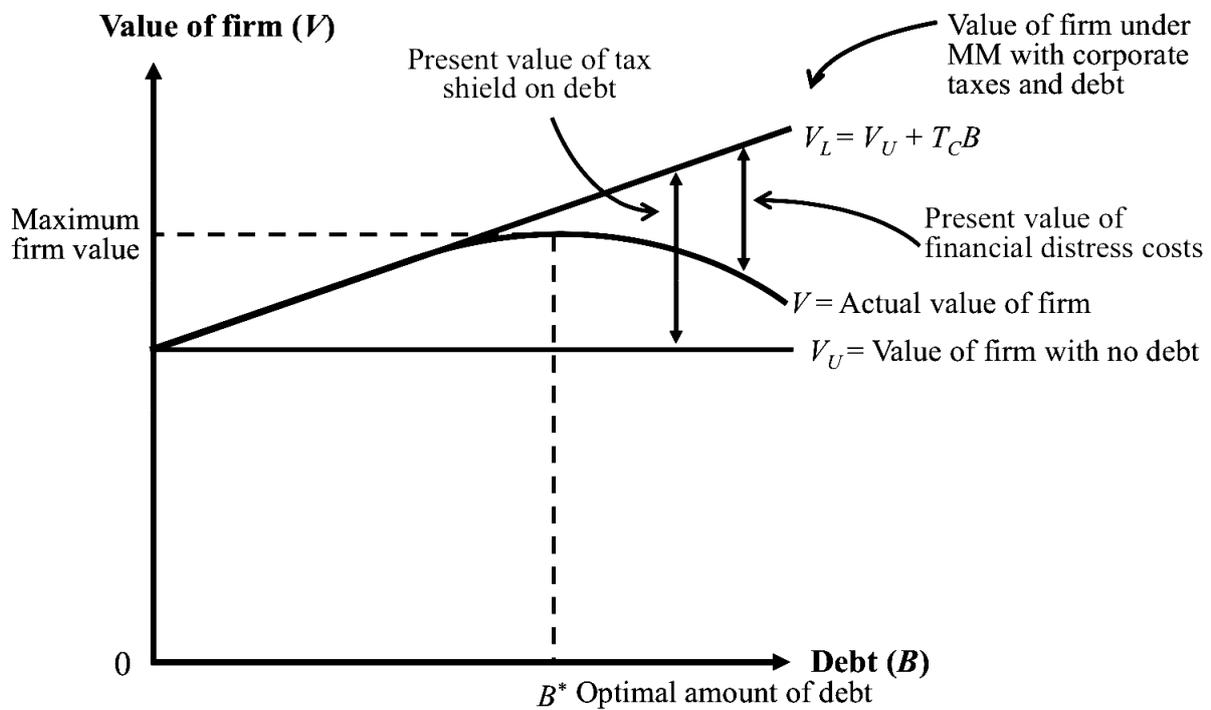
The capital structure has been studied by many scholars and academics such as Modigliani, Miller and Jensen. Jensen (1986) , in particular pointed out that the capital structure has a foundational role in determining the incentives provided to a company to be efficient. The use of debt in a company is a useful tool that provide incentives to be organizationally efficient, because of the financial distress put on the company. Using debt for financing projects, force executives and managers to pay back the amount they borrowed this is a powerful incentives for being efficient and for not using these financial resources in wasteful and not relevant projects.

Briefly, using debt force managers to:

- Pay back the amount of money they borrowed from banks or other financial institutions with interests, so they have to invest in projects with returns higher than the interest rate due to banks;
- Use the money borrowed in an efficient way, a wasteful project could expose the company to take-overs and bankruptcy; take-overs are a particularly effective deterrent, in fact a new owner can easily replace the old management with new more capable managers;
- Not indulge in non-monetary benefits; if executives use the money borrowed from financial institutions for personal purposes, the probability they're going to pay them back, will reduce.

So debt has an important role in defining the managerial behaviors. However, the use of debt is not always good for the company.

The objective of a manager is to maximize the value of the company he is appointed to lead; but as Modigliani and Miller brilliantly pointed out an excessive use of debt can reduce the value of a company, specially in their theory (trade-off theory) they argued that the value of a company is maximized when the marginal benefit deriving from the tax shield equals the marginal cost deriving from an increase in debt (**Figure 1.2.3**).



**Figure 1.2.3**

This Figure shows how the value of the firm value change when the company has different level of debt. It is possible to appreciate the effect of the present value of financial distress and even the value of the firm with the assumption of lack of bankruptcy costs.  $V_L$  stands for value of the leveraged company.  $V_U$  stands for value of the unlevered company.  $T_c$  stand for tax rate.  $B$  stands for debt.

Source: Personal Elaboration

This theory claims that there is an optimal level of debt ( $B^*$ ), and therefore an optimal level of financial leverage, defined as the ratio between total debt and equity, that maximize the financial value of the company.

The increase in the use of debt by a company improve the effect of the tax shield but at the same time increase the expected costs of bankruptcy. It is possible to reach the same conclusions by looking at the weighted adjusted cost of capital rate that in  $B^*$  reach its lowest value.

The capital structure is important because it links the financial solidity with the behaviors of manager and executives. As it is showed in this paragraph the use of debt can be both beneficial or wasteful for a company and has a tremendous impact on the choices and decisions made by executives and managers.

So discussing corporate governance means also discussing about the financial structure and the use of debt, because a wise utilization of money borrowed from financial institutions can be really helpful for the company but an inappropriate management of these resources can lead to a waste of money dangerous for all the shareholders.

#### **1.2.1.4) Executives' Pay scheme**

This particular theme linked to corporate governance is the main topic of this thesis and it is going to be dealt with deeply in other sections.

## 1.2.2) External Factors

The external factors can be defined as the elements on which the companies can not intervene directly and so depend from the political and socio-economical context in which the company operate. The following mechanism are the most important external factors affecting corporate governance practices:

- Take-overs and proxy fights;
- Product market competition;
- Competition for managerial talents;
- Institutional context.

The following sections are going to cover in great detail the aforementioned factors.

### 1.2.2.1) Take-overs and Proxy Fights

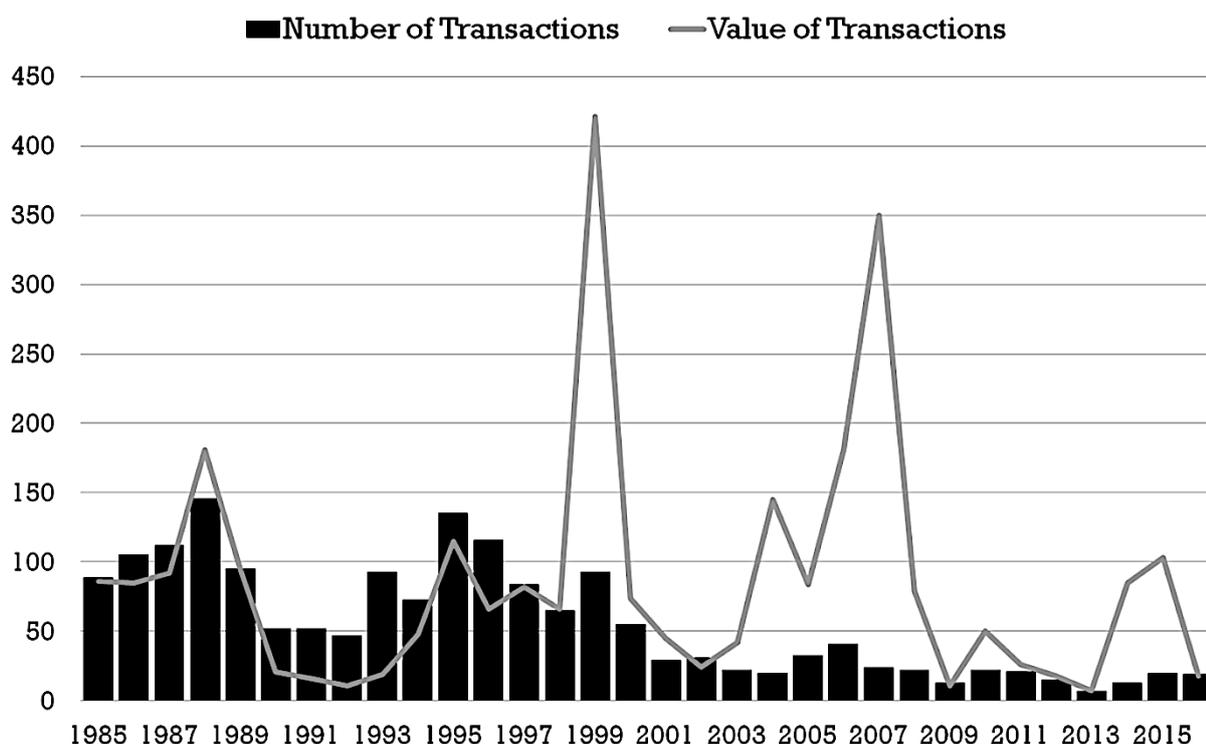
Take-overs and proxy fights are among the most used way to change the control (and therefore the management) of a company. In fact their effectiveness heavily depend on the market for corporate control. The evolution over time of this phenomenon can be seen in **Figure 1.2.4**. The contestability of voting control is really important because as Shleifer and Vishny wisely wrote "In a world in which search for improvement is a public good how can its provision be ensured". The main concept expressed in this phrase is that control is a public good, so the effort for gaining it is really high but the degree of ownership is really low.

The control is difficult to transfer because small shareholders have little to none incentives to control the actions of managers and executives, it is clear that this is a problem of free riding.

If on one hand the contestability of control is extremely important on the other hand managers and executives are usually reluctant to give it up, because through tunneling they can appropriate of private benefit of control. There are many ways through which executives and managers can gain personal benefit using company's money, for example they can vote, exerting their influential positions, for significant executive compensation packages, or they can hire family members without considering that they don't meet the requirements needed for the job. Another way in which managers and executives can exert their influence is through the sell of company's asset at inflated prices to other company they own.

These private benefit of control are the main reason why managers are so reluctant to give up control of a company; these benefits can be measured in two ways: as the difference between the price payed by the buyer for the control package and the price of shares they day after or as the price difference between shares with voting right and shares without voting right.

The value of these benefit varies across different countries according to multiple research for example Barclay and Holderness (1989) documented that the economic value of these private benefit of control in US corresponded to 4% of the value of the share, meanwhile Dick and Zingales proved that in Italy these benefits accounted for 37% of the share value.



**Figure 1.2.4**

In this Figure the solid line represents the value of transactions in US billion dollar and the bars represent the number of transactions over time. It is clear that the number of hostile take-overs is declining.

Source: <https://www.carriedin.com/need-hostile-takeovers/>

There certain conditions that foster the increase in value of private benefits of control; they are especially high when there are poor accounting standard and consequently when there is a lack of transparency in balance sheets, when there is little law enforcement and competition is not so intense.

A common way to gain control of a company is the use of LBO (leveraged buyout), especially common during the 1980s; through this technique the acquirer can use large amount of debt to gain control of the company and take it private.

The transfer of control must be voted and accepted by the majority of shareholders. There, by the way, some rules that can facilitate or complicate this passage of control.

For example the bylaw can state that only a part of directors is elected by shareholders or that there are limit to the transfer of shares or that the voting structure can be more inclined to facilitate the transfer of control.

Moreover there are some defensive strategies that corporations can use for preventing a take-over; amongst these the most notable ones are:

- Poison pills, that include all the actions which make more expansive the take-over like capital increase launched when the take-over start;
- Greenmail, that consist in the payment to the individual or group of individuals for desisting and so avoiding the transfer of control;
- Scorched earth strategies that include all the actions aimed at reducing the value of the company.

In all the financial markets there are some laws designed to protect investors and to rule take-overs, the most important ones are the passivity rule, that forbid all defensive strategies if not authorized by shareholders and the break-through rule that state that the defensive strategies designed by insiders became ineffective after a take-over bid.

National authorities like the S.E.C in the US or the CONSOB (Commissione Nazionale per le Società e la Borsa) in Italy have a critical role in supervising take-overs bids and protecting shareholders from expropriation.

Proxy fights are a common alternative used for transferring corporate control and they usually follow the same pattern: an activist, in disagreement with the actual management, try to collect as many proxy votes as he can to install a new management. This strategy has some advantages compared to hostile take-overs: in the first place is less expensive, in the second place the individual trying to gain the control does not pay the premium that in some countries (e.g Italy) can represent a large amount of money.

Just the threat of a take-over can motivate management to try to perform better, because a take-over usually corresponds to a change of management of the corporation.

The element that came out from this analysis is that take-over and proxy fights are a way to install better-performing management at the expense of poor-performing managers. These two mechanisms are a way commonly used for transferring the control of a corporation from poor-performing managers to good-performing managers. Although they could be perceived as an hostile move to gain control, they allow a better exploitation of company's resources to increase profits.

### **1.2.2.2) Product Market Competition**

Product market competition is one of the most known mechanism of corporate governance. There is plenty of evidence that the most competitive market produce successful companies, for example, in Japan the high degree of competition in the automotive industry helped the rise of innovative and profitable companies like Toyota, the biggest carmaker worldwide, and Honda.

For these Japanese companies the competition acted as a substitute for other corporate governance mechanisms, in fact Japanese companies usually have larger boards of directors, that as it is mentioned in precedent sections, is not a good element, and are less exposed to take-overs. Therefore these examples highlight how competition can be a strong mechanism of corporate governance and can provide an effective monitoring of management.

Essentially markets where competition is really intense tend to self-eliminate companies with poor-performing managements and to help the rise of companies characterized by good-performing managements. In other words competition acts like a take-over , but the firms take-over the product market instead of the other company. Theoretical models have claimed that an high level of competition in product markets is a powerful force for overcoming the agency problem between shareholders and managers, because product market competition forces management to improve financial performances and to make the best available choices regarding the future of the

company; this happens because bad choices can lead to bankruptcy or job loss by managers.

As it is clear from **Figure 1.2.5** and **Figure 1.2.6** the least competitive industries are the ones older and least innovative. Competition reduce the waste of resources and diversion of liquidity and the value of private benefits of control.

Some recent empirical studies found that the strength of the relation between performances measures (long term stock returns, firm value and operating performance) and corporate governance to decrease monotonically in the degree of product market competition.

"In the most competitive industries there is no significant relation between corporate governance and the performance measure above, in contrast this relation is strong, positive and significant in non-competitive industries" (Ammann, Oesch and Schmid, Product Market Competition, Corporate Governance, and Firm Value: Evidence from the EU-Area , 2011, 2).

Other studies highlight that companies operating in most competitive industries have more take-over defenses (e.g clause in the bylaw), therefore competition act as substitute of market for corporate control.

This happens primarily because competitive are characterized by more information available on the market, this abundance of information make the monitoring easier and less costly. All these findings advocate that high competition is related with a reduction of agency problem

Industry	Percentage of Industry Output Produced by the Four Largest Firms
Primary copper	99
Cane sugar refining	99
Cigarettes	95
Household laundry equipment	93
Beer	91
Electric light bulbs	89
Glass containers	88
Turbines and generators	88
Household refrigerators and freezers	85
Primary aluminum	85
Petrochemicals	85
Small-arms ammunition	83
Motor vehicles	81
Men's slacks and jeans	80
Aircraft	81
Breakfast cereals	78
Household vacuum cleaners	78
Phosphate fertilizers	78
Tires	77
Electronic computers	76
Alcohol distilleries	71

**Figure 1.2.5**

This Figure shows the most concentrated industries in US. Concentration is a good indicator of competition, usually when a market is very concentrated there is less competition. The concentration of the market is measured through the CR4 index that measure, as percentage, the output produced by the biggest 4 firms in an industries.

Source: Bureau of Labour Statistics

Industry	Percentage of Industry Output Produced by the Four Largest Firms
Asphalt paving	25
Plastic pipe	24
Textile bags	24
Bolts, nuts, and rivets	24
Plastic bags	23
Quick printing	22
Textile machinery	20
Sawmills	18
Jewelry	16
Curtains and draperies	16
Metal windows and doors	14
Women's dresses	13
Ready-mix concrete	11
Wood trusses	10
Stone products	10
Metal stamping	8
Wood pallets	7
Sheet metal work	6
Signs	5
Retail bakeries	4

**Figure 1.2.6**

This Figure shows the least concentrated industries in the US. Even in this case the concentration is measured through the CR4 index.

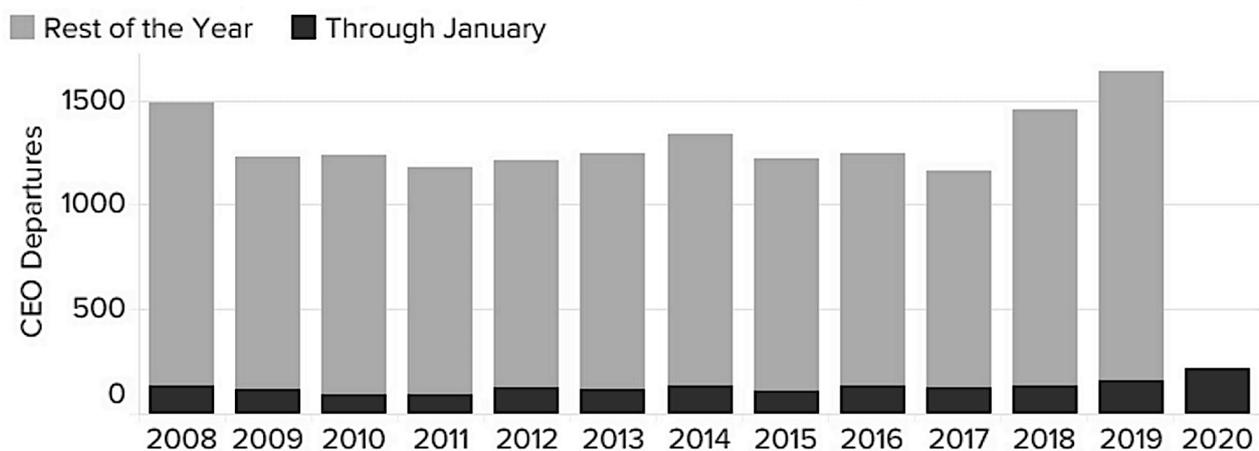
Source: Bureau of Labour Statistics

### 1.2.2.3) Competition for Managerial Talent

Managers hold a foundational role in defining the success of an organization. So the hiring process they should go through must be rigorous, because hiring competent managers affects the productivity of the entire workforce and influences the strategic alignment of a company. Therefore companies compete for hiring the best managers available, because good managers are necessary for being a successful corporation.

This competition should allow to easily substitute poor-performing managers with good-performing manager (**Figure 1.2.7** shows the number of CEO's departure over time in US companies). This system, as here described, could only work if managers retribution is based on performances (e.g stock options), so managerial skills and abilities can be evaluated based on firm's performances.

Consequently, as argued by Schmidt and Coughlan (1984) and by Warner, Watts and Wruck (1988) there is an inverse relation between net-of-market performance and the probability of management turnover, essentially managers are more likely to leave the firm they are working in after bad years than after good years. In particular Warner, Watts and Wruck found evidence that there is an inverse relation between the probability of management turnover and stock performance, under the joint hypothesis that information about management performance is reflected in stock returns and that such information is used in evaluating management performance (these results are obtained using a logit model). So it appears that the threat of termination is an effective tool that can be used for motivating managers.



**Figure 1.2.7**

This figure shows the number of CEO departure over time in US. January is highlighted because it is the most busy month regarding CEO turnover, as companies make leadership changes after assessing business conditions at the end of the fiscal year.

Source: <https://www.cnbc.com/2020/02/12/rapid-ceo-turnover-continues-with-a-record-number-of-top-executives-departing-in-january.html>

Rarely managers are openly fired and changes at the top management usually came after managers reach their retirement age; data suggest that CEOs, and top executives in general, have little risk of being dismissed by their Board of Directors, but this

infrequent termination of poor-performing CEOs does not imply by itself the lack of incentives, considering that even a low probability of termination can provide incentives if the penalties associated with it are adequately tough.

In conclusion the threat of termination and the competition for managerial talent are mechanisms that can be really effective in improving the profitability of a company, because, in a competitive labour market, companies “fight” for achieving the best results, hiring the most competent managers that are a key factor in the success of a company.

#### **1.2.2.4) Institutional Context**

The institutional context is the socio-economic, political and legal environment in which the company operate. There are different elements that impact on the way in which company choose their practices of corporate governance, many of these depend on the context in which the company works. As it is described in precedent sections, companies operating in different countries, experience different corporate governance modalities. For example Japanese companies tend to have larger Board of directors or Germans companies tend to have more blockholders.

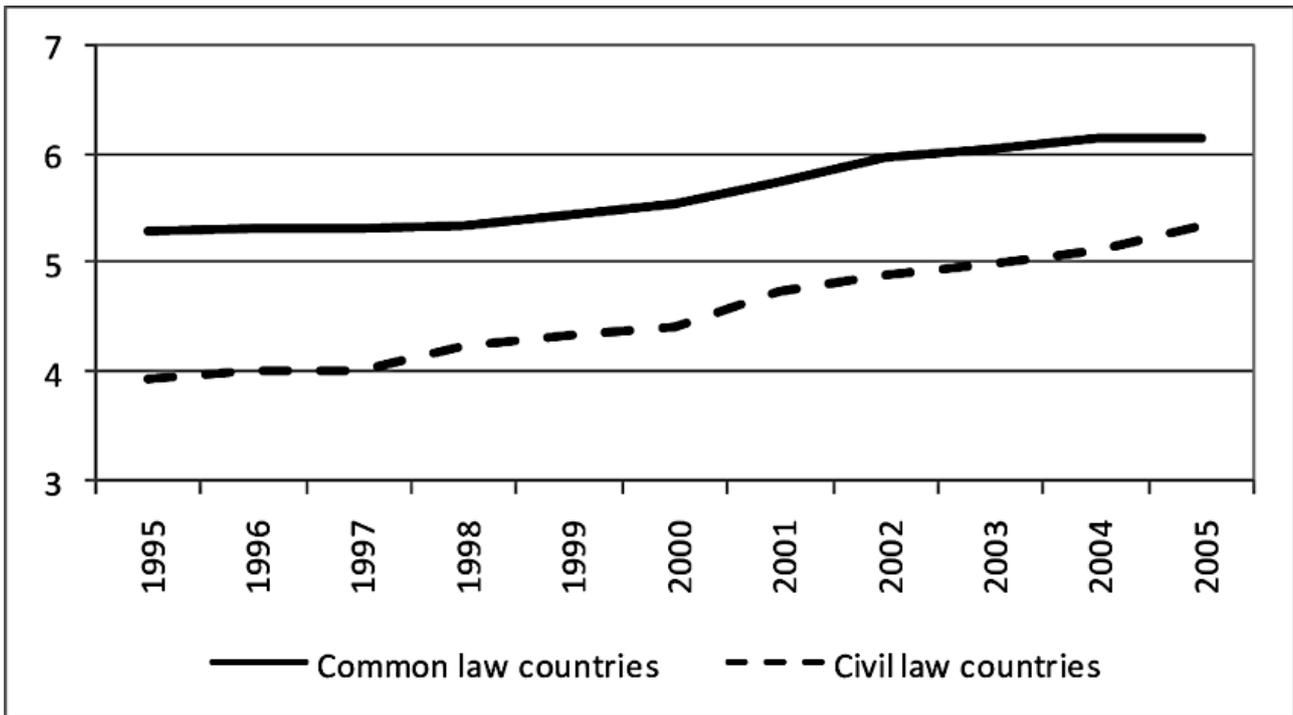
The legal environment plays a foundational role in the definition of the best practices that companies apply, for example the countries characterized by common law legal environment have better shareholder protection (**Figure 1.2.8** shows the differences in terms of legal protection of shareholders) or Scandinavian countries tend to have the highest accounting standard, this factors contribute to reduce the value of private benefits of control.

The last factor considered in evaluating the institutional context is the efficiency and effectiveness of the judicial system; in a recent paper Moro, Mareschi and Ferrando showed that the time required to resolve a dispute is really different form country to country.

“It range from 235 days in Finland to 1210 days in Italy; in the same paper the authors made other considerations regarding the judicial systems across Europe for example the number of procedural steps involved in a commercial dispute is between 21 (value found for Ireland) and 41 (value found for Spain) instead the cost of the claim range range from 13.3% (e.g Finland and Portugal) to 29.9% of the claim” (Moro, Mareschi, Ferrando, 2010: 263).

Finally, in many countries there are Code of Conduct (e.g Codice Preda in Italy) that prescribe the best practices to follow in terms of corporate governance and try to improve the degree of legal protection of shareholders.

In conclusion, the institutional context is a critical factor that allow the creation of a healthy environment that help corporations to mitigate the agency problem (and so reduce the associated costs) and therefore increase profits.



**Figure 1.2.8**

This Figure shows the differences in terms of legal protection of shareholders across countries belonging to different legal families. It is clear that Common Law countries tend to have a better legal protection of shareholders.

Source: Buchanan, Heesang Chai, Deakin

### 1.3) A comparison between different legal systems

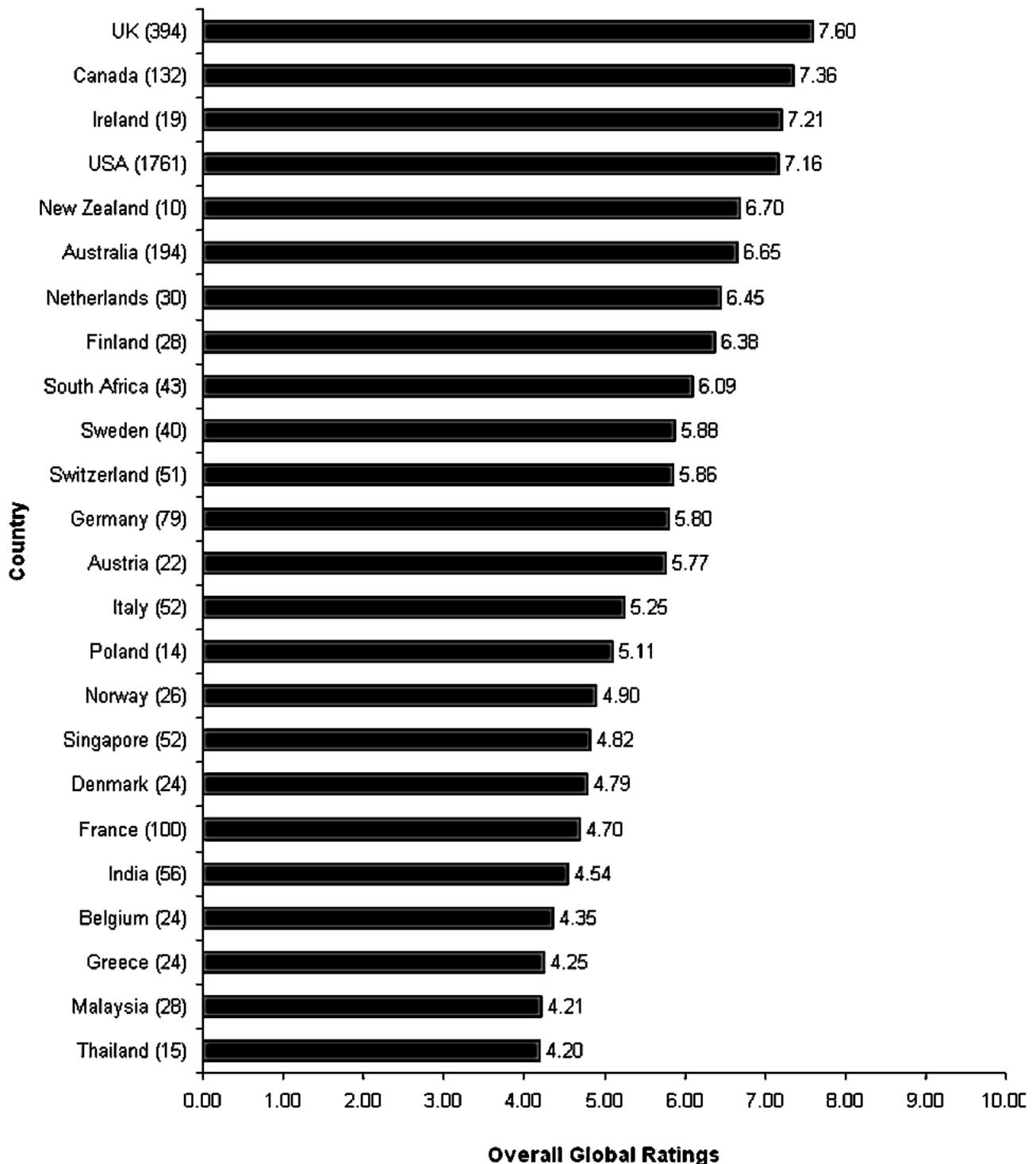
There are different approaches to corporate governance depending on the country in which the company operate. These differences can be seen in every aspect analyzed in the precedent sections, for example, as discussed before, there are significant differences in the time required for resolving a dispute and in the cost associated with the claim.

Comparing corporate governance practices among different countries is particularly interesting because it help to identify the elements that foster the best institutional and corporate practices. **Figure 1.3.1** shows a ranking in which they are evaluated in terms of corporate governance overall rating. The first element that deserve to be analyzed is that usually countries characterized by common law systems tend to have better ratings (e.g UK, US), this is not surprising, it is commonly known that these countries usually have higher level of shareholder protection; this higher degree of shareholder protection create larger capital markets and push companies to have better standard of corporate governance.

This section provides brief examination of the main differences detectable among various countries, for example in Japan boards are dominated by insiders which tend to be especially concerned for the welfare of keiretsu (the parent company) to which the company belongs; in China the economic structure is really complex with company that

have parent, grandparent and sometimes even great-grandparent, every board has at least a member of the Chinese Communist Party.

It is clear from this analysis that the diverse socio-economic and political systems present around the world take effect on the structure and the governance system chosen by the companies operating in that country.



**Figure 1.3.1**

This figure shows the ratings of various countries in terms of corporate governance practices.

Source: OECD

## **CHAPTER 2**

### **2.1) Measuring executive pay**

The theme of executive and managerial pay is among the most discussed and studied in the economic literature. All the researches in this field point to the same solution, managers and executive should receive a compensation proportional to the performance of the firm they lead. This apparently simple solution has many noteworthy aspects that should be studied in deep detail to better understand the importance of this problem and the implications related to it.

The following Sections are going to cover different aspects of this theme, dealing with the existing researches on the topic, the evolution over time and the factors that shape the managerial pay.

#### **2.1.1) A Brief Review of the Literature**

Over time the managerial pay has caught the attention of many famous scholars, that approached the vast theme of managerial pay, using different method but reaching the same conclusions:

- There are many factors that contribute to shape the managerial pay;
- Public accountability and scandals play an important role in the definition of managerial pay;
- There should be a relation between managerial pay and performance;
- There are problems with many forms of compensation.

One interesting facet of the works done in this field is the empirical point of view used by all the authors involved in this research area.

Measuring the manager pay is really complex, in the first place there are many different form of compensation (e.g salary, stock awards etc...), in the second place some of this forms of compensation are difficult to measure in monetary value (i.e club membership or other form of personal benefits). Moreover "many of these form of compensation depend on performance measured over a single or multiple years, and it is not obvious how (or when) to measure them. For example stock options typically have terms up to ten years. Should stock options be "counted" as compensation when granted, or only when exercised?" (Murphy, Executive Compensation, Where We Are, and How We Got There, 2013: 217).

Another problem related to managerial pay is that many payments gained while employed are received only after retirement when managers have not more obligation to report their compensation.

An open debate concerning the measurement of managerial pay is the grant date versus realized pay in evaluating the stock options. The grant date approach values the stock awards as the fair market value on the grant date and it is usually referred to as ex-ante approach (and compensation valued through this technique is called expected compensation) because a value is assigned before the vesting and exercising of the stocks; meanwhile the realized pay values the stock awards as the actual amount realized upon vesting and exercise and the compensation computed through this

technique is commonly referred to as realized pay. Using the grant date approach allow to use some variant of the Black and Scholes (1973) formula (below presented under the assumption of continuously paid dividends):

$$\sum_{t=0}^{\tau} N_t \cdot [S_t \cdot e^{dt} \cdot \varphi(Z_t) - P_t e^{-rT} - \varphi(Z_t - \sigma\sqrt{T})]$$

Where  $N_t$  is the number of options granted in year t at exercise price  $P_t$ , T is the number of months until the expiration of these options, r is the average monthly market yield on 5-years government securities in year ( $\tau$ ), d is the dividend yield in year ( $\tau-1$ ),  $\sigma$  is the estimated standard deviation of stock returns over the previous 60-month period,  $S_t$  is the stock price at the end of fiscal year  $\tau$ , and  $\varphi$  is the cumulative standard normal distribution.

The results deriving from different analysis conducted through many studies are here presented, discussing the conclusions reached by different authors.

The pioneering work carried on by Jensen and Murphy (1983) it is the forerunner for many other studies conducted and provide many elements worth of discussion.

The focus of their work is on the pay-performance sensitivity, that is the dollar change in the CEO's wealth associated with a dollar change in the wealth of shareholders. They used a sample of "2,213 CEOs listed in the Executive Compensation Surveys published in Forbes from 1974 to 1986" (Jensen and Murphy, Performance Pay and Top Management Incentives, 1990 : 4). In their paper, the authors explored different possible models for evaluating the pay-performance sensitivity, the first one presented was the following:

$$\Delta(\text{Ceosalary} + \text{bonus})_t = a + b\Delta(\text{shareholder wealth})_t$$

This formula relates the change in shareholder wealth with the change in salary and bonus received by CEOs. The authors used an Ordinary Least Square (OLS) regression for this first analysis. In particular they found that the coefficient b (that represents the pay-performance sensitivity) is statistically significant (Student-t=8) and equal to  $b=0.0000135$ , this indicate a positive relation between cash compensation and firm performance. This coefficient suggests that "a CEO receives an average pay increase of \$31,700 in years in which shareholders earn a zero return and receives 1.35¢ for each \$1000 increase shareholder wealth"(Jensen and Murphy, Performance Pay and Top Management Incentives, 1990 : 6). All the results presented in this section are adjusted for inflation.

The equation used assumes that current stock price performance has immediate impact on compensation. The timing though is not properly this one, in fact there are bonus decisions made before final fiscal year earnings data are available, and sometimes the bonus presented in proxy statements are referred to previous year and so do not reflect the effects of CEO's actions.

So the authors used another model who try to incorporate the effects of past performance as well as current performance on CEO pay revision:

$$\Delta(\text{CEOsalary} + \text{bonus})_t = a + b_1\Delta(\text{shareholderwealth})_t + b_2\Delta(\text{shareholderwealth})_{t-1}$$

The coefficient  $b_2$  is positive and statistically significant, highlighting that the performance obtained in the previous year have impact on the determination of this year's pay revision. The F-test of jointed significance, implies that the sum of the coefficient  $b = b_1 + b_2$  is statistically significant (F=93). The results of these regressions are presented in **Table 3**.

This analysis is consistent with precedent works and confirms the difficulties in finding strong relation between CEO's pay and changes in shareholder wealth.

Independent Variable	$\Delta(\text{Salary} + \text{Bonus})$	
	(1)	(2)
Intercept	31.7	30.8
Change in shareholder wealth (thousands of 1986 dollars)	.0000135 (8.0)	.0000139 (8.4)
Change in shareholder wealth in year $t-1$	...	.0000080 (5.5)
$R^2$	.0082	.0123
Estimated pay-performance sensitivity, $b^{\S}$	.0000135	.0000219
F-statistic for $b$	64.0*	93.0*
Sample size	7,750	7,688

**Table 3**

This Table shows the results of the first two regression used by Jensen and Murphy (1990) to estimate the relation between CEO's pay and performance. Column (1) is the one referred to the case in which stock price instantly reflects the actions of a manager and so it impacts on his pay revision. Instead Column (2) presents the results in which is considered the lag between firm performance and CEO's pay revision.\* is used for indicating a significance at the 0.01 percent level

This analysis lacks a fundamental element for the evaluation of the relation between managerial pay and firm performance, that is the evaluation of stock options. So the authors repeated the regression including the changes in the value of CEO's stock options. **Table 4** shows the results of the analysis conducted by the authors; this analysis includes the changes in stock options value as a form of compensation.

In particular column 1 shows the change in value of stock options, meanwhile column 2 shows the value of total pay plus the present value of increment in salary and bonuses (calculated assuming that the CEO gets salty until he age 70 and at a real interest rate of 3 percent per year).  $PV(\Delta Salary)$  is "the discounted present value of the permanent component of the change in total wealth" (Jensen and Murphy, Performance Pay and Top Management Incentives, 1990 : 9). The regression used in column 2 is the following:

$$\Delta(CEOpayrelatedwealth) = totalpay + PV[\Delta(salary + bonus)] + \Delta(valueofstockoptions)$$

The only difference between column 2 and column 3 is the presence of the ownership interaction variable, that has a small positive coefficient that is statistically not significant. This results is quite astounding because it implies that the relation between compensation and performance is independent of an executive's stockholdings and this is in stark contrast with the economic theoretical prediction since optimal compensation contracts should include shareholdings.

Independent Variable	Dependent Variable (Thousands of 1986 Constant Dollar)				
	$\Delta(\text{Value of Stock Options})$	Total Pay + $PV[\Delta(\text{Salary} + \text{Bonus})]$ +		$\Delta(\text{Value of Inside Stock})^\dagger$ + Total Pay + $PV[\Delta(\text{Salary} + \text{Bonus})]$ +	
		(1)	$\Delta(\text{Value of Stock Options})$	(3)	$\Delta(\text{Value of Stock Options})$
Intercept	79.4	815.9	816.1	818.4	892.9
Change in shareholder wealth (\$ thousands)	.000105 (8.6)	.000176 (5.2)	.000174 (5.0)	.00118 (4.4)	.000198 (3.7)
Change in shareholder wealth in year $t - 1$	.000040 (3.3)	.000131 (3.8)	.000130 (3.8)	.00031 (1.2)	.000168 (3.1)
CEO's fractional ownership x change in shareholder wealth	...	...	.00294 (.7)	...	1.020 (145.0)
$R^2$	.0807	.0376	.0381	.0216	.9610
Estimated pay-performance sensitivity, $b$	.000145	.000307	.000309 <sup>‡</sup>	.00149	.0020 <sup>‡</sup>
F-statistic for $b$	58.3*	33.0*	33.2*	12.5*	565.2*

**Table 4**

This table shows the results of 5 different regression made by Jensen and Murphy (1990). Moreover the table shows the  $R^2$  that is the ratio between the explained sum of square and the total sum of square, the estimated pay-performance sensitivity and F-statistic for b. \* indicates significance at the 0.01 percent level. The sample is 877 for all regression.

Among the various forms of contract that can be done one that accomplishes an high level of b is the franchising, "these contracts are very similar to optimal contracts under risk neutrality that, in effect, sell the firm to the CEO."(Jensen and Murphy, Performance Pay and Top Management Incentives, 1990 : 26). Actually, compensation plans should be designed to align the interests of self-interested risk-averse CEOs and shareholders. This alignment should reduce the problems related to agency theory.

Column 4 reports regression coefficients in which the dependent variable measure the change in all pay-related wealth plus the change in the value of his stockholdings. "Changes in the value of inside stockholdings are calculated as the value of the shares held at the beginning of the fiscal year multiplied by the realized rate of return on common stock" (Jensen and Murphy, Performance Pay and Top Management Incentives, 1990 : 14). Column 5 differ from column 4 for the presence of the ownership interaction variable.

In particular results from column 1 "implies that the value of CEO stock options increase an average of 14.5¢ for each \$1000 increase in shareholder wealth" (Jensen and Murphy, Performance Pay and Top Management Incentives, 1990 : 12) this result from column 1 suggests that stock options provide stronger incentives than the sum of the estimated coefficient of current and lagged change in shareholder wealth. Analyzing results from columns 4 and 5, it should be specified that stockholding can have a strong impact on the value of pay-performance sensitivity, as a matter of fact for an executive negligible stockholdings the pay-performance can b large and positive but for executives with large holdings b could be small or even negative because their wealth is extremely tied to the performance of their firms. The distribution of stock ownership by CEOs is skewed, 60 percent of the sample CEOs hold less than 0.42 percent of their firms' stock. The distribution representing the percentage and value of stock ownership for CEOs is reported in **Table 5**; it is evident that CEOs in small firms tend to have more stocks than the average meanwhile CEOs of large company tend to have less stock than the average; viceversa considering the value of the inside stocks owned by CEOs , CEOs of large company have more larger dollar investment than CEOs of small companies.

All the regressions done confirm the predictions of the agency theory that state that CEO compensation should be tied to performance (this is confirmed by the fact that in all the regressions the pay-performance sensitivity is statistically significant), but the value seems not too high in terms of incentives provided.

The low pay-performance sensitivity it is not attributable to risk-aversion, in fact the amount of CEO's income at risk in case of poor performance is a small fraction of his compensation. For example the pay-performance sensitivity in column 2 of **Table 4** ( $b=.0000219$ ) suggests that if a firm loses \$100 millions the wealth loss for the CEO is about \$2,200 that represent a trivial percentage of the CEO's income.

The last hypothesis analyzed was the one related to the political influence and effect of firm size on pay-performance sensitivity. Political pressures tend to be more marked in large firms because of their visibility and higher degree of public accountability and scrutiny. These political pressures tend to focus on the cut of the upper tail of the pay-off distribution. These pressures, that sometimes culminates in legislative actions, can be one of the factors that reduces the pay-performance sensitivity penalizing CEOs that obtain extraordinary performance.

	CEO Stock Ownership as Percentage of Shares Outstanding			Value of CEO Stockholdings (\$ millions)		
	All Firms (1)	Small Firms (2)	Large Firms (3)	All Firms (4)	Small Firms (5)	Large Firms (6)
Mean	2.42%	3.05%	1.79%	\$41.0	\$19.3	\$62.6
Median	.25	.49	.14	3.5	2.6	4.7
Quintile Boundaries:						
Min	----- less than .01% -----			----- less than \$0.1 -----		
20%	.05	.11	.03	.7	.5	1.2
40%	.17	.33	.10	2.5	1.9	3.3
60%	.42	.73	.20	5.1	3.6	7.2
80%	1.38	1.95	.75	17.4	10.5	22.6
Max	83.00	83.00	53.50	2,304.2	1,041.0	2,304.2
Median value of equity (\$ millions):				\$1,200	\$580	\$2,590

**Table 5**

This Table shows the CEO stock ownership reported as percentage of shares outstanding and the value of CEO stockholding in \$ millions. The analysis was conducted on the all sample and then it was conducted dividing the companies in 2 categories: large and small.

Source: Jensen and Murphy, 1990

The effects of these political actions, as said before, can be more easily detected in large companies; this hypothesis can not explain all the differences between the pay-performance of large and small companies; for example the higher pay-performance sensitivity found for small companies can be explained by the higher degree of influence that CEOs have in small companies.

In conclusion the study conducted by Jensen and Murphy (1990) shows the difficulties to find strong and robust empirical evidence of the relation between firm performance and managerial pay and underlines the presence of many aspects, that are difficult to measure and therefore on which data are not available, that can have huge impact in shaping the pay-performance sensitivity.

Baker, Jensen and Murphy studied other elements of the relation between firm performance and managerial pay, focusing in particular on compensation and incentives features. The first element worth analyzing is the elasticity of compensation with respect to firm sales that, as turned out from this study, is about 0.3. **Table 6** reports the value of this elasticity over time in different industries it is; quite evident that this elasticity is almost always around 0.3.

ESTIMATED ELASTICITY OF CEO SALARY AND BONUS WITH RESPECT TO FIRM SALES, 1973-1983

Industry	Year				
	1973	1975	1979	1981	1983
Manufacturing	.313	.296	.297	.287	.285
Retail Trade	.253	.271	.230	.306	.298
Gas & Electric Utilities	.331	.236	.347	.313	.314
Commercial Banking	.317	.329	.367	.372	.404
Insurance	.313	.277	.299	.372	.345

**Table 6**

This Table reports the value of elasticity of CEO salary and bonus with respect to firm sales over time in different industries.

Source: Jensen and Murphy, 1990

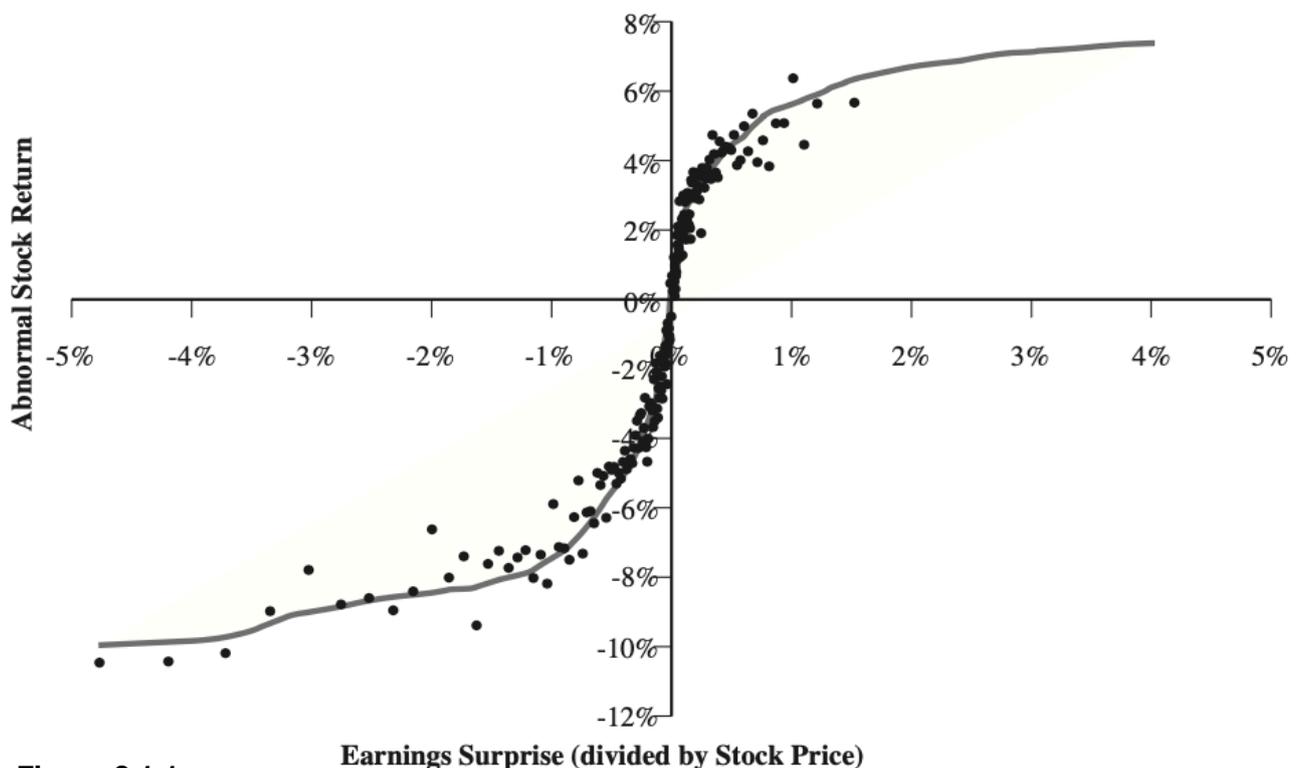
Another extremely important element discussed by the authors is the correlation between firm size and executive compensation, as a matter of fact larger companies tend to pay their executives more. This phenomenon can be easily explained because larger firms can employ better qualified CEOs that required to be paid more. "Murphy (1985) shows that, holding the value of firm constant, a firm whose sales grow by 10 percent will increase the salary and bonus of its CEO by between 2 percent and 3 percent" (Baker, Jensen and Murphy, *Compensation and Incentives: Practice VS Theory*, 1998 : 25). This mean that a CEO could his pay by increasing firm size, even if this mean reducing firm's market value. The example just showed, provide an explanation to the inefficient expenditures of corporate resources for diversification programs that created large conglomerates from the 1960s.

Another topic touched in this paper is the incentive policy; incentives can be defined as mechanism designed to motivate CEO to increase firm performance, most of the time companies provide CEOs with monetary award as a form of incentive, but as Slater (1980) pointed out "Getting people to chase money...produces nothing but people chasing money" (Baker, Jensen and Murphy, *Compensation and Incentives: Practice VS Theory*, 1998 : 5).

The incentives are usually defined referring to performance indicators, for example a contract could state that the CEO gain a 5% bonus if sales increase by 10% with respect to the previous year, in this particular example sales are the performance measure. The perfect performance measure for evaluating a CEO is CEO own contribution to the firm value. This datum is usually not available and is very difficult to measure so instead performance measure are defined in a different way like comparisons to benchmark. One major problem in defining incentive plans is, defining the appropriate performance measure necessary to identify CEO actions and efforts to increase firm value.

Commonly incentives plans are accounting-based, although they seem a good indicator of CEO contribution they presents a series of problems noteworthy. Especially CEOs usually take decisions that could penalize short-term profits to increase long-term value (i.e decisions regarding R&D investments). Furthermore accounting-based measures can be tricky, as a matter of fact if a bonus is expressed as a ratio a CEO can increase it in two ways by increasing the numerator (e.g accounting profits) or by decreasing the denominator (for example selling assets). These incentive plans seem to provide incentives to focus on short-run profits at the expanse of long run value creation, this

effect can be achieved for example by shifting revenues from one reporting period to the next one. These problems could be mitigated through the use of equity-based incentive plans; if, as postulated by many scholars, markets are efficient, then the equity market should penalize CEOs for shifting revenues for personal advantages (this technique is called earnings management game). However some problems presented for accounting-based incentive plans can be exacerbated by equity-based incentive plans. These plans can lead to meet or beat analysts and market expectations for earnings or key performance measures or benchmarks. **Figure 2.1.1** shows the relation between abnormal stock return (defined as the difference between the actual return of a share and the expected return) and quarterly earnings surprises measured by forecast error. Earnings surprises are defined as “the difference between actual announced earnings per share and the median analyst forecast for quarterly earnings thirteen trading days prior to the end of the quarter, divided by the closing stock price for the quarter” (Murphy, Executive Compensation, Where We Are, and How We Got There, 2013: 246).



**Figure 2.1.1**  
 This Figure shows the relation between Earning Surprise and Abnormal Stock Returns.  
 Source: Murphy, 2013

As shown in **Figure 2.1.1** stock prices react positively to small earnings surprises, when a company produces earnings that beat the consensus of analyst forecast by 1% the stock price rises on average by 5.5%. Correspondingly when a company produces earnings lower than the forecasts stock price reacts strongly and negatively, for example if a firm misses its forecast by 1% stock prices fall by about 8%. This figure highlights another salient element, the curve representing the relation between earning surprises and abnormal stock return is S-shaped underlying that the stock price increases to a

decreasing rate; this means that CEOs are motivated to beat analysts' forecasts by a small amount because the additional payoff from beating the forecast by a lot is not significantly higher than the payoff for beating it by a smaller amount. The same analysis can be done with regard to missing analyst earnings by a lot.

It turned out that CEOs can play the earnings management game even when companies use equity-based incentive plans.

Another common measure of performance used in the evaluation process of CEOs is benchmark comparison. Bonuses are usually tied to relative performance measures (e.g. EPS vs last year EPS). In these cases executives can increase their bonus by increasing their firm's performance or by lowering the benchmark. For example "when benchmarks are based on meeting a budget, executives with bonuses tied to budgeted performance targets have strong incentives to low-ball the budget" (Murphy, *Executive Compensation, Where We Are, and How We Got There*, 2013: 244).

In conclusion, the key elements that emerge from this literature review are the problems related to the measure of managerial actions and their evaluation, the effects of internationalization of companies and their consequently "standardization" of pay packages in terms of monetary compensation and structure and the difficulties to find a strong robust relation between pay and performance.

## **2.2) Executive Pay: Is it an agency problem?**

The agency problem (called principal-agent problem too) is a well studied and documented theme in the economic literature.

This problem occurs when one person or entity can make decisions and take actions on behalf of another person or entity, the so called principal.

This new approach to Corporate Governance and Executive pay gained attention thanks to the work conducted by Jensen and Meckling in the mid 1970s even if the the first paper trying to understand and properly analyze this phenomenon was done by Berle and Means (1932).

### **2.2.1) Agency Problem at a glance**

Among scholars there has been a different variety of approach to the agency problem. They all made the same assumptions:

- The principal is risk-neutral, that means that it does not bear risk;
- The agent is risk-averse, that means that it does bear risk.

The agency problem relies on the notion of "arms-length contract" (even if recently many scholars criticized this notion), that is an agreement stipulated by two parties freely and independently of each other, and without special relationship. This type of contract is concluded between shareholders and managers; in this case self-interest and opportunism have a strong impact on the designing of the contract.

These contracts should serve two main purposes , align the different and divergent incentives of firms' executive and their shareholders and obtaining this incentive alignment trying to achieve high values of pay-performance sensitivity, that is the key metrics to measure weather executive pay arrangement create motivation to maximize shareholder wealth. One of the problems related to this principal-agent problem is the imperfect monitoring, in particular the principal does not observe the action that the agent did, but can only observe the results, that derives partially from agent's action and partially from chances. Another problem is the information asymmetry, the principal, as mentioned before, can only see the results and not the execution. It is possible to identify two main types of information asymmetry:

- When designing the contract the principal has less information, in fact he does not know the utility and cost function of the agent, this is called adverse selection;
- The contract between the two parts can not specify the actions that the agent must do so it should promote them, this situation is known as moral hazard.

The problem of adverse selection is famously known as "The Market for Lemons" and it occurs when one party lacks information during the negotiation of the contract; meanwhile moral hazard refer to the situation in which the agent, in this case the executive, that has more information than the principal, can take risky actions (from an executive viewpoint).

The contract must satisfy two constraints in order to persuade the agent to conclude the contract:

- Participation Constraint, also called rational participation constraint, that state that in order to convince the agent to conclude the contract the principal should at least offer him his reservation utility that he would get in his second best scenario;
- Incentive Compatibility constraint, this constraint is base don the notion that the contract can not force the agent's action but can influence them through an appropriate incentive framework; given an incentive plan the agent will act pursuing his self-interest whose outcome satisfy the principal too.

Therefore aligning divergent interests is one of the most relevant purposes of executive contracts. There are different ways through which it is feasible to converge these interests, most of them are based on the concept of risk-sharing, that is the concept of linking executive contribution to company performance. Many of these methods of interests aligning develop themselves around the idea of equity-based compensation offered to executive; in particular sales and other short-term measure of performance can not fully encapsulate the value of managerial actions; meanwhile stock price reflects the value added to company by managerial actions on a longer time horizon. These notions of contract designing here presented can help to explain why managerial contracts always include stock options and other equity-based compensation.

### **2.2.2) Three different approaches**

As discussed in the precedent section the agency problem is the common approach to deal with executive compensation. It should be pointe out that nowadays scholars and academics are coming up with different approaches to face this problem.

One of these new way to deal with the executive compensation is the self-serving executive model whose advocate "argue that pay regimes are an artifact of socially-derived executive power, deliberately designed to secure rent for an executive cadre at the expanse of the interests of other corporate stakeholders" (Bruce, Buck and Main, Top Executive Remuneration: A View from Europe, 2005: 1495). This theory is based on the idea that executives and other members of the top management are just pursuing their own interests through the power they retain but without provoking scandals and social outrage. The main reason for which this theory is gaining traction is that there is plenty of empirical evidence that do not find strong evidence of an high pay-performance sensitivity. The most famous scandals are usually associated with companies that are sailing in troubled waters but provide their top managers high compensation in this case the evident lack of connection between their company performance and their compensation causes social outrage.

This viewpoint is increasing the focus and the attention of academics on equity-based compensation and long-term incentive plans. In particular Bebchuk and Fried (2004) recently strongly criticized these form of compensation and marked them as one little short of theft. They state that "the object of CEO is to extract the maximum personal gain subject to the constraint of not provoking excessive social outrage" (Bruce, Buck and Main, Top Executive Remuneration: A View from Europe, 2005: 1495). Bertrand and Mullainathan showed that "lucky dollars earned by a firm, that is those earning over

which CEO has no control, influence the CEO's pay in the same way as other dollars" (Bruce, Buck and Main, Top Executive Remuneration: A View from Europe, 2005: 1495). They called this practice "skimming".

The advocates of this theory enumerate the following problems related to the principal-agent approach: the presence of social influence between executive and independent directors, the free-riding deriving from the weakness of individual shareholders and post retirement perks that as discussed before make harder to measure the real compensation of CEOs and executives. Some opponents of the self-serving executive model argue that this is just a special case of agency model in which institutions and governance body are extremely weak.

Another approach to executive compensation problem is the Stakeholder theory that is based on a less cynical view of CEOs and executives. This theory states that "senior managers suspend their own immediate self-interest, and make important enterprise decision according to the interests of the firm's stakeholders as a whole, or for the firm as a "community"" (Bruce, Buck and Main, Top Executive Remuneration: A View from Europe, 2005: 1496). Some agency theorists argued that this suspension can be a mechanism that serve managers long-term self interest

Bruce, Buck and and Main (2005) proposed in their paper a new way to face the problem of executive compensation based on an Institutional Theory that is characterized by elements from all the theory previously presented in this section. This approach question whether the applicability of these methods is universal, recognizing the importance of the legal and institutional environment in which the company operate.

This theory puts emphasis on elements like the industry in which the company is, the country institutions and the path-dependence, in fact many regulatory innovations, including executive compensation, must be socially legitimized with respect to regulatory and normative national standards. The result of this process is commonly known as hybridization of corporate governance model, a clear example of this is the Americanization of European executive compensation. There are three main sources of institutional changes, functional pressure, political pressure and social pressure. The functional pressure arise when there is a shared perception of performance shortcomings, the political pressure arise when there is a shift in political interests and consequently a change in power distribution, finally social pressure arise from single interest groups with different social view.

With these approach the authors tried to explain why some economic models proposed for understand the phenomenon of executive compensation are applicable in certain countries but appear not feasible for others. For example the agency-model and the self-serving executive model "seem most applicable to large firms in US and UK" (Bruce, Buck and Main, Top Executive Remuneration: A View from Europe, 2005: 1498). It should be pointed out that UK local institutions and their national legal environment produced more effective constraints than US institutions. In particular, in relation to executive compensation, CEOs in UK applied she degree of self-restraint and suspension of opportunism to contribute to self-regulation.

The last significant factor that should be highlighted is that fiscal policy has a huge impact in defining the applicability of the models discussed in this section and could

shape pay package in different ways, making them more or less depending on firm's performance.

The authors presented two example of how different countries (UK and Germany), and consequently their legal environment and national institution, can make one model or another feasible to explain the executive compensation.

In the UK the use of stock options was and still is very limited with respect to US, in fact 2while the total sum of all realized gains from exercising stock options by the CEOs in the 500 largest UK companies in 1998 came to some £74 m, in the same year Michael Eisner CEO at Disney Co., exercised options worth around £348 m" (Bruce, Buck and Main, Top Executive Remuneration: A View from Europe, 2005: 1499).

This evident difference derives from a different political and institutional context that UK firms had around them. In particular pay packages were subjected to different and more severe fiscal laws and CEOs and executives accepted to adopt best practices present in the Code of Conduct and Institutional Investors; moreover UK is characterized by a strong self-regulatory spirit that has shaped corporate governance practices and executive compensation over time. The effects of these self-regulatory movement and these fiscal laws can be seen in the huge difference between CEOs compensation in UK and US, with American CEOs being paid hugely more.

In contrast Germany is characterized by a strong internal voice of shareholders that are committed in long-term performance; another element noteworthy is the presence of a supervisory board that represents employee interests (it should be pointed out that in Germany the level of unionization is really high, so generally employees have a stronger voice in the company).

These differences in terms of political and institutional context reflects themselves in the different types of pay packages offered to CEOs and executives; for example in Germany stock options usually cover a smaller part of the firm's share capital and a larger number of senior executives. It can be said that "while CEO pay in Germany is undoubtedly shaped by local institutions, it cannot be concluded that social legitimacy has been achieved at the expense of efficiency" (Bruce, Buck and Main, Top Executive Remuneration: A View from Europe, 2005: 1503).

In particular a lot of German companies do not use low-cost pricing strategies or high-volume assembly-line production but prefer to focus on highly engineered and well designed products especially in the car making industry.

This section helped to explain why different approaches are needed to understand different pay practices and corporate governance practice implementation around the world.

## 2.3) Components of Managerial Compensation

The managerial pay, as discussed in precedent sections, is not easy to measure for a variety of reasons, including the fact that it is not composed by just one element but is composed by a group of different kind of compensations. The main one are:

- Salary, that is a fixed cash compensation that the CEO receives at the end of the year or in a precise moment of the year;
- Bonuses, that are cash compensation that the CEO receives if he/she meet some short-term performance level;
- Stock awards, that are stocks sold to the CEO at low price and represent ownership in the firm;
- Stock options, that are form of compensation that allow the CEO to sell stocks at an agreed upon price and date.

The following sections are going to cover these forms of compensation with greater details.

### 2.3.1) Salary

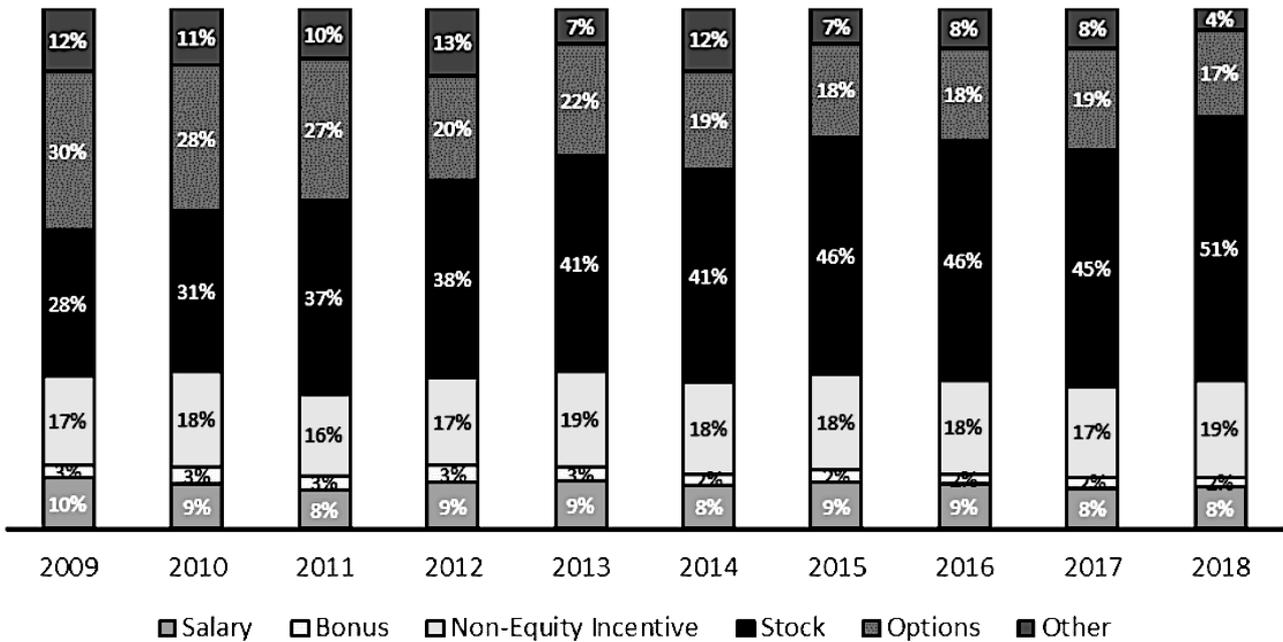
A CEO's salary is a fixed amount of cash that a company provide to him/her. According to the contract design theory it should be at least equal to his/her reservation utility in order to convince him/her to be an executive in the company.

The reservation utility is the minimum level of utility that should be guaranteed by a contract to make it acceptable to the agent.

**Figure 2.3.1** shows the composition and the evolution over time of CEO compensation for S&P CEOs. It is quite evident that the weight of the salary on the total compensation is almost constant over time, this fact is concordant with the contract design approach mentioned earlier.

This component of CEO's compensation is irrelevant for the evaluation of pay-performance sensitivity, in fact it does not depend on performance or the meeting of some benchmarks.

Therefore CEOs' salary are complying with the requirements of an optimal contract according to the theory of contracting.



**Figure 2.3.1**

This Figure shows the composition and the evolution over time of CEO's compensation for S&P CEOs. The different elements considered in the evaluation of CEO's compensation are salary, bonuses, non-equity incentives, stocks and options.

Source: Murphy, 2013

### 2.3.2) Bonus

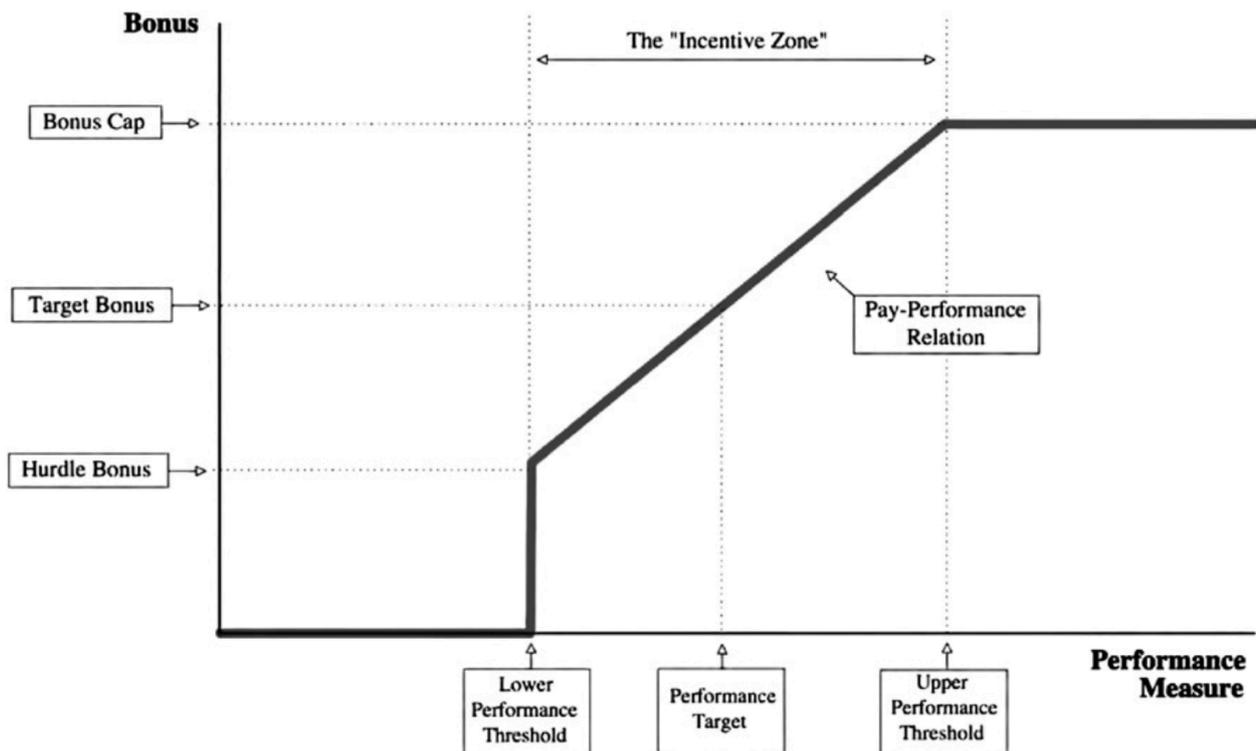
Bonuses are a form of compensation linked to the meeting of some short-term performance measure. This component of CEOs' compensation create multiple problems connected to the alignment of incentives.

Bonus plans have usually stronger effects on managerial actions and behaviors because CEOs are more able to understand how their actions can change accounting measures, but rarely understand how their actions can affect their company stock price. Moreover the immediacy of this form of compensation make CEOs more eager to achieve the desired results than other form of compensation like stockholding or stock options.

Although the presence of these strong incentives can appear a positive factor there are deeply rooted problems in the designing phase of many bonus plans.

The usual plan typically provide no bonus if the performance is under a certain threshold, and the bonus is usually capped at an upper bound; after this point there is an increase in performance produce zero additional bonus.

**Figure 2.3.2** shows a typical bonus plan highlighting the presence of a lower performance threshold and an upper performance threshold.



**Figure 2.3.2**

This Figure shows the typical bonus plan. There are two thresholds the lower performance threshold that the CEO must be pass to gain a bonus and an upper threshold that CEOs usually do not want to overtake because the passing of this threshold does not provide any additional bonus to them.

Source: Murphy, 2013

These threshold are commonly decided in the budgeting process. Looking at **Figure 2.3.2** it is quite easy to spot some problems with this form of compensation. In the first place CEOs can be motivated to shift earnings or cash flows from one period to another (a problem already underlined for equity-based plans). This process of shifting earnings can motivate managers to withheld effort and consequently lower the performance of the firm and not maximizing the value of the company.

The incentive zone (one example is presented in **Figure 2.3.2** ) can be linear, convex or concave.

The graph presented in **Figure 2.3.2** underlines an important concept the definition of threshold that make the incentive plan not linear could create serious problem in term of performance. For example executives can be motivated to not increase the performance for which they are evaluating, because if they surpass the upper threshold they are not going to receive additional bonuses; moreover they are going to try to transfer performance results from the present evaluation period to the following ones.

The lower threshold presents other problems, for example if a CEO believes that he can not achieve the result needed for reaching the lower threshold, are going to "save" performance for the next period. Furthermore, executives who believes that they are capable of reaching at least the lower threshold are going to make every possible decision to achieve that result; these decision are usually bad for the company and its shareholders and include actions like reducing R&D budget and required maintenance expenditures.

The discontinuity introduced by the threshold represent a real problem that exacerbate some of the typical problem related to the relationship between managers and shareholders.

These problems linked to non-linearity can be partially mitigated by eliminating caps on the upside and by introducing and implementing penalties on the downside. The penalties can be implemented “by basing pay on multi-period cumulative performance or deferring current compensation into a bonus banks that can be used to fund future negative bonuses” (Murphy, Executive Compensation, Where We Are, and How We Got There, 2013: 217).

In conclusion bonuses can motivate executives and managers to behave in the best interest of the company but for achieving such results they should be carefully crafted in order to avoid the problems described in this section.

### **2.3.3) Stock Awards**

Stock awards are a form of compensation allow CEOs to receive stocks (especially at low price) as a form of compensation. This form of compensation can mitigate some of the problems linked to bonuses, for example the shifting of revenues from one period to another. As a matter of fact executives’ interests should be aligned to shareholders’ ones, because with stock awards executives benefit if the stock price increase (i.e there is creation of wealth).

This component of managerial pay has the relevant job of increasing the executive attention on long-term wealth creation instead of short-term increase in accounting-based performance measure.

Stock awards are usually referred to as restricted stocks and have a special legal treatment that is designed to prevent managerial abuse that could potentially damage the company. These restricted stocks are non-transferable and must be treated in compliance with special SEC regulations. (<https://www.investopedia.com/terms/r/restrictedstock.asp>, 15/5/2020 14:44). These stock restriction are applied to avoid and deter premature selling that can adversely affect the company.

Executives should forfeit their restricted stocks if they leave the company, fail to meet some corporate goals or run afoul of SEC trading restrictions.

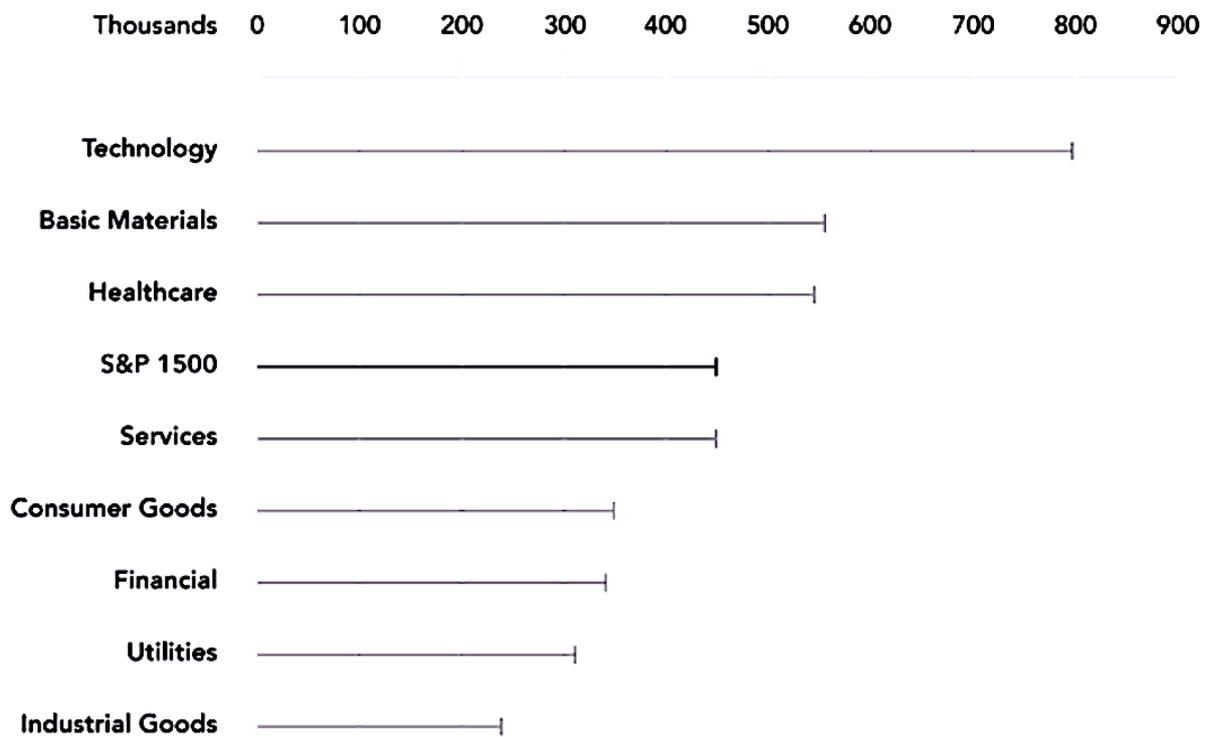
Moreover executives must disclose the amount of restricted stock they own, declaring as income the stock’s fair market value on the vesting date minus its original exercise price.

**Figure 2.3.3** shows the median amount of restricted stocks awarded to by 1500 S&P companies.

**Figure 2.3.3** clearly shows that the kind of compensation is more widespread in industries in which long-term commitment is more important to achieve wealth creation and commercial success.

In conclusion this form of compensation alongside stock options can increase the interest in long-term wealth creation and can help to reduce the divergence of interests between shareholders and executives and the agency cost associated to this misalignment of incentives.

### Median Restricted Stock Granted By S&P 1500 Companies, 2014



**Figure 2.3.3**

This Figure shows the median amount of restricted stocks granted by S&P companies in 2014. It is evident that the amount of restricted stock is bigger where long-term commitment is more important, therefore companies operating in industry like technology or healthcare provide more restricted stock than companies operating in industries like finance or utilities.

Source: <https://www.equilar.com/press-releases/35-2015-equity-trends.html>

#### 2.3.4) Stock Options

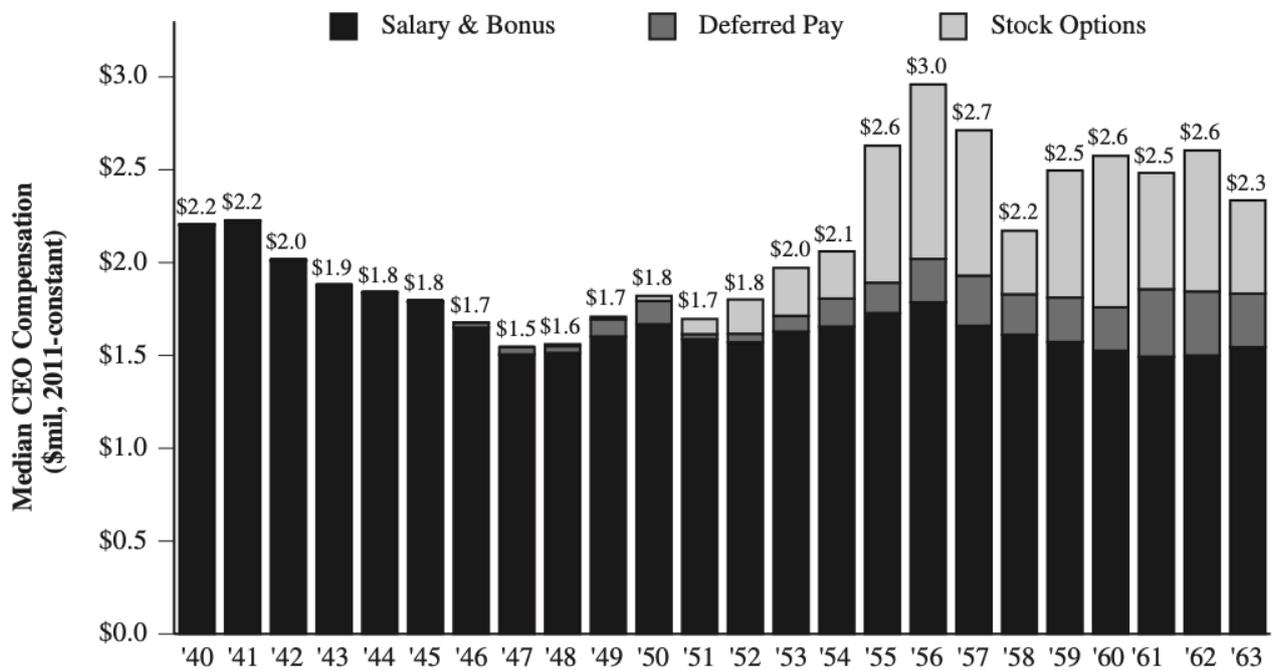
A stock option is a financial tool that is usually part of the pay packages offered to executives. This form of compensation “gives an investor the right, but not the obligation, to buy or sell a stock at an agreed upon price and date (“<https://www.investopedia.com/terms/s/stockoption.asp>,16/5/2020 15:22) .

This form of pay has a long history and it is surrounded by many debates concerning the adequacy of its regulation, the exacerbation of the agency problem that it can create and the mismanagement that occur when it is abused by companies.

The main purpose of this financial instrument is to ensure that executives act in the best way possible to increase the value of the company and therefore increase shareholder wealth.

Stock options gained popularity in the 1950s when a business-friendly Congress, contrary to the Supreme Court of the US decision that chose to apply the ordinary income rate (25%) on stock options instead of the capital gain rate (12.5%), allowed the creation of a different type of stock options called “restricted stock options” that were

taxed not upon exercise but when shares were sold. This decision that was part of the Revenue Act made the stock taxable at the capital gains rate increasing the popularity of this form of compensation. The evolution between 1940 and 1960 of pay package and composition for CEOs is shown in **Figure 2.3.4**.



**Figure 2.3.4**

This Figure reports the evolution over two decades of the composition and level of median CEO’s compensation. It is evident that since the passage of the Revenue Act (1950) the percentage of stock options offered as a form of compensation increased significantly.

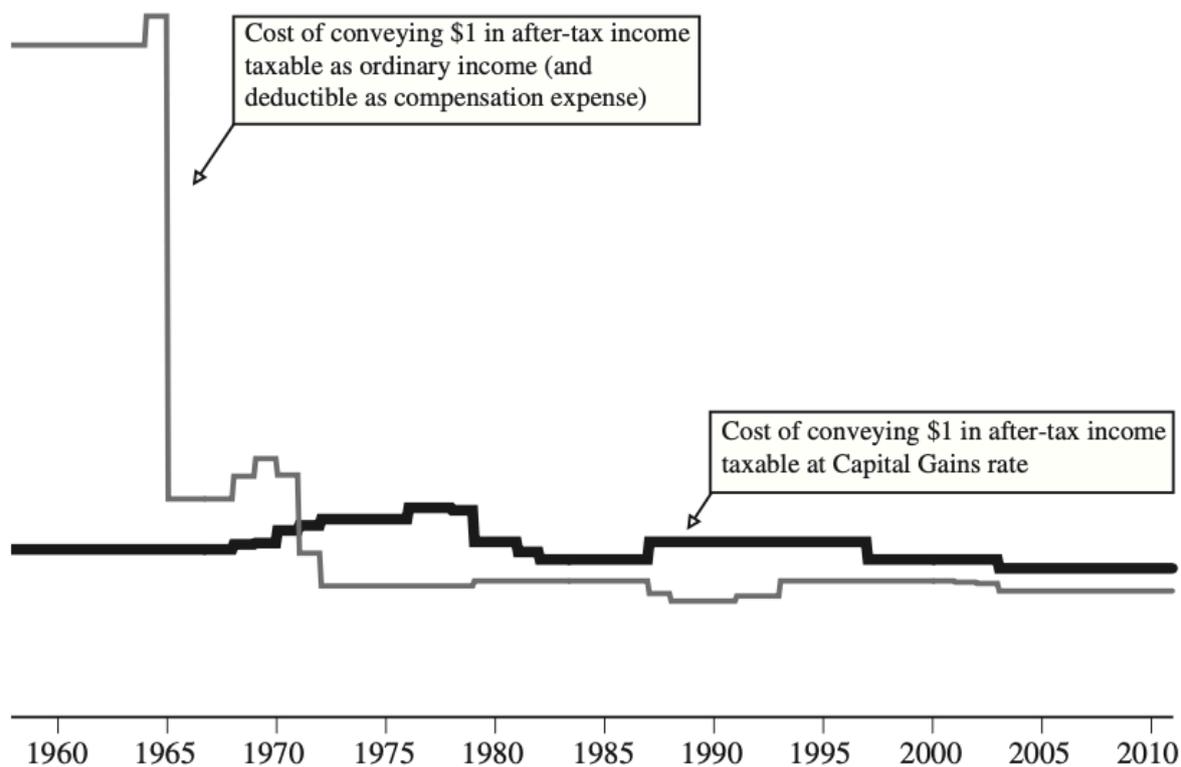
Source: Murphy, 2013

This new form of compensation was becoming commonly popular as a part of CEOs’ pay packages. Later, in the 1960s the Congress of US “reduced the top marginal tax rate on ordinary income from 91% to 70%, which significantly reduced the attractiveness of restricted stock options over cash compensation” (Murphy, Executive Compensation, Where We Are, and How We Got There, 2013: 257).

**Figure 2.3.5** reports a historical comparison of the tax advantages of restricted stocks (the one created in the 1950s) relative to non-restricted stock options.

Stock options can drive CEOs and executive to act irresponsibly in order to achieve the maximum personal benefit. One of the most used (illegal) way to achieve these personal benefits is the option backdating. “Under this practice, companies deliberately falsified stock option agreements so that options granted on one date were reported as if granted on an earlier date when the stock price was unusually low—commonly the lowest price in the quarter or in the year”(Murphy, Executive Compensation, Where We Are, and How We Got There, 2013: 290).

These practices were widespread and brought the SEC to charge against many companies over the years.



**Figure 2.3.5**

This Figure shows the evolution over time of tax rate on ordinary income and capital gain. These rates are important because they drive the preferences in terms of compensation. It is evident that from the 1964 when the fiscal advantage of owning restricted stock options became less important cash compensation became more competitive in terms of appreciation by CEOs. Source: Murphy, 2013

In conclusion stock options are wildly popular and can be an effective long-term incentive for CEOs and executives in order to achieve commercial success on a longer time horizon, but they should be carefully crafted and subjected to a strict and effective regulation that should avoid abuse and exploitation of these form of compensation at the expense of wealth creation and consequently shareholders.

#### **2.4) The evolution over time of managerial compensation**

The history of managerial pay is strongly linked to the economic progress and evolution that countries faced. The use of a particular form of compensation is based on many different elements: fiscal policy, public accountability and outrage, macroeconomic trends, political pressure and academic researches; for example many aspects of the agency problem linked to CEOs' compensation were discovered thank to the brilliant work of Jensen and Meckling in the mid-1970s.

The following sections are going to cover the history of managerial pay from the 1930 to 2008 explaining how a wide range of elements contribute to shaping CEOs' compensation and consequently the pay-performance sensitivity.

### **2.4.1) 1930-1950**

The years between 1895 and 1904 were critical in the formation of large businesses across the US; the improvement in the field of communication and technology allowed the development of country-wide enterprises. In this period "nearly two thousand small manufacturing firms combined to form 157 large corporations." (Murphy, *Executive Compensation, Where We Are, and How We Got There*, 2013: 251). The dimensional increase was not followed by any change in the pay packages because the majority of these corporations were still run and operated by owners, founders or individuals with large blocks of equity, therefore there was no clear and obvious reason for incentive plans that bound remuneration with corporate performance. Shortly after there was a significant change in corporate culture, many management responsibilities shifted from owners/founders to executives with professional management skills. This new class of managers had no considerable equity stakes, consequently there was a void in incentives. In the next two decades this lack of bonuses was filled by the rise of incentive plans tied to corporate profits; this new way of paying managers quickly gained traction and "by 1928, nearly two thirds of the largest industrial companies offered executive incentives plans"(Murphy, *Executive Compensation, Where We Are, and How We Got There*, 2013: 250).

The absence of public disclosure of executive bonuses and the economic growth was stable granting low unemployment high shareholder returns and prosperity.

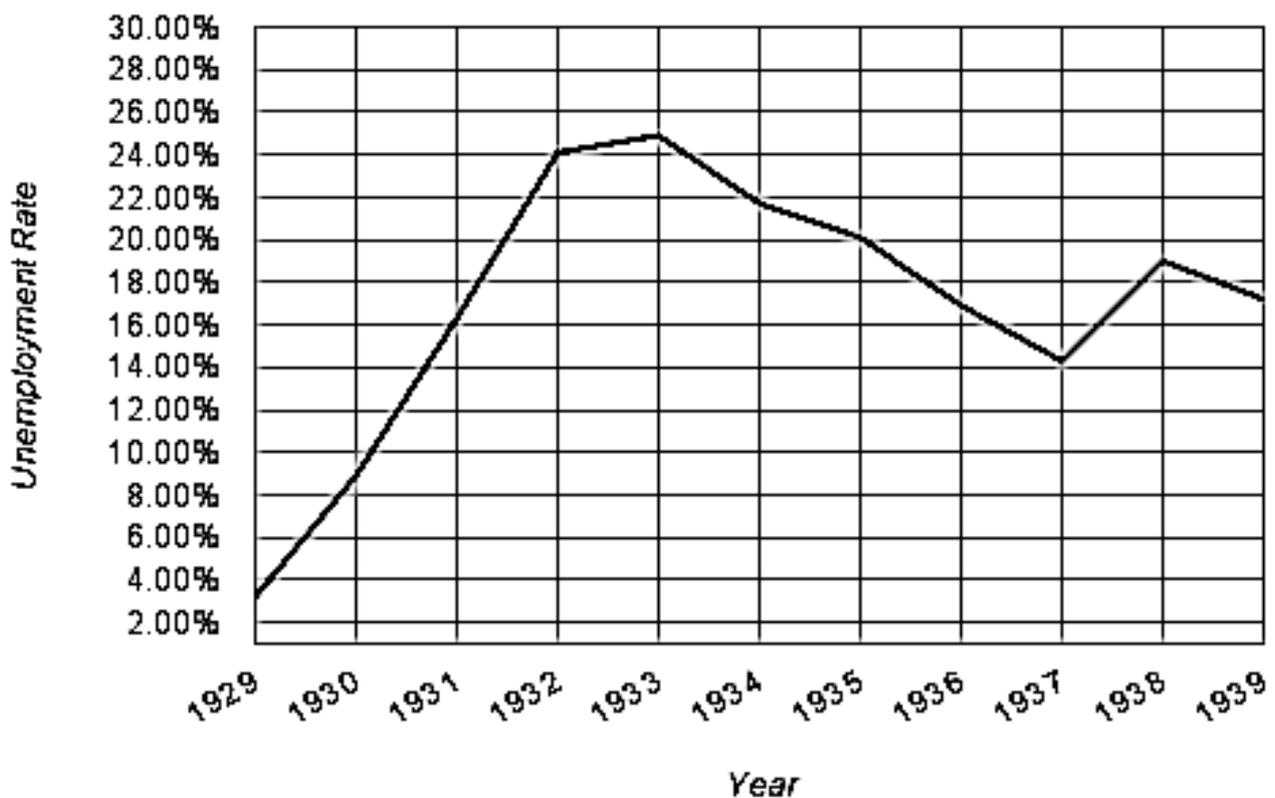
The Great Depression (the economic effects of which on employment can be seen in **Figure 2.4.1**) deeply influenced the public and political perception concerning executive compensation and bonuses. In July 1930 during a lawsuit trying to prevent Bethlehem Steel's takeover of Youngstown Sheet & Tube Co. Bethlehem's CEO was forced to reveal that he received a bonus consisting of \$1,623,753 for 1929, while six vice presidents received \$1.4 million in aggregate. The same year there were new revelations regarding American Tobacco and its CEO that was forced to show excessively high executive remunerations. In both cases this high level of remuneration fueled public outrage culminated in a significant number of lawsuit carried on by shareholders.

These two events and the political interest in regulating these pay packages by "New Deal" politicians created the perfect environment to have pay disclosure.

After many years of Republican government, in 1933 Franklin Delano Roosevelt became president and started new political trends and regulation concerning pay disclosure for top executive managers especially in the railroads industry. The Roosevelt Administration was particularly shocked by the disclosed pay and put an informal, but uniformly complied-with) cap of \$60,000 for all railroad top executive.

This first "experiment" on pay disclosure conducted by this Administration was the precursor of many other actions taken towards a more supervised and transparent

## Unemployment During The Great Depression



**Figure 2.4.1**

This Figure highlights the rise of the unemployment rate in US during the Great Depression. At its peak unemployment rate in US reached a little more than 24%.

Source: <https://sites.google.com/a/sheboyganfalls.k12.wi.us/brianna-alex-and-tyson-s-living-histories-project/statistics>

corporate world (in these years the Federal Trade Commission was extremely active in pursuing more public accountability and oversight).

In 1934 President Roosevelt founded the Securities and Exchange Commission (SEC) (through the Securities Act) and assigned it a pivotal role in the enforcing of pay disclosures for executives. The SEC established a new set of rules that forced public companies to disclose the name and all the compensation received by the three highest-paid executives of a company.

The role of SEC was critical over time in defining the rules that companies should comply with, and from its creation, increasingly expanded the elements of pay packages that must be disclosed; a great example of the evolution of the regulation can be found in the increased length of the proxy statement the first one was about three-to-five pages long, by 2007 the average proxy statement was incredibly longer totalizing more than 70 pages.

This increased regulatory activity filled two legitimate purposes, meeting some requests advanced by concerned shareholders and satisfying public curiosity. Although the second purpose had some positive effects like ensuring public accountability for CEOs and executives it also had enormous cost on the bargaining process through which private corporations choose the way to remunerate their executives.

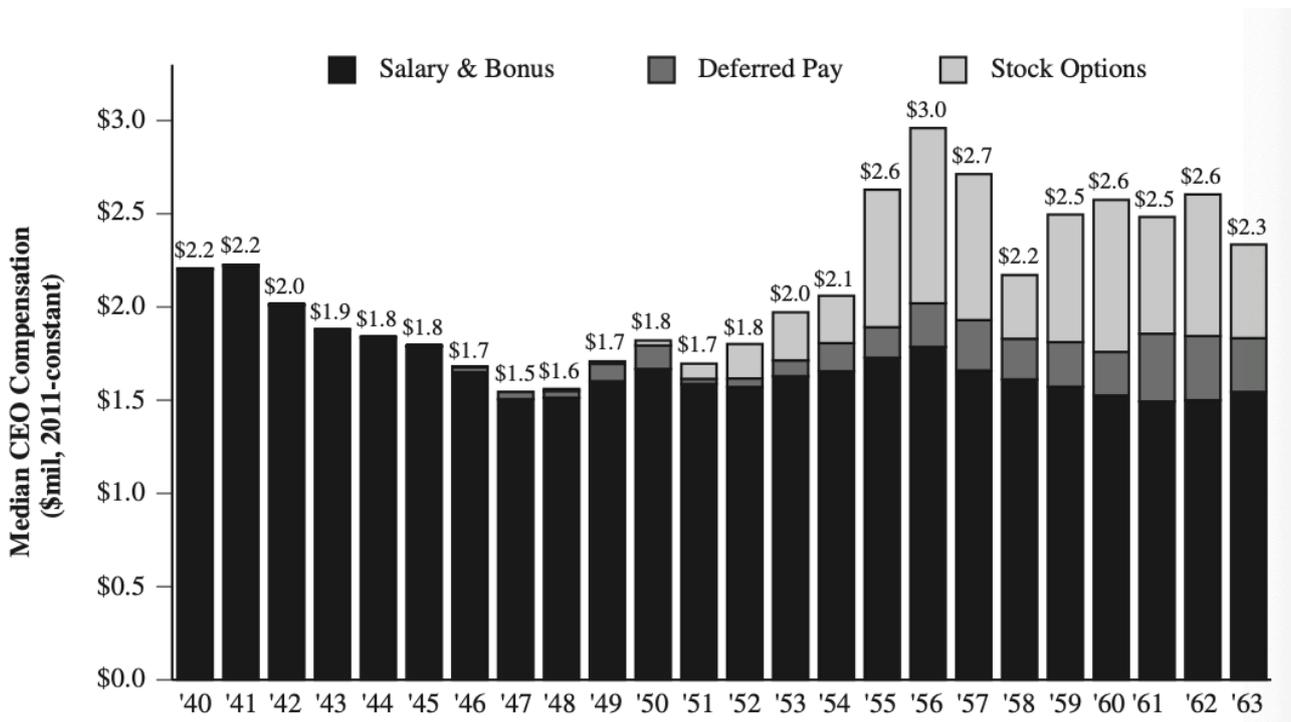
This influence exerted by groups unaffiliated with companies (e.g. media and political parties) puts pressure even when these groups have no real interest in the way the company is managed; to summarize, these groups can have a major role in the bargaining process between employer and employee transforming it from a private matter to a public one.

Undoubtedly, it is really hard to draw a line and the trade-off between better monitoring and public influence in private matters is really complex to solve.

### 2.4.2) 1950-1969

In the late 1920s the use of stock options was really rare and a pivotal problem was the way to tax them. The debate was should they be taxed as compensations or as capital gains?

This issue was at the center of a debate surrounding fiscal policy and taxation for nearly twenty years; this debate was one of profound importance because the highest marginal rate on ordinary income skyrocketed from 25% to 91% meanwhile the highest capital gain rate was 25%. The Supreme Court ruled that they should be taxed as a form of compensation; however in the 1950 Revenue Act, the Congress of US at odds about the new Supreme Court decision created a new type of stock options called “restricted stock options” which would be taxed as capital gains.



**Figure 2.4.2**

This Figure shows the composition and the median pay of CEO in 50 large US manufacturing companies from 1940 to 1963. The growth of stock options as a form of remuneration is clear, the light grey bar increased considerably from the passage of the Revenue Act.

Source: Murphy, 1990

The passage of this new law facilitated the creation of an enormous wave of new option plans (that can be seen in **Figure 2.4.2**). The use of stock option plans increased because of this favorable tax treatment they had.

In the first half of the 1960s President Kennedy and a Democratic-controlled Congress worked to solve the issues related to the favorable taxation of stock options.

This issue was intensely debated and discussed for three years and intensified in early 1964 when it was revealed that executives at Chrysler had gained \$4.2 million in gains from exercising stocks.

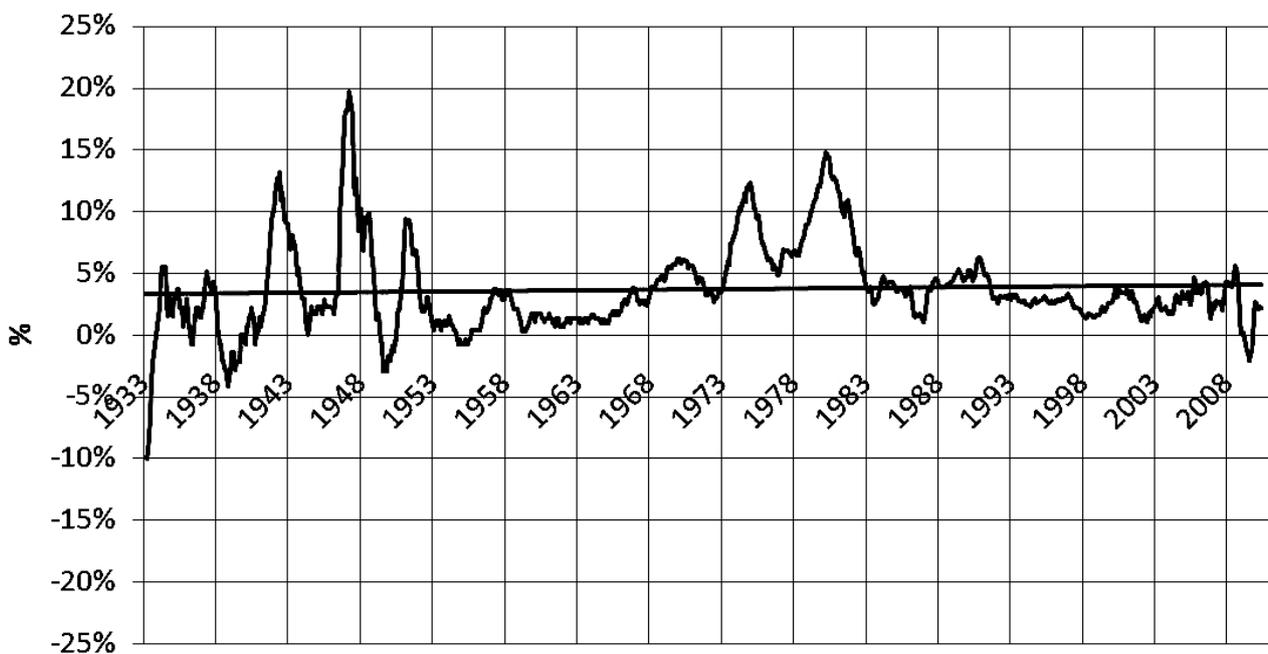
In conclusion Congress passed a new law that reduced the attractiveness of restricted stock options, in particular under the new law:

- Executives were required to hold stock acquired through option exercises for three years in order to be taxed at the lower capital gains rate;
- The maximum option term was reduced from ten years to five years;
- The option price could not be reduced during the term of option;
- The top marginal tax rate on income from 91% to 70%.

Overall these measures achieved their goal of reducing the attractiveness of stock options over cash compensation. The result was a collapse in the use of restricted stock options.

### 2.4.3) 1970-1983

The first half of the 1970s was characterized by a significant increase in the inflation level. The Consumer Price Index (CPI), commonly used for measuring the inflation level, rose considerably (as shown in **Figure 2.4.3**) and led the Nixon Administration to foist a 90-day freeze on commodity price and wages in August 1971.



**Figure 2.4.3**

This Figure shows the evolution of the annual change of CPI over time in the US. The steep slope of the curve in the 1970s highlights an important increase of the inflation level.

Source: Bureau of Labour Statistics.

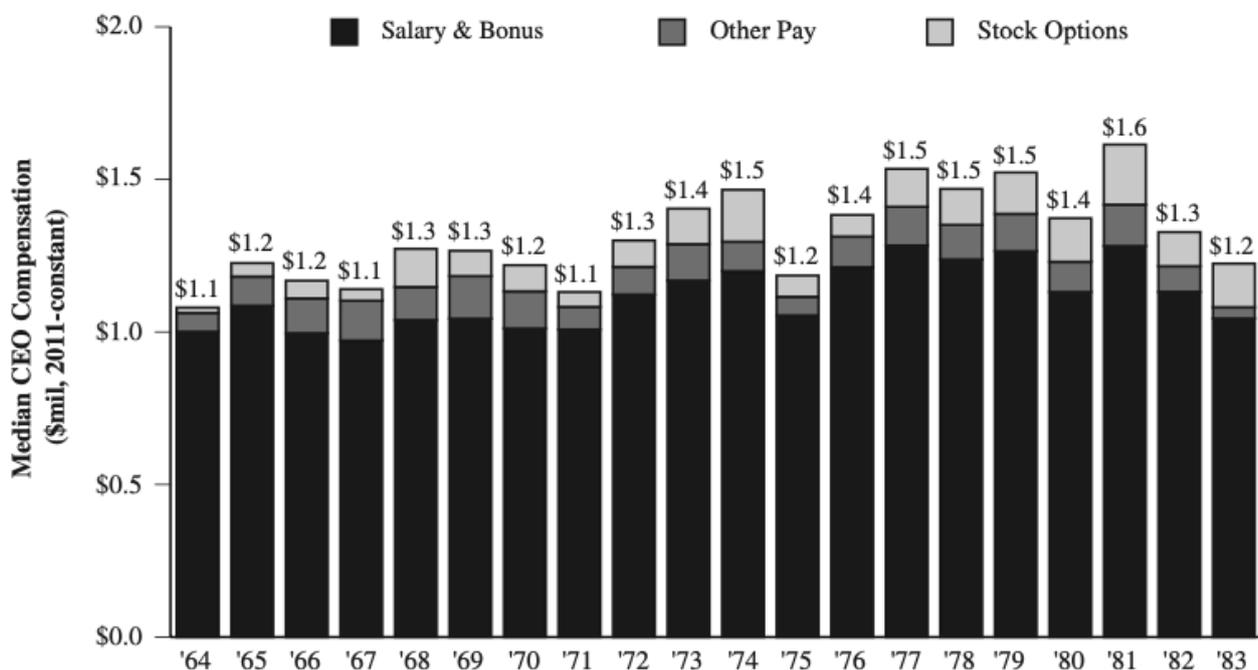
Among the various measures taken by the Government there was one that was unprecedented, for the first time in a peacetime economy there was an explicit limit on executive compensation levels. Both during the Second World War and during the Korean War there were some form of control over executive compensation level, but this limits imposed on wages were rapidly dismissed after the wars ended.

In December 1971, as a part of his plan of wage-and-price control the Nixon Administration imposed a limit of 5.5% for increase in executive pay.

However “this limit did not apply to existing sales incentives, commission and production-incentive programs. As a result, scores of companies introduced performance-based bonus plans tied to accounting data or revenues, or converted their plans into plans exempt from the limits ” (Murphy, Executive Compensation, Where We Are, and How We Got There, 2013: 260).

This constraint on executive pay-raise was easily to bypass because it was applied to executives considered as a group, therefore companies circumvented this limit by reducing the pay of lower-level manager and raising CEO and higher-level executives.

**Figure 2.4.4** shows the median level and structure of compensation for CEOs and highlights how the median compensation of CEOs during the wage-and-price control increased despite the constraints and limits put in place by the Nixon Administration.



**Figure 2.4.4**

This Figure shows the median level and the structure of compensation for CEOs in 73 American large manufacturing companies. In this time-span the major trend was the increase in the use of stock option plans, that in 1964 accounted for 2% of pay for the average CEO meanwhile accounted for 12% of pay in 1981.

Source: Murphy, 2013

In conclusion during the first half of the 1970s cash compensation increased, meanwhile the use of stock option plans was stable and was not increasing especially because of

the changes in tax policies that, as aforementioned, made stock option plans less alluring.

The lack of interest for stock options as a form of compensation allowed companies to offer different type of compensation like book-value plans, long-term performance plans and guaranteed bonuses. Moreover, since the wage-and-price control era, companies offered to CEOs and high-level executives more benefits like low-interest loans, limousines, yacht, corporate jet and other perquisites.

These alternative forms of remuneration were perceived as abusive by the Internal Revenue Service (IRS), the SEC and many shareholders; this anger was even amplified by President Carter that was shocked when became aware of companies taking deductions for perquisites like theater tickets or first class air travel and rallied against this kind of corporate behaviors. In August 1977 the SEC in an attempt to curb these excessive use of perquisites, imposed that such perquisites had to be included and therefore disclosed as compensation in proxy statement.

This battle against perquisites found many advocates in the academic world such as Jensen and Meckling whose brilliant work on the "agency problem" focused heavily for the first time on non-pecuniary benefits.

Another relevant phenomenon that was peculiar of the 1970 was the expansion programs and diversification attempted by companies in order to increase their revenue; this process had a simple goal, it was known at the executive level, that cash compensation increased in direct proportion to company size (usually measured by revenues) so if diversification, expansion and investment programs fostered more revenue generation then executive cash compensation increased. Most of these programs were ineffective and unproductive.

Moreover, this period was characterized by incredible technological advances that improved productivity, increase in global trade and decline in regulation.

Finally, at the beginning of the 1980s many companies faced two problems they had excessive capacity and excessive free cash flow.

By definition, industries with excess of capacity have more capital and labor than required to obtain a productive deployment; therefore there are two ways of balance that excess, increasing the output or maintaining stable the output with a smaller workforce. In addition, this enormous amount of cash was greatly more than needed for founding positive net-present-value projects and investments.

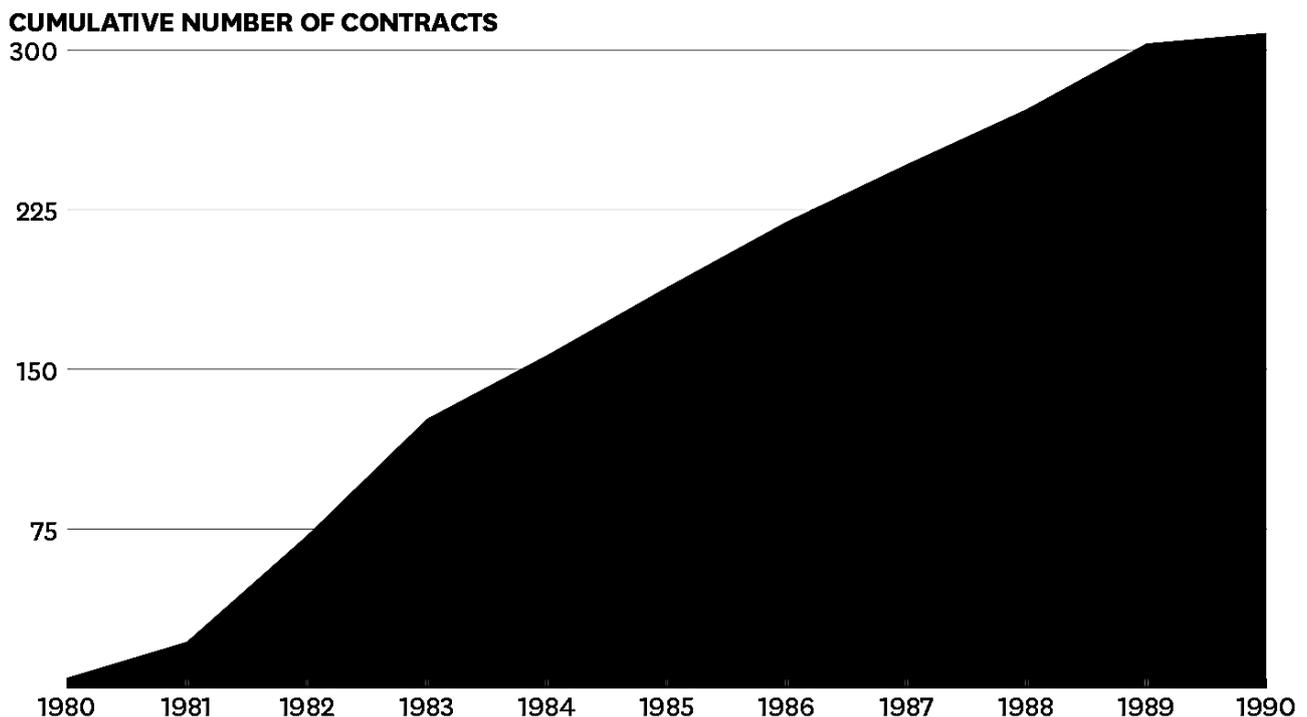
#### **2.4.4) 1983-1992**

Equity-based compensation were really rare in the 1970s, consequently there were little incentives to pursue value-increasing projects such as reducing excessive capacity or increasing the output; moreover, the main form of incentive plans were annual bonuses that increased executive attention on short-term profits instead of long-term value generation. Finally, there were two additional brakes to the pursuit of long-term value creation, first the managerial market was ineffective in punishing poor-performing managers, because a significant number of open positions as CEO were filled by incumbents and second boards of directors were only interested in delivering positive profits and did not care about corporate wastes.

However hostile take-overs put pressure on managers, and forced them to improve corporate performances in the long-run.

“The takeover market was complemented by the emergence of leveraged buyouts (LBOs): going-private transactions financed by debt using the target firm’s future cash flows as collateral. Debt created value by providing commitments that the firm would pay its cash flows to debtholders, reducing the amounts available for executives to waste” (Murphy, Executive Compensation, Where We Are, and How We Got There, 2013: 268).

It is worth noting that the most notorious innovation in executive compensation was the golden parachute (whose increase over time can be observed in **Figure 2.4.5**) that consisted in payments to executives in case of successful change-of-control.



**Figure 2.4.5**

This Figure highlights the increase use over time of golden parachutes in contracts.

Source: <https://hbr.org/2016/10/a-short-history-of-golden-parachutes>

In order to obtain the payments, in most cases, it was necessary the change-of-control and the loss of a job (this was the “double-triggered” golden parachute), but there were some exceptions in which the change-of-control was the only requirement to be filled (this is the “single-triggered” golden parachute).

These kind of arrangements became controversial when William Agee, CEO of Benedix received a \$4.1 million payment.

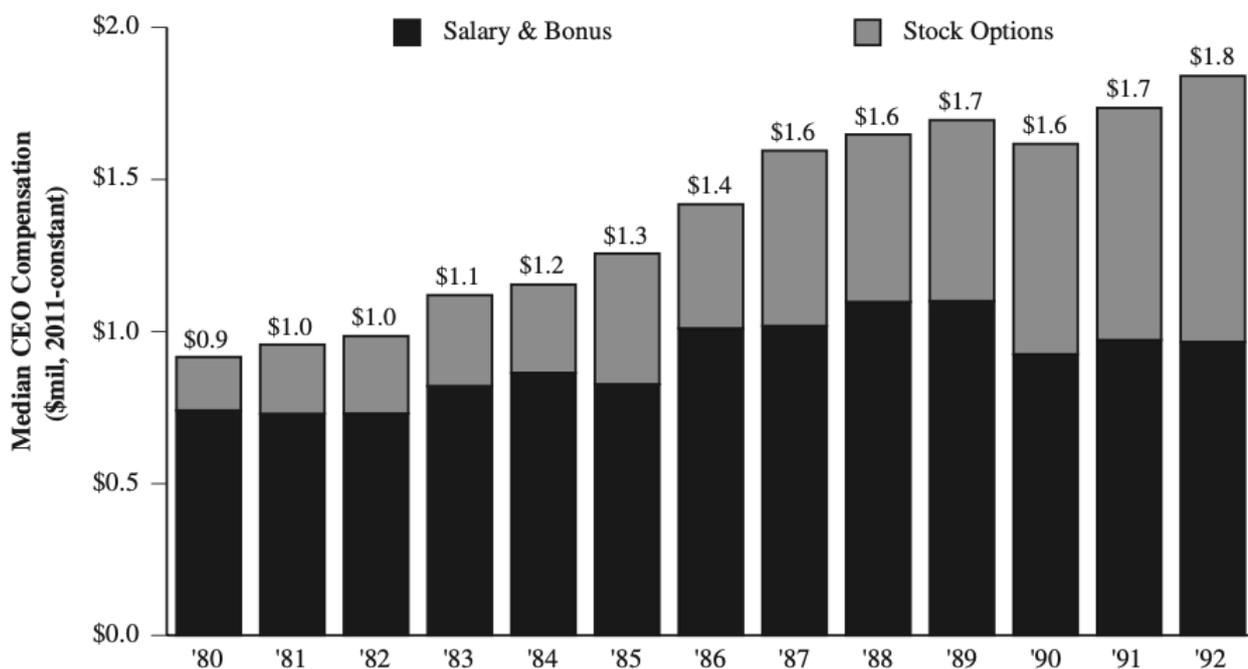
Congress tried to discourage the use of golden parachute adding Section 280(G) to the tax code. Section 280(G) contained some restrictions and penalties for excessive use of golden parachute. In response to this large corporations proceeded to a standardization of golden parachute in order to comply with the recently passed Section 280(G).

After a long period of stagnation, the Dow Jones Industrial Average rallied from below 800 points to over 2700 between mid-1982 and mid-1987. The main beneficiaries of this wave of takeover were shareholders but many executives tried and fought hard to prevent takeovers even lobbying for political protection. The results of these lobbying actions consisted in “hundreds of bills were introduced in Congress to curb takeovers and highly leveraged transactions” (Fischel, *Payback: The conspiracy to destroy Michael Milken and his financial revolution*, 1995).

Nevertheless the lesson about value-generation in the long-term was clear, shareholders started organized themselves in association like the Institutional Shareholder Services and the United Shareholders Association that provided assistance to shareholders on topics like governance and voting.

Furthermore many academics and scholars strongly criticized non-equity-based compensation packages arguing that bonuses based on accounting measures, company size were not a proper way to incentivize value creation.

This idea that compensation should be tied more closely to company value rather than other form of bonuses gained attention and, consequently, after the mid-1980s stock options became a bigger part of the total compensation packages (this shift from accounting based bonuses to equity-based compensation is evident in **Figure 2.4.6**).



**Figure 2.4.6**

This Figure shows the median level and the composition of compensation for CEOs between 1980 and 1992.

Source: Murphy, 2013

**Figure 2.4.6** underlines two important aspects of the new trends that involved managerial pay, first it doubled from 1980 to 1992, second the use of stock options grew fast and accounted for almost 50% of the aggregate CEO pay in 1992.

It should be also pointed out that “between October 13-19, 1987, the Dow Jones Average dropped nearly 800 points (from 2508 to 1738), losing 30% of its value in a week. Executive stock options, which had only recently become an important part of pay, were suddenly underwater.” (Saly, P. J., Repricing executive stock options in a down market. *Journal of Accounting and Economics*, 1994, 18: 325-356).

Furthermore many large manufacturing companies were downsizing and laying off workers contributing to fuel outrage of politician in Congress labor unions and the media. This situation was the perfect environment for a populist attack on executive pay, that exploded during a visit of President George H.W Bush in Japan, in which it emerged that there were too large disparities, in terms of pay between US executive and Japanese one. It was common opinion that these disparities were the main factor that was thwarting US global competitiveness.

In response to these phenomena the SEC and Congress passed new bills and new legislation in order to limit excessive compensation and to help shareholders to have a voice in compensation-related policies.

#### **2.4.5) 1993-2001**

The 1990s were characterized by a staggering increase in the use of stock options as a form of compensation for CEOs (as shown in **Figure 2.4.7**).

This increase in the use of stock options cannot be explained by a single factor because there were many elements that contributed to this high use of stock options.

They were:

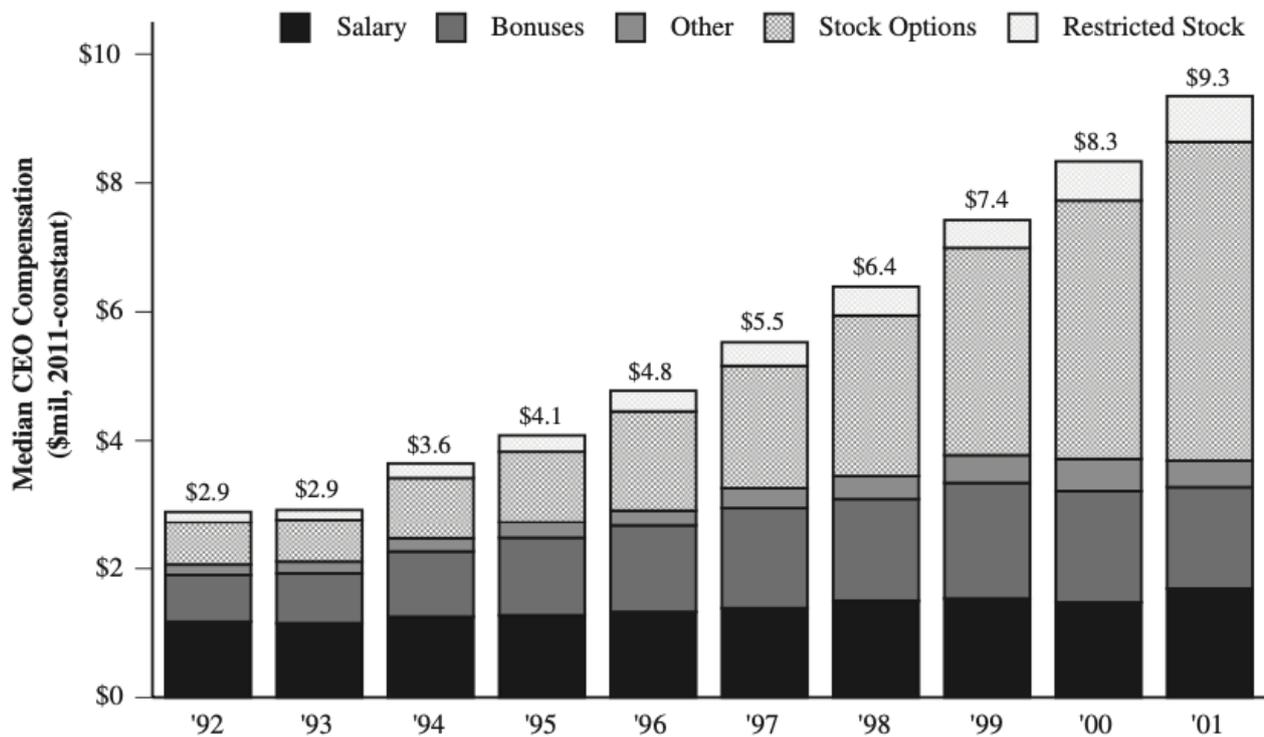
- Shareholder pressure for equity-based compensation;
- Clinton \$1 million deductibility cap;
- NYSE listing requirements.

The first phenomenon took place from the late 1980s when shareholders activists demanded to tie CEO pay to shareholder returns. To briefly summarize activists argued that compensation committees and Boards of Director had to focus their attention on the composition of the pay package rather than the level of the compensation itself. Companies responded to these pressures increasing their use of stock options without reducing the level of other form of payment.

The proposed imposition of the \$1 million deductibility cap by President Clinton created two opposite reactions, on one hand many politicians from both side of the aisle were enthusiastic about these new law on the other hand many companies did whatever they could to react in order to maximize their earnings.

In addition many companies including Merrill Lynch, Morgan Stanley and Bear Stearns publicly announced that they were considering to return to private companies if the bill became law.

By February 1992 President Clinton softened his position admitting that not all compensation over \$1 million was unreasonable and therefore non-deductible; for example performance-based forms of compensation were exempt from the proposed law. Moreover this law was intended to be applied only to CEOs and the four highest paid executives of publicly traded companies.



**Figure 2.4.7**

This Figure shows the median level and composition of S&P 500 CEOs. It is evident that the both use of stock options and the overall level of compensation increased dramatically.

Source: Murphy, 2013

Although the objective of the law was clear, limiting excessive CEO pay through limiting deductibility, the effect was a considerable increase in CEO compensation (as shown in **Figure 2.4.7**).

The reactions to the passage of the law were predictable, companies with CEOs salaries exceeding \$1 million lowered salaries to \$1 million and increased other performance-based forms of compensation, meanwhile companies with CEOs earning less than \$1 million raised their salaries to exactly \$1 million.

These reactions are common and show that whenever a cap on salaries is imposed companies tend to standardize the compensation practices by offering a salary equal to the cap value.

In conclusion legal imposition shed light on the negative effects of arbitrary (because it is applied only on public companies) and discriminatory (because it is applied only to high level executive) tax rules.

The last factor that had a huge impact was the NYSE listing requirements. "Under listing rules in affect at the time, companies needed shareholder approval for equity plans covering top-level executives, but did not need approval for broad-based plans. While the SEC had not been clear on how "broad-based" was defined, the general understanding was that such plans involved equity or option grants to employees below the executive level." (Murphy, Executive Compensation, Where We Are, and How We Got There, 2013: 285).

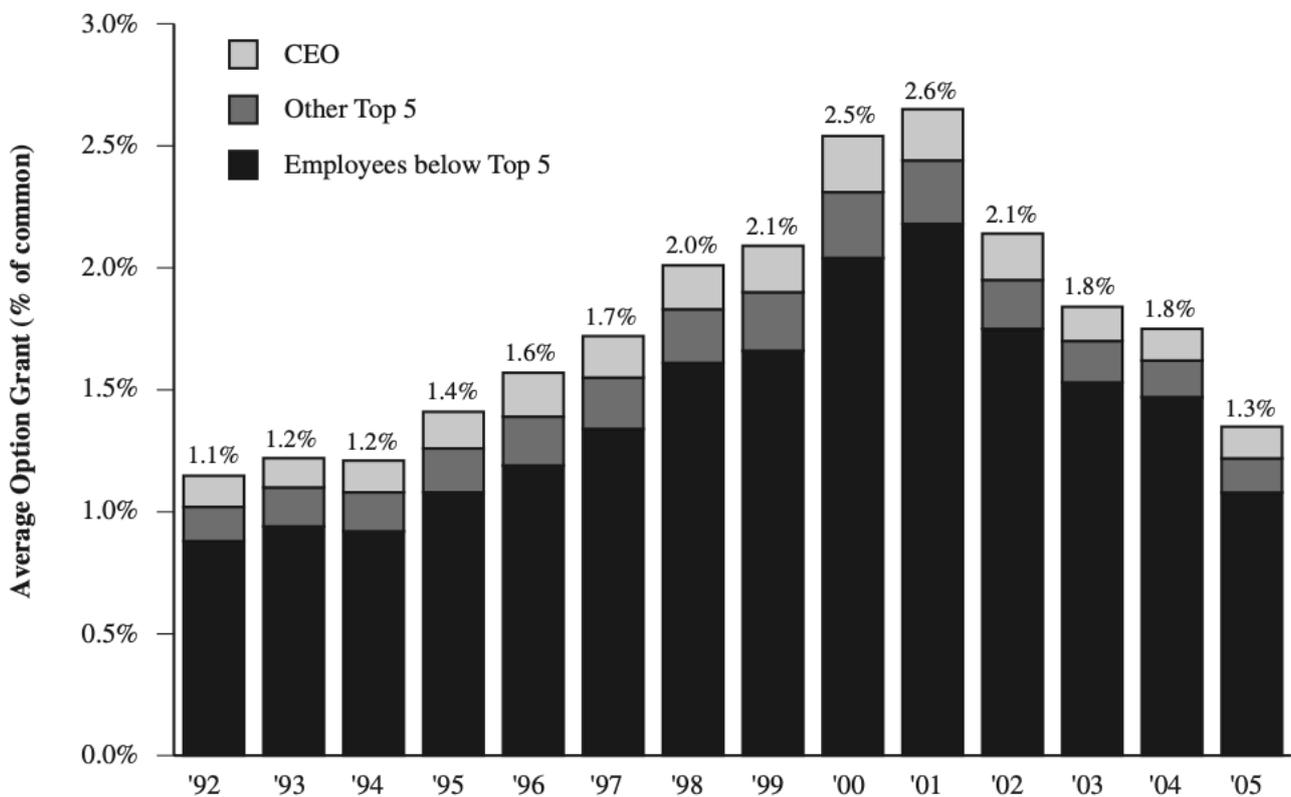
In January 1998, the NYSE in accordance with the SEC clarified the definition of broad-based plan as any plan in which at least 20% of employees were eligible to participate, and at least half of the eligible employees were neither officers nor directors.

Shareholders were scared of this new clarification because it could allow the explosion of a toxic use of stock options.

In June 1999, in response to these criticisms the NYSE changed the rule and allowed a narrower application of it.

Nevertheless Congress passed bills easing the restriction imposed by the NYSE. The main effect of these new bills was a staggering increase in the use of stock-options (that can be seen in **Figure 2.4.8**).

The reaction against this excessive use of became particularly intense in the early 2000s especially during the Internet bubble, when companies granted a greater number of options.



**Figure 2.4.8**

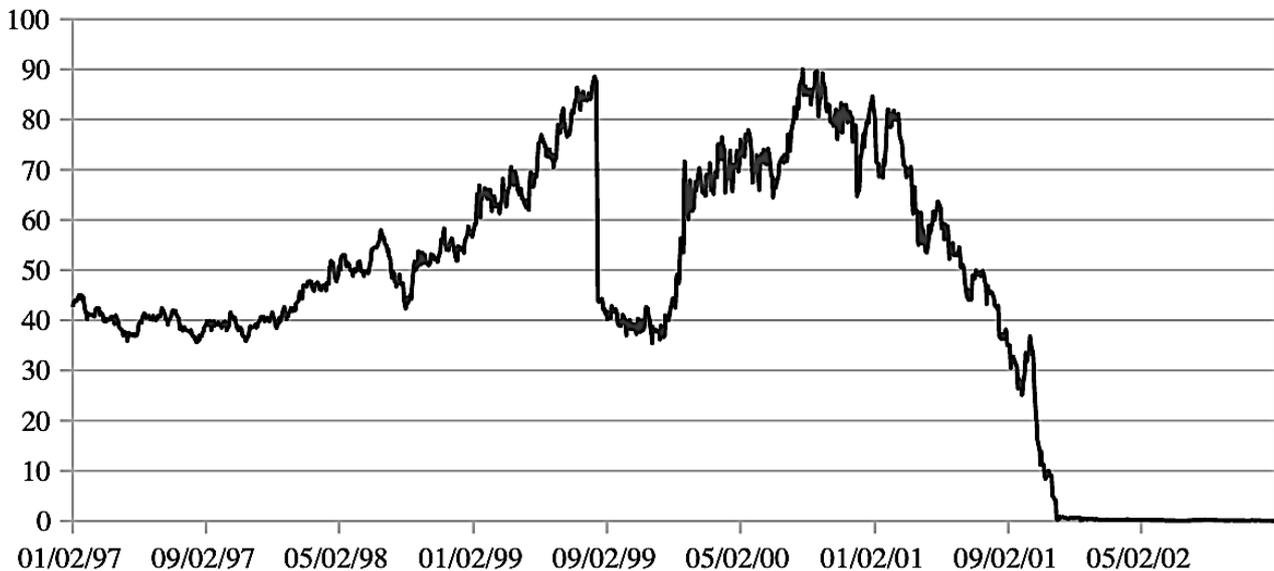
This Figure shows the Grant-Date number of employee stock options (as percentage of company shares) in the S&P 500.

Source: Murphy, 2013

**2.4.6) 2001-2011**

During the early 2000s there was an impressive wave of scandals that hit particularly hard some well-known and respected corporations like Enron (its stock price evolution in this period can be seen in **Figure 2.4.9**), HealthSouth, Xerox and many others. In response to this scandals, that sparked outrage and ire among the public, Congress

passed the Sarbanes-Oxley Act that expanded and clarified quality standard for consulting and accounting firms, boards of directors. The main focus of the law was a review of the accounting standards but Congress pushed for some new restrictions and regulations on executive pay.



**Figure 2.4.9**

This Figure shows the evolution of Enron stock price after the scandal that hit the company. Source: <https://it.wikipedia.org/wiki/Enron#/media/File:EnronStockPriceAug00Jan02.jpg>

The new restrictions were: the prohibition of certain corporate loans to executives and directors and the obligation for CEOs and CFOs to reimburse any bonus or equity-based compensation “in the twelve months commencing with the filing of financial statements that are subsequently restated as a result of corporate misconduct” (Murphy, *Executive Compensation, Where We Are, and How We Got There*, 2013: 289).

In this period of corporate scandals one of the most common tool used for increase executives’ wealth was option backdating. This practice consisted in a falsification of stock options. “. Under this practice, companies deliberately falsified stock option agreements so that options granted on one date were reported as if granted on an earlier date when the stock price was unusually low—commonly the lowest price in the quarter or in the year. ” (Murphy, *Executive Compensation, Where We Are, and How We Got There*, 2013: 290).

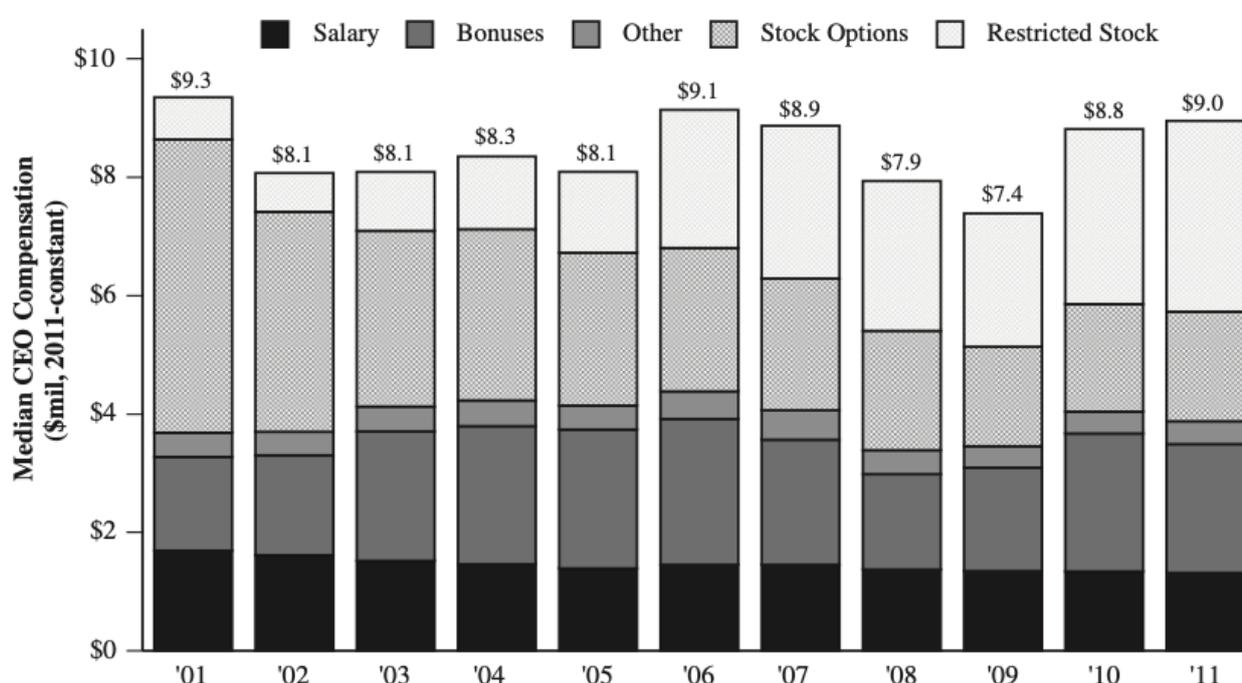
This practice violated accounting laws, tax laws and federal disclosure laws. The Wall Street Journal and Erik Lie, Professor at the University of Iowa, were the first to address this problem; this latter was particularly ferocious in his battle against the practice. Its crusade brought to a SEC investigation into more than 140 firms. The trials regarding the CEOs of most of these companies faced serious charges and some of them were convicted of criminal conduct.

In retrospect some backdating cases were quite astonishing, for example “Cablevision’s award of backdated options to its vice chairman after his death in 1999.” all financial institutions to identify and disclose (to their relevant regulator) any incentive-based

compensation arrangements that could lead to material financial loss to the covered financial institution, or that provides an executive officer, employee, director, or principal shareholder of the covered financial institution with excessive compensation, fees, or benefits.

Consequently the first ten years of the 2000s were characterized by a stagnation of CEOs' pay level as shown in **Figure 2.4.10**.

However there were some changes in CEOs pay composition, for example there was a decrease in the use of stock options, primarily due to the new SEC regulation, and an increase in the use of restricted stocks. Restricted options are unregistered shares of ownership in a company that are issued to corporate members, like executives and directors. Restricted stock is non-transferable and must be traded in compliance with special SEC regulations.



**Figure 2.4.10**

This Figure shows the median level and composition of CEOs compensation between 2001 and 2011. It is clear the surge in the use of restricted stock and the sharp decrease in the use of stock options.

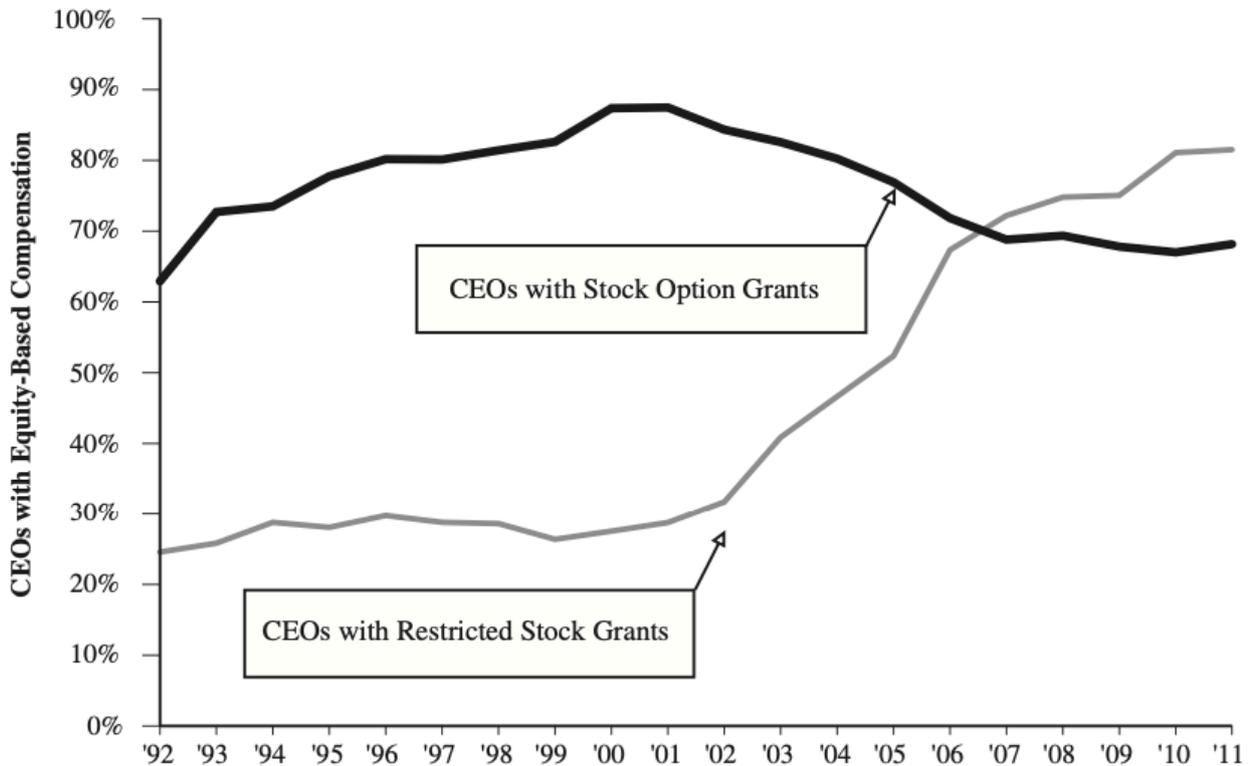
Source: Murphy, 2013

This phenomenon consisting in the rise of restricted stock and contemporary decrease of stock options can be easily explained considering that there was the market crash caused by the Internet Bubble and worsened by the terrorist attacks on the World Trade Center.

Many companies (e.g Microsoft) cancelled their outstanding options and substituted them with restricted stocks, this latter form of compensation was extremely favorable to the executives when they had really low expectations for the future performance of the company.

Generally the use of stock options surges when stock markets are trending upward meanwhile the use of restricted stocks rises when markets trend downward (the

percentage of CEOs receiving these two different equity-based form of compensation is shown in **Figure 2.4.11**).



**Figure 2.4.11**

This Figure shows the percentage of CEOs (belonging to the S&P 500) receiving equity-based compensation. The Figure shows the sharp increase in the use of restricted stocks following the wave of scandals that characterized the first half of the 2000s.

Source: Murphy, 2013

Another date to remember ,in the history of executive compensation, is September 19th 2008 when, forced by the tumultuous conditions of the market and consequently of the economy, Bank of America bought Merrill Lynch; at the same time Treasury Secretary Paulson tried to approve in Congress a plan to use taxpayers' money for buying hundred of billions of dollars of illiquid assets from US financial companies.

The first attempt made by the Treasury Secretary was rejected by Congress because for many Democratic and some Republican members of chamber, the lack of constraints on executive compensation was not a proper way to fight that "Wall Street Bonus culture" that was one of the root causes of the financial crisis.

After the first rejection on September 30th 2008, Congress approved the bill as a direct consequence of the rapid and violent loss in the Dow Jones Industrial Average. The bill (named EESA that stands for Emergency Economic Stabilization Act) was converted to law by President G.W Bush on 3rd of October.

As a direct consequence of the recent passed law, the Treasury created a new federal program called Troubled Asset Relief Program (TARP) that authorized expenditure for \$700 billions to purchase toxic financial assets from financial institutions in order to reinforce the financial sector. Many CEOs that applied for TARP were required (and

sometimes forced) to reduce their compensation and applied new constraints to golden parachute expanding the definition.

Although there were severe limitations on CEOs compensation and on executive compensation in general, Merrill Lynch and other TARP recipients distributed a staggering number of bonuses to their high-level employees (as shown in **Table 7**).

Corporation	2008 Earnings/ (Losses) (\$bil)	2008 Bonus Pool (\$bil)	Number of Employees Receiving Bonuses Exceeding		
			\$3 mil	\$2 mil	\$1 mil
Bank of America	\$4.0	\$3.3	28	65	172
Bank of New York Mellon	\$1.4	\$0.9	12	22	74
Citigroup	(\$27.7)	\$5.3	124	176	738
Goldman Sachs	\$2.3	\$4.8	212	391	953
J P Morgan Chase	\$5.6	\$8.7	>200		1626
Merrill Lynch	(\$27.6)	\$3.6	149		696
Morgan Stanley	\$1.7	\$4.5	101	189	428
State Street Corp	\$1.8	\$0.5	3	8	44
Wells Fargo & Co.	(\$42.9)	\$1.0	7	22	62

**Table 7**

This Table shows the Earnings/Loss of eight TARP recipients and the their Bonus Pool in billion dollars. In the second column there are the 2008 earnings, in the third column there are the Bonus Pool paid meanwhile on the last three columns there are the number of employees who respectively received bonuses greater than \$3 million, 2\$ million and \$1 million.

Source: Murphy, 2013

This move sparked political outrage and drove the recently elected Obama Administration to take actions.

Therefore, in response to this wave of public ire, President Obama proposed a new regulation for executive-pay, distinguishing between companies facing hard times and companies in a relatively safe economic condition.

The proposal contained some hard restrictions on executive-pay, for example there were limitations on golden parachutes even stricter than the one contained in the Emergency Economic Stabilization Act; moreover for the firms seeking for exceptional assistance, the Administration imposed a cap of \$500,000 on annual compensation for senior executives. In addition, the new regulation required that all the TARP beneficiaries had to fully disclose their internal compensation policy to shareholders.

Then among few controversies both chambers approved the Dodd amendments which imposed new and exceptionally restrictive regulation on executive-pay.

It is noteworthy that the Dodd amendments were unprecedentedly successful; as described in many Sections before in this thesis, most attempts to regulate the financial sector and the executive-pay were futile meanwhile the Dodd amendments imposed so many draconian limitations on executive pay that many financial companies decided to pay back the government in order to distribute bonuses.

The success of the Dodd Amendments drove the Administration to push in that direction to further regulate the financial sector.

While the Dodd amendments applied only to TARP recipients, the Dodd-Frank Act (signed into law in July 2010 by President Obama) regulated pay for all financial institutions (public or private TARP beneficiaries or non-beneficiaries).

This new law required “all financial institutions to identify and disclose (to their relevant regulator) any incentive-based compensation arrangements that could lead to material financial loss to the covered financial institution, or that provides an executive officer, employee, director, or principal shareholder of the covered financial institution with excessive compensation, fees, or benefits.” (Murphy, Executive Compensation, Where We Are, and How We Got There, 2013: 308)

The financial sector was not the only target of the wave of regulation contained in the Dodd-Frank Act, in fact the objective of the amendment was a substantial reform of corporate governance and executive compensation for all large and publicly traded corporations across all the industries.

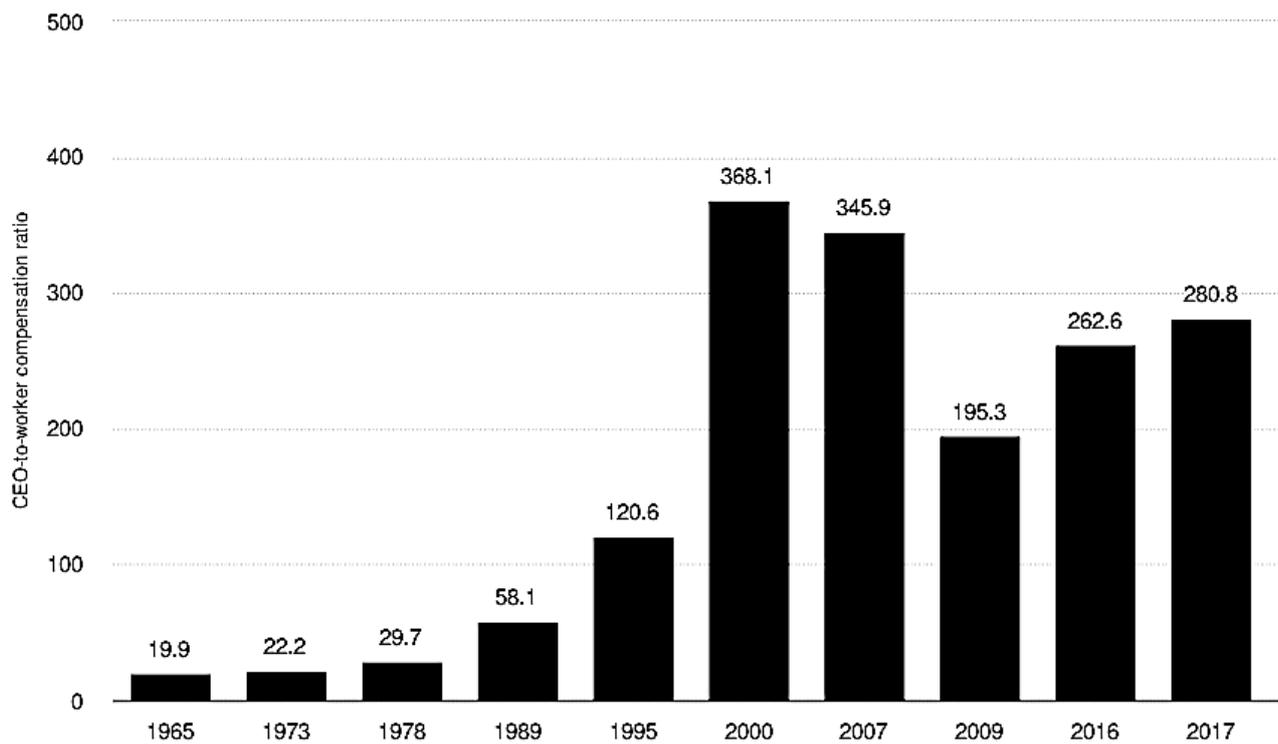
Among hundreds of new rules the main one were:

- Say-on-Pay policies, that allow shareholders to approve or not the company compensation policies, in a vote occurring at least every three year;
- Companies must disclose and report the ratio of CEO compensation to the median pay of all other company employees;
- Companies must disclose and analyze in detail the relation between their financial performance and CEO realized compensation;
- Companies are required to have a compensation committee composed only by outside independent directors;
- The creation of two new federal agencies Financial Stability Oversight (FSOC) and the Consumer Financial Protection Bureau (CFPB). While this latter focus more on consumer protection, the FSOC seeks to ensure that no bank becomes “too big to fail,” which would pose systemic risk.

In particular the FSOC had to enforce Section 662 of the Dodd-Frank Act that “established a financial sector concentration limit that prohibits a financial company from merging or consolidating with, or acquiring, another company if the resulting company’s consolidated liabilities would exceed 10 percent of the aggregate consolidated liabilities of all financial companies.” (<https://home.treasury.gov/policy-issues/financial-markets-financial-institutions-and-fiscal-service/fsoc/studies-and-reports>, 31/8/2020, 17:37).

Overall, the thorniest point of this Act is the required disclosure of the CEO-to-Worker pay ratio (shown in **Figure 2.4.12**) that impose a large cost on multinational corporations and seem like a populist move driven by political fear.

In conclusion the Dodd-Frank Act had a positive effect on the financial sector and tried to promote transparency and good corporate governance practices in public traded companies in order to avoid the dire consequences of the 2008 Wall Street financial crisis.



**Figure 2.4.12**

This Figure shows the evolution over time of the aggregated CEO-to-Worker compensation ratio for 350 largest publicly owned companies in US. It is evident the sharp decline following the passage of the Dodd-Frank Act; however the ratio is increasing, meaning that the percentage increase in CEO compensation is greater than the percentage increase in employees compensation.

Source: <https://www.statista.com/statistics/261463/ceo-to-worker-compensation-ratio-of-top-firms-in-the-us/>

## 2.5) Factors that influence executive compensation

It is clear from the previous analysis that the theme of executive pay is complex and many elements contribute to determine the level and the composition of it.

From the information contained in the past Sections it is evident that among various factors that influence the level and the composition of executive compensation are:

- Fiscal policy, in other words the way that the different components of the compensation are taxed;
- Labour market competition, in order to get the best executives, companies must offer competitive pay packages so the labour market for managerial talent should be efficient;
- Ownership Structure, that is the internal organization of shareholders;
- Public accountability and scandals.

These elements are going to be covered in great detail in the following Sections.

### 2.5.1) Fiscal Policy

Many academic studies have been conducted in order to understand the relationship between fiscal policy and executive compensation. The vast majority of them (Goolsbee 2000, Rose and Wolfram 2002) have found a modest effect of tax policy on executive compensation, that is coherent with the limited response of high level earners to tax changes.

In particular Carola Frydman and Raven S. Molloy, authors of the most complete analysis on the relationship between fiscal policy and executive compensation (titled "Does Tax Policy Affect Executive Compensation? Evidence from Postwar Tax Reforms"), in their conclusion state "we find little response of executive salaries, bonuses (both short-term and long-term), and stock option grants to changes in labor income tax rates "(Frydman C. and Molloy S., "Does Tax Policy Affect Executive Compensation? Evidence from Postwar Tax Reforms", 2012, 33).

However if the level of executive compensation is not strongly affected by the taxation, the composition surely is.

**Figure 2.4.2** and **Figure 2.4.4** offer a great opportunity to understand the way that taxation influences the composition of executive pay; a set of laws passed by President Kennedy and Democratic-controlled Congress passed a set of laws that made stock options less attractive by lowering the income tax rate from 91% to 70%.

Therefore the median composition of a CEO rapidly changed; stock option use fell down from nearly 23% in 1963 to 2% in 1964.

This is one of many different examples that can be brought up to show the importance of fiscal policy on executive compensation.

### 2.5.2) Labour Market Competition

The pay package offered to a CEO or to an executive shows the level of confidence that the company lays by him/her. Hence companies who can offer the best pay packages (in terms of pay level and composition) can use the compensation as a competitive lever.

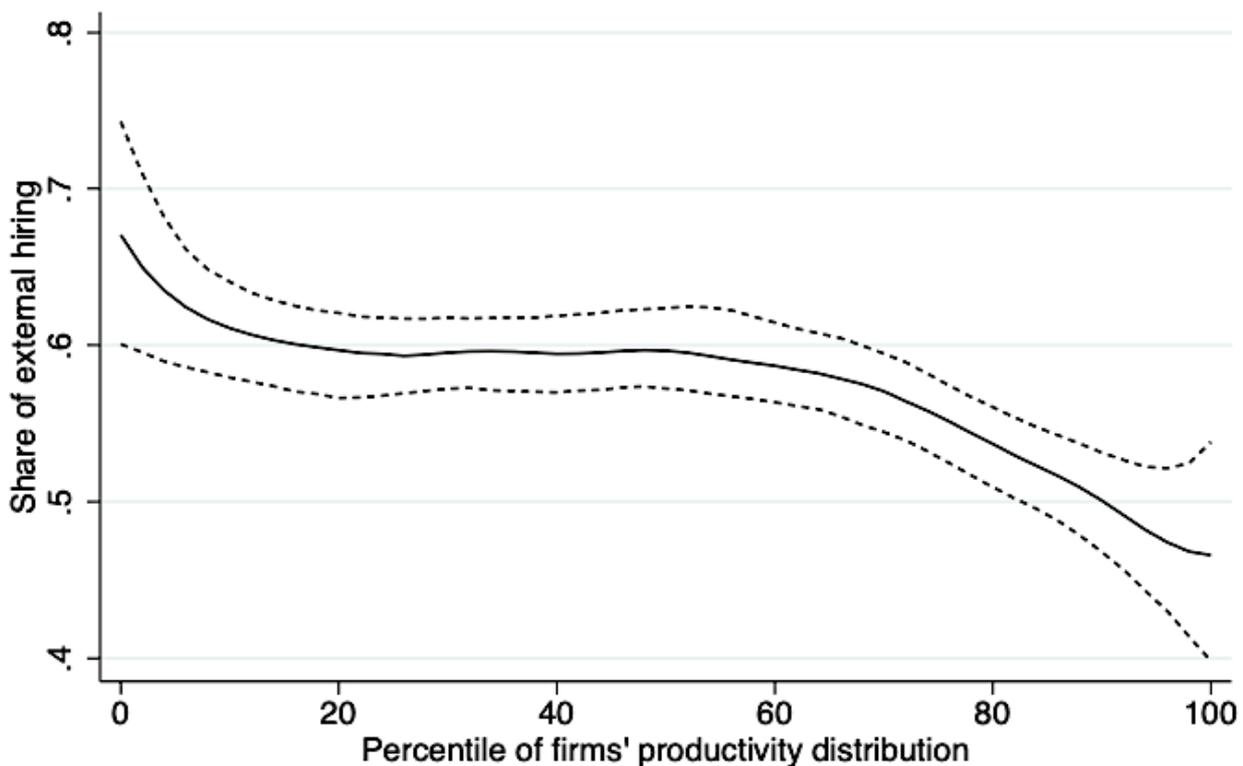
There is empirical evidence that CEOs with more and better skills (identified through better company performance) tend to be paid more and therefore companies with highest-paid CEOs tend to be perceived as leader in their industry.

As it is clear from the precedent Sections executive compensation increased, especially in the last thirty years, part of this increment is due to deregulation and increased competition. Many studies have shown that deregulation (Hubbard, Palia, 1995) and changes in product markets (Cuñat, Guadalupe, 2009) are usually associated with higher demand for managerial talent and therefore higher executive compensation.

The last thirty years were characterized by a slow shift from executive with firm-specific skills to executive with general managerial competencies; in fact there has been a notable increase in CEO mobility that confirms this trend.

Moreover there has been a sharp rise in CEO appointed from outside (e.g Stefan Larsson for Ralph Lauren or Marissa Mayer for Yahoo) and the differences in executive

pay between executive in small firms and executive in big firms increased (**Figure 2.5.1** contains some findings noteworthy).



**Figure 2.5.1**

This Figure shows the percentage of external managerial hiring in relation to percentile of firms' productivity. The dotted curves represent the 95% confidence interval. It is clear that firms with higher productivity level tend to have less external managerial hiring. The main explanation to this phenomenon is that highly productive firms are usually bigger than the average in their industry and therefore have a wider internal pool of candidates for promotions.

Source:Friedrich, 2019

All these changes increased the pay dispersion and the competition in a labour market that is in constant evolution and that require an enormous set of skills and competencies.

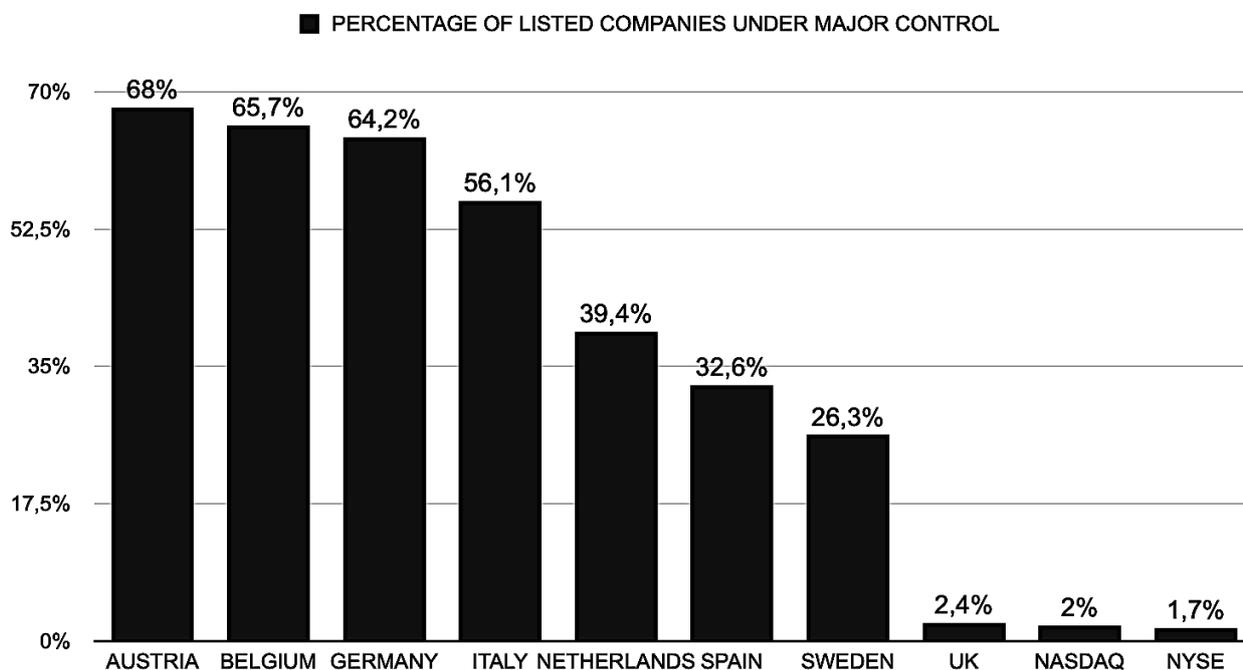
### 2.5.3) Ownership structure

Ownership structure is an important corporate governance mechanism that affects the level and composition of executive compensation.

Many studies (Hartzell C.J , Starks L.T 2003, Jarrell and Poulsen 1988) showed through empirical analysis that a more concentrated ownership structure is positively related to pay-performance sensitivity and it is negatively related to executive compensation.

This analysis can help to explain why European executives tend to have lower compensation than their American colleagues, this phenomenon is due to the differences in ownership structure among different countries. In continental Europe concentrated ownership structure is the norm and usually companies are dominated by insiders that hold a big stake of shares, meanwhile in UK and US companies tend to have a more fragmented and highly-dispersed. These dissimilar structures (shown in **Figure 2.5.2**) are a direct consequence of the legal environment (common law for

Anglo-Saxon countries and civil law for European countries) and the capital providers; in continental Europe there is a prevalent bank-oriented model in which a handful of shareholders (blockholders) can exert a great degree of control and detain a significant number of shares otherwise in US and UK there is a prevalent market-oriented model characterized by a more dispersed ownership and a prevalence of institutional investors.



**Figure 2.5.2**

This Figure shows the percentage of listed companies under major control across different countries and stock exchanges. It is evident that in Europe publicly traded companies tend to have a more concentrated ownership structure meanwhile in UK and US companies have a more fragmented ownership structure due to the more favorable shareholder protection granted by the common law legal system.

Source: personal elaboration on OECD data

The US ownership structure is the most dispersed and fragmented of any other developed country in the world; this particular operative condition in which US companies operate allowed manager to exert a enormous influence and degree of power that is unprecedented in any other country in modern history.

The US is a perfect case study to underline how monitoring managers and executives is expensive and, considered that monitoring is a public good so free-riding is the norm, how the lack of blockholders can be dangerous for a company.

In conclusion it can be said that in Europe the ownership structure is one of strong blockholders and weak dispersed owners meanwhile in US and UK the structure is one of strong managers and weak owners.

Therefore, in the US, monitoring must focus on the role of management teams that should consider the interests of all shareholders, instead of seeking to maximize their own personal benefits.

#### **2.5.4) Public accountability and scandals**

Politics, media and the public have historically played a defining role in the debate around executive pay. As it has been explained in the precedent Sections, throughout the history many corporate scandals fueled public outrage and pushed politician from both side of the aisle to take actions.

These actions have a twofold task, on one hand they had to calm the public opinion that often perceived the compensation of CEOs and executives as excessive and unreasonable, especially during economic crisis such as the Great Depression or the 2008 financial crisis; on the other hand they had to improve public accountability and shareholder protection. This latter task is usually delegate to federal agencies (in US) or national/European agencies (in Europe) such as the FSOC, CFPB or the SEC.

The scandal following investigations of American Tobacco in the 1930s, Chrysler in the 1960s and Enron in the 1990s show how there has been a continuous public and political interest in knowing CEOs compensation.

Political institutions have a difficult role in the debate around executive pay because they have to balance two conflicting interests; on one side there is the need for public accountability and oversight in order to avoid exploitation of shareholder resources, on the other hand there is the growing concern that the contracts between executives and companies are no longer a private matter because media and the public opinion carve out a position in the bargaining process.

This concern reflects the idea that if a company is not able to stipulate a contract with an executive at the best possible condition for him, he will not have the right incentives to pursue the maximum value generation.

#### **2.6) Differences between countries**

The comparison between executive compensations of companies from different countries can be difficult. In fact countries from the same geographical area can have different legal environment, shareholder protection or financial market regulation.

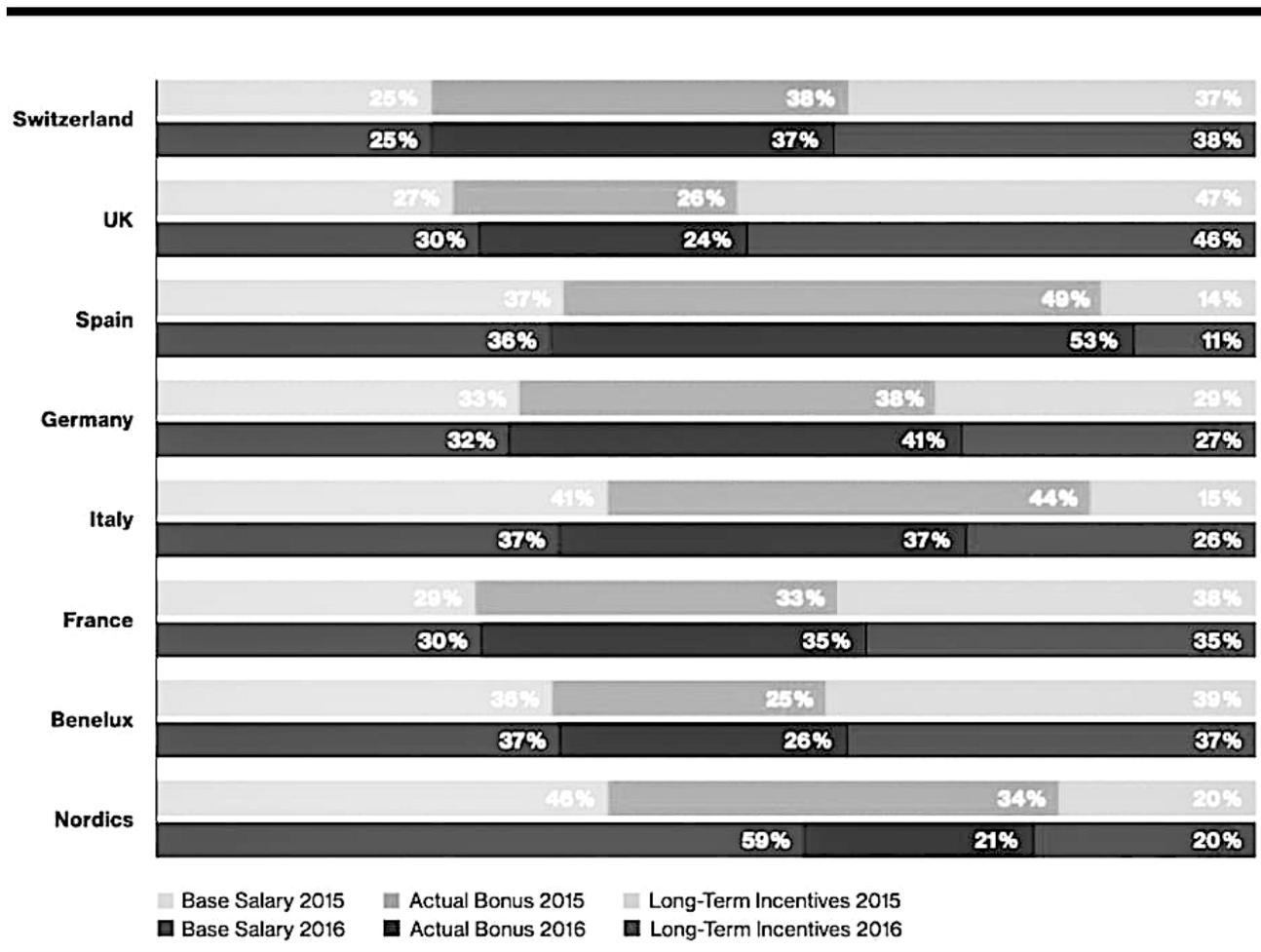
The main element that contribute to determine the differences in terms of pay packages are the legal environment that could be civil law based or common law based; this latter one is more effective in terms of shareholder protection and so allow a more fragmented ownership structure that give CEOs and executive a lot of power and discretion. This ownership structure can explain why for many years US companies paid the so called "US pay-premium", therefore paid CEOs more than their European colleagues.

The next Section is going to cover the differences between US and Europe, focusing especially on Italian executive compensation.

### 2.6.1) United States, Europe and Italy

US and Europe have different histories, different financial market and different regulation in terms of disclosure and taxation. All these differences need to be understood in order to carry on a comparison between the executive pay of European and American CEOs.

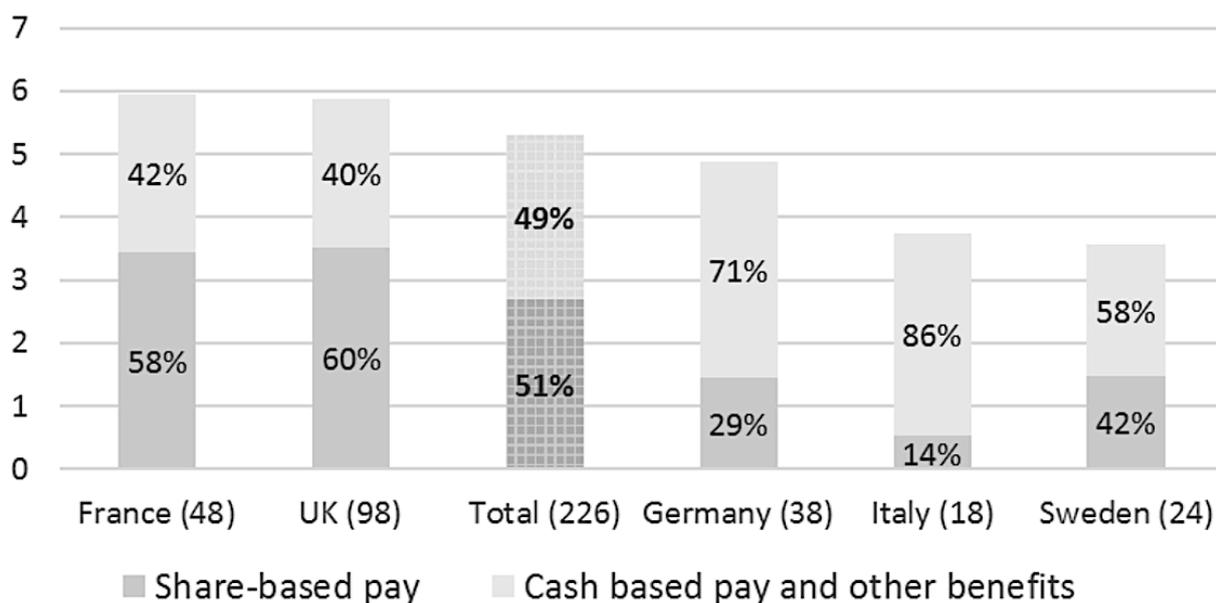
While the latest pay packages of CEO of American companies are showed in **Figure 2.4.10** the current pay composition and level of CEOs in different European countries are presented in **Figure 2.6.1** and **Figure 2.6.2**.



**Figure 2.6.1**

This Figure shows the average compensation for European CEO for different European countries. It is evident that there are many differences in terms of composition and level of compensation among different countries, for example Italian CEO on average receive less long-term incentive compensation than their Swiss or French colleagues.

Source: Hazel Rees, Sven Slavenburg, CEO pay landscape in the Eurotop 100, 2016.



**Figure 2.6.2**

This Figure shows the level of CEO compensation in different European countries. It also shows the composition of these pay packages in terms of cash-based pay and share-based pay. The numbers in parenthesis represent the sample used for each country. The compensation is measured in €million.

Source: Kotnik, Sakinç, Slavec and Guduraš.

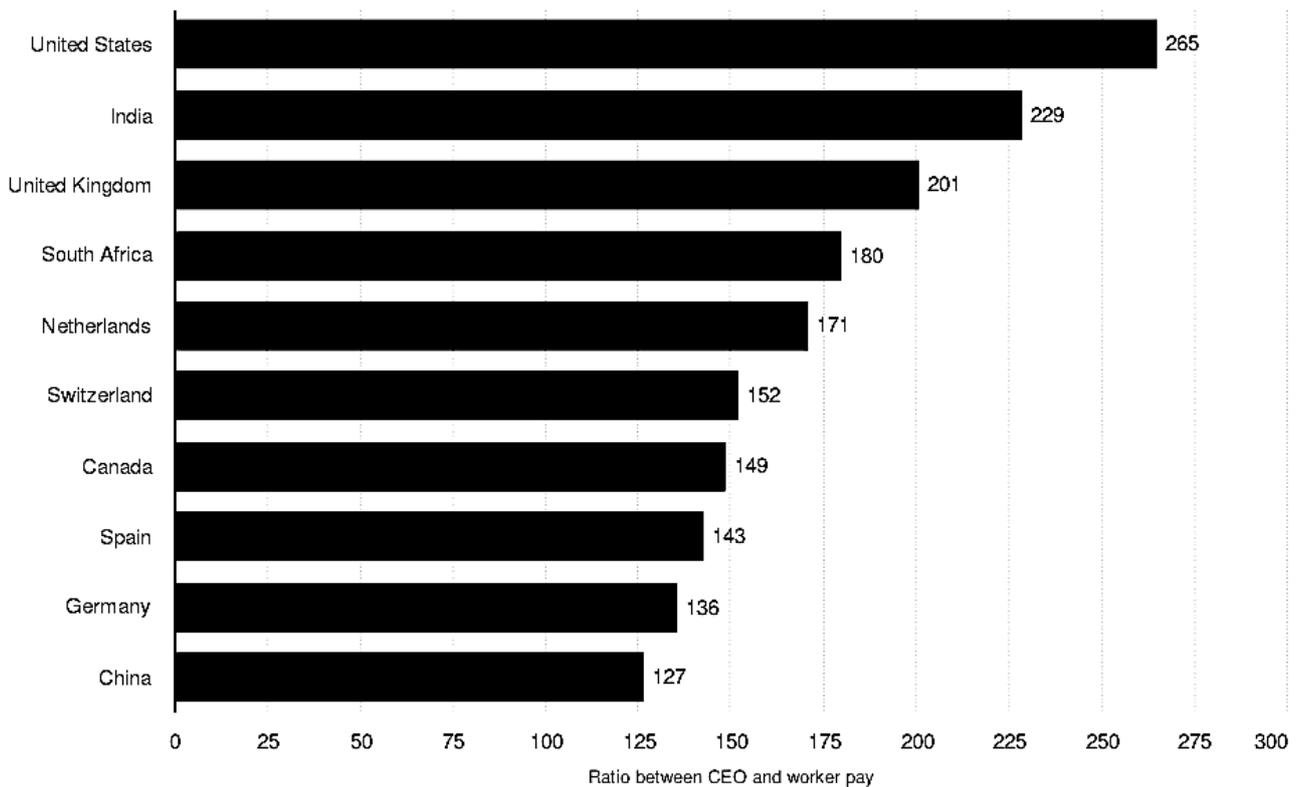
The main differences between CEOs of American companies and CEOs of non-American companies are easy to spot on average American tend to have a higher compensation than their European colleagues; but the composition of the pay packages is quite similar in fact comparing **Figure 2.4.10** and **Figure 2.6.2** it is noticeable that the percentage of equity-based pay of CEOs of American and European companies are quite similar.

Another dissimilarity between CEOs of American companies and CEO of non-US companies is that the worker-to-CEO ratio is higher than the rest of the world (as showed in **Figure 2.6.3**). Perhaps this can explain why there is more public outrage when there is a corporate scandal in the US.

On a regulatory level the difference that should be pointed out is that European publicly traded companies are subjected to the control of the ESMA (that basically has the same duties of the SEC in US) and the national agency (in the Italian case CONSOB).

First of all, the main element needed for carrying on this analysis is the acknowledgment of the Americanization of pay practices. In particular many of these companies adopt these pay packages to compete directly in a global, highly competitive managerial labour market. To summarize, if these companies want to succeed in a global market, they have to attract the best executives and therefore offer them competitive pay packages like the American ones, that usually include large stock options and bonuses. Although really few non-US companies have American CEO, many American firms are hiring non-US executives, consequently affecting the pay packages offered by non-US companies in order to be competitive and attract national and foreign managerial talent.

### Ratio between CEO and average worker pay in 2018, by country



**Figure 2.6.3**

This Figure shows the ratio between CEO and average worker pay in 2018 by country. It is apparent that in US this ratio is the highest in the world.

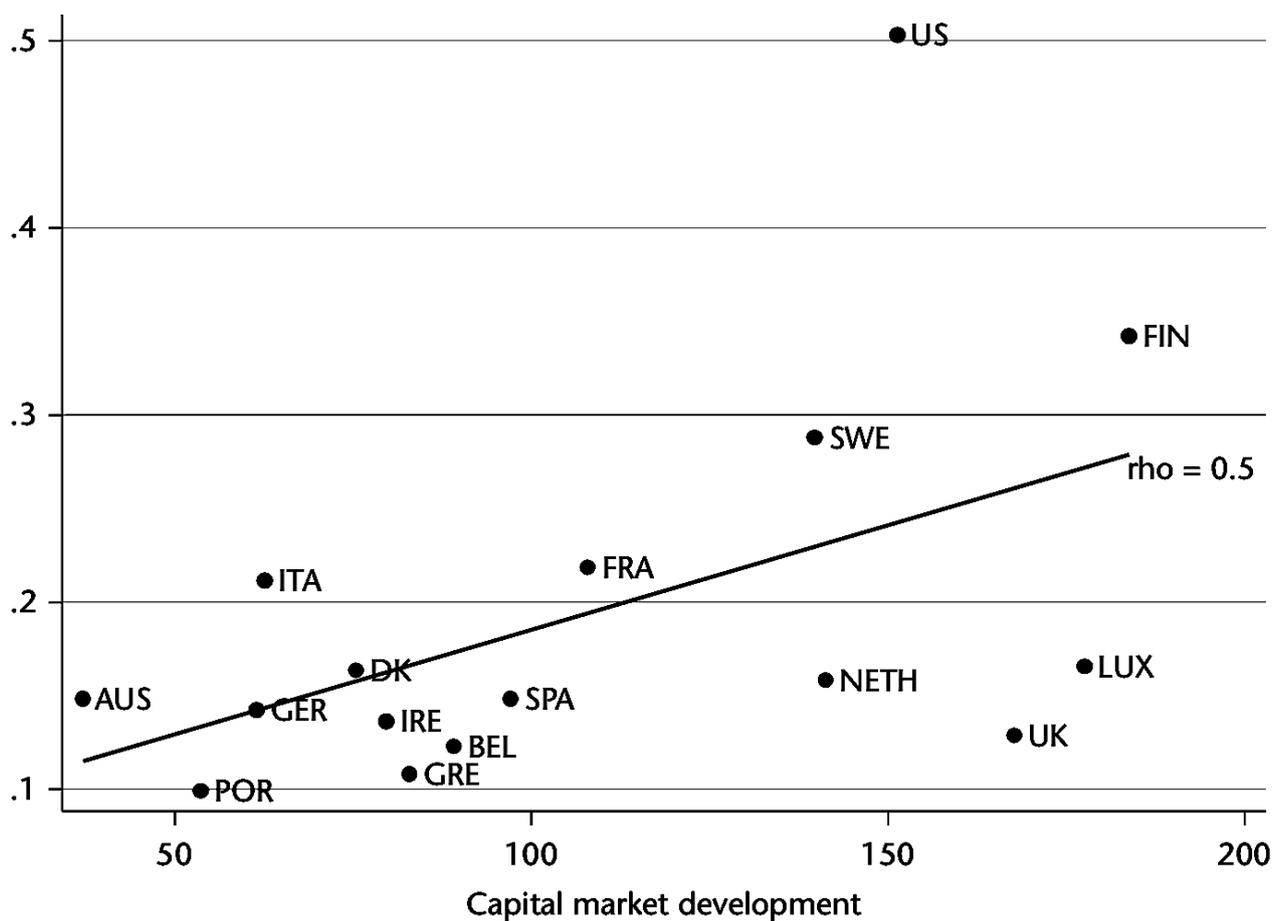
Source:<https://www.statista.com/statistics/424159/pay-gap-between-ceos-and-average-workers-in-world-by-country/>

These dissimilarities among different countries, especially between continental Europe and US, but also between European countries themselves, can be further analyzed (**Figure 2.6.4**, **Figure 2.6.5** and **Figure 2.6.6** show some of the main determinants of these differences).

These Figures, result of the great work conducted by Boeri T., Lucifora C. and Murphy K.J in their book Executive remuneration and employee performance-related pay, a transatlantic perspective, highlight how there are some deeply rooted factors that determine the diffusion of pay-for-performance scheme.

For example, **Figure 2.6.4** shows the positive relation between the Capital market development and the diffusion of pay-for-performance scheme in different European countries and US. It is quite easy to note that, except US that is clearly an outlier, there are two groups in which the countries of the sample can fit. There are the Northern countries like Finland, Netherlands and Sweden characterized by an extremely developed Capital markets and in which there is a high diffusion of pay-for-performance incentives; then there are the Southern European countries characterized by less developed Capital markets and a smaller diffusion of pay-for-performance incentives.

Moreover, **Figure 2.6.5** underlines the negative relation between the number of small firms and the diffusion of pay-for-performance schemes.



**Figure 2.6.4**

This Figure shows the relation between the Capital market development and the diffusion of pay-for-performance incentive schemes. The slope of the line, called rho in the Figure, is greater than 0 highlighting that there is a positive relation between the capital market development and the diffusion of pay-for-performance incentive schemes; this means that the more the capital market is developed the more companies will use pay-for-performance incentives.

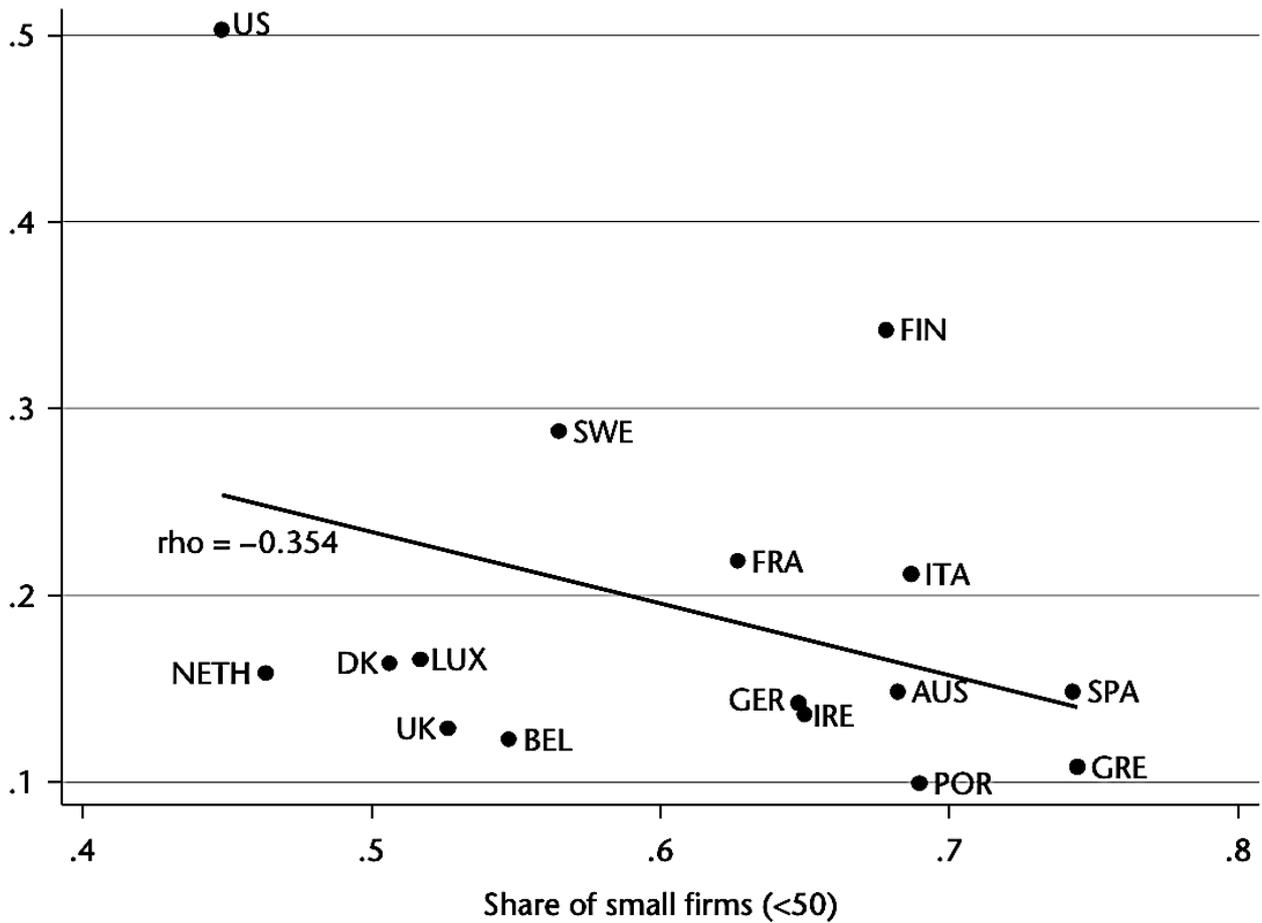
Source: Boeri T., Lucifora C. Murphy K.J,2013

As it has been pointed out there is a positive relation between size and executive compensation, therefore the negative relation between the number of small firms and the diffusion of pay-for-performance incentive is not a surprise.

Finally, **Figure 2.6.6** shows on Panel A the diffusion of pay-for-performance schemes in relation to product market regulation, and on Panel B the relation between the diffusion of these aforementioned incentives and the labour market regulation.

Both graphs show a negative relation between the degree of regulation and the diffusion of the above incentives, meaning that more market regulation, in terms of products or labour, usually is associated with less diffusion of pay-for-performance incentives.

The difficulties in comparing US and the European countries are confirmed by the fact that the US is an outlier in every Figure presented; this means that US has a different economic and financial background that explain why for many years the differences between these two areas of the world looked irreconcilable.

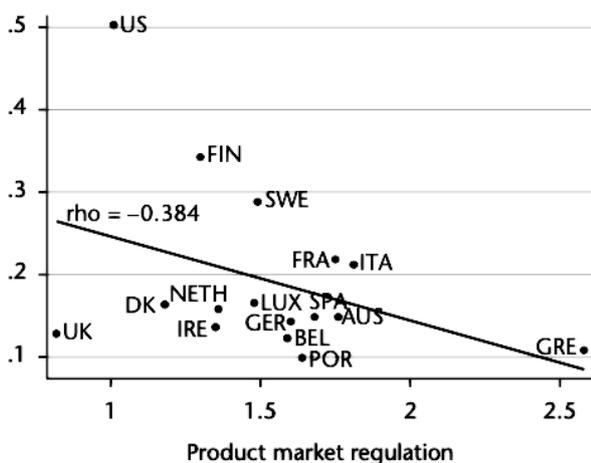


**Figure 2.6.5**

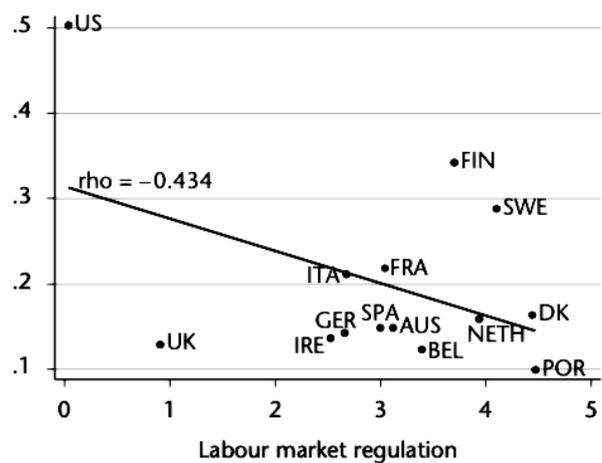
This Figure shows the relation between the share of small firms and the diffusion of pay-for-performance incentives.

Source: Source: Boeri T., Lucifora C. Murphy K.J,2013

**Panel A Product market regulation**



**Panel B Labour market regulation**



**Figure 2.6.6**

This Figure shows on Panel A the relation between product market regulation and the diffusion pay-for-performance incentives, and on Panel B the relation between labour market regulation and the diffusion of the said incentives.

Source: Source: Boeri T., Lucifora C. Murphy K.J,2013

Among the European countries the Italian case is worth discussing for its peculiarities. From a macroeconomic point of view, is a rich developed country characterized by the presence of many small and medium size enterprises a high level of product and labour market regulation and a capital market less developed than other European countries.

In the first place Italian companies can be divided in two groups newly privatized (former State-controlled) companies like Telecom S.p.A or ENI S.p.A or family-controlled companies like Brembo S.p.A or Mediaset S.p.A.

In the second place Italy has a French civil-law legal system that it is considered by many scholars (La Porta, Lopez-de Silanes, Shleifer, and Vishny) the weakest one for shareholder protection.

These two elements contribute to the extremely concentrated ownership structure that characterize Italian companies.

As it has been pointed out in precedent Sections a concentrated ownership structure is usually associated with a lower CEO compensation, therefore it is not surprising that Italian CEOs tend to have on average lower pay than other European colleagues.

The lower level of long-term incentives and equity-based also reflects the fact that Italian companies usually operate in consolidated markets so there is no need for high long-term incentives that instead are a common form of compensation in industries like fin-tech, high-tech or pharmaceutical.

## **2.7) Dividends**

The purpose of this work is to investigate if there is a relation between dividends policy and the pay performance sensitivity; in order to do that, the next Section is going to be focused on the definition of dividend and other elements connected to it.

“A dividend is the distribution of some of a company's earnings to a class of its shareholders, as determined by the company's board of directors.” (<https://www.investopedia.com/terms/d/dividend.asp> , 4/9/2020, 18:11).

The vast majority of time dividends are distributed as cash but it is also possible to distribute them as additional stock or other property.

To summarize, dividends are a portion of the profits a company make that it chooses to distribute to its shareholders.

There are companies who issue dividends regularly (e.g Walmart issues dividends every four months) and other companies (e.g Facebook Inc.) that do not pay them. This decision is up to the Board of Director which can choose if and when propose to issue dividends.

It should be also pointed out that companies can issue special dividends as a consequence of strong financial and economic performance.

Historically companies that operate in consolidated industries such as oil and gas, healthcare, basic material and banks/financial services are top dividends payers viceversa companies operating in dynamic, high technological industries such as fin-tech or ICT may not offer regular dividends because, especially in the early days of their corporate life, they can face high costs due to R&D development. Even companies with

high revenues can choose not to issue dividends in order to grow faster and use their profits to invest in business expansion.

The last element, but definitely the most important to investors, is the dividend policy; the dividend policy is the way in which companies structure their dividend payouts to their shareholders.

Despite the fact that many scholars consider the dividend policy irrelevant, because shareholders can sell their stocks if they need funds, it is an income for shareholders and therefore they look closely at the way in which companies set up their dividend policy.

There are three commonly used dividend policy:

- Stable dividend policy, in which the company pay the same amount of dividends regardless of the economic situation in that specific time frame; the main goal is to gain an alignment between long-term growth and dividend policy. This strategy is the favorite one by investors that seek steady and foreseeable dividend payout;
- Constant dividend policy, in which the company pay a fixed percentage of the company profits to investors as dividend; in this way during years of skyrocketing performance investors receive high payout, meanwhile during financially difficult years they receive low payout. In this way shareholders are completely subjected to the volatility of company financial performance.
- Residual dividend policy, in which companies pay out their dividends only after the payments of CAPEX (Capital Expenditures) and working capital; this approach is the most reasonable because investors usually do not like companies that try to justify their increased debt with the issue of dividends.

In conclusion, dividends are a fundamental part of a publicly traded company strategies and therefore executives show interest in the way they should be delivered to investors and shareholders.

## **2.8) Pay-performance sensitivity: an open debate**

Executive compensation, as it has been exposed many times in the precedent Sections, is a complex theme that, in order to be properly understood, requires competencies and knowledges from different subjects (contracting, microeconomics, econometrics etc...).

The pay-performance sensitivity was and still is one of the most relevant parameter in evaluating a CEO, but is a parameter whose interpretation is not simple; the economic literature is quite divided on this theme, some scholars find it the most suitable indicator of an executive behaviors and performance others find it misleading.

Highly incentivizing contracts can lead CEOs and executives to behave in improper ways in order to achieve the maximum personal wealth (e.g backdating scandal in the early 2000) meanwhile contracts with few incentives to improve firm's performance can lead to risk aversion by CEOs. Moreover, the vast number of different incentives (long-term, short-term, stock options and stock awards) add complexity to the understanding of the problem.

Therefore incentives should be carefully crafted because an improper use of them in a contract can be detrimental for the company.

In conclusion, the world of executive compensation is enormous and difficult to deal with because many elements including political differences, different regulations, different fiscal policy and different financial markets contribute to make this thematic area one of the most studied and complex among the topics of corporate governance.

## CHAPTER 3

### 3.1) Institutional Context in Italy

From a macroeconomic perspective Italy is a rich Western-European country characterized by a solid economy and leadership role in industries like food and beverages, automotive and car making, eyewear manufacturing, banking and insurance. From a financial perspective, instead, Italian companies operate in a Capital market that is less wide and liquid than other European countries with similar level of economic activity (e.g Germany, France or UK).

These differences can be explained using many elements including differences in regulation, fiscal policy ownership structure and social context and are reflected on the way companies remunerate their executives.

This work is focused on the Italian case, therefore the next Sections are going to cover with great detail many of the defining aspects of the Italian institutional context with regard to executive remuneration and other linked characteristics.

#### 3.1.1) Regulations

In Italy the agency responsible for the oversight of publicly traded company is the CONSOB (Commissione Nazionale per le Società e la Borsa) that carries out tasks regarding information provided by companies to the market, penalization of companies that implement unfair financial practices and regulation of investment services and operations of intermediaries.

To summarize the main tasks are ensuring transparency and oversee the behaviors of public companies.

This agency is headed by a collegiate body composed of a President and other four members.

All the members of this College are chosen among people of proven competences and moral integrity (e.g Luigi Spaventa economist and college tenure professor) by a decree of the President of the Republic.

The regulation of executive compensation is one the competences of this agency that must ensure respect of the TUF (Testo Unico della Finanza) that contains the regulation concerning this thematic area.

In particular executives of publicly traded companies must disclose the overall compensation and the components of that compensation, and in case of bonus tied to performance, the criteria on which the performance is evaluated should be clear and exhaustive. Moreover, the shareholders must vote on the remuneration report that contains all the information regarding the compensation of high level executives (an example of remuneration report is shown in **Table 8**)

It should be pointed out that this is a binding vote but, until 2018 was just an advisory vote.

All the information contained in the remuneration report must be available to the public for at least ten years in order to ensure transparency.

Nome e cognome	Carica ricoperta	Periodo per cui è stata ricoperta la carica	Scadenza della carica	Compensi CDA(*)	Compensi fissi	Bonus e incentivi (1)	Retribuzione totale corrisposta
<b>AMMINISTRATORI</b>							
<b>James Pallotta</b>	Presidente CDA	01/07/2014 – 30/06/2017	30.06.2017	-	-	-	-
<b>Umberto Maria Gandini</b>	CEO	28/10/2016 – 30/06/2017	30.06.2017	-	663	-	663
<b>Mauro Baldissoni</b>	Direttore Generale	01/7/2014 – 30/06/2017	30.06. 2017	-	752	250	1.002
<b>Benedetta Navarra</b>	Consigliere	01/07/2014 – 30/06/2017	30/06/2017	25	-	-	25
<b>Gianluca Cambareri</b>	Consigliere	01/07/2014 – 30/06/2017	30/06/2017	25	-	-	25
<b>Brian Klein</b>	Consigliere	01/07/2014 – 08/05/2017	30/06/2017	25	-	-	25
<b>John Galantic</b>	Consigliere	01/07/2014 – 30/06/2017	30/06/2017	25	-	-	25
<b>Cameron Neely</b>	Consigliere	01/07/2014 – 30/06/2017	30/06/2017	25	-	-	25
<b>Charlotte Beers</b>	Consigliere	01/07/2014 – 30/06/2017	30/06/2017	25	-	-	25
<b>Mariel M. Hamm</b>	Consigliere	01/07/2014 – 30/06/2017	30/06/2017	25	-	-	25
<b>Richard D'Amore</b>	Consigliere	01/07/2014 – 30/06/2017	30/06/2017	-	-	-	-
<b>Paul Bradford Edgerly</b>	Consigliere	12/05/2017 - 30/06/2017	30/06/2017	-	-	-	-
<b>Stanly Philip Gold</b>	Consigliere	01/07/2014 – 30/06/2017	30/06/2017	-	-	-	-
<b>Barry Sternlicht</b>	Consigliere	01/07/2014 – 30/06/2017	30/06/2017	-	-	-	-
<b>Alba Victoria Tull</b>	Consigliere	10/01/2017- 30/06/2017	30/06/2017	-	-	-	-

**Table 8**

This Table shows a concise scheme of the remuneration report of a company (in this particular case AS Roma S.p.A for the year 2017). It is quite easy to find the different components of executive compensation so salary (compensi fissi), bonus and incentives (bonus e incentivi).

Source: [https://www.borsaitaliana.it/comitato-corporate-governance/documenti/relazioniremunerazioni2018/asroma\\_pdf.htm](https://www.borsaitaliana.it/comitato-corporate-governance/documenti/relazioniremunerazioni2018/asroma_pdf.htm)

### 3.1.2) Fiscal policy

As it has been explained in the precedent Sections the taxation is important to determine the structure of executive compensation.

In Italy, the income tax has different rates (shown in **Table 9**) so the taxes an executive should pay are determined by his/her income.

Reasonably, all the executive of Italian public companies have income that exceeds the upper bound shown in **Table 9**, in fact the average level of compensation received by a CEO of an Italian company is approximately €2 millions (without considering compensation deriving from stock options or perquisites), therefore in their cases the tax rate applied will be 43%.

The income tax has been steadily decreasing in the last thirty years from 51% in 1995 to 43% in 2019.

There are also regional income taxes that range from 1.23% to 3.33% and municipal income taxes that can range from 0 to 0.8%.

<b>Taxable income (EUR)</b>		<b>Tax bracket (%)</b>
<b>Over</b>	<b>Not over</b>	
<b>0</b>	<b>15,000</b>	<b>23</b>
<b>15,001</b>	<b>28,000</b>	<b>27</b>
<b>28,001</b>	<b>55,000</b>	<b>38</b>
<b>55,001</b>	<b>75,000</b>	<b>41</b>
<b>75,001</b>		<b>43</b>

**Table 9**

This Table shows the different tax brackets applied to different income levels in Italy in 2019.  
Source:<https://taxsummaries.pwc.com/italy/individual/taxes-on-personal-income>

Until fairly recently stock options were taxed as capital gain and therefore on them it was applied a tax rate of 12,50%, but the DL 112/08 stated that the gain from stock options should be considered as income and therefore taxed according to the rates presented in **Table 9**.

In case of stock options issued by innovative start-up there is no tax applied to them; the idea behind this favorable treatment is to allow a rapid and strong economic development in order to strengthen the economic fabric of the country.

This high tax rate can explain why Italian executives receive less equity-based, long-term incentives than their European colleagues.

### **3.1.3) Code of Conduct**

Code of Conducts can be an important element in regulate behaviors of executives. As it has been pointed out previously Code of Conduct are sets of rules established for ensuring the application of the best practices in the financial markets.

For example, in UK the Cadbury Code and the Greenery report are a cornerstone in the definition of the good practices that should characterize the work done by executives.

In Italy the main source of best practices is the Preda Code that is a Code of Conduct drafted in 1999 in order to guide the publicly traded companies towards a better way of working and a proper internal structure.

In particular, this Code, updated in 2015, contains precepts on the composition of the Board of Directors, on the role of independent directors, on the risk management and finally on the executive compensation.

The latter element is extremely important in this Code, in fact there are many principles regarding this factor; specifically the first three principles state that:

- Executive remuneration should be established in order to attract talented managers, that can increase value generation for the company;
- The compensation should be such that managers and executives should align their interests to the one of shareholders (thus long-term value generation);
- The Board of Directors should constitute a Remuneration Committee composed by independent directors that should propose the best-crafted compensation plan for every executive.

Companies have not to comply with this requirements but they should disclose their state of compliance to the market and to investors in order to inform them on their corporate governance practices, on their remuneration plans and on other aspects related to internal governance.

### 3.2) Sample description and data presentation

The dataset used for the analysis of the relation between dividend policy and executive compensation is composed of 172 Italian publicly traded companies. The dataset contains information regarding CEO compensation such as salary, bonus, non-monetary benefits, information regarding CEO characteristics such as age, birth year and tenure and data regarding these companies' business activity such as sales, number of employees, market capitalization and industry concentration.

Moreover there are data regarding dividends and dividend payout (expressed as the ratio between the total amount of dividends and net income).

The data used for this work are panel data meaning that are multidimensional data that involve measurements over time.

In this particular case the dataset is composed by time series for different companies (data are available from 2000 to 2017).

A brief description of the main variables regarding CEOs' compensation is shown in **Table 10**.

The variables indicates respectively salary, non-monetary benefits, bonus, other compensation, total compensation.

The first step to do, in order to verify if the data available are aligned with the scientific literature on the subject, is the computing of the Pearson correlation coefficient that measures linear correlation between two variables.

Variable	Obs	Mean	Std. Dev.
salary	1901	502.6718	538.2942
b_n_m	1886	10.14793	55.64678
bonus	1885	273.0377	771.852
otcomp	1889	190.5061	1010.619
totcomp	1901	972.4571	1567.462

**Table 10**

This Table shows a brief description of the data regarding CEOs' compensation of Italian publicly traded companies. The mean value are expressed in k€.

**Table 11** shows the results of the calculation of the Pearson correlation coefficient for some variables.

The results of this analysis are aligned with what is said in the literature. In particular there is a positive relation between all the elements of the executive compensation (salary, bonus, non monetary benefit, other compensation) and sales that is a proxy measure of the size of the company.

Moreover there is a negative relation between internal hiring and all the components of managerial compensation.

These results are not surprising and confirm all the evidences aforesaid.

	salary	bonus	b_n_m	otcomp	totcomp	sales	i_hr
salary	<b>1.0000</b>						
bonus	<b>0.3574</b>	<b>1.0000</b>					
b_n_m	<b>0.0898</b>	<b>0.1705</b>	<b>1.0000</b>				
otcomp	<b>0.0002</b>	<b>0.1556</b>	<b>0.0197</b>	<b>1.0000</b>			
totcomp	<b>0.5215</b>	<b>0.7192</b>	<b>0.1626</b>	<b>0.7197</b>	<b>1.0000</b>		
sales	<b>0.3695</b>	<b>0.3802</b>	<b>0.1021</b>	<b>0.0891</b>	<b>0.3743</b>	<b>1.0000</b>	
i_hr	<b>-0.0349</b>	<b>-0.1428</b>	<b>-0.0834</b>	<b>-0.0238</b>	<b>-0.0999</b>	<b>-0.1393</b>	<b>1.0000</b>

**Table 11**

This table shows the correlation matrix computed for six variables. Each cell contains the Pearson correlation coefficient calculated between the variables on the respective row and column of the cell.

In addition **Table 12** shows the Pearson correlation matrix between the different elements of managerial pay and some CEO-related variables.

The variables indicates respectively the components of CEO pay, the number of year in which the CEO held that position (tenure), the belonging to the controlling shareholder family (famceo).

	salary	bonus	b_n_m	otcomp	totcomp	tenure	famceo
salary	<b>1.0000</b>						
bonus	<b>0.3574</b>	<b>1.0000</b>					
b_n_m	<b>0.0898</b>	<b>0.1705</b>	<b>1.0000</b>				
otcomp	<b>0.0002</b>	<b>0.1556</b>	<b>0.0197</b>	<b>1.0000</b>			
totcomp	<b>0.5215</b>	<b>0.7192</b>	<b>0.1626</b>	<b>0.7197</b>	<b>1.0000</b>		
tenure	<b>0.1275</b>	<b>-0.0317</b>	<b>-0.0539</b>	<b>-0.0251</b>	<b>0.0104</b>	<b>1.0000</b>	
famceo	<b>-0.0156</b>	<b>-0.1664</b>	<b>-0.0983</b>	<b>-0.0749</b>	<b>-0.1383</b>	<b>0.3465</b>	<b>1.0000</b>

**Table 12**

This table shows the correlation matrix computed for seven variables, five of them are components of CEO compensation, the remaining ones are CEO-related characteristics.

Nevertheless, even in this case, the results are not surprising. CEOs that share family relationships with the dominant shareholder tend to have lower compensation (in every form), meanwhile CEOs who held that position for longer period of time tend to have higher salary but lower bonus or equity-based compensation.

Finally, the relations between the dependent variable of this study, Payout ratio and some of the independent variables is shown in **Table 13**.

It is clear that salary and non-monetary benefits are negatively correlated with the dividend payout meanwhile bonus and other compensation are positively correlated (even if the entity of these correlation is really low).

	Payout	salary	bonus	otcomp	totcomp	b_n_m
Payout	<b>1.0000</b>					
salary	<b>-0.0026</b>	<b>1.0000</b>				
bonus	<b>0.0143</b>	<b>0.3574</b>	<b>1.0000</b>			
otcomp	<b>0.0029</b>	<b>0.0002</b>	<b>0.1556</b>	<b>1.0000</b>		
totcomp	<b>0.0079</b>	<b>0.5215</b>	<b>0.7192</b>	<b>0.7197</b>	<b>1.0000</b>	
b_n_m	<b>-0.0030</b>	<b>0.0898</b>	<b>0.1705</b>	<b>0.0197</b>	<b>0.1626</b>	<b>1.0000</b>

**Table 13**

Pearson correlation matrix for the dependent variable and five variables regarding CEO compensation.

### 3.3) Previous studies

The relation between executive compensation and dividends has been studied for a long time and many scholars agree that there is a direct link between these two elements.

The common hypothesis shared between all these studies is that investors and shareholders want CEOs and executive to undertake only positive NPV projects; therefore if these projects are not available they can distribute the income as dividends. **Figure 3.3.1** (from the outstanding work of Nalinaksha Bhattacharyy, Julie Ann Elston, Laura Rondi) summarizes the aforesaid hypothesis and links all the elements that should be analyzed in order to properly understand the relations between dividends and executive compensation.

In particular the idea behind this theoretical framework is that, executives with higher managerial qualities tend to spot easily positive NPV projects and therefore tend to invest back in business a larger part of the income available instead of distributing it as dividends.

In conclusion the observable link that is testable provides for a negative relation between dividend payout and executive compensation.

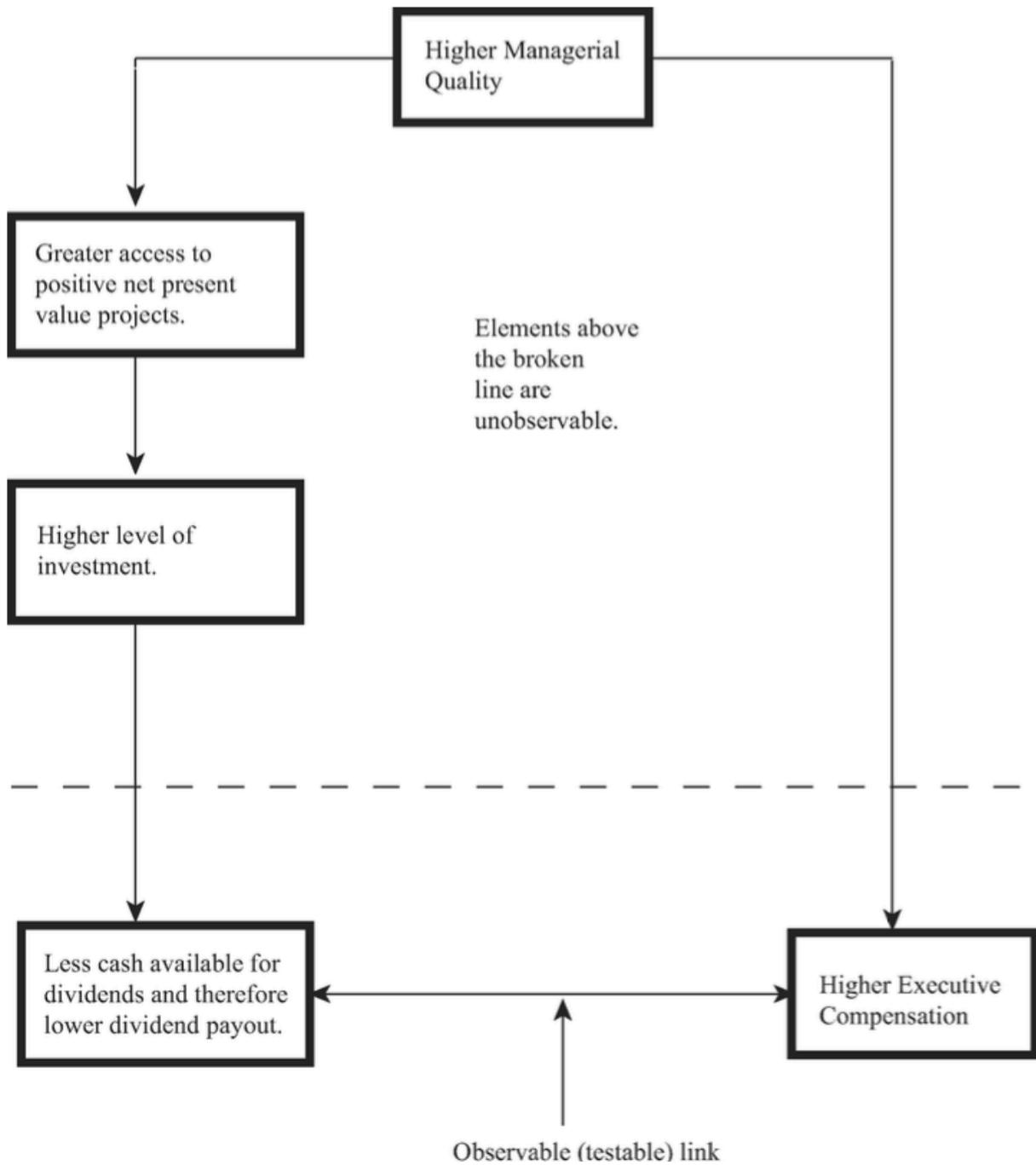
All the previous studies conducted on these subject (for countries like US and New Zealand) find evidence supporting the hypothesis that a lower dividend payout is associated with executives with higher degree of managerial capabilities that therefore have higher compensation.

In conclusion these researches found a negative relation between dividend payout and executive compensation, and a positive relation between dividend payout, size (expressed through total asset or company's revenues) and debt to equity ratio (a measure of financial leverage).

These results indicate that larger and highly-leveraged firms tend to use an higher portion of their income as dividend.

The positive relation between size and dividend payout can be explained recurring to the principal-agent problem, in this case the executive/CEO is the agent who has more information about projects and investments that the company could do, meanwhile shareholders are the principal; when the company size grow the monitoring process became more difficult consequently dividends can play a role in helping to mitigate this problem.

The positive relation between debt to equity ratio and dividend payout can be explained by understanding that firms are under pressure when they announce dividends distribution therefore they use external fund to finance dividend distribution.



**Figure 3.3.1**

This Figure shows the theoretical framework that drive the researches in this field.

Source: Bhattacharyya, N., Elston, J.A. and Rondi, L. (2014) 'Executive compensation and agency costs in a family controlled corporate governance structure: the case of Italy', *Int. J. Corporate Governance*, Vol. 5, Nos. 3/4, pp.119–132.

### 3.4) Econometric models

The purpose of this work is to try to understand better the relation between executive compensation in Italian publicly traded firms.

The models analyzed in previous work used, as dependent variables the dividend payout or the retention ratio (defined as 1 - dividend payout) meanwhile, used as explanatory variables the executive compensation.

In addition, in order to control for omitted variables like size and capital structure all the models analyzed used the fixed effects. In this work the models used are going to trace the ones used in previous work, but considering the differences and peculiarities of the Italian case.

The first model used in this work is the following one (**Model 1**):

$$lret = \beta_0 + \beta_1 comp_{it} + \beta_2 dividend_{it} + \beta_3 lincome_{it} + \sum_{t=1}^{17} d_t + \varepsilon$$

Where:

- $lret$  is the natural logarithm of the retention rate for the company  $i$  in the year  $t$ ;
- $comp$  is the cash compensation of the CEO so it is the sum of salary and bonus;
- $dividend$  is the amount of dividends distributed by a company in a specific year;
- $lincome$  is the natural logarithm of the net income of the company in that specific year;
- $D_t$  are time dummies used for avoiding the incorporation in the model of trends like GDP growth or other macroeconomic trends;
- $i$  is the company index;
- $t$  is the time index;
- $\varepsilon$  is the random noise.

This model derives from the great work conducted by

In order to fully understand this model some specifications are required. In the first place the model uses panel data so in order to control for year effects it is necessary to use time dummies (seventeen, one less than the total number of years in the dataset in order to avoid the dummy variables trap); in fact without time dummies the model picks up the influence of aggregate trends which do not have casual relationships with the dependent variable.

This model use fixed effects so it is assumed that something within the individual (in this particular case the company) can impact or bias the outcome variables. Moreover in order to avoid problems related to multicollinearity, it is required the use of robust standard errors.

Finally it is appropriate to remove payout below zero (that is the case of companies that distribute dividends even when their net income is negative through the use of liquidity reserves).

In this particular case the expected signs for the coefficient are the following:

- $\beta_1 > 0$ , because as it has been pointed out before higher executive compensation is associated with higher managerial capabilities and therefore higher retention rate (less dividend payout);

- $\beta_2 < 0$ , because higher dividends correspond to a lower managerial capabilities and therefore lower retention rate;
- $\beta_3 < 0$ , because as it has been highlighted previously there is a positive relation between size and dividend payout therefore there should be a negative relation between size and retention ratio.

The result of the regression are showed in **Table 14**.

Independent Variables	Predicted Sign	Coefficient	t-statistic
Constant	?	-4,22344	-5,96***
Compensation	+	-0,139x10 <sup>-3</sup>	-0,58
Dividend	-	-8,35x10 <sup>-7</sup>	-1,85*
Lincome	-	0,3448	5,27***
F-statistic=3,23			

**Table 14**

This table shows the results of the regression based on Model 1. The total number of observation is 1120 and the  $R^2 = 0,0338$

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

First of all the F-statistic is greater than 3, consequently all the coefficient of the regression are not equal to 0.

The results are not aligned with previous studies in fact the coefficient of the compensation has a negative sign (the opposite of what was expected and is not statistically significant) and the coefficient of the natural logarithm of the net income has a positive sign.

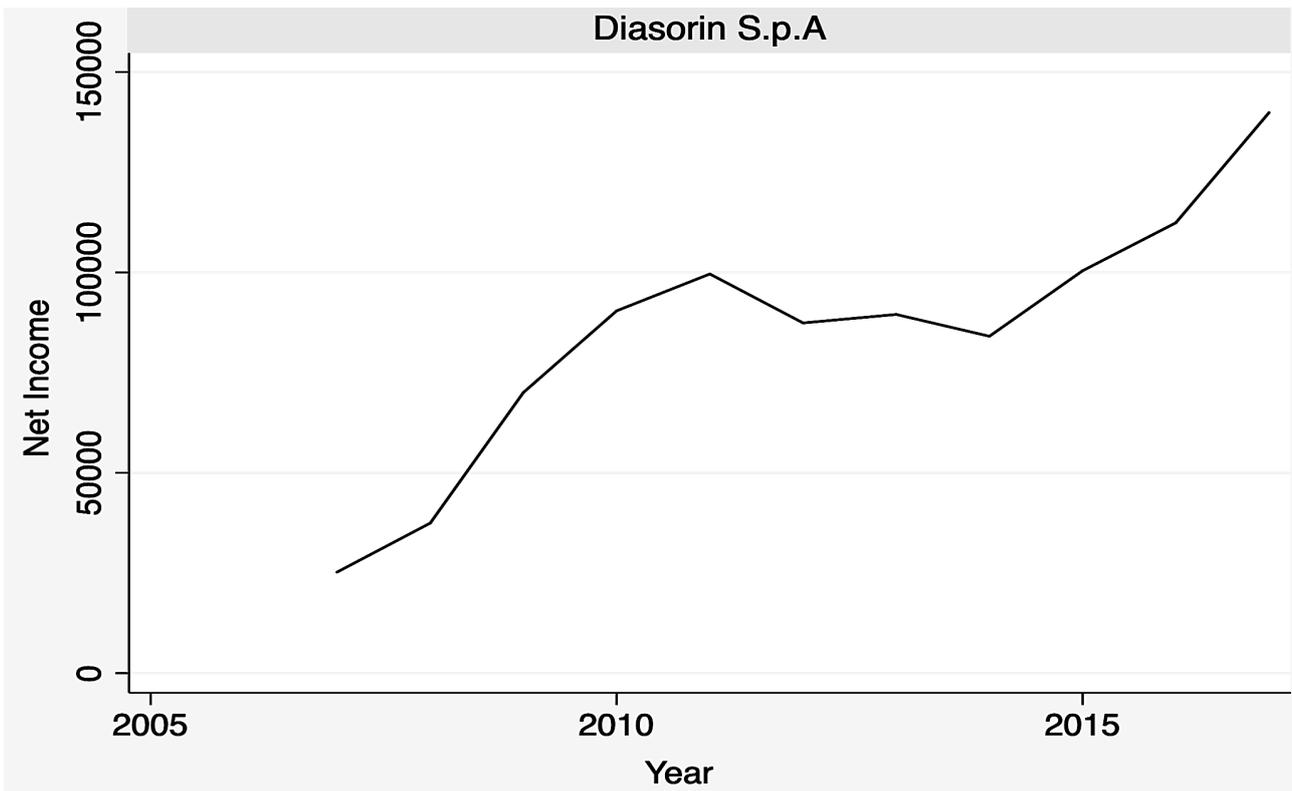
The unexpected sign for the compensation and can be explained considering that Italian firms operate in consolidated markets where it is difficult to identify projects with positive NPV.

These companies can use a larger part of their net income as dividends, in fact they usually have stable revenues during years (an example is given in **Figure 3.4.1**, **Figure 3.4.2** where are shown Diasorin S.p.A net income and dividend payout over time).

Therefore these companies are expected to have an important amount of free cash flow that they can use for dividends distribution.

**Figure 3.4.3** shows the compensation of Diasorin S.p.A CEO between 2001 and 2017.

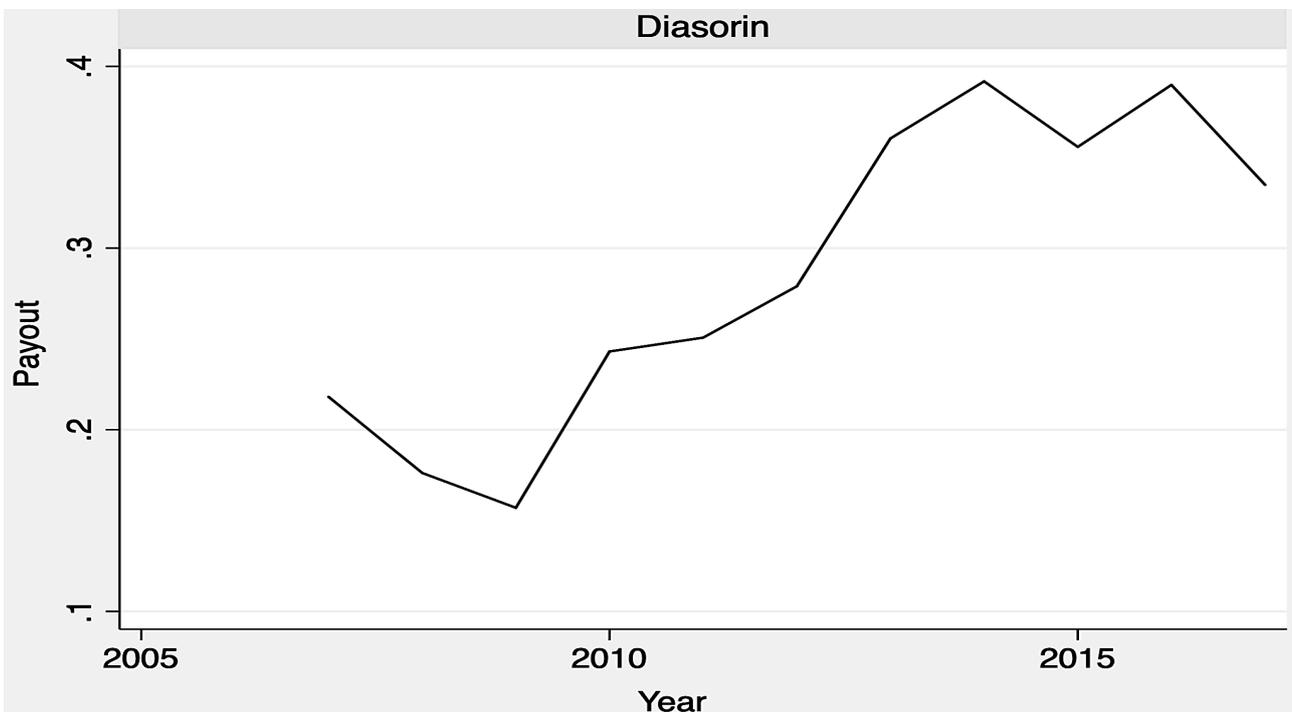
The comparison between **Figure 3.4.2** and **Figure 3.4.3** can be useful in order to understand the unexpected sign of the variable compensation; both curve have a similar trend, hence when compensation grows consequently the dividend payout grows. These trends can be find in a not insignificant number of companies especially in consolidated industries like commodity or construction, and therefore can explain the



**Figure 3.4.1**

This figure shows the net income of Diasorin S.p,A between 2008 and 2015.

Source: Personal Elaboration



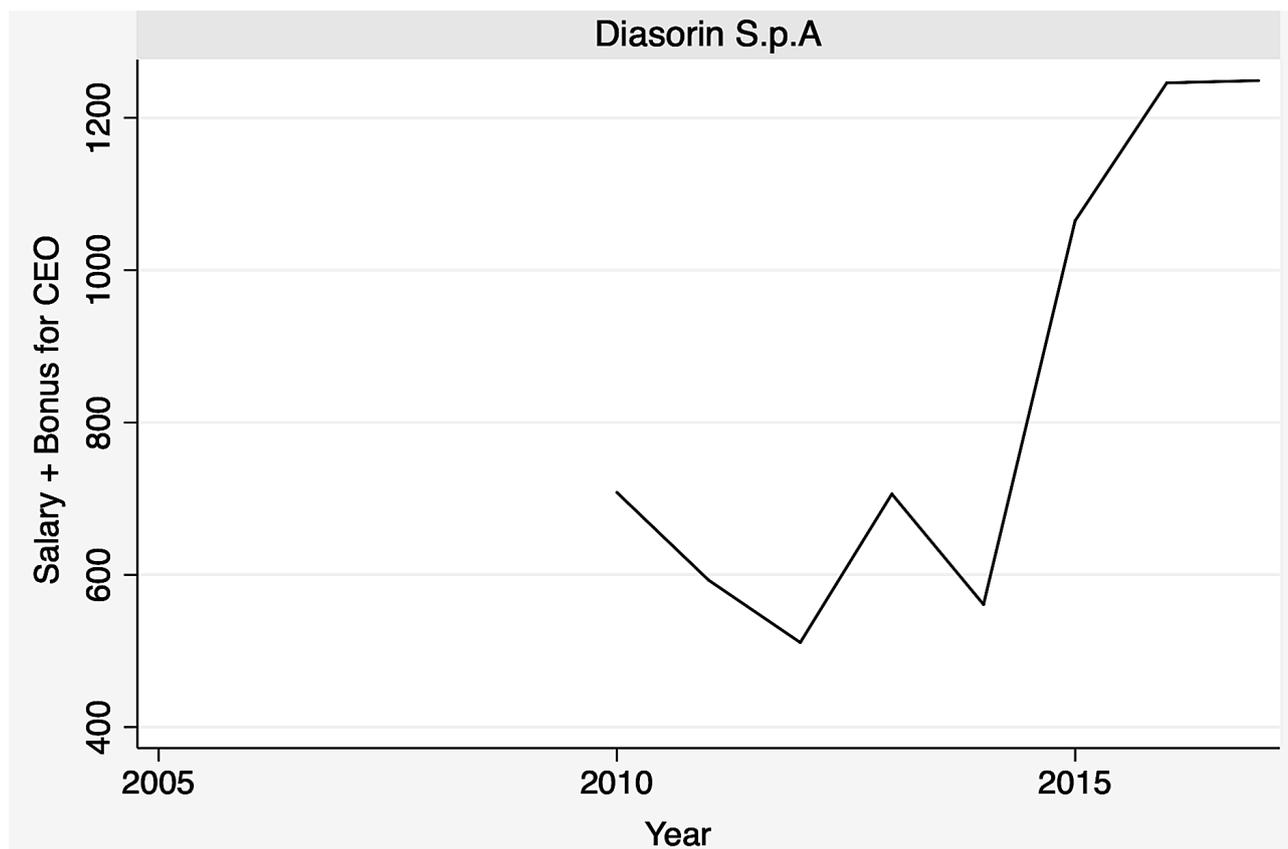
**Figure 3.4.2**

This Figure the payout ratio for Diasorin S.p.A between 2000 and 2015. It is important to underline that even in 2015 when the net income was negative ENI distributed dividends.

Source: Personal elaboration

negative (but insignificant) relationship between retention ratio and CEO compensation in Italy.

Meanwhile the unexpected sign for the coefficient of  $\text{Lincome}$  can be explained considering that dividends are usually used by company to signal future large cash flow increase and, as it has been pointed out previously, Italian companies, especially large ones, operate in mature industries where it is difficult to increase considerably cash flows; hence larger companies are going to have higher retention ratios.



**Figure 3.4.3**

This figure shows the cash compensation of ENI S.p.A CEO between 2001 and 2017.

Source: Personal Elaboration

There is another fundamental element useful to further understand Italian firms that is the impressive number of family-controlled firms.

In these firms the ownership is detained by a family member or a group of relatives, thus loyalty and family ties play an important role in the definition of business, administrative, financial and dividend policy. There are two main hypothesis that can be formulated for understanding the relation between dividend payout and there of a family in a Board of Directors. The first hypothesis assumes that there is a positive relation between dividend and family ownership because there are incentives to increase the family wealth rather than keeping inside the company, meanwhile the second one suggest that there is a negative relation between family ownership and payout ratio because family prefer to not distribute dividends in order to protect the company (and themselves) from future financial risk.

The model used for testing the hypothesis aforementioned is the following (**Model 2**):

$$lret = \beta_0 + \beta_1 comp_{it} + \beta_2 dividend_{it} + \beta_3 lincome_{it} + \beta_4 family + \sum_{t=1}^{17} d_t + \varepsilon$$

The symbols used for **Model 2** are the same used for the first model tested in this work plus the variable family, that is a dummy variable that is 1 if the company is family-controlled and is 0 if the company is not family-controlled.

The results of the regression for **Model 2** are shown in **Table 15**.

Independent Variables	Predicted sign	Coefficient	t-statistics
Constant	?	-6,56	-6,03***
Compensation	+	-0,35x10 <sup>-3</sup>	-1,31
Dividend	-	-8,18X10 <sup>-7</sup>	-1,86*
Lincome	-	0,35	5,46***
Family	?	0,539	3,43***
F-statistic=4,20			

**Table 15**

This table shows the results of the regression based on Model 2.

The total number of observation is 1120 and the R<sup>2</sup> = 0,0540

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

Nonetheless, in this case the F-statistic is greater than 3 consequently all the coefficient of the regression are not equal to 0.

In addition the results of the regression based on **Model 2** confirms the results of the regression based on **Model 1**; moreover the variable family has a positive sign fulfilling the second hypothesis made that is that there is a negative relationship between payout ratio and family ownership, meaning that Italian family-controlled firms tend to preserve the profits of the company in order to protect the company itself (and themselves) from future financial risks and therefore distribute less dividend (they have essentially higher retention ratios).

This positive relation can be a proof of how family ownership can reduce the agency problem, in fact in these companies the lack of information between shareholders and executive is mitigated by the large stake that family own in the company that put them in a position where monitoring is less costly; consequently executive tend to distribute less dividends in order to preserve the financial soundness of the company.

Another important analysis that should be done is the one that consider the presence of an interaction between the variable comp (cash compensation) and the variable family (family-controlled or not family-controlled); in order to execute this analysis, a new interacted variable called compfamily (defined as comp x family) is added to **Model 2**.

The results of this regression are showed in **Table 16** and highlight the lack of significance of the interacted variable compfamily (that however has a negative sign).

**Table 16** shows results extremely similar (the F test shows joint significance and the sign are the same of the precedent regression) to the previously conducted regression, but the presence of an interacted variable requires further tests; in particular in these cases, in which the regression includes an interacted variable, an F test for joint significance is important to determine the impact of the interacted variable.

Independent Variables	Predicted sign	Coefficient	t-statistics
Constant	?	-4,65	-6,05***
Compensation	+	-2,32x10 <sup>-6</sup>	-0,12
Dividend	-	-8,18x10 <sup>-7</sup>	-1,86*
Lincome	-	0,351	5,45***
Family	+	5,83	3,41***
Compfamily	?	-0,371x10 <sup>-4</sup>	-1.10
F-statistic=3,99			

**Table 16**

This table show the results for the regression based on Model 2 in which is considered the interaction between the variable compensation and the variable family.

The total number of observation is 1120 and the R<sup>2</sup> = 0,0549

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

The F test for joint significance for the variables comp and compfamily returns a result lower than three meaning that it is not appropriate to include the interacted variable in the model.

As it is clear from the analysis previously conducted the control exerted by the families plays an important role in the definition of the dividend policy within a company.

In order to better understand this role the sample is divided in two mutually exclusive subsamples the first one in which there are only family-controlled companies and the second one in which there are only non-family controlled companies.

The results for these two regressions are showed in **Table 17** and **Table 18** respectively. Both tables present results extremely similar to the ones previously commented for **Model 1**.

As expected the F-test for joint significance is greater than three in both situations, meaning that **Model 1** is appropriate to explain the phenomenon presented.

The signs for the various relations analyzed are the same and the variables retain their significance, therefore there are no particular differences between these results and the ones deriving from **Table 14**.

Independent Variables	Predicted sign	Coefficient	t-statistics
Constant	?	-4,54	-5,60***
Compensation	+	-2,58x10 <sup>-6</sup>	-0,11
Dividend	-	-4,45X10 <sup>-6</sup>	-1,68*
Lincome	-	0,42	7,39**
F-statistic=4,89			

**Table 17**

This table shows the results for the subsample that includes only family-controlled companies.

The total number of observation is 717 and the  $R^2 = 0,0782$

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

Independent Variables	Predicted sign	Coefficient	t-statistics
Constant	?	-4,56	-8,37***
Compensation	+	-0,29x10 <sup>-3</sup>	-0,92
Dividend	-	-7,50X10 <sup>-7</sup>	-1,72*
Lincome	-	0,34	2,01**
F-statistic=3,42			

**Table 18**

This table shows the results for the subsample that includes only non-family controlled firms.

The total number of observation is 392 and the  $R^2 = 0,0363$

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

Another element worth discussing is the 2008 financial crisis that had a deep impact on many Italian companies. In order to understand the impact of this event it is appropriate to run two different regressions, the first one that consider the years between 2000 and 2007 and the second one that consider the years between 2009 and 2017. The objective of these analysis is to investigate whether there are significant differences between the pre-crisis and the post-crisis scenario in relation to CEO compensation and dividend policy.

These two regressions are based on **Model 2** (the one that includes family as independent variable).

The results for the pre-crisis scenario are showed in **Table 19** meanwhile the results for the post-crisis scenario are showed in **Table 20**.

Independent Variables	Predicted sign	Coefficient (Pre-crisis)	t-statistics (pre-crisis)
Constant	?	-4,67	-5,99***
Compensation	+	-0,33x10 <sup>-3</sup>	-1,78*
Dividend	-	-7,89X10 <sup>-7</sup>	-1,86*
Lincome	-	0,34	5,44***
Family	+	0,54	3,60***
F-statistic=5,82			

**Table 19**

This table shows the results for the regression base on Model 2 in which is considered only the pre-crisis scenario.

The total number of observation is 1120 and the  $R^2 = 0,0528$

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

Independent Variables	Predicted sign	Coefficient (post-crisis)	t-statistics (post-crisis)
Constant	?	-4,42	-7,22***
Compensation	+	-0,34x10 <sup>-3</sup>	-1,8*
Dividend	-	-8,28X10 <sup>-7</sup>	-1,87*
Lincome	-	0,34	5,60***
Family	+	0,54	3,40***
F-statistic=5,29			

**Table 20**

This table shows the results for the regression based on Model 2 in which is considered only the post crisis scenario.

The total number of observation is 1120 and the  $R^2 = 0,0535$ .

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

Both **Table 19** and **Table 20** show similar results to the previously conducted analysis, relatively to F-statistic and signs of the variables, but in both cases the variable comp (cash compensation) is statistically significant, at least at the 10% level.

Overall, there are no considerable differences in the two scenarios, meaning that the 2008 financial crisis, that had a deep and durable effect on Italian companies, did not affect substantially the relation between CEO compensation and dividend policy.

It could be relevant to replicate the analysis based on **Model 2** using a subsample in which there are only manufacturing companies.

**Table 21** and **Table 22** show the results for the regressions, based on **Model 2**, in which the data are segmented by industry, in particular the first table shows the results for the regression in which the subsample is composed only by manufacturing companies, the second table shows the results for the regression on which the subsample is composed only by non-manufacturing companies (i.e utility and tertiary).

Independent Variables	Predicted sign	Coefficient	t-statistics
Constant	?	-5,34	-7,11***
Compensation	+	0,175x10 <sup>-3</sup>	0,77
Dividend	-	-3,72X10 <sup>-6</sup>	-2,82***
Lincome	-	0,47	7,09***
Family	+	0,09	0,55
F-statistic=3,82			

**Table 21**

This table shows the results for the regression based on Model 2, in which are considered only manufacturing firms.

The total number of observation is 766 and the R<sup>2</sup> = 0,0925

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

Independent Variables	Predicted sign	Coefficient	t-statistics
Constant	?	-3,27	-5,58***
Compensation	+	0,175x10 <sup>-3</sup>	-1,08
Dividend	-	-6,91X10 <sup>-7</sup>	-1,57
Lincome	-	0,20	1,82*
Family	+	0,84	4,33***
F-statistic=12,22			

**Table 22**

This table shows the results for the regression based on Model 2, in which are considered only non-manufacturing firms.

The total number of observation is 343 and the R<sup>2</sup> = 0,0613

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

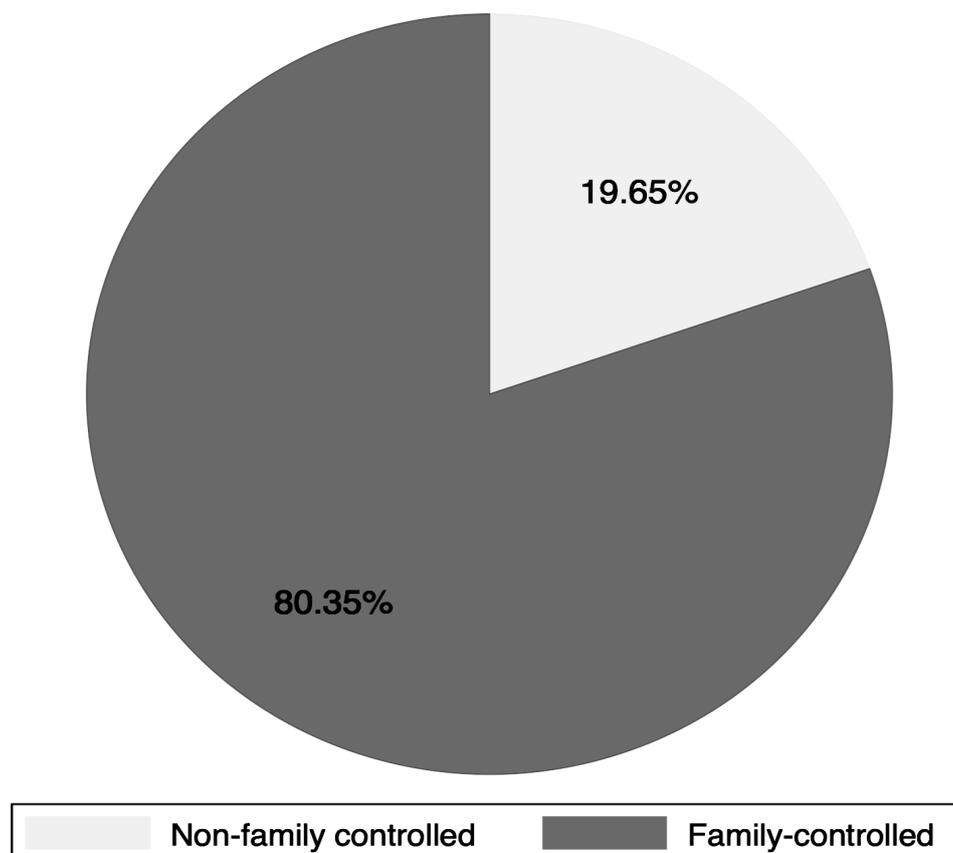
Source: Personal Elaboration

The comparison between the results from the two mutually exclusive subsamples is quite striking. First of all the F-statistic (or Wald test) is greater than three in both cases, secondly there are many important differences in terms of statistical significance and signs of the coefficients.

The first notable difference is the sign of the coefficient for the compensation, in the regression that consider only manufacturing companies, in this particular case the sign of the regression is coherent with the first hypothesis formulated (even if the relation is not statistically significant),

This surprising result, can be explained considering that manufacturing companies, unlike utility companies, are in more competitive industries that impose high R&D costs and investments for new equipments and industrial plants, and in which high-risk, costly projects can give a durable competitive edge. Therefore for these companies, the model proposed by Bhattacharyya, Mawani, Morrill in their paper " Dividend payout and executive compensation: theory and evidence" is the most suitable.

Moreover, in the case of manufacturing companies the variable family lost its statistical significance, meaning that in the case of manufacturing companies the role of the family control is less strong and a relation between the payout and the family control cannot be found even if the majority of the manufacturing companies is family-controlled (as shown in **Figure 3.4.4**).



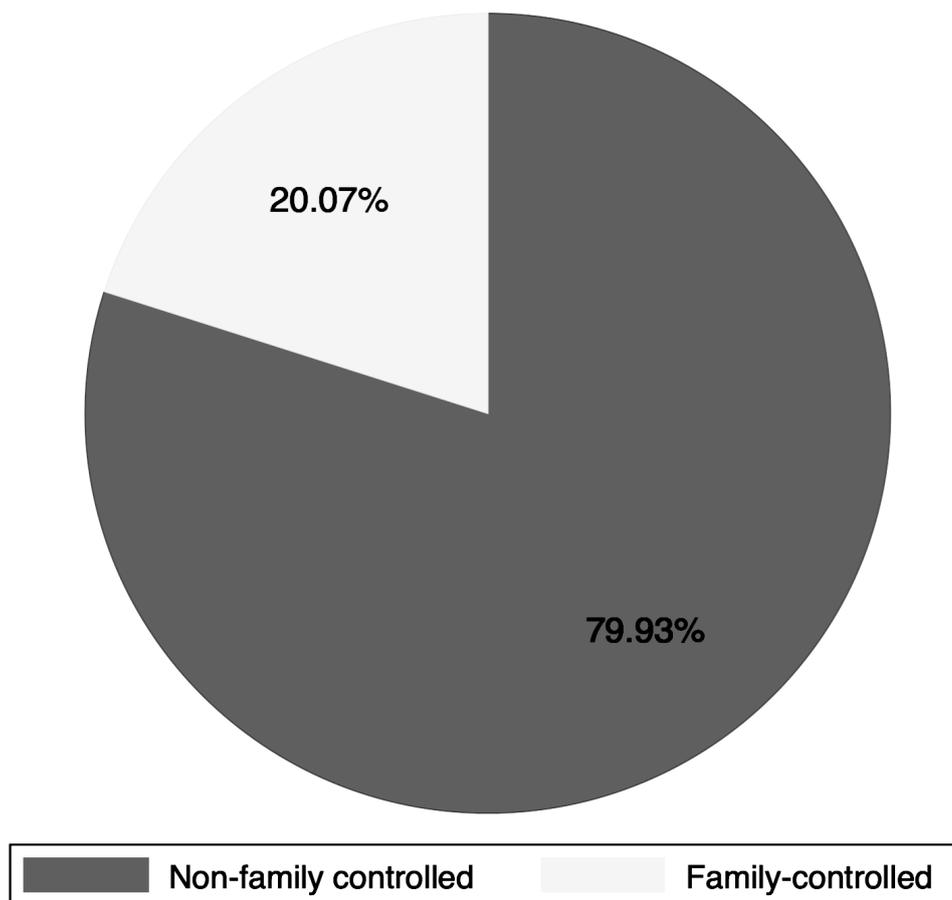
**Figure 3.4.4**

This pie chart shows the percentage of Italian publicly traded family-controlled manufacturing firms.

Source: Personal Elaboration

The other variables keep their significance and their coefficients keep the same signs. On the other hand, for non-manufacturing companies the results are aligned with the analysis previously conducted, meaning that the coefficients of the variables have the same signs and keep their significance.

In particular the variable family is statistically significant at the 1% level, meaning that the role of the family is particularly important in companies that operate in industry like utility and tertiary (in this case **Figure 3.4.5** and **Figure 3.4.6** present the percentage of family-controlled companies in utility and tertiary industries).

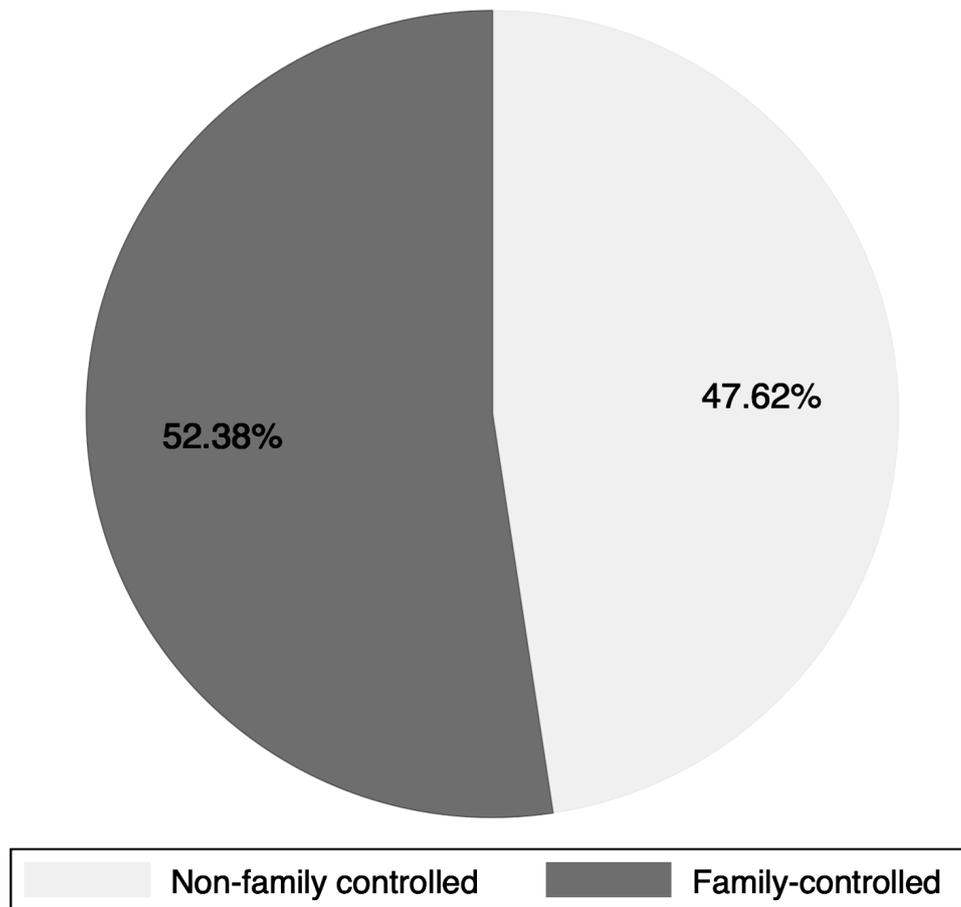


**Figure 3.4.5**

This pie chart shows the percentage of Italian publicly traded family-controlled utility companies. Source: Personal Elaboration

This comparative analysis shows that an analysis conducted on the entire dataset can provide misleading results and that the relation between dividend policy and executive compensation, at least in Italy, can be industry-specific.

This key consideration can be the main element that differentiates the analysis conducted in previous papers and this thesis and suggests that the industrial mix (i.e. the percentage of manufacturing companies and non-manufacturing companies) that characterizes a country is one of the main elements that impacts the relation between executive compensation and dividend policy.



**Figure 3.4.6**

This pie chart shows the percentage of Italian publicly traded family controlled companies that operate in the tertiary industry.

Source: Personal Elaboration

Another element of profound importance in regulating the compensation policy of executive and dividend policy is the presence of institutional investors that as it has been pointed out in precedent sections can be a mechanism for implementing better corporate governance practices.

In order to understand how the presence of institutional investors affects the relation between CEO compensation and dividend policy, it is useful to run two regression both based on **Model 2** in which in the first one are considered only the companies in which there is at least an institutional investor with a relevant stake, meanwhile in the second one are included only companies with no institutional investors.

The results of the two regressions are presented in **Table 23** and **Table 24**.

In the first case (presence of institutional investors) the results are aligned with the precedent analysis, except for the variable family that loses its statistical significance (**Figure 3.4.7** shows the percentage of family-controlled companies among the ones characterized by the presence of institutional investors).

Independent Variables	Predicted sign	Coefficient	t-statistics
Constant	?	-4,635	-6,82***
Compensation	+	0,1x10 <sup>-3</sup>	-0,42
Dividend	-	-1,53X10 <sup>-6</sup>	-2,46***
Lincome	-	0,47	4,05***
Family	+	0,24	1,40
F-statistic=5,00			

**Table 23**

This table shows the results for the regression based on Model 2 in which are considered only companies in which there is at least one institutional investor with a relevant stake in the company.

The total number of observation is 650 and the  $R^2 = 0,0568$

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

Independent Variables	Predicted sign	Coefficient	t-statistics
Constant	?	-4,71	-6,86***
Compensation	+	0,34x10 <sup>-3</sup>	-0,51
Dividend	-	-1,53X10 <sup>-6</sup>	-2,46***
Lincome	-	0,35	3,36***
Family	+	0,61	1,12
F-statistic=2,36			

**Table 24**

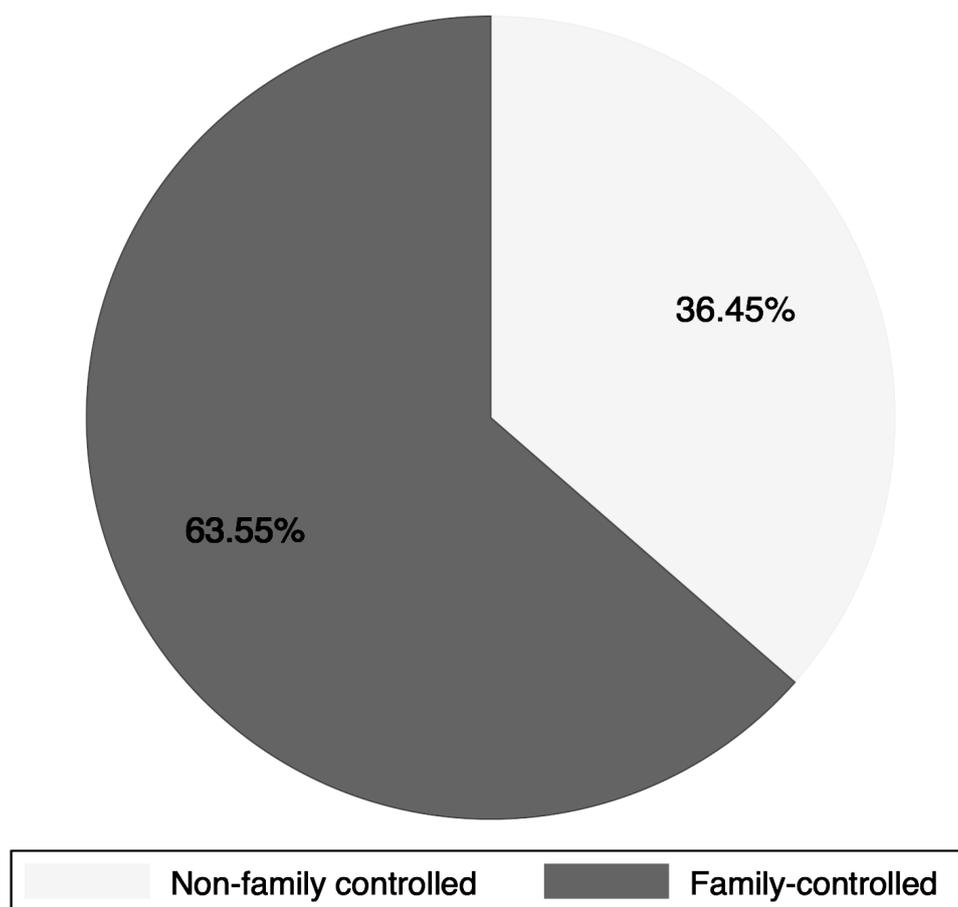
This table shows the results for the regression based on Model 2 in which are considered only companies in which there are not institutional investors.

The total number of observation is 454 and the  $R^2 = 0,0656$

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

On the other hand it should be pointed out that the regression in which are considered only company where that have no institutional investors returns a F-statistic lower than three, highlighting that these results should be interpreted with an high degree of skepticism.



**Figure 3.4.7**

This figure shows the percentage of family-controlled companies among the ones characterized by the presence of institutional investors.

Source: Personal Elaboration

Another factor that has profound importance, that is here analyzed, is the difference between companies with high levels of expenditure for R&D and companies with lower levels of R&D expenditure.

The differences between these two types of companies can be properly analyzed comparing the results of two regressions (both based on **Model 2**) in which the first considers only companies with high levels of R&D expenditure, meanwhile the second one considers only companies with low levels of R&D expenditure.

The results of this comparative analysis are presented in **Table 25** and **Table 26**.

The results for the regression in which the subsample includes only companies with high levels of R&D expenditure are important because they confirm that in this kind of companies the role of the family is less important (and also statistically insignificant) in the definition of the dividend policy.

This relation can be explained considering that high expenditures for R&D means that companies that do not invest are out of market and therefore in order to avoid this possibility, firms tend to use wisely their profits reinvesting them and not distributing as dividends

Independent Variables	Predicted sign	Coefficient	t-statistics
Constant	?	-5,46	-4,02***
Compensation	+	-0,131x10 <sup>-3</sup>	-0,48
Dividend	-	-0,698X10 <sup>-7</sup>	-1,84*
Lincome	-	0,4718	4,83***
Family	+	0,68	0,35
F-statistic=3,90			

**Table 25**

This table shows the results for the regression based on Model 2 in which are considered only companies with high R&D expenditure.

The total number of observation is 484 and the  $R^2 = 0,0628$

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

Independent Variables	Predicted sign	Coefficient	t-statistics
Constant	?	-4,14	-5,78***
Compensation	+	0,467x10 <sup>-3</sup>	-1,83*
Dividend	-	-0,22X10 <sup>-5</sup>	-1,89*
Lincome	-	0,31	3,98***
Family	+	0,46	2,62***
F-statistic=2,89			

**Table 26**

This Table shows the results for the regression based on Model 2 in which are considered only companies with low level of R&D expenditure.

The total number of observation is 625 and the  $R^2 = 0,1064$

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

The results for the regression in which the subsample includes only companies with low level of R&D expenditure returns an F-statistic lower than three, hence the results should be analyzed with an high degree of skepticism.

A further analysis that is important to conduct, is the one related to the belonging to the STAR (Segmento Titoli Alti Requisiti) segment. The STAR segment of the MTA (Mercato Telematico Azionario) is dedicated to medium-size enterprises with capitalization between forty million euros and one billion euros and that undertake more regulation in terms of transparency and corporate governance practices.

The aim of these analysis is to understand whether more regulation in terms of transparency and corporate governance can mitigate the agency problem and therefore align the interests of executives and shareholders.

The results for the subsamples are presented in **Table 27** and **Table 28**.

Independent Variables	Predicted sign	Coefficient	t-statistics
Constant	?	-7,54	-10,58***
Compensation	+	0,761x10 <sup>-3</sup>	1,58
Dividend	-	-0,298X10 <sup>-3</sup>	-2,26***
Lincome	-	0,697	5,61***
Family	+	0,68	0,27
F-statistic=8,26			

**Table 27**

This table shows the results for the regression based on Model 2 in which are considered only companies belonging to the STAR segment.

The total number of observation is 383 and the R<sup>2</sup> = 0,1144

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

Independent Variables	Predicted sign	Coefficient	t-statistics
Constant	?	-4,06	-5,76***
Compensation	+	-0,321x10 <sup>-3</sup>	-1,49
Dividend	-	-0,298X10 <sup>-6</sup>	-1,82*
Lincome	-	0,294	3,74***
Family	+	0,62	3,83***
F-statistic=3,32			

**Table 28**

This table shows the result for the regression based on Model 2 in which are considered only the companies which do not belong to the STAR segment.

The total number of observation is 726 and the R<sup>2</sup> = 0,0987

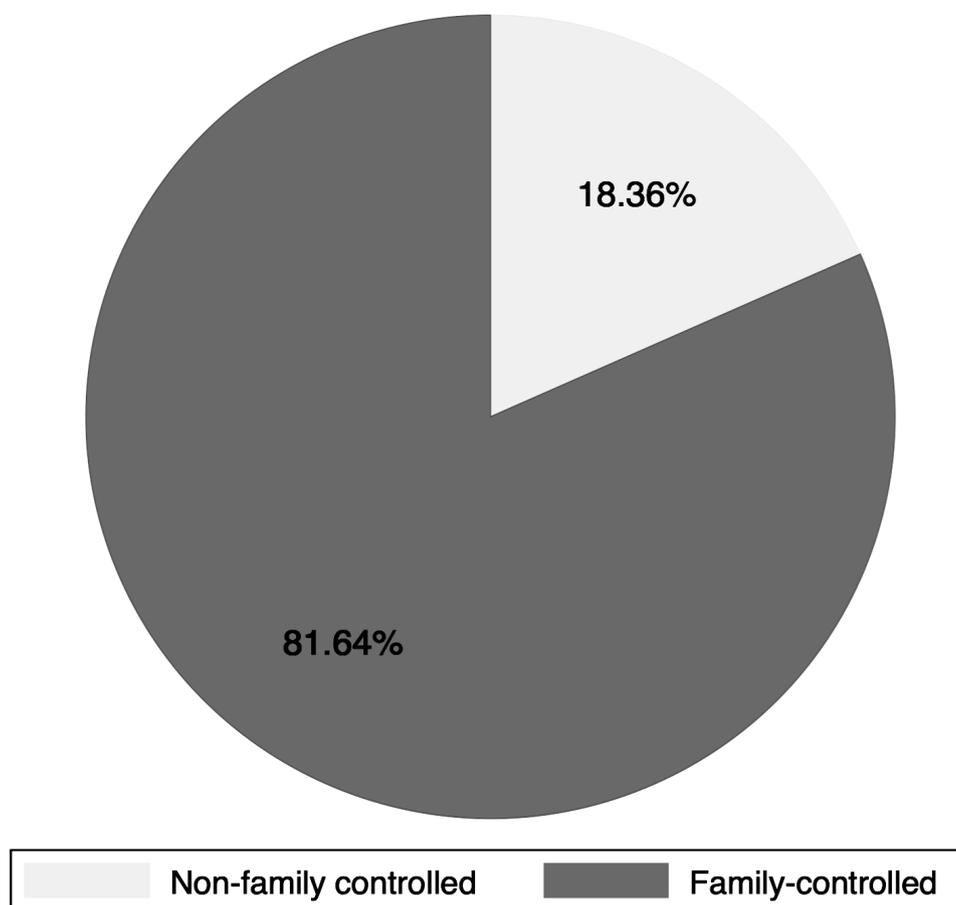
\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

First of all in both cases the F-statistic is greater than three.

The results presented show that there is a marked difference between the two subsamples, in particular for the companies belonging to the STAR segment, the results are more similar to the one found in previous papers and suggest that probably more transparency, more regulation followed by a rigorous implementation of the best corporate governance policy can lead to a mitigation of the agency problem and consequently, can affect the dividend policy.

The comparative analysis return two important results, first the role of the family is much more important in determining the dividend policy, in companies which do not belong to the STAR segment (the percentage of family-controlled firms among the ones belonging to STAR segment is shown in **Figure 3.4.8**), second as pointed out before, these companies fit better the models proposed in this work and the underlying theoretical framework.



**Figure 3.4.8**

This Figure shows the percentage of family-controlled firms belonging to the STAR segment.

Source: Personal Elaboration

In conclusion the companies belonging to the STAR segment are more similar to companies that operate in countries characterized by a common law legal system (e.g US and UK) that assures more shareholder protection and more advanced corporate governance practices.

In order to conduct a thorough analysis the regression for the subsample including only companies belonging to the STAR segment is repeated, adding as variable famceo (that is a binary variable that is equal to one when the CEO belongs to the family that controls the company and zero otherwise).

The results of this regression are showed in **Table 29**.

Independent Variables	Predicted sign	Coefficient	t-statistics
Constant	?	-7,53	-10,58***
Compensation	+	-7,73x10 <sup>-4</sup>	1,56
Dividend	-	-4,45X10 <sup>-6</sup>	-2,24***
Lincome	-	0,69	5,57***
Family	+	0,71	0,28
Famceo	-	-0,05	-0,40
F-statistic=10,80			

**Table 29**

This table shows the results for the regression in which are only considered companies belonging to the STAR segment and in which is added the variable famceo to Model 2.

The total number of observation is 383 and the  $R^2 = 0,1128$

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

**Table 29** shows no significant differences compared to **Table 27**; therefore it can be seen as a robustness check that confirms that the regulations in terms of liquidity and corporate governance practices is an important factor in shaping the dividend policy. Therefore the models used in this thesis can suit properly Italian companies subjected to higher level of regulation.

The lack of significance for the variable compensation can be explained considering that even these strict rules that companies are required to respect are not comparable to the excellent standards that Anglo-Saxon companies must comply with.

### 3.5) Further analysis

The approach used for all the regression presented in this thesis is based upon the use of fixed effects. This analysis on the relation between dividend policy and executive compensation can be also done through the use of the Tobit regression, that is applied when the range of the dependent variable is censored (in this particular case the upper limit of the dependent variable is zero meanwhile the lower limit of the dependent variable is the value correspondent to the lowest payout ratio among the data).

However it should be pointed out that the Tobit regression is based upon the hypothesis of random effects, therefore the results should be analyzed with an high level of skepticism.

The first analysis is the one conducted through the use of the Tobit regression that does not consider the time effect (the results of this analysis are presented in **Table 30**).

Independent Variables	Predicted sign	Coefficient	z-statistics
Constant	?	-7,54	-1,67*
Compensation	+	0,52x10 <sup>-3</sup>	2,11***
Dividend	-	-0,25X10 <sup>-7</sup>	-4,04***
Lincome	-	-0,52	-3,22***
Family	+	0,73	1,38

**Table 30**

This table shows the results for the Tobit regression that does not consider the time effect.

The total number of observation is 1298 and the pseudo  $R^2 = 0,0206$

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

This result are quite striking, but are not particularly significant because the time effect is not considered and the regression is based on the use of random effects; therefore the results the are extremely different from the ones presented in all the previous analysis.

This analysis is presented just for make the picture clearer.

The following step is to introduce the time effect in the Tobit regression and analyze the results.

**Table 31** presents the results of the analysis for the Tobit regression that consider the time effect.

In this case the results are really similar to the ones considered using the models based on the fixed effects assumption.

The presence of similar results between the Tobit regression and the previously conducted analysis reassures about the quality of the work done and consequently the conclusions deducted.

Independent Variables	Predicted sign	Coefficient	z-statistics
Constant	?	-1,30	-3,10
Compensation	+	$0,12 \times 10^{-3}$	-0,5
Dividend	-	$-0,58 \times 10^{-7}$	-5,95***
Lincome	-	-0,52	-0,24
Family	+	0,73	0,83

**Table 31**

This table shows the results for the Tobit regression that consider the time effect. The total number of observation is 1298.

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

In order to present a thorough study of the phenomenon here presented, the use of the Tobit regression that considers time effect is extended at the subsample containing only companies belonging to the STAR segment and to the subsample containing only companies that have high R&D expenditures.

The results for the subsample containing only companies belonging to the STAR segment are showed in **Table 32**.

Independent Variables	Predicted sign	Coefficient	z-statistics
Constant	?	-1,70	-3,57***
Compensation	+	$0,75 \times 10^{-3}$	1,09
Dividend	-	$-0,33 \times 10^{-4}$	-5,88***
Lincome	-	-0,06	1,45
Family	+	-0,22	-1,45

**Table 32**

This table shows the results for the Tobit regression that considers only companies belonging to the STAR segment.

The total number of observation is 453

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

This results are quite similar to the ones obtained through the use of the model that is based on fixed effects; therefore they confirm the analysis previously presented.

The results for the subsample including only companies that have high R&D expenditure are showed in **Table 33**.

Independent Variables	Predicted sign	Coefficient	z-statistics
Constant	?	-0,94	-3,15
Compensation	+	0,162x10 <sup>-4</sup>	-0,61
Dividend	-	-0,58x10 <sup>-8</sup>	-5,81***
Lincome	-	-0,02	0,88
Family	+	0,17	-1,68*

**Table 33**

This table shows the results for the Tobit regression that considers the time effect for the subsample of companies that have high R&D expenditure.

The total number of observation is 843

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

Even in this case the Tobit regression that considers the time effect confirms the results of previous analysis.

In conclusion it is evident that the Tobit regressions here presented confirm the results previously presented in this thesis and give rise to the idea that the models applied in context like US and UK are not particularly effective in explaining the relation between executive compensation and dividend policy for European countries, especially Italy.

### 3.6) Robustness checks

The last step necessary to confirm the effectiveness of the models proposed is to carry on some robustness checks, in order to do that it is necessary to replicate the analysis previously conducted using alternative measure of some variables used in the models. The first step is the replication of Model 1 in which instead of the cash compensation (indicated as comp in the model that includes only salary and bonus) it is used the variable total compensation (indicated totcomp and that includes salary, bonus, other compensation and non-monetary benefits).

The remaining part of the model is unaltered.

The results of this variation of **Model 1** are presented in **Table 34**.

Independent Variables	Predicted sign	Coefficient	t-statistics
Constant	?	-4,21	-5,95***
Total Compensation	+	-0,143x10 <sup>-3</sup>	-1,02
Dividend	-	-8,29x10 <sup>-7</sup>	-1,86*
Lincome	-	0,346	5,24***
F-statistic=3,16			

**Table 34**

This table shows the results for the regression based on Model 1 in which the variable compensation (salary plus bonuses) is replaced with the variable total compensation (salary plus bonuses plus other compensation and non monetary benefits).

The total number of observation is 1120 and the R<sup>2</sup> = 0,0332

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

Source: Personal Elaboration

The results in **Table 34** confirm the results previously presented for **Model 1**. Therefore the signs of the coefficients of each variable are the same and the variables retain their significancy. The F-statistic is greater than three consequently the model has not all the coefficient equal to zero.

In addition, **Model 2** is tested (checking for robustness), replacing the variable comp (that indicates cash compensation so salary plus bonus) with totcomp (that indicates total compensation therefore salary plus bonus, other compensation and non monetary benefits).

The results of the regression based on **Model 2** in which instead of the variable comp it is used the variable totcomp are expected to confirm the previous analysis.

The results of the above-mentioned analysis are shown in **Table 35**.

As expected, the coefficients retain their sign and their significancy demonstrating the robustness of the model.

Independent Variables	Predicted sign	Coefficient	t-statistics
Constant	?	-6,55	-6,56***
Total compensation	+	-0,193x10 <sup>-3</sup>	-1,50
Dividend	-	-8,11X10 <sup>-7</sup>	-1,88*
Lincome	-	0,3563	5,45***
Family	?	0,5369	3,48***
F-statistic=4,07			

**Table 35**

This table shows the results for the regression based on Model 2 in which the variable compensation (salary plus bonuses) is replaced with the variable total compensation (salary plus bonuses plus other compensation and non monetary benefits).

The total number of observation is 1120 and the  $R^2 = 0,0332$

\*, \*\*, \*\*\* denote that results are significant at the 10%, 5% and 1% level.

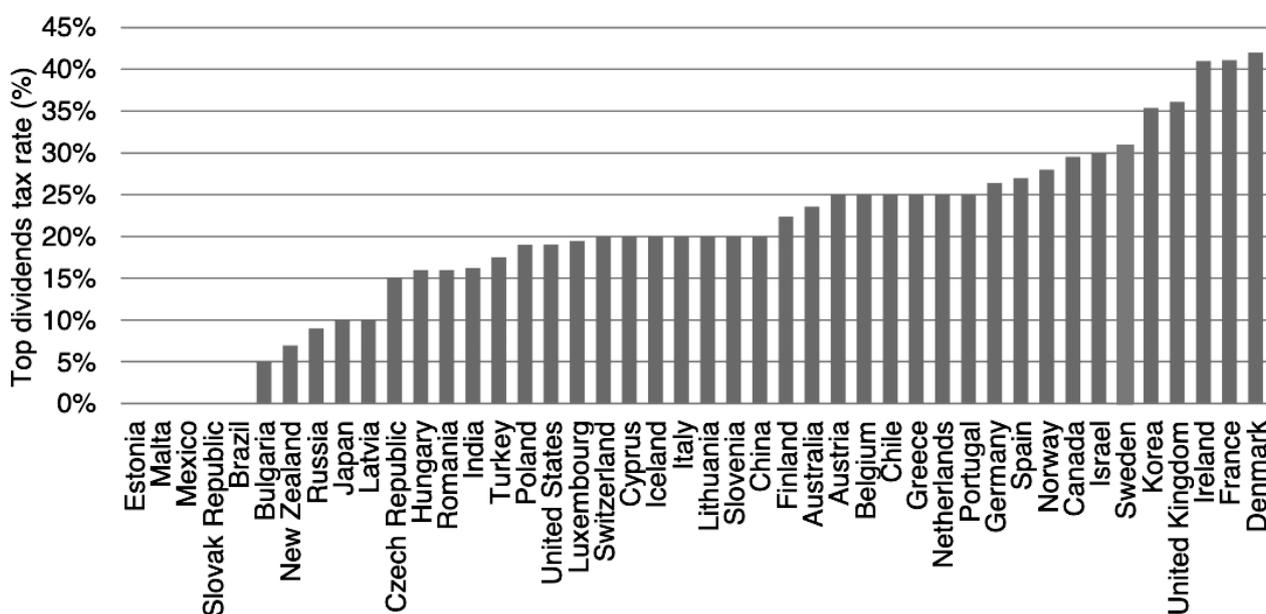
Source: Personal Elaboration

In conclusion the analysis and the consideration carried out for the models and for the relations between the variables are valid independently of the measure of CEO compensation used in the regressions.

### 3.7) Further developments

The analysis carried out in this work presents anomalous results compared to the literature on the subject; in order to verify if this anomalies are typically Italian or represent a wider European situation, further efforts should be made to assess the relation between dividend and compensation; in fact other European countries (e.g Germany and Sweden) are characterized by different industrial environments, different legal families and different financial markets.

Many other elements, as discussed many time in the precedent sections, can affect the executive compensation and the dividend policy (e.g the different fiscal treatment in European and BRIC countries as shown in **Figure 3.7.1**)



**Figure 3.7.1**

This Figure shows the different fiscal treatment of dividend in some European and BRIC countries. The differences among countries that share a common market (like the EU) are quite big, for example in Estonia dividends are tax-exempt, meanwhile Denmark applies a tax over 40% on dividends. These differences can be detrimental to the process of European economic integration.

Source: <https://docplayer.net/11547382-Corporate-dividend-and-capital-gains-taxation-a-comparison-of-sweden-to-other-member-nations-of-the-oecd-and-eu-and-bric-countries.html>

The country-specific differences can affect the relation between dividend and compensation and can confirm or disprove the relations found in this or precedent works.

Moreover it could be useful to assess if the different structure and level of compensation of European CEOs could affect the dividend policy and have an effect on the ways in which companies decide to use their profits.

In conclusion a wider cross-country examination, that take into account a variety of elements like size, company's age and family ownership, could be helpful in order to improve the understanding of the relation between dividend policy and CEOs' compensation.

### 3.8) Conclusions

This paper offers a wide range of analysis on the topic of executive compensation and dividend policy in Italian publicly traded companies and gives a fresh and innovative perspective on this thematic area.

As expected the findings of this thesis are consistently different from the results of previous studies and scientific papers, as a matter of fact Italy has a lot of peculiarities that contribute to make the analysis more complex compared to other countries.

The main elements that made this analysis different from other previously conducted are:

- The preponderant importance of family in the management and strategic control of many important companies, as pointed out before there are many Italian publicly traded and family-controlled companies and therefore the role of family is on average more relevant than in other countries;
- The French civil law legal system that is completely different in terms of shareholder protection and corporate governance practices from the common law system (that is applied in many countries studied in precedent papers like US and New Zealand);
- The great number of companies that operate in consolidated industries like energy supply or utilities and consequently the lack of innovative high-tech companies that in other countries are thriving;
- The presence of corporate governance practices that do not assure a high level of disclosure and allow executive to easily extract private benefits from shareholders.

These factors are typically Italian and therefore help to explain the results presented in this paper.

Nevertheless, there are some considerable results that need to be summarized in this paragraph.

In the first place it appears to be likely that dividend policy is industry-specific as pointed out by the comparison of **Table 21** and **Table 22** in which there is a significant difference in the results between manufacturing companies and non-manufacturing companies (utilities or tertiary).

In the second place, the results for the subsample that include only companies with high levels of R&D expenditure confirms that the models proposed in this thesis suit better countries characterized by competitive and technological companies like US and UK and therefore cannot suit properly Italian companies.

Finally, it seems that more regulation in terms of transparency, corporate governance practices and disclosure is an effective normative tool that can help to reduce the agency problem and therefore align the interests of executives and shareholders.

This last fact is confirmed by the comparison between **Table 27** and **Table 28** that highlights the relevant differences in the relation between executive compensation and dividend policy among the companies belonging to the STAR (Segmento Titoli Alti Requisiti) and the ones who do not belong to the aforementioned segment.

In conclusion Italy is a country in which there is a need for more transparency, disclosure and new regulation concerning corporate governance practices in order to better facilitate the alignment of interests between shareholders and executive.

## **Bibliography**

Alchian, Armen A. and Harold Demsetz (1972). "Production, Information Costs, and Economic Organization." *American Economic Review* LXII, no. 5 (December): 777-795.

Bebchuk L., Fried J. (2004), *Pay without Performance: The Unfulfilled Promise of Executive Compensation*, Harvard University Press.

Berglöf, E. (1997). *Reforming Corporate Governance: Redirecting the European Agenda*. *Economic Policy*, April 1997, 93-123.

Bhattacharyya, N., Elston, J.A. and Rondi, L. (2014) 'Executive compensation and agency costs in a family controlled corporate governance structure: the case of Italy', *Int. J. Corporate Governance*, Vol. 5, Nos. 3/4, pp.119-132.

Bhattacharyya, N. (2007) 'Good managers invest more and pay less dividends: a model of dividend policy', *Advances in Financial Economics*, Vol. 12, pp.91-117.

Bhattacharyya, N. and Elston, J.A. (2011) 'Dividends, executive compensation, and agency costs: empirical evidence from Germany', *Journal of Accounting and Finance*, Vol. 11, No. 1, pp.11-20.

Bhattacharyya, N., Mawani, A. and Morrill, C.K.J. (2008a) 'Dividend payout and executive compensation: theory and Canadian evidence', *Managerial Finance*, Vol. 34, No. 8, pp.585-601.

Bhattacharyya, N., Mawani, A. and Morrill, C.K.J. (2008b) 'Dividend payout and executive compensation: theory and evidence', *Accounting and Finance*, Vol. 48, No. 4, pp.521-541.

Boeri T., Lucifora C. Murphy K.J (2013), *Executive Remuneration and Employee Performance-Related Pay*, Oxford University Press, 158-170.

Carroll, T.M. (1981). *Review: Running the American Corporation*. *Southern Economic Journal*, 47: 1168-70.

*Chicago Tribune* (1977). *NYSE Chairman Sees Bigger Government Role*. *Chicago Tribune*, August 10, 1977, E9.

Coase, Ronald H. (1937). "The Nature of the Firm". *Readings in Price Theory*. Homewood, IL, Irwin. New Series, V: 331-351.

Cochran P.L. and S.L. Wartick (1988). *Corporate Governance: A Review of the Literature*.

Comitato per la Corporate Governance (2015), *CODICE DI AUTODISCIPLINA*, Luglio 2015, 1-43

Comitato per la remunerazione AS ROMA S.p.A, RELAZIONE SULLA REMUNERAZIONE PER L'ESERCIZIO CHIUSO AL 30 GIUGNO 2017

CONSOB, MODIFICHE AL REGOLAMENTO SULLE OPERAZIONI CON PARTI CORRELATE, AL REGOLAMENTO MERCATI E AL REGOLAMENTO EMITTENTI IN MATERIA DI TRASPARENZA DELLE REMUNERAZIONI, DEI GESTORI DEGLI ATTIVI E DEI CONSULENTI IN MATERIA DI VOTO IN RECEPIMENTO DELLA DIRETTIVA (UE) 2017/828 (SHAREHOLDER RIGHTS DIRECTIVE 2), Documento per la consultazione 31 ottobre 2019

Conyon, M. J., & Schwalbach, J. (2000). Executive compensation: Evidence from the UK and Germany. *Long Range Planning*, 33, 504-526.

Cuñat, V., and M. Guadalupe, 2005, How does product market competition shape incentive contracts?, *Journal of the European Economic Association* 3, 1058-82.

Cyert R., Kang S., Kumar P., Shah A. (1997), Corporate governance and the level of CEO compensation, Working paper, Carnegie Mellon University.

Decreto-legge 25 giugno 2008, n. 112, "Disposizioni urgenti per lo sviluppo economico, la semplificazione, la competitività, la stabilizzazione della finanza pubblica e la perequazione Tributaria", pubblicato nella Gazzetta Ufficiale n. 147 del 25 giugno 2008 - Suppl. Ordinario n.152/L

Dittmann, I., & Maug, E. (2007). Lower salaries and no options? on the optimal structure of executive pay. *Journal of Finance*, 62, 303-343.

Dye, R. A. (1992). Relative performance evaluation and project selection. *Journal of Accounting Research*, 30, 27-52.

Fama, E.F. (1980). Agency Problems and the Theory of the Firm. *Journal of Political Economy*, 88: 288-307.

Hamner, W. Clay (1975). "How to Ruin Motivation with Pay." *Compensation Review* 7 : 17-27.

Fernie, Sue and David Metcalf, 2003, 'It's Not What You Pay It's the Way That You Pay It and That's What Gets Results: Jockeys' Pay and Performance', *Labour: Review of Labour Economics and Industrial Relations* 13(2), 385-411.

Ferri, F., & Sandino, T. (2009). The impact of shareholder activism on financial reporting and compensation: The case of employee stock options expensing. *The Accounting Review*, 84, 433-466.

*Financial Times (1993). Governance Goes Global. Financial Times, September 13, 1993.*

*Financial Times (1996). Crumbs from the Table. Financial Times, September 25, 1996.*

*Financial Times (1999). Moves to Halt Another Decade of Excess. Financial Times, August 5, 1999, 10.*

*Friedrich B., (2019), Internal Labor Markets and the Competition for Managerial Talent , Northwestern University, 11-13.*

*Frydman, C., & Jenter, D. (2010). CEO compensation. Annual Review of Financial Economics, 2, 75-102.*

*Frydman, C., & Saks, R. (2005). Historical trends in executive compensation, 1936-2003. Harvard University Working Paper.*

*Frydman C. and Molloy S., Does Tax Policy Affect Executive Compensation? Evidence from Postwar Tax Reforms, 2012, 33*

*Gibbons, R. and K. J. Murphy (1990), "Relative Performance Evaluation for Chief Executive Officers," Industrial and Labor Relations Review, 43(3), 30s-51s*

*Gillian S.L., Starks L.T., (2007), The Evolution of Shareholder Activism in the United States, Journal of applied Corporate Governance, Volume 19, Number 1.*

*Goolsbee, Austan. 2000a. What Happens When You Tax the Rich? Evidence from Executive Compensation, Journal of Political Economy, Vol. 108(2), April.*

*Hall, B. J., & Murphy, K. J. (2003). The trouble with stock options. Journal of Economic Perspectives, 17, 49-70.*

*Hamner, W. Clay (1975). "How to Ruin Motivation with Pay." Compensation Review 7 : 17-27.*

*Hartzell, Jay C., and Laura T. Starks, 2003, Institutional investors and executive compensation, Journal of Finance 58, 2351-2374.*

*Jensen M.C. and Meckling, W.H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. Journal of Financial Economics, 3: 305-60.*

*Jensen M.C. (1983). Organization Theory and Methodology. Accounting Review, 58: 319-39.*

*Jensen, M.C. and Warner, J.B. (1988). The Distribution of Power Among Corporate Managers, Shareholders and Directors. Journal of Financial Economics, 20: 3-24.*

Jensen, M.C. (1993). *The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems*. *Journal of Finance*, 48: 831-80.

Kaplan, S. (1994). *Top executive rewards and firm performance: A comparison of Japan and the US*. *Journal of Political Economy*, 102, 510-546.

Kotnik P., Sancik E.M., Guduras D. (2018) . *Executive compensation in Europe: Realized gains from stock-based pay working paper* , Institute for new economic thinking, 2018

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny (2002), *Investor Protection and Corporate Valuation*, *Journal of Finance*, 57, p. 1147-1170.

La Porta, Lopez-de Silanes, Shleifer, and Vishny (1998). *Law and Finance*, *Journal of Political Economy*, 106

Livingston, J.A. (1958). *The American Stockholder*. Philadelphia: J.B. Lippincott Company.

Martin, Kenneth J. and John J. McConnell. 1988. "Corporate Performance, Corporate Takeovers, and Management Turnover." In *Working Paper*. West Lafayette, IN: Purdue University.

Murphy, K. (2002). 'Explaining executive compensation: managerial power vs. perceived cost of stock options'. *University of Chicago Law Review*, 69, 3, 847-69.

Murphy, K. J. (2012). *Pay, politics and the financial crisis*. In A. Blinder, A. Lo, & R. Solow (Eds.), *Economic lessons from the financial crisis*. Russell Sage Foundation.

Murphy, K. J., & Oyer, P. (2004). *Discretion in executive incentive contracts*. USC working paper.

Murphy, K. J., & Sandino, T. (2010). *Executive pay and independent compensation consultants*. *Journal of Accounting and Economics*, 49, 247-262.

Murphy, K. J., & Zábojník, J. (2008). *Managerial capital and the market for CEOs*.

Nader, R., M. Green M. and J. Seligman (1976). *Taming the Giant Corporation*. W.W. Norton: New York.

*New York Times* (1977). *Management: The First Draft of a New Corporate Constitution*.

Ocasio W. and J. Joseph (2005). *Cultural Adaptation and Institutional Change: The Evolution of Vocabularies of Corporate Governance, 1972-2003*. *Poetics*, 33: 163-78.

O'Keefe, Mary, W. Kip Viscusi and Richard J. Zeckhauser (1984). "Economic Contests: Comparative Reward Schemes." *Journal of Labor Economics* 2 (January): 27-56.

Pfeffer, J. (1972). 'Size and composition of corporate boards of directors: the organization and its environment'. *Administrative Science Quarterly*, 16, 218-28.

Porter, M.E. (1992). *Capital Choices: Changing the Way America Invests in Industry*. *Journal of Applied Corporate Finance*, Spring 1992, 4-16.

Pound, J. (1993). *The Rise of the Political Model of Corporate Governance and Corporate Control*. *New York University Law Review*, 68: 1003-71.

Pound, J. (1995), *The Promise of the Governed Corporation*. *Harvard Business Review*, March-April 1995, 89-98.

Rose, Nancy L. and Catherine Wolfram. 2002. *Regulating Executive Pay: Using the Tax Code to Influence Chief Executive Officer Compensation*. *Journal of Labor Economics* 20(2): S138-75.

Rose, N. L., & Wolfram, C. D. (2002). *Regulating executive pay: Using the tax code to influence chief executive officer compensation*. *Journal of Labor Economics*, 20, S138-S175.

Saly P.J. (1994), *Repricing executive stock options in a down market*, *Journal of Accounting and Economics*, 18: 325-356

Schwartz, D.E. (1983). *Shareholder Democracy: A Reality or a Chimera?* *California Management Review*, 25: 53-67.

Schwartz, D.J. (1976). *Penn Central: A Case Study of Outside Director Responsibility Under Federal Securities Law*. *UMKC Law Review*, 45: 394-421.

Seligman J. (1982). *The Transformation of Wall Street: A History of the Securities and Exchange Commission and Modern Corporate Finance*. Boston: Houghton, Mifflin.

Shleifer A. and R.W. Vishny (1997). *A Survey of Corporate Governance*. *Journal of Finance*, 52: 737-83.

Siconolfi, M. (1992). *Wall Street is upset by Clinton's support on ending tax break for excessive pay*. *Wall Street Journal* (October 21)

Small, M.L. (2011). *The 1970s: The Committee on Corporate Laws Joins the Corporate Governance Debate*. *Law & Contemporary Problems*, 74: 129-36.

Smith C.W., Watts R. L. (1992), *The investment opportunity set and corporate financing, dividend, and financing policies*, *Journal of financial economics* 32, p. 262 - 292.

Sommer, A.A. (1977). *The Impact of the SEC on Corporate Governance*. *Law and Contemporary Problems*, 41: 115-45.

Stiglitz, Joseph E. (1975). "Incentives, Risk, and Information: Notes Toward a Theory of Heirarchy." *Bell Journal of Economics* 6 (Autumn): 552-79.

*US Steel guards data on salaries: Sends details confidentially to SEC head with request that they be kept secret (1935)*. *New York Times* (June 2).

*Wall Street Journal (1977) Personal-use perks for top executives are termed income: SEC says valuable privileges will have to be reported as compensation by firms August 22 1977*

*Wall Street Journal (1981). SEC's Shad Shows Pro-Business Tilt But Says He Won't be a Pushover. Wall Street Journal, September 16, 1981, 29.*

*Wall Street Journal (1989). Pension Funds Plot Against Takeover Law. Wall Street Journal, April 5, 1989, C1.*

Wilcox, J.C. (1997). *A 10-Year Quest for Director Accountability*. *Directors & Boards*, September 1997, 46-50.

Williamson, O. (1984). *Corporate Governance*. *Yale Law Journal*, 93: 1197-1231.

Zeitlin, J. and Herrigel, G. (Eds) (2004). *Americanization and its Limit*. Oxford: Oxford University Press.

## **Sitegraphy**

<https://www.investopedia.com/terms/r/restrictedstock.asp>, 15/5/2020 14:44

<https://www.investopedia.com/terms/s/stockoption.asp>, 16/5/2020 15:22

<https://home.treasury.gov/policy-issues/financial-markets-financial-institutions-and-fiscal-service/fsoc/studies-and-reports>, 31/8/2020, 17:37

<https://www-statista-com.ezproxy.biblio.polito.it/statistics/424159/pay-gap-between-ceos-and-average-workers-in-world-by-country/>, 4/9/2020, 18:11

<https://www.cnbc.com/2020/02/12/rapid-ceo-turnover-continues-with-a-record-number-of-top-executives-departing-in-january.html>

<https://www.carriedin.com/need-hostile-takeovers/>

<https://www.equilar.com/press-releases/35-2015-equity-trends.html>

<https://sites.google.com/a/sheboyganfalls.k12.wi.us/brianna-alex-and-tyson-s-living-histories-project/statistics>

[https://www.borsaitaliana.it/comitato-corporate-governance/documenti/relazioniremunerazioni2018/asroma\\_pdf.htm](https://www.borsaitaliana.it/comitato-corporate-governance/documenti/relazioniremunerazioni2018/asroma_pdf.htm)

<https://hbr.org/2016/10/a-short-history-of-golden-parachutes>

<https://it.wikipedia.org/wiki/Enron#/media/File:EnronStockPriceAug00Jan02.jpg>

<https://www.statista.com/statistics/261463/ceo-to-worker-compensation-ratio-of-top-firms-in-the-us/>

<https://www.statista.com/statistics/424159/pay-gap-between-ceos-and-average-workers-in-world-by-country/>

<https://www.investopedia.com/terms/d/dividend.asp>

<https://taxsummaries.pwc.com/italy/individual/taxes-on-personal-income>

[https://www.borsaitaliana.it/comitato-corporate-governance/documenti/relazioniremunerazioni2018/asroma\\_pdf.htm](https://www.borsaitaliana.it/comitato-corporate-governance/documenti/relazioniremunerazioni2018/asroma_pdf.htm)