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THE SEPARATION OF COMMERCIAL AND INVESTMENT BANKING: A LITERATURE REVIEW

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ABSTRACT

The purpose of this thesis is to survey the academic literature concerning the separation of commercial and investment banking, and to serve as a basis for future research. We provide a review of 75 papers showing that there is no unanimous evidence either for or against the argument that a separation of commercial and investment banking would be more beneficial for society overall. We further demonstrate that the recent financial crisis did not directly stem from the combination of commercial and investment banking activities within universal banks. The findings do, however, provide evidence showing that increased diversification within the financial industry has amplified the systematic risk exposure for banks and increased the similarity between institutions. Our results suggest that regulators should focus on limiting the interconnectedness and similarity between financial institutions, thereby minimizing the risk of systemic crises and market contagion. Even though this literature review does not determine whether or not commercial and investment banking activities should be unified, we hope that it can act as an aid to future research in the area.

Keywords: Commercial & investment banking, Conflicts of interest, Diversification, Glass-Steagall, Gramm-Leach-Bliley, Moral hazard, Separation, Too big to fail, Universal banking, Vickers report, Volcker rule.

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1. INTRODUCTION

The financial crisis of 2007-2009 has revealed major trading losses and problems of insolvency at banks all over the world. Financial market regulators have intensified their pursuit for the largest regulatory reforms the financial system has seen since the Great Depression. Basel III and its' capital adequacy requirements has been put forward as the main solution on how to solve the problem of insolvent banks. Nonetheless, discussions about banks' risky trading activities have become increasingly intense during the last couple of years. Major trading losses are being witnessed at some of the worlds most trusted and reputable banks. The massive Swiss bank UBS experienced a $2.3 billion loss in 2011 due to risky trading activities at their London office (Thomasson and Taylor, 2011). Another major loss was recently witnessed at the regarded New York based bank JPMorgan Chase after a $2 billion loss in May 2012 due to speculative hedging activities similar to the trading activities that caused the losses at UBS in 2011 (Kopecki et al., 2012).

> "The enormous loss JPMorgan announced today is just the latest evidence that what banks call 'hedges' are often risky bets that so-called 'too big to fail' banks have no business making" – Senator Carl Levin on May 10th 2012, (Protess and Craig, 2012).

Major losses like these have induced economists and politicians to request that risky trading activities should be restricted from traditional banking activities so that depository money will not be put at risk through banks' proprietary trading activities. What is interesting in this context is that the US not even a decade before the recent financial crisis repealed the Glass-Steagall Act[1] (GSA), which prohibited commercial banks to engage in investment banking activities by enacting the Gramm-Leach-Bliley Act[2] (GLBA). Some argue that the GSA strengthened commercial banks and made the financial system more reliable since banks were no longer able to jeopardize their customers' money on risky banking activities. However, others argue that diversified banks that can engage in all kinds of financial services are beneficial for the stability of the financial system.

[1] Also called the "Banking Act of 1933".

[2] Also called "The Financial Services Modernization Act" and the "Citigroup Relief Act".

1.1 PROBLEM DISCUSSION

There are several reasons to why regulators should separate commercial and investment banking. Among the most common is the problem of banks that are "Too Big to Fail" (TBTF). Nobel Prize winner Joseph E. Stiglitz (2010c) states that we in the past couple of decades have seen more banks become too big to fail, especially at the organizational level, and that it is not generally realized how much more concentrated the banking system has become since the repeal of the GSA. If a financial institution is so large so that the whole financial system would be at risk if that institution would find itself insolvent, then we have a TBTF problem. This may also give rise to increased risk taking, since the financial institution knows that the government will bail them out if they would go bankrupt. The TBTF problem, along with federal deposit insurance, gives rise to moral hazard within the banking sector. Federal deposit insurance (FDI) aims to protect small investors in the event of an insolvent bank and effectively ensures a level of public trust in the banking system. However, FDI may at the same time give rise to increased risk taking when combining commercial and investment banking; if the government ensures that customers will get their money despite a bank being bankrupt, the bank may take on excessive risk to receive high profits. The problem of moral hazard and TBTF is that if banks take on high risk and win, they also take all the profit, but if they fail when taking on such a high risk it is the taxpayers that will pay. Therefore, when the government provides depository insurance programs it should also be able to demand restrictions on risk-taking activities. Clearly, there is a problem of moral hazard here since the current situation makes it possible for banks to continue its operations regardless of outcome.

Conflicts of interest may also appear when combining commercial and investment banking. If a bank has an outstanding loan to a financially distressed company, the bank may want to issue corporate bonds on behalf of the company and in turn force the company to use this money to repay the initial bank loan. This effectively transfers the risk from the bank onto the buyers of the corporate bonds (Hebb and Fraser, 2002). Additionally, a bank may feel pressure to give unwise bank loans, or ensure the market price of that company's stocks or corporate bonds, to a financially troubled company if the same bank helped the company to issue corporate bonds or stock (Johnson and Marietta-Westberg, 2009). This may give rise to the problem of banks actively trying to mislead the public.

Stiglitz (2010c) states that the GSA was an important law and that separation of commercial and investment banking has a vital purpose to play. He argues that commercial banking should be conservative and risk adverse, and act as a provider of financial services, such as lending,

borrowing, and payment services. Commercial banks handle ordinary peoples' money and should therefore act accordingly to their customers' expectations and demands. Investment banks, on the other hand, manage rich peoples' money. Rich people are those who have a surplus of money, with which they are willing to speculate by taking on higher risk. Therefore, Stiglitz (2010c) argues that by merging commercial and investment banking, there are clearly conflicts of interest.

There were several voices that expressed their worry when the United States Congress approved the GLBA by a vote of 90 to 8 in 1999. Senator Byron L. Dorgan, stated in The New York Times: ''I think we will look back in 10 years' time and say we should not have done this but we did because we forgot the lessons of the past, and that that which is true in the 1930s is true in 2010" (Labaton, 1999). However, Senator Bob Kerrey stated: "The concerns that we will have a meltdown like 1929 are dramatically overblown" (Labaton, 1999). This may have been an indication of the impact of lobbying from market participants to achieve banking deregulations and to make the US financial system more competitive. But why was the GSA repealed if there were such concerns about financial market instability?

Even though there are several reasons to why separation of commercial and investment banking makes sense, there are also reasons to why these activities should be unified. Every regulation comes to a cost; in this case the cost for banks not being able to diversify themselves. If banks are allowed to participate in more activities, they can also more easily diversify themselves and thus minimize the risk of insolvency. By separating commercial and investment banking, one may thus in fact make the financial system even more vulnerable. The additional cost imposed on these banks could lead to higher costs for corporations and customers, resulting in lower economic activity. A working universal banking[3] system has also been utilized in Germany, Sweden and several other European countries for decades.

[3] Universal banks are institutions that are allowed to combine all financial activities under the same roof; such as insurance activities, securities underwriting, commercial, retail, merchant, and investment banking etc.

1.2 RESEARCH QUESTION

By bearing in mind the problem discussion stated above about combining commercial and investment banking activities, the research question of the thesis is depicted as follows:

> *What is the academic support for and against a separation of commercial and investment banking?*

1.3 RESEARCH PURPOSE

The main purpose of this thesis is to survey the academic literature concerning the separation of commercial and investment banking so that we can shed light upon whether regulators should separate these activities or not. Another purpose is to provide an overall picture of this problem area to the reader and hopefully be an aid to future research.

2. METHODOLOGY

The complexity of our financial system provides an opaque picture of what to consider as relevant when examining the separation of commercial and investment banking. The academic literature within this area is extensive, and research covering this thesis' scope goes back to the early twentieth century. Despite this, results, standpoints, and opinions are frequently contradictory providing fragmented and inconclusive results. Therefore, it is valuable to examine what researchers within the area considers as relevant, together with their thoughts and different conclusions. This thesis is therefore a literature review that builds upon both qualitative and quantitative research. The research stems from various sources, mainly consisting of articles, journals, working papers, and other academic or relevant papers within the area. This qualitative thesis takes an economic and regulatory perspective in interpreting literature that critically evaluates the separation of commercial and investment banking and related subjects, which all touches the thesis' research area.

Jesson et al. (2011) define a literature review as a written appraisal of what is already known. Blumberg et al. (2008) argues that a literature review is an appropriate summary of previous work but that it needs your interpretation as an added dimension. Moreover, Jankowitz (2005) emphasizes the literature review as a process of building on existing work, but with a focus on describing and then bringing the work together in a critical way.

There are mainly two styles to consider when writing a literature review, the traditional format and the systematic format (Jesson et al., 2011). Jesson et al. (2011) state that a traditional literature review does not need a methodology, whereas the systematic review is a great deal more comprehensive. The current public policy and research favors the systematic review over the traditional. However, Jesson et al. (2011) concludes that students may not yet have developed sufficient working knowledge within the topic and are therefore not ready to undertake a systematic review. Based upon these arguments, this thesis' will mainly follow a traditional review format, although we will include some key elements defined by Jesson et al. (2011) from the systematic review process. These key elements include providing a detailed methodology description and search process documentation by defining used databases, keywords, search strategy, and selection and inclusion criteria. By including these elements we aim to strengthen the transparency of our research process so that the study can be replicated and the reader will be able to judge the completeness of the thesis' arguments.

A thesis usually builds upon two different approaches, the inductive or the deductive approach. Jacobsen (2002) states that a deductive approach means that the researcher turns to theory to make predictions about empirical data. Inversely, a perfect inductive approach starts with that the researchers presuppose the reality, without any expectations and preconceptions, and gather the information to form new theory. The approach used in this thesis is however called ethnography, which is neither strictly deductive nor inductive. The ethnographic approach goes hand in hand with Noblit and Hare's (1988) meta-ethnography. Noblit (2003) states that meta-ethnography is both inductive and interpretive, and that it is about the comparative textual analysis of published field studies. It begins with the studies and inductively derives a synthesis by translating studies into the terms of each other to inductively derive a new interpretation of the studies taken collectively. Noblit and Hare's (1988) meta-ethnographic approach is mainly aimed at synthesizing qualitative studies, we have however included papers that are both qualitative and quantitative. This approach formed the basis for this literature review.

A meta-ethnography is according to Noblit and Hare (1988) accomplished through seven phases, and starts off by identifying an interest that research might inform, in this case whether commercial and investment banking activities should be unified or separated. The second phase consists of determining what is relevant to the initial interest; this includes an exhaustive search and selection of relevant papers. The third phase is the reading of the selected papers. We have in this phase read all papers in detail by highlighting important findings and conclusions. The fourth and fifth phases consist of determining how the studies are related and the translation of them into one another. These phases included a categorization of all studies' relevant findings and conclusions. The sixth and the seventh phases consist of synthesizing the translations and to lastly express our interpretation of the papers into one another. The relevant papers have been organized into three ways, as argued by Noblit and Hare (1988): First, some papers have been combined so that they are presented in terms of each other. Secondly, some papers have been set against one another so that the grounds for one study's refutation of another have become visible. Lastly, some papers have been tied to one another by noting just how one study informs and goes beyond another. Additionally, Noblit (2003) explains that the meta-ethnographic approach allows for the development of more interpretive literature reviews, critical examinations of multiple accounts of similar phenomena, systematic comparisons of case studies to allow interpretive cross-case conclusions, and more formal syntheses of ethnographic studies.

2.1 SELECTION OF PAPERS

To achieve a high academic quality and to make sure that the thesis can be replicated, this process aims to be transparent in line with Jesson et al.'s (2011) process of conducting a systematic literature review. Tables A1-A4 in the Appendix provide a detailed map over the search strategy used, the number of search results provided, and the number of selected papers each database generated. Furthermore, the table of selected papers in the results section provides information about which database each paper was collected from. Every search used a combination of keywords, narrowing down the search results so that relevant material could be collected. The initial search process was limited to four well-known academic databases. The search process and keywords used when searching for relevant literature in these databases are presented in Appendix throughout tables A1-A4.

Selection and inclusion criteria were the following: *English and Swedish language, peer-reviewed material but also gray literature such as reports, news and non-academic research mainly identified from reference lists to show relevance and actuality, no time limitations.*

Blumberg (2008) states that database searching is often time consuming and commonly provides extensive material. This is a problem since it can be hard to select appropriate sources when a lot of data is available. Our search strategy therefore involved a snowballing technique. The collected material from the database searches often provided additional research and important findings from other authors and academics. This material was also looked up by searching for these references in Gothenburg University Library's database or at Google.com. This strategy provided a virtuous cycle where additional important material was discovered when more articles and material was read in full; resulting in a broad range of accessed information and material. Along with the snowballing technique, the extensive search process mapped out several important and frequently cited authors. Looking at these author's publication lists[4] also made us discover additional articles from these authors within the research area. The potential for not including relevant material has been reduced due to the use of snowballing. It would have been possible to extend the search process into more databases, but this is a time consuming process and many of the search results provided includes already gathered material. The snowballing technique has on the other hand provided faster access to new and relevant material, providing an excellent complement to database searching.

[4] Normally provided from the author's homepages, CV's or by searching in databases.

2.2 Categorization of Papers

All selected papers have been reviewed and read in full, with important findings and conclusions highlighted and the level of relevance determined. The initial reviews of the papers were used to develop categories. After these initial reviews, a more detailed analysis and categorization of each paper into the developed categories followed. The categorization is not about filing the relevant material into different boxes but more of defining where each paper's context and findings are structured into different headlines and themes throughout the thesis. This is in line with Jesson et al.'s (2011) guidelines for how to write a literature review. We have identified papers involving six main categories. The first category consists of a historical background concerning the separation of commercial and investment banking. The following three categories enlighten the reader of the main arguments for and against a separation. The fifth category considers what papers say about the recent financial crisis and its' connection to a universal banking system. The last category briefly outlines recent regulatory reforms within the area. The categorization is further explained in section *3. Results*.

2.3 Analysis of Papers

The categorization provided a comprehensive body of text filed into the thesis' main categories and themes. The analysis of the papers started by synthesizing this body of text into a whole that is something more than the parts alone imply. Noblit and Hare's (1988) previously stated relationships between papers were followed so that arguments, context and findings are synthesized and analyzed so that they are critically referred to one another, building themes of discussion and line of arguments throughout the thesis. This thesis therefore provides an ongoing analysis throughout the whole result section, which continues into the discussion and critical summary.

Since published papers are the main source of knowledge in this thesis, we have to be aware of the same issue that may arise when using secondary data. Blumberg (2008) states that a problem of using secondary data may be that it provides biased conclusions and statements due to authors' personal opinions. This means that the papers we have analyzed according to Blumberg (2008) may be exposed to subjective information. We have therefore aimed to objectively and accurately reflect opinions and arguments from "both sides of the coin" and to find supporting evidence in multiple sources. Blumberg (2008) states that finding supporting evidence in multiple sources increases the validity of the results, and it therefore becomes less likely that these results are biased. When we have analyzed findings from the selected papers we

have also tried to be critical of the methodology used in these articles. However, the reader should be aware of that we, in some cases, may not have the right expertise to judge whether different methodologies used in these articles are better or worse than others; especially since some studies use very comprehensive statistical models and data. We have therefore aimed to strengthen important findings from the gathered material by supporting these findings with evidence from other sources, and by using peer-reviewed material as a primary source.

After the categorization and analysis we have drawn conclusions based upon the papers presented. We have aimed to present the knowledge gap in the field, and on which aspects most authors agree or disagree. The characteristics and results of the presented papers will be summarized in a meaningful way, effectively showing the thesis' contribution to knowledge and filling the knowledge gap.

3. RESULTS

This thesis surveys the academic literature concerning the separation of commercial and investment banking. In total, we provide a structured overview of literature from 75 different sources. Since the Glass-Steagall Act lies at the heart of the separation of commercial and investment banking, the majority of the literature is based upon American data and research. However, we have also evaluated several studies examining evidence and experiences from other countries. The literature reviewed has frequently contradictory standpoints providing fragmented and inconclusive results. It is nevertheless possible to point out important findings, which together help to shed light on whether commercial and investment banking activities should be unified or not. The results of our literature review are firstly presented in tables on the following pages. The first table, *Table of Journal Distribution,* provides an overview of which journals that are represented in this literature review. We provide articles from 40 different journals with the three most represented journals being *Journal of Banking and Finance, Journal of Financial Intermediation,* and *Journal of Money, Credit and Banking.* The second table, *Table of Selected Papers,* gives a more detailed description of each paper's results, together with topics discussed, setting and time focus, and whether the article is based upon empirical findings or theoretical reasoning.

Table of Journal Distribution

Journal	Number of Articles
Journal of Banking and Finance	7
Journal of Financial Intermediation	6
Journal of Money, Credit and Banking	5
Journal of Monetary Economics	3
European Financial Management	2
Journal of Economic Perspectives	2
Journal of Economics and Business	2
Journal of Financial Economics	2
Journal of Financial Services Research	2
The American Economic Review	2
Journal of Applied Corporate Finance	2
Albany Law Review	1
Business Law Review (UK)	1
CESifo DICE Report	1
CESifo Economic Studies	1
CESifo Working Paper	1
Challenge	1
Empirical Economics	1
European Journal of Operational Research	1
Explorations in Economic History	1
International Finance	1
International Journal of Law and Management	1
International Journal of Political Economy	1
Journal of Business, Finance & Accounting	1
Journal of Economic History	1
Journal of Finance	1
Journal of Financial Research	1
Journal of International Banking Regulation	1
Journal of the Northeastern Association of Business, Economics and Technology	1
Oxford Review of Economic Policy	1
Public Choice	1
Quarterly Journal of Business & Economics	1
Real Estate Finance	1
Revue d'économie financière	1
Seoul Journal of Economics	1
Suffolk University Law Review	1
The B.E. Journal of Economic Analysis & Policy	1
The CPA Journal	1
The Financial Review	1
The McKinsey Quarterly	1

Table of Selected Papers - Part 1

	Reference	Title	Journal	Type & Database	Research Approach	Setting & Time Focus	Topic(s)	Results
1	Acharya, V. V., Cooley, T. F., Richardson, M. P. & Walter, I. (2011)	Regulating Wall Street - The Dodd-Frank Act and the New Architecture of Global Finance	-	Book, Ekonomiska Biblioteket Göteborgs Universitet	Empirical & Theoretical reasoning	USA, N/A	Conflicts of interest, Too big to fail & Moral hazard, Diversification, Risk impact, Recent financial crisis, Recent regulatory reforms etc.	-
2	Acharya, V. V., Cooley, T., Richardson, M., Sylla, R. & Walter, I. (2011)	The Dodd-Frank Wall Street Reform and Consumer Protection Act: Accomplishments and Limitations	Journal of Applied Corporate Finance	Article, Wiley Online Library	Theoretical reasoning	USA, N/A	Conflicts of interest, Too big to fail & Moral Hazard, Recent financial crisis, Recent regulatory reforms	DFA does not address all relevant and fundamental issues, it needs further work.
3	Akhigbe, A., Whyte, A. N. (2004)	The Gramm-Leach-Bliley Act of 1999: Risk Implications for the Financial Services Industry	Journal of Financial Research	Article, Wiley Online Library	Empirical	USA, 1998-2000	Too big to fail & Moral hazard, Diversification, Risk impact	Evidence of different risk changes for different institutions. Securities business increases risk for commercial banks.
4	Ang, J.S., Richardson, T. (1994)	The Underwriting Experience of Commercial Bank Affiliates Prior to the Glass-Steagall Act: A Reexamination of Evidence for Passage of the Act	Journal of Banking and Finance	Article, ScienceDirect (Elsevier)	Empirical	USA, 1926-1934	Conflicts of interest, Risk impact	No evidence of conflicts of interest. Commercial and investment bank issues do not differ in performance. National/Chase were not a good representation of banks in the Pecora hearings.
5	Anonymous (2010)	Recent Legislative and Regulatory Proposals	Real Estate Finance	Article, Business Source Premier (EBSCO)	Theoretical reasoning	USA, N/A	Recent regulatory reforms	States implications of the DFA and Volcker rule.
6	Baele, L., De Jonghe, O. & Vander Vennet, R. (2007)	Does the stock market value bank diversification?	Journal of Banking and Finance	Article, ScienceDirect (Elsevier)	Empirical	Europe, 1989-2004	Diversification, Risk impact, Conglomerate discount	Diversification increases market value and systematic risk of banks, but decreases unsystematic risk.
7	Barth, J. R., Brumbaugh Jr R, D., Wilcox J. A. (2000)	The Repeal of Glass-Steagall and the Advent of Broad Banking	Journal of Economic Perspectives	Article, JSTOR	Theoretical reasoning	USA, N/A	Diversification, Risk impact, Comparison between countries	Several potential benefits with a universal banking system, but also potential risk effects.

Table of Selected Papers - Part 2

	Reference	Title	Journal	Type & Database	Research Approach	Setting & Time Focus	Topic(s)	Results
8	Barth, J. R., Caprio, G. Jr. & Levine, R. (2000)	Banking Systems Around the Globe: Do Regulation and Performance Affect Performance and Stability?	-	Working Paper, Google	Empirical	International, N/A	Comparison between countries' regulations and its impact upon stability	Tighter restrictions upon securities activities increase bank inefficiency and the likelihood of a financial crisis.
9	Barth, J. R., et al. (2009)	Bank Regulation in the United States	CESifo Economic Studies	Article, Oxford Journals	Theoretical reasoning	USA, N/A	Recent financial crisis, Development of bank regulation in the US	Bank regulation in USA is too complex to work efficiently.
10	Barth, J. R., Nolle, D. E., Rice, T. N. (1997)	Commercial Banking Structure, Regulation, and Performance: An International Comparison	-	Working Paper, Google	Theoretical reasoning	International, 1997	Comparison between countries' regulations	There is a wide range of banking structures and supervisory practices in different countries. However, USA and Japan are the only countries that not allows an universal banking system.
11	Benston, G. J. (1989)	The Federal "Safety Net" and the Repeal of the Glass-Steagall Act's Separation of Commercial and Investment Banking	Journal of Financial Services Research	Article, EconLit (EBSCO)	Theoretical reasoning and review of empirical findings	USA, 1920-1989	Conflicts of interest, Moral hazard, Diversification, Risk impact	Argues that a universal banking system would not be more profitable and safer compared to a separated banking system.
12	Benston, G. J. (1994)	Universal Banking	Journal of Economic Perspectives	Article, JSTOR	Theoretical reasoning	International, N/A	Conflicts of interest, Diversification, Risk impact, Market efficiency, Power concentration	Universal banking offers many benefits and few costs to U.S. consumers.
13	Benzoni, B. & Schenone, C, (2009)	Conflict of interest and certification in the U.S. IPO market	Journal of Financial Intermediation	Article, EconLit (EBSCO)	Empirical	USA, 1998-2000	Conflicts of interest	No evidence of conflicts of interest. IPOs issued by relationship banks performed similar to non-relationship bank issues.
14	Ber, H., Yafeh, Y. & Yosha, O. (2001)	Conflict of Interest in Universal Banking: Bank Lending, Stock Underwriting, and Fund Management	Journal of Monetary Economics	Article, ScienceDirect (Elsevier)	Empirical	Israel, 1991-1995	Conflicts of interest	No issues when combining lending and underwriting, but clear evidence of conflicts of interest when adding an asset management division.

Table of Selected Papers - Part 3

	Reference	Title	Journal	Type & Database	Research Approach	Setting & Time Focus	Topic(s)	Results
15	Berger, A. N. & Humphrey, D. B. (1991)	The dominance of inefficiencies over scale and product mix economies in banking	Journal of Monetary Economics	Article, ScienceDirect (Elsevier)	Empirical	USA, 1984	Diversification, Inefficiency	Most inefficiencies are operational in nature, involving the overuse of physical inputs, rather than financial.
16	Berger, A. N. & Humphrey, D. B. (1997)	Efficiency of financial institutions: International survey and directions for future research	European Journal of Operational Research	Article, ScienceDirect (Elsevier)	Literature study	International, N/A	Diversification, Risk impact, Efficiency	No predominance of evidence either for or against economies of scale in the financial sector.
17	Bessler, W., Stanzel, M. (2009)	Conflicts of Interest and Research Quality of Affiliated Analysts in the German Universal Banking System: Evidence from IPO Underwriting	European Financial Management	Article, Wiley Online Library	Empirical	Germany, 1997-2004	Conflicts of interest	Evidence of conflicts of interest. Analysts of universal banks tend to produce inaccurate and positively biased stock recommendations.
18	Cairns, A. J., Davidson, J. A., Kisilevitz, M. L. (2002)	The limits of bank convergence	The McKinsey Quarterly	Article, Business Source Premier (EBSCO)	Theoretical reasoning	USA, 1995-2001	Diversification, Impact upon investment banks' business from the GLBA	Universal & commercial banks put competitive pressure upon investment banks, and take market shares.
19	Calomiris, C. W. (2010)	The political lessons of Depression-era banking reform	Oxford Review of Economic Policy	Article, Oxford University Press	Theoretical reasoning	USA, 1920-2010	Recent financial crisis, Recent regulatory reforms, Diversification, Self-interest incentives	Faulty incentives played a role when enacting the GSA. Political entrepreneurs take advantage of crises for self-interest purposes.
20	Cargill, Y. F. (1988)	Glass-Steagall is Still Needed	Challenge	Article, Business Source Premier (EBSCO)	Theoretical reasoning	USA, N/A	Conflicts of interest, Moral hazard, Diversification	A repeal is premature. At first we should deal with failing banks and thrifts, and then redesign deposit insurance to limit risk-taking and to bolster market discipline.
21	Chambers-Jones, C. (2011)	The Vickers Report	Business Law Review (UK)	Research Paper, Business Source Premier (EBSCO)	Theoretical reasoning	UK, N/A	Too big to fail & Moral hazard, Recent financial crisis, Recent regulatory reforms	Even though the Vickers Report has been criticized for not going far enough, it is a step in the right direction.

Table of Selected Papers - Part 4

	Reference	Title	Journal	Type & Database	Research Approach	Setting & Time Focus	Topic(s)	Results
22	Cornett, M. M., Ors, E. & Tehranian, H. (2002)	Bank Performance around the Introduction of a Section 20 Subsidiary	Journal of Finance	Article, JSTOR	Empirical	USA, 1987-1997	Diversification, Risk impact	Banks diversifying through Section 20 affiliates performed better with little change in risk.
23	Cyree, K. B. (2000)	The Erosion of the Glass-Steagall Act: Winners and Losers in the Banking Industry	Journal of Economic and Business	Article, ScienceDirect (Elsevier)	Empirical	USA, 1990s	Conflicts of interest, Diversification, Risk impact	Commercial banks earned higher abnormal returns due to increased securities activities (Section 20). Banks that diversify will most likely outperform smaller nondiversified competitors.
24	Czyrnik, K., Klein, L. S. (2004)	Who Benefits from Deregulating the Separation of Banking Activities? Differential Effects on Commercial Bank, Investment Bank, and Thrift Stock Returns	The Financial Review	Article, Wiley Online Library	Empirical	USA 1996-1999	Diversification, Market value impact	Commercial banks are favored the most from deregulation.
25	De Jonghe, O. (2010)	Back to the basics in banking? A micro-analysis of banking system stability	Journal of Financial Intermediation	Article, ScienceDirect (Elsevier)	Empirical	Europe, 1992-2007	Diversification, Risk impact, Too big to fail & Moral hazard, Recent financial crisis	Bank diversification into noninterest income increases banks' systematic risk exposure and thereby reduces banking system stability.
26	DeYoung, R. & Roland, K. P. (2001)	Product Mix and Earnings Volatility at Commercial Banks: Evidence from a Degree of Total Leverage Model	Journal of Financial Intermediation	Article, ScienceDirect (Elsevier)	Empirical	USA, 1988-1995	Diversification, Risk impact	Bank diversification into noninterest income increases revenue volatility (risk) but an increase in profitability partially compensates for this.
27	Eckbo, B. E. (2009)	Banking System Bailout - Scandinavian Style	CESifo DICE Report	Report, CESifo	Theoretical reasoning	USA, Norway, Sweden, 1990-2009	Recent financial crisis, Bailout strategy	The US government should look to the Scandinavian style when bailing out banks.
28	Elsas, R., Hackethal, A. & Holzhäuser, M. (2010)	The anatomy of bank diversification	Journal of Banking & Finance	Article, ScienceDirect (Elsevier)	Empirical	Australia, Canada, France, Germany, Italy, UK, USA, Spain, Switzerland, 1996-2008	Diversification, Recent financial crisis, Conglomerate discount	Evidence that diversification does not reduce shareholder value but rather improves bank profitability and thereby, indirectly, value.

Table of Selected Papers - Part 5

	Reference	Title	Journal	Type & Database	Research Approach	Setting & Time Focus	Topic(s)	Results
29	Esen, R. (2001)	The transition of German universal banks	Journal of International Banking Regulation	Article, Kluwer Law International	Theoretical reasoning	Germany, N/A	Conflicts of interest, Power concentration	There has been clear conflicts of interest and high concentration of financial power in German universal banks.
30	Freixas, X., Loranth, G. & Morrison, A. (2007)	Regulating financial conglomerates	Journal of Financial Intermediation	Article, ScienceDirect (Elsevier)	Theoretical reasoning	N/A	Diversification, Risk impact, Moral hazard	Shows that extra risk-taking will wipe out diversification benefits within financial conglomerates.
31	Geyfman, V (2010)	Commercial Banks and Securities Underwriting: The Impact on Risk, Return and Diversification	Journal of the Northeastern Association of Business, Economics and Technology	Article, Business Source Premier (EBSCO)	Empirical	USA, 1990-1999	Diversification, Risk impact	Section 20 affiliates were beneficial for commercial banks, and that BHCs expanding into securities activities were more diversified and less likely to fail relative to commercial and investment banks.
32	Geyfman, V & Yeager, T. J. (2009)	On the Riskiness of Universal Banking: Evidence from Banks in the Investment Banking Business Pre- and Post-GLBA	Journal of Money, Credit and Banking	Article, Business Source Premier (EBSCO)	Empirical	USA, 1990-2007	Diversification, Risk impact, Recent financial crisis	Increased participation in investment banking was associated with higher total and unsystematic risks and no significant change in systematic risk.
33	Ghosh, S. & Patnaik, S. (2012)	The Independent Banking Commission (Vickers) Report: squaring the circle?	International Journal of Law and Management	Article, Emerald Insight	Theoretical reasoning	UK, N/A	Too big to fail, Recent financial crisis, Recent regulatory reforms	Concludes that the key recommendation of the Vickers Report only goes mid-way in securing the twin objectives of stability and safety that the Report has set out to achieve.
34	Grant J. K. (2010)	What the financial services industry puts together let no person put asunder: how the Gram-Leach-Bliley Act contributed to the 2008-2009 American capital market crisis	Albany Law Review	Article, HeinOnline	Theoretical reasoning	USA, N/A	Conflicts of interest, Too big to fail & Moral hazard, Diversification, Risk impact, Recent financial crisis	Banks have grown Too Big To Fail and they should face more regulation. GSA should be reenacted.

Table of Selected Papers - Part 6

	Reference	Title	Journal	Type & Database	Research Approach	Setting & Time Focus	Topic(s)	Results
35	Grumet, L (2009)	Bring Back Glass-Steagall	The CPA Journal	Article, Business Source Premier (EBSCO)	Theoretical reasoning	USA, N/A	Conflicts of interest, Moral hazard	Banks should not be able to play with deposits in risky business, bring back the GSA!
36	Hebb, G. M. & Fraser, D. R. (2002)	Conflict of interest in commercial bank security underwritings: Canadian evidence	Journal of Banking and Finance	Article, EconLit (EBSCO)	Empirical	Canada, 1987-1997	Conflicts of interest	No evidence of conflicts of interest. Commercial and investment bank issues do not differ in performance.
37	Hebb, G. M., Fraser, D. R. (2003)	Conflict of Interest in Commercial Bank Security Underwritings: United Kingdom Evidence	Quarterly Journal of Business & Economics	Article, EconLit (EBSCO)	Empirical	UK, 1986-1997	Conflicts of interest	No evidence of conflicts of interest. Commercial and investment bank issues do not differ in performance.
38	Herring, R. J., Santomero, A. M. (1990)	The Corporate Structure of Financial Conglomerates	Journal of Financial Services Research	Article, Business Source Premier (EBSCO)	Theoretical reasoning	Mostly USA, N/A	Conflicts of interest, Diversification, Risk impact, Moral Hazard, Power concentration	Universal banking may pose several concerns of variable significance. But these may differ in different economies.
39	Hopkins, C. & Borak, D. (2011)	Volcker Study Leaves a Regulatory Fog	Investment Dealers' Digest	News Article, Business Source Premier (EBSCO)	Journalistic	USA, N/A	Recent regulatory reforms	The Volcker rule needs to define proprietary trading.
40	Johnson, W. C., Marietta-Westberg, J (2009)	Universal Banking, Asset Management, and Stock Underwriting	European Financial Management	Article, Wiley Online Library	Empirical	USA, 1993-1998	Conflicts of interest	Evidence of conflicts of interest. Universal banks that have an asset management division tend to utilize institutional funds and information advantages to get more underwriting business.
41	Kanatas, G. & Qi, J. (1998)	Underwriting by Commercial Banks: Incentive Conflicts, Scope Economies, and Project Quality	Journal of Money, Credit and Banking	Article, JSTOR	Theoretical reasoning	N/A	Conflicts of interest, Diversification	Shows that economies of scope, but also conflicts of interest can arise when combining commercial and investment banking.

Table of Selected Papers - Part 7

	Reference	Title	Journal	Type & Database	Research Approach	Setting & Time Focus	Topic(s)	Results
42	Kang, J-K. & Liu, W-L (2007)	Is universal banking justified? Evidence from bank underwriting of corporate bonds in Japan	Journal of Financial Economics	Article, EconLit (EBSCO)	Empirical	Japan, 1995-1997	Conflicts of interest	Evidence of conflicts of interest. Banks with securities business discount the price of corporate bonds they underwrite significantly to attract investors.
43	Kroszner, R. S. (1998)	Rethinking Bank Regulation: A Review of Historical Evidence	Journal of Applied Corporate Finance	Article, Wiley Online Library	Theoretical reasoning	USA, N/A	Conflicts of interest, Moral hazard, Interconnectedness	Market forces, rather than regulation, can deal with conflicts of interest.
44	Kroszner, R. S. & Rajan R.G. (1994)	Is the Glass-Steagall Act Justified? A Study of the U.S. Experience with Universal Banking Before 1933	The American Economic Review	Article, JSTOR	Empirical	USA, 1922-1940	Conflicts of interest, Diversification	No evidence of conflicts of interest, commercial banks did not try to mislead the public into investing in poor securities.
45	Kroszner, R. S. & Rajan, R. G. (1997)	Organization structure and credibility: Evidence from commercial bank securities activities before the Glass-Steagall Act	Journal of Monetary Economics	Article, ScienceDirect (Elsevier)	Empirical	USA, 1925-1929	Conflicts of interest, Organizational structure	No evidence of conflicts of interest. Commercial banks' in-house securities departments underwrote higher quality (lower risk) issues than standalone securities affiliates.
46	Kroszner, R. S. & Strahan P. E. (2011)	Financial Regulatory Reform: Challenges Ahead	The American Economic Review	Article, Business Source Premier (EBSCO)	Theoretical reasoning	USA, 1950-2011	Recent financial crisis, Recent regulatory reforms, Interconnectedness	Regulatory reform should not turn back the clock but instead improve the stability of this interconnected financial system by minimizing regulatory arbitrage and increasing transparency
47	Laeven, L. & Levine, R. (2007)	Is there a diversification discount in financial conglomerates?	Journal of Financial Economics	Article, ScienceDirect (Elsevier)	Empirical	USA, 1998-2002	Conflicts of interest, Diversification, Risk impact, Conglomerate discount	Diversification lowers market value of financial institutions. Evidence of a conglomerate discount.
48	Lindbeck, D. (2012)	Bankdelning	-	Research Paper, The Swedish Parliament	Theoretical reasoning	N/A	Too big to fail & Moral hazard, Recent financial crisis, Recent regulatory reforms	-

Table of Selected Papers - Part 8

	Reference	Title	Journal	Type & Database	Research Approach	Setting & Time Focus	Topic(s)	Results
49	Mamun, A., Hassan, M. K. & Maroney, N. (2005)	The Wealth and Risk Effects of the Gramm-Leach-Bliley Act (GLBA) on the US Banking Industry	Journal of Business, Finance & Accounting	Article, SSRN	Empirical	USA, 1990-2000	Diversification, Risk impact	Banks have after the GLBA experienced a decrease in systematic risk due to diversification opportunities.
50	Mayes, D. G. (2009)	Banking Crisis Resolution Policy - Lessons from Recent Experience	CESifo	Working Paper, SSRN	Theoretical reasoning	USA, UK, NZ & some other European Countries, 2000-2009	Conflicts of interest, Too big to fail & Moral hazard, Recent financial crisis, Bailout strategy	Regulatory reform practices differ throughout the world. Discusses the resolution methods in the UK, US and NZ.
51	Neale, F. R., Peterson Drake, P. & Clark, S. P. (2010)	Diversification in the Financial Services Industry: The Effect of the Financial Modernization Act	The B.E. Journal of Economic Analysis & Policy	Article, Berkeley Electronic Press	Empirical	USA, 1995-2007	Diversification, Risk impact	An overall positive reaction in share prices for firms in the financial services industries, and the systematic risk for financial institutions increased and converged after the passage of the GLBA
52	Norton, S. D. (2010)	A comparative analysis of US policy initiatives and their implications in a credit crisis: The Depression Era of the 1920s in a twenty-first century context	Journal of Financial Services Marketing	Article, Business Source Premier (EBSCO)	Theoretical reasoning	USA, 1920's and 2000's	Too big to fail & Moral hazard, Recent financial crisis, Recent regulatory reforms	A re-introduction of Glass-Steagall-type legislation, in an updated form, would appear to be unnecessary given the high level of sophistication of today's institutional investors and due to the global banking system.
53	Puri, M. (1994)	The long-term default performance of bank underwritten security issues	Journal of Banking and Finance	Article, ScienceDirect (Elsevier)	Empirical	USA, 1927-1929	Conflicts of interest	No evidence of conflicts of interest. Bank underwritten issues defaulted less than non-bank underwritten issues.
54	Ramírez, C. D. (1999)	Did Glass-Steagall Increase the Cost of External Finance for Corporate Investment?: Evidence From Bank and Insurance Company Affiliations	Journal of Economic History	Article, JSTOR	Empirical	USA, 1926-29, 1936-39, 1955-59	Diversification, Moral hazard, Cost of financing	The GSA increased the cost for corporations raising external funds for investment spending.

Table of Selected Papers - Part 9

	Reference	Title	Journal	Type & Database	Research Approach	Setting & Time Focus	Topic(s)	Results
55	Ramírez, C. D. (2002)	Did Banks' Security Affiliates Add Value? Evidence from the Commercial Banking Industry during the 1920s	Journal of Money, Credit and Banking	Article, JSTOR	Empirical	USA, 1926-1928	Conflicts of interest, Diversification, Market value impact	Glass-Steagall Act, by disallowing banks' involvement in the securities industry, had a direct cost in lost market value for the commercial banking industry.
56	Ramírez, C. D. & De Long, J. B. (2001)	Understanding America's hesitant steps toward financial capitalism: Politics, the Depression, and the separation of commercial and investment banking	Public Choice	Article, EconLit (EBSCO)	Empirical	USA, 1900–1933	Why the GSA was enacted, Self interest incentives	Evidence indicates that the Senate vote was significantly influenced by important interest groups
57	Rime, B., Stiroh, K. J. (2003)	The performance of universal banks: Evidence from Switzerland	Journal of Banking and Finance	Article, ScienceDirect (Elsevier)	Empirical	Switzerland, 1996-1999	Diversification, Efficiency	Evidence of large relative cost and profit inefficiencies in Swiss banks.
58	Saunders, A. & Walter, I. (1994)	Universal Banking in the United States – What Could We Gain? What Could We Lose?	-	Book, Ekonomiska Biblioteket Göteborgs Universitet	Empirical & Theoretical reasoning	USA, N/A	Conflicts of interest, Too big to fail & Moral hazard, Diversification, Risk impact etc.	Argues that the GSA should be repealed and that universal banking should be allowed in the US.
59	Schmid, M. & Walter, I. (2009)	Do financial conglomerates create or destroy economic value?	Journal of Financial Intermediation	Article, ScienceDirect (Elsevier)	Empirical	USA, 1985-2004	Conflicts of interest, Diversification, Risk impact, Conglomerate discount	Diversification and financial conglomerates lower market value. Evidence of a conglomerate discount.
60	Stiglitz, J. E. (2009)	Capitalist Fools: Five Mistakes That Led Us to the Collapse. From the book: The Great Hangover	-	Book chapter, Google	Theoretical reasoning	USA, 1999-2009	Recent financial crisis, Risk impact, Interconnectedness, Future regulations	Today's financial system should be regulated harder and the repeal of the GSA to some extent had an impact upon the recent financial crisis.

Table of Selected Papers - Part 10

	Reference	Title	Journal	Type & Database	Research Approach	Setting & Time Focus	Topic(s)	Results
61	Stiglitz, J. E. (2010)	The Financial Crisis of 2007-8 and its Macroeconomic Consequences	-	Book chapter article, GUNDA	Theoretical reasoning	USA, N/A	Conflicts of interest, Too big to fail & Moral hazard, Diversification, Recent financial crisis, Future regulations	To make crises less frequent and less severe in the future, we have to think more deeply about the causes of the crises. Regulatory frameworks should be designed to address the underlying problems.
62	Stiglitz, J. E. (2010)	Lessons from the Global Financial Crisis of 2008	Seoul Journal of Economics	Article, EconLit (EBSCO)	Theoretical reasoning	USA, N/A	Too big to fail & Moral hazard, Recent financial crisis, Risk impact, Future regulations	Argues that regulations upon banks and financial institutions are necessary and the only way to go.
63	Stiroh, K. (2006)	A Portfolio View of Banking with Interest and Noninterest Activities	Journal of Money, Credit and Banking	Article, JSTOR	Empirical	USA, 1997-2004	Diversification, Risk impact	Diversification that generates noninterest income does not lead to higher returns, but increases all risk measures.
64	Stiroh, K. J. (2004)	Diversification in Banking: Is Noninterest Income the Answer?	Journal of Money, Credit and Banking	Article, JSTOR	Empirical	USA, 1978-2001	Diversification, Risk impact	Little evidence that the shift into noninterest income provides diversification benefits for banks.
65	Stiroh, K. J., Rumble, A. (2006)	The dark side of diversification: The case of US financial holding companies	Journal of Banking and Finance	Article, ScienceDirect (Elsevier)	Empirical	USA, 1997-2002	Too big to fail & Moral hazard, Diversification, Risk impact	Diversification benefits between FHCs are more than offset by the more risky non-interest activities, which are quite volatile but not more profitable.
66	Tabarrok, A. (1998)	The Separation of Commercial and Investment Banking: The Morgan vs. The Rockefellers	Quarterly Journal of Austrian Economics	Article, Google	Theoretical reasoning	USA, N/A	Self-interest incentives	Argues that the GSA can be better understood as an attempt by the Rockefeller banking group to raise the costs of their rivals, the House of Morgan.

Table of Selected Papers - Part 11

Reference	Title	Journal	Type & Database	Research Approach	Setting & Time Focus	Topic(s)	Results
67 Tatom, J. A. (2010)	Financial Legislation: The Promise and Record of the Financial Modernization Act of 1999	-	Book Chapter, Springerlink	Theoretical reasoning	USA, N/A	Too big to fail, Recent financial crisis, Recent regulatory reforms	Discusses connections between the enactment of the GLBA and the recent financial crisis.
68 Tropeano, D. (2011)	Financial Regulation After the Crisis - Where Do We Stand?	International Journal of Political Economy	Article, Business Source Premier (EBSCO)	Theoretical reasoning	USA, Europe N/A	Risk impact, Recent financial crisis, Recent regulatory reforms	New regulations from USA & Europe are similar but differ on the Volcker rule.
69 Ursel, N. D. (2000)	Bank acquisitions of investment dealers: Canadian evidence and implications for Glass-Steagall reform	Empirical Economics	Article, EconLit (EBSCO)	Empirical	Canada, 1987-1994	Diversification	Costs for issues handled by a bank-owned underwriter are lower than those handled by an independent underwriter. Indicates the availability of economies of scope when combining underwriting with commercial banking.
70 Volcker P. A. (2008)	Rethinking the Bright New World Of Global Finance	International Finance	Article, Wiley Online Library	Theoretical reasoning	USA, N/A	Recent financial crisis, Future regulations	Calls for a global perspective when regulating financial markets.
71 Wagner, W. (2010)	Diversification at financial institutions and systemic crises	Journal of Financial Intermediation	Article, ScienceDirect (Elsevier)	Theoretical reasoning	N/A	Diversification, Risk impact	Shows that diversification reduces each institution's individual probability of failure, but it makes systemic crises more likely.

Table of Selected Papers - Part 12

	Reference	Title	Journal	Type & Database	Research Approach	Setting & Time Focus	Topic(s)	Results
72	White, E. N. (1986)	Before the Glass-Steagall Act: An Analysis of the Investment Banking Activities of National Banks	Explorations in Economic History	Article, ScienceDirect (Elsevier)	Empirical	USA, 1919-1933	Diversification, Conflicts of interest, Risk impact	Concludes that a separation of banking activities is unwise and puts a burden on the financial industry.
73	White, L. J. (2010)	The Gramm-Leach-Bliley Act of 1999: A Bridge Too Far? Or Not Far Enough?	Suffolk University Law Review	Article, Hein Online Law Library	Theoretical reasoning	USA, N/A	Recent financial crisis, Recent & future regulatory reforms	Argues that the GLBA was not responsible for or did not contribute significantly to the recent financial crises.
74	Wieandt, A. & Moenninghoff, S. C. (2011)	Too Big to Fail?! - Lessons from the Financial Crisis	Revue d'économie financière	Article, Google	Theoretical reasoning	International, N/A	Too big to fail & Moral hazard, Recent financial crisis, Recent regulatory reforms, Interconnectedness	Argues that there are huge problems with the TBTF doctrine.
75	Yeager, T. J., Yeager, F. C., Harshman, E. (2007)	The Financial Services Modernization Act: Evolution or revolution?	Journal of Economics and Business	Article, ScienceDirect (Elsevier)	Empirical	USA, 1996-2004	Diversification	Synergies between commercial banking, insurance underwriting and merchant banking are weak. Synergies between commercial and investment banking are much stronger but were most likely captured in the 1990s due to Section 20 affiliates.

As previously discussed, in section *2.2 Categorization of Papers*, all papers have been categorized into different themes in this literature review. These categories were chosen and developed due to the high frequency of them being discussed. Furthermore, we were not able to identify any other category that was relevant in this thesis context. The table below, *Table of Category Distribution,* provides an insight in how many articles discussing each category. Please note that the first category in this thesis, the historical background, has been left out from this table since almost every paper in some context touch this area. *Diversification & Risk Impact* is the most frequent category and theme discussed in the reviewed papers, followed by *Conflicts of Interest.*

Table of Category Distribution

Category	Number of Articles
Conflicts of Interest	30
Too Big to Fail & Moral Hazard	22
Diversification & Risk Impact	43
Recent Financial Crisis	22
Recent Regulatory Reforms	14

To understand the complexity of separating commercial and investment banking, the following sections will start off with the first category being the historical background of the Glass-Steagall Act and its subsequent deregulatory period. Secondly, categories discussing the main arguments, for and against a separation, of our reviewed literature are presented and compiled in a critical manner. Thirdly, the category discussing the connection between the recent financial crisis and the combination of commercial and investment banking is assessed. Lastly, we briefly present the recent regulatory frameworks considering a separation of commercial and investment banking.

3.1 THE HISTORICAL BACKGROUND OF SEPARATION

The Great Depression was the hardest hit the modern economy has ever experienced. From December 1929 to December 1933 the number of American banks decreased by 39 percent from 24,633 to 15,015 according to the Federal Reserve Board (1943), and almost one quarter of the American work force was out of a job. The people eagerly demanded that something had to be done. When the Roosevelt administration took office in 1933, they introduced the New Deal Reform, consisting of several laws aimed at correcting a faulty financial system. The New Deal package included a law called the Glass-Steagall Act (GSA). The GSA is technically part of the Banking Act of 1933 and consists of the sections 16, 20, 21 and 32. The GSA prohibited any member of the Federal Reserve from purchasing, dealing in, or underwriting non-government

securities for their own account, or affiliating with any corporation principally engaged in these activities (Cargill, 1988). It also prohibited investment banks from accepting demand deposits (Cargill, 1988). The separation of commercial and investment banking activities is often referred to as a Glass-Steagall separation since this was the first law that effectively separated these activities.

Following the stock market crash on “Black Thursday”, October 24, 1929, an investigation was opened to investigate its causes. Congressional hearings, commonly referred to as the “Pecora Hearings” were held in 1932 (Calomiris, 2010). These hearings accused banks of actively trying to fool naive public investors into taking positions in poor issues. It has been argued that the Pecora Hearings ultimately had a great impact upon the enactment of the Glass-Steagall Act, which was directly designed to prevent conflicts of interest between commercial and investment banking during the 1920s (Calomiris, 2010 & Cargill, 1988). The Nobel Prize winner Paul Krugman (2010) recently argued that “the United States managed to avoid major financial crises for half a century after the Pecora hearings were held and Congress enacted major banking reforms. It was only after we forgot those lessons, and dismantled effective regulation, that our financial system went back to being dangerously unstable” (Krugman, 2010).

The GSA remained active from 1933 until 1999 but it was gradually weakened due to lobbying efforts from the commercial banking industry beginning in the 1970s (White, 2010). It was argued that the separation of commercial and investment banking activities weakened US banks relative to foreign rivals who were not constrained by those limitations (Calomiris, 2000). The Second Banking Directive of 1989 had allowed European banks to combine banking, insurance and other financial services within the same institution (even though many European countries had pursued universal banking prior to 1989), thus increasing global competition (De Jonghe, 2010). This provided the new head of the Federal Reserve in 1987, Alan Greenspan, with incentives to loosen regulatory limitations. Section 20 of the GSA allowed a bank holding company or its non-bank subsidiary to engage in non-banking activities including securities activities, as long as the Federal Reserve determined that the activities were “closely related to banking” (Barth et al., 2000a). From 1987 the interpretive freedom of this section made it possible for the Federal Reserve to allow bank holding companies to establish securities subsidiaries engaged in underwriting and dealing in several financial products. These subsidiaries were commonly referred to as “Section 20 subsidiaries.” At first, the Federal Reserve limited the revenue allowed from the Section 20 subsidiary’s securities underwriting to 5 percent of total revenue. This threshold was raised in 1989 to 10 percent and furthermore to 25 percent in the end of 1996 (Barth et al., 2000a). However, these revenue limitations made it

possible only for the largest bank holding companies to own full-line investment banks; for example, Hebb and Fraser (2003) state that by the end of 1999 only 55 bank holding companies had received permission to establish Section 20 subsidiaries. Following the repeal of the GSA at the end of 1999, banks' connections to investment banking rapidly increased with over 100 banking organizations applying to be classified as financial holding companies in March 2000, as permitted by the Gramm-Leach-Bliley Act (GLBA) (Hebb and Fraser, 2003).

Even though there were strong forces working to repeal the GSA during the 1970s-90s, investment banks were not among these. White (2010) claims that investment banks for the most part resisted and had little interest in entering commercial banking. This was due to investment banks fearing tougher competition and lower profit margins when competing with commercial banks' deep pockets. However, the repeal of the GSA and the enactment of the GLBA in 1999 finally forced the investment banks to capitulate.

In 1997, before the GLBA was enacted, an international comparison between 19 countries' (15 European Union countries, Switzerland, USA, Canada and Japan) banking structures was made by Barth et al. They concluded that almost all of the countries in the study allowed a wide range of banking activities, including underwriting, dealing, and securities and insurance brokering, with the only exceptions being the United States and Japan. Advocates for the repeal of Glass-Steagall therefore clearly had support of the argument that US banks had a comparative disadvantage compared to their international competitors, especially since the financial markets have become more and more global since the 1980s (Czyrnik & Klein, 2004).

The intention of the GLBA was to strengthen the overall financial services sector by allowing financial firms to diversify across industries within the financial sector (Neale et al. 2010). As previously mentioned, the GLBA gave rise to the financial holding company. This new holding company was allowed to own a variety of financial firms as subsidiaries under the same roof. White (2010) states that after the enactment of the GLBA no domestic US investment bank had become a financial holding company until September 2008 since this would have brought them under the regulatory purview of the Federal Reserve, which they wish to avoid. However, when Lehman Brothers went bankrupt both Goldman Sachs and Morgan Stanley applied for financial holding company status, so that they could guarantee deposit insurance and financial safety to their investors.

Three important factors as to why the GSA was finally repealed in 1999 have been identified by Barth et al. (2000a). The first factor was the increasing weight of empirical evidence generated by academics. Many studies, such as those from Kroszner and Rajan (1994), and White (1986),

found that the securities activities of commercial banks bore little responsibility for the banking crisis of the Great Depression. Securities underwritten by commercial banks performed better than those underwritten by investment banks, and diversified banks operating securities activities defaulted less often. Secondly, the experience from allowing US banks to undertake limited securities and insurance activities during the years before the GLBA proved successful. This, along with the extensive experience from other developed countries such as Europe provided support for a repeal of Glass-Steagall. Lastly, the technological advances had reduced the cost of using data from one business to benefit another, together with increased cost-efficiency when providing insurance and securities products. Barth et al. (2000a) argue that these three factors added power to the case for the enactment of the GLBA.

3.1.1 Political and Self-Interest Reasons for the Enactment of Glass-Steagall

Several academics such as Calomiris (2010) and Tabarrok (1998) argue that there may have been politically biased and self-interest incentives as to why the Glass-Steagall Act was enacted in the wake of The Great Depression. The question is whether the GSA would have been signed in to law if these reasons did not exist.

During the Great Depression the Federal Reserve followed an economic theory called the real bills doctrine[5]. Calomiris (2010) argues that the real bills doctrine heavily worsened the Great Depression due to the Federal Reserve implementing a contractionary monetary policy and by not providing credit to the already illiquid securities markets.[6] According to Calomiris (2010), Senator Carter Glass was the premier supporter of the real bills doctrine and advocates for the real bills doctrine had incentives to separate commercial and investment banking since the real bills doctrine opposes banks being in the business of creating money through securities underwriting and "casino gambling" activities.

In addition to the real bills doctrine argument, Calomiris (2010) states that Representative Henry Steagall was the leading representative of the interest of unit bankers in the US Congress.

[5] According to the real bills doctrine, the only loans and credit transactions that should be made are those that support the production and movement of goods. In addition to this, the real bills doctrine implies that the money supply has no direct effect upon price levels (Investopedia, 2012b). According to Calomiris (2010), banks would under the real bills doctrine therefore solely or mainly engage in financing trade, where one bill would equal a certain asset's value and thus minimize inflation. Modern economic theory heavily opposes the real bills doctrine since it places no effective limit on the amount of money that banks can create.

[6] Cargill (1988) also states that the collapse of the banking system during the Great Depression has been recognized to have more to do with policy blunders of the Federal Reserve than to do with combining commercial and investment banking under the same roof.

According to Calomiris (2010) one of the most obvious flaws of the US banking system during the Great Depression was the problem of unit banking. He states: "the fragmented structure of the 'unit banking' system in the US was at the core of the systemic fragility of the system…unit banking made banks less diversified, and thus more exposed to location-specific shocks" (Calomiris, 2010, p. 542). The lack of diversification in unit banks' loan portfolios thus reflected the operations of their local economy. In agricultural areas, the income for these banks was closely correlated to the changes in prices of one or two crops. Therefore, unit banking made banks less competitive, cost efficient and less profitable (Calomiris, 2010). Indeed, Benston (1994) states that all but ten of the 9,096 banks that fell during the Great Depression period of 1929-1933 were small unit banks. Representative Steagall therefore had clear incentives to support the separation of commercial and investment banking, and especially to pass the federal deposit insurance program. Both of these laws undermined large banks' ability to outperform smaller unit banks that did not have the same possibilities to compete in the underwriting business.

The unit banking and real bills doctrine arguments show that Carter Glass and Henry Steagall, the enactors of the Glass-Steagall Act, may have had incentives for self-interest purposes such as maximizing the probability of being re-elected. Apart from these arguments, a study made by Tabarrok (1998) comprehensively covers a struggle between rival elements in the banking industry at that time. Tabarrok (1998) argues that the separation of commercial and investment banking can be better understood as an attempt by the Rockefeller banking group to raise the cost of their rivals, the House of Morgan. During the 1930s both of these banking conglomerates exercised enormous political and economic power, but it was the Rockefeller group that seized the moment of opportunity to gain even more market power. In the wake of the Great Depression the public also eagerly sought redemption and were happy when someone pushed for change. Calomiris (2010) therefore argues that the creation of regulatory frameworks in the period after a severe financial crisis may produce regulations that do not truly capture the real sources of the crisis.

Although these self-interest incentives are interesting, Ramírez and De Long (2001) state that it is hard to argue that the passage of Glass-Steagall was entirely a symbolic, "we are doing something", attempt by legislators to calm the public during the Great Depression. They conclude that both states with large manufacturing sectors and poor states, that were hit the hardest, voted in favor of Glass-Steagall. This happened despite a strong coalition of National banks who tried to prevent the act from being passed.

3.2 THE CONFLICTS OF INTEREST ARGUMENT

The reviewed literature has pointed out that one of the main arguments as to why commercial and investment banking should be separated is the concern that conflicts of interest may arise within an institution that provides both of these activities. Conflicts of interest can arise in various forms but the main issue is that the bank uses the informational advantage it gains from conducting both activities to its own advantage. The concern is thereby that banks may mislead customers and investors in various ways.

According to Kroszner and Rajan (1994), Kroszner (1998), Hebb and Fraser (2003), Stiglitz (2010a) and others, conflicts of interest may arise when a bank combines lending and deposit taking with underwriting. If a bank has outstanding loans to a corporation, and prior to public knowledge finds out that the firm is in financial trouble, a bank may underwrite bonds on behalf of this firm and require the corporation to use the proceeds to repay the bank loan. This effectively shifts the increased default risk from the bank to the securities market and its investors (Hebb and Fraser, 2002). Thus, a universal bank may find itself in a situation where it actively tries to mislead naive public investors by issuing securities of bad quality.

As mentioned before, the GSA was directly designed to prevent conflicts of interest within financial institutions. During the Great Depression the general conception was that conflicts of interest existed and were severe enough to hurt public investors. However, Kroszner and Rajan (1994) argue that this general conception was driven by weak arguments and invalid evidence. In a study based upon data from the Great Depression era, Kroszner and Rajan (1994) investigated whether commercial bank underwritten issues performed differently compared to investment bank underwritten issues. They state that if commercial banks systematically misled naive public investors into investing in low-quality issues, these issues would have performed poorly. The results from Kroszner and Rajan's (1994) study, however, show that commercial bank underwritten issues defaulted significantly less often than comparable investment bank underwritten issues. Commercial bank underwritten issues also tended to be of higher quality and Kroszner and Rajan (1994) thereby conclude that commercial banks do not seem to have misled the public into investing in low-quality issues. By 1940, 28 percent of the investment bank underwritten bonds had defaulted compared to only 12 percent of the bonds underwritten by commercial banks. Several other academic studies, such as White (1986), Benston (1990), Ang and Richardson (1994), and Puri (1994), have reached the same conclusions. Studies based upon data from the Great Depression era thus seem to heavily reject the existence of conflicts of interest among commercial bank underwritten issues.

The main evidence supporting the enactment of the Glass-Steagall Act was the allegations of conflicts of interest put forward in the Pecora congressional hearings. The hearings leveled evidence against mainly two banks: The First National Bank and The Chase Bank (National/Chase) (Ang and Richardson, 1994). These banks were accused of actively trying to mislead the public into investing in low-quality issues. However, Ang and Richardson (1994), and Puri (1994) provide empirical evidence showing that these two banks were not a fair selection among commercial banks during the Great Depression. Ang and Richardson (1994) compared default rates of 1926-1930 issues from commercial banks, investment banks, and issues from National/Chase. Until 1939, when considering the number of defaults, National/Chase issues had a default rate of 51.8 percent compared to investment bank issues' default rate of 48.4 percent. The default rate of other commercial bank issues was, however, only at 39.8 percent. Furthermore, when considering total volume in defaults, National/Chase issues had a default rate of 45.6 percent, which was almost similar to the default rate of investment bank issues at 45.3 percent. Still, default rates for commercial banks were significantly lower at 34.3 percent. This clearly shows that National/Chase was not a fair representation of commercial banks' underwriting activities prior to the Great Depression and that National/Chase did not perform worse than investment banks. Ang and Richardson (1994) argue that the Pecora hearings may thereby have condemned an entire industry on the basis of two banks' performance and they, together with Puri (1994), supported critics of the GSA, and questioned whether such separation is justified when commercial banks in total performed so much better than investment banks.

During the 1920s, American commercial banks conducted securities underwriting either through an in-house department or through a separate affiliate (Kroszner and Rajan, 1997). Kroszner and Rajan (1997) provide empirical evidence showing that in-house departments underwrote higher quality (lower risk) issues compared to issues underwritten by affiliates. This means that in-house departments of commercial banks were more cautious when underwriting, and Kroszner and Rajan (1997) believe that this might be due to the public's conception of conflicts of interest. Furthermore, Kroszner and Rajan (1997) found that these higher quality issues were also sold at lower prices compared to affiliate underwritten issues. They state that this implies that investors actively discounted for the possibility of conflict of interest in in-house departments and that their results suggest that the market indeed was self-regulating and could handle conflict of interest problems on its own. Stiglitz (2010c), however, argues that one cannot rely on self-regulating banks since this eventually will generate deregulation.

The evidence and reasoning for conflicts of interest when combining commercial and investment banking has so far mainly been based upon data from the Great Depression era. However, Ber et al. (2001) among others stress the importance of contemporary evidence. The following section will therefore highlight the more recent findings concerning conflicts of interest.

Johnson and Marietta-Westberg (2009) provide anecdotal evidence showing that investment banks may feel pressured to hold initial public offerings (IPOs) issued by the same bank's underwriting division. They describe an event at Deutsche Bank in 2003 where an underwriting executive at Deutsche Bank phoned the chief investment officer at the bank's asset management division and asked him to buy issues of the struggling media company Vivendi Universal, which Deutsche Bank had helped make public. The chief investment officer was told to be a team player. However, the request was refused causing a noisy dispute. Similarly, a bank's lending division may feel pressured to provide bank loans to a firm whose shares have been issued by the bank's underwriting division, even though these loans are unwise and risky.

According to Johnson and Marietta-Westberg (2009) there is clear potential for conflicts of interest within a bank that underwrites IPOs and simultaneously manages client funds. They provide empirical evidence based upon a six year sample from the US market that banks with both IPO underwriting and asset management divisions tend to use client funds to attract more future business to their underwriting divisions. These banks do this by holding more poorly performing IPOs compared to other institutions and thereby distort market conditions. Another study from Ber et al. (2001) comes to the same conclusion but their empirical evidence adds another dimension. Their study is based upon the Israeli universal banking system, and even though they provide evidence showing that the combination of bank lending and bank underwriting is not harmful and probably beneficial, they find that the combination of bank lending, underwriting, *and* asset management results in conflicts of interest: "…banks must choose between selling the IPO stocks of client firms at a high price, generating a substantial amount of cash in exchange for minimal dilution of ownership, and selling these stocks at a low price generating good returns for investors…" (Ber et al., 2001, p. 215) Their findings suggest that banks generally decide to favor client firms over fund investors by overpricing the IPOs. Ber et al. (2001) argue that these market price distortions clearly indicate the existence of conflicts of interest and show that banks may very well mislead investors into investing in poor (over-priced) issues.

A study that contrasts sharply with the American evidence is provided by Kang and Liu (2007). Their study examines the Japanese experience of universal banking. Japan had a Glass-Steagall-

like separation of commercial and investment banking due to the American occupation of Japan following the World War II. Commercial banks were however finally allowed to provide investment banking services in 1993. From a sample period of 1995-1997 Kang and Liu (2007) found empirical evidence showing that commercial banks entering the securities business significantly discounted the price of corporate bonds that they underwrote to attract investors. This generates conflicts of interest that are harmful to issuers since these corporations received fewer proceeds than they should have. Moreover, prior lending relationships between the bank and their clients were the main driving force for these conflicts of interest and competition from investment banks only partly limited these conflicts. Kang and Liu (2007) suggest that the US experience with universal banking cannot be justified for all countries due to different norms and traditions in countries' bank-firm relationships and how well-developed their capital markets are.

Bessler and Stanzel (2009) add an additional view to conflicts of interest within universal banks in Germany. Their empirical findings indicate conflicts of interest by showing that earnings forecasts and stock recommendations provided by an analyst working within the same institution as the lead-underwriter are on average inaccurate and positively biased. Unaffiliated analysts perform better and provide higher long-run value to their customers. Bessler and Stanzel (2009) state: "…stock recommendations of the analysts that are affiliated with the lead-underwriter are often too optimistic resulting in a significant long-run underperformance for the investor." (Bessler and Stanzel, 2009, p. 757) This is strong evidence showing that universal banks (at least in Germany) to some extent can mislead naive public investors by providing biased recommendations.

In contrast, Benzoni and Schenone (2009) provide empirical evidence based upon a three year sample from the USA rejecting the conflicts of interest argument. They state that commercial banks underwriting IPOs for existing clients avoid conflicts of interest by only choosing to underwrite their best clients' IPOs. These relationship banks thereby exploit their informational advantage in another way and underwrite higher quality issues that are more accurately priced for investors.

In addition to Benzoni and Schenone's (2009) article examining the US experience of commercial bank's securities underwriting, Hebb and Fraser (2002) examined the experiences from Canada who in 1987 implemented a law similar to the Gramm-Leach-Bliley Act, and thereby allowing universal banking. From a sample period of 1987-1997, Hebb and Fraser's (2002) empirical findings shows that ex-ante bond yields of commercial bank underwritten

issues are lower, thus rejecting any conflicts of interest problems and supporting the movement to universal banking. Apart from the Canadian evidence, Hebb and Fraser (2003) also investigated concerns of conflicts of interest in the United Kingdom. The UK had also separated commercial and investment banking through a Glass-Steagall-like law until 1986 when universal banking was allowed. Hebb and Fraser's (2003) UK study concludes that both ex-ante and ex-post performance of corporate bonds underwritten by commercial banks during the sample period of 1986-1997 did not differ from the returns of investment bank issues. The empirical results from Hebb and Fraser (2002), Hebb and Fraser (2003) and Benzoni and Schenone (2009) are thereby consistent with the evidence based upon data from the Great Depression era provided by Ang and Richardson (1994), Benston (1990), Kroszner and Rajan (1994), Puri (1994), and White (1986), thus rejecting allegations of conflicts of interest.

3.3 The Too Big To Fail and Moral Hazard Argument

One of the main concerns addressed by financial market regulators is that banks are increasingly becoming "too big to fail" (TBTF). The reviewed articles in this literature review indicate that a separation of commercial and investment banking would effectively hinder a TBTF doctrine, even though it will not eliminate it. Saunders and Walter (1994) argue that a bank becomes TBTF when its failure could create a severe credit freeze on the financial market, and since the bank is simply too large and too interconnected with other banks on the market, its failure can lead to market contagion where other banks may fall with it. This contagion could lead to long-standing and severe consequences for the whole economy. The cost of letting the bank fail may thus exceed the cost of saving it.

The problem of banks that are too big to fail also creates a moral hazard issue. Grant (2010) states that the safety net creates adverse incentives when a bank's balance sheet has been weakened by financial losses. If the bank knows that it will be saved due to it simply being too big to fail, it may have incentives to pursue excessive risk-taking to receive higher returns. This could over time potentially strengthen the bank's balance sheet and ease the difficulty, but it could on the other hand worsen the situation. Similarly, deposit insurance can push this excessive risk-taking even further since depositors will not rush to withdraw their funds even though the bank may be in a troubled situation. Stiglitz (2010c) argues that if the bank succeeds with these risky investments, the managers and shareholders take the profits, but if they fail, it is the government who picks up the pieces. "The major players are simply too large to fail, and they, and those who provide them credit, know it." (Stiglitz, 2010c, p. 46).

Wieandt and Moenninghoff (2011) argue that TBTF banks are not a new phenomenon. They take the American rescues of Continental in 1984, First Republic in 1988, and the rescue of the hedge fund LTCM in 1998 as evidence of a TBTF doctrine in the USA prior to the recent financial crisis. The TBTF doctrine has according to Wieandt and Moenninghoff (2011) also been illustrated globally in countries such as Norway, Finland, Sweden and Japan where governments have laid out significant amounts of taxpayer money to troubled banks. At the day of the Glass-Steagall repeal Senator Reed, a proponent of the GLBA, highlighted the TBTF issue in the United States Congress:

> "As we celebrate passage today, we should also underscore and point out areas that bear close watching. Fundamental changes as we are proposing today include consequences which may have adverse effects if they are not anticipated and watched carefully. Among those is the issue of the consolidation of our financial services industry. We are witnessing the megamergers that are transforming our financial services industry from small multiple providers to large providers that are very few in number. We run the risk of the doctrine "too big to fail;" that the financial institutions will become so large we will have to save them even if they are unwise and foolish in their policies. We have seen this before. We have to be very careful about this." – Senator Reed (1999), p. 28334.

Even though there were people addressing the importance of being careful about letting banks become TBTF, Wieandt and Moenninghoff (2011) state that there were several indicators pointing to the fact that banks grew significantly larger and more complex prior to the recent crisis. They highlight that in the decade leading up to the recent crisis the financial sector grew faster than GDP in all major Western economies. Additionally, between the years 2002 to 2007 financial institutions' leverage in the United States grew by 32 percent and in the United Kingdom by 27 percent, even though it remained almost unchanged in other Western economies (Wieandt and Moenninghoff, 2011). This increase in leverage and thereby risk did, however, not lead to any notable action trying to prevent a crisis.

Wieandt and Moenninghoff (2011) take the failure of the investment bank Lehman Brothers as an appearance of TBTF in the recent financial crisis. The collapse of Lehman Brothers sent contagious shockwaves throughout the global financial system, effectively proving that there indeed exists a TBTF doctrine. The market could not absorb the losses on its own. Since Lehman Brothers was not saved, Wieandt and Moenninghoff (2011) argue that market participants understood that other large investment banks would not be either. This caused a loss of confidence among banks and created a credit and liquidity freeze, causing asset prices to decline.

Interestingly, the TBTF issue seems to have grown even further after the recent crisis. Stiglitz (2010b) claims that both the Bush and Obama administrations have allowed collapsed banks to be taken over by bigger banks, in turn creating even larger TBTF banks. Grant (2010) states that the USA a few years ago only had 11 banks that regulators considered to be too big to fail but the list has now grown to 21 banks. Furthermore, Grant (2010) argues that one thing we should learn from the recent financial crisis is that organizations can grow too big to manage. He takes the Citigroup merger[7] between Citicorp and Travelers Group as an example of a bank that became both too big to fail and too big to manage. Grant states that a bank with too many businesses strays far off path in fulfilling its primary mission – banking.

Even though Stiglitz (2010b) argues that the TBTF problem is one of the main systemic issues of today's financial system, he also recognizes the problem of having a large number of small banks since this can also give rise to systemic risk. It is therefore important to have neither a system dominated by many small banks nor a system dominated by too large banks. The government and its regulators therefore have an important agenda to set the rules for the system.

3.3.1 Power Concentration

The TBTF problem also causes further issues such as power distortions. Herring and Santomero (1990) identifies monopoly power as a concern when large financial conglomerates are allowed to offer a full range of financial products. The concern is that these conglomerates may be able to acquire and exercise monopoly power and create barriers to entry. Herring and Santomero (1990) do however reject this concern due to the increase of international competition across borders and technological development. In contrast to these conclusions, Johnson and Marietta-Westberg (2009) provides American empirical evidence showing that institutions with both underwriting and asset management divisions tend to use their informational advantage to earn annualized market-adjusted returns at 7.7% more than their competitors that did not underwrite the IPOs. This is especially notable when there is little information available about the company that has been underwritten, and when the underwriter/asset manager belongs to a high reputation rank institution. Large financial conglomerates are thereby more likely to outperform smaller and specialized institutions, and become more powerful by establishing barriers to entry. This may however also generate positive effects; Bessler and Stanzel (2009)

[7] The Citigroup merger had a huge impact upon the repeal of the GSA. Citicorp and Travelers Group got an interim allowance to merge in 1998 even though the GSA prohibited this since Citicorp was a commercial bank and Travelers Group was involved in non-traditional banking. If the GSA would have remained the Citigroup merger would have had to be reversed, resulting in enormous costs. This put additional pressure upon the United States Congress to repeal Glass-Steagall (Grant, 2010).

argue that this informational advantage may produce underwriting that performs better and thereby lowers the risk of defaults among universal bank underwritten securities. The question is if these benefits outweigh the concern of banks being too big to fail and gaining too much market power.

A concern identified by Herring and Santomero (1990) is that universal banks may exploit their access to the safety net by using cross-subsidization. Large universal banks are generally more likely to receive official assistance when facing financial problems, compared to small banks. Thus, it is natural to have a concern that these banks may use their position to raise funds cheaply in their more traditional banking departments and then transfer (cross-subsidies) these funds to their more risky activities to generate more profits. This would in turn distort market competition and undermine the possibility to compete on equal terms for other financial institutions that do not have access to the safety net. Herring and Santomero (1990) address this concern as highly viable but also present ways to control this problem. They suggest that it is possible to employ cross-subsidy rules to generate financial separateness (similar to firewalls) between banking departments so that basic banking functions are protected from other activities. Regulators may also increase the cost for these banks by requiring risk-based deposit insurance or risk-based capital requirements to offset the subsidy.

Herring and Santomero (1990) also identify the concern that large financial conglomerates can gain too much economic and political power, and thereby distort political decisions. Concerns raised are, according to Herring and Santomero, most common in Germany where large universal banks are present. They do, however, state that they are seldom expressed in Switzerland where the presence of large universal banks is also common. These concerns were, however, according to Herring and Santomero (1990), surprisingly common in Japan (due to the financial power of *keiretsus*), even though commercial and investment banking were rigorously separated in Japan until 1993. Previous to the enactment of the GLBA, there were also many American concerns raised about the political and economic power of money center banks and Wall Street (Herring and Santomero, 1990). Herring and Santomero (1990) also conclude that they do not regard this concern as a significant argument against combining commercial and investment banking. However, Grant (2010) argues strongly in his article that the concentration of financial resources may distort financial transparency and increase the complexity of the industry. He also expresses concern about a cluttered market where financial products are sold by untrained professionals. Furthermore, Esen (2001) states that Germany experienced a series of corporate failures involving large German banks at the end of the 1990s. At that time universal banks in Germany held powerful positions with extensive voting majorities within

Germany's largest corporations. The financial power that German universal banks possessed had, according to Esen (2001), huge consequences upon how firms were run and how they operated. This shows that combining commercial and investment banking by utilizing a universal banking system may very well provide problems of power concentration.

3.4 The Diversification Argument

The literature examined has outlined diversification as the main argument as to why universal banking should be allowed. It is argued that the benefits from diversification would strengthen the financial industry and make banks more competitive and less likely to fail. Wieandt and Moenninghoff (2011) argue that large diversified global banks offering a broad range of services can contribute to economic growth. They state that these banks contribute to more efficient stock, bond and foreign exchange markets while at the same time they realize economies of scope. Universal banks can thereby share infrastructure, know-how and information, and thus reduce costs in areas such as IT, back-office and regulatory requirements (Wieandt and Moenninghoff, 2011). Furthermore, Barth et al. (2000a) argue that diversified universal banks can pass along lower prices and offer more products and services to their customer. A benefit that comes from this is, according to Neale et al. (2010), the benefit of one-stop shopping. However, several academics such as Cairns et al. (2002), Herring & Santomero (1990), state that corporations and customers do not want a one-stop shop for banking. Instead, they will pick the 'best of breed' in each product category and choose specialists that can customize the product to the individual's preferences. Moreover, universal banks may according to Barth et al. (2000a) be less affected when firms bypass banks and raise funds directly in the capital markets through corporate bonds; the decline in lending activities may be offset by an increase in securities activities. Additionally, Wieandt and Moenninghoff (2011) argue that large diversified global banks can contribute to the stability of the financial system by supporting an effective resolution of failing institutions. The financial sector can take over troubled institutions as illustrated by JPMorgan's acquisition of Bear Sterns, and thereby government support can also be reduced (one should, however, keep in mind that JPMorgan's acquisition of Bear Sterns was heavily sponsored by the American Government). Arguments like these are, according to Wieandt and Moenninghoff (2011), important to keep in mind when discussing regulation since large diversified global banks perform various functions benefiting the global economy. However, the question is how large the benefits from increased diversification are, and if they are accompanied by increased risk-taking.

As illustrated in the conflicts of interest section, a separation between commercial and investment banking is heavily opposed by several academics since issues underwritten by commercial banks performed significantly better than investment bank underwritten issues. Because the GSA does not want banks to diversify into investment banking activities, one would assume that commercial banks that diversified into investment banking activities during the Great Depression era would default more often than traditional non-diversified banks. However, White (1986) provides evidence showing that commercial banks that diversified into investment banking activities had significantly lower default rates compared to non-diversified commercial banks. According to White's (1986) study, 26.3 percent of all US national banks failed during that period, compared to only 6.5 percent of commercial banks with a securities affiliate, and 7.6 percent of commercial banks with a bond department. These results can however, according to White (1986), be explained by the tendency of the typical commercial bank involved in investment banking to be far larger than average, thus making it possible to take advantage of diversification benefits. Even though the Pecora hearings may have exploited some problems, White (1986) concludes that the Great Depression was not caused by the involvement of commercial banks in the securities business.

Moreover, Ramírez (1999) provides empirical findings suggesting that the enactment of the GSA led to increased cost of financing for corporations in the US and thus limited the potential of economic growth. Ramírez (1999) states that the GSA led to a substantial reduction of bank involvement in corporate decision-making, followed by an increase in liquidity constraints for corporations. However, Ramírez and De Long (2001) argue that it is hard to prove that the passage of the GSA had significant costs in terms of slowing down the US economy. They also state that "perhaps the web of financial intermediation channeled funds elsewhere, so that the net flow of capital for industrial investment was undisturbed." (Ramírez and De Long, 2001, p. 111).

Similar to the American repeal of the GSA in 1999, Canada made the same move to universal banking in 1987. Ursel (2000) provides empirical evidence from Canada suggesting that corporate issue costs were lower if corporations used a bank-owned underwriter, compared to an independent (investment-bank) underwriter. These findings suggest that economies of scope provide diversification benefits when combining commercial and investment banking. In addition to this, by studying more than 60 countries' banking systems, Barth et al. (2000b) find that tighter restrictions upon banks' securities activities and corporate ownership will lead to more inefficient banks and increase the likelihood of a banking crisis. However, Rime and Stiroh (2003) analyzed the performance of universal banks in Switzerland and concluded that all types

of Swiss universal banks have large cost and profit inefficiencies. Thereby, these banks do not appear to benefit from broader product mixes, and Rime and Stiroh's (2003) study provides evidence showing that diversification does not always result in benefits; more products may just as easily lead to higher costs and a more complex organization structure. A study from Berger and Humphrey (1991) also shows that inefficiencies among US banks are often operational, involving overuse of labor and physical capital, rather than financial. Moreover, Benston (1994) argues that economies of scope within universal banks are not overwhelming. He takes the universal banking experiences from Germany as an example; even though German financial institutions may offer all kinds of financial services, universal banks do not totally dominate the market. Therefore, diversification and economies of scope and scale do not automatically lead to more efficient banks. Indeed, a literature study covering 130 empirical studies from 21 countries made by Berger and Humphrey (1997) finds that there is no predominance of evidence either for or against economies of scale in the financial sector. Their failure to find consistent evidence therefore shows that diversification benefits among banks may be trivial.

3.4.1 Profit and Risk Impact

The deregulatory period with increased investment banking activities through Section 20 subsidiaries and the repeal of Glass-Steagall have increased the share of banks' noninterest income. This diversification and change in source of income has arguably had an impact upon banks' profitability and risk. For example, Freixas et al. (2007) shows that financial conglomerates utilize excessive risk-taking due to their access to the safety net, and that this effect wipes out any diversification benefits. Moreover, a study from Yeager et al. (2007) failed to find significant diversification benefits within the financial services industry after the enactment of the GLBA. They state that universal banks significantly underperformed peer banks in profitability during this period. Yeager et al. (2007) do however argue that if synergies between commercial and investment banking arose, they were most likely captured in the 1990s due to the evolution of Section 20 subsidiaries.

The introduction of Section 20 subsidiaries and their impact upon bank performance and risk has been examined by Cornett et al. (2002). They found empirical evidence from data sampled between 1987-1997 showing that banks diversifying through a Section 20 subsidiary performed better compared to banks that did not have a Section 20 subsidiary and investment banks. The increased revenues appear to stem from non-traditional banking activities while industry-adjusted risk measures indicate that the risk for these banks does not change significantly. Another study performed by Czyrnik and Klein (2004) argues that the relaxation of firewalls and the enactment of the GLBA produced only winners and no losers in the financial services

industry. Commercial banks experienced greater revenue due to the possibilities of diversification, while thrifts and investment banks experienced no significant impact upon their businesses. Additional studies by Cyree (2000) and Geyfman (2010), together with Cornett et al. (2002) and Czyrnik and Klein (2004), point to the conclusion that Section 20 affiliates were beneficial for commercial banks.

The findings from studies that investigated increased Section 20 subsidiary activity are consistent with the standard portfolio theory. According to the standard portfolio theory, if the returns of two or more sources of income are less than perfectly correlated, it is possible to reduce risk through diversification (Geyfman, 2010). Financial regulation has, according to Wagner (2010), been heavily influenced by this theory and it is widely believed that diversification at financial institutions benefits the stability of the financial system. However, Wagner (2010) argues that even though diversification reduces each institution's individual probability of failure, it makes systemic crises more likely were several institutions fail at the same time. Diversification thereby tends to make banks more similar to each other since they are exposed to the same risks. Wagner's theory suggests that if all banks diversify, they will all be exposed to roughly the same risks, and thereby the systematic risk will increase. He provides evidence indicating that banks have become substantially more similar to each other. For example, the correlation of share prices among large American banks rose from 28 percent to 54 percent between 1995 and 2000 (Group of Ten, 2001). Additionally, Deyoung and Roland (2001) find American empirical evidence indicating that banks diversifying into noninterest income will experience an increase in revenue volatility and thereby risk. An increase in bank profitability does, however, partially compensate for this increase in risk.

When the GSA was repealed in 1999, several studies investigated the change in risk for banks. Mamun et al. (2005) and Akhigbe and Whyte (2004) document a significant decline in systematic risk for the financial market due to the increased diversification opportunities. Mamun et al. (2005) also conclude that larger firms benefited the most from the GLBA. Akhigbe and Whyte (2004) do, however, also find strong evidence for a significant increase in total and unsystematic risk for banks and insurance companies, whereas securities firms experience a significant decline in both total and unsystematic risk. What is even more interesting is that banks experience an increase in risk regardless of whether they have actually taken steps into investment banking activities or not; the general volatility of bank stocks increased, which Akhigbe and Whyte (2004) suggest was due to the market taking into account the possibility of participation in investment banking. Their research suggests that to minimize total risk for commercial banks, expansion into investment banking activities should be prohibited.

Consistent with the findings of Mamun et al. (2005) and Akhigbe and Whyte (2004), Neale et al. (2010) state that there was an initial decline in overall systematic risk after the GLBA was enacted. However, Neale et al. (2010) find from their longer[8] sample period that the systematic risk later on increased for all firms when they expanded into non-traditional businesses, and the passage of the GLBA made systematic risk of financial services firms converge. Furthermore, De Jonghe (2010), Stiroh (2004), Stiroh (2006), and Stiroh & Rumble (2006) find that the increased risk of combining commercial and investment banking in a bank holding company offsets any diversification benefits due to noninterest income activities being far more risky than traditional interest income activities. Stiroh (2004), Stiroh (2006), and Stiroh & Rumble (2006) also conclude that noninterest activities do not yield higher returns compared to traditional commercial banks that rely mainly on interest income. Moreover, consistent with Neale et al.'s (2010) findings, De Jonghe's (2010) European evidence and Stiroh's (2006) American evidence show that banks were exposed to a significant increase in systematic risk after the enactment of the GLBA, thus reducing banking system stability. Stiroh (2004) states that his results raise fundamental doubts about the belief that noninterest income will stabilize banks' revenues and profitability, and thereby reduce their exposure to risk.

Baele et al. (2007) also support findings that systematic risk increases, but bank diversification of revenues generally also leads to a decrease in unsystematic risk. Their results have a number of implications for different stakeholders. Firstly, investors that are able to diversify themselves are mostly interested in systematic risk exposures since a market downturn will affect the whole portfolio, whereas unsystematic risk would only affect a small portion of the portfolio. Secondly, large bank shareholders should, however, mainly be interested in the unsystematic bank-specific risk. Thirdly, regulators and bank supervisors are, however, concerned about both systematic and unsystematic risk of banks since they are interested in the bank sector's stability (Baele et al., 2007). Additionally, Geyfman and Yeager (2009) find that universal and traditional banks have different risk-exposure. Although they have similar systematic risk, universal banks are exposed to higher total and unsystematic risk. This is especially interesting for regulators since if the unsystematic bank-specific risk is higher for universal banks, which also tend to be the larger banks, a failure of such a bank could cause market contagion and a systemic crisis. If the bank at the same time is considered as being TBTF, the problem is even worse.

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[8] The sample period from Mamun et al.'s (2005) and Akhigbe and Whyte's (2004) studies ends in the year 2000, whereas Neale et al.'s (2010) sample period goes on to 2007.

3.4.2 Market Value Impact

A study from Ramírez (2002) investigates whether security affiliates had any impact upon banks' market value during the 1920s. When combining commercial and investment banking, economies of scale and scope should eventually translate into a higher stock market value. Ramírez (2002) concludes that banks' security affiliates added 4 to 7 percent to the market value of commercial banks in 1926 and 1927. This could explain the substantial increase in the share of American banks that became involved in securities underwriting during the 1920s, increasing from 277 banks in 1922 to 591 banks in 1929 (Peach, 1941). Additionally, Ramírez (2002) is the only article that we have been able to find that provides an estimate of the direct cost for banks when they are not allowed to combine commercial and investment banking. The direct cost per bank was about $8 million in 1927's dollar value, roughly equivalent, according to Ramírez, to approximately $61.5 million per bank in the dollar value of 1999. Although Ramírez (2002) estimates a cost for banks, he argues that one should be careful when interpreting these numbers; the private profits that seem to appear when combining commercial and investment banking do not necessarily translate to a loss for society in general.

Consistent with Ramírez's (2002) Great Depression era study, Czyrnik and Klein (2004) find that the repeal of the GSA increased the market value of commercial and investment banks. Also Neale et al. (2010) find that the enactment of the GLBA was associated with an overall positive reaction in share prices for all kinds of financial services firms.

In contrast to these findings, Schmid and Walter (2009), and Laeven and Levine (2007) find empirical evidence from the US showing that diversification is value destroying for financial institutions. Both studies argue that there is a significant conglomerate discount involved when banks are allowed to fully diversify. This means that the market value of banks that engage in multiple activities is much lower than if those banks were broken up into specialized and separate financial intermediaries. They also argue that the positive elements of economies of scope and diversification do not outweigh the negative elements, and Laeven and Levine (2007) argue that intensified agency problems have adverse implications upon market value. Due to these findings, Schmid and Walter (2009) question why financial managers urge for diversification even though benefits seem trivial.

The American evidence from Schmid and Walter (2009), and Laeven and Levine (2007) is, however, opposed by Beale et al. (2007) and Elsas et al. (2010). Baele et al. (2007) provide empirical evidence from Europe showing that there is a positive relationship between banks' market value and their degree of diversification, even though they argue that unlimited

diversification may not be optimal. The study from Elsas et al. (2010) is based upon data from 6 European countries but also from Australia, Canada and USA. They find that positive effects of diversification upon market value remained undiminished during the recent financial crisis and argue that there is evidence against a conglomerate discount in banking. Their findings indicate that economies of scope are indeed pronounced in banking. Both Beale et al.'s (2007) and Elsas et al.'s (2010) studies conflict with the American evidence from Schmid and Walter (2009), and Laeven and Levine (2007), but Baele et al. (2007) argue that this is due to the longer track records of European banks compared to their American counterparts. This raises the question as to whether there are fundamental differences in banking culture between the European and American financial markets.

3.5 THE FINANCIAL CRISIS OF 2007-2009

The recent financial meltdown has heavily increased the political pressure upon regulating the financial markets. In several countries around the world, politicians have discussed regulations concerning a separation of banking activities, especially with regards to putting a ban on investment banking activities for depository institutions. This section outlines the main causes of the recent financial crisis discussed in the reviewed literature and tries to shed light on whether the repeal of the GSA contributed to the crisis.

The academic literature concerning the recent financial crisis in this literature review unanimously argues that an American housing bubble was at the center of the crisis. White (2010) states that the bubble was caused by allowing under-qualified households to commit to residential mortgages well above the market value. He argues that all market participants had overconfidence in housing prices continuing to rise and that the heart of the problem was the commercial banks' overly excessive sub-prime lending to underfinanced households. These sub-prime mortgages were in many cases repackaged into AAA-rated securities and sold to insufficiently cautious investors. Calomiris (2010) sees the problem of rating agencies, "whose opinions had been at the heart of the capital standards arbitrage that allowed banks to back subprime mortgages with so little equity capital". Stiglitz (2010c) says that the rating agencies played a critical role by converting C-rated sub-prime mortgages into A-rated securities, thus allowing these securities to be held by pension funds and ensuring the continuous flow of liquidity to the mortgage market. He continues by identifying the flawed incentives of rating agencies; rating agencies are paid by those they are rating and thereby have clear incentives to produce good grades for their customers and thus enable investment firms to engage in financial alchemy.

When the mortgage finance system finally imploded, it dragged much of the financial sector down with it due to relatively low capital levels (White, 2010). Tatom (2010) argues that the trend for mortgages to "originate and distribute" instead of "originate and hold" changed the whole mortgage process. He states that banks originated and served mortgages as before, but the next step was to sell the mortgages to investment banks and government-sponsored enterprises (GSEs) such as Fannie May and Freddy Mac. Stiglitz (2010c) also attributes the problem of the repackaging of mortgages into securities as one of the main causes of the recent financial crisis and he questioned the move to securitization in the 1990s (Stiglitz, 1992). According to Stiglitz (2010c), in a system allowing securitization, banks do not actually hold the mortgages and they therefore only have incentives to produce pieces of paper that they can pass off to others, instead of making sure that those to whom they issue mortgages can repay them. The former Chairman of The Federal Reserve, Paul A. Volcker, agrees and states that one unintended consequence of securitization within commercial banks has been less attention to careful credit analysis (Volcker, 2008). Stiglitz (2010c) suggests that banks should be required to keep a part of the risk from the loans that they originate, which in turn would encourage greater care in lending. Tropeano (2011) agrees and suggests that a model for securitization could be the German *Pfand-briefe*, i.e. that bonds issued by banks remain on their balance sheet. These *Pfand-briefe* are highly standardized and give banks incentives to care about the quality of loans and the creditworthiness of the borrowers.

> "Financial markets are supposed to allocate capital and manage risk. They did neither well. Products were created which were so complicated that not even those that created them fully understood their risk implications; risk has been amplified, not managed." - Stiglitz (2010c), p. 19.

Stiglitz (2010c) argues that banks and other market participants failed to understand diversification and underestimated systematic risk. He believes that market participants thought that securities consisting of a large number of mortgages would not be able to fall more than ten percent in market value. Stiglitz (2010c) also argues that when mortgages are sold as securities and bought by investment banks, repackaged, and partly sold to others, it creates information asymmetries and dilutes the knowledge of the underlying risk factors. Norton (2010) states that asymmetric information spread among banks resulting in them being unable to determine which banks were financially stable, and which banks held toxic assets and mortgage backed securities. Stiglitz (2010c) agrees and states that one reason for the malfunctioning was the lack of transparency, which in turn created a credit freeze because no bank was willing to lend to another. There was simply no way of knowing if a bank was solvent or not. In addition, Stiglitz

(2010c) argues that financial institutions have strong incentives for a lack of transparency since transparent and standardized markets provide lower profit margins and higher competition. The lack of transparency has therefore, according to Stiglitz (2010c), been a central part in the business model of American financial institutions.

Securitization does, however, according to Kroszner and Strahan (2011), foster both liquidity and diversification. But they also argue that securitization expanded too far prior to the crisis. Kroszner and Strahan (2011) argue that the government sponsored this expansion by supporting GSEs such as Fannie Mae and Freddie Mac, and that this inflated the housing bubble even more. These GSEs subsidized securitization by offering credit at low prices and at the same time by purchasing securitized subprime mortgages in the secondary market. They go on by pointing out that the original Basel capital adequacy framework encouraged securitization of low-risk loans due to the fact that it treated all loans to businesses equally for the purposes of required capital. This led to it becoming attractive to securitize loans to highly rated creditors and hold lower-rated loans on the balance sheet, thus making fragile banks even more fragile.

Kroszner and Strahan (2011) state that an increased usage of securitization has transformed both the liability and asset sides of bank balance sheets, which in turn has created greater interlinkages among financial institutions. This gives rise to a highly interconnected financial system providing opaque distributions of risk. Wieandt and Moenninghoff (2011) argue that the recent financial crisis stems from a bank's interconnectedness with other institutions, its similarity to other banks, and its complexity. The many links in our present financial system have, according to Kroszner and Strahan (2011), introduced a contagion problem, allowing shocks to spread rapidly across the system. Kroszner and Strahan (2011) also state that today's regulations focus too much on depository capital adequacy standards and too little on the interconnectedness of our financial system. Moreover, they argue that modern financial innovations have made the financial system more liquid with improved opportunities for diversification and lower cost of capital, but it has also led to risk concentrations to grow large, thereby increasing the potential for a crisis.

White (2010) argues that a separation of commercial and investment banking would not have eliminated the sources for financial instability that caused the crisis. He argues that the losses arose due to bad investments in mortgage-related securities, not due to losses from commercial banks underwriting corporate securities. The latter, is what the GSA would have prohibited; the sale of mortgage-related securities would still have been allowed. Therefore, he also concludes that the repeal of the GSA bore little, if any, responsibility for the recent financial crisis.

However, Stiglitz (2010c) argues that conflicts of interest arose after the repeal of the GSA. Even though these conflicts of interest may not have been at the center of the problem, Stiglitz (2010c) states that they clearly played a role in the recent financial crisis. He argues that commercial and investment banking have very different business cultures, where the former was previously conservatively risk adverse and the latter has a speculative and profit-driven culture. Stiglitz (2010c) argues that when the GLBA was enacted in 1999, it was the investment banking culture that dominated and took over the modern financial system.

According to Stiglitz (2010b) one can understand the recent financial crisis as a result of a failure of regulation. He states that the 25 or 30 years after World War II has been the only period during the past 200 years without continuous financial crises. Interestingly, that period was also characterized by strong regulation, which at the same time provided rapid and widely shared economic growth. However, White (2010) argues that critics of the GLBA are mistaken in attributing a connection between the GLBA and the recent financial crisis. He argues that the GLBA had very little to do with the recent financial crisis and that the GLBA did not go far enough when deregulating the US financial system.

3.6 The Recent Regulatory Reforms

This section will address recent regulatory reforms that consider a separation of commercial and investment banking. Even though politicians have discussed the problem of unified banking activities in several countries, it is only the US and the UK who have actually taken action towards such a regulation. Switzerland discussed a ban on investment banking activities, mainly due to the massive $2.3 billion loss at the huge Swiss bank UBS in 2011, however, the Swiss parliament narrowly voted against this Glass-Steagall-like suggestion in 2011 (Thomasson and Taylor, 2011). In addition to regulations concerning unified banking activities, there have been a few changes at the European level. Tropeano (2011) names the creation of three new regulatory bodies: The European Banking Authority, The European Securities and Markets Authority, and the European Insurance and Occupational Pensions Authority. He also outlines EMIR, European Market Infrastructure Regulation, and Basel III as the main regulatory reforms that Europe has put forward after the recent financial crisis. However, none of the above stated laws considers a separation of commercial and investment banking, and we will therefore not elaborate on them further. Obviously, European financial market regulators and politicians have mainly taken another view compared to that of separating commercial and investment banking. They seem to have taken the view of Norton (2010), who concludes that a re-introduction of Glass-Steagall would appear to be unnecessary due to the high level of sophistication of today's institutional

investors. Furthermore, he states that Glass-Steagall was an appropriate law for a unit-based, state-based banking system, which prohibited national banking, but in today's context of global banking it would be "peculiarly inappropriate and restrictive".

3.6.1 The Dodd-Frank Act and the Modified Volcker Rule

The United States Congress voted the Dodd-Frank Wall Street Reform and Consumer Protection Act into law on July 21, 2010 (Tropeano, 2011). The reform introduced several structural changes for the US financial markets. This thesis will however only put emphasis on the part of the Dodd-Frank Act that discusses the separation of commercial and investment banking. This part is referred to as the modified Volcker rule, named after the previous Federal Reserve chairman Paul A. Volcker.

The original Volcker rule put forward by the Obama administration would have prohibited banks from conducting private equity, hedge fund, or proprietary trading businesses, and thereby effectively separating these activities from commercial banks (Tropeano, 2011). In its original form, the Volcker rule would have reenacted many Glass-Steagall-like prohibitions. However, due to harsh political pressure the Volcker rule was eventually signed into law in a weakened form. The approved law limits commercial banks' private equity and hedge fund business activities up to 3 percent of total assets while still prohibiting "proprietary trading"[9](Tropeano, 2011). This "proprietary trading" is, however, hard to define and Tatom (2011), among others, argues that it will be hard to eliminate since this trading is usually conducted in many different sectors of the same bank. Thus, it is not possible to simply flip the switch of a department to stop the proprietary trading; the whole bank would need to be overhauled. Acharya et al. (2011b) argue that the definition of proprietary trading creates gray areas, which invites manipulation: "What is to prevent a bank from accumulating a large exposure in a given security or derivative in expectation of an eventual customer demand for the asset?" (Acharya et al., 2011b, p. 201). These gray areas make it very difficult for regulators to know what is proprietary trading and customer driven trading. Additionally, the Volcker rule will not limit bank holding companies merchant banking activities and will allow them to invest in small business investment companies and other "public welfare" investments (Real Estate Finance, 2010). Furthermore, Calomiris (2010) states that the Dodd-Frank Act does nothing to

[9] Proprietary trading is commonly referred to when an institution trades stocks, bonds, derivatives, currencies, commodities, securities etc. for its own direct gain instead of on commission on behalf of a customer (Investopedia, 2012a). Another definition is short-term trading on the bank's own accounts (Acharya, et al., 2011a).

address one of the primary causes of the recent financial crisis, namely the politically motivated government subsidization of mortgage risk in the financial system. Neither does it address the worst performing shadow banks of Fannie May and Freddie Mac, who, according to Acharya et al. (2011a), were at the center of the crisis. Acharya, et al. (2011a) state that the Dodd-Frank Act "…would have done little to prevent the enormous lending bubble specific to subprime mortgages in the United States." (Acharya et al., 2011a, p. 53). Additionally, it is argued by Acharya et al. (2011b) that restrictions such as the modified Volcker rule will provide a competitive disadvantage for American banks compared to their foreign competitors and in turn increase offshore banking. They conclude that international cooperation is needed when enacting restrictions such as the Volcker rule to prevent banks circumventing the restrictions.

Calomiris (2010) argues that the time after severe financial crises puts political pressure upon regulators, making them commit to politically faulty regulations just because the public want something to be done. He argues that not enough time and effort are sacrificed to ensure that safe and sound regulations are put into practice that actually correct the fundamental problems; instead theories of influential people dominate the reforms. The Volcker rule and restrictions that apply to one set of financial institutions could, according to Kroszner and Strahan (2011), also actually increase interconnectedness, reduce stability and make the market less transparent. They argue that restrictions such as these will just move the problem to other institutions and that this in turn would provide incentives for shadow banking and regulatory arbitrage. Kroszner and Strahan (2011) concludes that the new regulatory framework should not try to turn back the clock, but try to improve the stability of the modern interconnected financial system by minimizing regulatory arbitrage and increasing transparency. A reenactment of Glass-Steagall thus seems far away, even though some restrictions have been revived in the form of the modified Volcker Rule.

3.6.2 The Vickers Report

In the summer of 2010, the Independent Commission on Banking, chaired by Sir John Vickers was created to consider reforms to the UK banking sector. Their goal was to promote financial stability and competition, and to make recommendations to the UK government (ICB, 2011b). The final report was released in September 2011 and has been commonly referred to as the Vickers Report. It tries to ensure a new structure that will make it less costly and easier to resolve future banking crises. The Vickers Report advocates a so-called "ring-fencing" of a bank's retail business from its wholesale business (Chambers-Jones, 2011). The report defines retail banking as "provisions of deposit-taking, payment and lending services to individuals and SMEs" (ICB, 2011a). In contrast, wholesale banking typically serves "large corporate customers, other

financial institutions and governments providing a range of services including arranging financing, trading, advising and underwriting" (ICB, 2011a). This ring fencing therefore aims to separate retail and wholesale banking activities, which bears a resemblance to the separation of commercial and investment banking. The report wants to ensure separate legal, economic and operational standards for both activities and to make sure that the bank treats the retail business as a third party and a separate entity (Chambers-Jones, 2011). Both businesses can however be owned by the same company (Chambers-Jones, 2011). This regulatory change would increase investment banks' cost of borrowing to a total cost of £7bn for banks in the UK, equating to about 0.1 percent of their assets (BBC News, 2011). Apart from the ring-fencing, retail banks should have a primary loss absorbing capacity of at least 17 percent and equity capital should be at least 10 percent of risk weighted assets (Chambers-Jones, 2011). The Vickers Report therefore goes considerably further than the capital adequacy requirements of Basel III.

Chambers-Jones (2011) states that the Vickers Report has been criticized for not going far enough, but that a reform is essential and that it does take steps in the right direction towards a safer and more effective system. However, Ghosh and Patnaik (2012) argue that the key recommendation of the Vickers Report, i.e. to ring-fence the retail business from the wholesale business, goes only mid-way in securing the objectives of stability and safety that the Report set out to achieve. In contrast to this, Kroszner and Strahan (2011) argue that Glass-Steagall-like restrictions such as those that the Vickers Report proposes could increase, not decrease, financial fragility through the creation of market incentives for regulatory arbitrage. Indeed, Cargill (1988) claims that given the ability of the financial system to circumvent regulations that limits profit, it is not likely that regulatory firewalls will be effective, unless they are very thick. This raises problems such as, if the firewall is too thick, the benefits of combining commercial and investment banking will not be realized, and if the firewall is too thin, the increased risk may overweigh the benefits. Cargill (1988) continues by stating "the basic problem with the firewall concept, for example, is that it focuses on limiting the opportunities for risk-taking rather than addressing the incentives for risk-taking".

> "Whatever regulatory system we devise, there will be those who will try to find weaknesses and exploit those weaknesses for their own gain, even if it imposes costs on others—and those in the financial markets will continue to use their financial clout to induce the political processes to make "reforms" (as arguably they did in the repeal of Glass-Steagall) that enhance their profits, at the expense of the well-being of society more generally." – Stiglitz (2010c)

4. DISCUSSION AND CRITICAL SUMMARY

The results of this literature review have shown that papers provide contradictory evidence and opinions on whether commercial and investment banking should be unified or separated. Papers, such as those from Kroszner and Rajan (1994), Puri (1994), Benston (1990) etc., that were written prior to the repeal of the GSA provides compelling evidence in support of a repeal. These studies found significant evidence showing that banks involved in investment banking activities during the Great Depression were not the root cause of that crisis. Additionally, studies on international banking structures, such as Barth et al. (1997), also supported the argument that the USA was at a competitive disadvantage compared to the rest of the world, which mainly allowed universal banking. Moreover, research from Cornett et al. (2002), Cyree (2000), and Geyfman (2010) etc., pointed to the conclusion that Section 20 subsidiaries were beneficial for bank holding companies in the USA during the 1990s. Thus, we argue that there was plenty of evidence pointing to the conclusion that the repeal of the GSA in 1999 was warranted and that USA would benefit from a universal banking system.

Papers based upon data from the Great Depression era, such as those from Kroszner and Rajan (1994), Puri (1994), Benston (1990) etc., together with more recent studies from Hebb and Fraser (2002). and Hebb and Fraser (2003), which are based upon findings from Canada and the UK provide empirical evidence that clearly rejects problems of conflicts of interest. These studies mainly base their evidence upon the fact that bonds underwritten by commercial banks default less often than bonds underwritten by investment banks. We therefore argue that the bond underwriting of commercial banks does not seem to be a major concern; commercial banks seem to utilize their informational advantage to underwrite mainly high quality firms. However, as shown by Ber et al. (2001), Bessler and Stanzel (2009), and Johnson and Marietta-Westberg (2009), conflicts of interest seem more severe and more likely to exist in a universal bank that has an underwriting division together with an asset management division. These studies seem to support the view that asset management divisions may feel pressured by the bank's underwriting division to buy and hold poorly performing issues to make a customer satisfied, even though this may be unwise. These asset management divisions also seem to give worse investment advice to the public, compared to stand-alone asset managers. Thus, we believe that it is important that regulators are aware of these issues and that they actively aim to limit the possibility for universal banks to mislead the public through market making and poor investment advice. One way of doing this would be to separate commercial and investment banking, but we do not believe that this argument alone is strong enough to justify such a

separation. These problems could instead be resolved through supervisory control measures of regulatory bodies.

A commonly recognized issue of today's financial system is that banks are increasingly becoming too big to fail. This TBTF-doctrine would most certainly at least be limited by separating commercial and investment banking; the sum of two parts is arguably larger than one part alone. Moreover, banks' access to the safety net (either through them being too big to fail, or by deposit insurance) creates an intrinsic moral hazard problem as shown by Grant (2010) and Herring and Santomero (1990). By separating commercial and investment banking, excessive risk-taking through proprietary trading within banks and the problem of moral hazard would thus be effectively limited in theory. However, the recent financial crisis has shown that investment banks and specialized institutions also can be too big to fail and thereby indirectly have access to the safety net. We argue, therefore, that a separation of commercial and investment banking would not eliminate banks that are considered as being too big to fail. On the other hand, the enactment of the GLBA has increased the number of institutions that the Federal Reserve considers as being too big to fail (Grant, 2010). A reenactment of the GSA would thus probably limit the number of institutions that are seen as being too big to fail.

As Wieandt and Moenninghoff (2011) argue, large diversified global banks can contribute to economic growth and more efficient financial markets by performing various functions benefiting the global economy. These benefits should be kept in mind when discussing regulation. However, as shown in this thesis, there is no unanimous evidence either for or against diversification benefits from economies of scope within the financial industry. Diversification benefits for banks thereby seem trivial at best. This is also consistent with the findings of Acharya et al. (2011b), and Berger and Humphrey (1997). Combining commercial and investment banking on the argument of diversification benefits thus seems weak. Furthermore, studies about the impact upon banks' risk from increased investment banking activities are frequently contradictory. The evidence provided by Stiroh (2004), Stiroh (2006), and Stiroh and Rumble (2006) shows that increased noninterest income does not seem to yield higher returns for banks, only higher volatility in earnings. Furthermore, most studies based upon modern evidence, such as Baele et al. (2007), De Jonghe (2010), Neale et al. (2010), and Stiroh (2006), clearly indicate that the systematic risk has increased since the enactment of the GLBA. These studies are consistent with the view of Wagner (2010); even though diversification into investment banking activities has reduced each institutions probability of failure, the diversification has at the same time increased the similarity between institutions. Banks have thereby become exposed to the same risks, which has arguably increased interconnectedness

between institutions and the likelihood of a systemic crisis. Thus, if the systematic risk heavily increases for banks, a bubble could potentially cause more institutions to fail at the same time since they are all more exposed to the overall market risk. On the other hand, if banks were less exposed to systematic risk, a downturn in the market would not affect these banks as much. The arguments of Wagner (2010) therefore seem highly relevant to consider in today's financial system. Since the repeal of the GSA and increased investment banking activities within banks seems to have caused an increase in banks' exposure to systematic risk, a separation and a reenactment of the GSA would probably be preferable when trying to limit "boom and bust" cycles in the financial system.

Even though studies such as Ramírez (1999) and Ramírez (2002) find that the GSA increased cost of financing for corporations and lowered commercial banks' market value, we agree with Ramírez and De Long (2001) that it is hard to argue that the GSA had significant costs in terms of slowing down the US economy. As Ramírez and De Long (2001) argue: "Perhaps the web of financial intermediation channeled funds elsewhere, so that the net flow of capital for industrial investment was undisturbed." (Ramírez and De Long, 2001, p. 111).

A separation of commercial and investment banking would, according to the papers we have presented, not have prevented the recent financial crisis. Rather, it was the highly relaxed lending policies that played the most significant part. Securitization changed commercial banks' lending policies from originate and hold to originate and distribute. This, along with government sponsored enterprises such as Fannie May and Freddie Mac, provided a stream of liquidity to the American housing market, thereby inflating the housing bubble even more. The repeal of the GSA could, however, have had an impact on the severity of the recent financial crisis. Financial institutions have arguably become more interconnected and similar to each other, and arguments from Stiglitz (2010c) that the profit-driven investment banking culture took over the American financial system seems to make sense.

The American modified Volcker rule takes steps to prevent banks from participating in proprietary trading. This rule will probably take time to implement, but the purpose of the rule (to only allow banks to trade on behalf of a customer, and not on its own behalf) makes sense and to some extent will probably limit banks' risk-taking. The development of the firewall concept in the UK, as proposed by the Vickers report, should also be interesting for regulators to follow. The implementation of these regulatory firewalls will take time, but their impact upon the stability of the UK's financial system will be interesting to compare to most other countries in the world that mainly focus on capital adequacy requirements. The future will show whether

capital adequacy requirements are enough, or if UK's firewall concept and a separation of banking activities is the most effective way to stabilize the financial system.

The complexity of the financial system introduces an excessive number of variables to consider when regulating the system. Some countries may have more problems with conflicts of interest or banks that are too big to fail, while others experience greater diversification benefits within financial institutions. This may be due to different business, banking and social cultures, different degrees of financial system maturity, together with different regulatory norms and frameworks. A separation of commercial and investment banking may thereby be suitable in one country but not in another. This makes it extremely difficult to suggest and implement a standardized regulatory framework. However, as long as there are countries that do not limit banking activities, there will also be opportunities for regulatory arbitrage and offshore banking, as argued by Acharya et al. (2011b).

5. CONCLUDING REMARKS

This thesis has through a review of 75 papers given an overall picture of the positive and negative sides that a separation between commercial and investment banking induces. The evidence suggests that a universal banking system does not necessarily lead to more profitable banks but there is no unanimous evidence showing that a separation of commercial and investment banking would be more beneficial for society overall. This thesis has also shown that the recent financial crisis did not directly stem from the combination of commercial and investment banking activities within universal banks. There is, however, compelling evidence showing that the increased degree of diversification within banks has increased the similarity between institutions and their systematic risk exposure. We therefore argue that regulators should focus on limiting the interconnectedness and similarity between financial institutions to prevent banks from failing at the same time, thereby minimizing the risk of systemic crises and market contagion. It is up to financial market regulators to set the playing field for banks, and a separation of commercial and investment banking is one of the tools in the regulators' toolbox. Although this thesis cannot provide an answer to whether commercial and investment banking should be separated, we hope that this review has been helpful in identifying key issues (Conflicts of Interest, Too Big to Fail, Moral Hazard, Diversification and its impact upon risk) within the area and that it can be an aid to future research.

6. APPENDIX

A1 - Business Source Premier (EBSCO) Database Search Strategy

Keyword(s)	Limiters	Results
Glass-Steagall OR Banking Act of 1933	Full text, Peer Reviewed	79
Gramm-Leach-Bliley OR GLBA OR Financial Services Modernization Act	Full text, Peer Reviewed	73
Investment banking AND Commercial banking AND Separation	Full text, Peer Reviewed	15
Investment banking AND Commercial banking AND Regulation	Full text, Peer Reviewed	98
Investment banking AND Commercial banking AND Deregulation	Full text, Peer Reviewed	18
Universal banking AND Regulation	Full text, Peer Reviewed	8
Universal banking AND Separation	Full text, Peer Reviewed	1
Universal banking	Full text, Peer Reviewed	43
Volcker rule	Full text, Peer Reviewed	17
Vickers report	Full text, Peer Reviewed	8
Dodd Frank AND Volcker	Full text, Peer Reviewed	9
Number of papers selected		**12**

A2 - Econlit (EBSCO) Database Search Strategy

Keyword(s)	Limiters	Results
Glass-Steagall OR Banking Act of 1933	Full text, Europe and North America	31
Gramm-Leach-Bliley OR GLBA OR Financial Services Modernization Act	Full text	34
Investment banking AND Commercial banking AND Separation	Full text	6
Investment banking AND Commercial banking AND Regulation	Full text	20
Investment banking AND Commercial banking AND Deregulation	Full text	4
Universal banking AND Regulation	Full text	18
Universal banking AND Separation	Full text	3
Universal banking	Full text	50
Volcker rule	Full text	4
Vickers report	Full text	0
Dodd Frank AND Volcker	Full text	2
Number of papers selected		**8**

A3 - JSTOR Database Search Strategy

Keyword(s)	Limiters	Results
Glass-Steagall OR Banking Act of 1933	Full text, Article, English	381
Glass-Steagall OR Banking Act of 1933 AND Separation	Full text, Article, English	109
Gramm-Leach-Bliley OR GLBA OR Financial Services Modernization Act	Full text, Article, English	82
Investment banking AND Commercial banking AND Separation	Full text, Article, English	75
Investment banking AND Commercial banking AND Regulation	Full text, Article, English	138
Investment banking AND Commercial banking AND Separation AND	Full text, Article, English	59
Investment banking AND Commercial banking AND Deregulation	Full text, Article, English	57
Universal banking AND Separation AND Regulation	Full text, Article, English	53
Volcker rule	Full text, Article, English	3
Vickers report	Full text, Article, English	1
Dodd Frank AND Volcker	Full text, Article, English	0
Number of papers selected		**9**

A4 - Wiley Online Library Database Search Strategy

Keyword(s)	Limiters	Results
Glass-Steagall AND Investment banking AND Commercial banking AND Separation	Full text	122
Gramm-Leach-Bliley OR GLBA OR Financial Services Modernization Act AND Deregulation	Full text	90
Universal banking AND Regulation AND Separation	Full text	151
Volcker rule	Full text	34
Vickers report	Full text	7
Dodd Frank AND Volcker	Full text	32
Number of papers selected		**7**

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