The Evolution of the Stock Market as a Financial Institution

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The Evolution of the Stock Market as a Financial Institution

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Introduction

The stock market has become one of the most significant institutions in the financial world. This market facilitates finance and trade activities for corporations, governments, and individuals. With such a seemingly simplistic purpose, the complex history surrounding its evolution becomes even more interesting. In early times of commerce, large hierarchical organizations arose to monopolize trade to bring about a prosperous city, country or nation. As individual units within these organizations became more successful, prominent, and powerful, they sought out an identity of their own. The result was the recognition of the corporate entity. Now with this new power and identity, the corporation turned to an intermediary to raise capital to continue their growth. Brokers served this purpose and founded a stock market to facilitate this financing in such a way that remained flexible to meet the changing functionality of the corporation. Additionally, the stock market itself has facilitated the investing in American business by continually changing to allow faster, more reliable transactions for the investor. The stock market has been, and will continue to be, the driver behind the increasing efficiency, complexity, and advancing technology of the corporation.

This paper will address the evolution of the corporation which underlies the reason for the stock market’s existence. Beginning with a chronology of events triggering the existence of trade, I will examine the commerce activities in Europe and in America. The events that arise from this discussion lead us to the causes of the revolution which allowed
for the evolution of our own financial markets. Facilitating America’s successful revolution was the rise of banks in America to finance the debts that were accumulated by the colonists during the exploration of the new world. Following the successful launch and stabilization of a paper currency came the emergence of a successful financial marketplace. As the markets became more stable and structured through regulation, I turn to examine a few significant industries. This examination will show the role that these industries played in the development of the corporate form as well as the stock market itself. Closing the paper is a discussion of the role that the brokerage firms and technology have played in bringing the market to its current state. Thus bringing us to an understanding of how the stock market has continually changed to meet the needs of the corporation giving it the significance it has as a solid financial institution.
Origins of Economic Activity

The financial markets of the twentieth century are the result of a compilation of numerous advancements in the development of the corporation. As far back as observed history allows, there existed differing forms of trade, which itself is the underlying principle of the corporate form. Trade is more than a mere exchange of goods between two people. The essence of trade involves a mutually beneficial process, a transaction, in which both parties perceive themselves as wealthier than they were before (Bernstein 21). All desirable articles of trade are only valuable when they are employed into the hands of another individual with the desire and the ability to use them. Understanding the concepts of trade will allow us to uncover how trade evolved to bring the corporation into existence.

Prior to the discovery of America, Europe was the center for the dominant trade activity. Trade represents a form of speculation which has always existed, yet this existence has been witnessed in a variety of forms. Farmers would sell grain before it was harvested in Mesopotamia as a form of trading. Similarly, the Trojans would buy wine to sell at a later time to soldiers resulting in large profits; both of which were forms of speculation in trade.¹ These and other early Europeans participated in trade, yet the Romans had little inclination for business activities. The reasons for the lack of inclination revolved around the perception that the entering of trade for profit was not widely considered an acceptable behavior until a much later era. However, when one retraces history they will find that most of the origins of European commerce centered on the profit-motive.

¹ Taken from “A History of the New York Stock Exchange” page 2.
The group of individuals in this profit-seeking business class, those who participated in trade transactions, were called *equites.*

*Equites* represented a powerful force during the times of the Roman Empire in that they were next in the line of power to the nobility. Early development of countries and cities revolved around the actions of the governmental nobility, ruling class, to support each nation-state. So, as this class of businessmen entered to challenge the ruling class, these monied-men achieved their place in the social order and from their activities spawned the first form of the corporation.

A difference needs to be noted between the evolution of the corporation and a hierarchical organization. Hierarchies were formed within the Roman Empire to serve as management for towns, villages, and cities. These hierarchies, such as the Crown in England and the Hanseatic League in Germany, were in charge of the general affairs within the boundaries of their organization of individuals. This organizational system allowed for a single-group to arrange the activities for a larger population. These activities, meant to keep the peace and power, included the creation of a money standard as well as facilitating trade with other lands to remain prosperous. There were no separate entities, corporate or otherwise, apart from that of the ruling hierarchy. A look at the Hanseatic League in Germany around the late thirteenth century, will allow us to see an example of this hierarchical organization which led to the development of the corporation.

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2 Beard, 34
3 The rise of the equites did not change the traditional ruling hand of the nation-state. Though it did have a significant impact on the traditional changing of power from family to younger generations. Power now came in the form of money and noble family name.
4 A hierarchical organization is used to describe a difference between the concept of a corporation and that which is a ruling body for a larger population. I use this term for the lack of a better term to describe such an entity or governmental body in these early centuries.
The origins of the Hanseatic League came as a result of the times when those in power were attempting to attain the goals of monopolizing trade and building vast empires during the thirteenth century. As an initial attempt to gather the power necessary to obtain monopolistic trade, and to avert the problems of piracy during these times, self-protection was necessary for these cities. As had been witnessed in Italy, a fight for royal supremacy in all aspects of an economy, especially trade, were about to be seen in Germany. The cities of Germany were fairly evenly matched and this made the question of supremacy difficult to settle quickly (Day 104). Instead of competing, they united to form the Hanseatic League which became the most remarkable commercial association of the medieval period (Day 104).

The League originated with the alliance of Hamburg and Lubeck about the middle of the twelfth century, and gradually came to include the coast towns of the Baltic and the inland towns of northern Germany. By the beginning of the fifteenth century it embraced nearly one hundred towns in Germany and elsewhere (Webster 76). The towns never formed a very close union, but each sent their representatives every year to a meeting place where they could discuss matters of common interest and decide a policy to follow. In order to become a commercial power they needed to become a military power. Through victorious battles against such nations as Denmark, Norway, and Sweden, the Hanseatic League became so successful in the closing centuries of the Middle Ages that they were a dominating force in the commerce of northern Europe (Day 105). In a similar manner, they gained control of the valuable native products of Poland, Hungary,

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5 The word "hanse" meant in early German a society, a band of men, and was applied to a number of commercial associations besides the particular league described here.
Bohemia, and parts of Russia, in addition to their monopoly of the fisheries, mines, agriculture, and manufactures of Germany (Webster 77).

Now understanding the degree of dominance and the virtual monopoly this League held over all the trade centering in some of the cities where they had factories, we can look more closely at the inter-workings of the trade taking place. Each factory formed a little city within the city where it was located, and each possessed a separate government of its own subject to the diet (Webster 78). Employees would work at one of the factories for their lifetime, in ten year segments which would then lead to promotion through various stages of apprenticeship. The factories were unique as described below.

The factory was a place where the trade could be regulated, and where the merchants could be kept under supervision. To let a man trade as he pleased would have subjected not only himself, but all of his compatriots to danger, for the natives made little distinction between foreigners and would readily have punished one merchant for the fault of another (Day 109-110).

Villages and towns grew rapidly and the populations within these locations were considerably centralized. Manufacturing activities within these locations were very prosperous concerning trade in industries such as fishing, shipbuilding, and numerous leather goods. What these factories lacked, though, was the ability for its workers to use any entrepreneurial spirit.

Regardless, these factories were becoming very large and successful. Since they typically represented entire cities within this League, the growth gave these cities the need to expand. This League had seen centuries of dominance, however, they were now becoming almost too large to manage with so many successful cities within the League. The result came when these cities were no longer satisfied due to the lack of

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6 These cities included: Bruges, London, Novgorod, and Bergen.
acknowledgment by the diet that these manufacturers were themselves organizations within the overall structure. Individual cities became powerful enough to break away from the League and prosper on their own. As this became more commonplace, the League eventually ceased due to its loss of control as described in the following:

English merchants became restive in the inferior position assigned to them both at home and abroad, and before the end of the Middle Ages began to fight for equal rights or for privileges, but they did not secure final and complete victory until the beginning of the modern period, in the sixteenth century (Day 110-111).

The Hanseatic League proved to be a significant piece of the European economic landscape and will always hold a centerpiece in the understandings of the evolution of the corporation.

The reason the League in Germany was so successful was that there existed trading power in masses. As the power weakened with the dissent of many of the cities in the League, the smaller groups of merchants began to have a more significant role. The nation-states no longer were able to hold their trading advantages, yet the smaller merchant guilds were struggling to obtain these same advantages. It remains that the nation-state is still needed to grant authority to the guilds to operate under their countries' boundaries. Having understood the power the nation-states held when having grouped together, we can examine the effects the guilds had during the demise of these organizations.

What evolved out of the demise of such organizations as the Hanseatic League was the chartered corporation. These chartered corporations existed in a less formal sense during these periods just explained, but the change became evident when these guilds were being granted legal power from the state to enter into trade opportunities. Guilds
were nothing more than an organization of people all devoting their time and labor to the
development and trade of a particular product. In Europe, weavers received the first
corporate charter as a guild from Henry II in the early 1300’s (Meyer & Gustafson 2).
Following, goldsmiths, mercers, haberdashers, and fish mongers all received these
corporate charters by the year 1433. They these guilds, and other ‘groups of common
interests,’ became the only forms of corporate organization apart from the government.

The simplicity of this form of corporate organization is what sets this type of
commerce apart from others we will discuss. The earlier trading Leagues were groups
spanning several different industries. These guilds now represented single purpose
production corporations which held some form of political clout through being charted by
the larger governmental body of the nation-state. Government remained the main player
in trade activities and thus the equites and guilds devoted a large portion of their time to
the bidding of government contracts. The next shift then evolves when the guilds no
longer existed as the next successive entity in size.

Even in these early times, the government raised capital by selling these
government contracts in partes, shares, to the public (Sobel 3). This became a completely
new form of trading since previously trading was merely the exchange of goods between
two individuals. Now trading existed in a secondary/representative nature as these partes
were exchanged for money signifying the right to a portion of some future exchange.
Many in the business class became wealthy as a result of trading in these shares, but this
did not bring the political clout that was still more valuable. Even the wealthiest Roman

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7 The year of charter for these guilds are as follows: goldsmiths 1327, mercers in 1373, haberdashers in
1407 and fish mongers in 1433. As cited in Meyer & Gustafson page 2.
of the times attempted to buy votes from senators with no success. This lack of acceptance to the political spectrum of the corporate form shows how the Roman Empire was unwilling to accept this new concept in commerce. Although the government prospered from the corporate form through the sales of the government contracts, this remains an important part of the decline of the Roman Empire. Regardless, the corporate form was gaining momentum and importance within the society and the economy.
European Economic Landscape

The Romans pioneered the corporate organization. Motivated by the desire to share risks, some merchants organized joint-stock companies. A majority of the large trade that took place involved trade overseas. This trade required large amounts of capital to finance the ships used to transport goods from one location to another. Rather than have one individual take on the risks of an entire voyage, groups of merchants would pool capital together to finance the building of these ships. Since the sole proprietorship was the main form of business, these joint-stock companies had a significant impact of the furthering structure of the corporation. This was also a foreshadowing of the impact limited liability would have on the success of capital formation in England and in America.

Joint-stock companies were unique in that they were limited in duration, purpose, and capital (Sobel 4). Most of these companies operated with the sole purpose of bringing back riches from foreign lands through voyages across the seas. Upon return, the profits would be shared with all those who invested capital with the company. This distribution of capital also signaled the end of the company since their purpose was fulfilled. This distinction held significance since trading in the shares of these first joint-stock companies was only done on the basis of a primary issuance of those shares. Though many of these voyages may have been profitable, they were entered into rarely and most people were reluctant to take these risks. The sole-proprietorship prevailed, but not for long.

In the 1400’s, the Renaissance merchants furthered the foundation made by the Roman merchants during the revival of trade in the Middle East. This revival of trade
opened up many more opportunities for profits. As more individuals sought to prosper from these opportunities, more capital was needed to finance the resurgence of the joint-stock companies. As the demand continued increasing, the issue of trust between investor and manager became an issue since governments had little control over enforcement of these venture contracts. In response to the need to satisfy this concern, the merchants adopted a code of honor for those persons investing capital. This code was not taken lightly and a breach in this contract meant expulsion from commerce forever.⁸

The success, or at least increase, in these joint-stock ventures brought about the rise of the brokers. These early brokers emerged to bring individuals together for transacting business. The role of the broker in these times was significantly different due to the fact that securities were not yet traded in a secondary market as they are today. It was until investors began trading the original shares, such as happened with tulip shares discussed later, that the brokers began to take on more of a role as they do in current times. Previously, the only existing members of the business society serving this purpose were those who traveled from town fair to another, organizing the primary issuance of shares as well as engaging in the trade of goods. A more formal structure was conceived when brokers entered the scene. Further, the brokers helped to establish a centralized location for conducting business. Anyone interested in these early investments now knew where they could engage in a securities transaction.

This concept of having a central location for these transactions allowed the first marketplace to easily emerge as a functional institution. The marketplace was still very crude in the sense that there were no formal distribution channels or established locations,

such as the stores, from which to sell goods in these times. Rather, the marketplace found its meager beginnings in the streets on street corners. As voyagers began to return home, all could see the profits that could be made from investing in these joint-stock companies. Those who were making money continued to invest in other ventures and those that did not start so early in these practices soon began. As more and more people were investing capital with these companies, the economies prospered and economic growth was the law of the land. The marketplace was successful in these initial runs.

Continuing in the sixteenth and seventeenth century, more joint-stock ventures were formed. The first booms and busts of the early economy can be witnessed by watching the number of joint-stock companies being sold in the marketplace continue to rise and fall during these times. The rapid expansion in trade and the increased amounts of money in circulation lead to establishment of more permanent joint-stock companies. Much credit is given to the Dutch East India Company as one of the first very successful joint-stock companies pioneering the later successful companies in North America. As the Dutch East India Company became more successful, speculation in these shares became widespread and their success well known.

During these years the Crown awarded corporate charters to many foreign adventures such as the Russia Company and the Turkey Company. By the end of the seventeenth century, much of Britain's colonization in the New World had been carried out by chartered joint-stock companies (Meyer & Gustafson 3). These were not only profit making organizations, they were monopoly-like instruments of the Crown. It was this link to governmental power that gave them an advantage in pursuing their mission as profits flowed steadily from these ventures.
Religion was a much a part of lifestyles in these times as any other activity. During the Reformation, Calvinism showed that salvation could not be earned as could profits. A Calvinist principle was that God had His chosen few, and those of whom that were chosen could be seen doing good deeds and amassing worldly accomplishments. With business still being somewhat outcast from acceptable society, this interpretation had a positive effect on individuals seeking good in the world of commerce. Wealth, on this interpretation, was considered a sign of divine grace by Calvinists.\textsuperscript{9} Thus, there was more reason to continue in securities speculation.

This new vision of merchants, coupled with the expansion of economic growth through continued demand for corporate ventures, merged into a period to become known as times of “speculative orgies.”\textsuperscript{10} Markets began to emerge in many places such as Turkey, the Netherlands, and Amsterdam. An example of the frenzy occurring in speculation can be seen in the 1630 Amsterdam market for tulip bulbs. During the 1600’s, the tulip shares amassed the largest share of the marketplace and later spread to the markets in every western European nation. These shares, representing a single tulip, sold as high as $10,000 in currency of these times.

Many Investors had made large profits and they began to sell their shares as well as begin other trading tactics. Noticing that these shares had been priced to extremes, brokers began to sell short these tulip shares and reap tremendous profits. This practice of selling shares short is the selling of shares that one does not own at the current, higher, price with the intention to purchase these shares back at lower prices when selling would

\textsuperscript{9} Max Weber “The Spirit of Capitalism” page 157
\textsuperscript{10} Sobel page 5
begin to slow. This became known as a short sale. Brokers already made large sums of money, since they controlled most of the information, but they found this short selling as a new way to make profits. Realizing that there was more selling than buying, shares would decline. This triggered more selling by other investors and also added to the role of the broker which made the profession more likened to their role today.

Many investors lost large amounts of money and this event put a lot more pessimism into the marketplace. Though the charters for these organizations were still issued by government, the shares that represented the company were loosely regulated. However, a majority of the joint-stock companies issued were fairly simple enough to be able to sort out the shady deals. Despite the pessimism, the continued success of numerous joint-stock companies brought additional eager speculation. Shares of these companies rose for virtually no other reason than the fact that all of the other shares were going higher. This mania set the stage for a tremendous letdown for investors and overall speculation.

In 1711, to help finance extended intervention in the War of Spanish Succession, an issue of government debt was floated in London’s security market (Werner 11). The success of the ventures and the little faith in the government’s ability to repay its obligations made this issue relatively uninteresting. To change this tone, a new financing was arranged so that these low priced bonds could be exchanged for shares in the South Seas Company at par. A similar mania to that of the tulip debacle arose from this lucrative opportunity to capitalize on the virtual monopoly the government had given this company. The South Sea Company was the talk of the town as they promised to pay investors extraordinarily high dividends. There erupted a frenzy of buying and selling in
those shares and the bond holders converted their bonds to shares in the South Seas Company. In a book titled, "The Great Swindle," author Virgina Collins had this to say about the South Seas stock,

One must remember that the great majority of investors...knew nothing of finance. It did not occur to them...to study a balance sheet before risking their money. They bought on a hunch and hearsay. The government was behind the South Seas scheme; the King was Governor of the Company: what could be more solid or respectable? (76)

Exchange Alley in London became the hot spot and the enthusiasm from the South Seas Company spilled over into the rest of the market. It became a mania unrivaled by any other phenomena. The South Seas Company had taken in so much capital and so much debt that rumors began surfacing on the doubts they would be able to meet their dividend payments. After inquiries were launched into the affairs of many companies, including South Seas, the directors of the South Seas Company dumped their shares, flooding the market with unwanted securities, and panic erupted (Werner 12). These companies that had been built on lies were labeled 'bubble' companies as many were bankrupted and the English government had nearly ruined their credit when the bubble burst.

Parliament did finally step in to try to halt this mania by appointing a commission to inquire into the widespread speculation of trade in England. The result was the passage of the Bubble Act in 1720. This was the first attempt by Parliament to establish effective administrative control over securities offered by corporations to the public. The financial speculation from 1690 leading up to the passage of the Bubble Act was not only in speculative companies, as the South Seas example showed. In fact, by 1720, roughly 200 companies had received charters for numerous sorts of ventures. The act in essence
prohibited, except by special permission of Parliament, the issuance of additional securities in joint-stock companies.

Economic growth, in the beginnings of European speculation, was mainly attributable to the development of the corporate form rather than that which is measurable in statistics. Gains and losses from speculation led to booms and/or busts in the economy since there was unlimited growth potential, as well as disappointment, from numerous opportunities. Government control, though loose in share speculation, was strong in setting precedence for what the New World was to take from their teachings. I will now turn to a discussion of the American economic landscape which began from scratch, yet had all the advantages of the hard-learned lessons in Europe.
American Economic Landscape

Though Europe experienced a horrendous debacle during the bubble scandal, they had developed all of the necessary elements of a successful securities market.

First, there was a group of actively traded securities, representing both the government and private companies. Second, in accessible places like the coffee houses, there was continuous trading with publicity of prices and quotes. Third, there were professional brokers and dealers specializing in trading securities. Fourth, and perhaps most importantly, there was an investing public eager to buy and sell (qtd in Werner 11).\footnote{V.E. Morgan and W.A. Thomas, *The London Stock Exchange: Its History and Functions*, pp. 1-27.}

America developed more rapidly than would have otherwise been true given the success of the joint-stock company ventures from England. The American economic landscape was not conceived after the Bubble Act. Rather, it was during the rise in popularity of the joint-stock ventures that a first of many voyages to America occurred. The history just described for Europe, has a different scope when discussed under the light of the American viewpoint.

Two half brothers, Sir Humphreys Gilbert and Sir Walter Raleigh, were the first Englishmen to endeavor serious ventures to America from England.\footnote{Walton & Rockoff “History of the American Economy” page 25} After being granted the right to settle in what is now called Virginia, they set out to discover and colonize the new lands. A return trip to England for supplies tied up many years and after finding sufficient capital for the trip back to America, Governor John White in 1590, returned to America. To his surprise, no one was found on these lands as all the previous settlers had vanished.

After the war between England and Spain, which ended in 1603, two more charters were granted by England’s Parliament to the London Company and the Plymouth
Company. They were given the rights to settle in the southern part and northern part, respectively, of the English territory in America. Jamestown colony is given credit as the first English settlement in America after the Plymouth Company successfully settled in Chesapeake Bay in 1607. These joint-stock companies, in continuing with their mission to bring back riches from these new lands, returned to England with shiploads of "fool's gold." Many of these travelers now poor, diseased, and starved, died in the following years. The remaining settlers organized the colony awaiting the return of those who ventured home.

In 1619, those of the Chesapeake Bay colony were met by 800 new settlers from England rather than seeing the return of those individuals who had made the trip back to England. Due to inadequate supplies and a lack of knowledge for organizing of a colony, many of these settlers also failed to survive the colonization. This caused further hardship for those who had invested in shares of these companies back home in England. Disappointment and heavy losses plagued these early attempts to colonize the new frontier.

English Parliament knew there would be riches in these lands of America and urged further ventures to discover these riches in America and return them to England. England’s first step toward more private investment in these new lands proved successful. Under Parliament’s Headright system, anyone who successfully ventured to America would be given a grant to fifty acres of land. By 1623, all land holdings from previous settlers had turned to private ownership from England’s new plan. Thus, Virginia was converted into a Crown colony inhabited by those who had risked their lives and capital.

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13 Walton & Rockoff ".." page 28
England gained a foothold in America extending from French Canada to Spanish Florida and into the Caribbean. The North American colonies were established for the development of trade and/or for the exploitation of available resources. The allure for the English to come to America was the chance for a new freedom socially and religiously. These early settlers were discouraged to find the following as phrased by James Robertson in his book American Business.

In North America, distances were vast...in time and in miles. There was no extensive existing agriculture in America, and the crops that were grown by the natives were strange to Europeans. There were no available sources of gold, silver, precious stones, or other concentrated sources of what Europeans recognized as available wealth. There were no large populations of natives producing food or goods...There was an unimaginable extent of wilderness...There was a climate of extreme heat and cold completely unfamiliar to Europeans. (14)

None-the-less, England had other plans for colonizing these lands and finding the riches they so desired.

The setting in seventeenth century England afforded merchants more freedoms to govern their own affairs. They were still chartered by Parliament, but were granted certain liberties in their production of goods. The problem was that these merchants were still considered a lower class of citizens than typical English peasants working in agriculture for the government. Upon hearing of these new found freedoms in the New World, masses of English people wanted to venture to the new lands in the West to reap the rewards of freedom and lucrative trade opportunities available there.

This prompted a resurgence of charter ventures organized to tackle the tremendous obstacle the Atlantic Ocean presented to Europeans eager to reach their destination of America. The costs of this voyage were not minimal. In the early
seventeenth century, the Atlantic passage would cost an English person nearly half a year's wage. As a result, many of the passengers had to embark on this journey with another commodity they owned other than money, themselves.

Slave labor was the answer for poor English men and women to gain entrance to the New World, the land of opportunities. Those who used this as their ticket to America entered into indenture contracts. These contracts were agreements by an individual to sell their labor to someone in America, for a specified period of time. This was a profitable trade practice in England since the price they would sell these people for was double the cost of transporting them to America. In return for their services, these slaves received room, board, and certain money or land at the end of their contract. This evolved into a third type of trading, trading of humans.

A market was established informally for the trade of slave workers since the purchase of a slave entitled the purchaser to the fifty acres of land under the Headright System. The marketplace for slaves was extremely efficient. An individual's physical capabilities could be viewed by all and estimates on their productivity could be easily assessed. Determining this value of an individual's labor is strikingly similar to the practice of finding the present value of a stock by discounting the future returns that individual would be able to return to the purchaser. So, in many ways these trading activities held less risk than trading in the shares of joint-stock companies.

This slave era helped correct some of the problems described earlier related to the disappointments found by early settlers in America, mainly the establishment of a work force. Prisoners were another group who, like the poor, entered into indenture contracts since this was a way to escape a death sentence or life imprisonment in England. Not only
were slaves pouring into North America, but also high wages attracted many scholars and craftsmen to come abroad. Throughout this slave period, more individuals with knowledge and intelligence came to the New World and this helped in later developments of revolution from British control.

In these colonies, the majority of production remained in the agricultural industries and this production was steadily increasing. Since the agricultural products were great for trade and did not require much intellect on behalf of the slaves to cultivate, economic growth in these colonies was easily spurred by the population increases. The population nearly doubled every twenty-five years (Walton and Rockoff 32). The greatest periods of population growth, thus economic growth, occurred after 1720 when over 200,000 Scot-Irish and Germans immigrated to the British North America.

Since agricultural production was so dominant, companies organized for land speculation were the only chartered companies in America. Only six or seven joint-stock companies even existed up to the time of the Revolution14 (Sobel 14). The Crown in England more or less prohibited other industries, such as the development of the banking industry which will be discussed later, to develop in America. As a result of the lack of financial institutions in America, there was a lack of funds available for starting new businesses. As a further result, excess profits were then typically reinvested in family enterprises and any remaining money went to land speculation for agricultural purposes.

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14 Meyers, Margaret. "A Financial history of the United States." The New York Company for Settling a Fishery was chartered in 1675 by the Governor and Council of York; The Free Society of Traders was chartered in 1682 by the governor of Pennsylvania; The Philadelphia Contributorship for the Insuring of Houses from Loss by Fire was also chartered; The New London Society United for Trade and Commerce was chartered in Connecticut in 1732; The Union Wharf Company was chartered in 1760; also the Proprietors of Boston Pier was chartered in 1772.
Capital formation was a primary challenge to the colonists since the colonies always needed more than was available to them.

The colonists needed to be able to organize their own governmental structure if they were going to be able to develop into more than an agricultural society ruled by the British. They were also going to need to battle the Spanish and French settlers that had inhabited these lands. These settlers in America knew of little else in organizing this type of system than they had experienced in England. Using this model, the colonists developed a similar, smaller, governmental organizational structure to that in England which gave the colonists the stronger foundation they needed for the development of their colonies. Commerce slowly evolved as these colonies became more familiar with this and now the new nation was ripe to grow.

In 1752, one of the first visible changes in the business landscape of America came when a group of New York merchants organized an exchange for dealing in slaves similar to the crude market for land speculation. This became the first formal market in North America, located at the foot of Broad Street (Sobel 15). This was not the main form of industrialization in these colonies. The importance of trade between colonies continued and so did trade with England despite the beginnings of the struggles for power between the colonies and England. Due to this continuation of trade domestically and abroad, many industries along the East coast started to emerge.

Regardless, the agricultural industry was the first important industry to begin to flourish in these colonies. One of the important products produced was tobacco which was exported from Virginia to England within a decade after the settlement of Jamestown (Walton & Rockoff 44). Early travelers to America had returned samples of this weed to
England and a large demand followed for this product. Given that production of tobacco was relatively simple and commanded only land and a sufficient workforce to cultivate, the individuals of the American colonies were perfectly suited for this production. Rice and indigo also became strong exports as agricultural products. The demand for these products in England made joint-ventures for agricultural products very prosperous.

Following the successes in agriculture, animal skins, lumber, and ores became viewed as valuable commodities. These proved to be extremely important to further advancements for the later iron and steel industries. As members of these colonies worked together in many forms ranging from single families to large shops or mills, they commingled the extraction of the lumber, ores, and skins into a productive manufacturing industry. Labor remained the most important ingredient in the development of these industries. This was true even in light of the scarceness of available capital. Regardless, the commodities came to be more widely used and thus produced surplus profits for many of the colonists.

A final topic in the industrial transformation of these colonies is the development of the merchant marine. This group of colonists consisted of thousands of individuals who entered into the production of the goods previously mentioned and more importantly, the building of ships. Shipbuilding, which had important implications on the forthcoming Revolution, was a tremendous trading tool and helped continue the expansion of trade. These colonies, by the end of the colonial period, were able to sustain sizable trade with England and this furthered the large controversy between the old world in England and the New World in America.
American Revolution

The American Revolution is a historic event in that it freed this group of settlers from the British lock hold, and that it paved the beginnings of the great nation of America. Britain was not going to give up the powers they had over these colonies without a war. The strength of the colonies, in joining together to fight for the freedoms they had longed to hold, changed the entire economic landscape for trade prior to the nineteenth century. There were many reasons for the uprising from the colonies that resulted in the revolution. These colonies needed capital, freedom from the powerful ties England held on them, and a need to establish a foundation from which to grow their country socially, politically, and economically.

American colonies were governed in a fashion similar to the English Crown. The upper house was appointed by the Crown in England, but the lower house was elected by the adult males holding property in the American colonies. The significance of this structure is that the lower house was the only place where financial legislation could initiate for the colonies (Walton & Rockoff 106). When Parliament took over power from the Crown in 1690, few changes were witnessed concerning their relations with the Americas. Due to the distance between England and America, all laws being enacted by the colonies passed relatively freely without interference from England. This may leave one to assume there was a political and economical freedom for the colonists. This was true, for the most part, until 1763, but these “freedoms” were not truly existent and England had yet to enact their own laws that would later restrict these early freedoms.

British North America offered many comparative production advantages to that which were available in England. These advantages were overwhelmingly obvious in
agriculture, but these advantages were also witnessed in the shipbuilding industry. American shipbuilding was not curtailed by the British due to the fact that enforcement of legislation passed in England on America was an “annoyance” and thus did not alter the industrialization of the colonies. As England became privy to the advantages being enjoyed in America, Parliament began passing legislation that placed stronger restrictions on these colonies, concerning trade, that were beyond their control. These acts of legislation are classified into three distinct “crises which lead to the revolution,” as described in the book *The History of the American Economy*.

The first of these three crises involved the end of the Seven Years’ War between the English and French along with the Sugar and Stamp Acts. Britain was angered by the American colonist’s ingratitude as seen in their lack of assistance in fighting this war. Taxes in England were, comparatively, extremely high in attempts to finance the war while,

Despite their [the colonists] substantial wealth, the colonists at this time were still free riders of protection, receiving British defense at almost no cost. Taxes per capita in the colonies were among the lowest in the world, nearly 20 - 25 percent of taxes paid by English residents (Walton & Rockoff 110).

In response to this inadequacy, Parliament responded by passing these two laws to generate approximately one-tenth of the revenue needed. The specifics of these laws are not of the issue, rather the main importance falls in that these laws had far reaching implications for the colonists since these laws affected each colonist in some form. These effects threatened business, growth, and the previously mentioned “early freedoms.” Public response to these acts was answered with a repeal of the Stamp Act, but England
maintained the right to tax the colonies. England, still needing to raise revenues, had other leaders attempting to pass tax laws to raise revenues from these colonists.

The Second crisis leading to the revolution is witnessed by legislation enacted, and named after, Chancellor of the Exchequer Charles Townshend. In 1767, Townshend secured passage of several measures to pass "external" duties on such important articles of consumption as tea, glass, paper, and pigments for paint (Walton & Rockoff 112). These new laws angered the colonists so much due to the formality in their enactment. The structure and enforcement of these acts spurred widespread resistance amongst a large populous of Americans again and one well-known result was the Boston Massacre which left five dead. Trade diminished significantly due to these acts as shown by the fact that American imports fell to one-third of their normal level in 1769 (Walton & Rockoff 113). A similar result ensued as these acts, except the tea tax, were also repealed in 1770 as had happened with the Stamp Act. American trade again resumed and a new level of progress and achievements were reached by 1771 and continued through 1773.

The issue of monopoly power granted by Parliament leads us to the third crisis and rebellion of the colonists. The English East India Company had experienced financial difficulty and was helped with public funds from England. As well, the company was being granted a monopoly right for tea trade by Parliament as was typical of companies at this time. The Tea Act of 1773 allowed the East India Company to ship tea directly to the Americas without having to pay duties and other handling costs. One would assume that this would have benefited all involved. However, this eliminated the American importer from the trading spectrum which outraged the colonist merchants. Following the Boston Tea Party, a result of the outrage toward British policies, was the passage of the
Intolerable Acts during the summer of 1774 by Parliament. This was the third and, consequently, final straw to the American colonists as unfavorable acts continued to be passed against them.

The colonists refused to yield to the British until their basic needs and freedoms were restored. On the other hand, the rapid growth of the colonies was making them more than ever dependent on England for capital and for credit (Myers 23). The question now became a matter of whether economic progress would be best attained by urging independence within the colonies or by conformity with British rule. Each group of colonists had reason and individual motives for resisting British authority as expressed by the following passage.

A host of new taxes and regulations were enacted and strictly enforced by Britain. Though minor in terms of financial impact, they gave almost every colonist a grievance: debtors objected to the Currency Act; shippers and merchants to the Sugar Act; pioneers, to the Quebec Act; politicians, printers, and gamblers to the Stamp Act; retailers and smugglers to the Tea Act. (Walton & Rockoff 121)

The increasing industrial maturity and independence of the colonies appeared to have made complete independence from England virtually inevitable. This is shown by the statistic that America’s gross product was now roughly one-third of England’s compared to only about 4% in the early 1700’s. However, the fact remained the even at the outbreak of the Revolution, the amount owed to British creditors was estimated at $28,000,000, an amount nearly equal to the value of two years’ imports.\(^{15}\)

The revolution officially began on April 19, 1775, and continued for more than six years. When independence was declared in 1776, Americans had the choice to

\(^{15}\) Myers p. 23
either remain loyal to Great Britain with the protection of a mother country or the opportunity to give up these ties and become independent (Robertson 53). Colonists had chosen to seek independence as their means for political and economic freedom. Though the war itself posed many problems to all, the colonists were faced with yet another huge task. The colonists needed to organize a solid governmental structure. Under the Articles of Confederation, a government was structured similar to that previously held in England. In 1785, Congress established fundamental policies for property rights for dividing, distributing, and colonizing these western lands. After a crucial vote in New Hampshire late in 1788, the Articles were approved and were to be considered in effect by Congress beginning March 4, 1789.
Banking in America

Also during the late 1700's came the advancement of the banking industry in America. Since there were no commercial banks in the colonies before the Revolution, many of the better-known merchants carried on what were essentially banking operations in making loans and handling payments (Myers 13). There was a need for significant amounts of capital in this new nation.

Courts had to be set up with judges and clerks, roads had to be made, forts had to be constructed and equipped, prisons had to be built and staffed. Some of the expensive services of modern governments such as education and water supply were seldom demanded in the colonial period, but it was necessary for public officials to raise sums which were large in relation to the income...of a community so predominantly agricultural (Myers 15).

Colonies had been issuing paper notes in circulation to serve as a medium of exchange. Soon banks began to assume this role. The first institution to handle these paper note issues was the Pennsylvania Bank.

Individuals subscribed 300,000 pounds to this bank, but the men and women of America needed much more than this to repay the British. However, these funds arrived at a time when they were desperately needed in America (Burg 33). Ninety merchants and wealthy residents of Philadelphia had banded together in this effort which seems only to have delayed serious financial troubles temporarily. There was little significance surrounding the offering of this bank stock in the public arena since the bank was not officially chartered. However, the success of the mission of this bank helped set the tone for the banking industry in America. The accomplishments of Robert Morris and Alexander Hamilton brought true financial relief to America.
Robert Morris was a significant figure in the financing of the revolution. He was later appointed Superintendent of Finance under the Articles of Confederation and remained there until 1785. Morris had helped to establish and found the Bank of North America in Philadelphia in 1782. This bank was one of the first corporations chartered in the new United States. The bank was subscribed to in an issuance of 1,000 shares at $400 per share, which secured $400,000 in loanable capital. Like others, Morris claimed the bank would facilitate the war effort and promote prosperity after the nation secured independence (Burg 34). However, not all agreed with the legitimacy of this bank claiming it went against the Articles of Confederation.

Robert Morris again stepped in arguing that the country's dire need more than outweighed the concerns with the theoretical nuances (Myers 43). The success of this bank offered the government assistance through loans obtained to repay their debts with the British. Also noteworthy in the success of this bank was that it helped begin a flow of large amounts of capital from foreign lands since the financial outlook was now much brighter in America. One example of these large deposits to the United States banking system was the $1.25 million from Dutch lenders shortly after the bank received its charter.

The Bank of North America was established to issue notes providing loans to the government of the United States. Morris and his partners in the Bank of North America were successful with these issuances as well as their achievements with providing a relatively stable currency and financial structure for the new nation. Morris had long supported a strong, economically active central government that could create and
maintain a strong financial structure allowing for trade to move freely and for markets to operate in pursuit to increase national wealth (Robertson 55).

One of the reasons the issuance of debt by the American government was successful was that there had been numerous attempts to raise revenues through taxation. Taxation eventually became to standard, but in the beginning, government struggled with problems of collecting these taxes from its people which held very little money. The government had issued paper money to repay Britain while attempts were being made to collect the taxes. As the government continued to issue more specie, inflation became a problem. John Adams wrote to his wife in 1777 of this problem by saying, "Taxation as deep as possible is the only radical cure [to inflation]. I hope you will pay every tax that is brought to you, if you sell my books or clothes or oxen, or your cows, to pay it."16

Taxation was not a failure by any means. Rather, the importance of these bank loans to government brought about a channel for government to pay off its debt. This was viewed by many as the firm financial arm of government that was sorely needed. These actions also signaled the beginning of a battle for dominance in the arising financial centers of Philadelphia, Boston, and New York. Soon, the banking industry began to experience economies of scale after the success of the Bank of North America. The response to this first successfully chartered banking company was the establishment of the Bank of New York on Wall Street in 1784.17

Alexander Hamilton pioneered his ideas for the Bank of New York in part from a desire on the part of certain New York merchants for banking services like those provided

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17 The bank did not officially receive charter until 1791.
by the Bank of North America. Hamilton was quite attune to the needs of the financial community. A proposal had been submitted for a land bank in New York, but Hamilton feared that a bank capitalized on pledges of land would have dangerous weaknesses. The Bank of New York was his solution. He drafted the constitution and served as one of the original directors. The bank now holds its place in history as being the second state chartered bank in the United States second to the Bank of North America.

State authorities re-chartered banks, chartered new banks, enacted free banking laws, and expanded the capital of existing banks. Although the Constitution forbade the states to issue money, it did not prohibit this chartering of banks. These banks issued bank notes, which were claims to specie and therefore widely acceptable in payment. Bank notes were supposed to be convertible upon demand, but the banks only needed to hold a reserve of .2 or .3 against the notes (McCallum 313). As a result, the nation’s monetary medium was largely expanded thanks to the banks. A drawback from these practices came when the banks over issued notes against their reserves. Some claim that the Bank of New York had this problem, but regardless, they remain one of the main reasons why New York is the pinnacle of the financial community.

Hamilton had many other noteworthy accomplishments. Having served on the Continental Congress from 1782-1783 and as an independent lawyer for merchants’ interests, Hamilton was asked to represent New York at the convention in Annapolis in 1786. Later, Hamilton and fifty-four other men drafted a document during the constitutional convention of 1787 that organized the financial foundations of the nation. The document they drafted provided for the establishment of a government that would
undertake to pay its debts through taxation and to promote business by the use of its police and other forces (Sobel 17). Witnessing the success of the Bank of North America and the Bank of New York, in 1790 Hamilton proposed a nationally chartered bank.

Many opposed Hamilton’s suggestion to grant a national charter to a bank. However, the Bank of the United States, BUS as it became known, was granted a national charter in early 1791. The BUS was given a twenty year charter and Congress was given the stipulation that they would not grant a national charter to any more banks for the next twenty year period. This satisfied a majority of the concerns over the national charter and allowed for a significantly larger institution to handle the issuance of governmental debt securities. The bank became the country’s largest corporation, subscribed at $10 million dollars (Hummel 182). Its privileged connection with the national government, along with its monopoly on interstate branch banking, gave it a commanding position within the economy. The bank could issue up to $10 million in notes, and the federal government promised to receive the notes for all the payments. In addition, the bank became the primary depository for the funds of the national government (Hummel 181). The was now a clear, organized, and reliable system for which funds could circulate around the country.

The First Bank of the United States was not without their own problems of issuing more notes than they were able to hold reserves to meet the demands on those notes. After most of the twenty years had past which the BUS had held a charter, the United States were still far from being out of a debt crisis. There had been great demand for American exports during the Napoleonic wars in Europe which made many Americans

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18 It was at this convention that the Constitutional Convention was organized. From The Encyclopedia of American Business, P.239.
very wealthy (Myers 75). Suddenly, the situation changed. In a desperate effort to keep British and French troops from interfering with American ships and sailors, short of declaring war on one or either, President Jefferson proclaimed an embargo on most foreign trade (Myers 75). When war was actually declared in 1812, Congress had little choice but to find ways to collect revenue to meet specie demands and debt obligations.

The Treasury offered an eleven million dollar issue to the public in 1812 and another sixteen million dollar issue in 1813. Both of these issues were poorly subscribed to due largely to the demise of the a strong central bank they had in the BUS. If it were not for the large subscriptions of John Jacob Astor, Stephen Girard, and David Parish, the U.S. would have entered into serious problems at these early times. These funds helped the government get through some sticky times. Without the larger national bank, many smaller state banks arose, and it was with these smaller banks that the government deposited their funds.

The increase in smaller state banks meant that there were more banks that were able to float their own notes which increased the amount in circulation. Inflation was steadily increasing as is shown in the following table.

<table>
<thead>
<tr>
<th>Year</th>
<th>World Price Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1810</td>
<td>131</td>
</tr>
<tr>
<td>1811</td>
<td>126</td>
</tr>
<tr>
<td>1812</td>
<td>131</td>
</tr>
<tr>
<td>1813</td>
<td>162</td>
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<tr>
<td>1814</td>
<td>182</td>
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<tr>
<td>1815</td>
<td>170</td>
</tr>
<tr>
<td>1816</td>
<td>151</td>
</tr>
<tr>
<td>1817</td>
<td>151</td>
</tr>
<tr>
<td>1818</td>
<td>147</td>
</tr>
<tr>
<td>1819</td>
<td>125</td>
</tr>
</tbody>
</table>

Found in McCallum (p.314) 1910-1914=100, Series compiled by Warren & Pearson, reported in *Historical Stats of the U.S.*
More than ever, the government needed to find a way to curb this inflation. Demand for specie increased and these smaller banks were not able to meet this demand. A breakdown in the banking system finally occurred in 1814 when the British attacked Washington in April of that year. Many banks were suspended and many more were closed.

The treaty of peace that was signed six months later reduced federal expenses and income gradually increased (Myers 82). After several bank proposals had been brought before Congress, finally one found the support of a majority. This proposal was for the Second Bank of the United States. There were few differences between this bank and the first BUS. The main difference was that this issuance was for $35 million compared to the previous $10 million. The main reason for this bank passing Congress was they had been assured by the current banks in existence that there would not be an immediate demand for specie on the bank. It is interesting to note that there was not a debate in Congress over the constitutionality of this nationally chartered bank since previously this was a significant sticking point. This seems to suggest the extreme importance of chartering of this bank.

Suffice to say, a financial structure, political freedom, and economic independence were eventually achieved in America. The nation’s banking industry, which emerged in the late eighteenth century, continued to grow steadily during most of the nineteenth century as can be seen in the following table.
<table>
<thead>
<tr>
<th>Year</th>
<th>National Banks</th>
<th>Non-National Banks</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1834</td>
<td>---</td>
<td>506</td>
<td>506</td>
</tr>
<tr>
<td>1840</td>
<td>---</td>
<td>901</td>
<td>901</td>
</tr>
<tr>
<td>1850</td>
<td>---</td>
<td>824</td>
<td>824</td>
</tr>
<tr>
<td>1860</td>
<td>---</td>
<td>1,562</td>
<td>1,562</td>
</tr>
<tr>
<td>1870</td>
<td>1,612</td>
<td>325</td>
<td>1,937</td>
</tr>
<tr>
<td>1880</td>
<td>2,076</td>
<td>1,279</td>
<td>3,355</td>
</tr>
<tr>
<td>1890</td>
<td>3,484</td>
<td>4,717</td>
<td>8,201</td>
</tr>
<tr>
<td>1900</td>
<td>3,731</td>
<td>9,322</td>
<td>13,053</td>
</tr>
<tr>
<td>1910</td>
<td>7,138</td>
<td>18,013</td>
<td>25,151</td>
</tr>
</tbody>
</table>


These colonists were well on their way to attaining economic growth as a new and powerful nation. As well, the nation was now organized enough to be able to facilitate a financial market for more than just governmental obligations. In doing so, they created the greatest market for capital formation ever to be developed.
Creation of Markets

America’s first sustained and regular securities trading market arose in the bonds issued by the states and the Continental Congress to finance the Revolutionary War (Werner 13). As America recovered further from the war, trading advanced and inflows of money from Europe found a home in American securities. This is largely attributable in part to Hamilton’s plan to establish financial integrity and federal supremacy of the infant United States government with the authorization of three new bonds issues to redeem the debts of the national and state governments (Werner 13). Prospects for the American economy brightened as foreign capital flowed to the nation and these bond prices rose.

The government’s bonds were the only issues of significance in the financial community. It was the success of these bond issues by government that spurred the expansion of issues for corporate entities. New York became the temporary capitol of the new government as the first Congress settled in Federal Hall around early 1790. Alexander Hamilton took up residence near this spot on Wall and Water Street. The location of his living arrangements were significant in that they symbolized the informal partnership between government and business. Senators and members of Congress sat with brokers and businessmen in coffee-houses, and each learned the views of the other (Sobel 17). Since this location was convenient and accessible, it soon became home to first organized securities transactions.

Until the times when the Tontine Coffee-House emerged as an indoor location for security sales, all transactions had taken place outdoors. The brokers, bankers, and traders had begun outdoor dealings for a good reason. In the beginning at least, these transactions
were only carried on for a few months of the year so there was no need for a permanent home (Sobel-3, 3). When securities took on a more important role, as with the governmental debt issues, the brokerage business became a full-time occupation. The later move indoors only signaled the enhanced status of these activities in society.

When joint-stock ventures were first used in Europe, their shares were issued for sale and usually held to duration. This was also largely the practice in America until the turn of the nineteenth century. The majority of the securities issued were as new offerings. It was until early 1792 when William Duer, wealthy merchant and friend of Robert Morris, had to sell a large amount of his securities that this practice of holding shares for the duration of the company's existence would end. Had this practice never ceased, the financial markets in America would be tremendously altered from their current state of affairs.

William Duer was notorious for his trading practices and seems to have been the one of the first large speculators to adhere to the greater fool theory of stock trading (Werner 17). Duer was known in European banking circles as a master of finance as well as a close friend of Alexander Hamilton.²⁰ His trading practices centered on the fact that any price paid for a stock cannot be considered too high if someone will later pay more for it than you had paid. With his close ties to Hamilton, and his position as assistant to the Secretary of the Treasury Robert Morris, came close ties to information that was not widely known. There existed no laws governing the use of ‘insider information’ during these times, so his practices were not illegal. However, there is an ethical argument to be made from his amassing wealth on these practices.

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In the beginnings of the securities market, shares would initially be sold to investors through auctions. The auction was the means of gathering all interested parties for investing in a particular security. Now, there was a need for an auction of ‘old’ securities since investors were desiring to sell their shares before a venture or company had accomplished their purpose. Not to undermine Duer, he was a savvy investor who took advantage of chances he saw to make profits. A more correct way to describe Duer’s financial knowledge would be to say that he pioneered the trading practice. An example of his additions to the trading of securities is written in the book *The Panic on Wall Street*, by Robert Sobel.

Speculators would borrow stock from its holders, paying a fixed amount of money for the privilege and promising to return it within a fixed number of months. The borrowed stock would be sold, and the funds gained used to purchase other issues. When the due date arrived, the borrower would sell out his position, and repurchase the borrowed stock. If the latter rose more than the former (taking interest into account) he made money; if not, he lost (17).

The auction was organized in the following way:

In order to sell his holdings, the owner would contact an auctioneer and deposit the certificates with him for sale. Buyers, having been informed of the sale would congregate at the auctioneer’s table to bid on the securities. The auctioneer would call out the name of the security and its denomination, the terms of sale, and the date of delivery…While transactions were taking place, other buyers and sellers would congregate in the back of the room, haggling over stocks not offered by the auctioneers (Sobel 20).

The auctions were scheduled irregularly, but in general, there was two sessions: one in the morning and one in the afternoon. As demand increased so did the publicity of these auctions. Newspapers began carrying reports of the sales, along with stock lists and bid

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and ask prices. Soon the small room used for these auctions became too small to accommodate the brokers and their customers (Sobel 20).

In performing these transactions for the public, the broker would earn a commission for their services. The brokers helped to facilitate these auctions by taking orders from individuals and then making their transaction at these auctions. This helped to make the auctions more formal and structured without such a hectic nature as would have been the case if the brokers had not facilitated these purchases. However, a struggle emerged between the auctioneer and the broker. Auctioneers could have acted against the interests of these brokers by allowing the public to participate in their auctions without the aid of the broker, or by dealing with them privately (Werner 21). The struggle never turned into a battle since it was easier for an auctioneer to complete trades by working together with these brokers than by dealing directly with members of the public.

To help assure the brokers that problems of this nature would not resurface, a group of several leading brokers organized to establish a guild of securities professionals. In writing the Corre's Hotel Pact, known as the 1792 Buttonwood Agreement, the brokers organized the New York securities market as a definite institution.

We the subscribers, Brokers for the Purchase and Sale of Public Stock, do hereby solemnly promise and pledge ourselves to each other, that we will not buy or sell from this day for any person whatsoever, any kind of Public Stock at a less rate than one quarter per cent Commission on the Specie value, and that we will give a preference to each other in our Negotiations. In Testimony whereof we have set our hands this 17th day of May at New York, 1792.

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21 This is the name given to the pact signed by 27 brokers while at the Corre's Hotel in New York.
This agreement lacked a notion to where their actions would take place. Some historical accounts tell a story that brokers ceased participation with the auctioneers, while others claim otherwise. Nonetheless, this agreement holds its place in history as an organizational foundation for investment professionals’ actions. The first formal transactions in this new market were held at Merchant’s Coffee-House, but this too became too small to house the needs of all interested parties. Through an initial public offering (IPO) of 203 shares valued at $200 a share, the Tontine Coffee-House was erected at the cross section of Water and Wall Streets.

Security speculation in these times did not hold the spotlight. The nation was still largely agrarian and any security transaction was taken on more for the sake of gambling than for investment. Farmers were more apt to place excess earnings into their business than into shares. The only securities that kept the Tontine active were banks, insurance companies, and state debt obligations. This remained the case until after the War of 1812 due to the agrarian nature of commerce and the issue of liability in owning shares. Despite the discouraging drawbacks, corporations were formed with increasing frequency during the Federalist and Jeffersonian periods (Sobel 23).

The increase in issues by banks and insurance companies was to be expected since the new nation needed money for expansion and the amount of gold in the nation and state treasuries were negligible. Since banks had the ability to issue bank notes, which inflated the currency, the establishment of more banks was not a surprise. There were also many individuals with hopes that these banks would act to bolster the local economy and provide for capital expansion. Still, none of these issues had more activity in their trading than government debt obligations. The total volume of their sales exceeded the combined
volume of all banks and insurance companies in New York, Philadelphia, and Boston in 1810-1820 (Sobel 25). The race was on among the three cities to generate more business from government and to become the financial pinnacle of the new nation.

All the banks would bid for the same federal, state and private bond issues and each of the exchanges in the cities claimed leadership for the entire nation when received (Sobel 30). The influx of capital from Europe was mainly flowing to Philadelphia since the Tontine was not as organized. It was then decided by the brokers in New York that they would form a new organization modeled after that in Philadelphia. On February 25, 1817, twenty-eight brokers from seven firms gathered and drafted a constitution very similar to that in Philadelphia for what was to be named the New York Stock and Exchange Board. This group of brokers resolved,

That it is desirable to constitute a Board or Association of Brokers in this city for the transaction of their business at their Board, and that a committee of three be appointed to draw up a report, at another meeting articles of association (Werner 28).

At this meeting, Nathan Prime was designated president and a few days later, on March 8, the New York Stock & Exchange Board was born. The days of coffee-houses and wild speculation seemed to be over and with these changes came more credibility to Wall Street. New York now had more banks, if not only larger ones, than those in Philadelphia. Also, after a few years of operation, New York now had a significantly stronger exchange and was quickly becoming the financial center of the United States.
Canals, Rails, and Early Trading

The markets did not change much for the next few decades in regards to their operations or competition from others. The activity that took place over the this time period is of great significance to the markets importance in the economy and the economy itself. These were the times of great advances in our nation and there were many individuals that were able to utilize this market structure to further the advancement. These great strides in America began with the innovations in transportation, namely the canals.

Towards the end of 1817, many in Europe became eager for better returns than were available at home. They began to look at the exotic stocks in America. At first these funds went to buy familiar state bonds, but the turn occurred with the canal mania. Canal building and operations were the glamour industries of the postwar period (Sobel 32). Everywhere two bodies of water existed, the desire emerged to bridge the gap by building a canal. Though many were failures, the activity and financing brought by these canal issues spurred economic growth and encouraged more foreign investment.

Capital practically flowed into every canal issue in the marketplace from foreign investors. Share prices raced skyward and foreign banking houses instructed their agents to buy up older issues as well as those of newly chartered companies (Sobel 34). The amazing success of the Erie Canal and the competitive rivalry among cities and regions for commercial traffic and economic growth generated many unprofitable investments in canals (Walton & Rockoff 180). The 1820’s saw a continuation of the massive bull run, yet more and more people were being sucked into unsound companies to cure their speculative craze. “For every European who made a fortune in American investments,
dozens lost everything." In total, from 1815-1843 thirty-one million dollars of investments were used in canal building (Walton & Rockoff 180). Three-fourths of this money came from governments. This was positive in light of political support for growth, but had poor results when the depression arose in the 1840’s when many states had to suspend payments on their debts. Many of the tremendous mistakes made during the canal era would have proved preposterous had it not been for the development of the railroad at the same time.

In 1831, securities prices and trading volume again rose noticeably, particularly in the newly-introduced railroad issues (Myers 40). The poor returns on a large portion of the canals, made investment in rail issues more difficult than had been experienced with the canals. Speculative urges again brought needed capital to Wall and Chestnut Streets and soon many of these shares traded regularly with the banks, insurance companies, and the successful canal issues. There were many in the investment community that manipulated trading in these rails issues and kept the markets away from the faint of heart. A Senator from the New York legislature sold short shares of Harlem Railroad in the mid-1830’s while holding a key piece of legislation that would hurt this company. After his transaction he sent this legislation through causing this stock price to crumble (Werner 41). He was later expelled from the senate for these actions, yet this added to the fears of market speculation.

As failure became more probable for the more speculative investments, some members of the New York Board were found to be telling nonmembers of their customers’ activities. This practice pinpointed the market leaders and eased predicting

23 Lewis, Corey The House of Morgan (New York) 1930 p45
movements in their actions (Sobel 38). Due to this information and other fallacies of some operations, the Board decided to scrap the original constitution and begin a redraft. Along with this large change, the brokers also moved office to more lavish quarters in the Merchants’ Exchange on Exchange Place and Wall Street hoping to turn the tide on the attitude about the market.

The opening of the new Merchant’s Exchange placed stocks in greater demand and share prices soared in 1835. Speculation became heavy and street sales became increasingly profitable. The stepped up volume led to a widening of the market. In 1836, there were thirty-eight banks, thirty-two insurance firms, twenty-one rails, four canals, and three gas companies having shares traded on the board (Sobel 44). During the same year the boom began to level off and though stocks still moved up, they did so at a slower pace. Economic activity had begun to spread west with these rails and canals which helped economic expansion, but with economic activity still largely agrarian, those problems halted the progress. The late 1830’s saw many crop failures coupled with the previously mentioned decline in successful rail and canal issues. The greatest bull market up to that time was about to come to an end.

As more of these failures were being announced, selling waves began appearing on the auctions. More and more stocks began to fall below their par values and soon all stocks followed them downward. Many in America were hoping for another influx of foreign capital, but Europe was experiencing their own depression during the 1840’s. One item seems to have been a glimmer of hope during this depression. Samuel F. B. Morse developed the first practical telegraph that had hopes to link large cities by telegraph. Though it took ten years to scrape up enough capital to construct a line, in 1842 this line
was constructed between Baltimore and Washington. Following this success, Magnetic Telegraph Company was formed in 1844 to operate a line between Philadelphia and New York (Sobel 52). Though this invention itself did not end the new bearish trend in the markets, it did have many tremendous implications for the future of the securities industry.

Transportation in rails and canals had been the scope of the decades of the 1820’s and 1830’s, but now transportation of information held the spotlight. This telegraph between Philadelphia and New York allowed Wall Street prices to be quoted the same day on Chestnut Street. The need for two major auctions was no longer a concern as more activity and authority came to Wall Street. By the mid-1850’s there were over fifty telegraph companies in operation and by the end of the decade, Wall Street was connected to every important American city while setting prices for them all (Sobel 53). These telegraphs, and express delivery companies,24 paved the way for the nationwide purchase and delivery of shares traded at the New York market. A further result was witnessed when shares in New York’s market were being quoted in leading newspapers across the country as business news now became a feature of many journals.

The rescuer of the 1840’s bear market came with the news of the 1849 gold rush in California. Wall Street brokers and speculators alike were fascinated by the rumors from the West. European investors, which had long been resistant to begin investing in American securities, found these rumors of huge profits to be more than interesting. Mining shares did not initially sell on the Board. Instead these shares found their way to

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24 Express delivery companies, such as Western Union, were of importance because they delivered the physical units which were being traded over these telegraphs.
the street markets where thousands of shares were traded each day (Sobel 55). New York brokers realized that for these mining companies to be successful, rails would need to be built to bring this gold back to the rest of the nation. The result was a second wave of rail speculation.

Banks became more than generous in helping the development of the West with loans to rails, mining, telegraph, and express companies. Notes, loans, and deposits totaled $538 million in 1848 and reached $950 million by 1854 and later jumped to $1,042 million in 1856 (Sobel 55). Unlike previous speculative crazes as the tulip craze, the gold ventures turned out to be true as shipments made their way to New York on a regular monthly basis. More banks were being thrown up each week in New York in the early 1850’s to meet the needs for the much eager ventures. With the great inflow of new ventures, most of the investment capital was taken up by the new issues. This left a majority of the common stocks out of the prosperity for the nation. The table below shows the number of securities outstanding in 1856 as reprinted from Hedge’s book

**Commercial Banking and the Stock Market Before 1863:**

<table>
<thead>
<tr>
<th>Security Type</th>
<th>Number of Issues</th>
<th>Amount (Dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Railroad Stocks</td>
<td>360</td>
<td>433,286,000</td>
</tr>
<tr>
<td>Railroad Bonds</td>
<td>360</td>
<td>363,137,000</td>
</tr>
<tr>
<td>Bank Stocks</td>
<td>985</td>
<td>266,137,000</td>
</tr>
<tr>
<td>State Bonds</td>
<td>31</td>
<td>190,718,000</td>
</tr>
<tr>
<td>City/Town Bonds</td>
<td>113</td>
<td>79,352,000</td>
</tr>
<tr>
<td>United States Bonds</td>
<td>1</td>
<td>30,737,000</td>
</tr>
<tr>
<td>Canal Stocks</td>
<td>16</td>
<td>25,888,000</td>
</tr>
<tr>
<td>Canal Bonds</td>
<td>16</td>
<td>22,130,000</td>
</tr>
<tr>
<td>County Bonds</td>
<td>347</td>
<td>13,928,000</td>
</tr>
<tr>
<td>Insurance Stocks</td>
<td>75</td>
<td>12,829,000</td>
</tr>
<tr>
<td>Misc. Stocks/Bonds</td>
<td>30</td>
<td>18,783,000</td>
</tr>
</tbody>
</table>
The economy in general was on a great expansion. Yet, the securities markets were hampered by the fact that the lines of credit at banks had been drawn to the hilt. A series of bank contractions in the West caused sharp declines on Wall Street. The immediate spark of the crisis of 1857 was the failure of the Ohio Life Insurance and Trust Company (Meyer & Gustafson 126). This company, having been known as one of the most conservative banks, had been heavily invested in rails. When the downturn occurred in the rail shares, the bank was too deep in paper losses to match deposits and make loans. Adding to the disappointments and panic was the startup of a mining exchange by some curb brokers. This exchange soon listed a fair number of shares, but ended when the panic came in 1857 when gold shares began to lose their luster. Along with the fall in the price of gold shares were the fall in shares of bank stocks, rail issues, as well as all the others. Though this happened in an orderly fashion, the roughly 200,000 shareholders in America at that time liquidated their portfolios in the late months of 1857.

As in 1837, the downturn in the markets left few unscathed. This crash had been less severe, but since more people were holding securities in these times than in the previous period, the damages were widespread. The requirements to gain entrance to the New York Stock Exchange Board had been high. Now, with many of the long-standing, older members of the Exchange Board departing due to huge paper losses or death, the Board had no other choice than to accept a younger class of individuals. This led to what has been called the most exciting, lawless, and unscrupulous period in American finance.\textsuperscript{25}

\textsuperscript{25} Sobel *The Big Board* pp.63
Market Expansion and the Rise of Investment Banking

There was a spree of new inventions and innovations entering the marketplace such as William Kelly's patent for the conversion of iron to steel, the first mail delivery to the West coast, the passenger elevator, and electric lights. But, these inventions seemed to have a small impact on Wall Street as brokers took little interest due to the thoughts of war. The rumors of war sent most stock prices downward as brokers continued to leave financial communities. When Fort Sumter was shelled on April 12, 1861, marking the beginning of the Civil War, news of the fighting came to a Wall Street that had operated under a war mentality for months (Sobel 67). The result on the financial community was an expansion in the number of exchanges.

Patriotism was the word of the day and members of the New York Stock & Exchange Board fully supported their troops. On May 11, 1861, the Board published another of their many resolutions during this period:

Resolved, That the members of the New York Stock and Exchange Board hereby pledge themselves not to deal in, or negotiate the bonds, stocks, or other securities of any state or states which have been issued subsequent to the date of any act or declaration of secession by the authorities of such states, and any member of the Exchange violating this rule shall be expelled (Sobel 68).

Stock prices did not move sharply upwards or downward except for some exotic securities such as Panama Railroad and Pacific Mail Steamship Company. When the withdrawal of southern brokers, customers, and money did not have the bearish effect that was expected during the war, securities began to pick up in 1862.

February of 1862 brought the initial issue of greenbacks which were backed only by the credit of the government and were not convertible into gold. Trading in gold was
extremely active in wartime, especially near Gilpin’s News Room were news of victory or defeat would first be heard. The greenbacks initially traded at a discount to gold and so, there was an easy way to make money of the news from the warfront. Here is an example:

When Union victories made it seem that the North would win the war, and thus be able to redeem the greenbacks in gold, the price of gold in relation to paper would decline. Confederate victories, which might mean a dissolution of the Union and a repudiation of obligations by the North, caused the price to rise (Sobel 73).

As the news rolled in, many are known to have lost or made fortunes in a matter of minutes.

All of this trading took place at exchanges other than the New York Stock & Exchange Board. The reasoning was that Board members felt that wagering against Union victories was wrong and several resolutions were passed to prohibit such activities by Board members. Other exchanges that allowed gold trading were very alive with action. Information was paramount, as several private wires would bring in news prior to its reaching Washington. Some even went as far as to have spies at the Confederate camps to gain an advantage in the gold trading. The ebbs and flows in gold prices became the barometer of the war and close observation could almost predict the next step in fighting the war.

This eagerness to participate in gold trading led to the opening of many new auction houses for the trading in gold, but also for the speculation in other commodities. Some of the exchanges to open in the mid 1860’s included the Mining Exchange, the Petroleum Board, and Godwin’s Room.26 The most important of these new exchanges, in

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terms of its effect on the Board, was yet another exchange by the name of "The Open Board of Stock Brokers" (Sobel 77). This Open Board operated between the hours of 8:30 - 5:00 which attracted many people since each security with a listing on the Open Board had a specified trading post and could be traded any time during the hours of business. The Open Board soon controlled most of the volume of all the exchanges combined. While this had taken place, all the shouts of war had ceased.

This rising interest in gold trading helped make investments more commonplace around the nation and more individuals were known for participating in the marketplace for securities. From this increased activity in securities trading, these new exchanges grew steadily. The New York Stock & Exchange Board was found wanting in terms of speed, facilities, and daring, as well as the fact that they only dealt in one security at a time (Sobel 72). Having only one auction per day, per security, on this Board was no longer acceptable to this larger group of investors. As a result, many investors would go elsewhere to buy and sell after the security had been called on the New York Board.

During the half of a century that lay between the end of the one great war and the beginning of another, the American economy assumed many of its modern characteristics. The most impressive change was the shift from an agricultural to an industrial economy (Walton & Rockoff 344). A census report of the 1890's showed that manufacturing output was greater in dollar value than that of agriculture. Following, in 1900, the annual value of manufacturers was twice that of agricultural products.

Leading up to these changes were some great changes in the development of the American securities markets. The old Board renamed themselves the New York Stock Exchange (NYSE) on January 29, 1863. Now the lone, major competitor was the Open
Board. Transactions were soon funneled to the NYSE with the help of James Cooke, a prominent figure in the banking community, as the Atlantic cable was finally completed in 1866. Cooke took advantage of this new cable to connect an office in London to that in New York thus transferring numerous transactions in government bonds and rails from Europe to New York. By 1867, activity on Wall Street returned to where it had been during the war. The following year saw three billion dollars worth of securities traded at the Exchange, while a larger volume was handled at the Open board, and still more at the curb (Sobel 82).

The Open Board moved from the Long Room, where they had operated since inception, to their own building where they continued to handle the largest portion of organized sales in New York. Desiring the prestige of the New York Stock Exchange, many members of the Open Board bid for seats on the NYSE. Merger talks began immediately to join the two Boards. On May 8, 1869, the two organizations joined successfully into a single securities exchange, with membership of 1,060 (Sobel 86). A new constitution was written and ratified as well as the organization of strict listing requirements. This centralization of the majority of securities dealings greatly helped the structure of market activities.

A majority of the investment activities up to this time had been in bonds of incorporated companies. Banks of all kinds had been ‘underwriting’ these bond issues which represented loans made to the company with a guaranteed interest payable at a specified time. Securities on the other hand were created and sold by investment banks and represented a share of ownership in the company. The banks that existed in America were mainly involved with commercial banking activities. These activities mainly
involved short-term loans that were secured by the goods themselves as collateral. Few banks had the resources to back large-scale projects, and none had the resources for more than minor business developments (Schweikart 61). Even when these banks took on large bond underwritings, such as the canal and rail boom periods, the bank merely facilitated the bond sales and usually did not underwrite the actual activities of the company.

The investment bank was the resulting entity that emerged to handle these larger underwritings. Although no laws existed to prohibit commercial banks from investment banking, or vice versa, each type of bank remained relatively confined to its own specialty (Schwieckart 61). Investment bankers were not new on the scene. The reason their appearance here is so significant is that the expansion of industry reached a size beyond the resources of individual entrepreneurs or banks. The movement for consolidation reached a stage where the services of a central investment house became necessary to handle the finance involved (Sobel 108). Even the powerful industrial barons as Rockefeller, Vanderbilt, and Carnegie found it difficult to function without the aid of the investment bankers and soon the power shifted.

During these times of war, the previously mentioned James Cooke stepped on the scene. He came to be known as the most prominent investment banker until the times of J.P. Morgan. Cooke is most highly noted for the floatation of $500 million worth of government bonds in one issue. These notes were callable in five years, matured in twenty, and paid a six percent interest rate. Realizing that during these times, it was next to impossible for Cooke to handle the issue by himself, he organized a syndicate of the strongest investment houses of the times to distribute the issue. Two-thousand five-hundred agents were assigned to the distribution. The role of these investment bankers
had been one of always being able to serve, but not as solicitors of new issues. This new role helped introduce stocks and bonds to places of the nation that to this time, had been unfamiliar with these investments. In addition, the fact that the syndicate’s first venture was in government bonds was symbolic of the growing influence that Washington had on the securities market in particular and the economy overall (Sobel 70).

Also furthering the developments of the markets was the patent approval of the “ticker.” E.A. Calahan, an operator for American Telegraph Company, developed this product which allowed brokers to work out of an office and get prices rather than having to wait on the floors to have prices come over the wires. Soon every major house had a crude battery powered machine. Five years later the Exchange took control over Commercial Telegraph and reorganized it as the New York Quotation Company. Additionally, in 1892, the governors established their right to select telegraph companies to distribute quotations (Sobel 87). Finally, there was the addition of the telephone which also helped to replace the hectic nature of the floor of the exchange and further allowed people to buy and sell away from the floor.

All was not roses in the markets in the coming years. Cooke & Co. had found itself in a financial hole after Cooke’s house had failed to market Northern Pacific bonds holding them all to their own firm. Falling into bankruptcy, Cooke & Company found themselves needing to float this issue to remain solvent. When the public did not respond to their issuance, they had no other choice than to declare bankruptcy. Cooke & Co. had become known and one of the strongest and most solid institutions of the times and upon this news, shares of all sorts began to tumble.
The Exchange closed for ten days in response to the immediate dropping in shares. This added to the panic since a closing of a security market had not occurred during the life of the markets. Soon runs on many banks proved deadly and heightened the panic. President Grant and Secretary of Treasury William Richardson issued more currency into the nation in an attempt to stabilize gold prices. An account of the activity shows the huge sums of funds that were needed to stabilize the markets.

Vanderbilt, an expert on watering and stock manipulation,...offered to deposit $10 million with the subtreasury if the Government would make deposits of $20-40 million in various New York banks as a sign of its trust and as a guarantee of payments: Wall Street was bargaining with Washington on equal terms. Grant rejected this proposal and instead directed Richardson to begin buying government bonds on the open market. Within the next four days $13 million worth were purchased. This action served to support bond prices, but it did not stop the panic, and the treasury was soon forced to stop purchases due to a lack of funds. Grant’s action replaced some of the money that had been hoarded and helped the banks remain solvent for a while longer. As a means of supporting and injecting confidence into the money market, however, it was a failure (Lane 276-7).^27

The panic in 1873 sent the economy into a recession that lasted seven years. The fall in prices was aided by extensive monetary policy movements, but did not level matters of the economy in any great state during the 1870’s. Three million were jobless in that year and 23,000 commercial and industrial failures were recorded. The securities markets showed the pains of the depression and remained so until the recovery seven years later.

In 1879, for the first time, Wall Street began marketing foreign bonds in sizable amounts. An issue of $3 million in Providence of Quebec bonds was floated successfully

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27 Reprint from copy in Sobel p.99
that year, and others followed (Sobel 105). This led to the end of the United States being known as a capital-importing nation to that of a capital exporting nation. Also helping to lead the nation out of depression was the announcement that after January 1, 1879, greenbacks would be fully convertible to gold. Many feared that having to decrease the amount of greenbacks in circulation from $382 million to $300 million would cause a depletion of greenbacks in circulation and a run on gold. To everyone’s surprise, only $135,000 in paper was redeemed for coin on that day and $400,000 in gold was exchanged for notes (Bining 446). 28 This showed the strength of the dollar and optimism returned to Wall Street.

In the aftermath of the depression, the advancement of industrialization continued. The shift that already had begin to evolve from the agrarian society to that of an industrial society was aided by the entrance of the investment banker. Many fortunes had been made and lost in the 1860’s and 70’s. To calm the fears of many individuals, some astute, not to mention wealthy, investors of the time arrived on the scene to underwrite more industrialized companies as had been done with the canals, rails, and manufacturers of the previous period. This began the era of the great investment bankers that we know today.

J. Piermont Morgan, a hallmark name in the field of investment banking, may be noted for one of the first significant underwritings. William Vanderbilt, who later inherited over $100 million from his father Cornelius’ death in 1885, approached Morgan in 1879 to save control of the New York Central for the family by marketing stock overseas. This needed to be done without affecting the price in New York (Sobel 108).

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28 Reprint from Sobel The Big Board p.107, from Bining Rise of American Economic Life p.446.
Though a daunting task, Morgan floated 350,000 shares in Great Britain without causing the price to fall a single point (Robertson 147).

Soon after, J.P. Morgan merged with Drexel & Company in 1871 (Morgan 5). Drexel, Morgan & Co. emerged as a leader in a class with James Cooke in America. Later, Drexel Morgan was succeeded by J.P. Morgan & Co. in 1895, which made Morgan the most powerful man in the nation.29 Other underwriters were around, though none as significant as Morgan.

Kuhn, Loeb & Co. owned an industrial underwriting firm before Morgan, and had several manufacturing concerns and steel companies by the mid eighties. Another large firm was Kidder, Peabody & Co. which was a leading house and known for being the first to underwrite issues of American Telephone & Telegraph. Other largely known names in our times had origins during this era. Marcus Goldman and Samuel Sachs formed a partnership in 1882. Lehman Brothers formed an investment house after the Civil War. All told, there were approximately two dozen underwriting concerns on Wall Street by the early 1880's.

The success of the big business boom was largely attributable to the investment bankers. Similarly, Wall Street shared in the success that was brought to the economy from many successful underwritings. The New York Stock Exchange was never again to be challenged by a rival organization (Sobel 114). The Exchange also held prestige by the fact that almost all companies regarded listing at the Exchange as having “arrived.” No major changes occurred for the remainder of this period at the Exchange as they were content to bask in their successes.

29 Sobel, Robert. The Big Board. p. 110-111
Banking Reform and the Creation of the Federal Reserve System

The distinction between commercial banks and investment banks was becoming clearer. But, the advent of banking affiliates to underwrite and trade in securities clouded the distinction. Dating back into the mid 1800's, trusts began to emerge. These were large sums of money entrusted to banks on behalf on wealthy individuals to be managed by the banks. Trust activities were to main reason for the emergence of the security affiliates and influenced banks to begin to engage in market transactions on behalf of these trusts. The first few decades of the twentieth century saw a tremendous overhaul in the banking industry. A large portion of these reforms came as a result of the much needed distinction between the investment banks and commercial banks during the depressions of these decades.

During the Panic of 1907, the stock markets shook. J.P. Morgan stepped in to attempt to quell the money markets, lending $25 million at 10% interest to New York banks (outlending the Treasury which had only deposited $19 million in those banks during the crisis) (Schwiekart xiv). This proved that no individual or even group of banks could act to aid the economy without some reform in the banking industry. The 1907 banking panic showed the inadequacies of the national banking system and its primary weakness of an inelasticity of supply of currency (Williams 41). Without the explicit power to print new currency, the Treasury found it difficult to deal with fluctuations in the demand for currency. Congress passed the Aldrich-Vreeland Act in 1908 to provide an emergency issuance of currency by a group of banks to handle temporary demand increases. For the longer term, this act established a National Monetary Commission to look into addressing these problems.
The result, after much debate in Congress, was the passing of the Federal Reserve Act on December 23, 1913. The Act established

twelve Federal Reserve districts with a Reserve Bank in each district. Federal Reserve Banks were owned by the member banks of the Federal Reserve System and controlled by directors, the majority of whom were chosen by member banks...The Federal Reserve Board had the power to define the character of paper eligible to be used as collateral against which member banks could borrow from Federal Reserve Banks (short-term discounting), to determine discount rates set by the Federal Reserve Banks, to appoint one-third of the Federal Reserve Bank directors, and to levy annual assessments on the Reserve banks to cover the Board's expenses. The act provided a more flexible currency system by creating Federal Reserve notes. A member bank desiring to augment its supply of currency could obtain Federal Reserve notes by rediscounting commercial paper (Williams 43).

This Act placed banks into a category; either a bank was to become a member bank, as was required of national banks, or they could opt to remain autonomous. The autonomy was not something to boast about as member bank status now held a certain amount of prestige as well as some protection in the ability to borrow from the Federal Reserve.

The Reserve Banks exercised their powers to regulate the money supply through the discounting to member banks. To expand credit the Reserve Banks lowered the discount rate, to contract credit they increased it. This tool of the Fed had tremendous implications and offered a tremendous hope for a stability of currency. However, the Federal Reserve Act was lacking in many facets in the banking reform era. Three issues that needed to be resolved were the notion of deposit insurance, trust activities, and interstate banking.

As the first World War was beginning to develop in Europe, a financial crisis erupted domestically and abroad. Stock exchanges in London and other European countries were inundated with sell orders trying to convert their securities into cash.
These sales of American securities needed to be financed by gold outflows or increased export receipts. Despite a tremendous wheat crop in America, exports were reduced to extremely low levels due to the increased risk of transporting these items overseas. There was no insurance mechanism for the deposits or loans of the commercial banks. Farm-state banks, which faced severe difficulties as farmers defaulted on their loans, had made an attempt to organize a deposit insurance entity.

Oklahoma was the first to attempt this voluntary deposit insurance program for state-chartered banks (Schweikart xvi). Other banks followed this lead, but this poorly designed deposit guaranty law proved disastrous. Not only did this attempt fail, but it also delayed real reform by making legislators think that deposit insurance could take place on this level. The result was a massacre wiping out 4,200 banks between 1919 and 1929.30

This drastic decrease in the number of banks is also attributable to the disallowed branch banking. A.P. Giannini, founder of a bank in San Francisco in 1904 to serve Italian immigrants, began to spread his bank across the state as he was met with competition during these times. Due to restrictions on these activities, he planned an attempt to get around this legislation in a two-stage approach. First he would bring his banks into the national system, provided Congress changed the national banking laws to permit branching, and second, to press for changes to allow interstate banking.

As numerous national banks began to convert their charters to state banks to circumvent this restriction, Congress passed the McFadden Act of 1927 which allowed for branching, but not across state lines. The federal government’s failure to authorize nationwide banking not only contributed to the collapse of the country unit banks in the

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1920's, but it made it difficult for some large chains to survive at the end of the decade (Schwiekart xviii).

Whatever the reasons were that kept the federal government from allowing interstate banking, they were not able to keep large trusts from entering the scene. The banking merger wave in the 1920's combined many investment trusts with the traditional commercial banks. As banks merged some produced a new entity, that of a holding company. These holding companies became affiliates to the banks. The fact that most of the large banks were in major urban areas led to a centralized securities market, explaining the close link between the mergers, the rise of trusts, and the stock market boom of the 1920's.

These holding companies began to own other holding companies and so on since these affiliates were not prohibited from investing in securities of other companies. In a nutshell, this meant that the funds loaned by individuals to banks were being invested in the stock market which helped fuel the boom, but later proved disastrous. Even more individuals began to enter the securities market with their funds rather than deposit them with banks. The easy money policy of the Fed added more fuel to the fire for the securities markets.

In mid-1928, the Federal Reserve made its first attempt to halt speculation. Governor Strong, during the summer of 1928 raised the discount rate from 3.5 percent to 4 percent, and then to 4.5 percent, and finally in December to 5 percent (Sobel 267). They also began selling government bonds in the hopes of drawing some funds out of the speculative markets. To no avail, the bond issuances were not enough to counter the
increased flow of money into Wall Street. The morning of October 18, 1929 was the last day the skies seemed clear (Sobel 272).

Everything seemed reduced to nothing. For every one day that the markets gained following the crash, there were three days of downward movements. Not only was the "little man" killed in this crash, but many of the corporations that were in need of additional capital, held off on bond issuances due to the poor state of the markets. This kept many of the nations largest companies from gaining the needed capital to expand during the next decade thus furthering the economic slump of the depression. Also wrecked in the debacle were the banks that had extended credit to customers to buy stocks on margin during the great boom preceding the crash.

Many stocks used as collateral on bank loans became worthless and any savings remaining in the banks were being withdrawn as quickly as possible. These bank runs were not able to be handled by the banks, and since there was no insurer of these funds, numerous banks went belly-up. In response to the crisis, President Herbert Hoover signed a bill creating the Reconstruction Finance Corporation (RFC) to extend loans to banks not eligible for rediscount at the Federal Reserve Banks. During the eleven months subsequent to the crash, the RFC authorized almost $1 billion in loans to 4,000 troubled banks at 6 percent interest (Schwietart xxii).

When Roosevelt was sworn in, he ordered a national banking holiday on March 6, 1933, which was extended to a total of nine days. Solvent banks were allowed to reopen after the holiday and others were reorganized or liquidated. Following Roosevelt’s holiday, Congress enacted sweeping banking and securities legislation, the latter of which will be discussed in the next chapter.
The Glass-Steagall Act, also called the Banking Act of 1933, prohibited member banks of the Fed from affiliating with firms that issued or underwrote securities, a reaction to the perceived dangers of combining commercial and investment banking. More importantly, this Act established deposit insurance through the Federal Deposit Insurance Corporation (FDIC). The FDIC insured the first $2,500 in a deposit account (eventually raised to $100,000 in 1980), which effectively insured more than 98% of all deposits in insured commercial banks (Schwietart xxiii).

Of course insured banks had to pay a premium for this insurance, but for a bank to pass up this insurance literally meant that they would soon have no depositors in their banks. A final additional of this Banking Act was that the FDIC would furnish a liquidation service that far exceeded previous processes, and, as part of its responsibilities, carried out its own examinations of member banks.

To examine even a minute portion of the effects this depression had on the economic state of America would amass enough text to consume another thesis. This attempt to retrace the introduction of the Federal Reserve System is meant to show the effect that banking reform had on the stock markets. Also, this was meant to highlight how the state of the corporation was shown in the current state of the stock market.
Corporate Disclosure Effect on the markets

Corporate financial disclosure has had a continually evolving history. This history did not begin in 1933 with the passage of the first Securities Act by Congress. Rather, financial disclosure has evolved with rise of the corporation. Throughout history, joint-stock companies, and other early corporations, issued stock by selling portions of their company to the public. In early times these investors needed little more than a hope for profits to place capital in the hands of these corporate managers. As some of these dreams and hope-filled ventures failed, investors wanted more protection for their capital. Protection came in the form of corporate disclosure. The following will show how securities regulation has been a blessing for the corporate world and for ensuring a mature climate for investment.

Corporations, though crude in some senses during the early 1900’s, left financial disclosure to the responsibility of management. Management was reluctant to offer more information than was considered necessary to the investors. Public demands on management for certain information ended up consisting of all that would be released. In these times, corporations were also reluctant and angered by uninvited government regulation of their businesses. Dating back even further in England, security speculation had gone wild and resulted in the need for reforms. In England this resulted in the largely restrictive “Bubble Act of 1720” which established state control over the activity of promoters of joint-stock companies. Due to these views of the corporate climate in the early England and in twentieth century United States, there was much room and need for change related to corporate disclosure.
As more corporations sought to become publicly held, the distinction between management and ownership became more prevalent. Many organizations adopted rules and regulations designed to influence management's practices related to their disclosure. The New York Stock Exchange and many investment bankers lead this charge and were eventually coupled with many leading individuals in government. The closest group to formal regulation was in London when a committee, appointed by Parliament, was organized to establish supervision over business activities. Investment bankers and the NYSE had their own ideas, but they did not come close\textsuperscript{31} to an agreed structure to guide this distinction between owners and management.

England made most of the groundwork for American regulation and supervision of securities activities. Acts were passed stating that investors should receive financial statements every 15 months and one establishing an organization for chartering accountants. Formal prospectuses also were a result coming from England. The Directors Liability Act in 1900 set forth that every prospectus issued would be signed, dated, and filed with a registry of the Board of Trade. When America tried to institute these progressions from England, the shift was made too rapidly, due to the anti-big business viewpoint, to have an immediate impact.

Big business was attacked by many Americans because they felt it placed too much power in an elite class and was against the democratic system employed in our country. In defense of these charges were the corporations and lawyers arguing that government intervention lead to imperfect solutions as well. Along with this fact, they also argued that a publicly held big business was an aggregation of capital from a number

\textsuperscript{31} Prior to the Securities Acts of 1933 and 1934
of people of small means. Regardless, few corporate executives spoke about these criticisms that furthered the correlation between big business and its need for corporate publicity.

The result of this struggle came to be defined by the needs for two items: 1) to protect the public through corporate disclosure and 2) to reveal the alleged abuses of corporate power. Under Theodore Roosevelt’s presidency, publicity of corporate transactions was used as a powerful weapon in dealing with these issues. In noticing that publicity of corporations was a first step in regulating toward better disclosure, President Roosevelt formed the Bureau of Corporations. This bureau issued many reports that were widely accepted and thus became a precedent setting in that they showed that government could and would intervene in private business. The bureau’s successor, the Federal Trade Commission, then brought on the full disclosure of corporate activity to investors.

The New York Stock Exchange was investigated and was found to hold many sound regulatory standards and some objectionable activities as well. The powers of this exchange, and other exchanges in Philadelphia and Boston, could easily be seen in that they brought a much more stable market for corporate securities. Also, these exchanges had the control over exacting the most minute details of a corporation applying for listing on the exchange. Annual reports of financial activity were also required by the exchanges, and this implied the ability for the members of the exchange to misuse such information.

Resulting from these investigations was the placement of all those involved with the underwriting to be listed in a prospectus. Also to be included in these prospectuses were the amounts of banker’s fees as well as disclosure of the amounts of money made in these issuances. More importantly, during these times was the creation of universal
standards of the accounting profession as an exact science. This helped to ensure better standards for financial disclosure. Accountant’s activities quickly broadened to include audits of financial statements. These audits helped to disclose the real facts of the company. From these audits, it was revealed that material could not be selectively placed in prospectuses since some data, good and bad, may only be short-term in their effects. Another result discovered from accountants was that their role should remain with verification rather than estimation on future earnings of a company.

In America, a major shift of concern evolved with our entrance into World War I, but critics remained against big-business. These critics urged more disclosure in prospectuses including pricing, labor policy, corporate salaries, director’s lists, distribution of shareholder ownership, and trust agreements. The critics were largely unsuccessful on the federal level, but this disappointment led to the outbreak of individual states issuing “blue sky” laws. These blue sky laws helped to ensure fair practices in securities transactions. The typical blue sky law included: 1) fairly broad antifraud provisions, 2) restrictions and requirements imposed upon broker dealers, and 3) provisions that securities must be registered. Within two years of the 1911 Kansas Blue Sky Law, which was the first prominent law passed, twenty-three states had passed laws and even more followed (Cross 293).

The third item requiring registration of securities was to be handled by a bank commissioner. This gave a lot of power to the bankers in that they were to issue a “permit” to the company for the issuance of their securities. This permit could be denied if the commissioner found any portion of the incorporation, charter, by-laws, or plan of business to be unfair, unjust, inequitable or oppressive to any class of investors.
Additionally, these companies were required to file semi-annual reports and certain books of accounts with these bankers. Though these laws helped prevent fraudulent practices in the selling of securities before 1933, while up to this time only the state of Colorado had a law passed dealing with disclosure.

Under the Colorado Act, any security could be sold as long as the issuer filed a prospectus and was willing to deliver a copy of the prospectus within two days of any investor request for this document. This act helped transform the risk of investments from the seller to the investor by requiring them, or at least offering them, to study the company and their financial statements. This act had been modeled after the British Companies Act and was successful in individual states, but failed to pass Congress in 1921 and in 1923. The main reason for opposition to this disclosure was that executives and bankers saw this adding unnecessary costs on security offerings. Also, opposition was made because this would require executives to spend time preparing these documents that should be spent on their business.

Many securities bills were presented to Congress prior to 1933. These bills mainly were brought forth due to the political environment and the rise of the investor class in America. Positions on the federal agencies created to regulate business, were now in the hands of people sympathetic to business. So, the status quo remained the mood of the nation. The public was prospering and more people entered the stock markets. From 1900 to 1928, the number of estimated shareholders in the United States rose from 4.4 million to 18 million (qtd in Hawkins, 595). Not only was the number of shareholders rising, but the numbers of issues in the markets too were increasing rapidly. During a similar period
to the above, 1900 to 1930, the number of shares listed from all companies on the New York Stock Exchange rose from 56 million to 1.128 billion respectively.

Important developments were made in this time period relating to financial disclosure that were not enacted as formal laws. In 1917, the Federal Reserve Board, in conjunction with other organizations, published the Federal Reserve Bulletin proposing a uniform system for accounting practices. Later, in 1929, a similar proposal was made for the verification of financial statements. These practices were not eagerly accepted and it was the result of efforts on behalf of accounting professionals to change this point of view. The New York Stock Exchange had requirements for all of its companies in that they were required to submit statements, but those documents did not have to be audited. The exchange came under attack for this and eventually things changed.

A Congressional committee was formed on circulars, a term to describe prospectuses, and in 1926 they came with a set of standards to be included in these documents. The committee recommended the inclusion of information such as descriptions of: the company and the industry they operated in, the management, the property, financial data, the purpose of the issue, previous earnings of company, and the voting rights of the stock. Compliance with these requirements was voluntary and there was still a need to have this take some regulatory control. Some reasons for non-compliance with these were that corporations thought that making public too much information would allow for competition to enter more easily. None-the-less, corporate disclosure was not at standards of acceptance by the public, including the media.

The debate about disclosure was now an issue to the public and hence the media took liberty with the issue. Corporate misuse of information in the past had lead to many
negatively slanted articles about those companies in the media. As stock prices declined, corporate managers were criticized as investors made claims that certain information was not widely known. Whether or not the media could have influenced the progression of corporate disclosure is beyond the scope of this paper, but the media did succeed in getting publicity to this topic.

Then the depression came. In the autumn of 1929 the aggregate value of all stocks listed on the NYSE was $89 billion. Within the months of September and October that aggregate value dropped to $18 billion as the stock market had its worst crash to this point in time. Black Monday, as that fatal 28th day of October 1929 has now become known, was not followed by any bright days in the near future. In 1932, the aggregate value of all NYSE stocks was still at a mere $15 billion. It was not merely a coincidence that this drastic drop in stock prices occurred when the movement for corporate disclosure was at a standstill. If the movement for disclosure ever needed more fuel for the fire, the crash was the best thing that could ever have happened.

In March of 1932, the Senate passed a resolution allowing the Banking and Currency Committee to investigate the securities industry. This set the wheels in motion for legislation to pass on this much needed issue. The result was the passage of the Securities Act of 1933 and the subsequent Securities Act of 1934. Much of what was required for corporate disclosure was already established, but was only voluntary. These acts set forth the base for the legal framework to regulate the securities industry.

The Securities Act of 1933 was enacted mainly to regulate initial offerings and actual sales of securities through the mail system. This act, referred to as the “truth in securities” law set forth two main objectives: 1) to require that investors be provided with
material information regarding the securities being offered for sale and 2) to prevent misrepresentation and other frauds in the sale of securities. To accomplish these objectives, a firm was required to file a registration statement and a prospectus to contain all material information to be given to the later established Securities and Exchange Commission (SEC). This placed the legal risk on the investor pertaining to investment decisions since it was not the Commissions duty to decide which securities were worthy of investment and which were of questionable value.

The 1933 act also provided the investor the right to recover any losses incurred as a result of false or misleading registrations or prospectuses. There were exemptions made for certain corporations in this act, but similar, less strict procedures needed to be adhered to by these exempted companies. The exercise of “due diligence” was indirectly started by this act as well. Corporations were now required to have an independent auditor write a “comfort letter” verifying the accuracy of the registration statements.

In attempts to further the “full and fair disclosure” principles, the Securities Act of 1934 was enacted. This act established the SEC which was given the duty to ensure that full and fair disclosure of all material facts concerning securities offered was available to the public. The 1933 Act dealt mainly with initial offerings while this act dealt with subsequent disclosure for corporations. Around 1945 the SEC had most of the legislation passed that was needed to properly operate. The SEC is now organized into a group of divisions in which each division has responsibilities under one or more of the Securities Acts. The SEC has a five member board and four divisions under them that allows for authoritative supervision and ensures honest trading and prohibits fraud.
A wide range of requirements were needed to be met by corporations from the passage of this act. To deal with these requirements, the SEC established twelve different report forms to handle these needs. The most recognizable of these reports are the 10K and 10Q reports which are annual and quarterly reports for financial information. The SEC also established a set of requirements for annual (10K) reports which must include the following: audited financial statements, summary of earnings for last 5 years, business description, product-line report, list of directors, identification of principle markets for trading of their securities, and range of market prices and dividends for most recent two years.

Many amendments have been made since these acts and many other related legislative acts have been passed to further the progression of corporate disclosure. Most notably in this progression is the advancement in usage of electronic filing. The SEC has compiled an Electronic Data Gathering, Analysis, and Retrieval system (EDGAR) for corporate filings. All of this information is on-line on the Internet for anyone in the world who may wish to see this information. With the continuing widened based of information dissemination, corporate disclosure will become more and more easy to comply with, but none-the-less will be continually evolving.
Evolving profile of the Investor

Individuals had been the sole owners of securities until the mid 1900's. The brokerage firms that existed held a large portion of those securities, yet they were managed for their own portfolios. By 1965, institutional investors transacted 75% of all stock volume (Blume 105). The beginning of this control shift from the individual investor to the institutional investor is witnessed by the promotion of Charles Merrill and the advent of the mutual fund. The addition of mutual funds to the investing populous allowed numerous amounts of people to enter the stock markets. However, big money began to control Wall Street as the managers of these mutual funds controlled a majority of the activity. Further, as stock analysis became more significant resulting from the Securities’ Acts, the investor needed to be much more savvy than in the past. All of these events shaped the profile of the investor during this century.

If one individual is to be given credit with getting the public back into the stock market after the crash, it would be Charles Merrill. In 1948, after the election of Truman as President, when the market had barely recovered to half of its pre-crash peak, Merrill responded to Truman’s criticisms of Wall Street. He printed an advertisement in several financial papers which read:

One campaign tactic did get us a little riled. That was when the moth-eaten bogey of a Wall Street tycoon was trotted out...Mr. Truman knows as well as anybody that there isn’t any Wall Street. That’s just a legend. Wall Street is Montgomery Street in San Francisco. Seventeenth Street in Denver. Marietta Street in Atlanta. Federal Street in Boston. Main Street in Waco, Texas. And it’s any spot in Independence, Missouri, where thrifty people go to invest their money, to buy and sell securities.\(^\text{32}\)

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\(^{32}\) Reprinted in *The Big Board* from Dies, *Behind the Wall Street Curtain*, pp. 118-119.
In building his brokerage business, Charles Merrill believed that gathering a large amount of small investors, was as good as getting a few large investors. To accomplish this goal, he staffed large amounts of salesmen to take in accounts for the firm. In doing this, he amassed an extremely large base of capital for his firm to work with.

This portion of investment history belongs to Merrill, and his partner Edmund Lynch. They offered the average investor the opportunity to invest a minimum monthly amount into actual stocks, not mutual funds. This was not the practice that made Merrill Lynch wealthy, however, it was this type of action in favor of the individual investor that marked their place in history. By 1965, more than 20 million Americans owned stock, which was more than three times the amount in the early 1950’s (Blume 56).

With the markets under a form of governmental regulation, the S.E.C., and with investment banks separated from commercial banks, the field was ripe for this new class of investors to enter the scene. The emergence of the mutual fund gathered the attention of a much larger population since investing in these funds offered an investor professional management and diversification. Andrew Carnegie, successful industrialist of the nineteenth century, had once said, “put all you eggs in one basket, and watch that basket carefully (Blume 85).” This had been the means by which many of the successful investors had achieved their status, but now investing was becoming more sophisticated.

The mutual fund evolved from the earlier trusts of the mid 1800’s when individuals were either unwilling or unable to manage their own security holdings. In 1924, the first two mutual funds had been created in Boston representing outgrowths of English and Scottish investment trusts (Blume 96). The Massachusetts Investment Trust

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differed from other trusts of the time in that shareholders were able to redeem their holdings at net asset value rather than the current market quotations. Additionally, shares of this trust were bought and sold directly through the trust itself rather than through the markets.\textsuperscript{34}

Later, another type of mutual fund was introduced and soon became more popular than MIT’s open-end mutual fund. Closed-end trusts, which had a specific number of shares outstanding, were issued to collect an initial sum of money for a manager to invest. As these funds increased or decreased, the investor’s share of the entire fund would fluctuate. When the crash of 1929 hit, many of these trusts ceased, but many of the mutual funds survived and even expanded during the depression (Sobel 332). The masses continued to pour into mutual funds as the years passed and as of 1961, there were over 330 mutual funds in operation, controlling some $22 billion in securities.\textsuperscript{35}

Mutual funds were popular because they gave the small investor a chance to enter the market with a small transaction cost. As these mutual funds caught on, especially through pension funds,\textsuperscript{36} the portfolio managers’ assets grew larger everyday. With this increase in assets came an increase to their significance to the investors and the markets. Institutional investors, such as the mutual/pension funds, investment companies, banks, and universities, are investing entities that control large sums of money on behalf of other investors. The Exchange had provided a fair market for individual investors, but now the markets seemed controlled by the institutional investor.

\textsuperscript{34} Sobel, Robert. \textit{The Big Board}. p.331
\textsuperscript{35} Sobel, Robert. \textit{The Big Board} p.332
\textsuperscript{36} It is estimated that from 1957 onwards approximately one billion dollars a year were invested in stocks and two billion dollars a year in bonds through pension funds. Further, by the end of that decade, over 2% of all corporate stocks were owned by these funds.
This shift of dominance in volume activity on the exchanges is attributable to the growing use of information during the twentieth century. The profession of the security analyst arrived on Wall Street during the early 1900’s and added a unique edge to those able to understand and analyze corporate activities. Peter Bernstein, President of an economic consultant firm to institutional investors and prominent figure in this field, describes a reason for this shift in the following passage.

Today, we rely less on our superstition and tradition than people did in the past, not because we are more rational, but because our understanding of risk enables us to make decisions in a rational mode (Bernstein 4).

Analytical techniques were being developed by numerous individuals such as Harry Markowitz who hailed that diversification in investing helped to decrease unsystematic\textsuperscript{37} risk and bring about more stable returns. A fellow researcher along with Markowitz at Rand Corporation, a research firm in Los Angeles, by the name of William Sharpe later developed the Capital Asset Pricing Model. This model was designed to calculate the differences in risk premiums of individual stocks captured in a measure called beta (Blume 101).

Charles Merrill also contributed to the evolving, and growing influx of information. Merrill had written a memo to all of the firms’ clients in 1928 warning of a large decline in the markets (Perkins 285). Not only did this save the firm by being in cash when the depression stuck, but it gained interest in market predictions on a large-scale basis. He alone is not to be credited for this, but he is to be praised for brining this to the publics’ attention at a crucial time in financial history. Merrill Lynch continued

\textsuperscript{37} Unsystematic risk is risk that can be controlled by diversification. Systematic risk is market risk and cannot be alleviated through diversification. Both of these terms were developed by Sharpe.
to build on its foundation of sound practices for all investors which included staffing of a large research department that issued research recommendations on solid, "blue chip" investments.

The information Merrill had disseminated to the public was quickly greeted with pleasure by the individual investors. Returning to the shift to institutional control, the information from these research departments became more valuable as methods of analysis became more in depth. In 1934, Benjamin Graham and David Dodd wrote Security Analysis which discussed the ‘intrinsic value’ of a security and the discrepancy between that price and the market price (Blume 94). What they had established was one of the premier fundamental analysis techniques.\textsuperscript{38} This theory claims that every stock has an intrinsic value which consists of a company's current earnings, as well as all future earnings discounted by an appropriate interest rate to a present value. This intrinsic value is then compared against the current price in the market to find under/over valued stock to be bought and sold respectively to their under/over valuation.

An equally challenging hypothesis was introduced as early as 1900, when a French Ph.D student named Louis Bachelier wrote on the efficiency of markets (Blume 87). In this he claims that,

\begin{quote}
From the consideration of true prices, one could say: At a given instant, the market believes in neither a rise nor a fall of true prices...Clearly, the price considered most likely by the market is the current true price: If the market judges otherwise, it would quote not this price but another price higher or lower (reprinted Blume 87).
\end{quote}

Though this message was very clear, it was not considered much until a much later date.

\textsuperscript{38} Previously, S. Eliot Guild (later clarified by John Williams) had developed this notion of intrinsic value by discounting dividend income. From Malkiel p. 20.
Three individuals endeavored serious attempts to test this efficient market hypothesis during the 1950's. Maurice Kendall from the Royal Statistical Society in 1953, Harry Roberts a statistics professor at the University of Chicago, and Eugene Fama an economist at the University of Chicago all attempted this feat. They all came up with the same conclusion that the markets reflected the true prices.

Burton Malkiel brought the issue into the limelight with his book, *A Random Walk Down Wall Street*. In this book he examines, in great detail, many reasons to support this efficient market hypothesis. He opens his book with a sample summation as follows,

In essence the random walk theory espouses the belief that future stock prices cannot be predicted. It says that a blindfolded monkey throwing darts at the newspaper's financial pages could select a portfolio that would do just as well as one carefully selected by the experts. Therefore investment advisory services, earnings predictions, and complicated chart patterns are useless (16).

In continuing the history of this debate, many retorted these claims in studies that found many ways that the markets acted against the efficient hypothesis. Such findings include Fisher Black's study in 1973 found that *Value Line's Investment Survey* did provide some value in forecasting stock prices. Frank cross found in 1973 that the markets produced different behavior on different days of the week. Even further, in 1985, Lawrence Harris discovered patterns of returns during a single day's trading activities.39

This debate continues today. None-the-less, the importance of investment advice gave a whole new perspective on investing over the course of the century. As institutional investors’ transactions increased, they each needed some reason to claim that their fund or

39 The previously listed names and contributions are summarized from Blume's book *revolution on Wall Street*. P.92.
transactions were based on some philosophy that made their investments unique. No
doubt, this debate will continue as the markets continue to evolve.
Technology to Today

Technological changes have shaped our entire nation during the last century. These changes have altered the corporate climate as well as allow for a new type of market to emerge for stock transactions. This new market is the Over-the-Counter (OTC) market, or National Association of Security Dealers Automated Quotation (NASDAQ) system. The entrance of this market added the dealer market to a marketplace that had only held auctions. Additionally, the breakdown of fixed commissions on the New York Stock exchange in 1970 helped make entrance into the markets much easier for brokerage firms and investors alike. To date, the entrance of the OTC market solidified the respective positions that each of the three exchanges now hold.

When the Securities Exchange Act of 1934 was passed, the Security and Exchange Commission was established to regulate the provisions of the act. Subsequently, to allow the SEC to regulate markets that were not exchange markets, without getting into the hands-on supervision, the National Association of Securities Dealers (NASD) was established in 1938 (Mayer 119). The NASD was intended to be a "self regulatory organization" for securities brokers and dealers who were not members of exchanges. Like the exchanges, it is owned by its members\(^{40}\) as it establishes rules of trading (subject to SEC approval) as well as disciplining members who break them. In addition, the NASD promotes the interests of its members with the public, the Congress, and the SEC itself.

The NASD has had many important roles in the evolution of the markets

\(^{40}\) A member of the NASD is any over-the-counter dealer registered with the SEC. In calendar year 1995, the Commission supervised over 8,500 broker-dealers
including the oversight of the over-the-counter market and the development of the NASDAQ market. The NASDAQ market did not evolve until the late 1970's, but the over-the-counter market has a much longer history. All stocks that do not trade on the New York Stock Exchange or the American Stock Exchange are considered over-the-counter stocks. Prior to the establishment of the NASD, there had been no formal regulations governing transactions in these securities. A majority of the stocks over time had not been listed on a formal exchange and were handled by dealers maintaining inventories in those stocks. Also, the OTC market traded issues that were so new, small, or speculative that they weren’t listed on any exchange (Blume 35). Given that there was no formal exchange for their trading, there was no posting of prices in these securities (Mayer 120).

Prices in these securities were organized by the National Quotations Bureau and were written on “pink sheets.” These prices were collected and distributed the following day, which meant that once the investing public retained a quote, that price was possibly outdated. NASD was responsible for publishing these quotations in many widely read newspaper, but the fact remained that they were too out of date as well as having wide spreads. As a result, the over-the-counter market had a less than savory reputation (Sloane 101). Robert Haack, later President of the NYSE, was offered a position as Chairman of the NASD in 1961 to bring about some much needed changes.

After accepting the position, Haack immediately began to tackle these problems and put the wheels in motion for the development of the NASDAQ automated quotation

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41 The spread of a stock is the difference between the bid and offer prices in a security. The bid is the price which the dealer will purchase and the offer the price the dealer will sell. The reverse is true for the investor.
system. Not only would this system bring the prices up to date, but would require the dealer to list the number of shares they were willing to buy or sell at that price. This was the dealer market. In the dealer market, the investor will receive the best posted price by a dealer at the time their order is placed. Listed exchanges were involved in the auction market where an investor would have a chance to negotiate the price of the security in the transaction. Bringing the quotation system up and running was exactly what the OTC market had lacked and was desperately needing.

The project was put into the hands of the NASD “automation committee,” which engaged the consulting firm of Booz-Allen & Hamilton, which in turn prepared specifications that were put out to bid (Mayer 121). The only bid that was made was from the firm Bunker/Ramo which raised the $25 million needed in 1968 to design and construct the NASDAQ quote system which executes the best bid and ask quotes and does away with the pink sheets (Blume 42). In 1971, the NASD installed two Univac mainframe computers designed in Connecticut by Bunker/Remo, which each individually were capable of handling all of the trading in the OTC market. The second President of the NASD, Gordon Macklin, had this to say when it was unveiled, “We turned it on February 8, 1971, and lo and behold, it worked (Mayer 121).”

Within a matter of years, the NASDAQ market had turned the use of state-of-the-art technology into the beginnings of an electronic global marketplace. Additionally, the OTC market became a major marketplace for the trading of equities - more important than the American Stock Exchange as the primary market for new emerging companies as well as established smaller concerns.42 The New York Stock Exchange was not content to

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42 Blume. Revolution on Wall Street. P.188.
sit idly by and watch the NASDAQ advance the marketplace. They lured the NASD leader Haack over to the Presidency of the NYSE and soon he began to continue these technological changes with their exchange leading the way. The following table shows the number of issues traded on the OTC market and the NYSE.

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= est. from Blume p.191 ** = actual from NYSE home page *** = est. from NASDAQ home page
All other data from Jessup & Upson Returns in the Over-the-Counter Stock Markets. P. 10.

In 1971, Robert Haack hired Alan Loss to modernize the NYSE’s trading system. Loss spent numerous months to devise a computer system that would be able to execute 100-share orders without the direct intervention of a specialist (Blume 194). His reasoning behind taking this on as his first project, is that orders were able to be submitted through wires from all across the world to the exchange. So, why shouldn’t there exist a system that can complete the transaction. The result was the Automated Trading System (ATS). This system would function as follows.

Orders [100 shares or under] would be entered into teletype machines on the edge of the floor. The machine then transmitted these 100-share orders electronically to the appropriate specialist post, where they would be automatically executed against the specialist’s quote (Blume 195).

The specialist in the auction market makes their money on the spreads between the bid and the offer and this circumventing of the process would prohibit them from making these profits. Naturally, the specialists disliked this addition to the markets. Someone had even attempted to use an axe or chainsaw to break the machine on the floor in their outrage. The reason this attempt failed was that the specialists did not want it to
work. Similar attempts were made such as the R4 which was the Registered Representative Rapid Response system. This system too failed due to the specialists’ inability to transact the orders in a timely fashion as they were transmitted.

The innovation that finally won out on the NYSE was the Designed Order Turnaround system (DOT) in 1976 by John Phelan. The reason this system passed approval of the specialist is that it was not so much designed to maximize the speed and efficiency of trades as to placate the most influential interest groups ahead of others (Blume 203). As well, this system allowed the specialist the opportunity to execute the trade after seeing it on a screen and still receive the money between the spread. This also allowed for the negotiation portion of the specialists’ business, which was much larger than 100-share transactions, the time devotion it deserved on the floor.

A similar system was implemented on the NASDAQ market after this invention. The Small Order Execution System (SOES) was introduced in 1984 (Mayer 122). This system compares the bid and offers of all participating dealers and identifies the dealer with the highest bid price or the lowest ask price in order to determine the best quote. This system also allows dealers to list the size of their shares they are willing to buy or sell. Typically this is in 100-share lots for smaller issues and 1000-share lots for the majority of issues. Now market efficiency and observation of trading activity by regulatory bodies has truly become a reality.

A final item affecting the markets within the last few decades is the removal of the fixed commissions on the NYSE. From the inception of the NYSE, until 1970, there had been a fixed-brokerage commission rate structure. At the urging of the SEC and Congress, the NYSE agreed to abolish this long lasted tradition. James Needham,
chairman of the NYSE in 1970, held a meeting of the 20 directors to vote upon the abolishing of the fixed commission. At this meeting,

...the directors split, 10 votes to 10, on this question. The tie-breaking vote was left to the chairman, James Needham. Needham told one of the directors, “If I decide this issue, I don’t need a board of directors... You’ve always wanted to participate. This is your moment to set the course of history.” Needham suggested the board take a brief recess. When the board reconvened a few minutes later, the vote was twenty to nothing to accept the SEC’s decision (Blume 51).

The fact that the directors were able to come to a unanimous decision on such a large issue, coupled with the tremendous leadership extolled by its chairman, the NYSE truly showed the excellence that the markets had come to hold.

Ceasing the fixed commission practice allows brokerages to compete for business by offering more competitive commissions to the investor. Brokerage firms and dealers now pay exchange fees for their executions somewhat like the overhead costs of a business. Following, now the brokerage firm is able to set the commission schedule to meet their needs as well as offering the best possible fees to the investor. This is the reason that there exists so many discount brokerage houses, in which most of these firms are able to offer much cheaper commissions since they typically do not house full-service functions of the other brokerages.

We have now come full circle in the evolution of the stock market. What began as a vehicle to facilitate corporate financing, still exists for that same purpose today. Without an organized marketplace, the floatation of large issues of securities would be difficult if not impossible (Sobel 158). Critics of the stock market say that this institution does not create any tangible good for society. However, it is the functionality of this institution that has allowed the corporation to change and meet the needs of corporate
America throughout the centuries. Additionally, the stock market itself has facilitated the investing in American business by continually changing to allow faster, more reliable transactions for the investor. The stock market has been, and will continue to be, the driver behind the increasing efficiency, complexity, and advancing technology of the corporation.
APPENDIX A

New York Stock Exchange Presidents

<table>
<thead>
<tr>
<th>Year</th>
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<th>Year</th>
<th>President</th>
<th>Year</th>
<th>President</th>
</tr>
</thead>
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<td>Charles R. Marvin</td>
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<td>1858 - 1859</td>
<td>Henry G. Stebbins</td>
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<td>William H. Neilson</td>
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<td>W. R. Vermilye</td>
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<td>Henry G. Chapman</td>
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<td>George H. Brodhead</td>
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<td>1876 - 1877</td>
<td>Salem T. Russell</td>
<td>1877 - 1878</td>
<td>Henry Meigs</td>
<td>1878 - 1880</td>
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<td>Donald Mackay</td>
<td>1882 - 1883</td>
<td>Frederick N. Lawrence</td>
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<td>Ransom H. Thomas</td>
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<td>Richard A. Grasso</td>
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*first full time salaried president.

Compiled from the New York Stock Exchange Home Page
# APPENDIX B

Presidents of the United States

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<td>1817 - 1825</td>
<td>John Quincy Adams</td>
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<td>Franklin Pierce</td>
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<td>1989 - 1993</td>
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# APPENDIX C

**Dow Jones Industrial Averages 1890 - 1996**

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Bibliography


