UNIVERSITY OF LJUBLJANA
FACULTY OF ECONOMICS

MASTER'S THESIS

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AN ANALYSIS OF RECENT REGULATORY CHANGES ON EXECUTIVE REMUNERATION STRUCTURE OF BANKS IN THE EUROPEAN UNION

Ljubljana, June 2015 ANA RAŠOVIĆ

AUTHORSHIP STATEMENT

The undersigned Ana Rašović, a student at the University of Ljubljana, Faculty of Economics, (hereafter: FELU), declare that I am the author of the master's thesis entitled "An analysis of recent regulatorz changes on executive remuneration structure of banks in the European Union", written under supervision of Ph. D. Sergeja Slapničar.

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INTRODUCTION

A remuneration practice in banking sector is the topic that has been discussed so much in recent years. The financial crisis and its high social costs have shattered the confidence of economic agents in the banking system. While opening many questions regarding the capacity of financial markets to channel resources to their best use, the crisis has drawn the attention of both academics and practitioners to research, concentrating on the possible solutions for overcoming the consequences of the crisis. A significant attention gained, of course, the most important source of the crisis itself. So far it has been proved that it lays in excessive risk taking. Although the most executives' behavior has been incentivized with different types of variable rewards which have been in force for years, it is still an issue of judgment whether it was a fault of shareholders' appetite for profit or even short termism in financial markets.

As regards remuneration policy within financial institutions, the issue is how different rewarding schemes affect risk. Financial crisis has shown increasing interest on how to find the best solution for remuneration structure while mitigating risk at the same time. For that purpose, responsible regulatory authorities have promoted new payment policies. In particular, being motivated by excessive bonuses, managers were concerned about short-term goals which led to long-term negative consequences. Thus, most critics' opinion was that bonuses fuel the culture of short-term success encouraging employees to take more risk. According to Hartmann and Slapničar (2014, pp. 1-2) this excessive risk taking occurred as a logical consequence of traditional bonus schemes which were created as option contracts, rewarding the positive performance deviation more than punishing the negative ones. However, consequential losses made a huge turnover in financial institutions management. And something that became the main issue was how to shape executive managers' pay to mitigate their risk taking tendencies.

The domain area of this thesis is studying implementation and effects of recent regulatory policies on bank executive compensation structure in the European Union (hereinafter referred to as: EU). The crisis reflected severe shortcomings in regulation and supervision of financial markets. Driven by experience gained in the crisis, the European Commission (hereinafter referred to as: the EC) has been carrying out a comprenhensive reform in order to establish reliable financial markets. According to the EC (2010, p. 2), there is broad consensus that compensation schemes based on short-term returns, without adequate consideration for the corresponding risks, contributed to the incentives that led to financial institutions' engagement in overly risky business practices. Since Europe has been adopting changes recently, the central theme of the most recent overhaul was to make bankers wait for a significant portion of their pay As Eavis (2013, p. 3) states for New York Times, they would have less of an incentive to take the sort of short-term risks that in 2008 led to crippling losses.

What years behind us witnessed were attempts of regulatory authorities to limit or mitigate risk by imposing certain remuneration structure. Importance of most recent tools for achieving this goal lays in their ability to serve as motivating environment; hence, they have been good indicators of changes in pay structure over recent years. The first type refers to deferral of bonus payments over a longer period in order to align its incentive effect w*ith the periods in which decision outcomes will become evident. As Hartmann and Slapničar (2014, p. 2) say, a second type includes imposing a negative outcomes such as a "malus" and "clawback" provision for poor performance during the vesting period. Both are novelties within banking remuneration regulations and field of research as well. Malus is an arrangement that permits the institution to prevent vesting of all or part of the amount of a deferred remuneration award in relation to risk outcomes or performance. In case of a clawback, which is a contractual agreement whereby the employee agrees to return ownership of an amount of remuneration to the institution under certain circumstances. This can be implemented to both upfront and deferred variable remuneration.

On 16th April 2013, the European Parliament (hereinafter referred to as: the EP) accepted the content of the Directive on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms (Commission of the European Communities, 2010). The Capital Requirements Directive IV (hereinafter referred to as: the CRD IV) which will, among other things, impose a cap on bankers' bonuses. At the same time the EP approved a regulation on prudential requirements for credit institutions and investment firms, that is the Capital Requirements Regulation (hereinafter referred to as: the CRR) which, together with CRD IV makes an EU legislative package known as CRD IV". The CRD III requires total variable remuneration to be considerably contracted where subdued or negative financial performance occurs, taking into account current remuneration and reductions in payouts of amounts previously earned, including malus or clawback arrangements. In explaining cross-border remuneration issues for financial services firms, Freshfields Bruckhaus Deringer, (2010, p. 6) states that CRD IV is slightly stricter regarding imposing bankers' bonus cap and the overall payment structure. CRD III, however, defined no strict scale between the fixed and variable elements of total compensation, according to Davis Polk, (2013, p. 7).

This master's thesis focuses on the following regulatory frameworks: CRD III, its background and mechanisms for its implementation, Guidelines on Remuneration Policies and Practices and Financial Stability Board Principles for Sound Compensation Practices. Since the Directive package CRD III was expected to be adopted from January 2011, the period of observation is from 2010 to 2013. The recent trend is that bonuses are going to be deemphasized, so what a lot of the investment banks have done is raising their base salaries quite dramatically. According to the Boyle (2012, p. 3), there is a pressure on the fact that the bonuses were not getting justified so the remuneration package has been reconfigured.

The research issue refers to the bank executive pay structure in the EU and how it has been changed recently. The research will provide answers to question: how the Guidelines and other above mentioned policies have been applied in different EU countries? The analysis will also discover whether or not more bonuses were deferred since these policies have been adopted.

1 THE CONCEPTUAL FRAMEWORK OF EXECUTIVE REMUNERATION

We have been witnessing the financial crisis and its consequences on both financial sector and social life. A highly accepted notion is that stimulus developed by bank executives' compensation schemes inspired enormous risk-taking. As a response to that situation, compensation reform proposals have taken three approaches: long - term deferred equity incentive compensation, mandatory bonus clawback after the company met a performance target, and debt – based compensation.

The corporate objective function of a bank plays a crucial role in its corporate productivity and efficiency, the accountability of managers and directors and eventually, social welfare. Yet there is much misunderstanding and confusion about whether there should be such a single governing objective and if so, what it should be (Jensen, Murphy, & Wruck, 2004, p. 15).

1.1 The economics of compensation

It is important to know that well-designed executive remuneration package contributes to creation of values and achievement of long-run goals. Namely, a right executive should be attracted at the lowest cost, an adequate retained at the lowest cost, and motivated to react in a manner to establish long - term shareholder value and avoid to act as destroying the value. Three most important goals which should be achieved by creators of a remuneration policy (Jensen et al., 2004, pp. 19-21) are:

- overall estimated benefits in correlation with the work position (non – monetary sides of the position as well);
- the remuneration scheme design;
- the linkage between award and performance which is named the pay - performance relation.

1.2 Executive remuneration as a corporate governance issue

When creating remuneration policy, the absence of any conflict between executives and the company is of great importance. Both remuneration package composition and level of compensation need to be managed by the Remuneration Committee (hereinafter referred to as: the Rem Co). However, conflict situations, the so - called agency problems, are very common within organizations worldwide. They usually lead to undermining the value, as well as to ineffective remuneration packages. Creation of remuneration scheme is a responsibility of the BOD. In addition, Rem Co generally lacks information, competence and bargaining abilities necessary for uncompromising contract negotiations with incumbent and potential directors. That is why many remuneration packages and processes are insufficiently designed. By hiring unskilled professionals they incentivize undesired behavior and performance of the staff. This can both develop and decrease agency problems in companies. Due to the fact that executives have their own interest, as well as that being a member of a Rem Co means spending company's money, there is a strong possibility for them to make agency problems worse. In such a way, corporate governance and remuneration policies are deeply interdependent. In other words, poor governance can easily cause actions which will diminish remuneration practices, but there are also other infamous excesses in remuneration that can be a path to bad policies and practices (Jensen et al., 2004, pp. 19-20).

1.3 Historical overview of executive remuneration

The Modern Industrial Revolution (Jensen et al., 2004, p. 23) as famous economic, managerial, and technological developments in the past three decades fundamentally changed the world economy. According to the author, a start of this transformation can be followed to the mishmash era of the 1960s and the huge changes in oil - price that occurred during 1970s. What followed is the period marked by long-run consequences of the achievements in technology, deregulation, the communism and socialism's fall on one side and capitalism's rise on the other. Important changes included rise of labor market's competition which led to lower remuneration in the western world. This extreme transformation led to huge capacity surpluses in numerous global aspects, as auto and auto components industry, metal and textile, as well as computers and weapons. Not willing to stop production and allocate surplus cash back to shareholders, executives spent large amounts of free cash flow through unsafe growth and investment plans. This caused a number of new effects for that period, including hostile takeovers, leveraged buyouts and the use of investments with high returns. The aim was to prevent using surpluses of company's resources.

The 1980s were marked by broad political changes at the global level. This particularly affected US financial markets. US legislation created such an environment in which hostile takeover process as a phenomenon was somehow stopped. The high - yield debt market was harmed by allegations and claims of Michael Milken and Drexel Burnham Lambert, as well as by constraints on high - yield debt holdings charged on savings institutions, commercial banks and insurance firms. Furthermore, many disciplinary advances in the US bankruptcy law prevented restructuring companies which needed intervention. Likelihood for global capitalism raised by the end of 1980s, followed by the fall of the SSSR in Poland, Hungary, East Germany, Czechoslovakia, Bulgaria and Romania, the fall of the Berlin Wall, as well as the reunification of Germany and decentralization of the Soviet Union. The 1990s were marked by Internet revolution and growth of entirely new types of companies. Initial public offerings influenced events on US market. IPOs were used to boost growth of companies and the rise of capitalism in general. Furthermore, shares trading and equity financing, such as mergers and acquisitions, characterized a stock market situation that time. New era got dividends dropped, since companies run a policy of reinvesting sources to different activities. At the beginning of 2000s it was obvious that shares of new companies became extremely overvalued, and in most situations supported by suspicious or counterfeit accounting, contractual, brokerage and other financial methods. Eventually, collapse of share prices led to a situation where numerous large US companies such as Enron, Arthur Andersen, KPMG, Lucent, WorldCom, Tyco, HealthSouth and Xerox were involved in accounting-related issues.

When it comes to executive remuneration, there are specific core changes in the global economy in which affected executive remuneration practices. Rewards received by chief executive officers (hereinafter referred to as: CEOs) in large US companies increased extremely during past thirty years. This was caused by increasing use of share – based remuneration. Jensen et al. (2004, pp. 31-33) showed that total remuneration on average basis for CEOs in S&P 500 firms raised from around $ 850,000 in 1970 to more than $ 14 million in 2000, decreasing to $ 9.4 million in 2002. He also found out that the design and level of CEO remuneration in S&P 500 firms from 1992 to 2002, disclosed in inflation - adjusted 2002 dollars. For the year 1992, fixed remuneration amounted for 38 % of the $ 2.7 million average CEO remuneration. On the other side, share – based remuneration (accounted at award date using the Black - Scholes equitation) amounted for 25 %. Aside the maximum remuneration year 2000, fixed remuneration amounted for around 18 % of the average $ 14 million, while share - based remuneration made half of remuneration. Until 2002, average remuneration reached $ 9.4 million, but share – based remuneration still amounted to almost half of the regular CEO’s remuneration package.

During the above mentioned period, the average Black - Scholes stock – based compensation increased from around 0 in 1970 to around $ 7.0 million in 2000. In 2002, it decreased to $ 4.4 million though. There are different remuneration elements that make discrepancy from the $ 7.0 million stock – based from 2000 and the $ 14 million of total remuneration. They include cash, restricted stock, retirement awards, and payouts from a range of long - run stimulus plans. It is to note that fixed, as well as cash – based variable remuneration increased by three times during the mentioned period. As he emphasized in the paper, inflation - adjusted cash remuneration increased from around $ 850 thousand in 1970 to over $ 2.2 million till 2002.

According to the authors (Jensen et al., 2004, pp. 28-34) who provided chronological tendencies in executive remuneration in US for the past thirty years of the 20th century, these tendencies present recent transformations in the economic settings. Namely, the 1970s executive remuneration packages approximately included the total fixed remunerations and performance-related bonuses. Over the last decade, around half of the cross - sectional variance in cash - based compensation in the US has been related to the scope of company's activities (the criteria was company's revenue in most cases). Directors with maximum remuneration were usually controlled by the biggest conglomerates, as well as the biggest multinational corporations producing various types of metal. These defined motivation with the aim to boost revenue, contributed in bringing closer the unproductive firms' growth and investment schemes during 1970s. This led to rise of capacity surplus that further decreased companies' stock price. Therefore, during 1970s directors had no big motivation for boosting stock prices of their companies. Stock – based remuneration to directors, famous in the 1960s, cease being appreciated during 1970s due to extended crisis in the US stock market. During this time, the nominal price of the bell - weather Dow Jones average was normally horizontal from the early 1965 through the early 1980s (after which it fell from 903 in January 1965 to 871 in January 1982). During the above mentioned period, a large number of companies changed price of their existing options (they decreased the first price). On the other side, there were companies that completely put a stop to the use of employee share option schemes in favor of long-term accounting-based incentive plans, where they guaranteed more foreseeable remuneration to directors. Firms in industries with excess capacity normally create free cash flow. It represents extra cash that can be invested in other production elements in the firm. In this case, price is developed by diminishing and bringing back cash to shareholders willing to invest in firms that are more likely to bring high returns on a particular investment. Conventional remuneration policies, awards based on measurement and growth, but not value creation. Also, non - monetary compensation, such as power, dignity, and community position – aim to be linked with size and persistence of the company, but not to value creation.

There are interesting as regards the matter. On one side the collapse of both governance and remuneration practices of firms in 1970scaused excess capacity. On the other side, it resulted in opening new doors for development of destroyed capital market. Although there were no dramatic transformations of remuneration packages and remuneration – there was still a high pressure in order to motivate people who were involved in decision-making. Hostile takeovers took control over firms with cash surpluses. Noticed by tricky outsiders, these firms were considered as irrelevant investment opportunities. These firms were acquirers (mirroring managers who already existed at the market searching for their cash surpluses) as well. A good thing was that big cash transactions brought back cash to shareholders who had more investment opportunities. It is to mention that transactions were financed by acquiring the market for high – yield debt which executed the acquirers to take back high amounts of present and future cash flows to debt keepers. This cash could be otherwise used for unprofitable projects. Actions that taken by executives of possible target objectives in order to impede takeover attempts included leveraged recapitalization, consecutive decrease of a value of their firms in order to be less - interesting objective. On the other side, they were promising high returns from future cash flows to the capital holders creating value through the commitment to return future free cash flow to holders of capital. Situations in which executives were faced with a practice of debt (which decreased motivations to make profusely opportunities) and non - tradable shares, enabled motivation for the development of long - term value. It is interesting to mention that conventional firms rest on the ownership of globally disorganized and static shareholders, ruled by large BODs composed of company's employees. Unlike them, the newly acquired companies were owned and governed by concentrated active investors.

2 INSTITUTIONAL BACKGROUND

Recently implemented remuneration policies are presented in this chapter. Significant changes in legal and regulatory environment, which have occurred alongside widespread adoption of the novelties introduced within banking remuneration structure, are explained as well.

During the past few years there have been substantial advancement in financial services remuneration from a regulatory perspective. These changes were based on international, regional and national level and have emerged from (Mercer, 2013, p. 2):

- a comprehension of the origin of the global meltdown;
- the accepted foundations for rebuilding financial markets;
- an operation process that began at the 2008 G20 Washington summit.

2.1 Financial Stability Board

The **Financial Stability Board** (hereinafter: FSB) is an authority which supervises and develops recommendations for financial system. FSB does so by coordinating national authorities and international standard-setting bodies as they work toward developing strong regulatory, supervisory and other financial sector policies. It encourages a level playing field by incentivizing consistent implementation of these policies over industries and jurisdictions (Mercer, 2013, p. 2). It was founded in April 2009, as the descendant of the

Financial Stability Forum (hereinafter referred to as: FSF) with an enlarged authorization to strengthen financial sector. On 2 April 2009, the FSB published the **Principles of Sound Compensation Practices**. The major points emphasised in these principles are related to more efficient remuneration policy; modification of remuneration according to risk categories, risk outcomes and time perspective in the future, as well as supervisory monitoring and commitment by stakeholders (Financial Stability Forum, 2009, p. 1). The aim was to give appropriate conditions and to enable a level playing field for remuneration practices on international basis. In order to support the Principles, the FSB published the Implementation Standards in September 2009, providing recommendations for remuneration, governance, design and disclosure (Mercer, 2013, p. 8). The concepts are considered as best practice and present the basis for regulation and supervision.

In practice, there were differences in approaches as regards implementation of these Principles adopted by regulators in G20 countries and worldwide. The United States (hereinafter referred to as: the US) adopted a principles-based approach and allowed flexibility to institutions with respect to implementation of the guidelines. The EU made this concept more prescriptive. This refers to setting a deferral of incentive awards and the types of remuneration instruments. Although some Asian countries such as Japan and China, as well as some European non-EU countries such as Switzerland use their methods, it could be said that FSB principles are implemented in their practices.

According to Mercer (2013, pp. 19-26), the Central Bank of Ireland regulates remuneration practices of financial services institutions in that country. Regulation is based on European directives and it is in charge of institutions which have benefited from state intervention. This country plays no significant role in the research of this master's thesis, but makes a good example of regulations' adoption practice. Moreover, Mercer's paper provides a rich database of Irish market remuneration practices that can be used as a guide to conduct a research of other countries' policies as well. Methods of regulation of EU financial industry, including the United Kingdom (hereinafter referred to as: the UK) and Ireland, with certain US-related cases, will be explained as well.

Already mentioned principles (FSF, 2009, p. 1) issued at the forum, recommended that regulators and supervisors work with market participants to mitigate the risks arising from remuneration policies. Financial institutions worldwide intend to apply the FSF principles, but they are especially critical for large, systematically important financial firms. They do not prescribe particular designs or levels of individual compensation. They include effective governance of compensation, effective alignment of compensation with prudent taking and effective supervisory oversight and engagement by stakeholders. These principles' goal is to adjust remuneration schemes such that they will stimulate prudent risk taking and enable effective supervisory oversight and stakeholder engagement in compensation. As stated (FSF, 2009, pp. 2-14), the benefits of sound remuneration practices will be accomplished only if there are specified and well - managed actions by national regulators, facilitated if necessary by suitable legislative powers and supported by national governments. The principles include (FSF, 2009, pp. 2-14):

- effective governance of compensation;
- effective alignment of compensation with prudent risk taking;
- effective supervisory oversight and engagement by stakeholders.

According to the first principle, the firm's board of directors must actively oversee the compensation system's design and operation and must monitor and review the compensation system to ensure that the system operates as intended. While staff engaged in financial and risk control must be independent, have appropriate authority and be compensated in a manner which is independent of the business, they oversee and commensurate with their key role in the firm. According to the second principle, compensation must be adjusted for all types of risk and symmetric with risk outcomes, while compensation payout schedules must be sensitive to the time horizon of risks. The mix of cash, equity and other forms of compensation must be consistent with risk alignment as well. Finally, according to the third principle, supervisory review of compensation practices must be rigorous and sustained, and deficiencies must be addressed promptly with supervisory activities. On the other hand, firms must disclose clear, comprehensive and timely information about their compensation practices in order to facilitate constructive engagement by all stakeholders.

Implementing FSB Principles for Sound Compensation Practices and their Implementation Standards issued by FSB, (2013, pp. 1-22) provide findings about implementation of the above mentioned principles both at the EU level and globally. In 2011, the G20 Leaders called on the FSB to undertake an on-going monitoring and public reporting on compensation practices focused on remaining gaps and impediments to full implementation and carry out an on-going bilateral complaint handling process to address level playing field concerns of individual firms (FSB, 2013, p. 4). Hence, this report focuses on remaining gaps and impediments to full implementation of the **FSB Principles and Standards** (hereinafter referred to as: P&S), describing some of the key challenges and evolving practices in this area. It was found that until 2013 all FSB member jurisdictions within the EU have completed the implementation of the P&S in their national regulation or supervisory guidance. As regards firms' implementation efforts, it has been reported by authorities that P&S have had a high impact on changes in compensation practices, and mostly to the mind-set of institutions. And what is the most relevant in regard to the thesis topic, institutions are willing to comply and acknowledge that risks stemming from variable remuneration have to be managed. Most jurisdictions report increases in the percentage of pay that is deferred and longer periods of deferral;

increases in the use of equity as a form of compensation; and increased use of maluses for both financial performance and compliance or behaviour issues (FSB, 2013, pp. 12-17).

2.2 The Remuneration Code in the UK

Financial institutions operating in the UK (including the subsidiaries of Irish Covered Institutions) are governed by the **Financial Services Authority** (hereinafter referred to as: FSA). The FSA is an independent non-governmental body, given statutory powers by the Financial Services and Markets Act 2000 (FSA, 2011, p. 1).

The code was introduced at the beginning of 2010 by the FSA. It was the basis for CEBS Guidelines, which were later transformed into CRD III. It was aimed to be the institution responsible for the largest institutions and it was modified and extended in scope to apply the CRD III remuneration provisions. The current version of the Code entered into force on 1 January 2011. The overall objective of the Code is to ensure that remuneration practices in these institutions do not encourage inappropriate risk taking and do not pay out more than the institutions can afford. All institutions that have to meet the Code are required to ensure that their remuneration policies and practices are consistent with and promote sound and effective risk management. According to the Mercer's Remuneration Review of Covered Institutions (Mercer, 2013, p. 12), the main features of the Remuneration Code include:

- proportionality, meaning that the Code is applied on proportionate basis. The features that are taken into account are the institution's size, internal organisation and nature and complexity of activities. A four-tire proportionality framework has been established with minimum expectations of compliance for each level;

- Code Staff, meaning that the code applies to specified groups of employees known as Code Staff (senior management, risk takers and employees in control functions);

- deferral, meaning that for all Code Staff at least 40% of any annual incentive must be deferred for at least three years. Moreover, for the most senior management, or when an individual's annual incentive is in excess of £500,000, at least 60% of the annual incentive must be deferred;

- form of payment, meaning that at least 50% of any annual incentive made to Code Staff must be paid in shares, share-linked instruments or other equivalent non-cash instruments. Moreover, these shares should be subject to an appropriate retention period;

- guaranteed annual incentives, meaning that guaranteed annual incentives of more than one year are prohibited, and only could be provided to new hires in their first year of service in exceptional circumstances;

- disclosure, meaning that institutions need to publish details of their remuneration polices at least annually;
- receive remuneration unless this is justified;

2.3 The CEBS Guidelines

National regulation in the EU is based on the guidelines that will be presented in detail bellow. Despite the fact that they apply to all member states, each of them has chosen to implement and interpret them differently.

In November 2010, the **European Parliament** (hereinafter referred to as: the EP) and the **Council** adopted Directive 2010/76/EU (known as Capital Requirements Directive III). CRD III contains rules on the remuneration policies of credit institutions with the aim to ensure that credit institutions develop risk-based remuneration policies and practices that are aligned with the long term interests of the institution and avoid short term incentives that can lead to excessive risk-taking. The main concepts, as well as its development and other issues, will be outlined in details bellow.

On 10December 2010, the **Committee of European Banking Supervisors** (hereinafter referred to as: CEBS) issued a set of guidelines, called the CEBS Guidelines on Remuneration Policies and Practices (CEBS, 2010). These guidelines came into effect on the same date as CRD III which was issued in November 2010. The main points from the Guidelines, amongst others, are the following (Mercer, 2013, pp. 9-12):

- national supervisors can require credit institutions to limit variable remuneration to a certain percentage of total net revenue if the payment of such remuneration is inconsistent with the maintenance of a sound capital base;

- credit institutions should have robust governance arrangements in place. These should include a clear organisational structure and remuneration policies and practices should promote sound and effective risk management;

- the guidelines apply to the remuneration of senior management, risk takers, and control functions;

- the policies should cover total remuneration and not just salaries;

- employees engaged in control functions should be independent from the businesses that they oversee. In addition, they should have the appropriate level of authority and their remuneration should be based on objectives linked to their function and should be independent of the business areas they control;

- both financial and non-financial criteria should be considered when reviewing individual performance and it should not be based solely on short-term performance;

- performance related remuneration should be based on the performance of the individual, the specific business area and the overall organisation;

- there should be an appropriate balance between the fixed and variable elements of the remuneration;

- at least 50% of variable remuneration should be in the form of shares or share-like instruments that reflect the long credit quality of the institution;

- variable remuneration should be based on long term performance;

- a significant portion of variable remuneration should be deferred. In general the deferred portion should be at least 40% of the total variable amount, increasing to 60% for significant amounts. The deferral period should be at least three to five years and should be appropriately aligned with the performance on which the variable remuneration was granted;

- the deferred portion of variable remuneration should only vest if it is sustainable according to the financial situation of the credit institution and is still justified;

- malus and clawback arrangements should be in place to recapture paid and/or granted variable remuneration where warranted by financial performance or other criteria;

- variable remuneration should not be guaranteed with some limited exceptions (for example, when hiring new employees, and then limited to the first year of employment);

- severance payments should not reward failure;

- national supervisors should collect information on the number of employees who receive remuneration unless this is justified.

According to the purpose of master's thesis, which is related to the effects of implementation of the regulatory remuneration policies, the main source for the literature were acts published by the European Banking Authority and documents database. Likewise its predecessor, the CEBS, which is already mentioned in the introductory part, the EBA plays a key role in the implementation of the regulatory framework in the EU. Institutions' remuneration policies for staff members whose professional activities have material impact on the institutions' risk profile shall ensure that remuneration is consistent with sound and effective risk management and provides an incentive for prudent and sustainable risk taking. This master's thesis also builds on set of **High-level Principles for Remuneration Policies** (hereinafter referred to as: HLP) (CEBS, 2009, pp. 1-5), published on 20 April 2009 by CEBS, that were intended to assist in remedying unsound remuneration policies. Within the scope of covered institutions, there are members of the management body, with special emphasis on senior employees and other risk-takers and risk-managers in the financial institution (CEBS, 2009, p. 1). The remuneration policy should include all levels of the organization and all categories of employees. The set of principles should be applied both at solo and group levels and be implemented in a proportionate way. It was the following:

- the financial institution should adopt an overall remuneration policy that is in line with its business strategy and risk tolerance, objectives, values and long-term interests. It should not encourage excessive risk-taking. The remuneration policy should cover the institution as a whole and contain specific arrangements that take into account the respective roles of senior management, risk takers and control functions. Control functions should be adequately awarded to attract skilled individuals;

- the remuneration policy should be transparent internally and adequately disclosed externally;

- the management body, in its supervisory function, should determine the remuneration of the management body in its management function. In addition the management body, in its supervisory function, should approve the principles of the overall remuneration policy of the institution and maintain oversight of their application. The implementation of the remuneration policy should be subject to central and independent review;

- measurement of performance as a basis for remuneration where the pay award is performance related, remuneration should be based on combination of individual and collective performance. When defining individual performance, factors apart from financial performance should be considered. The measurement of performance, as a basis for bonus awards, should include adjustments for risk and the cost of capital;

- there should be proportionate ratio between base pay and bonus. Where a significant bonus is paid, the bonus should not be a pure up-front cash payment but contain a flexible, deferred component; it should consider the risk horizon of the underlying performance (CEBS, 2009, pp. 2-5).

The requirements set out in the Capital Requirements Directive are complemented by more detailed **Guidelines on Remuneration Policies and Practices** (CEBS, 2010). Guidelines on Remuneration Policies and Practice**s** preceded the already described HLP and were initially published by the CEBS. These Guidelines are the main literature used for the thesis, as the main concern is to investigate whether and how they were applied in the EU banks. At the European level, the EC in July 2009 adopted the proposal CRD III to further amend the CRD, addressing inter alia remuneration policies. On 7 July 2010, the European Parliament voted and approved CRD III. The Council approved the Directive at its meeting held on 11 October 2010. Member States were to implement this Directive from 1 January 2011.

The proportionality principle applies to the general as well as to the specific requirements of CRD III. Proportionality operates both ways: some institutions will need to apply more sophisticated policies or practices in fulfilling the requirements; other institutions can meet the requirements of the CRD in a simpler or less burdensome way. As stated in the Guidelines (CEBS, 2010, p. 20), the notion of proportionality must be taken into account by both institutions, when implementing the remuneration requirements, and by supervisors, when carrying out supervision over remuneration policies and practices. It is primarily a responsibility of an institution and supervisors to assess its own characteristics and to develop and implement remuneration policies and practices. When it comes to the proportionality among institutions, it is their size, internal organization and nature, scope and complexity that CRD III takes into account. Although the size of an institution alone is not a relevant criterion for the application of the proportionality principle, it can relate to the value of assets; liabilities or risks exposure; level of capital; as well as the number of staff or branches of an institution.

According to the guidelines for institutions (CEBS, 2010, p. 22) the remuneration policies and practices should apply to any subsidiary of an EEA parent institution which is located abroad, including in a non-EEA jurisdiction, but proportionality remains valid also in this context. Institutions should, however, not be able to create special group structures or offshore entities in order to circumvent the application of the remuneration policies to staff to which the remuneration principles should otherwise apply. If the subsidiary poses a higher risk to the EEA parent institution, then more robust remuneration policies and practices should be required for either or both of the entities. On the other hand, guidelines for supervisors (CEBS, 2010, p. 23) should discuss remuneration issues and assess alignment between home/host supervisory requirements of remuneration policies and practices.

As the covered institutions significant in their size and complex of activities were required to establish the Remuneration Committee as an integral part of their governance structure. However, setting up the Rem Co is one of the requirements that can be neutralized via the application of the proportionality principle. Nevertheless, others can consider it a best practice. In order to identify whether the Rem Co is expected to be set up, the factors mentioned in section 1.2 (proportionality) should be considered. As a possible example, a subsidiary of an EEA-based parent institution may not establish a Rem Co where:

- the parent institution is obliged to set up the Rem Co performing its tasks and duties for the whole group;

- the subsidiary adopts the remuneration policy and structure defined by the parent institution.

According to the disclosures (CEBS, 2010, pp. 70-74), institutions should disclose, to the public, detailed information regarding their remuneration policies and practices for members of staff whose professional activities have a material impact on the institution's risk profile. Institutions should also provide general information about the basic characteristics of their institution-wide remuneration policies and practices.

The aim of the research is to investigate a remuneration structure of banks in the EU for the period 2010-2013 in order to see if and how have they implemented the guidelines, the Report **Benchmarking of Remuneration Practices at Union Level**, developed by the EBA enabled a significant insight into remuneration practices at the EU level for the period 2010 - 2012. Namely, the EBA has been required to benchmark remuneration trends at Union Level under the Directive 2006/48/EC, as amended by the Directive 2010/76/EU (CRD III) and later under the Directive 2013/36/EU (CRD IV).

The national competent authorities are responsible for collecting information on the remuneration practices of credit institutions and investments firms and to use the information to benchmark for remuneration practices and trends at the Union level (EBA, 2014, p. 5). Institutions are required (EBA, 2014, p. 9) to set a ratio for the variable and fixed components of total remuneration, pay at least 50 % of variable remuneration in non-cash instruments and defer at least 40 % of variable remuneration (60 % if a particularly high variable remuneration is awarded) for a period of not less than three to five years.

Based on EBA (2014, p. 8), it should be considered that the remuneration requirements within CRD III entered into force in 2011 and were only applied for variable remuneration awarded for 2010 if it was not paid before the date of effective implementation in each Member State. However, the main result of this research is that remuneration practices within institutions were not sufficiently harmonised under the Directive, even if different levels of remuneration paid in Member States, and the nature, size and complexity of institutions are taken into account (EBA, 2014, pp. 18-24). In fact, major differences between remuneration practices within institutions exist regarding:

- ratios between variable and fixed remuneration;
- deferral arrangements;
- the use of claw back;
- the level of staff identified as having a material impact on the risk profile, which differs significantly between similar institutions.

Consultation Paper **Draft Guidelines on the remuneration benchmarking exercise** provided by the competent authorities has to be forwarded to the EBA, which will benchmark remuneration practices at the Union level (EBA, 2014, pp. 5-7). It is now easier to understand how the whole process of gathering such information is done. In particular, the template has been revised by introducing a more collection of remuneration for different business areas, control and corporate functions.

2.4 Capital Requirements Directive III (CRD III)

On 7 July 2010, the European Parliament approved various amendments to the Capital Requirements Directive (2006/48/EC and 2006/49/EC) as regards bankers' remuneration. On 30 September 2010, it reached a political agreement on the amendments and produced a final version of the text, which was published in the Official Journal on 14 December. The amendments have been described as "some of the strictest rules in the world on bankers' bonuses" (Freshfields Bruckhaus Deringer, 2010, p. 1).

Directive 2010/76/EU (CRD III) was issued on 14December 2010 in the **Official Journal of the European Union**. The Directive requires the CEBS to issue guidelines on sound remuneration policies which comply with the principles included in the amended Annex V of CRD9 - to achieve this, the CEBS has to work in close cooperation with the Committee of European Securities Regulators (hereinafter referred to as: CESR). Annex V of CRD9 - to achieve this, the CEBS has to work in close cooperation with CESR (2010, pp. 329/3-329/6). To prepare for the guidelines, the CEBS undertook in the course of Q 4 2009 and Q

1 2010 an extensive implementation study regarding the national implementation of the Rem. HLP by supervisors on the one hand and institutions on the other.

The CRD III sets some specific numerical criteria (Directive of the European Parliament and of the Council. *Official Journal of the European Union*, no. 2010/76/EU.2012, pp. 329/4-329/5) including:

- the minimum deferral period of three to five years;
- the minimum portion of 40 % to 60 % of variable remuneration that should be deferred;
- the minimum portion of 50 % of variable remuneration that should be paid in instruments.

Because these criteria refer to minima, it is not possible to apply, within an institution, lower criteria based on proportionality.

The remuneration provisions in CRD III took effect in January 2011. They apply to remuneration due on the basis of contracts concluded before the effective date of implementation in each member state and awarded or paid after that date. They apply to remuneration awarded, but not yet paid, before the date of effective implementation in each member state for services provided in 2010. Since this is the EU directive, it needs to be implemented by each member state, rather than having direct effect. This follows from article 288 of the Treaty on the Functioning of the EU, under which a directive is binding, as to the result to be achieved, on each member state, but leaves to the national authorities the choice of form and method of implementation (Directive of the European Parliament and of the Council. *Official Journal of the European Union*, no. 2010/76/EU.2012, pp. 171-172).

The CEBS guidelines assist implementation by member states. However, differences in national law mean that there may be some divergent implementation across the European Economic Area (hereinafter referred to as: the EEA). It has already been mentioned that the FSA is the body responsible for governing financial institutions operating in the UK (including the subsidiaries of Irish Covered Institutions). For instance, in the United Kingdom the provisions are being implemented under the new FSA Remuneration Code and through the Financial Services Act 2010, which confers new powers relating to disclosure and regulation of financial sector remuneration (FSA, 2011, pp. 1-9). On the other side, in Germany, the German Banking Act was amended in June and November 2010, introducing new remuneration policies for financial institutions. The German Stock Companies Act was also amended (Freshfields Bruckhaus Deringer, 2010, p. 1). The detailed requirements of CRD III have been set out in a separate ordinance, in force from 13 October 2010.

2.4.1 Application of the CRD III

These remuneration requirements apply to:

- credit institutions – undertakings whose business is to receive deposits or other repayable funds from the public and to grant credits for its own account;
- investment firms – any business that provides investment services to third parties and/or performs one or more investment activities on a professional basis.

Certain exemptions apply for example to institutions only authorised to provide investment advisory services and/or to receive and transmit orders from investors without holding money or securities belonging to their clients.

CRD III principles were applied throughout group companies, including offshore financial centres as well. Consequently, parent companies need to ensure that the requirements of a group-wide remuneration policy are observed at all levels, including non-EEA subsidiaries (Freshfields Bruckhaus Deringer, 2010, p. 2). Summarizing basic principles on how this directive applies to international groups, including fundamentally different treatment of branches and subsidiaries, they are as follows:

- where a group company is headquartered in a member state, all companies within the group (including those outside the EEA) will be regulated by the regime of the parent's home state;

- where a business in a member state is conducted through a branch of a firm based in another member state, the remuneration rules of the parent's home state will apply to the branch. However, if the parent is outside the EEA, the brunch will be governed by the rules of the member state where it operates. For instance, there are numerous US and other financial institutions headquartered in the EEA;

- where a business in a member state is conducted through a subsidiary of a firm based in another member state, the subsidiary will be subject to a dual regime of the subsidiary's and parent company's home states;

- where a business in a member state is a subsidiary of a firm based outside the EEA, all entities within the sub-group will be governed by the rules of that subsidiary's member state. This also covers subsidiaries and branches in non-EEA jurisdictions.

When it comes to the staff that CRD III targets, they range from a senior management and risk takers (irrespective of remuneration level), staff engaged in control functions, to any employee whose total remuneration, including discretionary pension benefit provisions, puts him into the same remuneration bracket as senior management and risk takers. According to the Freshfields Bruckhaus Deringer (2010, p. 2), it is primarily the responsibility of firms to identify the members of staff whose professional activities have a material impact on the firms' risk profile according to the guidelines mentioned before.

2.4.2 Timeline of the Capital Requirements Directives (CRD)

In the Table 1, the timeline of Capital Requirements Directive is presented. The dates present the time of adoption of these directives, not their entrance into force.

Table1. The timeline of Capital Requirements Directives

Name	Date	Description of the directive
CRD I	Jan-07	Combination of frequent capital standards for European financial institutions and implementation of Basel Accord of 1988 within the EU
CRD II	May-09	Covers (1) high vulnerability; (2) abnormally capital instruments; (3) reviser methods; (4) liquidity risk management; (5) securitizations; (6) organized and united disclaimers for banks; and (7) modifications to certain technical provisions and follows technical suggestion presented by then the CEBS (now the EBA).
CRD III	Dec-10	Its most important feature to asset management institutions was the introduction of remuneration rules
CRD IV	Jul-11	Further legislative proposals to enforce the regulation of the banking industry. The proposal alters the on - going CRD (2006/48 and 2006/49) with a Directive and a Regulation and encompasses other important step towards developing a sounder and more reliable financial environment. The directive manages the approach to deposit actions while the regulation creates the significant requirements firms need to meet.

Source: The Committee of European Banking Supervisors, *Guidelines on Remuneration Policies and Practices*, 2010, pp. 6-8

2.4.3 Issues on clawback and malus

CRD III requires total variable remuneration to be considerably contracted where subdued or negative financial performance occurs, taking into account both current remuneration and reductions in payouts of amounts previously earned, including through malus or clawback arrangements. It is worth to mention that CEBS guidelines place significant emphasis on this obligation. The requirement for downward risk adjustment stems from the obligation stipulated by CRD III for firms' remuneration practices to be appropriately aligned with their risk and the drive not to reward failure.

The term clawback refers to an award that had vested and becomes the employee's property. This is in contrast to an award that has not vested and is subject to a provision whereby the award lapses because a condition of vesting has not been met. Therefore, clawback involves expropriation of the property from the employee, which is difficult to achieve in practice.

2.4.4 Issues on remuneration deferral

Under CRD III it is required that at least 40 % of variable remuneration should be deferred for at least three to five years. However, the criteria for determining deferral length will vary between countries. If variable remuneration is particularly high, at least 60 % should be deferred. According to Freshfields Bruckhaus Deringer, (2010, pp. 4-5), the implementation of deferral arrangements presents legal issues in several European jurisdictions, including whether (1) the implementation of deferral constitutes a breach of existing rights to be paid on a non-deferred basis; (2) deferral could be an unlawful restraint of trade insofar as leavers would forfeit unvested deferred bonuses; and the operation of deferral arrangements could constitute a breach of an implied term of trust and confidence or could be discriminatory.

When it comes to deferral issues in some key countries, in **Belgium** the threshold for triggering any requirements for deferral is where variable remuneration amounts to 25 % of total annual remuneration. At least 25 % of the variable remuneration must be deferred for at least two years and another 25 % must be deferred for at least three years. Moreover, these requirements are subject to the firm's articles and any explicit authorisation of shareholders.

In **France**, deferred variable composition must represent at least 40 % of variable compensation awarded in any financial year. As this percentage could vary according to the amount of variable compensation awarded, at the highest level deferral must be at least 60 %.

Under the Regulations on Remuneration System of Financial Institutions and Insurance Companies in **Germany**, at least 40 % of variable remuneration should be deferred for at least three to five years. Remuneration payable under deferral arrangements must not vest any faster than on a pro rata basis. Moreover, at least 50 % of the deferred variable remuneration must depend on the firm's sustainable financial success (Freshfields Bruckhaus Deringer, 2010, p. 5). However, the concept of deferral is now incorporated into the German remuneration law framework and is mandatory for certain significant firms. Deferral and retention rules apply only to board members and risk takers in significant firms. According to Freshfields Bruckhaus Deringer (2010, p. 5), there is a statutory presumption that firms with a balance sheet volume of € 40 billion (over the past three business years) are deemed to be significant.

Under the Banking Code in **Netherlands**, a material part of variable remuneration must be conditional and must not be paid until at least three years have passed. Shares granted to management board members without financial consideration must be retained for at least five years or at least until the end of the individual's employment. Also, financial institutions will be required to award a substantial portion of the variable remuneration component, conditionally over a period of at least three to five years. The term of "substantial portion" is interpreted as at least 40 %, while the variable remuneration component is a particularly high amount and at least 60 % must be granted conditionally and, hence, deferred.

In the **UK**, under the FSA Code, 40 % of any variable remuneration of Code Staff must be deferred over a period of at least three to five years. (FSA Code, 2011, p. 3). It is stated that at least 60 % must be deferred where the variable component is of a particularly high amount (generally over 500,000) or payable to a director of a "significant firm". As before, significance is measured in terms of size, internal organisation and the nature, scope and complexity of the firm's activities.

2.5 Recent developments

From CRD III in July 2011, the European Commission published proposed legislation on new capital requirements in financial institutions known as the CRD IV. According to the EC (2014, p.1), the original Capital Requirements Directives (2006/48 and 2006/49) have been replaced by a new legislative package known as “CRD IV”. The package, which applies from 1 January 2014, includes a regulation (CRR) and a directive (CRD IV). This is the third set of amendments to the original directives, following two earlier sets of revisions adopted by the Commission in 2008 (CRD II) and 2009 (CRD III).

One of the most important novelties is the agreement between the EP and EU country representatives (through the Irish presidency of the EU), whereby the maximum incentive payable would be 100 % of salary (Mercer, 2013, p. 13). However, this can be increased to 200% of salary with the backing of a majority of shareholders. Up to 25 % of incentives can be awarded in instruments which are deferred for more than five years (subject to clawback and bail - inable). The value of these can be discounted in the calculation of the maximum allowable payments. The already mentioned agreement is the CRD IV which was expected to be approved by a majority of EU member states as of January 2014. However, it is still to see if the directive has been applied.

3 LITERATURE REVIEW

A field of remuneration structure in banking sector of the European Union has been a common topic for numerous researches recently. Although most of the studies investigated implementation of the regulations to capital, leverage and liquidity ratios within banking sector, there are certain studies made by authorized regulatory institutions which are used to meet the expectations of the master’s thesis topic as well. In this part, a literature review is presented. In order to encompass a specific nature of the master’s thesis, the literature review is composed of theoretical, legislative and empirical part.

Marginal productivity theory is the one which explains field of executive remuneration, and it is mainly concerned about predicting the pay levels of executives. Flatau (2002, pp. 1 - 2) argues that J.R. Hicks’s book, The theory of wage (1932),which explains mentioned theory, foreshadows a number of important later developments in his theory. However, he explains the basic theoretical concepts of remuneration in scientific sense as well. **R**ubinfeld and Pindyck (2010, p. 185) explain Marginal productivity theory of wages (also called Marginal productivity theory of income distribution) as the economic concept where demand for labour is determined by its marginal productivity and the wage rates are determined by the value of the marginal product of labour. Flatau’s research paper is used as a good base for further work since provides much useful information of the wage theory as well as author’s critics of it in nowadays concept. He poses two sets of questions. Firstly, he (Flatau, 2002, p. 12) expresses concerns about whether the theory of wage adds significantly to extant neoclassical distribution theory. In addition, he investigates whether the theory provides an important restatement of wages theory as claimed by Hicks at the time of its publication in 1932, or it represented a minor work. Also, how important was the theory to the subsequent trajectory of neoclassical distribution theory. Secondly, he tries to provide answer to what was the importance of the theory of wages to the future development of Hicks as an economic theorist, and, in particular, to the later development of Value and Capital. Finally, he argues that the work deserves to receive major attention for few main reasons (Flatau, 2002, p. 15). When it comes to the wage concept, the final element of his discussion of the workings of the market is an emphasis on the role of fairness. He suggests (Flatau, 2002, p. 10) that demands for wage rises are made by employees because the proposed rise is seen to be 'fair' in the eyes of employees. Likewise, employers will be concerned to ensure that wage reductions are not perceived to be 'unfair'. Third, there is a modern resonance (New Keynesian efficiency wage theory, the role of custom and fairness, internal labour market theory and transaction cost economics) to much of Hicks's discussion of the workings of the labour market. This is a fundamental theory for further studying of managerial pay and managerial economics in general. Knowing its concepts, it is possible to understand concepts of evaluating managerial performance and creating their remuneration packages.

Another interesting paper by Bebchuk and Fried (2004), which is concerned about executive remuneration, aims to persuade readers that rise in executive salaries over the past decades is hardly warranted. Their main goal is to provide a full account of how managerial power and influence have shaped the executive compensation landscape. The dominant paradigm for financial economists' study of executive compensation has assumed that pay arrangements are the product of arm's-length bargaining. They explain this concept (Bebchuk & Fried, 2004, p. 2) as bargaining between executives' attempting to get the possible deal for themselves and boards seeking to get the best possible deal for shareholders. This assumption was also the basis for the corporate law rules governing this subject. Eventually, they aim to show that the pay-setting process in publicly traded companies has strayed far from the arm's-length model. In addition, this book discusses the shortcoming of the "official" view of executive compensation. According to this view (Bebchuk & Fried, 2004, pp. 15-17) corporate boards operate at arm's-length from the executives whose pay arrangements they decide on. Seeking to serve shareholders, directors design cost-effective compensation arrangements which provide executives with incentives to increase shareholder value. Moreover, this analysis indicates that managerial power has played a key role in shaping managers' pay arrangements. The pervasive role of managerial power can explain practices and patterns that have long puzzled financial economists studying executive compensation. Even if symbolism were unimportant, the subject of executive compensation is of substantial practical importance for shareholders and policymakers. That is why being familiar with executive compensation practices' timeline is of importance when conducting a research about the effects of recent regulatory changes on executive remuneration. They show (Bebchuk & Fried, 2004, pp. 170-185) that recent corporate governance reforms, which seek to increase board independence, would likely improve matters but that much more needs to be done. They also put forward reforms that, by making directors more accountable to shareholders, would reduce the forces in the past distorted compensation arrangements.

Baldwin and Wyplosz (2009, pp. 64-80) provide with the EU legislative framework, as well as explanation of institutions and legislative procedures. As the master's thesis topic is related to regulation of remuneration within European Union banks, having an insight in the EU organization, the Law and Institutions with legislative procedures is of importance for further work. The basis of the economic integration in the EU was designed to rest on the "four freedoms", the free movements of goods, services, people and capital. The EU is organized into three pillars. The first pillar encompasses economic integration or European Community (EC), including the Commission and the EU Court. It is worth to mention this, since regulations of importance for this thesis rest on rules regulated by the already mentioned institutions. The other two pillars include areas where the EU integration proceeds on an intergovernmental basis, including Home and Judicial Affairs, and the Common Foreign and Security Policy, respectively. Moreover, the EU is unique in having supranational legal system. The key principles covered were "direct effect", "primacy" and "autonomy" (Baldwin & Wyplosz 2009, p. 66). While there are many EU institutions, only five of them really matters in terms of the most important issues. These are the European Council, the Council of Ministers, the Commission, the Parliament and the Court. The five institutions work in concert to govern the EU and pursue deeper and wider European integration. Under the main legislative procedure, named "Co-decision Procedure", the Commission proposes draft laws which have to be approved by the Council of Ministers and the European Parliament before entry into effect. Most EU legislation has to be turned into national law by the parliament of each Member State.

Remuneration review of covered institutions issued by Mercer (2013, pp. 2 – 5) explains recent regulations within financial services market. It focuses on Irish market, but also provides significant information about the CRD Directives, the Guidelines, and FSB Principles for Sound Compensation Practices and their implementation in Europe. It analyses different countries' approaches to remuneration governance in financial services organizations. Furthermore, by comparing remuneration in the Covered Institutions in Ireland with a range of market sectors, it provides an overview of current trends in the International Financial Services market and sets out a range of options for a future Remuneration Framework.

Besides explaining in detail settings of CRD III, The Guidelines and FSB P&S, this review presents European remuneration trends, highlighting the following:

- economic uncertainty and increased attention on executive remuneration have generally reduced the level of total remuneration;

- results shown a significant use of salary freezes for executives in 2012, whereas the majority of organizations were back to providing salary reviews for the majority of employees in 2011, most chief executives did not see an increase in salary in 2012;

- short-term incentive plan payouts are also decreasing for most executive level positions, whereas when comparing target incentives with the incentives actually paid, actual incentive payment as a percentage of targets declined between 2011 and 2012;

- the majority of international banks, and a significant number of other financial services organizations, now defer a part of their short-term incentives on a mandatory basis;
- the majority of financial services organizations have also introduced clawback and malus provisions to accompany the deferrals;

- regulatory pressure, legislative considerations and alignment with business strategy are the major drivers for changes to remuneration policies;
- as a result of all the change, remuneration programs have become more complex (Mercer, 2013, pp. 27-31).

In their paper, Gregorič, Polanec and Slapničar (2010) examine the importance of reference values for executive compensation contracts. The paper relies on a quasi-experimental setting (the adoption of pay guidelines), and a well-defined measure of individual-specific reference values to provide evidence on how a change in CEO reference compensation leads to subsequent changes of actual pay. They find that executive compensation adjusts gradually towards the new reference values, and that the speed of the adjustment depends on the corporate governance characteristics: the firm ownership structure, the role of the State and employees in the firm decision-making. These results provide evidence for an introduction of reference values in theoretical models of bargaining.

Despite the research topic which is strictly pay structure-oriented, taking into account existing literature about effects of a pay structure on risk taking has a significant importance for the thesis as well. Hartmann and Slapničar (2014) examine three prominent recommendations in these remuneration rules, which are a response to the financial crisis in 2008. They focus on new rules for managerial remuneration adopted by European bank authorities. They include the use of negative bonuses, the use of bonus caps and the use of deferred bonuses. It is very interesting paper, as it advances the theory that cognitive frames created by compensation design affect risk-taking behaviour, by conducting a two-by-two within subject experiment, with an investment task on 153 students in two periods (Hartmann & Slapničar, 2014, pp. 11-13). Findings show that higher risk taking under the bonus scheme that contains a negative bonus option compensates for it with a higher return. Moreover, bonus deferral appears to have no such initial effect on risk taking, but accentuates risk behaviour in the second period as a response to positive and negative outcomes from the first period. Findings contribute to the theory and practice of bonus system design and the application of contemporary remuneration recommendations in the financial sector (Hartmann & Slapničar, 2014, pp. 16-19).

In their paper Clawback provisions in executive compensation, Chen, Greene and Owers (2011, p. 2) examine the role of clawback provisions in top management compensation. They develop a contracting model in which firm’s ability to recoup its managers’ incentive pay after a financial restatement affects both financial reporting and productive effort. The model shows (Chen, Greene & Owers, 2011, pp. 19-21) that while clawback policies generally reduce managerial misreporting, they can sometimes impose excessive risk on top management, leading to weaker incentives and lower firm values. The model yields the empirical predictions that (Chen, Greene & Owers, 2011, pp. 2-5):

- the benefits of a clawback policy are decreasing in managerial risk aversion, firm risk, and the quality of manager’s private information;
- clawbacks will lead to a lower amount of international misreporting;
- incentive compensation will become more sensitive to accounting performance, such as return on assets, following adoption of a clawback.

Eventually, they found (Chen, Greene & Owers, 2011, pp. 23-27) that the likelihood of having a clawback policy in place varies systematically with proxies for risk aversion, firm risk, and the quality of the manager’s information about firm performance. Also, they document a decrease in absolute discretionary accruals following adoption of a clawback, even after controlling for other key determinants of accrual behavior. Finally, they document in fixed-effects panel regressions, a significant, positive association between the presence of a clawback and the sensitivity of CEO bonus pay and CEO incentive pay to accounting performance. In another research paper (Chen, Greene & Owers, 2012, pp. 2-5) they have both theoretically and empirically analysed the benefits, costs, and consequences of clawback provisions. The theoretical model shows that the first benefit of a clawback provision is reduced managerial misreporting. The second benefit is an increase in the optimal sensitivity of the manager’s incentive pay to firm performance. The model also highlights previously unidentified costs associated with clawback provisions. A clawback provision may impose excessive risk on the manager, which increases compensation costs and undermines incentives for effort. Reduced effort and increased ex ante compensation costs can result in lower shareholder value for some firms. Moreover, the costs of a clawback provision outweigh the benefits when the manager has high risk aversion, the firm is risky, or the quality of the firm's internal accounting information is relatively poor. From 2004 to 2010, over 400 large publicly traded firms adopted a clawback provision. They have found empirical evidence that firms trade off the costs and benefits of such provisions. In line with the model, they found that the likelihood a firm has a clawback provision in place varies systematically with proxies for managerial risk aversion, firm risk, and the quality of the firm's internal accounting information. They further found that voluntary adoption of a clawback provision is associated with a reduction in abnormal accruals and an increase in the sensitivity of CEO bonus pay to accounting performance. Finally, the research paper showed that these benefits are partially offset by an increase in the total level of CEO compensation after adoption of a clawback provision.

Interesting research paper Bonus deferral does not choke excessive risk taking, which studies risk taking of expected utility maximiser under bonus schemes with and without deferral by Leisen (2011, pp. 2-4), documented that it is not always true that deferrals have an impact on risk taking. He described the situations in which risk taking increases and decreases, contributing to current policy debates. This paper contributes to the literature on the risk taking implications of bonus based compensation schemes. It allows the author to characterize changes in size, slope and curvature due to the introduction of deferral and how their interplay affects risk aversion and risk taking. In particular he described the situations in which risk taking increases and in which it decreases. The paper also contributes to that time policy debate (Leisen, 2011, p. 4). Here he cautions about the common thinking that deferral always decreases risk taking and point out that it is imperative not to defer too much into the future and/or keep the deferral ratio below a critical value. His analysis focuses on decreasing absolute risk aversion (DARA) and hyperbolic absolute risk aversion (HARA) preferences concepts. This paper studied risk taking of an expected utility maximiser under bonus schemes with and without deferral. In a first step we analysed the impact of deferral on local risk aversion for the derived utility using new translation, magnification and convexity (Leisen, 2011, pp. 8-15). The author has documented that deferral decreases risk aversion for derived utility in many relevant situations; in particular we found this under the usual assumption that preferences exhibit decreasing absolute risk aversion (DARA). For the straight bonus scheme (Leisen, 2011, p.5) he characterized the situations for which deferral increases/decreases the slope of the wealth function and when it increases/decreases the size of that function; the first impacts the sign of the translation effect and the second impacts that of the magnification effect. This put another question mark behind the common belief that risk aversion increases due to deferral. In another step, he analysed risk taking in a continuous-time model, finding that the local relative risk aversion of the derived utility function drives risk taking. The author documented that, even with DARA preferences, it is not possible to sign the impact of deferral on risk taking, in general. Whilst HARA, a common type of risk preferences in finance, in his investigation showed that risk taking increases for all asset values outside the interval where the deferred payment is reduced (Leisen, 2011, pp. 5-8). They conclude that common thinking, that deferring bonus payments to the future makes an agent less willing to take risks is false (Leisen, 2011, p. 22). At the end, he finds that risk taking increases outside the interval where deferral payment is reduced. However, on that interval, risk taking is only reduced, when the deferral ratio does not exceed the ratio of the marginal reduction in deferred payment to the pay-for-performance sensitivity.

In regard to both the CRD IV package and its effects on remuneration structure and decision-making, as well as aim of Europe is to limit the amount of bankers' bonuses to the amount of fixed remuneration, Murphy (2013) in his Regulating banking bonuses in the European Union: A case study in unintended consequences, states that remuneration practices could be improved through the following measures. In February 2013 the European Union (EU) reached a provisional deal to limit the amount of bankers' bonuses to the amount of fixed remuneration (i.e., a one-to-one ratio); the cap could be increased to 2:1 with the backing of a supermajority of shareholders. The provisional agreement – added as an amendment to the fourth Capital Requirements Directive (CRD-IV) – was formally approved by the European Parliament in April 2013. If the European Council of Ministers approves as expected by June 2013, the new rules will be effective as of January 2014; the first annual bonuses restricted under the regulations are those paid in early 2015 for performance in 2014 performance. Hence, he mentions cash bonus plan in financial services that can be improved by introducing and enforcing bonus banks or clawback provision for recovery of rewards. Improvements can go to the extent of ensuring that bonuses are based on value creation rather than on the volume of transactions without regard to the quality of transactions. However, measuring value creation is inherently subjective, and such plans will necessarily involve discretionary payments based on subjective assessments of performance (Murphy, 2013, p. 28). In addition, remuneration practices in financial services can undoubtedly be improved through government oversight focused on rewarding value creation and punishing value destruction. However, he states that it is highly unlikely that remuneration practices can be improved through increased government rules and regulations, which long history witnesses as well. Murphy's expected impact of regulating "pay ratios" is the following. Firstly, he claims (Murphy, 2013, pp. 13-15) that the proposed cap on pay ratios will increase fixed remuneration and the reason for this statement lays in the next facts. The level of fixed remuneration decreases the penalties associated with poor performance, which in turn increases rather than reduce incentives to take risk. Secondly, he says that the proposed cap on pay ratios will not decrease excessive risk taking. Moreover, the proposed cap on pay ratios will reduce incentives to create value (Murphy, 2013, pp. 18-23). The proposed cap on pay ratios will not decrease levels of remuneration and will decrease bank competitiveness. Also, the proposed caps on pay ratios will not fix the problem with banking bonuses. The purpose of this paper is to provide an economic analysis of the consequences of the pending European restrictions on banking bonuses and that the articulated objectives of the proposed cap are to reduce excessive risk taking and to reduce perceived excesses in the level of banking remuneration. However, the author showed that the proposed cap is unlikely to achieve either objective. Finally, he (Murphy, 2013, p. 28) demonstrates that the EU regulation restrictions will:

- increase rather than decrease incentives for excessive risk taking;
- result in significant increase in fixed remuneration;
- reduce incentives to create value;
- reduce the competitiveness if the EU banking sector;
- result in a general degradation in the quality of the EU investment bankers, thereby decreasing access to capital and increasing the cost of capital.

Many of the unintended consequences from capping the ratio of variable-to-fixed pay will depend on the implementation details to be specified by the EBA. For example, banks will attempt to find subtle ways within the guidelines to use fixed compensation as a form of variable compensation, such as moving individual salaries up or down based on prior – year performance. The only certainty with pay regulation is that new leaks will emerge in unsuspected places, and that the consequences will be both unintended and costly.

4 EMPIRICAL ANALYSIS

Primary goal of the empirical analysis is to investigate whether and how the requirements of CRD III have been applied in European systemic banks. This refers to their remuneration composition, and particularly how fixed, variable and other types of remuneration have changed over three years (2011 – 2013). In order to answer the research questions, the sample of the 30 EU banks has been chosen from the **List of banks** (EBA, 2011) that report to the EBA about their remuneration policies and practices, as well as from List of monetary financial institutions and institutions subject to minimum reserves and list of monetary financial institutions in the acceding countries (European Central Bank, 2007). The remuneration statements were expected to be disclosed in banks' annual reports.

The research questions are as following:

(1) How did remuneration structure change and how was the rule of deferred bonuses applied?

(2) Did remuneration levels increase to compensate for deferred bonuses?

It is important to note that CRD III Directive was applied in the EU as of January 2011, thus, 2010 represents the base year for all comparisons in the thesis. According to research papers related to remuneration policies and practices in European systemic banks, as well as recent regulatory framework which has been in place since 2011, it was assumed to find certain changes in BOD executives' remuneration structure. Since the research is conducted based on the sample of 30 banks in the EU, it has been estimated to find a significant increase of fixed element's share, as well as decrease of variable element in total remuneration at the EU level. On the other hand, it was expected to find increase in share based bonuses of the BOD executives. This, however, is not expected to be found in a case of all the banks, as they are not faced with the same situation over the past few years. The empirical analysis of recent regulatory changes on executive remuneration structure of banks in the European Union is based on the assumption that banks of the member states have applied the CRD III during the observed period. According to the years before 2011, there has been a trend of rewarding lower fixed and extremely high variable remuneration, which led to risk taking of BOD executive members. Hence, the year of comparison to the pre – regulation is 2010 and has been taken as the base year for the analysis.

According to Simoneti's paper (2010, p. 59), the highest fixed remuneration in terms of percentage of total remuneration was paid out in Nordic countries. Although bonuses represented significant percentage in total remuneration for all the countries observed (Nordic countries, Italy, Benelux, Switzerland, France, Germany, UK, USA) the highest were awarded in Germany. The highest long-term incentives were awarded in Switzerland and the US outside the EU, then Italy, France and the UK in the EU. The paper presents only selected European countries and the USA. Slovenia has not been included.

4.1 The sample and criteria for the selection of banks

The sample consists of 30 systemic banks in the European Union from the list of EBA, as well as from the list of European Central Bank. These banks publish remuneration statements in their annual reports as they report to the EBA about their compensation practices. The following table summarizes all banks whose annual reports have been observed.

Table 2. List of banks

Number	Name	Country
1	Erste Group Bank AG	AT
2	Raiffeisen Zentralbank Osterreich AG	AT
3	Österreichische Volksbank AG	AT
4	DEXIA	BE
5	KBC BANK	BE
6	BANK OF CYPRUS PUBLIC CO LTD	CY
7	COMMERZBANK AG	DE
8	DEUTSCHE BANK AG	DE
9	Bayerische Landesbank	DE
10	Landesbank Berlin AG	DE
11	BANCO SANTANDER S.A.	ES
12	BANCO POPULAR ESPANOL, S.A.	ES
13	CREDIT AGRICOLE	FR
14	SOCIETE GENERALE	FR
15	ROYAL BANK OF SCOTLAND GROUP plc	GB
16	HSBC HOLDINGS plc	GB
17	BARCLAYS plc	GB
18	ATTICA	GR
19	INVESTMENT BANK OF GREECE	GR
20	NATIONAL BANK OF GREECE	GR
21	BANK OF IRELAND	IE
22	BANCO POPOLARE - S.C.	IT
23	SNS BANK NV	NL
24	ING BANK NV	NL
25	RABOBANK NEDERLAND	NL
26	DNB NOR BANK ASA	NO
27	BANCO BPI, SA	PT
28	NORDEA BANK AB (publ)	SE
29	SWEDBANK	SE
30	NOVA KBM	SI

Source: European Banking Authority, *List of Banks*, 2011, pp. 1-2; European Central Bank, *List of Monetary Financial Institutions and Institutions Subject to Minimum Reserves and List of Monetary Financial Institutions in the Acceding Countries*, 2007, pp. 44-128.

The main reason for choosing these banks out of larger list of EBA lays in their detailed remuneration reports. Precisely, these reports provided detailed insight in their remuneration practices and allowed further measurements in order to meet research objectives of this master thesis.

The criteria for evaluating application of the Guidelines have been made according to the main points of the Guidelines according to Mercer's report (Mercer, 2013, pp. 10-12).

Annual reports have been downloaded from the banks' official web pages. The overall conclusion in data collection was that only biggest banking groups provide a detailed remuneration report that is, in most cases, included in annual reports. There are still numerous banks with annual reports including remuneration statements, however not detailed enough. Also, there are other banks which annual reports are stingy in providing information about remuneration in general.

4.2 Variable measurement

Variables measured in the master's thesis are BOD executive members' different remuneration elements. Banks' annual reports include remuneration report which enabled data collection process. All the values are presented in thousands of euro. Moreover, all the values that were originally in other currencies have been converted to euro based on the closing date of the financial year of the observed period. Data are presented per BOD executive member to make comparisons among banks possible.

The **fixed remuneration** refers to the remuneration awarded to the BOD executive members, regardless of the number of hours they work or the quality of their performance. In most common situations, fixed remuneration is another term for a fixed remuneration or fixed pay. High-level executive payment contracts at the corporate level, however, use the term "remuneration" rather than salary to indicate that a total compensation package can consist of more than just wages and salaries.

The **variable remuneration** term refers to pay that varies with performance. All banks use a certain form of variable compensation in order to pay employees for performance. It consists in principal of two components, an upfront bonus and a long – term performance award which is mostly deferred over 3 – 5 years. Both forms can be paid in cash or shares. Upfront bonus is determined through a comparison of the planned and actually achieved performance. Long – term performance award is mostly granted on a deferred basis, so that it ensures a long – term incentive effect over a multiannual period of time. It is important to mention that most of this component has been granted on a deferred basis, out of which one part comprises equity – based compensation, while the remaining portion was granted as deferred cash compensation. Other important thing related to long–term performance award is that there was a variable compensation granted on a non–deferred basis. It was also granted in both equity – based and cash. These components have been presented in annual reports, and hence, provided an analysis.

The **other remuneration** term includes severance and pension payments and benefits in kind awarded to the identified staff. Severance payment is a form of compensation that an employer provides to an employee who has been dismissed, whose position has been eliminated, who through mutual agreement has decided to leave the company, or who has parted ways with the company for other reasons. Executives may receive a month's pay for each year of service and senior executives generally receive severance pay as outlined in the employment contract. In addition to pay, severance packages can include extended benefits, such as health insurance and outplacement assistance to help the employee secure a new position. Benefits in kind are form of compensation that an employer provides to an employee as part of his total remuneration package, and can include a company car, private health insurance, mobile phone and are usually subject to tax.

Eventually, **total remuneration** encompasses all three mentioned forms of remuneration.

The variables of interest are:

- amount of fixed remuneration rewarded in cash
- amount of variable remuneration awarded in cash;
- amount of variable remuneration awarded in shares;
- amount of variable remuneration awarded upfront;
- amount of variable remuneration deferred;
- share of variable remuneration awarded in cash in total variable remuneration;
- share of variable remuneration awarded in shares in total variable remuneration;
- share of variable remuneration awarded upfront in total variable remuneration;
- share of variable remuneration deferred in total variable remuneration;
- share of fixed remuneration in total remuneration;
- share of variable remuneration in total remuneration;
- share of other remuneration in total remuneration;
- indices for the amounts awarded in a form of variable remuneration;

- indices for share of each variable remuneration component awarded in total variable remuneration;

- indices for share of each remuneration component in total remuneration awarded.

4.3 Methodology

Descriptive statistics techniques were used to provide answers to research questions. After collecting each bank's remuneration statements, ratios and indices were calculated as well. To check for statistical differences among periods, dependent sample t-test was conducted.

4.4 The results

4.4.1 Descriptive statistics

Size of banks varies considerably in terms of assets, profits, number of employees.Table 3 presents bank's average assets, profit and number of employees in the three analyzed years (excluding the base year 2010). Amounts of total assets and profits are presented in thousands of euro.

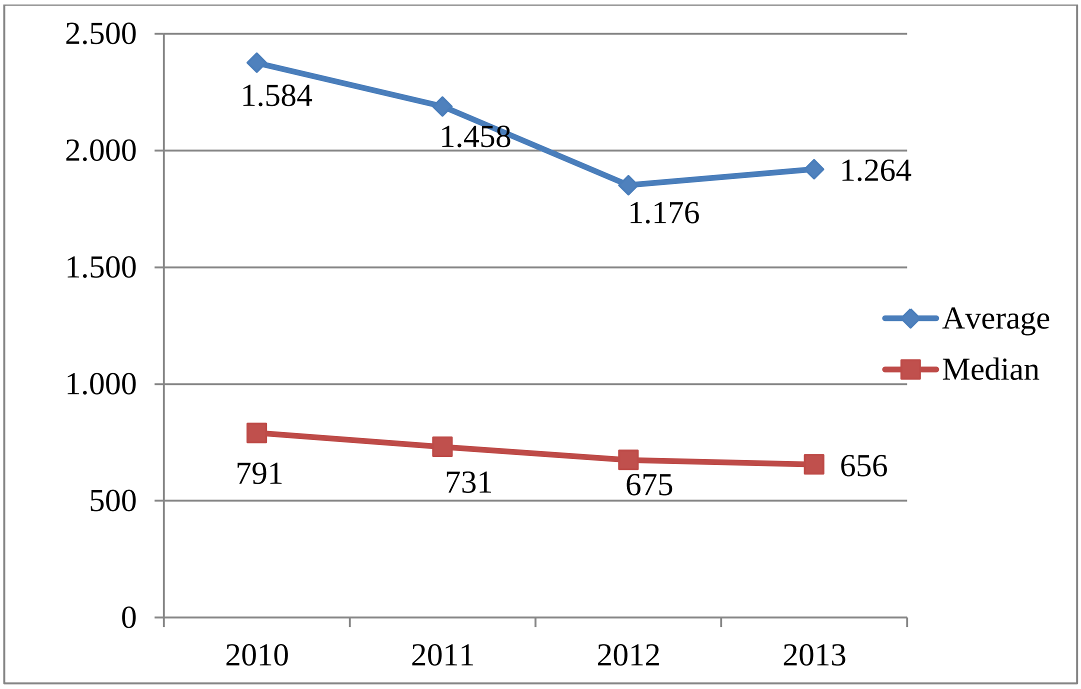
Table 3. Banks' average assets, profits and number of employees*

Variable	2010	2011	2012	2013
Total Assets	514,333,549	552,339,022	542,686,415	463,219,865
Profit	1,239,518	-138,462	161,162	556,059
Number Of Employees	44,420	43,676	42,012	43,199

Note: * Indicates amounts of total assets and profit in thousands of euro.

Figure 1 shows a change of total remuneration per BOD executive member for 30 banks that reported their remuneration structure over four observed years. Results showed that average total remuneration has been decreasing since 2010.

Figure 1. Total remuneration of BOD executives in the selected banks (in thousands of euros)



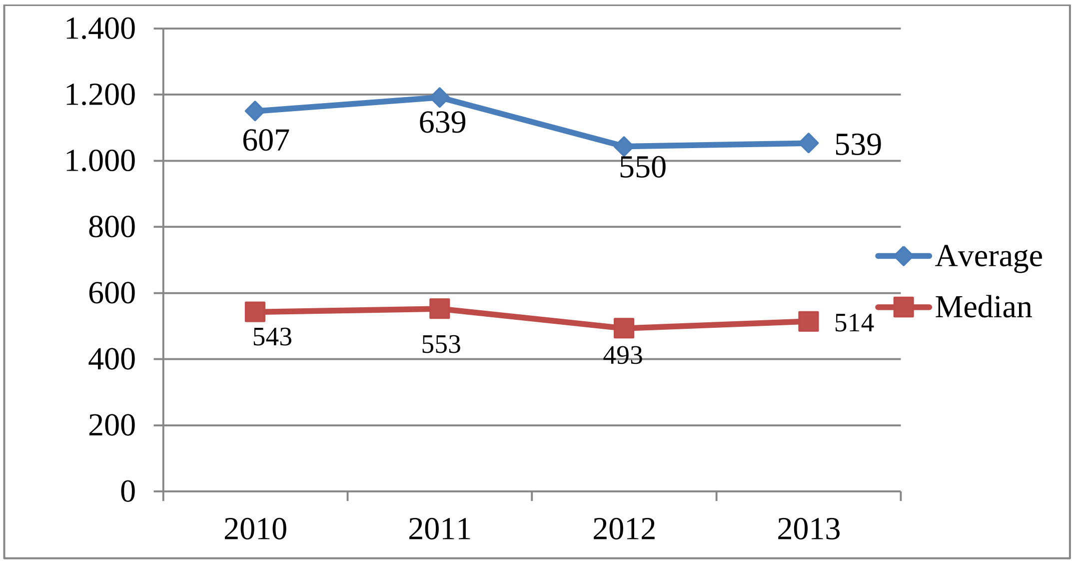
It is important to mention that CRD III was in place in January 2011, after which its implementation into EU countries' legislation was expected. Hence, 2010 was taken as the base year in order to find out when the Directive took effect. Medians are lower than mean values, implying that there are some banks with extreme values in the sample. Also, high standard deviations for all the observed years showed that data is spread around the mean in a range1.1 – 1.9 millions of EUR, which is in line with the fact that all banks vary in many already mentioned aspects.

Figure 2 shows a change of fixed remuneration per BOD executive member for the observed period. It has been found that there was a slight increase in 2011, compared to 2010. However, as of 2012 the situation changes, as fixed remuneration recorded a slight decrease.

Unlike total remuneration that was presented in the previous figure, median and mean values are closer in the case of fixed remuneration. This implies that extreme values deviate less from the mean, than in the case of total remuneration. Variable remuneration is hence responsible for the large part of the differences. Minimum amounts of fixed remuneration were in range 60 – 150 thousands, whilst maximum were 1.2 – 2.1 millions of euro. Standard deviation values were in a range 310 – 380 thousands of euro.

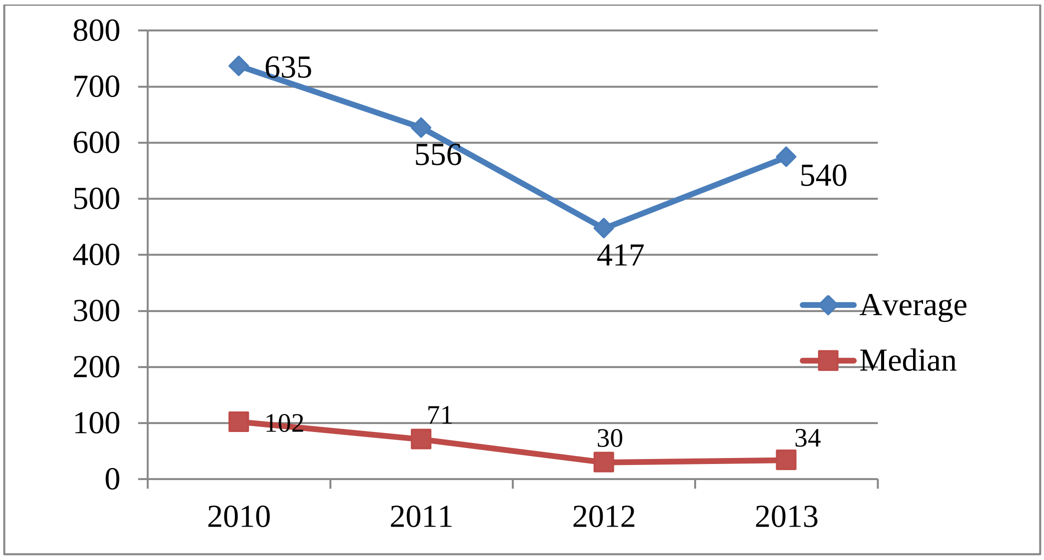
In terms of variable remuneration awarded per BOD executive member, a decreasing trend from 2010 to 2012 was found. However, it increased in 2013, but not reaching the value from 2010. On the other side, medians presented in the figure are much lower than mean values, which can also be explained by the following indicators.

Figure 2. Fixed remuneration in the selected banks (in thousands of euros)



According to significant changes of variable remuneration during the observed period, it is to note that a variable remuneration was in the centre of remuneration policies and regulation within the EU. Many banks from the sample have awarded no variable remuneration to their BOD executive members and therefore minimal values for all years from the observation period were zero.

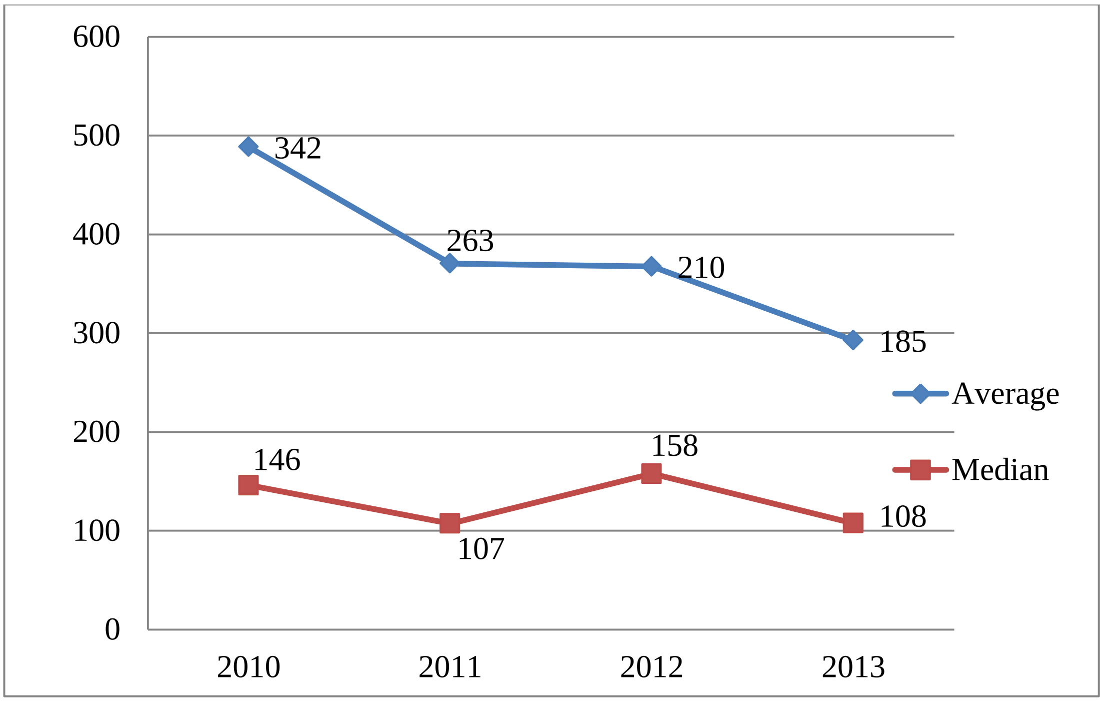
Figure 3. Variable remuneration in the selected banks (in thousands of euros)



Maximum values were in range 2.4 – 6.5 millions of euro. Eventually, a standard deviation values were in range 0.7 – 1.3 millions of euro. This explains how data is spread around the mean. A change of variable remuneration is presented in Figure 3.

Figure 4 shows the change of average other remuneration per BOD executive member.

Figure 4. Other remuneration in the selected banks (in thousands of euros)

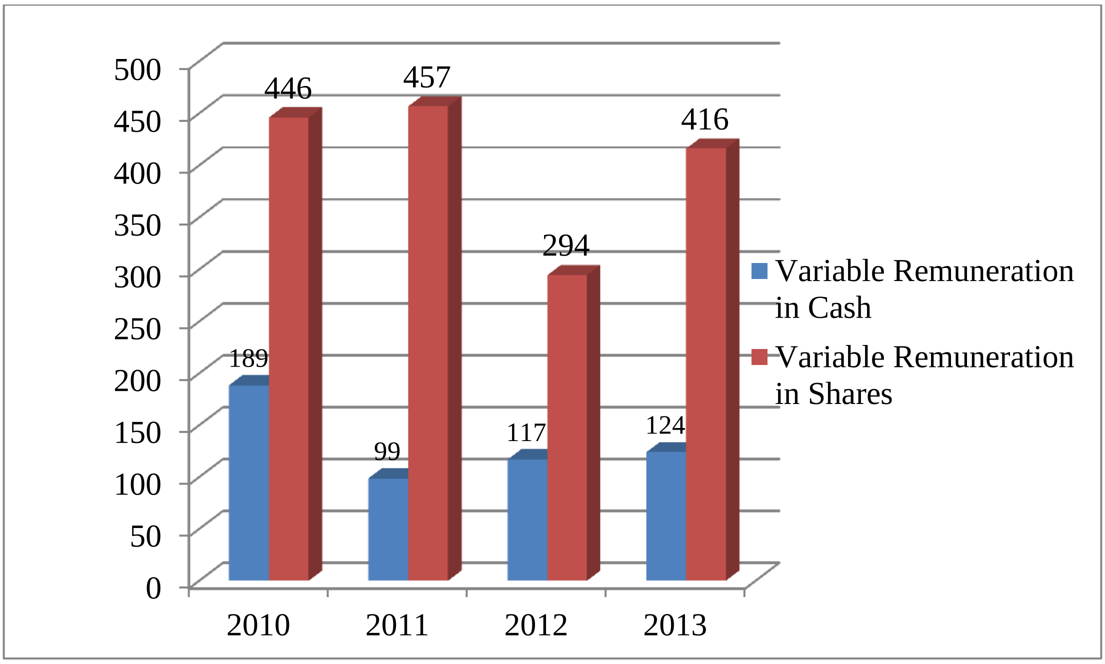


It was found that other remuneration element has decreased since 2010. A constant decreasing trend could be in favour to the CRD III requirements and requirement for decreasing awards per BOD executive member in general. It is important to note that median values are lower than mean values, but closer than in the case of variable remuneration. A standard deviation values for other remuneration were in a range 0.3 – 0.6 millions of euro, showing how much the data is spread around the mean value.

In figure 5 and 6, different forms of variable remuneration are presented. First figure shows two types of awarding BOD executives – amounts in cash and shares, whilst other shows a second aspect – amounts of remuneration awarded upfront at the end of the financial year and deferred remuneration. As deferred remuneration's measurement has already been explained, it is important to note that according to CRD III, at least 50% of variable remuneration should be in the form of shares or share-like instruments that reflect the long credit quality of the institution. When it comes to deferred remuneration, it is important to mention that a significant portion of variable remuneration should be deferred. In general the deferred portion should be at least 40% of the total variable amount, increasing to 60% for significant amounts. The deferral period should be at least three to five years and should be appropriately aligned with the performance on which the variable remuneration was granted.

As it can be seen from the Figure 5, a portion awarded in shares has been much higher than the one awarded in cash during the whole observed period. Share – based remuneration recorded slightly increase in 2011, after which it decreased in 2012.

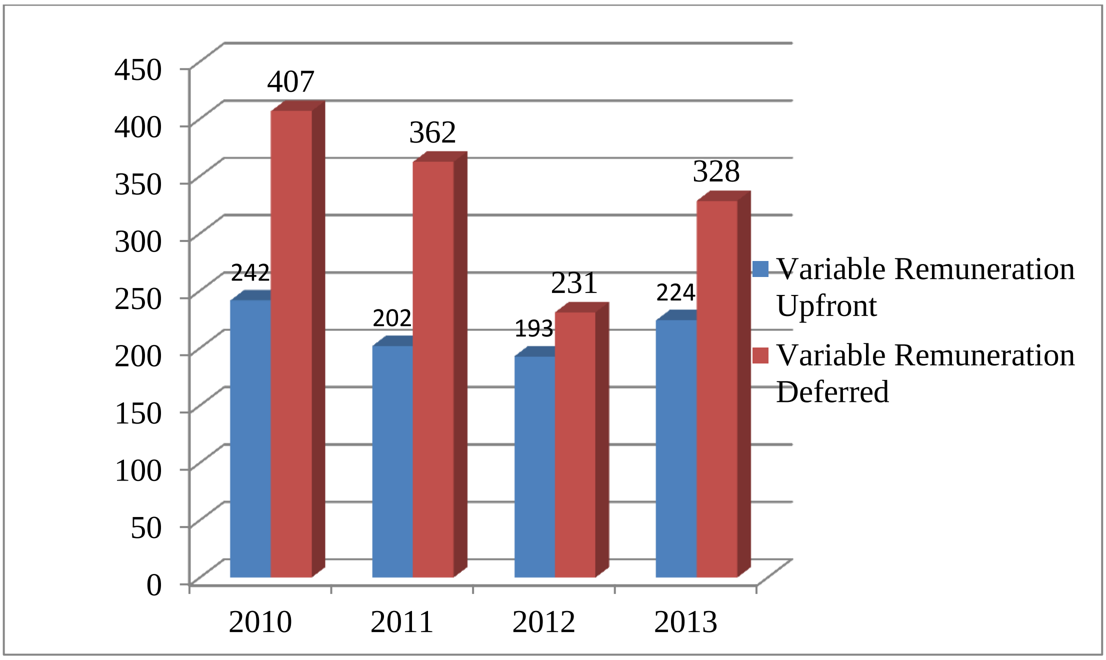
Figure 5. Overview of cash and equity based element in variable remuneration (in thousands of euros)



The reason of this dramatic drop was a decision of Deutsche Bank, Barclays and Royal Bank of Scotland to decrease share – based part of variable remuneration. On the other side, cash – based remuneration dropped in 2011 and started to increase in 2012.Year 2013 recorded an increase in both cash and share – based variable remuneration. What we can also observe is that share-based compensation was predominant also prior to the introduction of CRD III in the year, meaning that the directive was already within the scope of compensation practices.

It is to note that amounts of upfront and deferred remuneration from Figure 6 do not add up to the amounts presented in Figure 3 due to outliers which exist in the sample.

Figure 6. Overview of upfront and deferred element in variable remuneration (in thousands of euros)



Deferred remuneration refers to portion of bonus paid out at a later date after which the income was actually earned. Statistics of variable remuneration awarded upfront and deferred are presented in the Figure 6. It was found that deferred remuneration outreaches upfront remuneration anyway, hence that the directive has not introduced any drastic requirement for those banks. Nevertheless, in 2012 a trend of decreasing both types of remuneration continued. This was a logical consequence, as banks were expected to decrease their variable and total remuneration in general. Banks which increased their variable remuneration awarded upfront were Commerzbank, Deutsche Bank, BPCE, Banco Popolare and Nordea, out of which Commerzbank was the one which awarded zero bonuses in 2011. On the other side, Royal Bank of Scotland, Bank of Ireland, HSBC, Banco BPI and Rabobank decreased upfront awarded variable remuneration. When it comes to deferred variable remuneration, banks which increased this element in 2012 were Raiffeisen, Commerzbank, Landesbank Berlin, Societe Generale, Credit Agricole, HSBC and Santander. On the other side, banks which decreased this remuneration element were Erste, Deutsche Bank, Barclays and Nordea. Case of Barclays is interesting to mention, as it increased this part in 2011, decreased in 2012, and eventually increased it again in 2013. In 2013 both forms of remuneration increased at banks' level. Variable remuneration paid upfront reached even higher value compared to the base year, whilst deferred variable remuneration did not reach value from 2010. It is obvious that after January 2011 till 2013, there was a certain decrease in amounts of deferred remuneration. Percentage share of deferred portion in variable remuneration has been explained bellow in the text.

Figure 7. Percentage share of cash and share based variable remuneration element in variable remuneration

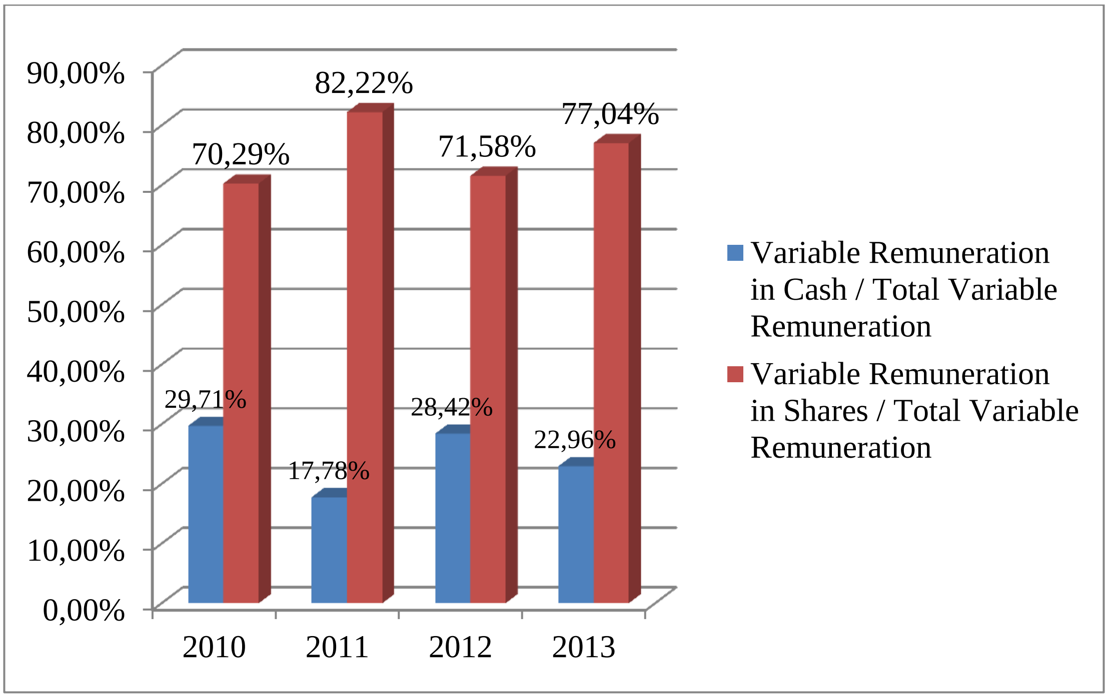
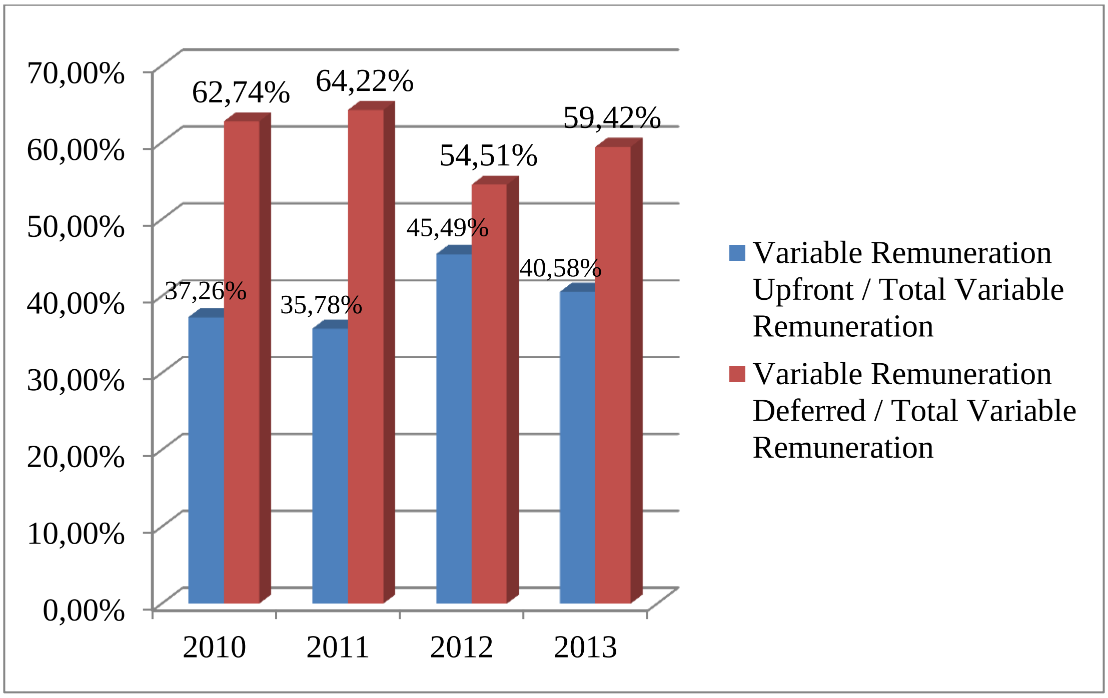


Figure 7 shows how percentage share of cash and share based variable remuneration elements have changed during the observed period. Knowing this information is of great importance for answering to research questions. It is obvious that share based remuneration has had greater share in variable remuneration during the whole observed period. This remuneration element has increased in 2011, compared to the base year, after which dropped in 2012, but increased again in 2013.

However, it is important to mention banks which have increased their share based remuneration element from 2011 onwards. These banks are: Erste, Deutsche Bank, Societe Generale, HSBC, DNB NOR bank ASA and Santander. Furthermore, HSBC Holdings is the best examples of a bank which has increased its share based pay in order to meet the CRD III requirement of awarding at least 50% of total variable pay. Deutsche bank is an example of a bank which has been rewarding at least 70 % of its variable remuneration as share based, since 2010, whilst DNB and Santander have had 50 % of their variable remuneration awarded in the same form during the whole observed period.

Figure 8 shows a change of percentage share of upfront and deferred remuneration element in variable remuneration during the observed period. It is obvious that deferred portion of remuneration has had greater share during all years.

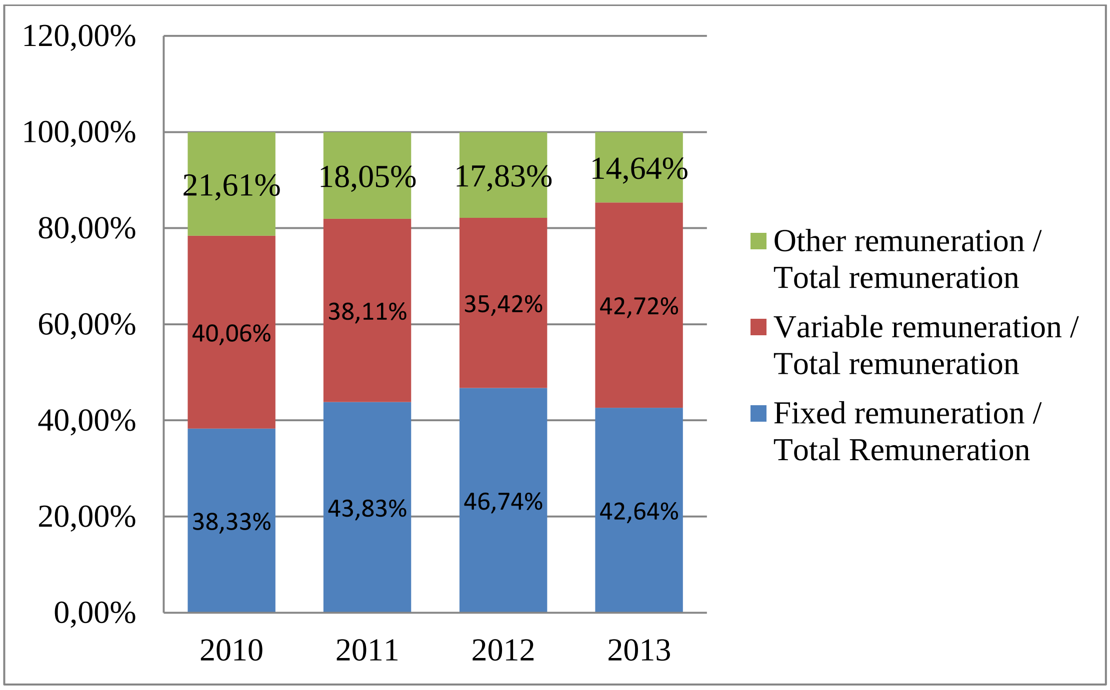
Figure 8. Percentage share of upfront and deferred remuneration element in variable remuneration



A slight increase in 2011 can be considered as the effect of the CRD III. However, it is important to keep in mind that these results refer to the sample of 30 banks for an average executive member of BOD. Banks which have awarded no variable remuneration have already been mentioned in the text. However, there were banks which have increased a deferred portion of their variable remuneration since 2011. These banks are: Commerzbank, Deutsche Bank, Societe Generale, Barclays, Royal Bank of Scotland, HSBC and Dexia, DNB and Santander are examples of banks which have awarded around 50 % of variable remuneration since 2011.

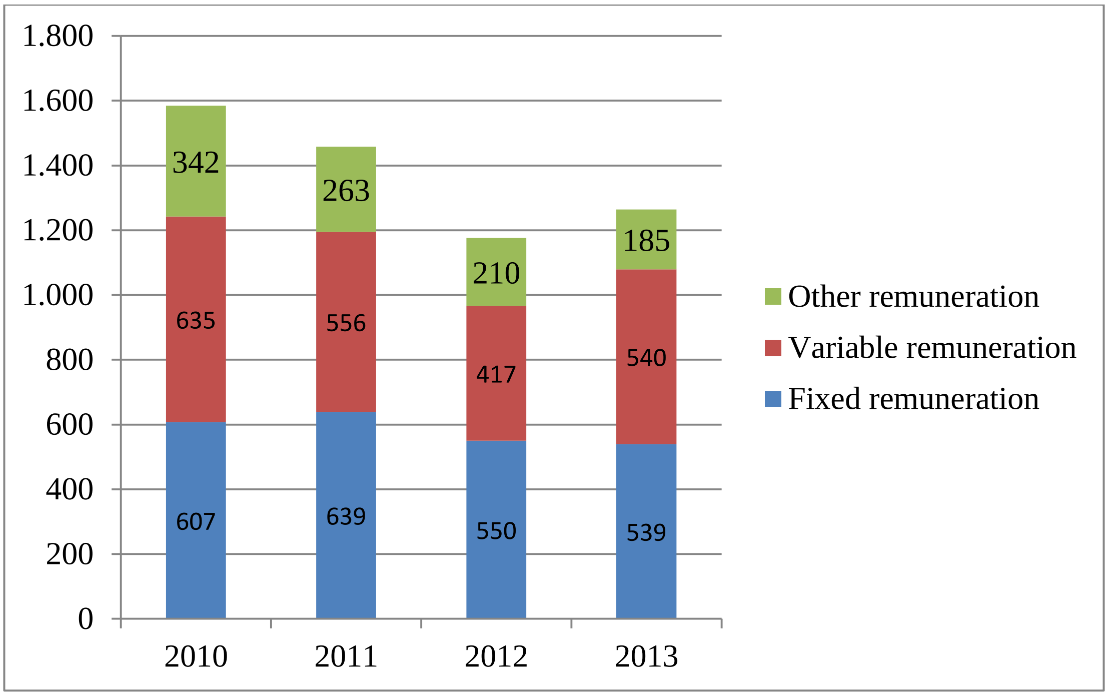
Figure 9 provides a significant insight in a change of each remuneration element share in total remuneration over the observed period. In 2011 year a fixed remuneration component has increased. It has remained a greatest share since 2011. A variable remuneration component has been decreasing since 2011, while recorded an increase in 2013. Other remuneration component had a smallest share and followed a decreasing trend during the whole period.

Figure 9. The structure of total remuneration



It is useful to see a change in each remunerations element, presented in absolute amounts. Unlike the previous figure, Figure 10 provides an insight into absolute amounts awarded per BOD executive member

Figure 10. The structure of total compensation in absolute amounts (in thousands of euros)



Although this is a logical result, as 2010 is a year before CRD III was applied in order to decrease variable element, it is important to mention several banks which caused such a great share of variable element in total remuneration. These banks are: Deutsche Bank, Barclays, Royal Bank of Scotland, HSBC and Santander. Banks which have kept a decreasing trend during the whole observed period. These banks are Erste and Dexia. On the other side, banks which increased their variable portion in 2011 and kept a decreasing trend afterwards are Societe Generale, Credit Agricole, HSBC and Banco Popolare. Furthermore, banks which had an increase in variable remuneration element in 2011 are Barclays and Royal Bank of Scotland. Barclays recorded a decrease in the next years, while Royal Bank of Scotland recorded an increase again in 2013.Other remuneration element has kept the lowest share in total remuneration during the whole period. It has been decreasing since 2010.

Descriptive statistics' has enabled ranking of banks from the sample in terms of the following remuneration types and elements. In order to make the following table easier to understand, each bank has been followed by its average number of BOD executives for the observed period. This is presented in Table 4.

Table 4. Banks' ranking per BOD executive member

Remuneration	Highest paid	Lowest paid
FR	Deutsche Bank (8), HSBC (5)	Nova KBM (3), DNB NOR BANK ASA (9), Bank of Cyprus (4)
VR	Barclays (3), Royal Bank of Scotland (4), Deutsche Bank (8)	Nova KBM (3), DNB NOR BANK ASA (9)
OR	Royal Bank of Scotland (4)	Nova KBM (3)
TR	Barclays (3), HSBC (5)	Investment Bank of Greece (3), Nova KBM (3)
VR Cash	HSBC (5)	DNB NOR Bank ASA (9)
VR Shares	Barclays (3)	DNB NOR Bank ASA (9)
VR Upfront	Barclays (3), Deutsche Bank (8)	DEXIA (7)
VR Deferred	Barclays (3), Credit Agricole (7)	Rabobank (9)

4.4.2 Dependent sample t-test

Paired sample t-test has been applied to test whether a significant difference in means exist between variables in the year prior to CRD III, i.e. 2010 and 2013 after full implementation of the Directive in 2013. The significance level was set to 0.05. The following differences have been tested: fixed remuneration; variable remuneration; other remuneration; total remuneration; cash-based variable remuneration; share-based variable remuneration; variable remuneration paid upfront and variable remuneration deferred; share of fixed remuneration in total remuneration; share of variable remuneration in total remuneration; share of other remuneration in total remuneration; share of cash-based variable remuneration in total variable remuneration; share of share-based variable remuneration in total variable remuneration; share of variable remuneration paid upfront in total variable remuneration, and share of variable remuneration deferred in total variable remuneration. The results are summarized in the table below.

Table5. Results of the T-test

Variable	**Value in 2010**	**Value in 2013**	**Difference between 2010 and 2013**	**df**	**t Stat**	**P(T<=t) two-tail**
FR	607	539	-68	29	1.03	0.31
VR	635	540	-95	29	0.41	0.68
OR	406	185	-221	29	1.62	0.12
TR	1,584	1,264	-320	29	0.96	0.34
VR Cash	189	124	-65	29	1.22	0.23
VR Shares	446	416	-30	29	0.13	0.9
VR Upfront	242	224	-18	29	0.16	0.87
VR Deferred	407	328	-79	29	0.47	0.64
FR/TR	38%	43%	5%	29	-2.41	0.02
VR/TR	40%	43%	3%	29	0.96	0.35
OR/TR	22%	15%	-7%	29	1.95	0.06
VR Cash/VR	30%	23%	-7%	29	0.42	0.67
VR Shares/VR	70%	77%	7%	29	-0.52	0.6
VR Upfront/VR	37%	41%	4%	29	-0.8	0.43
VR Deferred/VR	63%	59%	-4%	29	-0.35	0.73

The results show that a significant difference exists between variables in 2010 compared to 2013, only in a case of share of fixed remuneration element in total remuneration which increased by five percentage points at the expense of other remuneration. However, share of other remuneration in total remuneration had p-value 0.06, which is close to 0.05

compared to other results. This leads to the finding that a certain change occurred even in this case. On the other side, it can be seen that a certain change occurred in amount of other remuneration awarded per BOD executive member, although its p-value is 0.12.

Indices are calculated in order to see each year's change compared to previous year. An index is a value used in descriptive statistics to describe movements of a specific feature during time compared to the base period. An index with the value bellow 100 is a percentage decrease which equals a difference between 100 and the particular index. On the other side, index above 100 is a percentage increase which equals a difference between 100 and the particular index.

Table 6. Remuneration structure indices 2010 – 2013

Remuneration	2011	2012	2013
FR	105	86	98
VR	88	75	130
OR	77	80	88
TR	92	81	108
VR Cash	52	118	107
VR Shares	102	64	141
VR Upfront	84	96	116
VR Deferred	89	64	142
FR/TR	60	160	81
VR/TR	117	87	107
OR/TR	84	96	116
VR Cash/VR	89	64	142
VR Shares/VR	114	107	91
VR Upfront/VR	95	93	121
VR Deferred/VR	84	99	82

Interesting is that none of the variables recorded a constant increase during all observed years. On the other side, amount of other remuneration awarded per BOD executive member, as well as its percentage share in total remuneration, recorded a constant decrease during the observed period.

As seen before in Figure 3 and 9, a variable remuneration decreased in the first two years of implementation of the CRD III, after which increased in 2013. Similar trend could be found in case of total remuneration, whilst fixed remuneration increased in the first year of implementation of the CRD III, after which slightly decreased. Different forms of variable remuneration have been changing during observed years. However, it is important to note that share – based variable remuneration had a 2011 index of 117, implying that it increased for 17 % in the first year of implementation of the CRD III. On the other side, a percentage share of deferred amount in variable remuneration had a 2011 index of 89, implying that it recorded a drop of 11 % compared to the base year. Its 2013 index of 142 implies an increase of 42 % compared to 2012, which could present the effect of the CRD III.

CONCLUSION

The main goal of this thesis is to investigate how recent regulatory changes have affected bank executive remuneration structure in European systemic banks. Excessive executive compensation plans which were used for years contributed to risk – taking which eventually led to the financial crisis. Though deferred and share – based compensation were used before, they were even more emphasized by the CRD III. Precisely, the Directive required deferring more variable remuneration in a form of shares.

Two research questions have been evaluated. By first question an answer to how remuneration structure has changed from 2011 – 2013 was provided, as well as how the rule of deferred bonuses has been applied. The second question verified whether remuneration levels increased to compensate for deferred bonuses. In order to provide an answer to research questions, information on the sample of 30 EU systemic banks was collected and the data was analysed. Descriptive statistics were calculated per BOD executive member. Dependent sample t-test analysis was used to find whether statistically significant differences exist between period before and after CRD III. The criteria for both establishment and answering the research questions lay in the main points from the Guidelines, which have been explained in the paper.

The analysis of the paper has been done from few aspects. First of all, total remuneration has been divided into three different parts, including fixed, variable and other remuneration element. Their changes provided an insight into how the CRD III has affected remuneration structure in general. Furthermore, variable remuneration has been divided into cash and share - based on one side, as well as the one awarded upfront and deferred over several years. Also, a percentage share of each remuneration element in total remuneration has been presented, so that descriptive statistics techniques could provide answers to both first and the second research question.

Results reveal a decrease of total remuneration and all remuneration elements during the observed period. Fixed remuneration element increased in 2011and decreased afterwards. A variable remuneration was decreasing until 2012 which recorded an increase in variable remuneration.

In terms of variable remuneration components, it can be concluded that the requirement imposed by CRD III of awarding at least 50 % of share based variable remuneration, was already met before the adoption of CRD III. The other CRD III requirement to defer at least 40 % of the total variable amount and up to 60 % for significant amounts was also partially met before the adoption of CRD III. After analysing the data one wonders why such easily reachable limits were introduced in the first place. They were expected to change risk seeking behaviour of managers but observing the data before the adoption of CRD III one could question whether a true reason for risk seeking behaviour lies in cash compensation or elsewhere. Only further analysis of the outliers and their risk seeking behaviour could give an answer to this question. It is important to keep in mind that these results refer to a sample of 30 banks, of which certain have awarded no variable remuneration at all, while other banks awarded high bonuses during the observed period.

T-test was used for testing the hypothesis that no significant difference exists between periods before and after transposition of CRD III. Using a 0.05 significance level, the hypothesis was rejected only in a case of a percentage share of fixed remuneration element in total remuneration, meaning that no significant difference exists in other variables. T-test provided findings that a noticeable change occurred as regards the amount of other remuneration awarded to each of BOD executive members. However, this is the smallest part of remuneration package. Indices were presented to provide more detailed results, leading to a conclusion that there are almost no significant differences before and after transposition of CRD III.

In regard to this finding, it is important to mention that several banks have already deferred remuneration as share - based one prior implementation of CRD III. These are: Deutsche Bank, Societe Generale, Credit Agricole, Barclays, Royal Bank of Scotland, HSBC, Banco Popolare, Santander and Nordea Bank.

Remuneration in banking sector has resulted in sustained criticism as it is inevitably related to the stability of financial system. It has been claimed that the structure of bonuses allegedly increased risk taking to a high level and hence, contributed to the unravelling in 2007. Remuneration policies have undoubtedly become regularly used tools for maintaining the financial stability in the EU.

Although banks are of great importance for the EU economy and could not be easily punished, restricted or even liquidated, they need frequent monitoring and sanctions as well. It is still difficult to determine how remuneration practices in the period 2011 – 2013 will affect risk – taking. Finally, it remains to be seen how the Capital Requirements Directive IV will be applied in remuneration policies and practice in financial sector from 2014 onwards.

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APPENDIXES

LIST OF APPENDIXES

Appendix A: List of Abbreviations

CRD – Capital Requirements Directive
CEBS - Committee of European Banking Supervisors
EBA – European Banking Authority
FSB – Financial Stability Board
FSF – Financial Stability Forum
FSA – Financial Services Authority
HLP - High - level Principles for Remuneration Policies
EU – European Union
UK – United Kingdom
US – United States
EP – European Parliament
EC – European Commission
Rem Co – Remuneration Committee
BOD – Board of Directors
CEO – Chief Executive Officer
FR – Fixed Remuneration
VR – Variable Remuneration
OR – Other Remuneration
TR – Total Remuneration
VR Cash – Cash – based Variable Remuneration
VR Shares – Share – based Variable Remuneration
VR Upfront – Variable Remuneration Upfront
VR Deferred – Variable Remuneration Deferred

Appendix B: Dedication

This master's thesis is dedicated to my grandfather Prof. Dr. Danilo Aleksić for his endless love and support. He has been my greatest lodestar, teacher and critic. I have gained from him the first financial insight, as he was an expert in this field. This master's thesis is a result not only of years of master schooling, but of a dedication to work and science, which I have mostly learned from him.