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DEPARTMENT OF FINANCE

DEPOSITORY SERVICES AS A LIFELINE FOR BANKS

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Abstract

The focus of this thesis is to understand the corporate structure of large banks, specifically how much of their revenues are affected by its participation in depository services verses investment banking services, and how this balance could help the bank survive periods when the economy is down. Four major banks will be analyzed throughout this thesis including JPMorgan Chase, Bank of America, Goldman Sachs and Lehman Brothers. This thesis will also look at the economic landscape and regulatory environment that set the stage for the Great Depression and led to the passing of the Glass-Steagall Act in the 1930s in order to understand the possible downside of offering both depository and investment banking services. A look at the Federal Reserve and the effect it has on banks will also be reviewed in order to comprehend the regulatory environment that could affect the stability of these banks during recessionary periods.

For each bank this thesis will look at the revenue figures for a span of six years and compare the percentage of revenues that are generated from depository and investment banking services. For JPMorgan Chase and Bank of America, revenue streams from deposits and investment banking are fairly stable with evident changes attributed to the economic recession of 2008 and changes in corporate structures such as with Bank of America's acquisition of Merrill Lynch. Goldman Sachs presents an interesting case as it created an internal deposit bank that does not generate new revenue, suggesting that a relationship with the Federal Reserve may be just as important as actually offering deposits. Lehman Brothers, with its bankruptcy, shows that indeed having a depository component of a bank's business is important to the survivorship of a bank if not for the revenue stream is generates then for the legal monitoring of the bank.

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Acknowledgement

Thank you to my advisor James Miles for helping me throughout this endeavor, for opening my eyes to different research and sources of information and diligently guiding me in my journey to put this thesis together.

INTRODUCTION AND REVIEW OF OTHER STUDIES IN RELATED AREA

There has been much debate as to whether or not the repeal of the Glass Steagall Act was a good idea. Henry Glass, who wrote almost the entire bill, was on the forefront of promoting the idea that commercial, meaning deposit services and investing banks should be separate. After the passing of the act, he quickly changed opinion believing that the separation could do more to hinder banks than it would to help the economy. Among the many scholars that have analyzed the Glass-Steagall Act, the underlining issue seems to be the balance of a regulated and a deregulated financial system. On the one hand, when something goes wrong it is easy to blame the government and lack of regulation as the factor that created an environment where risk was permissible and mistakes could be made. On the other hand, too much regulation and the complaints are that the government's heavy intervention is creating a blockage in the system and thus is the root of the problem.

One particular study that was published in November of 2010 studied the effect that the Glass-Stegall Act had on banks. The purpose that authors William Allen, Joan Williamson and Michael Casson explained in their paper entitled "Implications of Deregulations in the Financial Markets, 2008" was to analyze certain pertinent ratios of commercial banks over a period from 1994-1999 and 2000-2007[1]. Their thought process is similar to the one found in this thesis; to determine how these banks performed by comparing certain figures across a range of several years. The figures would show the affect that the Glass-Steagall Act had on

[1] Allen, Williamson, Casson, 386

the companies' financial stands. In this particular study the goal was to determine if a more deregulated environment helped financial institutions. The study found that the more deregulated the financial industry was, the more financial institutions benefit, that is until the global economic crisis of 2008.

In 2010, Faith Neale and Steven Clark from University of North Carolina published a paper in the B.E. Journal of Economic Analysis and Policy entitled "Diversification in the Financial Services Industry: The Effect of the Financial Modernization Act." This study focused more on one of the key arguments for the repealing of the Glass-Steagall Act. In their paper, they explain that they observed that while deregulation may increase systemic risk for a firm it also allows for diversification, which decreases this risk.[2]. This idea of risk diversification is one of the arguments that have developed in opposition to the Glass-Steagall Act.

Like the study by Allen, Williamson, and Casson, this thesis will review a few key figures for the four banks presented in this thesis. The net revenues from investment banking services and depository services, as a percentage of the companies' total net revenues, will be compared among the banks within a time span of about 6 years. These year-to-year figures will capture the effect that the economic environment during 2007 and 2008 had on the banks. This thesis will take the analysis one step further and look at the affects that having an association with the Federal Reserve will have on the banks.

[2] Neale, Drake, and Clark 1

THE HISTORICAL LANDSCAPE THAT LED TO THE GLASS-STEAGALL ACT

The Stock-Market Crash of 1929 was a result of many scared investors. Throughout the roaring twenties the stock market valuation kept climbing. The consistent upward movement in prices meant that the market was pricing securities for much more than what they were actually worth. Eventually these "bubbles" of mispriced securities burst when investors realized their actual values. It was caused by a major flux of investors wanting to exit their investing position in efforts to mitigate their loss and salvage as much capital as they could. This meant that 12.9 million stocks costing the market $40 billion in only one trading day[3]. Additionally, with nearly everyone wanting to grab a hold of their money, the banks could not cover all the liquidated accounts. As individuals withdrew their money, banks failed to provide their customers' money leaving these individuals without their savings. The problem that started with the banks soon saw rippled effects throughout other areas of the economy. As a result of the crash, consumers stopped spending and businesses became weak. This caused businesses to lay off workers in attempts to cut costs. More individuals without jobs meant more people had less money. On the consumer end, businesses were not earning revenue since a large pool of unemployed individuals did not want to spend money therefore decreasing quantity demands. As a result many companies failed. Individuals either did not have the money to put into saving at depository banks, or could not afford to invest it. The disruption in the flow of cash slowed business down significantly for banks. Not surprisingly, many banks went bankrupt. Consumer spending continued to weaken

[3] McElvaine 74

meanwhile the government too became wary and wanted to reduce spending. With government revenue so low, President Hoover hiked up taxes to increase government spending. Tax increase is a common fiscal policy that aims to reduce the government deficit. However the effect of increased taxes further hurt the American people who were already struggling to gather enough money to get by.

This created a deadlock in the economy as a result of no spending and therefore no earnings. After raising taxes the government then had to jump-start the flow of the economy and did so by government spending, in other words injecting a large amount of money into the economy. They did so by funding banks and companies to stimulate commerce. But a large stimulus bill to businesses, infrastructure, and the individuals is only a temporary fix. This is to say that giving the economy a large amount of money, no matter how large the amount may be, can only ever be a temporary fix. A bill is not enough to really kick-start the economy. This is because a large, one time government spending will only burn through rapidly. At the company level, they will use the money to cover expenses and expand business. Eventually the money will be consumed. At the individual level, consumers may be more lax in spending. But these funds too will eventually, and more rapidly, be depleted. The major problem is that when the government hands out money, it is only good until the money runs out and eventually both the individuals and the businesses will go right back to their original position or further in dept.

Many believe that the most effective way to deal with the spending halt is to create a jump-start in the economy that will perpetuate moving forward. For example, if all the businesses used the money to re-higher workers, then these workers would have more money to spend. If enough new workers spend enough, businesses revenues would increase. With this influx of revenues, businesses then could expand. The growing process of the business will mean more hiring to sustain growth. More people employed and making money would create higher spending rates. When all these factors begin to play together and build on each other, this creates a cycle that allows the economy to start of small, but in a way that these small stepping stones help create a larger scale growth that could lead to a recovery.

THE GLASS-STEAGALL ACT

Many people blamed the destruction of our economy and financial infrastructure that eventually led to the Great Depression on the banking system. At the time banks were allowed to offer mixed services and thus were able to use their deposit division of banking to fund their investment banking division. It is important to understand the distinction between what is considered depository services and investment services. As it pertains to the Glass-Steagall Act, depository services include obtaining deposits from the consumer and holding it in checking or savings accounts. A depository firm may also offer loans and extend credits to its consumers. A firm that is involved in depository services will help its client safeguard and transfer his or her money. A bank that offers investment-banking services is less concerned with holding money and more involved with creating more money. These banks handle securities and are frequently the underwriters when its consumers engage in investment activities to raise capital.

The tipping point and eventual breakdown that led to the 1930s crisis was that commercial banks took on too much risk with depositors' money. Because banks use to combine services for depositing and investing, these banks had a heavy basket of money to invest and gain attractive returns. Banks would put money in investment vehicles that offered a higher rate of return on investment than the rates that the banks were charging its clients. The banks would then make a profit on the spread or difference between the two rates. In the earlier years of the twentieth century, banks were beginning to see profitable opportunities based on the spreads from several of these successful transactions.

So long as the investment rates were good and banks could make a couple thousand profits by investing a few thousands, it did not take the banks long to realize that they could pool large numbers of deposits to put into investments that offered even higher and more appealing returns. That way banks could earn more high profit margins by investing more of its deposits. It seems like a foolproof investment strategy where a bank could use the individuals' depository money, invest it, at maturity cover the money taken from the accounts, and pocket the interests earned on the investments. Most would agree that the problem with this formula became *greed* that made banks take on too much risk, a problem that went by uncorrected for far too long. Eventually, however, these riskier investments defaulted. This meant that banks not only didn't earn a profit, but they now could not cover the costs; meaning they could not put the money back into the deposit accounts.

The idea of credit further facilitated banks to participate in these transactions. Because banks would invest depository money it made sense that having a larger pool of money to invest was a good idea. In order for these banks to increase their pool of money all they had to do was extend more credit or essentially give out loans. With the rise of credit issuance, people were able to buy more and spend more. If a bank could raise money by borrowing it from its deposits and lending it to other borrowers through credit at higher rates while the bank received the spread[4], it made sense to issue a lot of credit. The interest and benefit that credit created for banks made banks relax their restrictions on who could receive credit. On the consumer level, it meant that practically anyone could get money today and pay it little by little as opposed to paying one aggregate amount. It is important to draw the similarity to the Subprime Mortgage Crisis of 2008. This system works well so long as the money flow continues and does not create a situation where the lenders cash in on their debts or the borrowers default all at once leaving the counter party caught in a situation where he or she does not have all the money at that moment. This is what happened at the brink of the Great Depression and the 1929 Stock Market Crash as well as the economic crisis of 2008.

In light of the situation, Virginia Democrat Senator Carter Glass and Alabama Democrat Senator Henry Steagall put together a bill that would essentially split the depository responsibilities from investment activities within a bank[5]. In order to accomplish this, the bill declared that a bank could not be involved in offering its

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[4] Bodie, Kane, and Marcus 12
[5] Benston 1-2

customers services in holding deposit accounts while providing them with investment banking services as well. The bill provided that

> "a member bank is prohibited from being affiliated with a company that directly, or through a subsidiary, engages principally in the issue, flotation, underwriting, public sale, or distribution of securities. A bank holding company or its nonbank subsidiary may not engage, directly or indirectly, in the underwriting, public sale or distribution of securities of any investment company for which the holding company or any nonbank subsidiary provides investment advice"[6]

The act's primary author, Senator Carter Glass had held strong opinion toward the idea that banks that decide to be in the business of deposits, should focus on just that. He feared that allowing depository bank to partake in the business of investing and security sales provided a conflict of interest that would be to the detriment of the consumer. In the banking system, a bank where one goes to deposit money should be regarded as a safe place with no risk. Herein lies the idea of trust that is essential for the business of a depository bank. On the other side, investment firms are rewarded for taking on additional risk. The way that investment and brokerage firms work compromised the concept of a depository bank. The situation with the fears of liquidity that led to the Stock Market Crash of 1929 and the banking system that kept the economy stuck during the Great Depression is what Carter Glass and Henry Steagall sought to correct. In theory, if a bank was not able to use

[6] FDIC § 225.125

depository money for investment purposes, it would ensure that the bank lenders, namely those who deposited their money in the bank, would still have all of their money readily available if they decided to cash out. Of course due to the structure of our banking system and its regulation by the Federal Reserve, in an event like what led to the Stock Market Crash in 1929 where fear would cause a large number of individuals to withdraw their bank deposits at the same time, banks would still be unable to provide all its clients with all their money. However, diminishing the opportunity of keeping depository funds tied to investments, it could possibly lower the effect of such rapid turn of events. It may reduce the prolonged situation of an economic deadlock. Henry Steagall held the same fears as Carter Glass believing that allowing banks to perform financial services in both areas not a practice of good banking business and created an ineffective system that spread unnecessary risk in areas it shouldn't be. In addition to limiting the revenue source available to a bank for investment purposes, the regulatory aspect that comes with participating in the depository market also affects the banks. When the bank is allowed to hold deposits, it is obliged to be part of a system where the Federal Reserve places some guidelines that the banks must adhere to. Here is where the debate of regulation or deregulation comes into play.

THE FEDERAL RESERVE

The institution of the Federal Reserve was formed as a result of the widespread failure of banks in the early 1900s that created a deadlock situation in the economy where the flow of money ceased. The Federal Reserve System was introduced in 1913 in response to “runs” on many banks following a moment of crisis. These runs occur when for some reason an unusual amount of consumers seek to liquidate their bank accounts. These runs were causing banks to default since they did not have the money to pay its depositors who wanted to close their accounts. The Federal Reserve thus represents a system that moderates and maintains a consistent working network of all banks. Its fundamental purpose is to instill trust into the economy by providing resources, oversight through regulation, and other financial services. It is made up of twelve Federal Reserve banks throughout the United States with each bank overseeing its branch banks within its district. Each reserve banks acts as a depository for all the banks in that district.

When the market begins to get nervous about the liquidity in the economy and the baking system, individuals alike pull their money from institutions. As discussed earlier, these financial intermediaries use deposits to invest in higher returning vehicles. They may hold securities, serve as brokers, or create new loans. In doing so, these banks make profits from the spreads between the borrowing and the lending activities. Because banks are constantly engaging in this pair of activities it means that at any given time only a portion of each deposit is actually held on reserve. This business strategy is good for banks because it allows them to provide a needed service to consumers while generating profits for the bank. All of this depends on the assumption that consumers will make withdrawals sparingly so that the bank does not have to meet the cash needs of all of its consumers at one time. The risk lies in the small probability that an event will occur that will make a large number of a bank's customers to withdraw their money at the same times. Because the banks have the deposits tied up on other investment, they are unable to provide its customers with the money they are seeking. This is what happened with the Stock Market Crash of 1929 that lead to the Great Depression.

One of the Fed's responsibilities is to provide "banking services to depository institutions"[7] during these times when banks find themselves in a position to pay out all of its deposit accounts and cannot do so. The Federal Reserve provides monetary support as a last resort. As part of the structure banks are required to maintain a small portion of deposits on reserve. Because this required portion is only a small fraction of the customers' money, it creates risk in the system. This is where the problem of the Great Depression originated as a result of the 1929 Stock Market Crash. In the event of worrying times where people are desperate to grab a hold of every little bit of money they own, it creates a run of the banking system. This run is created when banks are asked to pay up on all existing positions at once, which the bank is unable to do. This leads to the failure and bankruptcy of banks, which injects more fear in the market.

As it happened during the Great Depression, the Federal Servers System has been strengthened to provide a sense of trust over the banking industry that the Fed oversees. It introduced the Federal Deposit Insurance Corporation in efforts to provide greater security to depository institutions. The Federal Deposit Insurance Corporation, or the FDIC, functions as an insurance provider for all deposits up to a

[7] *The Federal Reserve System: Purpose & Function*

certain amount. This means that even if a bank does not hold the full amount of a deposit account on reserves and the customers asks to close the account, if the bank is unable to pay back the account balance, the FDIC will cover the remain amount. In essence the bank pays an insurance premium to the FDIC to insure its deposits. This in return, boots confidence in the consumer in providing them with the security that no matter, their money will be safe and available should they desire to cash out. The FDIC was a direct response to the banks inability to cover all withdrawals during the 1930s.

A LOOK AT THE BANKS

As stated earlier, four banks are included in this thesis. JPMorgan and Bank of America provide examples of banks with a fairly consistent balance between depository services and investment banking services as part of their core business. More specifically, these two banks will provide insight on the structure of a bank's product mix to see how much they rely on deposit and investment revenues. On the other hand, Goldman Sachs who has a long-standing reputation as an investment-banking firm has only recently added a depository component to its portfolio. Its new relationship with the Federal Reserve System after creating its banking branches provides another aspect of the effect that having a depository service signifies to the strength and survivorship of a bank. The former standing Lehman Brothers is the case of a bank that depended solely on investment-like services without a depository business line and failed to survive an economic recession. It is important to note that when comparing the banks, the figures that are being analyzed throughout this thesis are reported net revenues of depository and investment banking services as a percentage of total net revenue. Focusing on revenues, while not providing a full representation of the banks' earnings after considering operating costs, taxes, etc., does provide unbiased figures that make it easier to compare the firms.

The different composition of each bank to the varying degree that they rely on their depository branches is important to the analysis of whether banks should be allowed to heavily participate in both areas of financial services. It will also help to see the important effect it has on the daily operations of the banks. When a bank's revenue life line is heavily dependent of a specific segment of the business it becomes a question of what the bank can do to hedge that risk in the event that that particular sector is negatively affected. When thinking of the name JPMorgan Chase one would think of its Chase card and the retail banking it offers to consumers, but its also hard to not think of its investing and major lending services; especially after its acquisition of Bear Sterns. Similarly, Bank of America is a well-established retail bank but it would be hard to separate it from its Merrill Lynch investment side. The point is that most of what use to be retail banks offering services like deposits, savings, loans, and credit card businesses have now become dominant players in the investment-banking world. Goldman Sachs who got its start as an investment bank and still hold today a reputation as a prestigious, top-notch investment bank has recently entered the depository service market with its formation of Goldman Sachs Bank USA and Goldman Sachs Bank Europe. While its banks do not signify a new source of revenue, it does seem to provide other benefits, such as the association with the Federal Reserve and the assistance that Goldman Sachs may receive from the entity.

Lehman Brothers, who ultimately failed, never held any deposits. The different product mixes that each bank offers and the fact that Lehman Brothers' product mix was more limited than these other banks may show some pattern as to the important role that having a depository component could have on the success of a bank. The very business activity that Carter Glass and Henry Steagall sought to do away with may actually turn out to be the backbone that holds a bank together.

JPMorgan Chase

Like many of today's nation-wide banks, JPMorgan Chase went down a long road in a series of buyouts, mergers, and restructuring that helped shape it to be the banks as it is known today. The bank originally started in 1799 when it did business as The Manhattan Company. Separately, another bank entered the financial industry nearly a century later operating as Chase National. In 1955, Chase and Bank of Manhattan, formerly known as The Manhattan Company, merged. For many years the bank held a strong and successful business strategy and grew organically. The bank provided an increasing amount of financial services such as trust and real estate mortgage lending. Unfortunately, in the 1990s the bank hit a series of bumps with investments that turned sour as the economy struggled. The bank, facing the inevitable decision to file for bankruptcy, had no other option than to seek out a buyer to save the bank. When talks about a partnership with Bank of America did not work, the bank managed to make a deal with Chemical Bank in 1996. The following year the bank expanded and added a credit business component to the bank. Soon after, the bank bought Mellon Financial's corporate trust business line.

The year 2001 marked a substantial buy for the empowering bank when it bought the investment bank JPMorgan. JPMorgan was once like all other banks that offered almost every type of financial service. However, in 1933 with the passing of the Glass-Steagall Act, the large bank was forced to split itself. It did so by dividing and becoming commercial bank JPMorgan and investment bank Morgan Stanley. It wasn't until the 1980s that JPMorgan began to re-strengthen enough and was able to perform a series of mergers and acquisitions. Eventually JPMorgan once again became a bank that looked more like it did before the Glass-Steagall Act had been passed. Its growth made it an attractive buy for Chase Manhattan. After the merge the new bank took on the name of JPMorgan Chase & Co. as it is known today. The new bank was formed by its commercial branch JPMorgan Chase and its investment branch JPMorgan Securities. JPMorgan Chase, who had become a large player in the subprime mortgage lending business, took a very big hit with the Housing Crisis of 2008. After buying out struggling investment banker Bear Sterns, JPMorgan Chase received an enormous bailout from the government. The bank has since recovered and has paid back its TARP loan.

Today JPMorgan Chase & Co. holds the largest market cap at around $178 billion followed by Bank of America at $130 billion and Citi's $128 billion[8]. The magnitude of the bank extends throughout all financial services to varying degrees.

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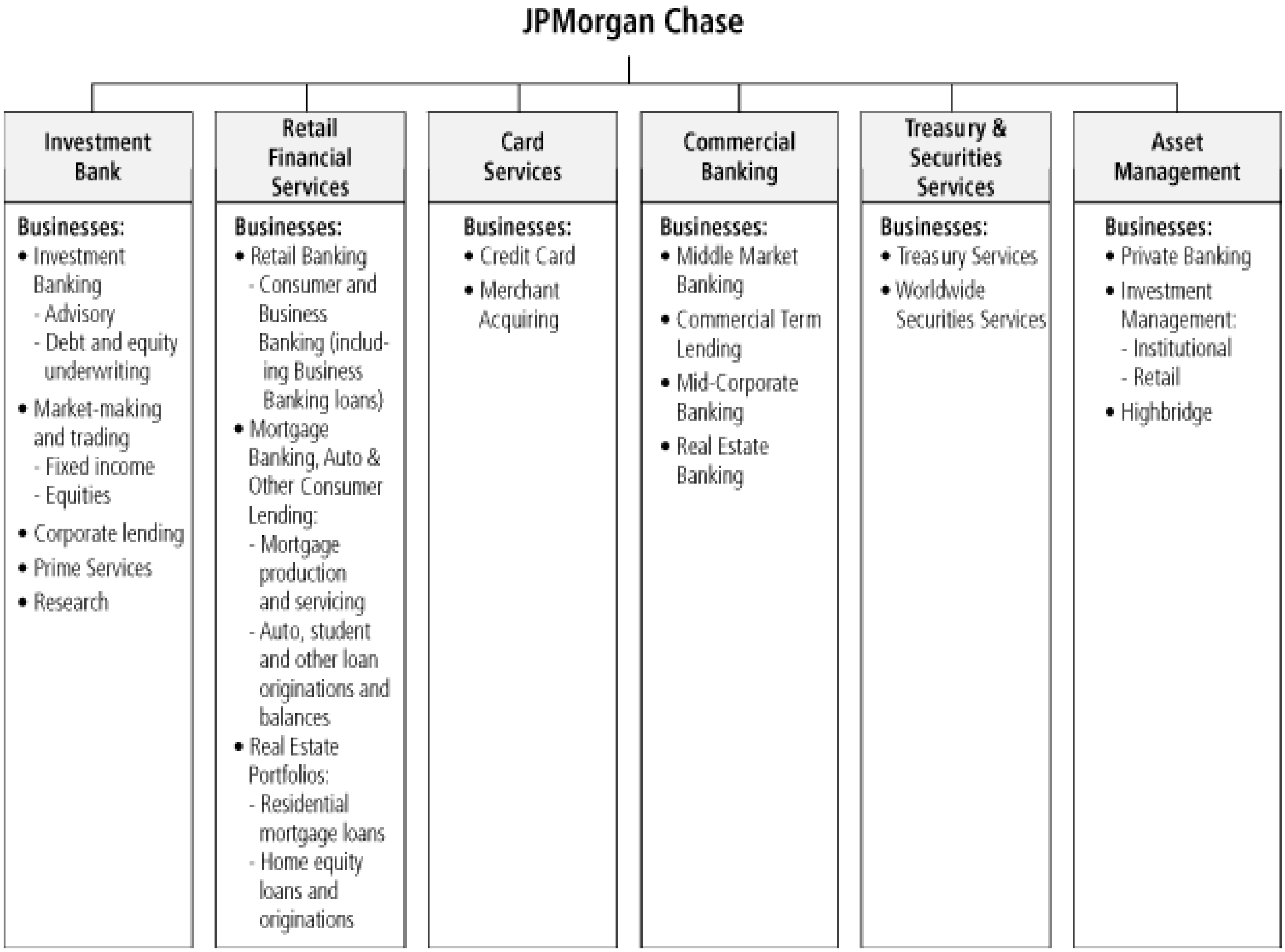
[8] Yahoo Finance, "JPM Competitors"

The traditional Finance theory is that the more diversified a portfolio is, the less inherent risk it has and therefore would put the portfolio in a stronger position to ride out more difficult economic times when the markets are down. But when a bank becomes so large it may tip the balance of how its assets are allocated among the bank's specific business segments. Banks may thus depend heavily on its commercial sector or on its investment branch. It means that large portions of the bank's revenue source are dependent of key business lines of which can be hit hard when the economy is weak. So is there a specific balance that would reduce exposure risk just enough?

During the 2000s JP Morgan Chase's portfolio has included investment banking, retail financial services, card services, commercial banking, treasury & securities services and asset management.

As of 2010, this is what its product mix looked like:

Image 1[9]



The next few images were taken from JP Morgan Chase's 10K reports. It highlights the different business segments and reports the net revenues earned within each segment for the last six years starting from year-end 2005 till the latest 10K filing for 2010.

[9] Bloomberg Businessweek JPMorgan Chase & Co. Form 10-k , 38

Image 2[10]

Segment results – Managed basis[(a)]

The following table summarizes the business segment results for the periods indicated.

Year ended December 31, (in millions, except ratios)	Total net revenue 2007	2006	2005
Investment Bank	**$ 18,170**	$ 18,833	$ 15,110
Retail Financial Services	**17,479**	14,825	14,830
Card Services	**15,235**	14,745	15,366
Commercial Banking	**4,103**	3,800	3,488
Treasury & Securities Services	**6,945**	6,109	5,539
Asset Management	**8,635**	6,787	5,664
Corporate	**4,245**	14	(1,133)
Total	**$ 74,812**	$ 65,113	$ 58,864

Image 3[11]

Segment results – Managed basis (a)

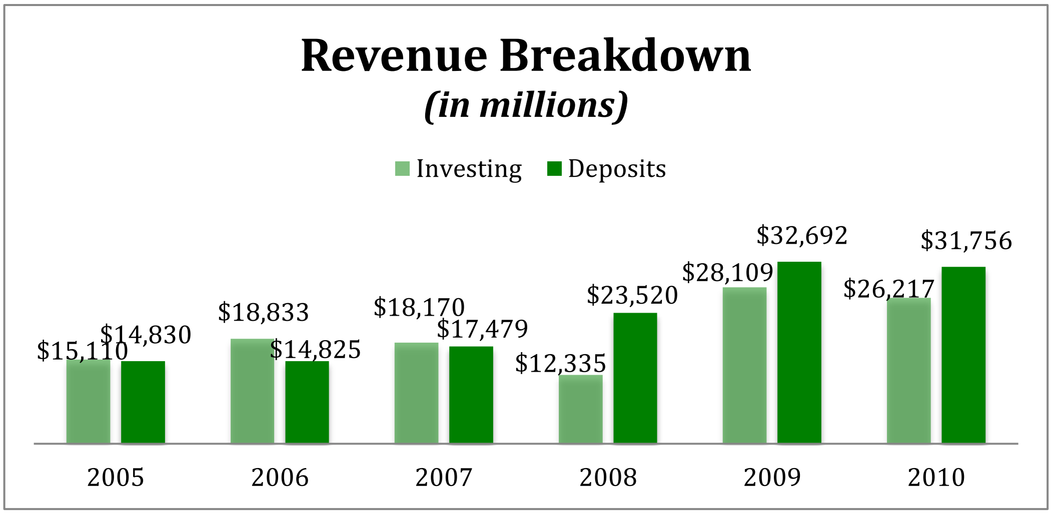
The following table summarizes the business segment results for the periods indicated.

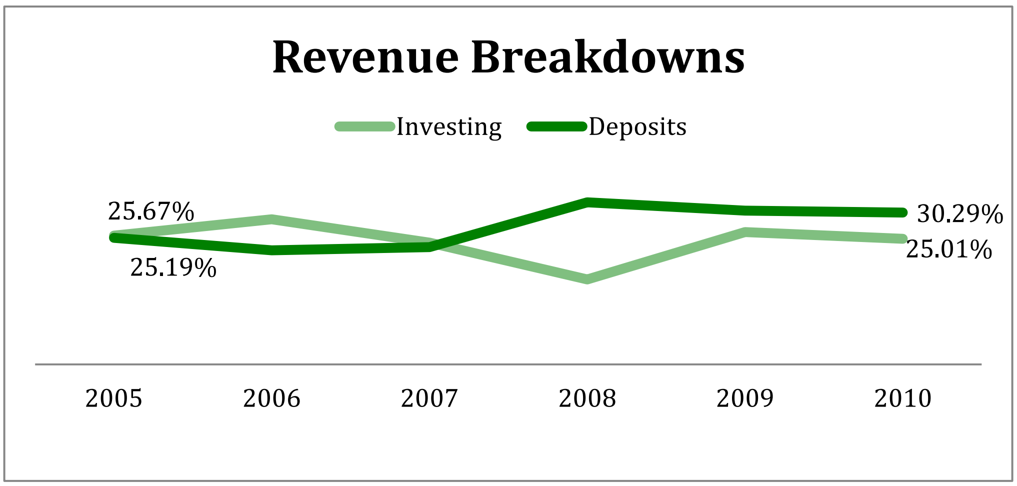
Year ended December 31, (in millions)	Total net revenue 2010	2009	2008
Investment Bank (b)	**$ 26,217**	$ 28,109	$ 12,335
Retail Financial Services	**31,756**	32,692	23,520
Card Services	**17,163**	20,304	16,474
Commercial Banking	**6,040**	5,720	4,777
Treasury & Securities Services	**7,381**	7,344	8,134
Asset Management	**8,984**	7,965	7,584
Corporate/Private Equity (b)	**7,301**	6,513	(52)
Total	**$ 104,842**	$ 108,647	$ 72,772

To summarize these images, the following charts are an overview from 2005 to 2010 depicting the relationship between investment services and depository services as components of the overall business.

[10]JPMorgan Chase & Co. Form 10-K, 29
[11]Bloomberg Businessweek JPMorgan Chase & Co. Form 10-K, 68

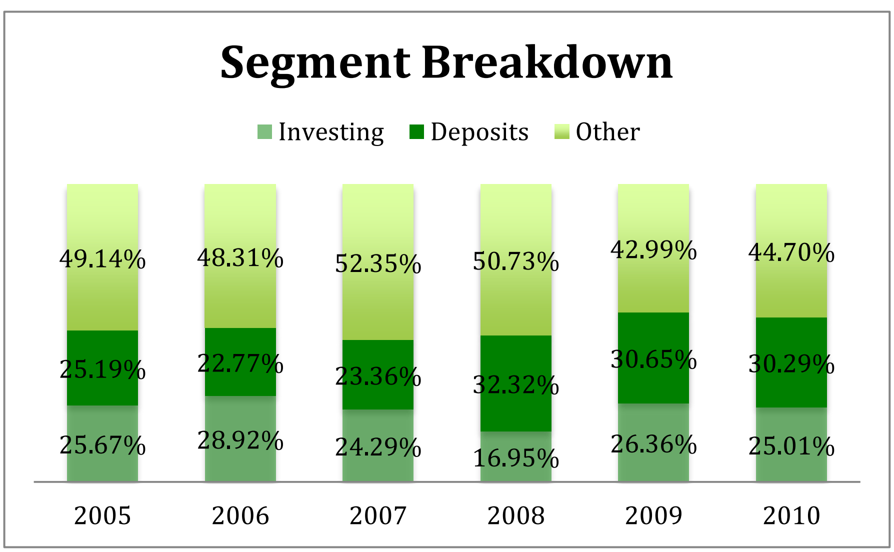
Chart 1 and 2





The following graph helps to understand the company's portfolio composition

Chart 3



As evident from the revenue breakdown chart, there is a substantial dip in investment services in 2008. This is of course due to the Subprime Mortgage Crisis where the housing bubble is said to have popped from 2007 leading into 2008. The most interesting factor to notice is that while the percentage of business dedicated to investment services has remained for the most part steady, the concentration on depository services has been increase. The revenue stream is increasingly depending more on its deposit business line as seen in the charts above. Deposits maintain a steady and significant amount of the company's revenue stream.

Bank of America

Bank of America is a leading bank that has a similar story as JPMorgan Chase with a weaving path of several business restructures. Bank of America's long history began in 1874 when it was formed as a retail bank operating under the name of Commercial National Bank. Separately, in 1901, Southern States Trust Company was formed and later became American Trust Co. Commercial National Bank merged with American Trust Co. in 1957 to expand its customer reach. Three years later, the newly merged bank merged yet again with another commercial bank, Security National, to form North Carolina National Bank. Business expansion occupied the growing bank for the next forty years. In 1991 the power bank renames itself NationsBank.

Another major bank was BankAmerica that had been formed in the early 1900s when it was called Bank of Italy. In 1928 the bank merged with the already existing Los Angeles bank, Bank of America. The merged banks began to do business as Bank of America. In the early 1950s Bank of America, well established as a commercial bank, looked to expanding into the insurance industry. In 1953 the bank bought Transamerican Corporation, a life insurance holding company. Unfortunately, this business endeavor only lasted a short while due to the incorporation of the Bank Holding Company Act that was passed three years after the merger between Bank of America and Transamerican Corporation and prohibited commercial banks from owning companies that offered any different type of banking services that was not retail. This effectively nullifies the relationship between retail banker Bank of America and insurance issuer Transamerican Corporation. Until the late 1990s Bank of America went through a series of different restructures that was largely affected by the ever changing legal environment but it eventually allowed Bank of America to become the largest commercial bank. Notably, in 1967 Bank of America formed BankAmerica Corporation as a legal business strategy. In 1997 a deal that went horribly wrong for the giant left it with no other option than to merge. In 1998 Bank of America merged with NationsBank. As a result of the merger the newly integrated companies formed what they called, Banc of America Securities. This branch of the company oversees brokerage services till this day.

Up until this point, Bank of America was battling to be the best bank focusing on its core line of business-commercial banking. For all these years the Glass-

Steagall Act and later the Gramm-Leach-Bliley Act, had less of an effect on Bank of America as it did some of the other growing banks such as Citi, JP Morgan, and Wells Fargo. Yet the most notable of Bank of America's purchases came at the start of 2009 when it bought the distraught Merrill Lynch and saved the investment banking from going under like its competitor Lehman Brothers. The buying out of Merrill Lynch meant more opportunities for Bank of America not just in the investment-banking world. Before Merrill has become a part of Bank of America, it had held ownership to almost half of the asset management company, BlackRock. This ownership of course went to Bank of America as soon as the deal with Merrill Lynch went through. Today Bank of America holds a strong position as one of the four largest banks. The extent of the banks presence is all due to the passing of the Gramm-Leach-Bliley Act that allowed Bank of America to buy into already establish companies in different areas of financial services. Today Bank of America provides services in consumer and small business banking at its core. The bank also provides wealth management and investment banking under its Merrill Lynch name. With the business association between Merrill Lynch and BlackRock, Bank of America also owns and manages corporate assets. Surprisingly, the bank has managed to survive the 2008 housing crisis despite its ownership of Countrywide Financial, a mortgage originator that Bank of America renamed as Bank of America Home Loans.

Bank of America divides its business segments differently compared to JPMorgan Chase. Instead it is made up of three categories. These categories are "Global Consumer & Small Businesses", "Global Corporate & Investment Banking", and "Global Wealth & Investment Management". Because this thesis is focused only the effect that deposit services and investing services impact the state of the bank, the following figures will concern only the "Global Consumer & Small Business" division where deposits are included, and "Global Corporate & Investment Banking" that accounts for a majority of Bank of America's investment-banking activities. More importantly, reviewing the investment figures within the "Global Corporate & Investment Banking" segment will show the effect that the acquisition of Merrill Lynch had on the investment revenues.

The following images were taken from the 2010 and 2009 annual reports. It provides a five-year summary of revenues from 2005-2010. The figures that are important to note are the "Total revenue, net of interest expenses". These figures are total annual revenues. These aggregated figures where used to calculate the percentage of revenues that come from the depository and investing services as is pertinent for the purpose of this thesis.

Image 4[12]

Table 6 Five Year Summary of Selected Financial Data

(Dollars in millions, except per share information)	2010	2009	2008	2007	2006
Income statement					
Net interest income	$ 51,523	$ 47,109	$ 45,360	$ 34,441	$ 34,594
Noninterest income	58,697	72,534	27,422	32,392	38,182
Total revenue, net of interest expense	110,220	119,643	72,782	66,833	72,776

Image 5[13]

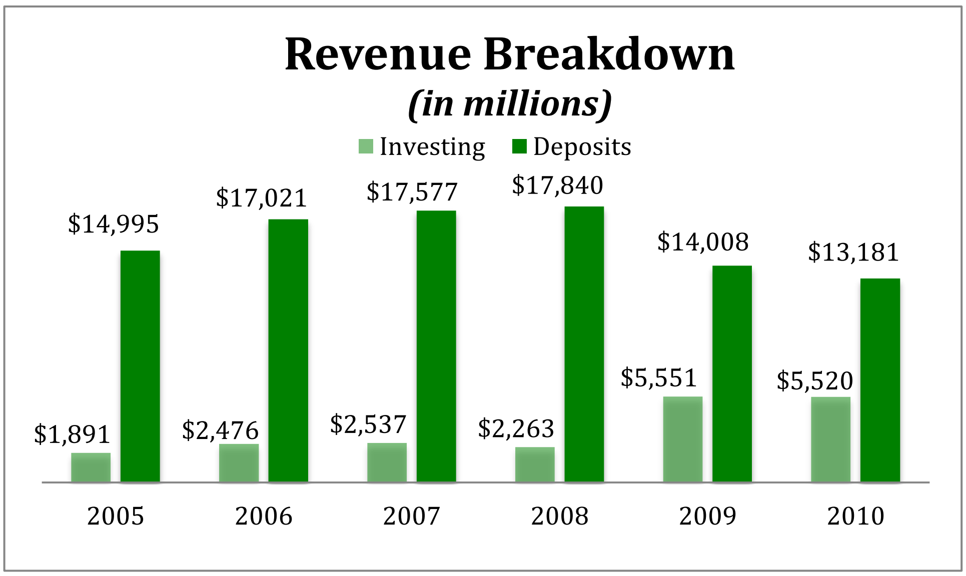
Table 6 Five Year Summary of Selected Financial Data

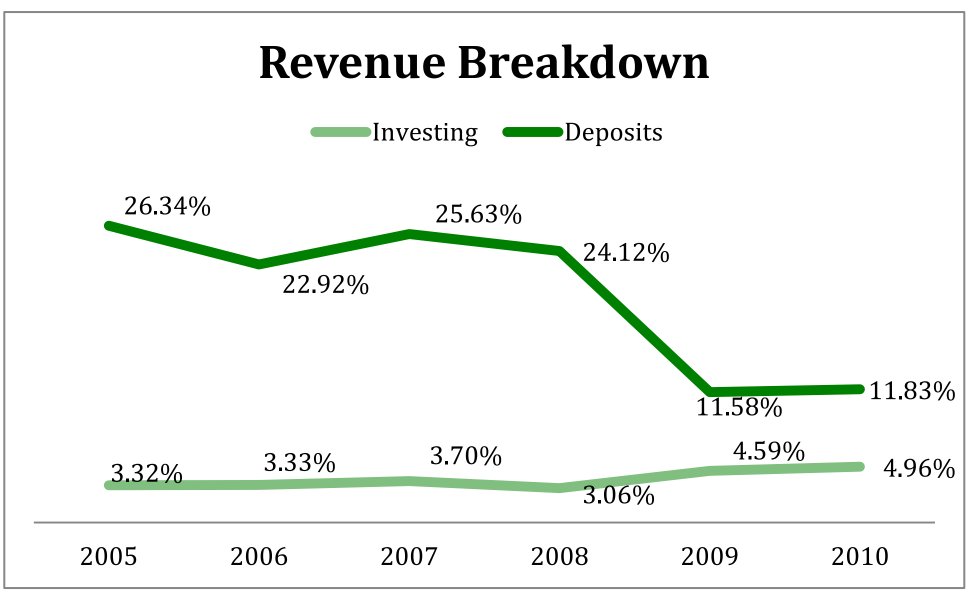
(Dollars in millions, except per share information)	2009	2008	2007	2006	2005
Income statement					
Net interest income	$ 47,109	$ 45,360	$ 34,441	$ 34,594	$ 30,737
Noninterest income	72,534	27,422	32,392	38,182	26,438
Total revenue, net of interest expense	119,643	72,782	66,833	72,776	57,175

[12] Bank of America 2010 Annual Report, 36
[13] Bank of America 2009 Annual Report, 36

Below are charts that compare the revenues that result from consumer depository services and investment services. The first graph highlights the revenue figures, in millions, on the investing and depository segments of Bank of America from 2005 to 2010. The second graph directly compares the percentage of revenues that come from depository and investing services.

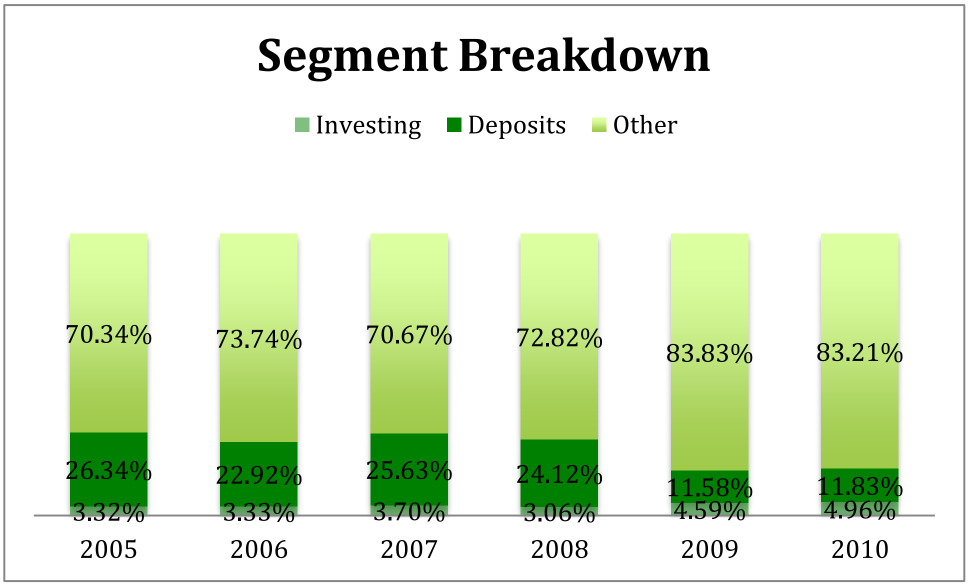
Chart 4 and 5





The following graph helps to understand the company's portfolio composition

Chart 6



According to the 2005 annual report, there was a slight increase in depository revenues as a result of the acquisition of FleetBoston that provided Bank of America with a wider range of client network[14]. There was a significant decrease in depository revenues from 2008 to 2009. As it is explained in the 2009 annual report, Bank of America introduced some new policies in their depository services. The company reported that the Federal Reserve introduced some new regulations that required banks to reduce over drafting fees.[15] This meant a significant loss in revenues, which is why there is a dip in deposit figures from 2008 to 2009.

[14] Bank of America 2005 Annual Report, 18
[15] Bank of America 2009 Annual Report, 29

Goldman Sachs

Goldman Sachs has a different and less windy road than other banks that started as retail banks like JPMorgan Chase and Bank of America. Mergers, acquisitions, and buyouts, while present, did not make the company that today stand as The Goldman Sachs Company. The bank instead anchored itself in the investment world and only recently has it changed its corporate strategy in a rather radical way. Now the bank, who was not considered to be a direct competitor of the other major banks like Bank of America and JP Morgan Chase since it worked in the more limited world of investment banking, is starting to look more like all the other banks.

Goldman Sachs has a long-standing reputation as a prestigious investment banking firms in the financial world. It started as a dominant player for financial services at the beginning of the 1900s. During the 1930s Goldman Sachs entered the equity market and was the largest institution to handle securities. The growing company was gaining much power with its growing presence in the market, but that did not make it immune to hard times. The company faced bond market downturns, market crashes, and internal corporate struggles with numerous shifts throughout company's corporate governance structure. It also took a huge hit with the ultimate failure of Long-Term Capital Management that cost Goldman Sachs a large sum of almost $300 million. Fortunately, throughout its entire history Goldman Sachs has managed to stay afloat. It survived the Stock Market Crash of 1929, it endured the Great Depression, it withstood the bond crisis of the 1990s, and it surpassed the sour economic times of 2008. It also managed to escape from having to file for bankruptcy and going under like Lehman Brothers. Goldman Sachs was able to remain on its own grounds without having to succumb to a company buyout, as was the case with Bear Sterns. To be fair, it is important to note the large outside aid that the company has received that has been pivotal to its survival. Like many other financial firm, Goldman Sachs received a substantial government stimulus. Its most notable aid came from multimillionaire Warren Buffet who invested $5 billion from its company, Berkshire Hathaway.

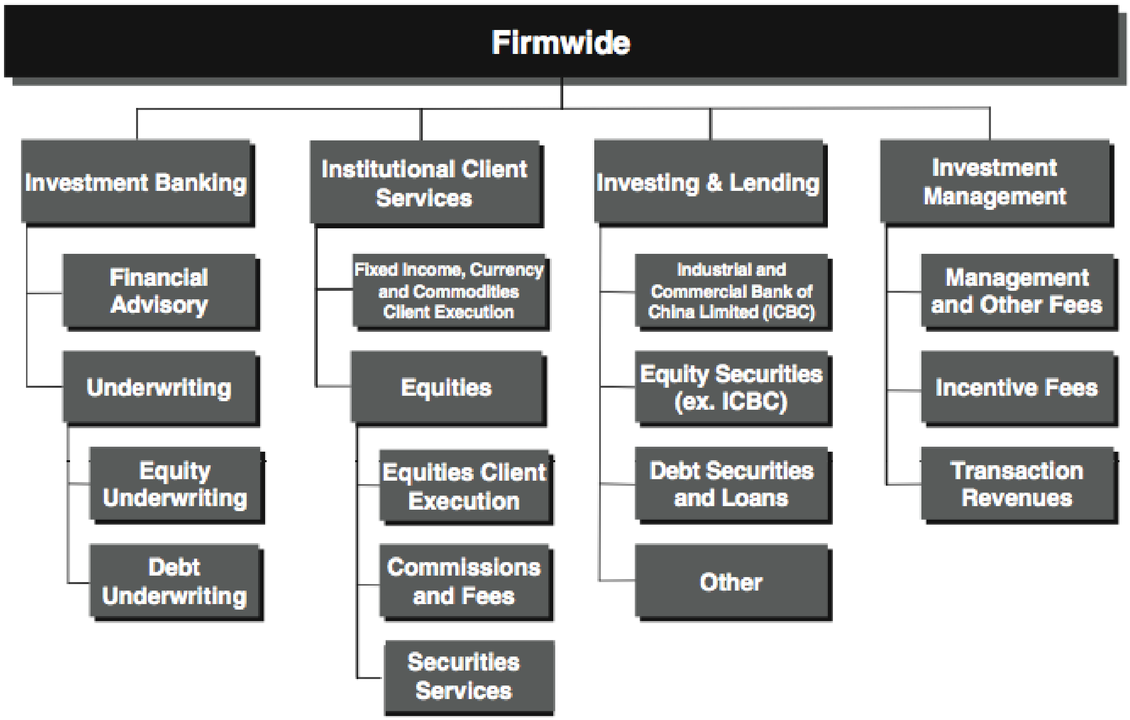
In today's financial work The Goldman Sachs Company is still a major name in investment banking. It runs an enormous asset management branch and offers services to corporations and high net-worth individuals. The company also has its own private equity line and is a leader in corporate restructures. The year 2008 was a monumental year in the history of the financial system. Within the era of frequent mergers, acquisitions, buyouts, and even bankruptcy, The Goldman Sachs Company took a shocking step to keep the bank alive throughout the harsh economic crisis. In September of 2008 Goldman Sachs went public with the news that is would join the Federal Reserve club, as it became a bank holding company[16] by essentially creating its own bank as opposed to buying an already existing smaller retail bank. This move marks exactly what Carter Glass and Henry Steagall had feared and what motivated the passing of the Glass-Steagall Act. Goldman Sacks formed Goldman Sachs Bank USA and Goldman Sachs Bank Europe. This change marks a significant step toward the survival of the firm. It is also an extremely useful point for the

[16] Goldman Sachs "Press Release" 2008

purpose of this thesis as it helps to explain what effect a depository function serves a financial institution and to what extent having a depository branch may help to the survival of a financial institution. This movement was the last string of corporate restructuring on Wall Street after which Goldman Sachs became a bank holding company. Now virtually every bank offers, to some extent, both deposit and investing services. The question then becomes how much of deposit service makes up the bank's product mix? Additionally, because these banks hold a relationship with the Federal Reserve due to their deposit arms, what does this relationship signify for the financial firms? Was becoming a bank holding company the reason Goldman Sachs survived?

In 2005 Goldman Sachs divided its business into three segments as follows: "Investment Banking", "Trading and Principal Investments", and "Asset Management and Security Services". It wasn't until 2007 that the company began to report earnings for depository services as a result of the creation of GS Bank USA and GS Bank Europe. However, the percentage of revenue that originated from deposits accounts for almost 90% of the reported revenues. Upon closer review it became clear that the deposits reflect simply a shift in revenue source allocation. That is to say that while Goldman Sachs did not make many changes to the organization of the business in terms of how they do business, they did make an important change in the way that they report their revenue figures. This is evident from their most recent 10K, which depicts their different business lines as seen below.

Image 6[17]



The following images were taken from Goldman Sachs' 2010 and 2007 annual reports. Note that the year-end changed from November to December due to regulations imposed by the Federal Reserve.

Image 7[18]

Financial Overview

The table below presents an overview of our financial results.

	Year Ended		
$ in millions, except per share amounts	**December 2010**	December 2009	November 2008
Net revenues	**$39,161**	$45,173	$22,222

[17] Goldman Sachs 2010 Annual Report, 1
[18] Goldman Sachs 2010 Annual Report, 45

Image 8[19]

Financial Overview
($ in millions, except per share amounts)

	Year Ended November		
	2007	2006	2005
Net revenues	$45,987	$37,665	$25,238

The following image was taken from Goldman Sachs' 2010 and 2008 annual reports. As indicated in the image, the figured include deposit revenue figured for Goldman Sachs Bank USA and Goldman Sachs Europe.

Image 9[20]

Note 14. Deposits

The tables below present deposits held in U.S. and non-U.S. offices and the maturities of time deposits. Substantially all U.S. deposits were held at GS Bank USA and were interest-bearing and substantially all non-U.S. deposits were held at Goldman Sachs Bank (Europe) PLC (GS Bank Europe) and were interest-bearing.

	As of December	
in millions	2010	2009
U.S. offices	**$32,353**	$32,797
Non-U.S. offices	**6,216**	6,621
Total	**$38,569**	**$39,418**

Image 10[21]

Note 5. Deposits

The following table sets forth deposits as of November 2008 and November 2007:

	As of November	
	2008	2007
	(in millions)	
U.S. offices (1)	$23,018	$15,272
Non-U.S. offices (2)	4,625	98
Total (includes $4,224 and $463 at fair value as of November 2008 and November 2007, respectively)	$27,643	$15,370

(1) Substantially all U.S. deposits were interest-bearing and were held at GS Bank USA.

(2) All non-U.S. deposits were interest-bearing and were primarily held at Goldman Sachs Bank (Europe) PLC (GS Bank Europe).

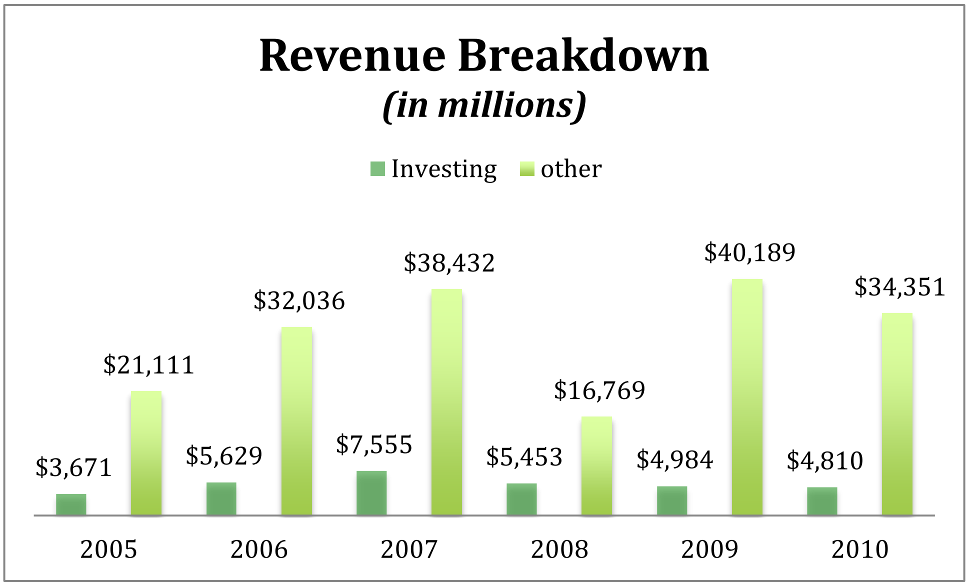
19 Goldman Sachs 2007 Annual Report, 64

20 Goldman Sachs 2010 Annual Report, 156

21 Goldman Sachs 2008 Annual Report, 168

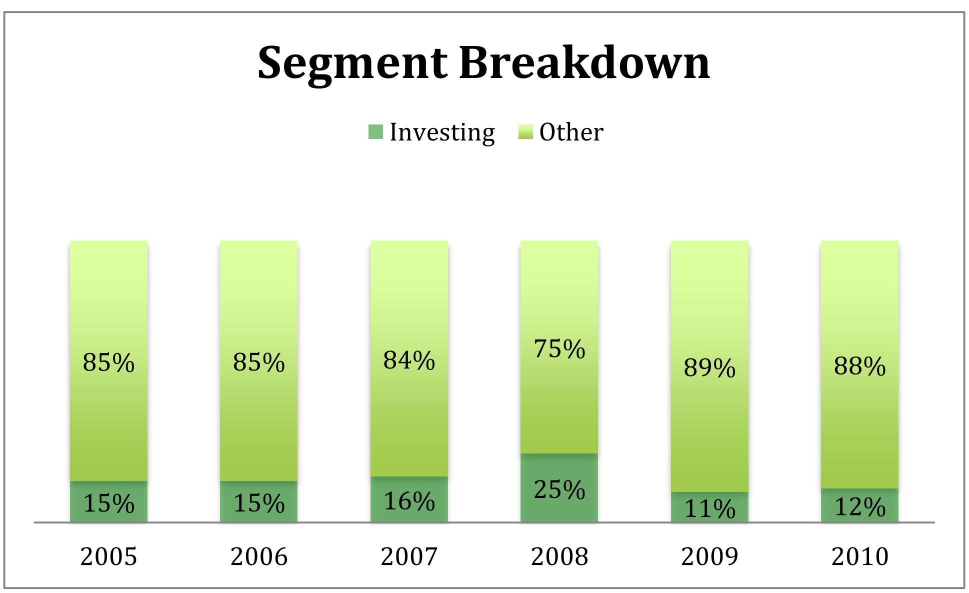
The next chart explains the company's portfolio composition.

Chart 7



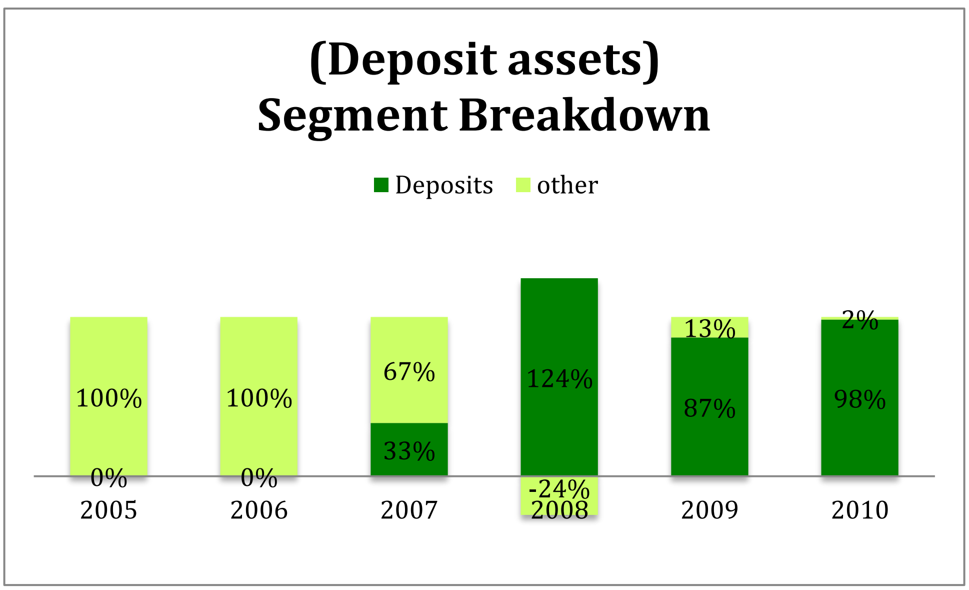
This next graph shows the composition of investment banking activities in comparison to the other segments of the business.

Chart 8



The effects of the depository services are not seen in these charts because holding deposit accounts does not function to generate new revenue streams. Instead the bank has altered the way that it reports its revenue figures. With its deposit banks, Goldman Sachs has put almost 90% of its revenues in its deposits. This means that the revenue figures held by its GS Bank US and Europe are not a part of the overall net revenues separate from the banks four other business lines. Rather the amounts in deposits come from revenue generated from its traditional core segments.

Chart 9



There is something very interesting to note in the revenue breakdown for Goldman Sachs. As opposed to creating a new business division that would represent a new source of revenue, most of their year-end revenues were shifted into their deposits account. These accounts are still regulated by the Federal Reserve who requires that Goldman Sachs adhere to certain regulations imposed by the Federal Reserve.

This presents a very interesting case as it pertains to the subject matter of this thesis. While this thesis aimed to understand how having a depository component of a bank's portfolio could help the bank weather a tougher economic stage, the case of Goldman Sachs suggest that having a depository aspect of the business may have more benefits than simply generating a more stable revenue streams. In Goldman Sachs' particular case, the reports show that the company is not raising any new revenue from deposits. Therefore Goldman Sachs' reason behind engaging in this relationship with the Federal Reserve represents other benefits such as capital insurance and tighter regulation. More regulation may not be considered a benefit of this new relationship, but according to the bank's chairman Lloyd Blankfein it does mean that the bank will become a more secured bank[22]. Because the Federal Reserve will govern the bank's revenue it implies that the earnings report will be more transparent. Therefore, Goldman Sachs provides a good case to the old question of whether or not it is beneficial for banks to be more regulated or less.

Regulation is probably exactly what Goldman Sachs needs. It seems odd that an investment banking company would only make 10% of its revenues from investment banking related activities. A PBS article declared that the rest of the company's revenues actually came from "proprietary trading"[23]. In an interview for econedlink, Council for Economic Education on February of 2010, reporter Paul Solman looked into Goldman Sachs profits. In his report he confirms the notion that

[22] Schroeder
[23] Kotowski

Goldman Sachs is really a hedge fund posing as a bank[24]. The company is essentially trading using its own money from its own accounts to make trades before they make trades on behalf of its clients. In other words Goldman Sachs is participating in a practice called "front running[25]" where the company will trading ahead of your clients so that it can benefit from the upward change in price

This means that a lot of their business is done for the company's own gains as opposed to making investment decisions to create capital for its clients and getting paid on based on commission. Usually these investments are made with the firm's own money. Because Goldman Sachs does participate in this type of business it makes sense that they would want to internally create GS Banks USA and Europe. It further shows that the reason Goldman Sachs became a bank holding company and began an association with the Federal Reserve was because of the legal implications it could mean for the company. While generally banks would want to shy away from more government oversight, the company has not been in the best of positions in terms of public sentiment. Financially, the company has taken a hit as a result of the overall weakening of the economy. But it has also had to endure the market's loss of confidence in the company. Therefore, showing to the public that it now has the Federal Reserve monitoring and regulating Goldman Sachs and making sure that the company is behaving in the best interest of its clients and the markets should instill some trust back into the company.

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[24] Making Sense with Paul Solman
[25] Making Sense with Paul Solman

Lehman Brothers

In the mid-1800s the Lehman Brothers began business as a cotton intermediary but soon was a striving business that the community relied on for financing operating as the Lehman Brothers Inc. By the end of the century they were among the leaders in the investment-banking world. In 1977 the growing company took a big step when it merged with Kuhn Loeb & Co. At the time the duo was financiers of the industrial revolution and the Russo-Japanese War[26]. Unfortunately, the business pair did not last long and broke it off by 1984 due to internal government instability. The late 1990s brought on a series of struggles for the investment firm. With the sale of its American Express arm, Lehman was struggling to avoid falling in the red. The only option the company had was to drastically cut costs everywhere it could. After struggling through some harder economic times, the company regained some grounds at the turn of the new century. Lehman Brothers created a good reputation with the big steps that it took including the purchases of privet equity firm, The Crossroads Group and fixed-income asset management group Lincoln Capital in 2003[27]. The company also joined the real estate market by taking on a large investment stake of the company's portfolio. Like many other players in the real estate market, Lehman Brother engaged in the practice of bundling subprime mortgages. These mortgage-backed securities contributed a large portion of the company's debt as a result of the Subprime House Crisis that burst in 2008.

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[26] Ramirez
[27] Ramirez

It seemed that the investment bank was poised to withstand more difficult financial times. From 2002 till 2007 the company's 10K reflected total revenue streams that were steadily climbing from one fiscal year to the next. However, in light of the Subprime Mortgage Crisis of 2008, the company was swallowed by insolvency. Because the United States government did not consider Lehman Brothers to be "to big to fail" and did not offer the distressed investment firm a bailout package as it did with Bank of America, Citi and others alike; Lehman had no other choice but to file for Chapter 11. Prior to its filing Lehman Brothers was a top player in the investment banking industry. The company offered services in merger and acquisition advising and financing, leveraged buyouts, securities underwriting, brokerage, etc. Had Lehman Brothers followed in the footsteps of competitor Bear Sterns and was able to find a suitable and willing buyer for the company, it may have survived. However, it may also have been the case that Lehman simply was so far in a whole that I did not have the time and resources to go shopping for a suitable buyer. Since its filing, Lehman Brothers is being sold off by parts to other financial institutions.

There are many stipulations when trying to pin point why Lehman Brothers failed. As it is outlined in the Lehman Brothers bankruptcy filing, some may say that the fall of the company was what led the economic crisis in 2007 and 2008, while others may consider it to be of a consequence[28]. However, in the grand scheme of things the reasons that describe what bankers where doing in the early 1900s that

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[28] Valukas 44

promoted the passing of the Glass-Steagall Act can likely be applied to Lehman Brothers during the years leading up to its bankruptcy.

In 2008 a risk analysis report was done on Lehman Brothers as it filed for bankruptcy. The underlining fact was that Lehman Brothers was holding a large enough amount of real estate assets creating a significant area of risk for the firm. As of mid-2008 the firm was reportedly holding an estimated amount of $50.4 billion in real estate mortgage type investments[29]. In addition to holding an exuberant amount of illiquid assets, the company functioned on a very weak principal. As it held long-term investments, the business basically ran on a day-to-day basis thanks to a series of short-term loans. As if surviving on short-term loans wasn't enough risk, the company adopted a high-risk business strategy. Henry Kaufman, a former member of the Board at Lehman Brothers who was also part of the Risk Committee, revealed in the bankruptcy filing report that Lehman Brothers adopted a "counter-cyclical strategy"[30]. Lehman Brothers belied that it could take advantage of the weakening housing market. Instead of cutting its losses like some of the other real estate investors, it increased its bets. This created a larger deficit, which most likely only led to its bankruptcy faster. Further fact-finding investigation in the compiling of Leman Brothers' filing report concluded that the internal leaders of the firm were aware of what their internal financial numbers meant. It was clear that the company had put its money into large investments that would not see a pay out until several years thus making them virtually illiquid. The company had to play around with its

[29] Marcus 1
[30] Valukas 47

reported figured in a desperate attempts to make it seem that the company was in a strong enough financial position and that it could survive the weakening economic situation. Eventually the public became aware of the companies incredibly weak position and that caused the value of the business to plummet.

Luigi Zingales, a professor of Finance at the University Of Chicago Booth School Of Business, testified before the Committee on Oversight and Government Reform is regards to the "Causes and Effects of the Lehman Brothers Bankruptcy". Zingales reiterates the factors that led to the most recent economic downfall as the lack of stringent regulation, which caused a lack of transparency that created an environment of over leveraged investment strategies. Many investors that participated in the real estate market held the naïve notion that the housing market could only go up and that prices would continue their upward rise forever. This theory held by the markets was similar to that during the years leading up to the Stock Market Crash of 1929. Even after the housing market burst, many other investors did not consider the possibility that a downfall in the real estate market could have rippled effect on other markets and even the economic overall. What Zingales' reported was that even after this wrong mentality became apparent, Lehman Brothers did not have an incentive to stay away from this risky business. Lehman Brothers held the notion that if all the banks were in a similarly tight situation, then the government would have to step in and bail them all out. To the detriment of Lehman Brothers is did not consider that it would be left out from the government's helping hand. To quote Zinglaes'; "it was the unlucky draw of a consciously-made gamble."[31]

The following figures, which were taken from company's 10Ks, represent the revenue streams for Lehman Brothers for its last five years from 2003-2007.

Image 11[32]

In millions, except per common share and selected data. At or for the year ended November 30.

FINANCIAL INFORMATION	2007	2006	2005	2004	2003
Net revenues	$ 19,257	$ 17,583	$ 14,630	$ 11,576	$ 8,647

The next two images are revenue segment breakdowns from 2002-2007. Lehman Brothers divided its business into three major segments including: Capital Market trading, Investment Banking services, and Investment Management services. Note that about 20% of the company's revenue consistency came from its Investment Banking activities.

Image 12[33]

LEHMAN BROTHERS HOLDINGS INC.
Management's Discussion and Analysis of Financial Condition and Results of Operations

Segment Operating Results

	Year Ended November 30,		
In millions	**2007**	**2006**	**2005**
Capital Markets			
Net revenues	$ 12,257	$ 12,006	$ 9,807
Non-interest expense	8,058	7,286	6,235
Income before taxes	$ 4,199	$ 4,720	$ 3,572
Investment Banking			
Net revenues	$ 3,903	$ 3,160	$ 2,894
Non-interest expense	2,880	2,500	2,039
Income before taxes	$ 1,023	$ 660	$ 855
Investment Management			
Net revenues	$ 3,097	$ 2,417	$ 1,929
Non-interest expense	2,306	1,892	1,527
Income before taxes	$ 791	$ 525	$ 402
Total			
Net revenues	$ 19,257	$ 17,583	$ 14,630
Non-interest expense	13,244	11,678	9,801
Income before taxes	$ 6,013	$ 5,905	$ 4,829

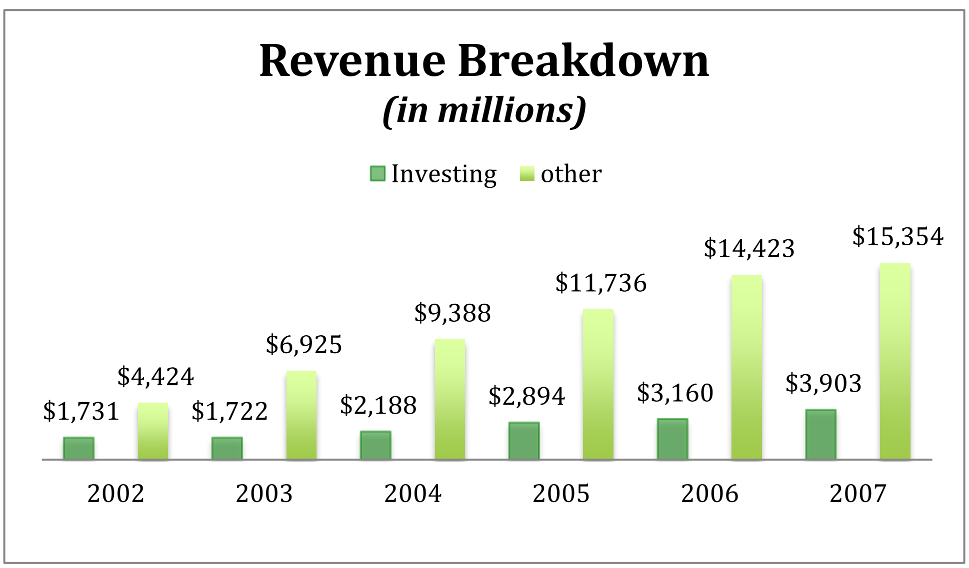
Image 13[34]

Business Segments

In millions *Year ended November 30*		*2004*		*2003*		*2002*
Net revenues:						
Investment Banking	$	2,188	$	1,722	$	1,731
Capital Markets		7,694		6,018		3,620
Investment Management		1,694		907		804
Total net revenues		11,576		8,647		6,155

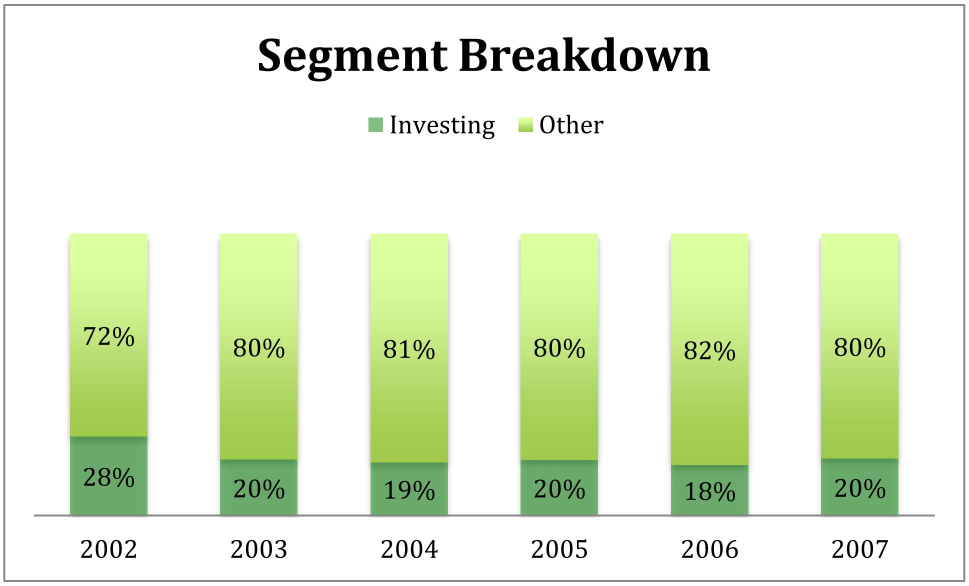
The charts below are a complication of these segment breakdowns in order to understand the company's portfolio composition. These charts highlight the percentage of revenue that is generated from investment banking services. Note that this chart looks different from the charts of the other banks because Lehman Brothers never held deposits.

Chart 10



[34] Lehman Brothers 2004 Annual Report, 41

Chart 11



In summary, the charts show that Lehman Brothers consistently earned about 20% of its yearly revenues as a result of its investment banking business line. At no point throughout the company's history was it involved in depository services and therefore held no direct relation with the Federal Reserve. Lehman Brothers was therefore permitted, through lack of regulation and third party administrator(s), to take on too much, unsound risk. It betted on always winning and calculated the risk to be too small to deter the company from going forward with its investments. In large part, the company became so concentrated on the potential lucrative gains that it did not stop to look at the short run effect that it could, and ultimately would have on the management of the business's day-to-day operations. The firm was so highly leveraged, that one little slip will send the company quickly into insolvency, and that is exactly what happened.

Conclusion

It is undisputed in the financial world that diversification reduces risk. If these banks were not allowed to merge and offer a variety of services it would mean that a depository bank could only handle deposit related services. Meanwhile, investment banks would only be able to operate in the securities market. The effect of this depends on the strength of the economy at any given time. When the overall economy is strong, people are willing to take on more risk and therefore investment firms enjoy a higher business demand. In times when the economy is rather weak, saving money is the thing to do and thus tips the balance of demand in favor of retail banks. The implication is that a bank will either excel or be hit by the state of the economy and there is no opportunity for mitigating risk. Being able to participate in the depository industry can provide firms with some stability. The constant revenue generation provides some security. Also the insurance from the FDIC provides some sense of security for banks. A relationship with the Federal Reserve also plays an important factor in the equation of product mix and risk exposure. One of the underlining reasons that Glass and Steagall argued in the 1920s and 30s was that banks were being carelessly eager in taking on too much risk. When the government becomes a watch dog it hold banks on a tighter leash. This means that a bank must be accountable for the money it controls.

Through the examples of the banks that were discussed throughout this thesis, it is evident that a depository sector helps the banks hedge their risk and safe guard them to some extent. It strengthens their financial position despite the fact that the overall economy may not be very favorable. In reviewing the numbers, as of the end of the latest fiscal years for the banks, these were the following breakdown of deposits verses investment banking as a percentage of the firms' total revenue gains. JP Morgan Chase has seen on average, a constant rate of revenue of about 30% from its depository services and about 15% from investment banking services. Bank of America saw a more evident change in 2010 after the integration of Merrill Lynch. From 2005 to 2008 Bank of America reported on average 24% revenues from depository services and about 3%% from investment banking services. In 2009, revenues from Bank of America Merrill Lynch boosted the company's revenues to about 5% generated from investment banking services. For Goldman Sachs the numbers are a bit misleading. The creation of revenues from investment banking activities was clearly seen the year after Merrill Lynch was integrated into Bank of America. On the contrary, for Goldman Sachs, there was no evident change in terms of new revenue for the firm after the creation of its banks. This is because Goldman Sachs' penetration into the deposit market was not a traditional one in the sense that it bought out other banks, as would normally be the case. Instead, Goldman Sachs organically formed its banks, which means that it is not receiving additional revenue. Instead Goldman Sachs is shifting its revenues into their own deposits. This suggests that the decision to become a bank holding company was not so much a financial decision as it was a legal one. In this way, the bank does have a certain level of insurance for capital. As a benefit to the public, the bank will be subject to more oversight and therefore will provide more security to its consumers.

As for Lehman Brothers, investment-banking services encompassed about a quarter of what the firm's activities with zero percent from depository services. Because the aim of this thesis is to understand if a certain composition of deposits verses investment banking may put a bank in a stronger financial position to weather an economic downfall, it is important to note that these banks did receive government aid during the 2008 economic crisis. This fund was a unique aid to the banks and it does play an important role when looking at the banks' financial stance throughout the 2000s. All of the banks presented in this thesis, with the exception of Lehman Brothers, did receive TARP aid from the government, which is one of the primary reasons that these firms were able to make it through the economic crisis of the 2000s. It cannot be said that the fact that Lehman Brothers did not hold deposits was the sole factor that led to its end. Internally, there where many things that Lehman Brothers did wrong that caused it to fail. But judging on Lehman Brothers' revenue figures, had Lehman Brothers participated in depository services, it would have created an alternative and rather steady source of revenue. This offering of depository services alone may not have saved Lehman Brothers, but it certainly would have strengthened it and maybe it could have bought the bank more time to find a solution. The regulation that comes with the relationship with the Federal Reserve may have also made the leaders at Lehman Brothers take the right action when they were given red flags on the amount of risk that the firm was taking on. Another speculation could be that if Lehman Brothers was not as weak as it actually was, maybe the government would have deemed it worthy to receive some TARP funds and maybe the economy wouldn't have suffered the negative impact that it did when Lehman Brothers went under. The case of Goldman Sachs, helps to understand the importance that participating in the depository industry has on the success of a bank. At the height of the economic crisis when real estate investments and other investment markets were down, Goldman Sachs, as a large player in investment banking, was getting hit hard. Its decision to create a bank holding provides one example that there is a significant benefit to having a depository component to a company's portfolio. As previously stated, it can reduce risk. The resulting relationship it creates between the Federal Reserve and the bank does offer the bank security in that it provides, to a certain extent, a stable revenue source and cash on hand.

Like Goldman Sachs, it is within the investment banks nature to take on risk. The problem with Lehman Brothers is that it took on too much, careless risk. The warning signs were apparent before 2008, but instead of reducing its risk exposure like other investment banking firms such as Bear Sterns did, it increased its risk. What Lehman Brothers did was run a business relying on the off chance that they would get lucky. However, it would be unfair to say that Lehman Brothers was the only firm to take on too much senseless risk and that is why it failed. The government had its part in the ultimate failure of Lehman Brothers when it chose not to extend it the government TARP fund. It seemed to have worked for the other banks that were rescued by the government. As of March 2011, the Wall Street

Journal reported that about 99% of the TARP fund was been repaid back to the government[35].

To reiterate, the Glass-Steagall Act was enacted to prohibit banks from taking on so much risk. The theory was that banks should not be allowed to be involved in investing and deposit services. In the 1930s this is because banks became less accountable to depositors and invested in unsound investments with money that they should not have been tying up in illiquid assets. Soon after the Glass-Steagall Act was passed, it became apparent that maybe such diversity for banks was a better option. The question then became, and still hold today, if a regulated or a deregulated financial system is better; or at least in what balance. This thesis looked at four banks. Two of which, JPMorgan Chase and Bank of America, are still standing today and offer a multitude of financial services including a significant portion in accepting consumer deposits and managing these accounts. Goldman Sachs, who is also still running, has only recently entered the depository regulated environment at the height of the financial crisis. As noted earlier, its depository involvement is somewhat different to that of JPMorgan Chase and Bank of America; but it still sheds some light of the effect that being a part of the Federal Reserve regulatory environment may have on a bank. Lehman Brothers did not accept or manage deposit accounts. It also was not regulated by the Federal Reserve as the other banks in this thesis are. Ultimately, Lehman Brothers dried up its liquidity when it tied up its capital in long-term investments. Its aggressive involvement in the real-estates market despite all the warning signs also caused a wider gap in its available

[35] Bater and Kell

operating cash flow. Had the Federal Reserve been able to regulate Lehman Brothers, the investment that it made most likely would not have gone through. These four banks do not encompass all the factors that provide an explanation of what allows a bank to survive a time when the entire economy is down. Still, in seeing what these banks did and did not do into the new millennium and through the dip in the economy during 2007 to 2009, does provide some insight into the benefits that participating in the depository market may have on banks. Through these banks it is evident that some regulation is necessary. In some cases a depository component of a bank, and all of its implications, may provide it with a more stable revenue stream, some capital insurance, and regulatory oversight that inhibits a bank from running away with its capital. In looking at these banks, the determination of this thesis is that banks should not be prohibited from offering both depository and investment banking services.

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EDUCATION

The Pennsylvania State University University Park, PA
Schreyer Honors College and Smeal College of Business Class of 2011

- Majoring in Finance and International Studies with minors in Business Law and French
- Studied abroad Spring 2010 in a French language intensive program Montpellier, France

INTERNSHIP AND EXPERIENCE

Cassel Salpeter & Co. Miami, FL
Investment Banking Intern June-August 2010

- Assisted in a sale-side project and a valuation project
- Helped create pitch book to present to clients
- Identified/analyzed company and transaction comparables using Capital IQ database

Dannon TRUST Case Competition & Business Simulation White Plains, NY

- Took group decisions to meet objectives while keeping in line with company views January 2011
- Generated a P&L to reflect increase sales projected over three years

Entertainment 101 State College, PA

- Networked with professionals from Sony, Paradigm, and ICM January 2011-present
- Participated in six week workshop about the structure of the entertainment industry
- Constructed Script Coverage of films to facilitate casting

LEADERSHIP

PSIA (Penn State Investment Association) University Park, PA
Analyst in the Consumer Staples Sectors 2009-present

- Modeled DCFs using Bloomberg to understand the financial health of companies
- Prepared and presented PEP pitch for the bench
- Competed in Stock Pitch Competition to add FEMSA to the fund's portfolio

WIB (Women In Business) 2007-present
Powerful Women Paving the Way Conference Committee November 2010-April 2011

- Coordinated leadership conference for students, professors, and professionals

Business Inferno

- Participated on a team that competed through tests that tested time management, group coordination, and mental puzzles March 2011

Financial Director co-chair August-December 2010

- Assisted in the management of checks, invoices, and refunds
- Built Excel database with integrated cost calculation formulas to track expenses

ATLAS THON (Penn State Dance Marathon for Pediatric Cancer) 2007-present
THON Weekend Committee Captain November-February 2009

- Began the committee to structure events throughout THON weekend
- Managed organization's activity around a $5000 budget
- Regulated logistics of 300+ participants

ULSP (An Undergraduate's Law School Prep) 2008-present
Founder and Coordinator

- Put together information panels and discussion forums for prospective law students
- Helped as a student-faculty/professional liaison

VOLUNTEER

Second Mile — University Park, PA

- Mentored underprivileged elementary school students — 2009-present

Habitat For Humanity

- Contributed time and skill in constructing houses for low-income families — 2007-2009

LANGUAGES

Proficient in Spanish and English with substantial skill in French