

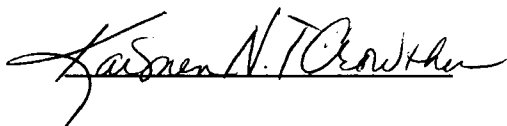
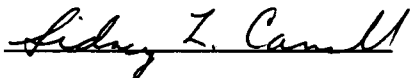
To the Graduate Council:

I am submitting herewith a dissertation written by Eric Robert Hake entitled "The Role of Financial and Legal Innovation in the Rise of the Modern Credit Economy: Evidence from the American Merger Movement, 1870-1904." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Economics.



Anne Mayhew, Major Professor

We have read this dissertation
and recommend its acceptance



Accepted for the Council:



Associate Vice Chancellor and
Dean of the Graduate School

The Role of Financial and Legal Innovation in the
Rise of the Modern Credit Economy:
Evidence from the American Merger Movement, 1870-1904.

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Eric Robert Hake
August 1994

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DEDICATION

To my wife, Teresa Rowell
my parents, David and Ann Hake
and my two sisters,
Elizabeth and Laura Hake.
For their Love and Attention.

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I would like to take this opportunity to thank the individuals and institutions which have helped me complete this dissertation. Professor Hans Jensen first introduced me to the subject of Economics, and without his support and insight my attraction to these issues would not have been realized. The courses and instruction of Professor Walter C. Neale provided an intellectual framework that will continue to affect my interests well into the future. The attention and criticism of Professor Anne Mayhew was crucial to the completion of my dissertation. As my dissertation chair, she has provided the opportunity to organize and express my thoughts in a productive and challenging environment. I would also like to thank Professor Sidney Carroll and Karmen N. T. Crowther, both of whom served on my dissertation committee and took the time and energy to evaluate my work.

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ABSTRACT

At the close of the nineteenth century, the organization of American businesses underwent a profound transformation from closely held partnerships and proprietorships to the widely held corporation. The rapidity of this change was largely possible through the development of horizontal mergers in a wide range of manufacturing industries. The academic consensus concerning this stage of evolution has focused on the role of scientific management and the emergence of new technologies. While the question of how much impetus financial and legal innovations provided to merger has received attention for more recent merger periods, this perspective has not been fully applied to the turn-of-the-century merger movement.

To judge the significance of changes in the legal and financial sectors of the economy, a detailed comparison of the financial plans for merger has been undertaken for the period 1870 to 1904. Utilizing the theories of Thorstein Veblen, the process of an emerging credit economy has been presented as proof of the role played by the changing business environment. The results of this analysis show that changes in corporation law altered the use of the corporate charter and were necessary for the implementation of financial practices associated with merger activity. The ability to consolidate was predicated on the ability to incorporate a new business with an authorized capitalization large enough to provide the funds necessary to acquire control over the assets of constituent companies. During

the time studied, a new method of valuing assets was being applied to the industrial sector of the American economy, which allowed for the large capital values of the new corporations. The values so created were tangibly represented by securities that provided a new form of purchasing power to the management of industrial concerns. By exchanging the property titles or existing securities of independent concerns with the newly issued capital of a corporation, effective centralization of management became possible. While these techniques and practices first appeared during a small merger wave from 1889 to 1894, it was not until after 1895 that these new methods became widely accepted and applied. The legal and financial environment of business in America therefore experienced several fundamental changes during this period of industrial evolution.

In presenting evidence of financial and legal innovation in merger activity, it is apparent that the application of Veblen's theory and a realization of the importance of changing business practices provides a valuable perspective for the study of industrial organization.

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Chapter I

INTRODUCTION AND METHOD: THE ROLE OF FINANCIAL AND LEGAL INNOVATION IN THE RISE OF THE MODERN CREDIT ECONOMY, 1870-1904

The purpose of this study is to describe the financial and legal innovation that accompanied consolidation in the manufacturing and mining sectors of the U.S. economy from 1870-1904. This is an undertaking to which many have already contributed; their contributions will be described below. What is added in this study is a detailed compilation and categorization of a larger set of data about these innovations than has previously existed.

The interest generated in consolidations during this period as a consequence of the detailed studies of industrial organization and reorganization undertaken by Alfred Chandler and his followers are one reason for the study.¹ A larger context for the analysis is current discussion of merger activity, the significance of the corporate form and the uses of capital markets in determining the shape of the modern American economy.²

¹ Alfred D. Chandler Jr., The Visible Hand: The Managerial Revolution in American Business (Cambridge: Harvard University Press, 1977). Naomi R. Lamoreaux, The Great Merger Movement in American Business, 1895-1904. (Cambridge: Cambridge University Press, 1985).

² Thomas R. Navin and Marian V. Sears, "The Rise of a Market for Industrial Securities, 1887-1902," Business History Review 29 (1955) : 105-139. Michael Baskin, "The Development of Corporate Financial Markets in Britain and the

The intent of the study is critical assessment of the standard assumption that technological or material innovations are most significant in determining the forms of business enterprise. This line of reasoning holds that the corporate form as it developed at the turn of the century was essential for the use of new technology and, in its most extreme form, holds that the business forms that emerged were the best possible guarantor of social and economic welfare.

Description of evolving relationships between the financial community and the manufacturing/mining industries will serve as a basis for consideration of alternative explanations of the merger movement. This work is a step in the direction of doing for finance what Chandler has done for organization of production and distribution--that is, looking at it dispassionately and not from the standpoint of combatants on the battleground on which it occurred.

The last quarter of the nineteenth and the beginning of the twentieth century witnessed a significant transformation that encompassed both industrial methods and the form of business enterprise in the United States. With the development of mass production technology and an integrated railway network, manufacturers began to develop national markets based on an integration of production and distribution systems. Changes in the methods of conducting business, new ways of extending credit, and general incorporation acts in several states, allowed the form of

Baskin, "The Development of Corporate Financial Markets in Britain and the United States, 1600-1914: Overcoming Asymmetric Information," Business History Review 62 (Summer, 1988) : 199-237.

business to shift from isolated proprietorships and partnerships to bureaucratically-run corporations. Changes in production and business methods were necessarily entwined.

The speed with which changes occurred was largely a consequence of large-scale mergers, in which the leading firms in many industries were combined. While there had been earlier attempts at collusion in manufacturing industries through pools, associations, and trusts, it was only with the development of the modern corporation that this coordination took a durable form, owing to the uncertain legality of the earlier combination methods. The use of the corporate form to organize large scale combinations corresponds roughly to the business cycle expansion of 1895-1904, with the peak of activity occurring in 1898-1902. Of the 519 recorded combinations that took place between 1854 and 1904, over four fifths of the activity--some 430 mergers-- occurred between 1895 and 1905, 364 (two thirds of them all) between 1898 and 1902. Any satisfactory explanation of the merger movement must explain why so much activity occurred in a relatively short space of time.

Most earlier work on this period of activity has focused on the relationship between mergers and industrial practices.³ This work was limited to studies of combinations that prevailed. A

³ Ralph Nelson, Merger Movements in American Industry, 1895-1956 (Princeton: Princeton University Press, 1959). Lamoreaux, The Great Merger Movement. For a review of merger literature, see Charles Bullock, "Trust Literature: A Survey and a Criticism," The Quarterly Journal of Economics (February, 1901) 168-217.

considerable portion of the earliest work involved denunciation, or defense, of the products of the new financiers and almost always dealt with the impact on prices and output. Contemporary literature has focused on the application of efficient market theories to the market for corporate control. By assuming away information asymmetry and accepting the notion of efficient stock prices, the issues of financial innovation or evolving processes fall outside the scope of these works.⁴ Response to this literature has therefore focused on issues such as the role of promotional profits and the divergence of financial and industrial aims.⁵

More recent work, as noted, has followed Chandler in a concern for actual industrial organization. My concern is not with short or long-term impacts on industrial practice, but with the impact on the financial practices themselves. In concentrating on the evolution of pecuniary practices it is necessary to include many of the shorter-lived combinations and failures as a transitory phase in the evolution of a new financial system. For this reason I will present data on

⁴ Gershon Mandelker, "Risk and Return: The Case of Merging Firms," Journal of Financial Economics 1 (December 1974) : 303-35. Henry G. Manne, "Mergers and the Market for Corporate Control," Journal of Political Economy 73 (February 1965) : 110-120. Michael C. Jensen, "Takeovers: Folklore and Science," Harvard Business Review 62 (November-December 1984) : 109-121.

⁵ Richard D. Du Boff and Edward S. Herman, "The Promotional and Financial Dynamic of Merger Movements: A Historical Perspective," Journal of Economic Issues XXIII (1989) : 107-133. Catherine L. Lawson and Larry L. Lawson, "Financial System Restructuring: Lessons from Veblen, Keynes, and Kalecki" Journal of Economic Issues XXIV (1990) : 115-131. Michael Gort, "An Economic Disturbance Theory of Mergers," Quarterly Journal of Economics 83 (Nov. 1969) : 624-642. Robert E. Prasch, "Economics and Merger Mania: A Critique of Efficient Markets Theory," Journal of Economic Issues (June 1992) : 635-643.

more combinations than are reported in the merger study done by Ralph Nelson. This dissertation has also been extended to include the Trust movement in the 1880's and some of the earlier isolated examples of the corporate form, while Nelson and Lamoreaux both used 1895 as the starting date for their studies.⁶

To understand the reasons for the larger scope and the analysis that will comprise this work requires review of the theoretical assumptions that inform my study. I have applied Thorstein Veblen's theory of the evolution of a credit economy to the historical record, focusing on the significance of financial and legal innovations in determining the shape of the merger movement at the turn of the century. This necessarily involves an expansion of the economist's usual view of innovation, and a blurring of the implicit line of causality that runs from an evolution of industrial practices to changes in the form of business enterprise.

Overview of Theory

Veblen described the rise of a new era at the turn of the century--the development of the credit economy--with combinations and large business enterprises being one of the first steps in this transformation.⁷ Under the earlier system, the capital of a business

⁶ Due to the multiple uses of the term "trust," Trust will be used to refer to industrial combinations that were based on the creation of trust certificates while trust will be used to refer to investment trust companies. More complete descriptions of Trusts can be found in Chapter Two, while observations about the evolution of investment trust companies can be found in Chapter Five.

⁷ Thorstein Veblen. The Theory of Business Enterprise (New York: Charles Scribner's Sons, 1921) 133. Also see Thorstein Veblen Absentee Ownership (New York: The Viking Press, Inc., 1923) 326, 331.

was understood to be the value of physical assets: the equipment and raw materials owned by the enterprise. The issuance of bonds or stock by early corporations formed by special acts of legislatures was described as the capitalization of the physical properties of the enterprise. There was however, a small capitalization of industrial values, with limited use of capital assets to obtain credit.

As the market for industrial securities evolved, capitalization of earning capacity and removal of any relationship that might earlier have prevailed between physical assets and capitalization became possible. Since the revenues of any industrial business are a joint function of the rate of turnover and the volume of business, a business can increase its earnings by use of credit and increasing its volume of business.⁸ The increase in the volume of business could occur through the expansion of the industrial equipment owned by the business, either through the purchase of new equipment *or the purchase of existing businesses*. During the period under study, the issuance of securities by recently formed corporations and use of the funds raised through incorporation frequently made possible the purchase of existing businesses.

This use of debt financing has the same effect of increasing earnings as would any technological advance that would allow for an increase in the turnover of capital. The application of new technologies allows more goods to be produced per dollar of capital outlay per period of time--these are economies of scale. New

⁸ Veblen, The Theory of Business Enterprise, 95.

technology and new organization--new organization that often followed consolidation--could increase rate of turnover.⁹ An increase in rate of turnover could occur in conjunction with lower costs per unit of output *or* without. Even where new technology was not involved, lower unit costs might result from reorganization that made "running full" possible.¹⁰

It was in the interest of the businessman to obtain credit through the issuance of securities "as far as his standing and the state of the market will admit."¹¹ This process has a cumulative nature, since existing values of stock can be used as the collateral for a further extension of credit. As long as the amounts of stock issued retain their value in the eyes of investors, this extension of credit can continue.¹² At the close of the nineteenth century, the use of new general incorporation laws that did not limit capitalization, or allowed more liberal limits to those items that could be capitalized, gave businesses the opportunity to expand their debt creation at an increasing rate.

Under this new form of financial traffic, the relationship between the authorized capitalization of a corporation and the purchase value of its physical assets was lost, while increasing attention was drawn to capitalization of the expected earning

⁹ Chandler, The Visible Hand, 281.

¹⁰ Lamoreaux, The Great Merger Movement, 28.

¹¹ Veblen, The Theory of Business Enterprise, 95.

¹² Veblen, The Theory of Business Enterprise, 108.

capacity of the business concern. As described by those who tried to understand this development as it was occurring, what was involved was the capitalization of intangibles, good will, patents, entrepreneurial talent, etc., that only have value when taken as a going concern.¹³ The modern confusion concerning the use of the term "capital" was made much worse during this stage of business evolution.¹⁴ What was happening was the transformation of the concept of capital to include intangible assets.¹⁵ This is why Veblen refers to the emerging system as a credit economy. It is important to note that Veblen--writing as he did in the midst of the transformation--treated securities and bonds as credit instruments.

Credit serves two main uses in the regular course of such business as is occupied with the conduct of industry: (a) that of deferred payments in the purchase and sale of goods - book accounts, bills, checks, and the like belong chiefly under this head; and (b) loans or debts- notes, stock shares, interest-bearing securities, deposits, call loans, etc., belong chiefly here.¹⁶

Since that time, we have come to think of securities as ownership of existing capital values and of credit as available for the

¹³ Arthur S. Dewing, Corporation Finance (New York: Ronald Press Co., 1931) 50.

¹⁴ Veblen, The Theory of Business Enterprise, 134, 135.

¹⁵ Veblen, The Theory of Business Enterprise, 114.

¹⁶ Veblen, The Theory of Business Enterprise, 92.

creation of such values. This view of the matter is one consequence of the evolution that Veblen described.

Those businesses able to expand their available credit through the issuance of one form of security or another will find themselves with an advantage in the purchasing of materials or of other concerns. It is from this perspective that the relationship between the financial developments and industrial combinations should be viewed. While the total volume of business credit had been extended previously, but slowly and over a considerable period of time, large scale combination of business meant the extension of much credit in a very short period of time. One effect of this credit extension was also immediate: a redistribution of ownership of industrial property took place, with the distribution of securities among former owners, promoters, and financiers. Under the early methods of finance, this transfer of ownership would only have taken place in times of financial crisis and with resulting liquidation of business concerns. During profitable times, the ownership and managerial control of business had resided with the industrialists, entrepreneurs with a working knowledge of the industrial practices; under the new system, financial backers immediately assumed an interest in and a position of control in determining the activities of the corporations. For this reason, Veblen describes the reorganization of business assets through large scale combination as a surrogate for commercial crisis, a process without liquidation or the collapse of corporate values but with redistribution of ownership.¹⁷

¹⁷ Veblen, The Theory of Business Enterprise, 128-129.

While the methods of this new form of finance were established in the railroad industries, and involved some trial and error over an extended period, their actual application to the manufacturing sectors of the economy was rapid and took place at a time when manufacturing businesses were seeking new methods of stabilizing their operations. The financial crises of 1893 to 1895 undoubtedly contributed to the reorganizations, but many of them took place during the upswing of the business cycle and in the absence of widespread financial panic. Nevertheless, and as Veblen points out, the consequences for redistribution of ownership were those that would have been expected from a crisis. As noted above, lines of causality are muddled, for the process was one of cumulative causation.¹⁸

An Explanatory Scenario¹⁹

In a typical combination, an individual not attached to any of the firms in an industry would be asked to attempt a combination of several competing companies. This individual is referred to as the promoter. In some cases, the promoter would decide for himself that a combination would be profitable, being moved to begin work either through some personal stake in the industry or a relationship to

¹⁸ Thorstein Veblen, The Place of Science in Modern Civilization (New Brunswick: Transaction Publishers, 1990) 77, 81.

¹⁹ This explanatory scenario is based upon the following sources; Veblen, Absentee Ownership, 341-343; Dewing, Corporation Finance, 42-64, 83-98, 227-248; Navin and Sears, "The Rise of a Market for Industrial Securities, 1887-1902," 105-139, *passim*.

interested parties. In either case, the promoter would obtain options to purchase the businesses of the proposed constituent companies. To obtain these options, the promoter would frequently have to prove the possibility of completion. This guarantee could take the form of securing an underwriter or financial backer who would guarantee to fund the new corporation by accepting their securities for some value of cash or the securities of other companies. With a group of financial supporters, made up of interested parties willing to accept the new stock, a syndicate would be formed with a manager appointed to represent the interests of the creditors.

In the process of securing the options on the constituent companies, the promoter would develop a plan for the creation of a new corporation, determining where it would be located, a hypothetical group of directors and officers, and the levels of authorized capitalization necessary to organize and begin the business. The options on the plants and the retainers that would go to the promoter and underwriters would be established in par values of stock in the as yet unformed corporation.²⁰

The new corporation would be "worth" the amount of "credit" extended, the most important components of which were the authorized capitalization of common and preferred stock and, to a lesser degree, the type and amount of mortgage bonds that could be floated. ²¹ All aspects of the stock that could be issued and the rights

²⁰ Dewing, Corporation Finance, 42-48.

²¹ Veblen, The Theory of Business Enterprise, 115, 116.

of its holder would be set down in the charter, in the main complying with the laws as established in the state's general incorporation laws. Under the new system of finance, preferred stock was frequently seen as representing the value of tangible assets, while the value of common stock was determined by the intangibles of the corporation-- such as good will or the value of the franchise. The total value of capitalization can be seen as existing in some ratio to the estimated earning capacity of the new concern. Since the dividend (contingent) and interest (fixed) charges will have to be paid out of earnings, the level of capitalization possible will be determined by the estimated earning capacity. Depending on the disposition of the promoters and financiers involved, this ratio could be large or small. In the case of a more risky undertaking, the ratio between capital stock and estimated earnings would be larger and the enterprise would be financed on a "thinner" equity footing. More conservative businesses would have a smaller ratio of debt to earning capacity, and would be more able to deal with sudden declines in the value of their stock. The natural tendency was for businesses to constantly increase the ratio of debt to earning capacity and to move towards a thinner equity footing.

The continuous adjustments of this ratio between capitalization and earning capacity are worked out in the capital market, however, since the effective capitalization of these companies depends on the market evaluation of the value of issued securities. In the case of a business that garners little public faith, the prices of stock will fall,

thereby reducing the ratio between capitalized values and earning capacity.²²

Most of the combinations were organized as corporations under the general incorporation laws of several key states: New Jersey, New York, Pennsylvania, Delaware, West Virginia, Maine, Illinois, and Ohio. Changes in the laws of these states and a knowledge of their relative benefits were therefore crucial to the successful promotion and organization of the large combination. This period under study was important because it saw the working out and establishment of accepted legal practices. Several notable authorities on corporation law, who played a significant part in writing the charters of combinations, were James B. Dill, Francis Lynde Stetson, and Max Pam.²³

The initial creditors and the promoter usually participated in determining who would be the directors and officers of the new corporation. Since the payment received by the creditors of the corporation frequently took the form of large blocks of securities that would require a substantial period of time to divest, they were eager to insure that their financial interests would be taken into account in the affairs of the corporation. Prior to the date that ownership was divorced from management by the dissolution of large holdings

²² Veblen, The Theory of Business Enterprise, 117, footnote 1.

²³ Each of these lawyers was involved in prominent mergers and contributed to the establishment of new legal techniques in the charters they wrote. Due to their expertise and involvement, they were called to give testimony to the United States Industrial Commission investigating merger activity in 1899 and 1900.

played a role in determining the concerns and members of management.²⁴

The evolution of accepted practices in the formation of corporations, (i.e., the rights granted to the various roles of promoter, industrialist, and financier) are laid out in the general incorporation acts of the more liberal states as they were being written and revised throughout the merger period. Also included in these state incorporation laws was a description of the legal uses to which the new financial instruments could be put; and, specifically, whether they could be used to purchase the stock, services, or assets of competing companies.

Context

While the aims of this work differ from those of Ralph Nelson and Naomi Lamoreaux, their conclusions provide important support for the story developed in the following chapters, and will be briefly summarized here.

Lamoreaux observes that the state of the industrial arts advanced rapidly at the end of the nineteenth century, leading to a situation of destructive price competition under the restraint of high fixed costs.²⁵ The causal force for merger activity is therefore the

²⁴ Thorstein Veblen, Absentee Ownership, 375,378. Later theories of merger activity and the role of corporations assume that the disparate holders of securities are capable of exercising control over the aims of management. This is based on the assumption of an efficient market for corporate control. Veblen reasonably takes a dim view of this assumption. The Theory of Business Enterprise, 146.

²⁵ Lamoreaux, The Great Merger Movement. 59.

fixed costs.²⁵ The causal force for merger activity is therefore the result of technological developments that made the earlier forms of business enterprise untenable. My interpretation--following Veblen's lead-- is that the condition of destructive price competition set the stage for a financially driven solution, a solution that allowed large combinations to protect interests endangered by the rapid evolution of industrial methods. Business was organized along such lines that the new methods of production could be turned to the creation of steady profits. Naomi Lamoreaux focuses on the combination movement proper as involving combinations of five or more independent businesses. Her observations about the role of size and of power of the largest combinations in reducing the rate of increase in output so as to maintain prices²⁶ support Veblen's view of a new system that rapidly changed the system of control of industrial processes.

Ralph Nelson's conclusions also do much to further the perspective developed here. By testing theories of merger activity with turn-of-the-century data and comparing the results to the merger experience in Britain, he concluded that the most significant factors in explaining merger activity were the development of the capital market and institutions that allowed the organizers to utilize this market. In the analysis of mergers during 1895-1904 and his tests of the relationship between merger activity and business cycles

²⁵ Lamoreaux, The Great Merger Movement. 59.

²⁶ Lamoreaux, The Great Merger Movement, 3.

over the entire period covered in his study (1895-1956), he makes a strong case that the stock market was crucial. Merger activity was found to have been more responsive to changes in security prices than to industrial production.²⁷ These observations support the contention that the evolution of the pecuniary practices of business and the developing roles of the financial community had a large effect on the nature of the American system. While this work is therefore based in part on the perspective developed by Nelson, it focuses more directly on the specifics of the combination stock plans and the development of the states' general incorporation laws.

Summary of Findings

The primary conclusion reached in this dissertation is that the evolution of financial instruments was crucial to the creation of horizontal mergers at the end of the nineteenth century. This evolution involved the application of a changing process for valuing corporate assets, and changing uses of the securities issued.

Common stock, which had previously been valued according to the physical assets of the corporation, became increasingly valued according to the intangible assets or goodwill of the company. While it continued to represent stockholder ownership of company assets, these assets became divorced from their physical values. In the financing of merger activity, common stock was frequently used as a

²⁷ Nelson, Merger Movements in American Industry, 6-7.

bonus on preferred stock to purchase or exchange for the assets of constituent companies.

Preferred stock was introduced in industrial finance during the merger period, and was valued according to the physical assets of the company. Preferred stock therefore represented tangible values and was more willingly accepted than common stock, both in the exchange for the stock and assets of constituent companies as well as in payment for the services of promoters and financial agents.

While mortgage bonds continued to be valued and used in a manner consistent with earlier periods, new types of bonds such as the debenture bond and collateral trust bond allowed for the further extension of security values. Mortgage bonds existed as a lien on physical assets, and were considered to be less risky than stock. They were frequently used to extinguish prior debt or to raise cash for working capital. A collateral trust bond was a lien on securities held by the corporation while debenture bonds depended on the credit of the corporation. Both debenture bonds and collateral trust bonds were used in ways similar to preferred stock, and provided an additional inducement in the exchange of merger company stock for the property or stock of constituent companies.

Because these valuations and uses of financial instruments are consonant with modern practices, merger activity at the turn of the century has had a significant impact on the evolution of industrial organization and business practice. Arguments that the important role played by financiers in turn-of-the-century American capitalism reflected a passing phase are therefore misleading.

My study focuses on the practices used to finance merger activity. I have therefore not dealt with common topics of merger theory such as market power or the applications of technology that produced the impetus for merger. For this reason, the conclusions are somewhat different from those in the economic literature on this subject, dealing primarily with method rather than with the causes or fundamental motivations that are frequently discussed in theories of merger activity. The context in which the financial innovation occurred was one of fundamental change in business organization, change driven by technological and organizational developments. However, my concern is not with this context but rather with the enabling financial reorganization.

The results of this analysis show the validity of Veblen's explanation of financial innovation and merger activity, in which he describes the process of an emerging credit economy through the evolution of pecuniary business practices. Until economic analysis integrates this perspective into the discussion of business evolution, theories of merger activity and the history of American industrial organization will remain incomplete.

Industrial Sectors Studied

The combinations included in this study are limited to the manufacturing and mining sectors of the economy, as the majority of mergers occurred there.²⁸ Further, mergers in the transportation and public utility sectors were not as well reported as industrial combinations, so their inclusion would have been difficult and fragmented.

For similar reasons, mergers by direct acquisition of the physical assets of one company by another are also ignored. These mergers rarely involved the use of large stock issues or the incorporation of new enterprises. Mergers by acquisition are therefore peripheral to the focus of this work. It should be noted that several industries, such as tobacco, meat packing, and gunpowder and explosives saw a significant number of mergers by acquisition, and the description of the evolution of these industries is therefore incomplete in this study.

Since the aim of this work is a detailed history of financial evolution on an industrial level, all combinations from 1854 to 1905 in manufacturing and mining are included. The occurrence of large

²⁸ Nelson, Merger Movements in American Industry, 8. For surveys of the merger literature see: Jesse Markham, "Survey of the Evidence and Findings on Mergers," in Business Concentration and Price Policy, Princeton University Press for National Bureau of Economic Research, Special Conference series No. 5, 1955.

mergers and the availability of information, however, was limited before the Trust movement of 1887. Descriptions of the earlier mergers are more largely based on secondary sources, and have been included to show the rapid development of merger activity and the differences between the methods used in earlier and later times to bring about mergers.

The Use of Earlier Studies

An initial list of consolidations was created by combining the lists made by Hans Thorelli, John Moody, Myron Watkins, and the Twelfth Census of the United States.²⁹ Ralph Nelson allowed the use of his unpublished worksheets, which proved to be much more detailed and complete than these earlier works. A comparison of these merger studies with the new list is shown in Table 1.³⁰

Sources and Nature of Information Collected

While the lists of Thorelli et al. differed in the dates covered and the variables included, their compilation provided an adequate list to begin collecting material that more directly pertained to the

²⁹ Hans B. Thorelli, The Federal Antitrust Policy: Origination of an American Tradition (Baltimore: John Hopkins Press, 1955) 295-302. John Moody, The Truth About the Trusts (New York: Moody Publishing Co., 1904) 453-478. Myron W. Watkins, Industrial Combinations and Public Policy (Boston: Houghton Mifflin Co.) 317-324. Twelfth Census of the United States, 1900, Bureau of the Census, Volume VII, Part I, pp. xxv ff.

³⁰ This table follows that of Ralph Nelson, p. 9.

Table 1. Comparison of Merger Studies

Compiler	Period Covered	Time Unit	Measure of Mergers by Number of	Measure of Size of Mergers by	Industrial Breakdown
Bureau of Census	Pre-1887 to mid-1900	Quarterly (derived)	Consolidations	Capitalization of consolidations	13 categories
Thorelli	1890-1903	Annual	Consolidations	total authorized capitalization	none
Moody	1854-1903	Annual	Consolidations	stock outstanding including bonds	none none
Watkins	1890-1904	Annual	Consolidations	Capitalization of consolidations	
Nelson	1895-1920	Annual and Quarterly	Consolidations, firm disappearances by consol., and firm disappearances by acq.	Capitalization of consolidations, estimated capitalization by acq.	two digit SIC categ.
Hake	1854-1905	Quarterly	Consolidations, firm disappearances by consol.	authorized capitalization by type, issued capitalization by type	three digit SIC categ.

particulars of each combination.³¹ Several sources were used. The collected annual reports located in the Historical Collections and the Cole Room of the Baker Library at the Harvard Business School provided financial information on several of the larger corporations in the form of income and balance of account statements. The presidents' and chairmans' statements included in some of these annual reports also gave clues as to the reasons for consolidation in the various industries. Also located in the Historical Collections holdings were folders of supplemental materials on a wider range of companies in the form of proxy statements, reorganization agreements, original charters, and prospectuses for security issues and combination plans. While the coverage of some activities (such as the United States Shipbuilding Company Reorganization of 1903) was exhaustive, information on the actual terms of the corporate stock plans for many companies was limited.

To fill out these details, The Bankers' and Investors' Manual proved to be a valuable resource which covered almost the entire period under investigation.³² Other sources used included the United States Industrial Commission Reports of 1900-1901, The Commercial

³¹ For a description of the differences between the earlier lists see Nelson, Merger Movements in American Industry, 8-12.

³² This manual began its existence in 1882 under the name of Statistics, published by the Daily Graphic. This was changed to The Manual of Statistics, published by the Financial News Association, in 1884. While the editorship of this manual changed frequently over the next 20 years, its name did not change again until the last year of its existence, 1923-24, to The Bankers' and Investors' Manual. The similarities between the information in this ignored manual and the more commonly cited work of John Moody is discussed in David Bunting's article "The Truth About 'The Truth About the Trusts,'" Journal of Economic History 31 (1971): 664-671.

and Financial Chronicle, and John Moody's The Truth About the Trusts.

The information compiled for this study included the name of the combination; its type, being typically either a reorganization, new corporation, or trust; the date and state of incorporation; the location of the principal office and the general management office; the names and locations of the constituent companies; the initial board of directors and officers with their location and primary role where possible; the amounts of authorized and issued stocks and bonds with a description of their specific form; the promoter and principal underwriters or syndicate managers; and the terms of the combination agreement (i.e., the specific method in which the combination was brought into existence and how it was financed, involving the proceeds from shares issued being used for the acquisition of cash, securities, or working capital).

In the organization of this information, several decisions had to be made regarding the formulation of values such as fixed and contingent charges and the inclusion or exclusion of variations in information. The recorded observations were organized into four types of information: (1) general information about the combination, (2) types and uses of financial instruments, (3) comparison of the costs and acquisitions of the financial plan, and (4) evidence on the use of legal and financial parties. These four groups involved a total of 57 possible observations.³³

³³ Please see Table 3 in the appendix for an example this worksheet, Combinations from January through March, 1899. Copies of the complete worksheet are available upon request.

General Information About the Combination

While the names of some consolidations changed after incorporation, I included these as a note, rather than recording two names for the name of the consolidation. Most consolidations occurred shortly after the date of incorporation. In those instances where a consolidation was carried out under the name of a pre-existing corporation, the original date of incorporation was included in parentheses following the date of combination. The occurrence of this was rare, however, and most combinations were completed within several weeks or months of the date of incorporation.

The use of Trusts, associations, and special charters was rare, and limited to the earlier years under study. When a combination did not organize under a specific state or used a special charter, this information was included under the state of incorporation.

The classification of combinations was taken to the four digit level whenever possible, recording two or more classification numbers rather than using the more general two or three digit classifications. This proved valuable in showing which combinations were engaged in a range of production activities.

The locations of businesses were recorded to show which combinations involved interstate acquisitions. The ambiguity of financial reporters required that this information be recorded only when reference was made to the city or region of location, as some reports recorded the state of incorporation for constituent companies as opposed to the state of location.

Shaw Livermore's observations on the success of industrial mergers were used to reflect the viability of these combinations, and observations regarding the specific causes and dates of failure were added to his general categories.³⁴

Types and Uses of Financial Instruments

Information about the authorized and issued values of preferred stock, common stock, and various types of funded debt were recorded according to their uses and method of distribution. Because information about payment to promoters and financiers is obscure, no consistent determination of the values of securities received was possible. Whenever possible, the values of securities received as profit to promoters and financiers were subtracted from the amounts listed for use as working capital, for retiring existing debts, or for the exchange or acquisition of property and stock.

The initial appearance of securities on the stock exchange was recorded by month for the listed and unlisted departments of the New York Stock Exchange.³⁵ Those securities exchanged on the New York curb were recorded bi-annually, June or December. Reporting

³⁴ Shaw Livermore, "The Success of Industrial Mergers," Quarterly Journal of Economics. 50 (1935) : 68-95.

³⁵ The New York Exchange employed several different classifications for stock. Securities accepted to the Listed category were widely traded, considered high investment quality, and were issued by legal corporations. The Unlisted category was established to deal with high quality widely traded securities issued by concerns with uncertain legal status, such as Trusts. Securities that had not been accepted to the listed or unlisted categories were frequently traded on the curb of the New York exchange.

of stock traded on the exchanges of Baltimore, Philadelphia, Boston, and Chicago was limited to reported observations.

A Comparison of the Costs and Acquisitions of the Financial Plan

A comparison of the fixed and contingent charges of the financial plans with net earnings was possible for many of the combinations. Net earnings were estimated as an average of actual earnings for two or more years, depending on available information. In those instances when the financial organization of the company changed several years after the combination, this was recorded as the cut-off date for estimating average earnings. When estimated earnings were used, this was noted in my worksheets, as estimated earnings frequently exceeded actual earnings.

The determination of fixed and contingent charges was based on the plan of combination. If a corporation assumed the funded debt of its constituents or set up a sinking fund for the retirement of constituent company debt with an immediate effective date, these values were included. If the constituent companies retained responsibility for their existing debt, or the sinking fund had an effective date several years in the future, these charges were ignored. In the latter cases, these charges were ignored since the costs of existing debt were not considered a component of the charges against the earning capacity of the new corporation.

Evidence concerning the par value of securities or tangible assets acquired was limited.

Evidence on the Use of Legal and Financial Parties

The use of trust companies as registrars, transfer agents, and trustees was widespread among the larger combinations and provided the most reliable source of information about the use of financial intermediaries. Many of the trust companies also acted as underwriters or syndicate managers for the public offering of stock. Their roles, as well as the use of promoters and legal counsel, were recorded in this section. While lists of directors and officers were readily available for the majority of the combinations, evidence of financial management was only recorded in those instances when direct reference was made to the role played by the financial parties. This method for recording the evidence of financial management was employed to avoid skewing the compiled information in favor of the argument presented.

The Initial List

The number of combinations compiled for study by year of incorporation are listed in Table 2.

Criteria for Inclusion of Combinations

Since the aim of this study is different from those preceding it, a very different criterion for inclusion has been used. Some of the earlier lists, because of their focus or in an attempt to delete insignificant combinations, used some cut-off criteria, such as a minimum size of \$1,000,000 authorized capitalization or the number

Table 2. Number of Combinations By Year

Year of Incorporation	Number of Combinations	Number of Comb. reporting total auth. cap.	Total Authorized Capitalization (in millions)	Average Auth. Capitalization (in millions)
1854	1	1	\$3	\$3
1860	1	0	n.a.	n.a.
1867	1	0	n.a.	n.a.
1870	1	0	n.a.	n.a.
1871	1	0	n.a.	n.a.
1873	1	0	n.a.	n.a.
1879	1	1	\$14	\$14
1881	1	0	n.a.	n.a.
1882	5	1	\$70	\$70
1884	1	1	\$30	\$30
1885	1	0	n.a.	n.a.
1887	3	3	\$99	\$33
1888	1	0	n.a.	n.a.
1889	6	4	\$170	\$42
1890	16	9	\$129	\$14
1891	14	5	\$100	\$20
1892	18	12	\$228	\$19
1893	14	7	\$201	\$29
1894	1	1	\$10	\$10
1895	11	7	\$110	\$16
1896	7	3	\$12	\$4
1897	9	7	\$95	\$14
1898	28	27	\$664	\$25
1899	141	114	\$2,635	\$23
1900	53	32	\$772	\$24
1901	64	44	\$2,215	\$50
1902	79	43	\$852	\$20
1903	28	13	\$232	\$18
1904	11	4	\$46	\$12
Total	519	339	\$8,685	\$26

Source: Worksheets

Note: The number of combinations reported exceeds the number for which authorized capitalization was available for some years. Annual Average Capitalization was computed using combinations which reported capitalization.

of disappearing firms.³⁶ No cut-off criterion was used in compiling the list for this work, since some of the earlier combinations would have been lost. In his book, Ralph Nelson deleted several combinations from his list, because they were reorganizations of previously existing mergers. The lists compiled by Thorelli, Watkins, and the Bureau of the Census only inadvertently included failed combinations such as American Vinegar or reorganizations. Reorganizations and failures have been included here, since a description of their collapse or readjustment could help us to understand the use, or lack of use, of the new forms of credit.

No systematic deletion of combinations other than duplicated listings was attempted in the organization of this study. Listings that appeared to duplicate each other were removed when the existing evidence was sufficient to show that key variables, such as the date of combination, were incorrect in one list or another. Several duplications, however, were allowed to pass, such as the listing of the Pure Oil Company for 1895 and 1900. In this case, the period of time between the two citations suggested a reorganization or the creation of a new incorporation with an identical name, which would occur if the state of incorporation were changed. This and other duplications

³⁶ Myron Watkin's list is an example where a minimum size cut-off was used, while Naomi Lamoreaux focused on consolidations involving five or more firms. It should be noted that underreporting of smaller combinations probably occurred throughout the period being studied. My analysis therefore, even though smaller combinations are included, will follow more closely the development of larger mergers (i.e., those with an authorized capitalization greater than \$1,000,000).

were left until the collection of additional evidence could clarify the reasons for their occurrence.

Verification

While some attempt to verify the existence of combinations was possible through tracking of succeeding entries in the financial manuals and cross reference of the Bankers' and Investors' Manual with the Commercial and Financial Chronicle, much of the reporting on short-lived combinations and closely held corporations was not amenable to this approach, since they would only appear in the manuals for the date of their organization. While Ralph Nelson's worksheets provided a valuable cross reference, his work began with 1895, and therefore could not be used to check the specifics of mergers prior to this date. For these earlier combinations, the most valid method of verification therefore proved to be the collection of detailed information on each of the combinations under study.

Classification of Combinations

In order to analyze the results on an industry basis, it was necessary to classify the various combinations. Following the work of Ralph Nelson, I used the Standard Industrial Classification manuals of 1945 and 1949.³⁷ While his codes were checked according to the specific information collected for this work, only a few corrections

³⁷ Bureau of the Budget, Technical Committee on Industrial Classification Standard Industrial Classification Manual (Washington: U.S. government printing office) Vol. I, Part 1 Nov. 1945; Vol. I, Part 2 Dec.1945; and Vol II, May 1949.

proved necessary. The primary reason for these corrections proved to be a different method for classifying mining operations. Several combinations in steel and iron, petroleum, and the refinement of minerals included constituent companies that were involved in mining. When the principal business of the combination involved mining activities, it was listed as a mining concern, while those combinations that involved some backward integration into mining were classified according to their manufacturing business.

Outline of Following Chapters

The information collected on merger activity from 1854-1904 will be used to describe the evolution of financial and legal practices in the emerging credit economy in America. This analysis will be accomplished in chapters on the role of state incorporation laws, the types of financial instruments, the methods of combination, the influence of promoters and financiers, and the evolving relationships of finance and industry.

Chapter II

THE ROLE OF STATE INCORPORATION LAW

The Role of the Law

The modern system of law provides a method of organizing activity according to accepted standards of practice and allows for the evolution of these accepted practices. The determination of what standard practices are is carried out through the reconciliation of varying ethical standards of justice.³⁸ Over the course of social evolution, these ethical standards have obviously changed, simultaneously affecting the determination of what constitutes acceptable behavior. While it can be said that some ethical standards or ideas of justice have persisted, or are dominant in American law --standards and ideas such as private property and the right to freely contract-- to assume that a single ethical standard has determined the patterns of acceptable behavior is only valid when applied to a specific period of time.³⁹ To describe a single ethical standard as the only force operative during a single period of time, one would additionally have to prove that

³⁸ It is this process that John R. Commons describes as the working rules for valuing, a system that forms the legal foundations of economy. John R. Commons, Legal Foundations of Capitalism (Madison: University of Wisconsin Press, 1957), 7-10.

³⁹ Max Lerner, "The Supreme Court and American Capitalism," Yale Law Journal 42 (1933) : 679.

the organization of the law was completely efficient in its response to that single ethical standard.

To support the thesis of this work, it is not necessary to prove that a single theory for organizing economic activity was working its way through the legal system during the evolution of state incorporation law. It is, however, necessary to see the law as an evolving component of society.⁴⁰ This allows us to view the changes in state incorporation law as an experimental process. In this way, changes in the legal system produce new ranges of activity whose immediate effects will be both positively and negatively viewed. Under a new precedent, the legal system can easily create opportunities that will later be viewed negatively. Further reflection and realization of the results will lead to dispute and further arbitration. When examining the long run, or industrial success, of newly created legal entities, it should not be surprising to see a wide range of successes and failures, with occasional digressions from the legal precedent.

Much has been written about the business success of the industrial combinations that occurred at the turn of the century. This literature has produced the full spectrum of results, from accounts of failure to the report of overwhelming success.⁴¹ This focus on the long run success or failure of

⁴⁰ Max Lerner, "The Supreme Court and American Capitalism," 680.

⁴¹ Arthur S. Dewing, "A Statistical Test of the Success of Consolidations," Quarterly Journal of Economics, 36 (November 1921): 84-101. Shaw Livermore, "The Success of Industrial Mergers," 68-96. Jesse Markham, "Survey of the

consolidations ignores the fact that these combinations occurred during a period of experimentation. Even if a large number of consolidations did not experience outstanding success, they could still have an impact on the financial, legal, and corporate structures.

The large number of legal battles associated with the Trusts and early combinations is evidence that these activities were carried out in an atmosphere of experimentation. Some industries, while desiring to consolidate, preferred to avoid the legal problems that could accompany a merger.

Rather than combine through the incorporation of a new business, several industry giants, such as American Tobacco and Armour, chose to evolve through the more conservative practices of acquisition and internally generated investment. In the 1902 attempt to consolidate the meat packing industry through the formation of a new corporation, a court injunction charged the Chicago meat packers with violation of the Donnelly Anti-Trust Law. While the National Packing Company did come into existence in March of 1903, the actual consolidation of 6 small companies proved much less ambitious than the previously hoped for combination of the Big Four.⁴² While the opportunity of combination through the formation of

Evidence and Findings on Mergers," in Business Concentration and Price Policy, 141- 212.

⁴² Armour Co., Swift & Co., Cudahy Packing Co., and Nelson, Morris & Co.. Commercial and Financial Chronicle, 74 : 1040, 1198. 75 : 241, 851, 1257. John Moody, The Truth About the Trusts, 257-259.

a new corporation was not exercised to its fullest extent in these cases, the new methods of finance were still evident and the experiment important.

In analyzing the role played by state incorporation law, one must be willing to accept the assumption that the combination movement occurred through a process of evolution and experimentation. It is neither the success or failure of each combination that is important, but the means used and the opportunities seized.

The Importance of Legal Forms other than the New Corporation

Due to the federal and state legal structure of the United States, the process of incorporation was deemed beyond the reach of the Constitution. While federal laws were passed regarding the illegality of acts to restrain trade or control prices, federal control over the laws of incorporation was not adopted. Although the possibility of a federal incorporation law was frequently raised in the Industrial Commission Reports of 1900 and 1901, no method for developing this system was suggested due to the broad extension of federal powers that would have been required. When asked about the usefulness of a federal incorporation law, the testimony of witnesses frequently went to the extremes, either declaring it an issue of high priority, dangerous, or unconstitutional.⁴³

⁴³ U.S. Industrial Commission, Report on Trusts and Industrial Combinations, (Washington, D.C. : GPO, 1900) 1: 36-37. Based on the testimony of Archbold, 565, 580; Rogers, 585; Havemeyer, 136-138; Gary, 1000, 1003; Gates, 1022; Pam, 1037,

The most common legal form of industrial consolidation, the limited liability corporation, therefore developed out of acts of state legislatures. Prior to the liberalization of general incorporation laws, industrial combinations had frequently taken the form of Associations, Trusts, or were incorporated through special acts of the legislature. Out of the 518 combinations reviewed, the legal form of combination was not recorded for 47 companies. Of these 47 companies, 19 were created during the early merger period of 1890-1893, when a variety of forms was more common.⁴⁴ This underreporting on legal form during the early years of activity may therefore underestimate the significance of legal forms other than the limited liability corporation.

Of the remaining 470 combinations of which we have clear evidence regarding the type of business, only 16 companies did not combine through the formation of a new corporation.

Seven of these were Trusts created between 1882 and 1889.⁴⁵ All of these Trusts converted to the corporate form after the Trust form was declared illegal with the passage of the Sherman Anti-Trust Act in 1890. The effects of legal action

1038; Myers, 1133, 1138; Dill, 1087, 1088; Moore, 965; Stetson, 981; Dos Passos, 1159-1161, 1174; Allen, 1194, 1206, 1209.

⁴⁴ See Table 4 in the appendix, Total Combinations by Year and State.

⁴⁵ Standard Oil Trust, American Cotton Oil Trust, Distillers' and Cattlefeeders' Trust, National Cordage Co., National Linseed Oil Trust, Sugar Refineries Co., and the National Lead Trust.

at the state level, however, had an even more immediate impact on the viability of the Trust form. New York state prosecution in the People vs. North River Sugar Refining Co., which began in 1888, led to the revocation of the North River Sugar Refining Company charter and the reorganization of the "Sugar Trust" as the American Sugar Refining Co of New Jersey in 1891.⁴⁶ In 1891, Ohio's prosecution of the Standard Oil Co. began and led eventually to the 1892 decision requiring that the Standard Oil Company of Ohio withdraw from the Standard Oil Trust.⁴⁷ The state renewed its attack on Standard Oil in 1897 for failing to withdraw in good faith from its contracts. In the face of potential litigation, the Distillers' and Cattlefeeders' Trust incorporated in Illinois in 1890. The remaining Trusts had adopted the corporate form by the end of 1891, the last of these being the National Lead Trust which incorporated as the National Lead Company in New Jersey during December of 1891.

Three combinations that did not incorporate using general incorporation law were the result of specially granted charters, one from New York in 1892 and two from Connecticut in 1899.⁴⁸ In each of these cases, the authorized capitalization

⁴⁶ The case was decided in 1890, 121 N.Y., 582. William Z. Ripley, Trusts, Pools and Corporations (Ginn and Company, 1916), 466.

⁴⁷ The Supreme Court of Ohio, State vs. Standard Oil Co. 49 Ohio State, 137. Decided in 1892. Ripley Trusts, Pools and Corporations, 466. Also see, the U. S. Industrial Commission Reports. 1 : 99.

⁴⁸ General Electric, American Agricultural Chemical Co., and American Brass Co., respectively.

was greater than that allowed under the existing general corporation statutes. Six other combinations were the result of an increase in the authorized stock of previously existing companies. In three of these cases, the previously existing company had also been a combination.⁴⁹

The number of combinations that did not take the form of newly incorporated companies was therefore slight, amounting to only three percent of the total number of combinations from 1854 to 1904. Over half of these 16 combinations also occurred prior to the surge in merger activity that began in 1895.

The Liberalization of General Incorporation Laws

New Jersey issued charters for 255 of the 456 corporations seeking to form combinations through general laws during the period under study. With the active support of corporation lawyer James Brooks Dill, New Jersey Governor Leon Abbett and Secretary of State Henry Kelsey, New Jersey liberalized its General Incorporation Laws in 1888 to allow unlimited authorized capitalization, an absolutely lower and declining tax structure on authorized capitalization, and a wide range of corporate powers that included the right to hold stock

⁴⁹ Tennessee Coal, Iron, and Railroad Co., Pittsburgh Plate Glass, and Standard Oil Co. were expansions of previous combinations. No information regarding prior combination was available for The Pullman Co., The United States Coal and Oil Co, and The Knickerbocker Ice Co.

in any other corporation.⁵⁰ Additional changes were made in New Jersey's incorporation law over the next several years, culminating in the General Revision Act of 1896.

Several other states mimicked the developments of New Jersey law, thereby attracting a reasonable share of merger-seeking corporations. Most states however, did not liberalize their laws to compete for the right to charter corporations. In all, 26 states incorporated at least one combination from 1854 to 1904. Eighteen of these states, each incorporating six or fewer combinations, accounted for 45 combinations, slightly less than ten percent of total combinations created by incorporation.⁵¹ The eight states that each incorporated more than 10 combinations accounted for 411 combinations, with New Jersey incorporating more than half. Figure 1 shows the total combinations incorporated by state in each of the top eight, while Figures 2 and 3 break these figures down by year for the four most prolific states.⁵² For the sake of comparison, the Y axis on Figure 3 only extends to 40 combinations. The peak year of New Jersey incorporations in 1899, a total of 93 combinations, is therefore not accurately shown in Figure 3.

⁵⁰ Christopher Grandy, "New Jersey Corporate Chartermongering, 1875-1929," The Journal of Economic History 49 (September 1989) : 680-681. New Jersey Session Laws, April 17, 1888, Chap. 294, 441 (merger); and April 17, 1888 Chap. 295, 445 (intercorporate holding).

⁵¹ See Table 4 in the appendix, Total Combinations by Year and State.

⁵² Based on Table 4, Total Combinations by Year and State.

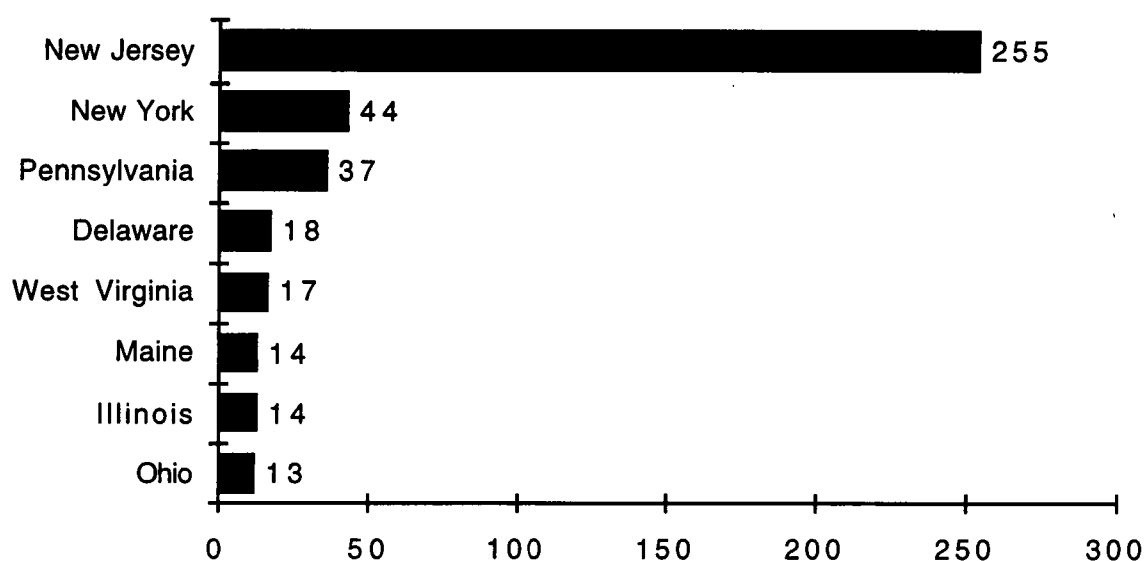


Figure 1. Total Combinations by State

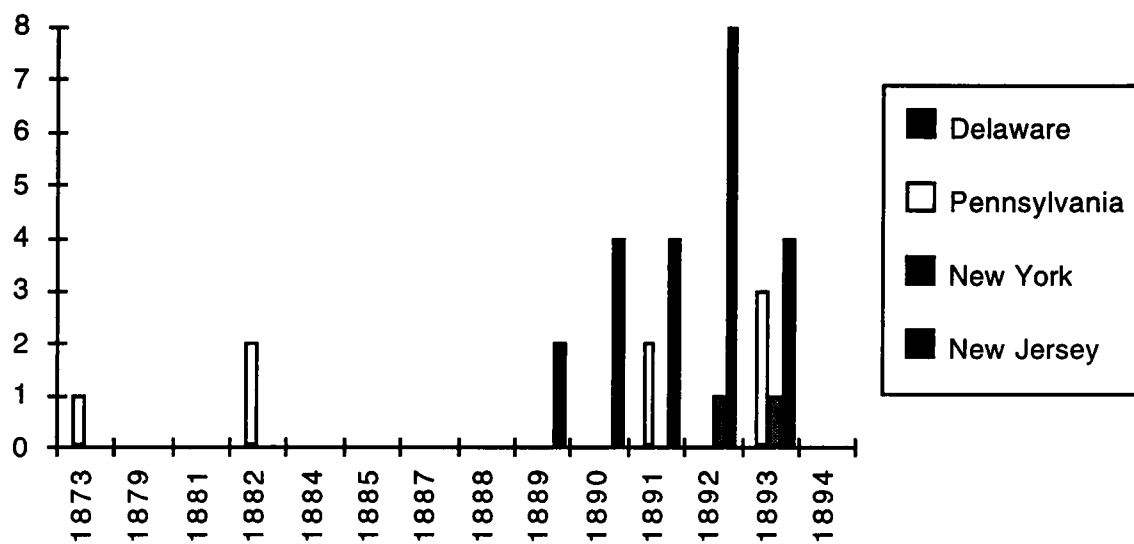


Figure 2. Total Combinations by Year, 1873-1894

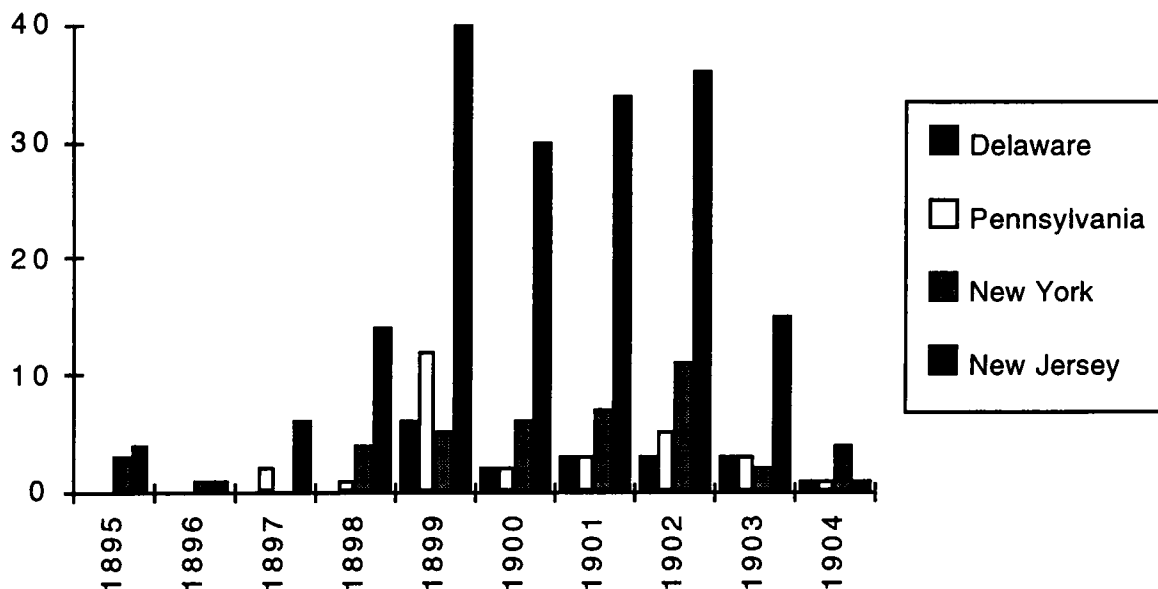


Figure 3. Total Combinations by Year, 1895-1904

To analyze the role played by developments in the general incorporation laws, the revisions of five key statutes were compiled for each of the states incorporating more than 10 combinations. The statutes studied were chosen for their significance for the process of combination. They dealt with the statutory maximum of authorized capitalization, the method for annual taxation of corporate stock, the method of paying in capital stock, the stockholder's and director's liability for corporate debts, and the general powers and limitations placed on corporations. Those statutes included under general powers

involved the ability to consolidate, the duration of existence, the amendment of articles of incorporation, the ability to own stock in other corporations, and the purposes for which a corporation can be chartered.

Some difficulty was encountered in determining when initial liberalization of these key statutes occurred. Because the process of revision and clarification was continuous, state statutes frequently noted only the last revision made, while session laws do not state the chronology or first instance in which the law was passed. The approach adopted for this analysis was therefore based on compilations of corporation law that were created during the period under study: the American Statute Law of 1892, the digest of corporation law compiled for the U.S. Industrial Commission in 1899, and the American Corporation Legal Manual of 1900.⁵³

New Jersey

New Jersey, which incorporated 255 combinations with a total authorized capitalization of \$6,940,943,000 and an issued capitalization of \$5,507,079,350, pursued broad ranging revisions from 1888 to 1891 that were later codified in the

⁵³ Frederic Jesup Stimson, American Statute Law: An Analytical and Compared Digest of the Statutes of All the States and Territories Relating to General and Business and Private Corporations (Boston: The Boston Book Co., 1892). U.S. Industrial Commission, Reports, 2 : 265-291. Charles L. Borgmeyer, ed., The American Corporation Legal Manual (Plainfield, New Jersey: The Corporation Legal Manual Co., 1900).

general revision of 1896.⁵⁴ Joel Seligman refers to the Revised Statutes of 1896 as the basis for all modern corporation law.⁵⁵ Merger activity in this state began in 1889 and continued until 1904, with the only gap in activity occurring in 1894.

Because of the overwhelming significance of New Jersey incorporation from 1889 to 1904, the advantages of their laws were discussed by a wide number of involved contemporaries.⁵⁶ They mentioned specifically the system of taxation, the wide-ranging powers granted to directors, and the limits on stockholder liability. Several later writers mention the willingness of New Jersey to provide an obviously pro-business environment to gain state revenues as a primary determinant of its success.⁵⁷ Seligman mentions the repeal of the Antitrust Law in 1892 as one of the primary reasons for the popularity of the New Jersey law, which served to reduce corporate fears of legal action. This followed a series of revisions that removed obstacles to the formation of stock

⁵⁴ For figures on the authorized and issued capitalizations associated with eight most commonly used states, see Table 5 in the appendix, Annual Authorized Capitalizations of Combinations in the Eight Most Commonly Used States.

⁵⁵ Joel Seligman, "A Brief History of Delaware's General Corporation Law of 1899," Delaware Journal of Corporate Law 1 no. 2 : 265.

⁵⁶ U.S. Industrial Commission, Reports, 1. See testimony of Dill, 1081, 1086; Gary, 996; Pam 1035-37; review, 11.

⁵⁷ Grandy, "New Jersey Corporate Chartermongering, 1875-1929," 681.

holding companies, a crucial process in many of the larger mergers.⁵⁸

New Jersey passed its General Corporation Act in 1874, allowing corporations to be formed by filing a certificate of incorporation with the secretary of state rather than incorporating through an act of the state legislature. Several amendments established the limiting nature of these early laws. An Amendment in 1877 limited the duration of a corporation to fifty years.⁵⁹ Amendments in 1886 dealt with the method of taxation, stating that "Every corporation shall be taxed upon their capital stock at its actual value and accumulated surplus."⁶⁰ In addition, the real and personal estate of a manufacturing company shall be taxed "the same as that of an individual."⁶¹ In his testimony to the U.S. Industrial Commission, James Brooks Dill described the uncertainty that corporations faced under this method of taxation. Since the assessed value and accumulated surplus had to be determined, the corporation would be uncertain as to the taxes they had to pay. Put differently, the taxes due would vary with reported value and surplus. When the laws were revised in New Jersey, one of the important amendments established an annual tax

⁵⁸ Seligman, "A Brief History," 265.

⁵⁹ Stimson, American Statute Law N.J. Corp. §11.

⁶⁰ Stimson, American Statute Law 1886 N.J. Supp. Corps. Chap. 57.

⁶¹ Stimson, American Statute Law 1886 N.J. Supp. Corps. Chap. 59.

based on authorized capital stock in order to avoid the opportunity for public corruption.⁶² The laws of 1896 clarified this new method of taxation for stock employed outside the state:

All corporations incorporated under the laws ... shall pay an annual license fee or franchise tax of one tenth of one per centum on all amounts of capital stock issued and outstanding up to the sum of three million dollars; on all sums of capital stock issued and outstanding in excess of three million dollars and not exceeding five million dollars an annual license fee or franchise tax of one twentieth of one per centum, and the further sum of fifty dollars per annum per one million dollars or any part thereof, on all amounts of capital stock issued and outstanding in excess of five million dollars.⁶³

The ability to organize holding companies was first established in Chapter 270 of the Annual Laws of 1888, which stated:

It shall be lawful for any corporation of this state, or of any other state doing business in this state and authorized by law to own and hold shares of stock and bonds of corporations of other states, to own and hold and dispose thereof in the same manner and with all the rights, powers, and privileges of individual owners of shares of the capital stock and bonds or other evidences of indebtedness of corporations of this state.⁶⁴

⁶² U.S. Industrial Commission, Reports, 1: 241-242.

⁶³ Borgmeyer, ed. The American Corporation Legal Manual P.L. 1896. First established in 1891. Stimson, American Statute Law.

⁶⁴ Stimson, American Statute Law, 138.

In 1889, the right to purchase mines, manufactories, stock, or other useful property and issue fully paid stock in payment extended the ability of corporations to float the expenses of combination by new issue of capital stock.⁶⁵ By 1893, the ability of any corporation to own the stock of any other company was established, while the 50 year limit for corporate existence was removed.⁶⁶ In addition, the Act of March 8, 1893 stated that any two or more corporations carrying on similar businesses could consolidate. Using stock to acquire assets during combination proved to be a valuable tool, and the power of the directorship was strengthened in 1896 with the provision that the directors valuation of items received for stock would be valid except in the instance of fraud.⁶⁷

Two important general powers involved the ability to carry on a range of related businesses under one company and the ability to issue large amounts of stock. The rights of New Jersey corporations with respect to these two powers was established fairly early. In 1886, New Jersey stopped limiting the range of activities in which non-banking corporations could

⁶⁵ Stimson, American Statute Law N.J. Corps. Chap. 55.

⁶⁶ Borgmeyer, ed. The American Corporation Legal Manual, Act of March 14, 1893.

⁶⁷ U.S. Industrial Commission, Reports "Digest of Corporation Laws" 2: L. 1896, Chap. 185 § 49.

engage. It is apparent that no implied limit on capitalization existed as early as 1887, while the revision of 1896 stated that no explicit limit to capital was placed on New Jersey corporations. The revision of 1896 also provided that the liability of stockholders and directors would be limited to their unpaid subscriptions on stock, and this expressly contingent upon the failure of the corporation leaving debts unpaid.⁶⁸ This removed the possibility of directors becoming fully liable for corporate debt, and increased their willingness to float corporations with large authorized capitalizations.

The results of these liberalizations are clearly evident in the methods of combination employed in New Jersey. While several trusts reorganized as New Jersey corporations from 1889 to 1891, and issued stock in exchange for trust certificates, it was not until 1893 that the method of issuing new stock for the stock of other existing corporations was used. From 1889 to 1892, the primary method of combination involved the purchase of property or other tangible assets with stock or with cash raised from the underwriting of the stock.⁶⁹ After this time, the exchange of newly created stock for that of constituent companies became a more common method of combination. There were however, notable exceptions to this method, as some promoters and financiers decided that the

⁶⁸ U.S. Industrial Commission, Reports "Digest of Corporation Laws" 2: L. 1896, Chap. 185 § 92, 94.

⁶⁹ Worksheets.

purchase of property with stock provided a more durable form of combination. The various methods of combination employed will be discussed more fully in chapter IV.

With respect to all five statutes reviewed, New Jersey provides the clearest example of liberalization beginning during the first surge of merger activity in the late 1880's. In each of the other states reviewed, key limitations remained in place that hampered the ability of directors to engage in large-scale combinations through the use of the new methods of finance. During the later surge of merger activity beginning in 1895, several other states had made revisions but failed to attract the attention of corporations away from the established success of New Jersey incorporation.

New York

New York passed three acts dealing with corporation law in 1892; The General Corporation Law, the Stock Corporation Law, and the Business Corporations Law. New York incorporated the unsuccessful National Wall Paper Co. in June of 1892 with an authorized capitalization of \$38,000,000. The Charter for this company was obtained under the new law passed in May of 1892. They also incorporated the International Pulp Co. in 1893. After this limited start, they began to see greater activity in 1895. New York proved a

distant second to New Jersey, incorporating 44 combinations with a total authorized capitalization of \$424,120,000.⁷⁰

The liberalization of New York law was based primarily on acts passed from 1890 to 1892 and the revision of 1896. The ability to issue stock for money, labor, and property estimated at its "true money value" was first established in the Annual law of 1890. The ability to use stock to acquire assets was not extended to the issue of stock for existing stock. This was made clear in a law passed in the same year which stated that no corporation shall take or hold stock in any other corporation, except for investment purposes where the securities acquired had paid dividends or interest continuously for three years.⁷¹ This was revised in the Stock Corporation Law of 1892, which granted the ability to own stock in other corporations engaged in a similar or useful business.⁷² While the laws of 1892 allowed for the combination of domestic businesses organized for similar purposes and unlimited terms of existence for corporations, New York did not revoke their Antitrust Laws, which had been tested in the decision of *People v. North River Sugar Refining Company*,⁷³ in which it was decided in June of 1890 that the North River Sugar Refining

⁷⁰ Worksheets.

⁷¹ Stimson, American Statute Law, N.Y. 1890, Chap. 564 § 40.

⁷² Stimson, American Statute Law, N.Y. 1892, Chap. 688 § 40.

⁷³ Stimson, American Statute Law, S.C.L. 1892 Chap. 688 § 58; G.C.L. 1892 Chap. 687 § 11; S.C.L. 1892 Chap. 688 § 7.

Company had forfeited its charter by entering the Sugar Refineries Trust.⁷⁴

The revisions of 1896 did not drastically change any of the earlier statutes. Unlimited authorized capitalization, an annual franchise tax based on the rate of dividends declared on stock, and the ability to carry on any legal business were clarified in 1896 but did not improve considerably the attractiveness of New York. Of particular importance was the method of taxation, whereby rates increased as declared dividends fell. As in New Jersey, all stock invested by manufacturing or mining companies within the state was exempt from this tax. Corporations unable to declare dividends in excess of six percent on the par value of stock would be charged at the rate of one and one half mills upon every dollar of the par value of stock, while stock with declared dividends of six per cent or greater would be taxed at the rate of one quarter of a mill for each one per centum of dividends made or declared upon the capital stock.⁷⁵ The annual franchise tax for any single corporation would therefore fluctuate every year, increasing as the profitability of the corporation declined.

While Grandy associates the limited use of New York incorporation to the large size of its state revenues, lack of a

⁷⁴ Commercial and Financial Chronicle November, 1890. 157. *People vs. North River Sugar Refining Co.* 1888, 121 N.Y. 582.

⁷⁵ Borgmeyer, ed. The American Corporation Legal Manual. L. 1896 Chap. 908 § 183-202.

dependence on franchise fees, and the subsequent inability of business interests to capture the legislature, it is apparent that New York did go through a process of revision and liberalization of corporate law.⁷⁶ The inconsistency of these revisions and the persistence of unfavorable statutes concerning combinations, the use of stock, and the method of taxation probably explain why the evolving financial center of the United States did not see the activity that occurred in the neighboring state of New Jersey.

Illinois

While Illinois ranked seventh in importance with respect to the number of combinations, the capital stock of several of its early incorporations gave it the third largest size of authorized capitalization, totaling \$249,300,000. It first began its revisions of corporate law in 1889. During this year the Diamond Match Co. and the Illinois Steel Co. incorporated. Illinois differed from all other states in that the first small wave of combinations from 1889 to 1892 was more significant than the large wave of 1895 to 1904. The first wave created over half of the total authorized capitalization within the state. While Illinois continued to revise its statutes until 1897, several statutes remained restrictive or incomplete, limiting the state's attractiveness as a haven for combinations.

⁷⁶ Grandy, "New Jersey Corporate Chartermongering," 685.

The laws of 1889 provided that corporations could be formed under the general statutes for any lawful purpose, that articles of incorporation could be amended with stock holder consent, the duration of corporate existence would be limited to 99 years, and directors and officers would be personally and individually liable for any indebtedness in excess of the capital stock.⁷⁷ While the laws of 1896 provided for an unlimited authorized capital stock, it is unclear if any limitation had been in place previously, as several of the combinations occurring during the height of Illinois activity in 1889 and 1890 capitalized at values in excess of \$30,000,000.

Illinois Antitrust laws were established in 1891 and revised in 1896 and 1897 without serious alteration. Under this law, domestic corporations engaging in combinations or trusts to restrain trade would forfeit their charters and franchises.⁷⁸ Despite this statute, the revisions of 1896 allowed that any two corporations doing similar business in the same vicinity could consolidate, although the ownership of stock in other companies was limited to one railroad adjacent to the company plant.⁷⁹ Additionally, the laws of 1896 revised the liability clause, reducing stockholder liability to the amount

⁷⁷ Stimson, American Statute Law, Ill. Chap. 32 §§ 1, 2, 50, 16

⁷⁸ Borgmeyer, ed. The American Corporation Legal Manual, Act of June 11, 1891. Amended June 10, 1897.

⁷⁹ Borgmeyer, ed. The American Corporation Legal Manual, Stat. 1896, Chap. 32, § 65; Chap. 93 § 35.

unpaid on the stock held or subscribed by them until all the stock was paid in. No provision for the further liability of stockholders was implied in this law.⁸⁰ The liability of directors and officers for debts in excess of capital stock, however, was restated in the Act of 1897.

The method of taxation for corporate assets continued to be based on the laws relating to personal property; this required that the property be assessed at its fair cash value according to local tax laws as stated in Clause 4, Paragraph 3 of the Revenue law.⁸¹

As late as 1896, Illinois had written no provision as to the medium of payment for stock. The ability to use stock for the purchase of assets or stock in other companies was therefore unclear and subject to arbitration.

As noted, the pattern of combinations in Illinois was unique, in that only limited activity occurred during the large wave from 1895 to 1904. Illinois incorporated only 5 combinations during this period, from 1898 to 1902. From 1889 to 1892, however, they incorporated 8 combinations. The peak of activity in Illinois occurred in 1890, with 4 combinations and a total authorized capitalization of \$74,500,000. This figure is largely the result of the incorporation of two previously existing trusts, The National

⁸⁰ U.S. Industrial Commission, Reports "Digest of Corporation Laws," 2: Stat. Chap. 32 § 8.

⁸¹ Borgmeyer, ed. The American Corporation Legal Manual, 1896 Ill. 2: 2030.

Linseed Oil Co. with an \$18,000,000 capital stock and the Distilling and Cattlefeeding Co. with a \$43,000,000 capital stock.

While Illinois developed laws to allow for large capitalizations, limited liability for stockholders, and combinations limited to the same vicinity, their statutes regarding the use of stock to purchase assets, the holding of other company's stock, their method of taxing corporations, and their Antitrust laws remained restrictive. The primary reason behind their large total authorized capitalization over the merger period was the result of a few large combinations. In addition to those combinations mentioned above, the increase in the capital stock of the Pullman Co. in 1899 to \$74,000,000 following the death of its founder account for over half the total authorized capitalization created in Illinois.⁸² A probable cause for the corporations that did take Illinois charters is the importance of Chicago as a center of industrial activity. In 9 of the 13 Illinois combinations that listed the locations of their business, Illinois was listed as a primary place of business, with their principal offices located in Chicago.

Pennsylvania

Pennsylvania incorporated 44 combinations with a total authorized capitalization of \$205,400,000. Due to the large numbers of Pennsylvania corporations that did not list their

⁸² The Bankers and Investors Manual. (1900) 412. George M. Pullman died in 1897.

authorized capital stock, it is reasonable to assume that Pennsylvania capitalizations actually surpassed that of Illinois. In all, 24 combinations did not report their authorized capitalization. While revisions to their corporate statutes occurred annually from 1893 to 1895, several of their laws continued to be based on the Constitution of 1874 and the Codes of 1883. While mergers of unknown size occurred prior to 1893, it was not until 1895 that verifiable merger activity appeared.

The laws of 1883 established a limit on corporate stock of five million dollars. The ability to increase stock to \$30,000,000 was specified in the laws of 1893, and in the subsequent year this limitation was removed, allowing corporations to capitalize at \$5,000,000 and then increase their stock to any value.⁸³

The method of taxing corporate stock as stated in the laws of 1889 were similar to the technique employed in Illinois, being based on the rate of dividends declared.⁸⁴ This statute was liberalized by the Act of June 8, 1893 following the lines adopted by New Jersey in 1891, although Pennsylvania established a higher rate of stock taxation.

⁸³ Stimson, American Statute Law, 1883 Pa. Mfg. Co.; Charles L. Borgmeyer, ed. The American Corporation Legal Manual, Laws 1893, 417; U.S. Industrial Commission, Reports "Digest of Corporation Laws," 2. 1894 Corp. §38.

⁸⁴ Stimson, American Statute Law, Chap. 332 § 21.

Every corporation having capital stock, except banks, savings institutions and foreign insurance companies... either incorporated in this or any other state, but doing business in this state, and liable to taxation herein, or having property or capital employed or used in this commonwealth, shall pay a state tax at the rate of five mills upon each dollar of the actual value of its whole capital stock of all kinds...provided further that there shall be no tax required on the capital stock of corporations, limited partnerships and joint stock associations organized exclusively for manufacturing purposes which is invested in and actually and exclusively employed in carrying on manufacturing within this State, excepting companies engaged in the brewing or distilling of spirits or malt liquors...⁸⁵

The exemption of capital stock exclusively employed in Pennsylvania is more important in this state than in New Jersey, because of the large number of Pennsylvania corporations that engaged in business only within the state. Of the 18 corporations that list their place of business, 13 were limited entirely to Pennsylvania, while three of the remaining five list Pennsylvania as the primary place of business. This taxation law therefore, appears to have been more effective at taxing foreign (those incorporated in other states) corporations that engaged in some activity in Pennsylvania.

The laws of 1883 allowed directors to purchase mines, real estate, manufactories, patent rights or other property necessary for business, and issue fully paid stock to the value

⁸⁵ Borgmeyer, ed. The American Corporation Legal Manual, 473. Act June 8, 1893, 354.

thereof, as well as establishing unlimited corporate existence.⁸⁶

While the method of valuation for these assets was not explained in 1883, the revisions of 1894 stated that there was no method of valuation other than price paid.⁸⁷ Companies engaged in petroleum refining were permitted to own stocks in companies engaged in metal manufacturing in 1895, but the ability to issue stock for the stock of other corporations was not granted during the period under review.⁸⁸

The liability of stockholders and directors in excess of their unpaid subscriptions to stock was established in the laws of 1883 and revised in 1894. The law making directors liable for any corporate debts in excess of the capital stock was established in 1883.⁸⁹ Under the laws of 1883 stockholders generally could be held liable for all debts and contracts during the time between the issue of special stock and the date when subscriptions were fully paid on the special stock.⁹⁰ The laws of 1894 extended the liability of stockholders to the debts of the corporation at the time of a reduction in the capital stock.⁹¹

⁸⁶ Stimson, American Statute Law, 1883 Pa. Corps. Chap. 32; Chap. 10.

⁸⁷ U.S. Industrial Commission, Reports "Digest of Corporation Laws," 2. 1894 Corp. § 43. In the phrase of the times, price paid was referred to as "taken value."

⁸⁸ Borgmeyer, ed. The American Corporation Legal Manual, P.L. 1895 §§ 7, 30.

⁸⁹ Stimson, American Statute Law, 1883 Pa. Mfg. Cos. § 6.

⁹⁰ Stimson, American Statute Law, 1883 Pa. Mfg. Cos. § 10.

⁹¹ U.S. Industrial Commission, Reports "Digest of Corporation Laws," 2. Pa. Mfg. Cos. § 4.

The right to form combinations among companies incorporated for and doing the same kind of business was allowed in the Constitution of 1874 and the Act of April 29, 1874, although consolidation was subject to the approval of the governor. This Act was revised in 1895 to allow manufacturing corporations to lease and dispose of property and franchises to any other corporation in a similar business.⁹²

After the revisions occurring between 1893 and 1895, it is apparent that the only limiting statutes involved the use of stock and the additional liabilities on stockholders and directors in excess of unpaid subscriptions to stock. The methods of combination employed by Pennsylvania corporations were similar to those used in Illinois and New York, in that most corporations were formed through the purchase of tangible properties, either for cash or stock. The location of businesses and corporate offices were similar to the experience of Illinois, in that a majority of the businesses with Pennsylvania charters carried on most of their business within the state.

Delaware

Activity in Delaware during this period was limited, beginning in 1899 with six combinations. Delaware incorporated 18 combinations from 1899 to 1904, with the

⁹² Borgmeyer, ed. The American Corporation Legal Manual. P.L. 1895, 369.

absolute number of combinations declining in each year following 1899. In later periods of merger activity during the 1920's and 1950's, Delaware was the undisputed chartermonger, having surpassed New Jersey in 1913 when that state passed the Seven Sisters Acts to reduce the possibility of charter abuse. Delaware set the stage for their later role with its Constitution of 1897 and large scale revisions of its corporate law in 1899.

These revisions were modeled almost exclusively on the laws of New Jersey, although Delaware adopted lower rates of annual taxation for capital stock and the initial licensing fee as well as enhancing the possibility of holding company pyramids. This allowed investors in parent companies to limit their personal liability and control large combinations through relatively small investments.⁹³ Delaware corporations therefore enjoyed an unlimited capital stock, fixed annual taxes, stockholder and officer liability limited to unpaid subscriptions on stock, combinations between domestic and foreign corporations, the ability to own and vote on other corporation's stock, unlimited existence, the right to carry on any legal business, while the valuation of assets acquired with stock was determined by the directors.⁹⁴

⁹³ Seligman, "A Brief History," 272-273.

⁹⁴ U.S. Industrial Commission, Reports "Digest of Corporation Laws," 2 : 273-291. Law passed March 10, 1899. Chap. 273 §§ 1,46, 54, 133, 138. See also Borgmeyer, ed. The American Corporation Legal Manual, 90-102.

Delaware was the only state that adopted more liberal statutes than New Jersey prior to 1904, and the only other state besides New Jersey that expressly allowed for the insertion into the articles of incorporation of any provision not in violation of the law.⁹⁵ According to the General Corporation Law passed on March 10, 1899, however, it is not apparent that Delaware corporations could purchase the stock of other companies with new stock. While Delaware's lack of success in attracting combination charters during the merger wave at the turn of the century can be partially attributed to the late revision of key statutes, the single clause relating to the method of payment for capital stock inserted in New Jersey law appears the most likely explanation of New Jersey's attractiveness.

Maine

Maine incorporated 14 combinations with a total capitalization of \$62,050,000, chartering its first combination in 1893. Several significant revisions were made to its corporate law in 1891, although a restriction on capital stock of 10 million dollars passed in 1884 remained intact.⁹⁶ While the laws of 1891 implied the power to consolidate, lease or contract with other companies and allowed for limited adjustment to

⁹⁵ Seligman, "A Brief History," 273.

⁹⁶ U.S. Industrial Commission, Reports "Digest of Corporation Laws," 2. R.S. 1884 Chap. 48 § 16. Law 1891 Chap. 99.

the articles of incorporation, the methods of corporate taxation, shareholder liability, and the methods of payment for capital stock remained based on the statutes of 1884.⁹⁷

While the changes in laws concerning consolidations did promote the chartering of combinations in Maine, the continued restrictions of 1884 statutes limited the use of the Maine charter to small combinations. Three combinations had authorized capitalizations at the maximum of \$10,000,000; The Consolidated Ice Co., The Bingham Consolidated Mining and Smelting Co., and The Planters Compress Co.. Additionally, only three combinations involved more than 5 constituent companies; The Consolidated Ice Co. (10), United States Envelope Co. (10), and The Planters Compress Co. (8).

West Virginia

Although West Virginia sought to attract foreign corporations through a revision of its code beginning in 1887 and ending in 1891, activity was limited due to the continued restriction on authorized capitalization of five million dollars and the fifty year limit on corporate existence.⁹⁸ West Virginia incorporated 17 combinations with a total capitalization of

⁹⁷ U.S. Industrial Commission, Reports "Digest of Corporation Laws," 2. Law 1891 Chap. 84 § 1; Chap 99, § 20; R.S. 1884 Chap. 6 § 14; Chap. 46 §§ 44,47; Chap. 46 § 45.

⁹⁸ U.S. Industrial Commission, Reports "Digest of Corporation Laws," 2. Biennial Laws of 1887, 1891 Code, Chap. 54 § 5; 1891 Chap. 54.

\$56,200,000, beginning in 1889 with The Consolidated Car Company.

The West Virginia Statutes of 1891 were considered more liberal than New Jersey in terms of the creation of "tramp corporations" and a fixed annual fee regardless of capitalization, while the liability of stockholders and directors was limited to the same degree as New Jersey.⁹⁹ The use of stock and the ability to combine, however, remained restrictive. The method of paying in capital stock included only cash or property in the laws of 1891, while no statutory provision for consolidation was established. The law of 1887 stating that no corporation could take or hold stock in other corporations was revised in 1891 to allow for the ownership of stock in one railroad connecting with the manufacturer's plant.¹⁰⁰

Even though West Virginia sought to liberalize its laws in accordance with the precedent set by New Jersey, the only statutes that could be considered lax dealt with annual taxation and shareholder liability. The other three statutes studied, dealing with maximum authorized capital stock, the method of paying in capital stock, and the general powers of the corporation, were not significantly revised. The ability to

⁹⁹ Borgmeyer, ed. The American Corporation Legal Manual. Chap. 32, §§ 86-93. Constitution Art. 11 § 2. Tramp corporations operated entirely outside the state in which they were chartered.

¹⁰⁰ Stimson, American Statute Law, 1887 Chap. 52 § 3; 1891 Civ. Code Chap. 52 § 4.

engage in large scale mergers through the purchase of constituent companies stock remained outside the laws of West Virginia.

Ohio

Ohio saw its first combination in the reorganization and expansion of Rockefeller, Andrews, and Flagler into the Standard Oil Company in 1870. Due to the limited reporting on the earlier combinations in this state, a total authorized capitalization of \$22,500,000 for thirteen Ohio companies should be considered low. The laws of Ohio were not liberalized during the later period of merger activity, and the revised statutes of 1886 retained their significance despite limited additions occurring in 1890 and 1897.

While the laws of 1897 removed the limit on authorized capital stock, only one Ohio corporation capitalized in excess of \$10,000,000, The Cleveland and Sandusky Brewing Co. in 1898. The laws of 1897 also provided for the consolidation of any two or more mining or manufacturing companies, while limiting the ownership of stock in other corporations to a single railroad adjacent to the company plant.¹⁰¹ The Constitutional provisions allowing the purchase of property and payment of debt in stock, stockholder liability double the amount of stock subscribed or owned, and the taxation of corporate property

¹⁰¹ U.S. Industrial Commission, Reports "Digest of Corporation Laws," 2. A.S. 1897 §§ 3863, 3864.

according to private tax rates were not revised to any considerable extent.¹⁰² The net effect of the evolution of Ohio law was therefore similar in many respects to the laws of Maine and West Virginia. While several statutes were revised to allow a greater degree of latitude in corporate activity, the lack of change in laws regarding the uses of stock, liability, and taxation meant that Ohio charters proved unattractive to the bulk of corporations seeking consolidation.

In reviewing the evolution of corporate law in those states which chartered more than 10 combinations from 1854 to 1904, several observations can be made. In each of these states, the revision of statutes governing the consolidation of corporations directly preceded the chartering of combinations. While all of the states attempted to liberalize parts of their corporate law, only New Jersey and Delaware saw significant changes in each of the five statutes analyzed. Despite the aggressive steps taken by Delaware to attract combinations, New Jersey was the only state explicitly to allow the purchase of other company's stock with newly issued stock and to repeal its Antitrust laws. Given the predominance of New Jersey charters and the methods of combination employed in this state, it is reasonable to assume that these two actions played a

¹⁰² Borgmeyer, ed. The American Corporation Legal Manual. Constitution 1851 Art. XIII §§ 3-4.

significant role in shaping the first American merger movement.

Chapter III

FINANCIAL INSTRUMENTS

Several questions concerning the types of securities issued, the methods used for valuing these securities, and their significance to the process of industrial combination are of obvious importance. Thorstein Veblen's theory of a credit economy provides a clear insight into the inter-relatedness of these questions.¹⁰³

According to Veblen, the fundamental function of all forms of securities is to increase the purchasing power of the company issuing securities. Securities provide this service by making fixed assets or putative earning capacity a means of payment. Capitalization involves the conversion of industrial (material) values into business (pecuniary) values. Since stock values represent material items already engaged in industry, their increase does not affect the value of the physical assets of industry (except insofar as earning capacity may be changed through the exercise of market power). The

¹⁰³ The relationship between the use of financial instruments, financial intermediaries, and the emerging stock market will be taken up in a later chapter. At this point it is only necessary to assume that the role of the financial market and its agents in industrial combinations developed through experimentation, beginning with some hesitation during the late 1880's and growing in sophistication and interest by the end of the nineteenth century. This observation is in keeping with the work of Thomas Navin, Marian Sears and Michael Baskin about the rise of the industrial stock markets. Navin and Sears, "The Rise of a Market for Industrial Securities, 1887-1902," 255-272. Baskin, "The Development of Corporate Financial Markets in Britain and the United States, 1600-1914: Overcoming Asymmetric Information," 199-237.

financial instrument therefore exists within the realm of pecuniary practice.¹⁰⁴

This statement however, does not imply that the issue of securities is incapable of affecting the evolution of the forms of industry. It is important to the social process because it establishes rights to the products of industry and monetizes the exchange of ownership of industry. In this way, the use of securities is significant in that it changes the methods employed in the distribution of ownership and use rights. The evolution of the types of industrial securities created is important because this involves changes in the rights conveyed by stock ownership.

The history of the financial instrument illustrates several benefits of monetizing ownership. While removing the limit of individual funds for finance, it also allows the investor or manufacturer to divest themselves of financial obligations.¹⁰⁵ As the rights associated with the ownership of industrial capacity become widely distributed, the duties of financial and industrial management become more specialized and concentrated. Significant to the view presented here is the realization that the introduction of a market for securities when coupled with the capitalization of new values also allows for the rapid reorganization of industrial enterprises.

In the organization of combinations, the par value of stock to be issued was frequently determined by the values of the companies

¹⁰⁴ Veblen, The Theory of Business Enterprise, 103.

¹⁰⁵ Navin and Sears, "The Rise of a Market for Industrial Securities, 1887-1902," 136.

to be purchased. Securities were therefore valued according to property or intangible values before they actually represented those assets. Only after the previous securities or claims to ownership on the assets had been converted into the new securities would actually represent the values of that property. Therefore, the use of financial innovations to form consolidations involved the capitalization of new values inherent in the business owned or to be acquired. The new methods of valuing corporate assets increased the usable funds of existing corporate management and the potential stock of funds available to those interested in gaining control.

The issue of financial securities whose values were based on previously unquantified assets was significant in financing the creation of consolidations. While the ultimate success of these consolidations was affected by the willingness of management to rationalize practices and concentrate control, the initial combination typically involved simply the integration of previously separate businesses. In this way, the creation of securities produced a market for corporate control which allowed rapid changes in the organization of industry. This provided a solution to the crisis in industries which experienced a rapid technological change. Under the previously existing market structure of independent and competing firms, the new technologies could not be profitably implemented and instead produced a situation of destructive price competition.¹⁰⁶ The combination of these businesses into larger cooperative structures

¹⁰⁶ Lamoreaux, The Great Merger Movement, 59-62. This model of industry structure is referred to as High Fixed Costs with Rapid Expansion.

provided a new method of organizing business which allowed for the profitable use of the new technologies.

The methods used for valuing securities are important in that they affect the acceptance of the securities, their amount, and the frequency of their creation. During the period of study, the types of securities created and the method of their valuation underwent significant transformation. Despite these changes, the function of securities remained provision for the owner of a claim in existing capacity with a form of purchasing power.

Types of Securities

The primary differences between stocks and bonds were as they remain today: stock represents partial ownership of the assets of the corporation, while bonds are loans and earn fixed interest. The stockholder receives a portion of profits which are referred to as dividends. The stockholder, as partial owner of the corporation, also has rights to determine its management and policies. On the other hand, the bondholder exists as a creditor of the corporation. Because of this distinction between creditor and partial owner, the bondholder's right to the interest accrued on the bond precedes the stockholder's right to a share of undivided profits. If a default on interest occurs, the corporation can be forced into receivership and possibly face the sale of assets to cover the debt obligations. The passing over of stock dividends, however, does not affect the legal

standing of the corporation.¹⁰⁷ Indeed, in some states, the indiscriminate paying out of unearned dividends can increase the liability of officers and directors or be used as proof of fraud. Despite the different nature of stocks and bonds, they were both used in industrial combinations as a way of financing the costs of consolidation.

Since a bondholder has the first claim on income, the bond is seen as a superior form of investment over the common form of stock because of the less risky nature of its returns. Stock did attract attention however, because of speculative returns. In their early forms, industrial securities were frequently issued as a single type (common), so that all investors would have the possibility of receiving large dividends.

While common stock, either issued solely or with other types of securities, remained the most frequently used security throughout the consolidation period, preferred stock was introduced during this period and grew to be very popular. It increased the regularity of payments and attracted investors into the market for industrial securities. The issue of preferred stock frequently satisfied the requirements of guaranteed returns by stating that no prior lien could exist on the property or could be secured after the issue of preferred stock. In this way preferred stock received its privileges

¹⁰⁷ Dewing, Corporation Finance, 8-41. The definitions of securities and their uses presented here follows from Chap. 2-4 of Dewing. To avoid repeated clarification, the term securities used in the text refers to both stock and bonds.

by being valued as the tangible physical assets of the corporation, and approximated the security typically associated with a lien.

As special types of stock were developed to increase the likelihood of stable returns, bond issues which limited the rights of the corporate creditors also came into more frequent use. In this way, the middle ground between stocks and bonds was filled by what Arthur Dewing refers to as "compromise securities."

Compromise securities were developed to approximate the regularity of bond interest payments while reducing the likelihood of forced bankruptcy.

The collateral trust bond was another form of compromise security which appeared as a derivative of the bond. While the collateral bond was less used than the general or first mortgage bond, the collateral bond was unique in that it allowed for a further extension of purchasing power based on the previous level of capitalized values. With the collateral bond, the existence of prior claims on assets were used as collateral for further claims, extending the range of values that could be capitalized. The clearest example of this use of the collateral trust bond is where constituent company stock was acquired with an issue of stock valued according to the combined value of corporate property. The stock thus received by the new corporation, existing as a prior claim on the assets of the constituent corporations, could then either be extinguished or deposited in a trust to support an issue of collateral trust bonds.

With the possibility of multiple capitalizations on the same assets, the most important determinant of the level of capital issued

became the ability to pay dividends (contingent) or interest (fixed) charges on the issued securities. The idea of capitalizing a corporation based on some multiple of its earning capacity therefore occurred naturally. The ratio between the charges and expected earnings could be determined so that charges would not exceed the corporation's ability to pay.

As the issue of more than one type of stock increased in the floatation of industrial combinations, common stock was frequently seen as representing the value of the intangible assets of the corporation. This stock therefore had a less clear right to dividends than preference shares or bonds. Some of the intangibles valued in this way included patent rights, degree of market security, and trademarks. Since the valuation of intangible assets was essentially a measure of the probable success of a combination, one could also say that common stock represented the extension of credit based on the likelihood of future earnings. This description of the valuation of common stock was most apparent in the largest multiple issues of stock occurring in the height of the merger movement and received a large vote of confidence from the testimony of financiers and lawyers before the Industrial Commission.¹⁰⁸

John R. Dos Passos, lawyer and combination promoter, told the Industrial Commission

¹⁰⁸ Industrial Commission, Reports 1: 12-16; 13: ix-x.. In Volume 1, see the observations of Stetson, 976; Doss Passos, 1149, 1150, 1166; Gates, 1021; Moore, 967. In Volume 13, see the observations of Flint, passim; White, 252; Burn, 306; Duke, 317, 331; Hopkins, 343, 355; Chisholm, 432, 433, 441; Norris, 477.

... I find that a great deal has been said about the subject of overcapitalization. Capitalization is of two kinds; there is a capitalization based upon the actual value of the property and a capitalization based upon the earning power; these are the two methods. You will find two classes of people in this country-- one in favor of the former method and one in favor of the latter.¹⁰⁹

In his support of capitalization based on earnings, Chairman of the American Steel and Wire Company John W. Gates provides a clear example of how this involves the extension of purchasing power based on expected future earnings.

I think in round terms they [the English] figure, irrespective of the amount of money invested in any specific line of goods, that if it will pay 7 or 8% on the principal, they are willing to capitalize on that basis. For instance, a concern making \$70,000 would be capitalized at \$1,000,000. ... If a street car line running between the Capitol and Treasury Department shows an earning for 10 years of \$10,000,000 and only cost \$500,000, I would rather buy that street car line than the one that runs from the Capitol to Baltimore that can not show anything over operating expenses, notwithstanding the fact that it cost \$10,000,000.¹¹⁰

If a combination were capitalized to its fullest extent according to the method of capitalization on net earnings, the ratio between annual charges and net earnings would be equal to one.¹¹¹ Applying

¹⁰⁹ Industrial Commission, Reports 1: 1149.

¹¹⁰ Industrial Commission, Reports 1: 1023.

¹¹¹ Since interest charges were included in annual fixed and contingent charges, net earnings were computed without the deduction of these charges. See Table 6 and 7 in the appendix.

this ratio of charges to earnings for combinations shows several distinct trends. As capital size increased, this ratio increased, from .47 for combinations smaller than \$5 million to .88 for corporations larger than \$50 million dollars. Smaller combinations were therefore more conservatively financed. Prior to 1895, combinations using common and preferred or common, preferred and bonds were more liberally financed, with ratios of .77 and .75 respectively. During this same period, combinations using common and bonds were very conservatively financed, with a ratio of .32. After 1895, the ratios associated with the various combination plans began to move closer together. The ratios associated with common and preferred or common, preferred and bonds declined, to .46 and .56 respectively. The ratio of common and bonds increased to .48. The changes in these ratios reflects a general movement toward a common method of determining capitalization values regardless of the types of securities used.

Common Stock

Valuing Common stock according to expected earnings was frequently the method of determining the purchase price of existing businesses. Common stock therefore could be issued in an amount that would provide for the bulk of the purchase of the constituent companies or their stock, while preferred stock or bonds could be used to cover part of the purchase costs, raise working capital, pay the profits of financial intermediaries and promoters, or to retire the previously existing debt of the constituents.

Of the 519 combinations that took place between 1854 and 1904, the types of securities used were recorded for 337, or 65 percent of the total. Common stock was issued by 331 of these 337. Common stock was therefore issued for every combination that listed sufficient information regarding their stock issues except for the six Trusts that issued only trust certificates. In terms of capital values, common stock was greater than the total authorized issues of either preferred or bonds. Common stock was authorized for \$4.56 billion dollars, while preferred stock and bonds were authorized at \$2.67 billion and \$1.17 billion, respectively.

The primary reason for this predominant use of common stock was the frequency of combination plans using two or more types of securities. While common stock was issued singly in 16 percent of the cases, the use of common in conjunction with preferred stock saw the most dramatic increase in use, accounting for 50 percent of the reported combination plans. The relative importance of common stock issued with preferred stock or with preferred and bonds can be seen in Figures 4 and 5.

Of the \$4.56 billion of authorized common stock, \$1.98 billion was issued in conjunction with preferred stock while \$1.3 billion was issued with preferred and bonds. The value of common stock issued singly or with bonds was somewhat less, \$635 million and \$573 million respectively. While each method of issuing common stock increased during the periods of heightened activity, the method of

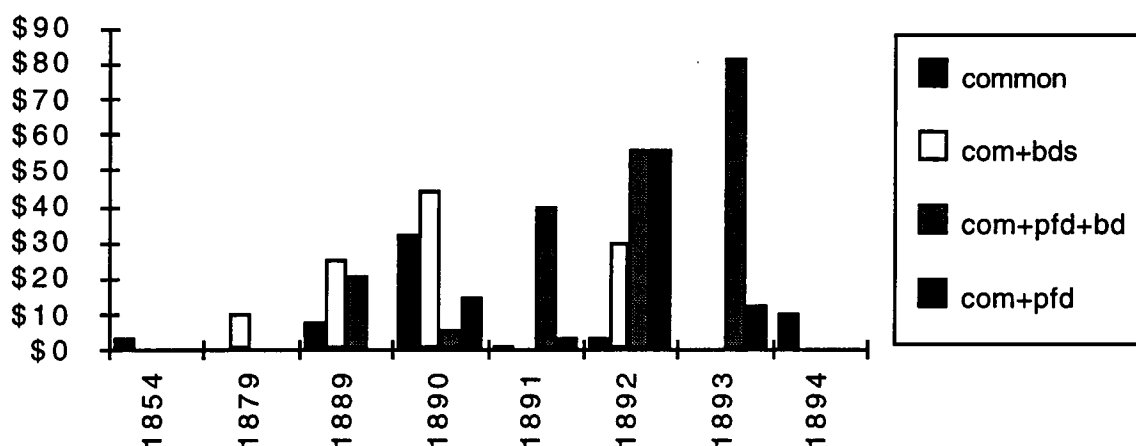


Figure 4. Annual Authorized Common Stock as a Component of Different Combination Plans (in millions), 1854-1894

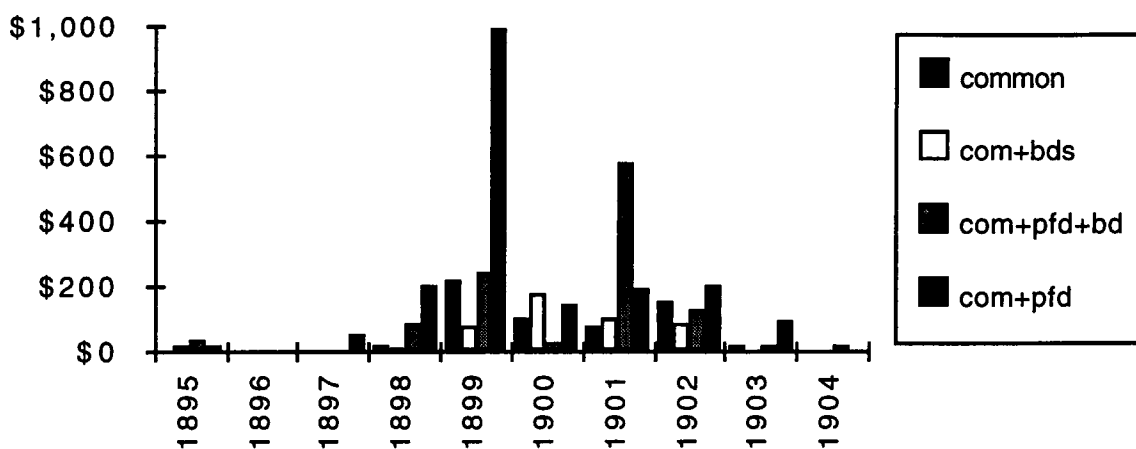


Figure 5. Annual Authorized Common Stock as a Component of Different Combination Plans (in millions), 1895-1904

capitalization using only common stock or common with bonds was considered a more conservative method of finance. This may explain the relatively larger values of common stock or common issued with bonds in the first years of the merger period beginning in 1889. Prior to the small merger wave of 1889, the only stock plans other than those using trust certificates were either those using common stock or common and bonds.

While larger numbers and values of common stock were issued in conjunction with preferred or preferred and bonds, the average authorized capitalization remained approximately the same for each use of common, ranging from an average of \$11 million dollars for common issued in conjunction with preferred stock to \$18 million dollars for common issued with preferred stock and bonds. Large fluctuations in the yearly average capital value for common stock occurred primarily in the issues of common, preferred and bonds or common and bonds. This was largely the result of increases in the size of capitalizations which occurred in 1901 and 1902. No explicit distinctions were made between the types of common stock issued, although it was clear that common stock issued singly was valued differently than common issued in conjunction with preferred or bonds.

Preferred Stock

Unlike common stock, preferred stock was authorized with reference to the percentage of dividends anticipated and whether

these dividends were cumulative or non-cumulative. A cumulative dividend required that unpaid dividends from previous periods must be paid on preferred stock in the present period prior to the distribution of dividends to common stockholders. A non-cumulative dividend stock does not accumulate unpaid dividends to the present. While the dividends on cumulative stock appear to be more secure, the danger of passing unearned dividends is more likely with cumulative stock, so that dividends on this type of asset might not be much more secure than non-cumulative stock. Because of the implied security of cumulative stock, however, it was the more frequent form of preferred issue.

In the merger wave of 1889 to 1894, 8% cumulative preferred was the most common issue.¹¹² Of the 218 companies that described their issue of preferred stock, the authorized issues of 8% cumulative preferred accounted for 63 percent of preferred stock authorized from 1889 to 1894 and 85 percent of the 8% preferred authorized from 1880 to 1904. After 1895, 7% cumulative preferred was the most common issue, with 7% preferred accounting for 77 percent of all preferred stock authorized after 1895. While preferred stocks offering 5% and 6% dividends were also authorized during the period under review, their use was limited and occurred primarily after 1895. The tendency towards cumulative dividend stock was also prevalent with these securities that paid smaller interest.

¹¹² See Table 8 in the appendix, Types of Preferred Stock Issued, by Year.

Preferred stock was issued with common stock 166 times for an authorized value of \$1.5 billion. While preferred was issued only 74 times with common and bonds, the larger issues of preferred associated with this method totaled \$1.2 billion. The average value of preferred authorized in conjunction with common and bonds was therefore almost double the average value of preferred issued with common.

Bonds

While mortgage bonds were the most frequently used bond, several other forms of bonds were significant, such as the collateral trust bond and the debenture bond. Of the 104 companies that issued bonds, first mortgage bonds were issued 74 times.¹¹³ The 6 percent first mortgage with no sinking fund or gold bond clauses was used in 43 percent of the cases using mortgage bonds. Although the use of mortgages accounted for 70 percent of all bond issues, they only accounted for 27 percent of the total authorized capitalization of bonds. This is primarily due to the very large issues of collateral trust bonds beginning in 1897. Collateral trust bonds were only issued 17 times, but their total authorized capitalization of \$724 million accounted for 64 percent of the value of authorized bond issues.

Mortgages, which exist as a lien on specific physical property, did not fluctuate much in terms of their average capital size and

¹¹³ See Table 9 in the appendix, Types of Bonds Issued, by Year.

remained throughout the period close to \$4.5 million. Collateral trust bonds, which exist as a lien on securities owned by the company, fluctuated widely in value, reaching a peak of \$480 million in 1901, an average value of \$80 million. The use of collateral bonds in the later merger period was similar to the use of debenture bonds in the first merger wave, since they were both issued for relatively large values. Prior to 1895, only one issue of collateral bonds was recorded. After 1895, of the 16 issues of collateral trust bonds, 10 issues were for corporations with capitalizations greater than \$25 million. From 1895 to 1904, collateral trust bonds were more frequently issued in exchange for the preferred stock or bonds of constituents, while debentures were issued for cash for the purchase of property or stock.

The debenture was an early form of security for the extension of credit beyond the value of physical assets. Debentures were basically unsecured credit obligations that promised to pay a certain sum of money at a given time. Their valuation was based entirely on the general credit of the corporation. Since the debenture bond was less closely attached to a particular asset of the corporation, it was considered more risky than a collateral trust bond and was used more conservatively than collateral trust bonds. In later years the use of debentures for the organization of combinations declined, and the terms of their issue became more elaborately defined to provide a greater degree of security. After 1895, debentures were issued seven times with common and preferred. They were frequently underwritten to provide cash for the purchase of property or stock.

Trust Certificates

Trust certificates provide an example of a financial instrument that was later to be mimicked by the evolution of compromise securities. Their limited use and attachment to the trust form of organization, however, makes the trust certificate a special case. The primary function of a trust certificate was to coordinate control of several independent corporations under a single management team. This was done by issuing trust certificates to existing shareholders who deposited a controlling portion of their stock in a trust. The independent companies were then coordinated by the trust directors.

The use of trust certificates was similar to the use of preferred stock in later years since it was issued to exchange for the stock of constituents. Trust certificates were valued as evidence of a pool of existing stock, which gave them a similarity to collateral trust bonds. Since trust certificates were essentially a stock, the development of debenture bonds in the 1890's and collateral trust bonds in the later period for similar uses meant a greater deal of security for the corporate creditor. The debenture and collateral trust however, were used to a limited degree. During 1895-1904, the largest number of combinations issued common and preferred stock in exchange for property or stock. Since this form allowed for the capitalization of values in excess of tangible property with sufficient security to insure vendors and stockholders to relinquish prior claims, many combinations found it unnecessary to turn to debt financing.

While common stock could not be considered a compromise security since clauses guaranteeing dividends were not attached to any issue of common, the ability of common stock to extend the capital value of a corporation should not be underestimated. As mentioned previously, when common stock was issued with either preferred stock or bonds, its value as a direct representation of tangible assets was superseded. It therefore had to be valued according to the intangible assets associated with the going concern. The use of common stock as well as the compromise securities were therefore all increasingly involved in the extension of the values that could be capitalized.¹¹⁴

Combination Plans

As explained above, corporations typically issued more than one type of security to finance their combinations. In Figures 6 and 7 below, the number of the combination plans are listed annually, while the total authorized capitalization in millions of dollars is noted with a marker.

1854-1894

Prior to 1895, the use of common and preferred to authorize the largest capital values had not been established. From 1889-1894, common and preferred were issued together 12 times, but accounted for only 34 percent of the value of capital authorized

¹¹⁴ For a description of the uses of issued securities by type, see Table 10 in the appendix, The Uses of Securities by Type.

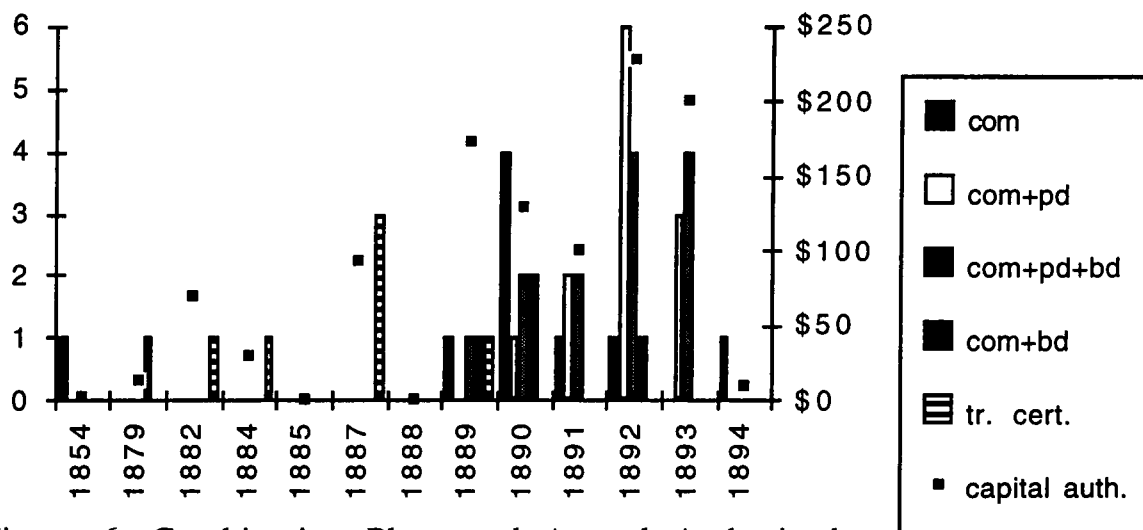


Figure 6. Combination Plans and Annual Authorized Capital, 1854-1894 (in millions)

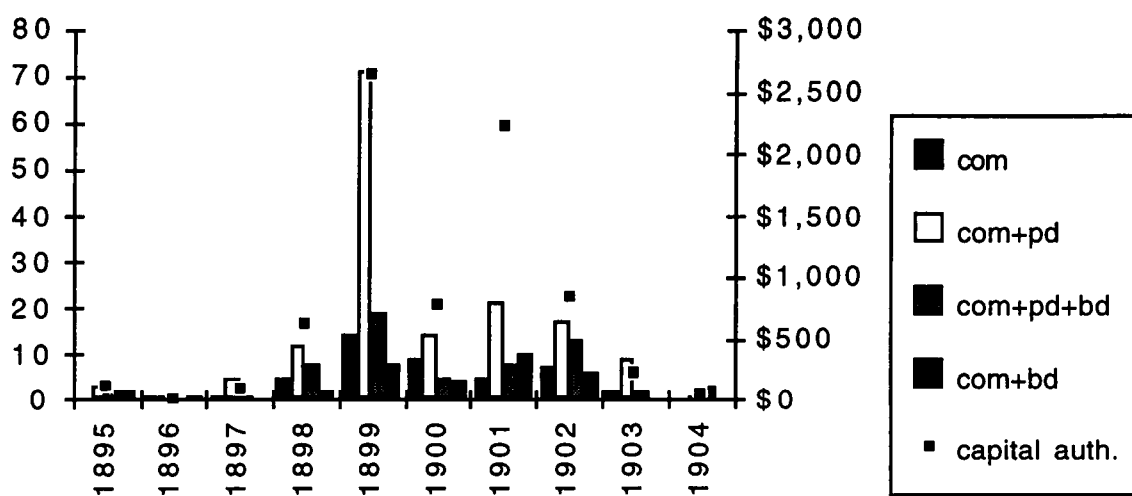


Figure 7. Combination Plans and Annual Authorized Capital, 1895-1904 (in millions)

through the issue of common, preferred, and bonds. Of the 16 companies capitalized in excess of \$25 million before 1895, only two used common and preferred. Six companies used issues of common, preferred and bonds to capitalize at values greater than \$25 million. Common stock with bonds were issued three times for companies of this size, while five of the trusts in the 1880's were capitalized in excess of \$25 million. Of the 29 companies before 1895 that authorized less than \$25 million, 19 used either common or common and preferred.

The two earliest issues of securities for combination, the American Waltham Watch Company issue of \$3 million common in 1854 and the Colorado Coal and Iron Co. issue of \$13.5 million in common and bonds in 1879 provide examples of the capitalization techniques of small manufactories and railroad subsidiaries.

The American Waltham Watch Company was incorporated in Massachusetts through the association of A.L. Denison and several others to manufacture watches in the vicinity of Boston.¹¹⁵ They issued \$3 million in common stock and sold it to a limited number of individuals. The company increased its stock by \$1 million in 1899 and sold the stock exclusively to the shareholders.¹¹⁶ Throughout this period, the company remained profitable and did not establish any mortgages on the property. The company paid annual dividends of 8% up through 1896, and of 6% through 1898. In 1899, following

¹¹⁵ Merchant's Magazine 1860, 498.

¹¹⁶ Bankers and Investors Manual, 1902, 374.

the increase in capital stock, the company issued an additional cash dividend of 16 2/3%.¹¹⁷ The securities of this company were not traded on the exchange, and probably remained closely held. In 1903, the company was involved in an exchange of stock with three other companies from Pennsylvania and New Jersey, although independent directorships were maintained.¹¹⁸

The Colorado Coal and Iron Co. was incorporated in Colorado in December of 1879. From its inception, it was controlled by individuals affiliated with the Denver and Rio Grande Railroad.¹¹⁹ Of the non-assessable¹²⁰ \$10 million common stock, the company issued \$9.25 million fully paid in exchange for the stocks of the Central Colorado Improvement Company, the Colorado Coal and Steel Works, and the Southern Colorado Coal and Iron Co.. An issue of \$3.5 million in first consolidated 6% gold mortgage bonds was authorized in January of 1880 to retire the acquired company's debt. \$1.604 million of these bonds were issued in exchange for the bonds of the constituents. Some of these bonds were then extinguished. By March of 1880, the bonds and stock had both been admitted to the unlisted department of the New York Stock Exchange. Several bond holdings acquired by the constituent companies were maintained, such as

¹¹⁷ Bankers and Investors Manual, 1903, 356.

¹¹⁸ The Commercial and Financial Chronicle, June, 1903, 1250.

¹¹⁹ The Commercial and Financial Chronicle, Investor's Supplement, Jan-June, 1882.

¹²⁰ Once paid in full, stockholders of non-assessable stock could not be assessed for additional payments in the instance of bankruptcy for the purposes of covering the unsecured debts or obligations of the company.

divisional bonds of the Denver and Rio Grande Railroad Co. and 8% town bonds of Canyon City, Colorado.¹²¹

In October of 1892, the Colorado Coal and Iron Co. transferred its agricultural and town lot properties to the Colorado Coal and Iron Development Co., which financed the exchange by increasing its capital stock to \$6,000,000 and issuing this increase to the shareholders of the Colorado Coal and Iron Co.. At this same time, stock control of the Colorado Coal and Iron Co. manufacturing properties was acquired by the formation of the Colorado Fuel and Iron Co.. This company involved the consolidation of the mining and fuel interests of the Denver and Rio Grande Railroad.

The Colorado Fuel and Iron Co. financed the exchange of securities through the issue of \$2 million 8% cumulative preferred and \$9.25 million common with a \$4.24 million 6% general mortgage to retire constituent company debts. The common and preferred stocks were placed in the unlisted department on the New York Stock Exchange in December of 1892.¹²² This company maintained its existence for the remainder of the period covered, acquiring additional properties through increases in bonded debt during 1895 and an increase of common stock in 1899.

The financial structure of this company grew increasingly complex at the turn of the century. The holding of railroad or affiliated company bonds in trust to guarantee constituent company

¹²¹ The Commercial and Financial Chronicle, 30 (1880) : 675.

¹²² The Commercial and Financial Chronicle, 50 (1892) : 373, 639, 1040, 1110.

bonds that were not extinguished was a technique adopted from the finance of railroads. Other complexities included an issue in 1901 of \$15 million convertible debentures to expand plant capacity. This required a subsequent increase in the authorized common stock to \$38 million. Through the purchase of these stocks, several outside investors and officers associated with the American Steel and Wire Co. were admitted to the Board of Directors. These included John W. Gates, I.L. Ellwood, and John Lambert.¹²³

The positions of the long standing director John C. Osgood and the new directors were soon called into question with the acquisition of stock by the Gould/Rockefeller and Edwin Hawley syndicates. The interests of George J. Gould and the Rockefellers were affiliated with the Denver & Rio Grande Railroad, while Edwin Hawley was associated with the Colorado & Southern Railroad. When control of the executive committee was established by the Gould/Rockefeller party in 1903, a plan to sell company property and to secure loans to raise capital was developed.

The sale of property, largely to the Gould and Rockefeller interests, was subject to a repurchase clause. If the directorship of the Colorado and Fuel Company chose not to repurchase the company, the evidence of participation in the sale of property would be used as a claim for stock in a new company which could provide the still existing Colorado Fuel and Iron Co. with necessary raw materials. Because clauses attached to the 1901 issue of convertible

¹²³ The Commercial and Financial Chronicle, 72 (1901) : 724.

debentures precluded the authorization of additional mortgages on the property, the plan of finance was based on the issuing of 6% participation notes that would be underwritten by an outside party. The capital could then be used by the Gould/Rockefeller agents to purchase the coal and iron lands and mines of the Fuel Company. In this way, the Fuel Company raised the money necessary to pay its debts through the temporary sale of tangible assets.¹²⁴

Although the capitalization techniques of the American Waltham Watch Company were clearly simplistic, the Colorado Coal and Iron and the Colorado Fuel and Iron Co. proved the applicability of techniques developed in railroad finance. Before 1889 and prior to the application of these techniques of sophisticated finance to industrial undertakings, the majority of combinations reported took the form of Trusts. Unlike the early use of common or common and bonds, trust certificates were issued for values of stock in excess of \$25 million and allowed for the horizontal integration of a large number of companies from several different states.

The use of trust certificates from 1882 to 1889 followed largely from the early success of the first trust, the Standard Oil Trust, which established control over 39 refineries and pipelines through the exchange of \$70 million of trust certificates for constituent company stock.¹²⁵ The Sugar Refineries, Distillers' and Cattlefeeders', and National Lead trusts all used certificates in exchange for constituent

¹²⁴ The Commercial and Financial Chronicle, 75 (1902) : 396. 77 (1903) : 2100. (1905), 1177. Bankers and Investors Manual, 1902, 423. 1903, 427.

¹²⁵ U. S. Industrial Commission, Reports 1 : 96.

stock. The American Cotton Oil Trust, however, issued trust certificates in exchange for the property deeds of the constituent companies.

The method of valuing the trust certificates was based on the physical assets of the constituents in two cases, the Sugar Refineries Trust and the Standard Oil Trust. In the National Lead Trust, American Cotton Oil Trust, and Distillers' and Cattlefeeders' Trust, trust certificates were issued at a par value in excess of the property value. While all of the trusts saw trading of their certificates on the New York Exchange, only the Standard Oil and Sugar Refineries certificates were exchanged at values above their par value of \$100. Despite the low exchange values of three trusts, the National Lead Co. in 1891 was the only reorganized trust which reduced its authorized capitalization, from \$90 million to \$30 million in common, preferred, and bonds. In the case of the American Cotton Oil Trust, attempts by the president, J. H. Flagler, and treasurer, J. O. Moss, to stabilize the market price of the trust certificates led to their resignations in 1889.

In terms of their valuation, methods of combination, and use of the stock exchange, the trust method was the precursor of later developments in large horizontal combinations. In the merger period 1889-1894, this was most obvious in the reorganization of the trusts as state chartered corporations. Each of the trust reorganizations was carried out through the exchange of stock for outstanding trust certificates. The method of acquiring control through the exchange of new stock for constituent stock or property in the later merger

period was a continuation of the practices established in the organization of the trusts. However, because the trust form was no longer legal, new types of securities were utilized which approximated the role played by the trust certificate.

Of the eleven corporations between 1889 and 1894 with authorized capitalizations in excess of \$25 million, nine issued some form of bond. The issue of debenture bonds occurred six times, while two mortgage and one issue of collateral trust bonds accounted for the other three bond issues. The two largest authorized values of debenture bonds were associated with the General Electric Company and the United States Leather Company. Both of these companies also issued common and preferred stock.

The United States Leather Co., chartered in New Jersey during 1893, was capitalized at \$130 million dollars. \$60 million dollars in 8% cumulative preferred was issued directly for property, while an additional \$60 million in common was valued according to the intangible assets and goodwill of the constituent companies. This common stock was issued as a 100 percent bonus on the distribution of preferred. Working capital was to be provided by the authorization of \$10 million 6% sinking fund gold debenture bonds. \$6 million of the debentures were issued for cash working capital to a group of bankers headed by Baring, Magoun, and Co. of New York.¹²⁶ The use of debenture bonds was similar in the organization

¹²⁶ The Commercial and Financial Chronicle, 57 (1893) 23, 24. Investor's Supplement (May 1893). U. S. Industrial Commission, Reports, cxxvi, 685-687. Bankers and Investors Manual, (1901) 550-551. (1902) 642.

of General Electric. In both of these cases, debenture bonds were issued to retire constituent company debt or supply working capital.

The National Wallpaper Co. and the Illinois Steel Co. issued debenture bonds with common stock. In each of these cases, the debenture bonds were used for the acquisition of constituent company property. In the case of National Wallpaper Co., common stock was authorized at \$30 million dollars, valued at 16 times the average earnings of the constituent companies. This common stock was distributed to the vendors of the property along with \$8 million in 8% debentures.¹²⁷ When debentures were issued only with common stock, their use was similar to that of preferred-- to provide additional security to vendors of the constituent companies. When issued with common and preferred, debenture stock was used in a way similar to mortgage bonds, to consolidate prior liens on property.

The only issue of collateral trust bonds occurring prior to 1895 was also utilized for the more conservative task of retiring debt. The U.S. Cordage Co., a reorganization of the National Cordage Co., authorized \$7.5 million of 6% collateral trust bonds to retire unsecured debt while acquiring the stock and bonds of 22 companies in 9 states with an issue of \$6 million guaranteed 6% preferred, \$8 million 8% cumulative preferred, and \$20 million common stock.¹²⁸

¹²⁷ The Commercial and Financial Chronicle, 55 (1892) : 216. (1897) : 1088. U.S. Industrial Commission, Reports, 13 : 282-303. Bankers and Investors Manual, 1899.

¹²⁸ The Commercial and Financial Chronicle, Investors Supplement, May, 1894. 58 (1894) : 820-821.

While two reorganized trusts were authorized to issue mortgage bonds, only limited amounts were actually issued. The American Sugar Refining Co. established a \$10 million first mortgage, but never issued any bonds. The American Sugar Refining Co. in 1891 exchanged \$25 million 7% cumulative preferred and \$25 million common for the \$50 million in outstanding trust certificates of the Sugar Refineries Trust. In January of 1892, both common and preferred stock were increased \$12,500,000 for the purchase of the Spreckels Refining Co., the E.C. Knight Co., the Franklin Refinery, and the Delaware Sugar House.¹²⁹ The only other large corporation that was authorized to issue a mortgage, the Distilling and Cattlefeeding Co., received \$35 million of trust certificates for an issue of \$35 million in common in 1890. In 1893 this company authorized an issue of \$8 million first mortgage bonds to retire debt and raise cash, although only \$1 million was issued for this purpose. An additional \$2,500,000 bonds were issued to the Central Trust Company of New York to guarantee the rebates due to the customers of the Distilling and Cattlefeeding Company.¹³⁰

The two corporations that authorized common and preferred stock in excess of \$25 million dollars before 1895 were similar in that both were chartered in New Jersey by important financial interests, saw extensive trading of their securities, and exchanged their stock for property. In 1892, the United States Rubber Co.

¹²⁹ Bankers and Investors Manual, (1901) 307-308.

¹³⁰ The Commercial and Financial Chronicle, 58 (1894) 682. U.S. Industrial Commission, Reports, 1 : 77, 78.

issued 8% non-cumulative preferred, valued according to the tangible assets of the corporation, while issuing common stock as a bonus on the distribution of preferred. Although the authorized issue of United States Rubber stock was \$50 million dollars, only half of the common and preferred authorized was issued for the acquisition of property at the time of incorporation.¹³¹ American Tobacco, on the other hand, had an authorized capitalization of \$10 million 8% non-cumulative preferred and \$15 million common. The physical assets of this corporation were close to \$25 million dollars, so that it appears both common and preferred were valued according to tangible assets. The total authorized capital of the American Tobacco Co. was issued for the acquisition of constituent company properties.¹³² The method of using common and preferred in exchange for constituent property was therefore established in the period between 1889 and 1894, although its use in larger combinations was still limited.

During the period from 1889 to 1894, common stock issued in conjunction with preferred or bonds accounted for the largest issues of stock valued according to intangible assets or earning capacity. The use of common stock in exchange for constituent company stock in large combinations occurred most frequently as a bonus on preferred or bonds. While debenture bonds used during this time were valued according to the general credit of the corporation, their

¹³¹ The Commercial and Financial Chronicle, Investor's Supplement, May 1893; November 1892. April 1, 1893. U.S. Industrial Commission, Reports, 13 : xli,xlii. 47-50. Bankers and Investors Manual, 1893.

¹³² U.S. Industrial Commission, Reports, 13 : lxxiii, lxxiv. 317-332. The Commercial and Financial Chronicle, 1890, 349.

number of issues was smaller than the number of common or preferred issues. When issued with common and preferred, debentures were used to retire constituent company debt or to provide working capital. When debentures were issued with common, they were used to acquire the property and stock of the constituent companies. Therefore debentures played some role in the extension of corporate credit and the organization of combinations.

1895-1904

The trends in the use of combination plans established during the first merger period became more clearly defined in the period 1895-1904. The use of common stock by itself was most prevalent in the smaller combinations, occurring 20 times in corporations capitalizing at less than \$3 million. Only five of the 80 corporations that capitalized in excess of \$25 million issued solely common stock. Common was issued 45 times for a capital value of \$580 million. Common and bonds were issued more frequently for corporations smaller than \$10 million dollars, although notable exceptions exist. Common and bonds were issued 33 times for \$973 million. The relative significance of the issue of common or common and bonds declined during the second merger period. While their uses and methods of valuation changed slightly, they remained associated with closely held combinations and more conservative methods of finance.

After 1895, the use of common and preferred was evenly divided among all sizes of corporations, occurring as frequently in corporations smaller than \$3 million as in corporations larger than \$50 million. This is in contrast to the period of 1889 to 1895 when common and preferred stock plans were typically used by smaller combinations. The issue of common and preferred accounted for the largest number of combination plans and the highest authorized capitalization, peaking in 1899 with 71 cases capitalized at \$1.72 billion. Common and preferred was used 154 times from 1895 to 1904 and accounted for \$3.33 billion of the total authorized capital of \$7.59 billion. When issued with preferred, common was most frequently issued as a bonus, valued according to intangible assets or earning capacity. In these cases, preferred would then be valued according to tangible assets. The use of common and preferred was not limited to any particular method of gaining control, although the practice of exchanging stock for constituent company property or stock was more common than issuing stock for cash to purchase property or stock. The values of common and preferred when issued in exchange for stock were also much greater than the values of common and preferred issued to exchange for property. This is despite the larger number of cases involving the exchange of constituent company property for newly issued stock.

The combination plan using common and preferred therefore had no difficulty in insuring the safety of constituent shareholders or vendors. In those cases where a greater degree of financial safety was required, common and preferred was easily floated or

underwritten for sufficient values to provide the necessary cash in the majority of the combinations. The use of common and preferred also saw the largest increase in use over the period studied. Non-existent prior to 1889, it was relatively less important in the merger period of 1889 to 1894 when the majority of combinations used common, preferred and bonds, although its ability to be exchanged directly for property rights or stock was established during this period. After 1895, its relative significance increased dramatically, accounting for the largest number of combinations both in terms of absolute numbers and capital values. In those cases where common and preferred stock was insufficient to guarantee the security of shareholders or vendors or allow for sufficient capitalization to carry through the combinations, companies had recourse to the use of bonds to raise working capital, provide for promoter's profits, and to exchange for the securities of the constituents.

The second most common combination plan from 1895 to 1904 involved the issue of common, preferred and bonds. The issue of common, preferred, and bonds typically involved capitalizations in excess of \$10 million dollars. Common, preferred and bonds were issued together a total of 61 times, valued at \$2.71 billion dollars. While the total number of issues of common, preferred and bonds peaked in 1899, the largest annual capitalization occurred in 1901. This was due to the single largest combination, The United States Steel Corporation, which was created in 1901 with an authorized capitalization of \$1.4 billion dollars. This was the only corporation which capitalized over \$350 million, and accounted for over half of

the \$2.71 billion capitalized through the issue of common, preferred and bonds.¹³³ Taking this one corporation into account, the significance of common issued with preferred has more significance, as it would then account for 54 percent of the total authorized capitalization.

The use of mortgage bonds remained the most common form of bond issued and their average value remained consistent at \$4.5 million dollars. They were used primarily to retire constituent bonds or provide working capital through a syndicate subscription. The use of mortgage bonds therefore did not change considerably from the first merger movement of 1889 to 1894.

Debenture bonds were used less frequently in the later period, although their uses changed to include their exchange for constituent stock. As in the earlier period, they were still issued to syndicate subscribers as a way to raise cash for the purchase of property or stock. Debentures continued to be used primarily by larger corporations, while the values of debentures also remained constant between the two periods. The largest authorized issue of debentures being the \$10 million 5% debentures of the American Bicycle Company in 1899. \$3.2 million debentures were issued with \$9.3 million 7% cumulative preferred and \$17.7 million common stock to exchange for the property of 48 constituent companies. The vendors of these properties required a partial payment in cash, so

¹³³ Moody, The Truth About the Trusts, 136-137.

additionally, \$6.3 million of debentures were issued for subscription by Baring, Magoun, & Company.¹³⁴

Debentures were also issued to exchange for the stock of constituents, as in the case of the National Starch Company during 1899. \$3.9 million 6% cumulative preferred, \$2.5 million common and \$3.6 million 5% debentures were issued to exchange for the stock of three constituent companies while parts of each issue were subscribed to by a syndicate to provide cash for the constituent shareholders.¹³⁵ While the use of collateral trust bonds was extended during the later period to include direct exchange for stock, the values of debentures remained fairly small. They should therefore be seen as an additional method for financing corporations and extending the credit of the corporation.

The use of collateral trust bonds developed almost entirely during the 1895 to 1904 merger period. Of the 17 issues of collateral trust bonds, 16 were issued after 1895, and they were used in exchange for stock or bonds in 12 of these cases. The largest issues of bonds were all collateral trust bonds, while the two largest issues of \$304 million and \$160 million were related. The Carnegie Company issued \$160 million 5% collateral trust bonds in exchange for the stock of 4 constituent companies in 1900. When this company was acquired by the United States Steel Corporation in 1901, Andrew

¹³⁴ Bankers and Investors Manual, Industrial Securities, (1902), 339, 341. (1903) 319. Commercial and Financial Chronicle, 68 (1899) : 974. U.S. Industrial Commission, Reports, 13 : 688-690.

¹³⁵ Bankers and Investors Manual, (1901), 455. U.S. Industrial Commission, Reports, 13 : 66-76.

Carnegie was uninterested in exchanging bonds for preferred stock. U. S. Steel therefore authorized the issue of \$304 million 5% collateral trust bonds to exchange for the \$320 million in collateral trust bonds and common stock of the Carnegie Company.

The third largest use of collateral trust bonds was the Consolidated Tobacco Company, organized in 1901. When it was organized to consolidate control of two earlier combinations created by the same interests, its entire issue of \$30 million was immediately subscribed for in cash by the Thomas Ryan and Standard Oil interests. An issue of \$158 million 4% collateral trust bonds were issued in exchange for the common stock of the American Tobacco Company and the Continental Tobacco Co., at the rate of \$200 dollars in bonds for \$100 dollars in American Tobacco common and \$100 dollars in bonds for \$100 dollars in Continental Tobacco common.¹³⁶ While some issues of collateral trust bonds were less than \$5 million, these smaller issues were used in a manner similar to mortgage bonds or debentures in the first merger period, for working capital and to retire constituent company debt. After 1895, the use of collateral trust bonds in a manner similar to preferred, to exchange for stock of constituents, was therefore most apparent in larger issues where the use of preferred would have been of insufficient size or security. The use of bonds rather than preferred stock also had the additional benefit of limiting ownership and management rights to a select group of individuals.

¹³⁶ Moody, The Truth About the Trusts, 86. 69-96.

While the use of common stock remained fairly similar throughout the period under review, the use of preferred stock and various types of bonds were adopted to provide for the organization of large horizontal combinations. The method of acquiring stock or property largely through the exchange of newly issued securities was first established as an effective method of combination in the Trusts of the 1880's. This technique was continued in the 1889 to 1894 merger period with the use of common, preferred, and debenture bonds. By 1895, the use of common and preferred had been adapted to this method of combination with the greatest success for combinations of all sizes. In those instances where additional capital values or vendor security were required, the collateral trust bond provided the opportunity for large extensions of credit.

In support of Veblen's theory of the emerging credit economy, it appears that changes were made in the securities created and the methods of valuing securities during this period which allowed for the continued extension of credit and the consequent increase in the purchasing power of corporations desiring to form consolidations. The capitalization of these values was a necessary step in the creation of all the combinations analyzed. The financial instruments were used to coordinate industrial management while creating a market for industrial ownership. This produced a system of horizontal combinations and the more profitable application of technologies that had made a directly competitive industrial organization unsustainable.

Chapter IV

METHODS OF CONTROL

The introduction of new types of securities and the evolution of the techniques used to value company assets dramatically increased the ability of companies to purchase the assets of other companies. The acquisition of constituent company assets through internally generated finance did not occur in any of the combinations studied. Because only a limited amount of capital could be generated in this way during a short period of time, this system of finance, if it had been used at all, would have been more likely to occur during the acquisition of a single company by a competitor. All of the corporations studied issued some quantity of stock, or in the case of the Trusts, certificates. The issue of securities allowed for the consolidation of management control over groups of separate companies. While some of these combinations financed their organization primarily through the sale of securities for cash, their number and size were limited.

Sale of stock for cash occurred after the primary method for gaining control, the exchange of new stock for stock or property, had developed. The authorization of large capital values during incorporation provided corporations with a new type of purchasing power which allowed for the rapid reorganization of industrial ownership. This creation of a market for corporate control, was necessary to the development of the large scale multidivisional

corporation in many industries. While the significance of the new methods of finance in industries that did not experience significant merger activity falls outside the scope of this study, other studies show the use of capital issues in some cases also proved to be a necessary device.¹³⁷

In the analysis of the methods of control that follows, 245 companies that described the method of consolidating ownership, either through the acquisition of property or stock, have been used. The authorized capitalization and type of combination plan were not recorded for eleven of these companies, while the use of stock either in exchange or for cash was not recorded for 83 companies. Further descriptions of the methods of control are therefore based on 151 companies.

Since no studies were available on the methods used by combinations to gain control of constituent companies, I constructed a system in which the method of control was broken into 6 categories. These six categories are based on two variables: the type of assets acquired, and the method of issuing securities to pay for these assets. Combinations that acquired property were assigned to category 1. Combinations that acquired property with cash were assigned to category 2, while those acquiring property with stock were listed in category 3. Category 4 included those companies which acquired stock. Combinations that acquired stock with cash

¹³⁷ William Michael Doyle, "The Evolution of Financial Practices and Financial Structures Among American Manufacturers, 1875-1905: Case Studies of the Sugar Refining and Meat Packing Industries," (Ph.D diss., University of Tennessee, Knoxville, 1991) 306.

were assigned to category 5, while those exchanging stock for stock were assigned to category 6.¹³⁸

Many of the companies studied used some combination of the methods for acquiring constituents described above. These combinations were categorized according to the most significant method of control utilized. If a corporation acquired stock control of one company, but acquired the property of several others, the method of control listed would be 1. If two methods of combination were used to a similar degree, the higher value of categorization was recorded. Therefore, if the values of stock issued for cash to acquire property and the value of stock issued in exchange for property were roughly equal, then the method of control would be listed as a 3, the exchange of property titles for new stock.

Several implications of the introduction of a securities market and the use of stock became apparent when analyzing the methods of control. Most significantly, the ability to exchange stock or property rights for newly issued securities was the most common method used to gain control of constituent companies. This method of control relies on using stock as a form of purchasing power, without requiring the market sale of the stock to achieve the acquisition of constituent companies. The role of stock in the evolution of industrial ownership was therefore most significant as a new means of payment, a limited purpose money, which had value

¹³⁸ See Tables 11 and 12 in the appendix for the tables based on these categories.

because it represented the right to future income streams generated by industrial capacity.

In terms of constituent company confidence, the purchase of property with cash was the most secure form of consolidation, while limiting the extension of ownership to outside investors. This method however, saw only limited use. The method of exchanging securities for property or stock, although considered more risky, was most commonly employed, and therefore leads us to assume that the consolidations were carried out under favorable investment conditions.

Also coupled with the introduction of the use of stock and the securities market was the ability to raise a large amount of cash or purchasing power in a relatively short period of time. Those corporations that utilized the new methods of finance to their fullest extent therefore capitalized at large values and acquired control by exchanging new stock for the stock of constituent companies.

The ways in which financial intermediaries were used and active promotion of enterprises accomplished differed in issuing stock for cash and in exchange for property and stock. In consolidations that issued securities for cash to purchase constituents, the securities were typically issued to a syndicate manager or group of financiers who then supplied the corporation with a specified amount of cash. These initial investors could then either retain a position of ownership or offer the securities for public subscription. If a management group sought to limit the extension of corporate ownership, the primary interests could underwrite the

securities themselves, or raise money through a blind pool. As long as the primary interests were willing to retain some large percentage or a majority of the stock issued, effective management control could be maintained. Due to the limited purchases of property or stock entirely by cash, it would appear that the stock exchange and public subscription as methods of raising cash involved only a fraction of the total capital values produced by the combination movement.

The number of combinations using financial intermediaries and syndicates, however, was not limited to those combinations that acquired control of property or stock solely with cash. Even in combinations that gained control through the exchange of stock, a portion of stock issued was usually converted into cash for working capital or the retiring of debt. For this purpose, the use of outside financial support would involve a portion of the total capital value authorized that was not immediately issued for public subscription. The financial intermediaries required a degree of safety when underwriting issues, preferring securities with special attachments and guarantees such as preferred stock or bonds. Most of the companies studied then, engaged the services of financial intermediaries to underwrite some portion of their capital stock.¹³⁹

The use of securities as a method of purchasing was a significant method of combination. The largest increase in combinations was associated with the method of exchanging new stock for stock or property. While the exchange of stock for property

¹³⁹ The role of financial intermediaries will be discussed more fully in Chapter 5.

was more common, the authorized values of stock swaps were much larger. The application of these methods of gaining control first appeared in corporations with large capital values prior to 1895. After this time the direct exchange of new stock for property or stock became more common among smaller combinations. Those combinations that used the new method of valuing their assets were also most likely to use the new methods of acquiring control.

Types of Assets Acquired With Stock

From 1854 to 1904, the number of purchases of stock and property were roughly equal, 112 and 122 respectively. The acquisition of property however, was more closely associated with the peak years of activity in each merger wave, 1892 and 1899. The acquisition of stock (including exchange for trust certificates) was the most common method used prior to the first merger period. In terms of authorized capitalizations, the purchase of stock was more than twice as large as the purchase of property, \$5.45 billion as opposed to \$1.98 billion. The average capital value of combination plans issued for the purchase of stock and property were therefore very different, \$49 million and \$16 million respectively. The acquisition of property was therefore more common among smaller corporations, while the larger combinations favored the acquisition of stock. The basic method of acquiring control of constituent companies therefore did not change during the period studied, although there was a large increase in activity.

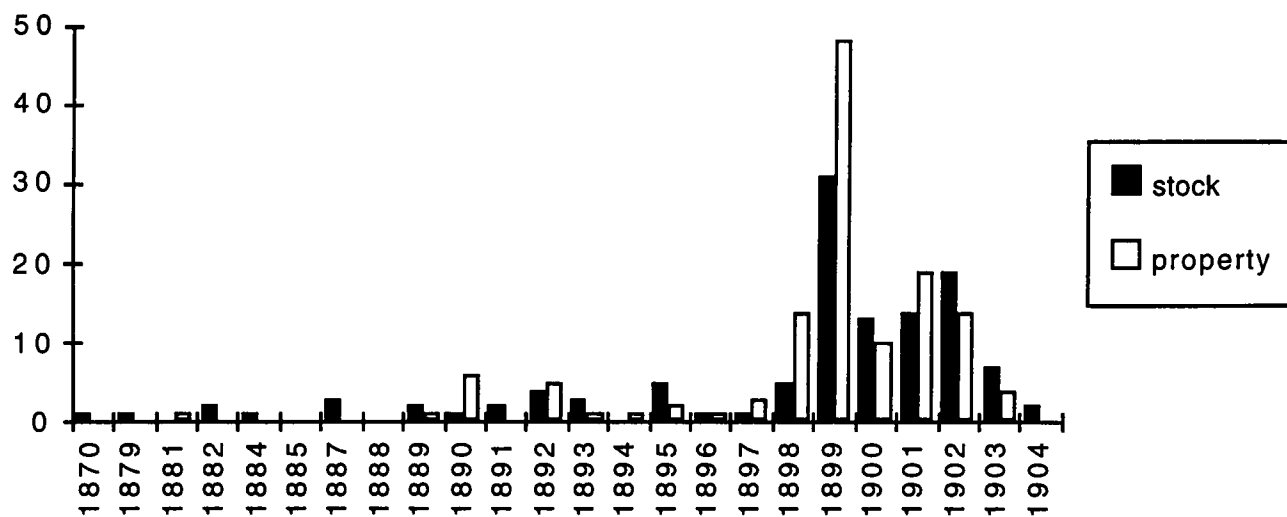


Figure 8. Annual Number of Purchases of Stock or Property

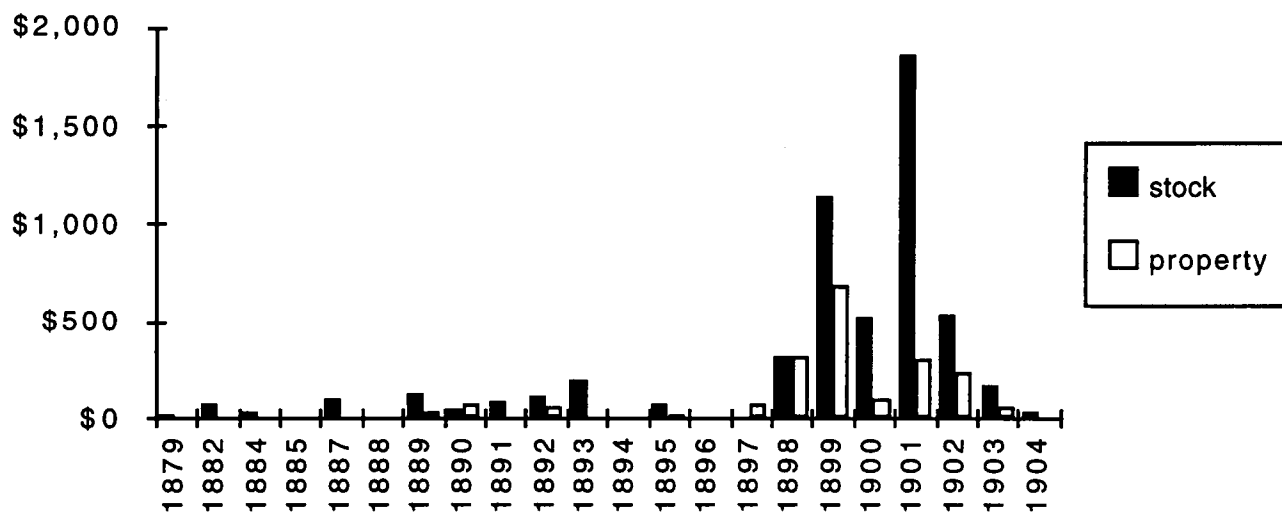


Figure 9. Annual Authorized Capital Values for the Purchase of Stock or Property (in millions)

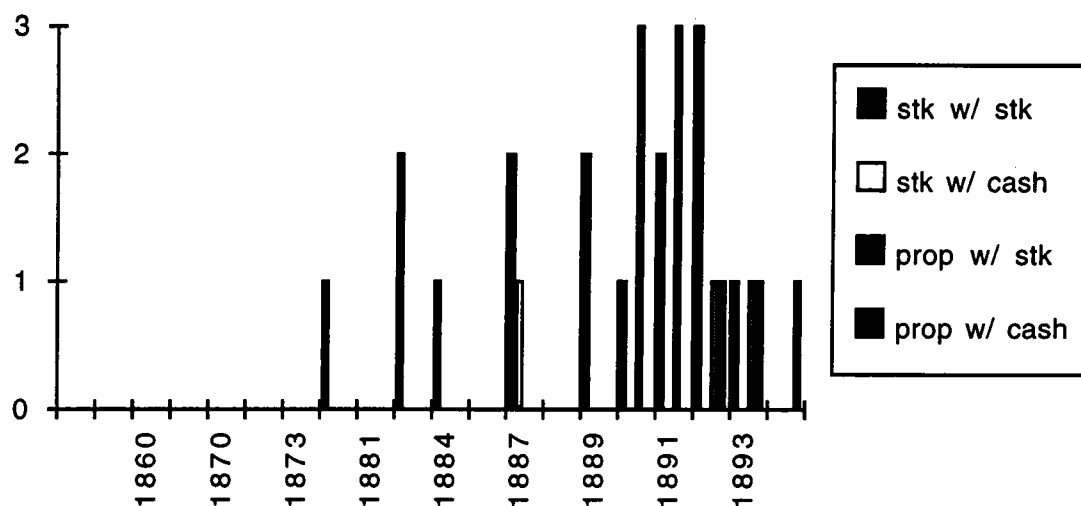


Figure 10. Annual Number of Purchases of Stock or Property, by Method, 1854-1894

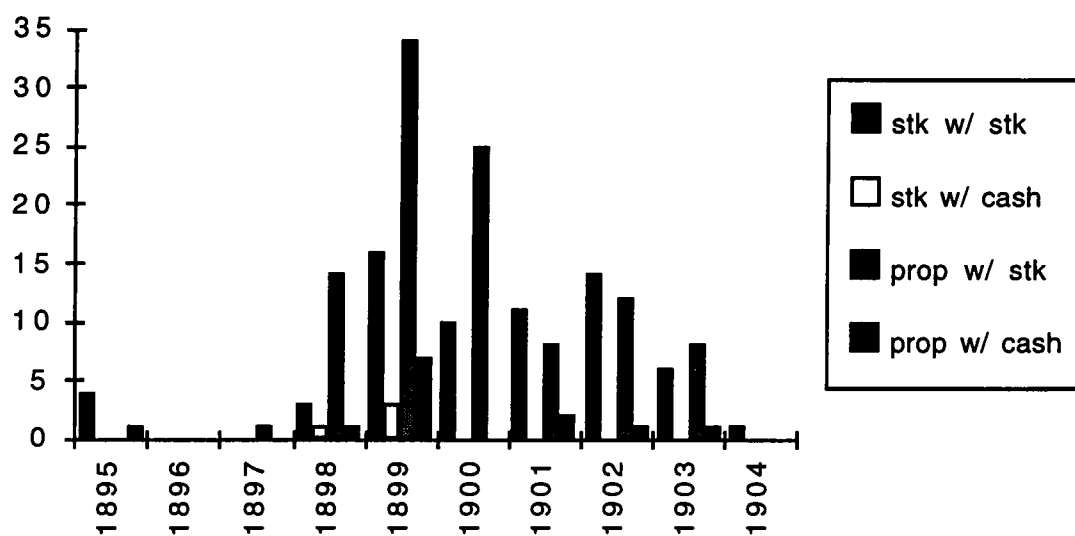


Figure 11. Annual Number of Purchases of Property or Stock, by Method, 1895-1904

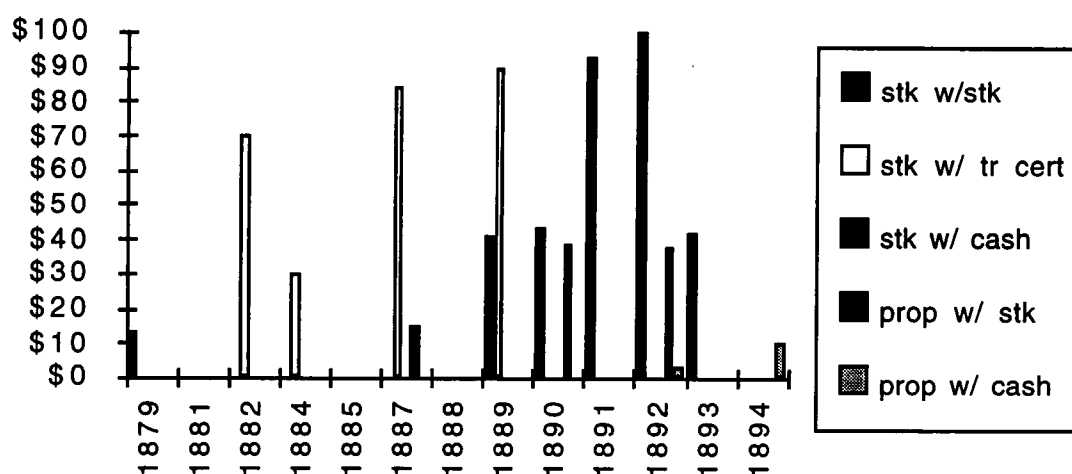


Figure 12. Annual Authorized Capitalization for the Purchase of Stock or Property, by Method, 1879-1894 (in millions)

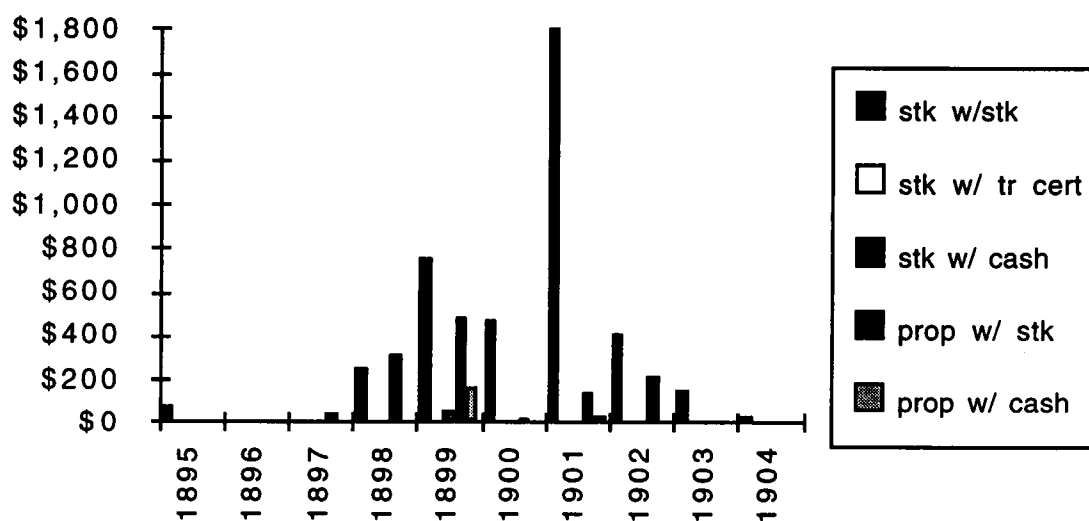


Figure 13. Annual Authorized Capitalization for the Purchase of Stock or Property, by Method, 1895-1904 (in millions)

Method of Issuing Securities to Acquire Assets

Of the 151 companies that listed the method of issuing securities for the acquisition of stock or property, only 20 were primarily issued for cash. Five of these companies acquired stock with cash for a total value of \$76 million. The other 15 companies acquired property with cash for a total value of \$215 million. The majority of the companies acquiring assets with cash occurred after 1895, involving 17 companies with an authorized capital of \$254 million. The average capital values associated with the issue of stock to acquire property with cash was only slightly smaller than the issue of stock to acquire stock with cash, \$14 million and \$15 million.

The issue of stock for cash implies a lack of confidence on the part of constituent shareholders or vendors of property. The desire for increased security during periods of slowing activity would lead to the more frequent use of issuing stock for cash, while the absolute size of these combinations would be limited to the amount of stock that could be successfully underwritten or issued to the public. The issue of securities for cash would also be more likely to guarantee the security of potential investors.

The concentration of this activity in the later merger period is significant for two reasons. First, this supports the observation that the ability to issue large amounts of capital stock for cash requires a buoyant securities market. The use of securities solely as a form of purchasing power therefore predates the use of securities as a method of raising cash in the formation of consolidations. Rather than seeing the evolution of combination plans from the acquisition

of tangible assets with cash to the exchange of stock, the acquisition of tangible assets with cash is secondary to the established method of exchanging stock for stock or property. The use of stock was therefore more than an additional device applied to the already existing market for industrial control, rather, it was a fundamental component in the creation of this market.

While the issue of stock for cash to acquire property or stock was limited, the exchange of stock for stock proved to be the most common method of acquiring control. Seventy-eight companies reported the use of a stock swap, for a total value of \$4.28 billion. The exchange of stock for stock involved the largest capital values and total number of combinations in each period of activity. The average capital value of stock exchanged for stock was \$55 million.

Although the use of stock swaps remained predominant during the period studied, the exchange of stock for property occurred infrequently prior to 1890 and became more popular after 1895. The exchange of stock for property was the second most common method of control, being used in 53 combinations for a total value of \$1.31 million. The average capital value of combinations that exchanged new stock for property was \$25 million.

While the value of combinations that acquired property with stock was considerably lower than combinations that exchanged stocks, both of these values are greater than the average capital values associated with the issue of stock for cash. This therefore shows an additional difference in the values of combination plans. Combination plans that engaged in the issue of stock for cash were

typically smaller than those combinations that exchanged stock for property or stock.

Due to the increasing significance of the exchange of stock for property during the period studied, the exchange of stock for stock declined slightly as a percentage of total values authorized, from 93 percent of total capital authorized for the period 1879 to 1888 down to 73 percent for the period 1895 to 1904. There is therefore evidence of some change in the methods of control used. Rather than a shift in the primary method of acquiring control, there was an increase in the range of methods used to purchase constituents.

Although the exchange of stock for stock was most important for large capital values, the exchange of stock for property among smaller corporations was introduced to a limited degree in the merger period of 1889 to 1894 and grew in popularity during the merger activity of 1895 to 1904. This reflects a desire of smaller combinations to gain a stronger position of control over constituent combinations than was possible through the creation of holding companies. The exchange of stock for property came to be considered a more durable form of consolidation, while it also gave a greater degree of security to shareholders since the securities were valued according to tangible assets. The larger capital values associated with stock exchanged for stock can also be described from this perspective, as these issues were more frequently valued according to intangible assets to ensure sufficient purchasing power for the acquisition of constituent companies stock.

Method of Control by Combination Plan and Size of Corporation

By categorizing the methods of control used by capital size and combination plan, the evolution of the methods of control become clearer.¹⁴⁰ Combinations were categorized based on authorized capitalization, which was broken down into six categories that included roughly equal numbers of companies. This was done so that the analysis of the methods of control would not be adversely affected by categories that inflated or diminished the significance of certain capital sizes.

The acquisition of property with cash was introduced in smaller companies using common or common and preferred. While several companies larger than \$10 million either issued common and preferred or common and bonds for cash to purchase assets after 1898, the majority of companies acquiring property with cash remained small. The other three methods of control, the acquisition of stock with cash and the exchange of property or stock with stock, were first introduced in combinations larger than \$10 million. While smaller companies also used these methods after 1897, they remained more commonly associated with larger companies.

These observations accurately describe the introduction of the two most popular combination plans, common and preferred and common, preferred and bonds. Of the 151 companies which described their capital size, combination plan, and method of issuing securities, 67 issued common and preferred, while 40 issued

¹⁴⁰ The information used to support the observations above has been included in the appendix, Table 11.

common, preferred and bonds. In the issue of stock for exchange, the use of common, preferred, and bonds preceded the use of common and preferred, while both of these combination plans were first used for corporations larger than \$10 million. In the acquisition of property with cash, the use of common and preferred was first introduced in companies smaller than \$10 million. Issues of both common and preferred and common preferred and bonds for cash to acquire property were more commonly associated with smaller capital sizes after 1895.

The use of common stock proves to be the clearest exception to variations in capital size based on the method of control. For each method of control, common stock issues remained predominantly small. The use of common therefore deviates from the trend toward larger capital sizes associated with the acquisition of property with stock and the exchange of stock for stock.

The issue of common and bonds for the acquisition of property with cash or the exchange of stock was used primarily by companies larger than \$10 million. The use of common and bonds is most similar to the use of common and preferred or common, preferred and bonds in the exchange of stock with stock. The introduction of common and bonds occurred first in larger companies prior to the use of the other combination plans, and it remained most closely associated with companies with a capital value larger than \$10 million.

The method of exchanging stock with new stock was the predominant method of acquiring control of constituents, accounting

for the largest percentage of each type of combination plan and the largest capital values. Those companies that sought to exchange stock for stock prior to 1889 used large issues of common and bonds or trust certificates. In the period from 1889 to 1894, the majority of the combinations exchanging stock issued common, preferred, and bonds, while common and preferred became the most frequently used combination plan for this method of control after 1895. This method of control therefore shows a clear evolution in the types of combination plans used, and supports the conclusion that the early use of trust certificates influenced the formation of later combinations.

Of those combinations acquiring control through the exchange of stock, 82 percent of the companies capitalized at values in excess of \$10 million. The acquisition of property rights with stock or stock with cash were also associated with larger companies, but to a lesser degree. Sixty percent of the companies acquiring property with stock or stock with cash were larger than \$10 million.

Unlike the other methods of control, the acquisition of property with cash was associated with smaller companies, with 66 percent of the companies using this method having capital values of less than \$10 million dollars. The acquisition of property with cash occurred primarily after 1895, with 47 percent of these combinations occurring in 1899, the peak of merger activity.

Prior to 1899, common stock issued by itself was only used for the purchase of property. Beginning in 1899, common stock was also issued for the exchange of constituent company stock with new stock.

While common stock was adapted to the purchase of constituent company stock and increased in use during the periods of general activity, only 20 of the companies which described their financial plans and the method of issuing securities used solely common stock. Given the average size of common stock and the late introduction of common stock for the exchange of securities, it appears the issue of common stock involved a minimal application of the new methods of valuation, control, and industrial organization. Its form was best suited to the purchase of property with cash since it was valued according to tangible assets and the smaller issues associated with its use allowed ownership and management control to remain closely held.

The issue of common and preferred was not limited to any single capital size, occurring as frequently in corporations with less than \$3 million authorized capital as in corporations with more than \$50 million. While the issue of common and preferred stock accounted for the largest number of companies using each method of control, its use occurred primarily after 1895. Prior to 1895, common and preferred was issued only four times. While the use of common and preferred for the acquisition of property or stock with cash was not preceded by any other type of combination plan, the use of common and preferred in the exchange of property or stock for new stock was clearly a continuation of the use of common, preferred and bonds, common and bonds, and trust certificates.

The trends in capital size and combination plans with respect to the various methods of control support several previous observations about the importance of new types of securities and the use of stock as a form of purchasing power. The acquisition of property with cash was the only method of control which showed a tendency towards smaller combinations and the use of common stock. The late and limited expression of this method of control suggests that it appeared as an outgrowth of the more popular method of issuing stock in exchange for property or stock. The use the stock market as a method of raising cash for acquisitions therefore involved only a small portion of total capitalized values and was associated with the more basic forms of capital stock.

The exchange of stock for property or stock showed a clear progression from the use of trust certificates to the use of common and preferred in conjunction with bond issues. As issues of common and preferred proved to be a sufficient method for raising capital values in excess of tangible assets, the significance of bond issues declined. The use of common and preferred issued for exchange purposes accounted for the largest number of consolidations after 1895. Each of the combination plans associated with the exchange of stock for stock or property showed a tendency towards larger capitalizations, while those associated with the exchange of stock for stock tended to be considerably larger than stock values used in the exchange of stock for property. The values necessary to acquire titles to the property of constituent companies were therefore smaller than the values necessary to acquire stock control of

constituent companies. This may have been due to the larger values of stock issues necessary to entice shareholders to exchange their prior evidence of ownership for new securities, or it could have been related to the necessity of issuing enough stock to allow promoters and specific management groups to retain a position of control despite the wide distribution of stock to constituent shareholders.

The largest values of capital were associated with the predominant form of organizing combinations. The authorization of stock as a form of purchasing power was therefore more significant than the use of stock as a method of raising cash. Those corporations that utilized this method of control were also the most likely to use new types of securities and methods of valuing the assets of the corporation.

Chapter V

THE ROLE OF FINANCIAL AGENTS AND THE EMERGENCE OF THE INDUSTRIAL STOCK MARKET

The creation of a market for industrial stock allowed for the expansion of corporate credit and provided a system for continuing revaluation of existing credit. This aspect of the stock exchange was crucial for determining the future extension of credit. Since the present values of future earning streams are dependent on the business climate, the prices of stocks represent a collective determination of the value of credit that has been extended to corporations. Trade of a portion of a stock issue determines the current price of the entire stock issue. The value of these securities then provides a method for describing the financial standing of the corporation. If the stock of a corporation is performing poorly, the investment community limits the opportunity of the corporation for the continued extension of credit. New issues of securities by this corporation would therefore be unlikely. If the market value of securities begins to rise, this increases the credit values and purchasing power evidenced by the stock. With the continued elevation of stock prices, the market value of corporate assets that can be used as collateral for further extensions of stock would increase, and credit values of the corporation could expand further. The effective capitalization of a corporation is therefore the aggregate of the value placed on securities in the exchange market,

rather than the nominal value of the total authorized capital. It is the effective capitalization that determines the ability of corporations to continue their extension of credit values.¹⁴¹

The evolution of the market for industrial securities occurred as an outgrowth of railroad securities, and many of the techniques of railroad finance were adapted to the industrial security market as it emerged in the end of the nineteenth century. The full attention of the banking community was not received, however, until after the market had been developed by a small group of independent financiers and promoters.¹⁴² These individuals and the investment bankers who joined in created a more advanced system of credit and served both as original creditors and as active agents in the distribution of stock to the investing community.¹⁴³ In many of the mergers, financial interests attained more than a temporary position of influence through underwriting securities or receiving a share of corporate stock for services rendered in the creation of a corporate consolidation. They were not only were responsible for developing a financial plan capable of satisfying the needs of the businesses the served; they had the opportunity to ensure that the values so created would be maintained.

¹⁴¹ Veblen, The Theory of Business Enterprise, 116, f.118, 130.

¹⁴² Navin and Sears, "The Rise of a Market for Industrial Securities, 1887-1902," 129.

¹⁴³ Veblen, Absentee Ownership, 339-340.

The Rise of the Industrial Securities Market

In the period prior to the establishment of a national market in industrial securities, a durable market in railroad and government debt already existed. This system was centered around the New York Stock Exchange, which had gained preeminence through the trading of canal securities and government debt following its organization in 1816. Other cities also established stock exchanges during this time. In all, approximately 250 different stock exchanges were formed during the nineteenth century. Many of these exchanges proved to be temporary, although several major business centers, such as Philadelphia, Boston, Baltimore, Chicago and San Francisco developed more durable organizations for trading in the stock of local businesses. Several of these cities also developed areas of specialty, such as Boston and Philadelphia in the fields of mining and petroleum stocks.¹⁴⁴ The primary financial intermediaries of this time were private banks, as they operated without restrictions.

As the position of the New York Exchange continued to expand with the development of railroad securities in the mid nineteenth century and the federal debt financing of the Civil War, higher grade securities were more frequently traded in New York, while the other cities continued to trade in inactive stocks or lower grade securities. These smaller exchanges became testing grounds for securities of uncertain caliber. The outside exchange on the curb of the New York

¹⁴⁴ R.C. Michie, The London and New York Stock Exchanges, 1850-1914. (London: Allen & Unwin, 1987) 167.

Stock Exchange also acted as a training ground for securities. If securities were upgraded, or accepted on the New York listing, brokers on the curb or in other cities such as Chicago would stop actively trading in them, and defer to the New York Exchange. While the curb exchange grew rapidly after 1899 as an informal organization for the dealing of industrial securities, other methods of trading in unlisted securities had been developed by the New York Exchange. The Unlisted department, developed in the 1880's, was used to deal in those securities of corporations that did not issue financial reports. While the Unlisted category only existed for a brief period of time on the New York Exchange, its organization was important to the widespread trading of the early industrial Trusts.

Description of the use of the stock exchange is difficult because of the changing categorizations employed by the Commercial and Financial Chronicle during the period under study. However, several useful observations can be made. Each of the 519 companies reviewed in this study were checked for stock listings by using the general quotations section of the Commercial and Financial Chronicle for the first week of June and December as well as the annual summary of Stock Prices listed in each January issue. Since the annual summary only mentioned stocks listed on the New York exchange, the general quotation section typically gave higher totals of companies traded. The use of weekly general quotations also proved beneficial for their categorization of unlisted securities, and

the more complete description of the categories of companies included under the miscellaneous heading.¹⁴⁵

Two figures were recorded from the "Miscellaneous" heading in the general quotations section of The Commercial and Financial Chronicle beginning in December of 1876; the total number of companies listing securities and the total number of securities listed.¹⁴⁶ This was done to determine the extent of "deepening" of the securities market over the period studied; that is, the extent of issuing and trading more than one type of security, a practice that became common among industrials.

In 1876, 19 companies were cited in the miscellaneous section. In addition to manufacturing and mining companies, this category included trust, telegraph, land improvement, bridge, and water power companies.¹⁴⁷ Of these 19 companies, only two were involved in the manufacture of goods or mining, the Pullman Palace Car company and the United Mining company. The only company under the miscellaneous heading that traded preferred stock was the Cincinnati & Covington Bridge company.

The number of companies listed under the miscellaneous heading fluctuated between 21 and 35 between June 1877 and

¹⁴⁵ The term industrials was first used for the listing of securities in the heading "Miscellaneous and Industrials" by The Commercial and Financial Chronicle in 1902.

¹⁴⁶ See Table 13 in the Appendix, The Growth of the Stock Exchange.

¹⁴⁷ In the discussion that follows lower case trust companies denotes financial businesses involved in the registering and transferring of securities. The upper case Trusts refers to those companies which have combined management control through the issue of trust certificates.

December 1889, in part as a result of a changing system of classification. The first change in the companies listed under the miscellaneous category came in December of 1880 when trust and telegraph companies were separately reported. Telephone and electric light stocks received a separate listing in December of 1884. Those combinations organized as Trusts received a separate heading for the year of 1889, with eight companies being listed. From 1877 to 1889, the number of companies issuing more than one type of security increased to only three, each of these being involved with land development or bridges.

In 1890, the Trusts were reintroduced into the miscellaneous category, along with canal and express company stocks, raising the total of companies listed in this category from 35 to 53. During the first small merger wave from 1889 to 1894, the first issues of preferred industrials appeared on the stock exchange. This was primarily due to the reorganization of trust companies. By June, 1894, the total number of companies listed reached 64, while the number of secondary issues had increased to 19. Prominent among the companies listing more than one type of stock were the Trusts which were in the process of reorganizing as corporations.

The method of reporting miscellaneous stock quotations changed in January of 1895 to miscellaneous active and inactive stocks and changed again in 1898 to the New York Stock Exchange and Outside Securities. Those securities listed on the outside securities included those traded on stock exchanges other than New York as well as the New York curb. While these modifications in

reporting obscure the changes in the number of stocks being traded, it appears that the numbers of securities traded did not increase from 1895 to 1897, fluctuating between 52 companies and 11 secondary issues to 51 companies and 12 secondary issues. From 1897 to 1900, the securities on both the New York Stock Exchange and the Curb increased, with the largest increases occurring in the listing of more than one type of security. Although the listing of primary issues on the New York and Curb leveled off after 1900, the listing of secondary issues on the curb continued to increase through 1904, from 61 to 71.

In both periods of increased merger activity, 1889 to 1894 and 1897 to 1904, a similar trend appears. In the early years of increased activity, the number of companies listed rose. This was followed by an increase in the number of secondary issues such as preferred and some types of bonds.

The Trading of Merger Securities

Because organized reporting on curb activity came late, it is difficult to generalize about the growth of this market prior to 1898, but it is apparent that the curb accounted for the majority of the securities listed by new mergers. In terms of the new listing of securities, the curb accounted for 58 percent, or 87, of the total merger securities listed.¹⁴⁸ Only 5 percent of the total mergers listing stock were designated as unlisted, while 55 merger stocks or

¹⁴⁸ See Table 14 in the appendix, The Trading of Merger Securities.

36 percent of the total mergers were at some point listed on the New York exchange. Those companies included in the New York exchange figures involve both companies that were first listed on the New York exchange and those that were rapidly upgraded from the curb, or unlisted categories, to the New York exchange.

Only 29 percent, some 149 companies of the 519 mergers, produced shares listed on the stock exchange. Although companies with traded securities only accounted for slightly more than one quarter of the total number of mergers, they accounted for almost 50 percent of the total firm disappearances and 74 percent of total authorized capitalization.

While the phenomenon of merger activity without the use of the stock exchange is therefore significant in terms of absolute numbers of mergers, the magnitude of firm disappearances and capitalized values associated with companies using the stock exchange for some portion of its securities makes clear the importance of financial agents in carrying out mergers.

Financial Agents

The financial agents employed in the organized trading and recording of security transfers fall into five categories.¹⁴⁹ Due to the personal contract nature of much of the financial activity involved in the first stages of organizing a merger, reports of involvement typically took the form of confirmed rumors as documented in The

¹⁴⁹ See Table 15 in the appendix, Financial Agents.

Commercial and Financial Chronicle. Many creditors operated under conditions of privacy, and sought to conceal their involvement in syndicate pools or subscription agreements. The evidence concerning the activities of financial agents should therefore be regarded as limited and subject to underreporting.

The first category of financial agent was the promoter. This individual was responsible for the initial stages of organizing the combination, establishing options on the constituent company assets and some general plan for the distribution of securities. Several of the mergers studied were promoted by manufacturers associated with one the constituent companies, although independent promoters were a visible component in many of the mergers in which securities were eventually listed on the exchanges. As mergers became more complex, additional cash expenses deriving from the need for option money, working capital, and the retiring of constituent indebtedness outstripped the financial reserves of promoters, requiring that they establish closer relationships with financial backers.¹⁵⁰

The second type of financial agent was the financial backer, or fiscal agent, those individuals or companies responsible for the initial purchase and distribution of securities. The role played by the backers changed as the market evolved, from individuals or brokerage houses paid on a commission basis for the sale of securities, to companies capable of underwriting or purchasing the entire issue of securities. These investment bankers or underwriters

¹⁵⁰ Navin and Sears, "The Rise of a Market for Industrial Securities, 1887-1902," 131.

then received a profit through the percentage difference between the buying and selling price. While brokerage houses and individual stockholders organized as blind pools or syndicates to support the initial sale of stock in the early stages of the merger activity, their limited resources led to the emergence of investment bankers and the underwriting of securities by 1902. The firm of J. P. Morgan & Co. was the first to introduce the underwriting of securities in 1898, and used techniques established in the marketing of railroad bonds.¹⁵¹

Categories three through five include the agencies responsible for transferring securities, registering securities, or acting as trustees for mortgages. These companies and banks also entered into agreements with the financial backers and promoters to ensure the sale of stocks by acting as underwriters or syndicate subscribers. While some banks were involved in these activities, the majority of transfer, registrar, and trustee agents were investment trust companies. Some of these trust companies were also involved as fiscal agents, underwriting the initial sale of securities. In addition to ensuring that their corporate clients complied with the reporting laws of state charters, the trust companies were willing to hold and invest in new issues of securities. Relationships between the directors of trust companies, promoters, and investment bankers became more clearly defined over the period under study, with

¹⁵¹ Navin and Sears, "The Rise of a Market for Industrial Securities, 1887-1902," 138. Arthur Stone Dewing, Corporation Finance, 83-98.

distinct patterns of behavior in the methods of promotion and distribution being associated with particular groups of individuals.

As noted in successive reports of the Chronicle, the period of increased merger activity saw a dramatic expansion of trust companies.¹⁵² Organized under very liberal laws, these companies not only competed with banks, but were also empowered to underwrite financial schemes and take large interests in promotions and other speculative activities.¹⁵³ The traditional operations of the investment company were based on deposited funds which were then invested with the aim of receiving higher interest rates than paid out on deposits. Their phenomenal growth was unusual, in that they typically paid out from 1 to 5 percent on deposits, while the interest received on both call loans and time loans during this same period was relatively low, remaining for considerable periods of time at 1 to 1.5 percent for call loans and 2 to 3 percent for longer loans.¹⁵⁴

Despite these conditions, the creation of new trust companies, expansion of trust deposits, consistent dividend payments, high stock prices, and large profits persisted. The success of the investment companies was therefore not caused in the main from their money lending, but rather from various other activities and the freedom

¹⁵² The Commercial and Financial Chronicle, Aug 6, 1898, 251-252. Aug 4, 1900, 209-210. July 27, 1901, 162-163. Feb, 1904, 790. March 18, 1905, 1078-1079.

¹⁵³ John Moody, The Masters of Capital, (New Haven, Yale University Press; 1919) 120.

¹⁵⁴ The Commercial and Financial Chronicle, Aug 6, 1898, 251.

from restrictions which they possessed that allowed them to "engage in and finance undertakings where command of large sums of money is not only a positive advantage, but an absolute necessity."¹⁵⁵ While the majority of investment company funds were used for call loans through the end of 1904, stock investments and loans on personal security saw rapid growth. From 1891 to 1901, stock investments and loans on personal security each grew more than four fold, while collateral loans increased three fold.¹⁵⁶

One source of deposits that became increasingly important for the investment companies were the assets of life insurance companies. While life insurance companies were not able to engage in the promotion or underwriting of mergers, they were able to invest in the stock of the trust companies. During the turn of the century, large financial interests began to enter the directorship of the insurance companies, as well as to forge close ties to particular investment companies. By 1900, the big three New York companies had developed such relations: J.P. Morgan was associated with New York Life Insurance Company; Equitable Life Insurance developed Wall Street interests through its president, Henry B. Hyde, and received a controlling interest in the Mercantile Trust Company; The Mutual Life Insurance, headed by Richard A. McCurdy developed affiliations with the New York Guarantee and Indemnity Company

¹⁵⁵ The Commercial and Financial Chronicle, Aug 6, 1898, 251.

¹⁵⁶ See Table 16 in the appendix. The Growth of Trust Companies.

and the United States Mortgage and Trust Company.¹⁵⁷ By 1907, these interests had merged under the leadership of J. P. Morgan.

The relationships between promoters, fiscal agents, trust companies and banks can be traced by using the advertisements for trust companies and banks in The Commercial and Financial Chronicle, covering the years from 1876 to 1904. The advertisements not only listed their directors and officers, but also occasionally stated the other positions held by their members.

Independent Promoters

Of the 49 promoters involved in the organization of 70 companies, 36 were responsible for only one promotion. The role played by manufacturers, by their very nature, was limited to single promotions. Manufacturers operated as promoters in eight of these consolidations. The majority of consolidations using promoters were organized by only ten individuals. Only two parties were involved in more than three mergers: William H. and James H. Moore were responsible for 8 and Charles Flint for 8 mergers.

In the early years of his involvement, Charles Flint relied on a variety of bankers and brokers to help in underwriting security issues, among these were H.B. Hollins, C.I. Hudson & Co., August Belmont and Co., and F.S. Smithers & Co.. The firm of H.B. Hollins & Co. was used as both the underwriter and transfer agent in Flint's first merger, The United States Rubber Company, in 1892. With the

¹⁵⁷ Moody, The Masters of Capital, p. 127. The New York Guarantee and Indemnity Company changed its name to Guaranty Trust shortly after coming under the influence of Mutual Life.

American Chicle merger of 1899, Flint began underwriting some of his own promotions. In the same year, Flint promoted the Sloss-Sheffield Steel and Iron Company with the help of F.P. Olcott. With the exception of the American Clay Manufacturing Co. in 1900 which Flint underwrote while John R. Dos Passos coordinated the merger plans, this was the only merger in which Flint engaged the help of another promoter. In the Sloss-Sheffield merger, Flint had his only exposure to the Central Trust Company of New York, which operated as both underwriter and transfer agent. The use of the Central Trust Company in this instance was probably the result of the influence of F.P. Olcott rather than Flint, since Olcott was the President of this trust company. While this is the only promotion associated with Frederic P. Olcott, his influence in the financial and industrial community was clear due to his presence on several industrial business directorships and his directorships in investment companies. In addition to being president of the Central Trust Company, Olcott also held directorships on the Hudson Trust Company, the Audit Company of New York, and was a member of the executive committee of the Central Realty Bond and Trust Company of New York.

Although many of the corporations organized by Flint used the services of the larger New York trust companies, it was not until the organization of the American Woolen Company that The Knickerbocker Trust Company was involved. In his later mergers, the use of Knickerbocker becomes more apparent, perhaps because of his position as a director. Charles R. Flint was also the director of

several other financial companies, including the State Trust Company of New York and The Audit Company of New York. While the combinations promoted by Flint that used the services of Knickerbocker company were all larger than \$10 million dollars, he was involved with companies of all sizes, ranging from the very small American Carmel Co. and the U.S. Bobbin and Shuttle Co. to the Rubber Goods Manufacturing Co. with an authorized capitalization of \$50 million.

Unlike Flint, the Moore Brothers only involved themselves in the promotional aspects of mergers, although they did hold director positions in several of the companies they helped organize. The size of the companies promoted by the Moore Brothers also tended to be quite large, Five of them being capitalized at values in excess of \$50 million, while the other three were larger than \$25 million. Although William H. Moore first entered the market with the organization of the Diamond Match Company in 1889, his second merger promotion did not occur until 1898. From 1898 to 1902, the Moore Brothers developed a clear relationship with several large financial companies, including the First National Bank of New York, the National City Bank of New York, the Guaranty Trust Company, the Central Trust Company and the Manhattan Trust Company. With the Moore's frequent access to companies allied with J.P. Morgan and their promotion of several Morgan dominated mergers such as the Carnegie Company in 1900, it appears that some working relationship probably existed between them. The Moore brothers operated out of Chicago and were not affiliated with any trust

companies from Illinois, even though a large number of Chicago houses were involved in the financial activities occurring during this time. While most financial agents were centered in New York, Chicago was the second most common location of independent promoters, with only four promoters coming from Boston, Philadelphia, Providence, and Baltimore.

Like Charles R. Flint, several other promoters also sat on the boards of industry and finance. Roswell P. Flower, until his death in 1899, was a director of the Amalgamated Copper Company, a large investor in the Glucose Sugar Refining Company, and also the president of the Central Trust Company of Illinois. Max Pam, a well known corporation lawyer in the Chicago firm of Pam, Calhoun, and Glennon was involved in writing several important corporate charters. Pam promoted the Chicago Pneumatic Tool Company as well as sitting on the board of the Central Trust Company of Illinois. Another director of the Central Trust Company of Illinois, Frank O. Lowden, was also engaged in the process of organizing mergers. One other lawyer, ex-judge E.H. Gary, promoted the Pocahontas Collieries Company in 1901. During this time, Gary held the presidency of the Federal Steel Co., was the New York Chairman of the Board for Allis-Chalmers, and a director of the Merchant's Loan and Trust Company of Illinois. While several other prominent lawyers such as Francis Lynde Stetson, Harry Ruebens and James B. Dill were among the directors of trust companies, they were not involved with merger activity except as general counsel. Three other promoters were also directors of trust companies, Amzi L. Barber, Azel F. Hatch, and

Thomas A. McIntyre, but neither the individual nor company was involved in merger activity to any great extent.¹⁵⁸

Fiscal Agents

Forty-Five trust companies, brokerage firms, and bankers were responsible for underwriting, managing syndicates, or offering stocks for subscription in 97 companies. While the number of fiscal agents associated with trust companies was comparable to those involved in promotion, the average capital size of companies that required the services of fiscal agents was more than double that of companies using promoters. The average capital size of companies using fiscal agents was \$56 million, as compared to \$27 million for those using promoters. The average sizes of firm disappearances associated with each type of agent were however, roughly equal. Although those companies using fiscal agents only accounted for 18 percent of total mergers, their large capital size accounted for 60 percent of the total authorized capitalization of the period studied. The role of these fiscal agents is therefore more significant than the use of promoters, who only accounted for 13 percent of the total merger activity and 21 percent of total authorized capitalizations. Although Chicago figured predominantly as a source of independent promoters, only a few of the fiscal agents involved in merger activity were located in Illinois. After New York, the other locations of fiscal agents in order

¹⁵⁸ Respectively, The Trust Company of New York; Equitable Trust Company, Chicago; and the State Trust Co., New York.

or significance were Boston, Providence, Philadelphia, Pittsburgh, and Baltimore.

The firm of J.P. Morgan & Company in New York was by far the most active in underwriting and financing mergers. Due to the size of the Morgan empire, their influence was felt even in companies not originally organized by Morgan interests. This was primarily due to the ability of J.P. Morgan & Company to act as a stabilizing influence during times of reorganization or financial duress. Two such companies were the Virginia-Carolina Chemical Company and the Pullman Company. In the case of Virginia-Carolina Chemical which was originally organized in 1895, subsequent increases of their stock in 1899 and 1901 led to increasing problems with discounting their bills. By organizing a syndicate, J.P. Morgan helped to provide a loan to this company in 1903. When the Pullman Palace Car Company was reorganized as the Pullman Company in 1899 with a large increase in stock, their directorship was expanded to 11 members to reflect the introduction of Morgan and Vanderbilt influences. While the Pullman Palace Car Company had experienced rapid growth in business prior to 1899, it had been very conservatively financed by its founder George Pullman and all increases in stock had been distributed or sold to stockholders. After his death in 1897, the younger Pullman allowed the introduction of outside interests through the sales of stock directly to the public.

In those consolidations originally underwritten or subscribed by Morgan, the majority were traded on the stock exchange and were quite large. Of the seventeen companies financed by Morgan,

13 were capitalized at values in excess of \$25 million dollars. Only two of the seventeen were not traded on the exchange, and nine of the traded securities were listed on the New York Stock Exchange. The two companies whose stock did not reach the market, the Kanawha and Hocking Coal and Coke Company and the Continental Coal Company, were both organized in West Virginia and capitalized at values less than \$10 million dollars. Each of these companies were also controlled by powerful interests, which is apparently the primary reason why their stock was not widely held. The Kanawha and Hocking Coal and Coke Company was controlled by the Hocking Valley Railroad, while J.P. Morgan & Co. held the entire common issue of the Continental Coal Company in a voting trust.

J. P. Morgan & Company made clear use of their affiliated concerns. While Morgan & Co. held absolute voting trusts over the Bankers Trust and Guaranty Trust, their close relationship with the National City Bank and First National Bank allowed the use of Chase National Bank, Farmer's Loan & Trust Company, and the Central Trust Company, with J.P. Morgan also sitting on the directorate of Central Trust.¹⁵⁹ Of these, Morgan made most frequent use of the National City Bank, Guaranty Trust, and Farmer's Loan and Trust, all of which were located in New York.

Several international investment banking houses also figured predominantly in the financing of mergers, each of which had a relationship with J. P. Morgan & Company. These firms included

¹⁵⁹ Moody, The Masters of Capital, 196.

Kidder, Peabody & Company and Lee, Higginson & Company of Boston as well as Kuhn, Loeb & Company of New York and Kidder, Peabody's New York branch Baring, Magoun & Company.¹⁶⁰

Baring, Magoun & Company financed five companies. In addition to their relationship with Kidder, Peabody of Boston, they were also affiliated with Baring Brothers of London. All of the consolidations that they were involved with had securities traded, four of them on the curb. Their specific role in financing the company was only mentioned in the case of United States Leather, when Baring, Magoun & Company were responsible for acquiring company debentures along with Heidelbach, Ickelheimer & Company. In the Rubber Goods Manufacturing company, Central Foundry Company and American Bicycle, Baring, Magoun operated as transfer agents in addition to underwriting some portion of the company's securities. In each of these companies, Baring, Magoun also operated with other companies as fiscal agents, most notably, Lee, Higginson & Company, Kidder, Peabody & Company, and the United States Mortgage & Trust Company, the latter being under the direction of the Mutual Life Insurance Company.

Kuhn, Loeb and Company, which had seen active involvement in the financing of railroads under the leadership of Jacob Henry Schiff, was involved in three consolidations. The National Packing Company, which was organized primarily through a direct exchange of stock, was partially underwritten by Jacob Schiff, James Stillman,

¹⁶⁰ Moody, The Masters of Capital, 203. Navin and Sears, "The Rise of a National Market for Industrial Securities," 125.

and E.H. Harriman. In the Consolidated Tobacco Company merger, Kuhn, Loeb & Company and Thomas F. Ryan were responsible for providing \$25 million dollars. While the American Beet Sugar Company and Consolidated Tobacco were both traded on the curb, The National Packing Company securities did not reach New York.

In addition to his activities at Kuhn, Loeb, Jacob Schiff was also a prominent director of the National City Bank and the Central Trust company.¹⁶¹ Another important member of Kuhn, Loeb, & Company was William C. Whitney, who participated in several syndicates with Thomas F. Ryan. Both Whitney and Ryan were also involved in activities with members of the Elkins-Widener syndicate, George Elkins and George D. and P.A.B. Widener.¹⁶² Whitney was also a director on several trust companies related to J.P. Morgan, such as the New York Guaranty & Indemnity (became Guaranty Trust Company), Morton Trust, and State Trust.

Both of the Boston banking houses, Lee, Higginson & Company and Kidder, Peabody & Company, had been involved in joint accounts or syndicate financing of security issues with J. P. Morgan & Company, First National Bank, and National City Bank of New York.¹⁶³ All of the merger securities handled by Lee, Higginson & Company were traded, two of them being listed on the New York exchange.

¹⁶¹ Larry Schweikart, editor, Encyclopedia of American Business History and Biography: Banking and Finance to 1913, (Brucoli Clark Layman, Inc., and Facts On File; 1990) 410, 411.

¹⁶² Matthew Josephson, The Robber Barons: The Great American Capitalists (New York, Harcourt, Brace and Co.; 1934) 335-336, 385-87.

¹⁶³ Moody, The Masters of Capital, 204, 205.

One of its leading members during this time, Henry L. Higginson, was also a director of the Manhattan Trust Company.

Kidder, Peabody & Company, more than the other investment banking houses affiliated with Morgan, made the most frequent use of banks outside of New York. The National Shawmut Bank of Boston was used twice, while the Continental Trust Company of Maryland was used as syndicate manager in the organization of the U.S. Cotton Duck Corporation. Several of the members of Peabody were also involved as directors of trusts. George Foster Peabody was a director of the State Trust Company of New York, while S. Endicott Peabody was a president of the American Loan and Trust in Boston. Several other Peabodys also held directorships in trust companies.

Several banking firms that were not intimate with J. P. Morgan figured predominantly in the underwriting of consolidations, although most of them did use the trust companies and banks of Morgan.

Harvey Fisk & Sons, while not related to Morgan in the literature, was involved in underwriting bonds for the Continental Coal Company and was a member of the syndicate organized for the Bethlehem Steel Company. Both of these were combinations largely influenced by Morgan. The Trustee of the mortgage for Continental Coal was the Central Trust Company, a company that also served as trustee for the Fisk financed American Locomotive Company. The stock of American Locomotive was the only company partially financed by Harvey Fisk whose securities were listed on the New York Exchange. This was due to the involvement of large financial

interests, J.P. Morgan and Consolidation Coal, in two of the other Fisk mergers.

All of the companies financed by Poor & Greenough of New York had securities which were traded on the exchange. This firm also made use of trusts affiliated with Morgan, the Central Trust and Guaranty Trust Companies.

One successful and seemingly independent international investment banking house was J. & W. Seligman & Company of New York. This firm was responsible for underwriting the securities of four combinations, although no clear pattern is distinguishable in the trading of securities or their use of trust companies.

The firms of H. B. Hollins & Company and Lehman Brothers were jointly involved in several underwriting schemes. Both of these companies were involved primarily with large corporations, while the securities they underwrote were usually found traded on the New York curb. Members of both firms were directors in trust companies, Harry B. Hollins being a director for the Knickerbocker and North American Trust companies while Philip Lehman was a director for the Trust Company of America.

Two other companies that operated together on several occasions were August Belmont & Company and Sheldon & Company. The Belmont Company was the American representative of the House of Rothschild, while Sheldon & Company was headed by George R. Sheldon, the second vice president of the City Trust Company. Sheldon and Belmont were both directors of the Republic Iron and Steel, while Belmont Jr. was also a director of the Manhattan Trust

Company, the Guaranty Trust Company, the Commercial Trust of New Jersey, and president of the Audit Company of New York. The consolidations organized by these two firms also made use of their affiliated trust companies as transfer agents, registrars, and trustees. These included the Manhattan Trust, Guaranty Trust, and City Trust.

While the majority of fiscal agents relied on relationships with New York banks and trust companies, George B. Hill & Company of Pittsburgh provides an exception. They were involved in two mergers as syndicate manager and prominent underwriter, both of them located in Pittsburgh. In each case, Hill & Company relied on the Union Trust Company of Pittsburgh as transfer agent and Fidelity Title and Trust Company of Pittsburgh as registrar.

Several brokerage firms were involved in offering stocks for subscription or underwriting issues, namely Moore & Schley of NYC, Dean & Shibley of Providence R.I., and R. B. Sperry & Co. of Baltimore Md.. Elverton R. Chapman, of the firm Moore & Schley, was also involved in several mergers. While neither of the brokers located outside New York were visibly linked to trust companies, the members of Moore & Schley held directorships in trust companies. In some cases, these brokers depended on their trust companies to operate as registrars, transfer agents, and trustees.

Taking the activities of Moore & Schley in New York with those of its agent, Elverton R. Chapman, this firm accounted for the majority of brokerage involvement in offering new merger stocks to the public or for private subscription. While Grant B. Schley and John G. Moore both served as directors of the Manhattan Trust

Company in New York, E. R. Chapman served on the board of the Citizens Trust and Deposit Company in Baltimore. While the Citizens Trust was not involved to any great degree in merger activity, the Manhattan Trust Company of New York was very active. This company was involved in underwriting the securities of the Kentucky Distilleries and Warehouse Company as well as the Union Bag and Paper Co., both of them capitalized in excess of \$25 million dollars. In addition to this, The Manhattan Trust Company was the transfer agent or trustee for 9 companies. All of these companies were traded on the exchange and 8 of them were capitalized in excess of \$25 million dollars. The use of the Manhattan Trust Co. was also closely associated with the Chase National Bank, one of the banks affiliated with J.P. Morgan.

Transfer Agents, Registrars, and Trustees

Acting as transfer agents, registrars, underwriters or trustees for merger consolidations, six trust companies were each involved in more than ten mergers. Of these six, three trust companies were associated with Morgan. They were all located in New York; the Central Trust, Guaranty Trust, and Manhattan Trust Companies. Acting as transfer, registrar, trustee, and underwriter, these three companies were involved in 32 companies. They were primarily involved with consolidations whose securities were traded on the exchange.

Of the 23 companies in which the Central Trust, Guaranty Trust, and Manhattan Trust operated as registrar, 20 had their securities

traded on the exchange. Only four of these 23 companies were authorized to issue less than \$10 million. The New York trust companies also showed some familiarity with other financial institutions. On several occasions, the Chase National Bank operated as registrar or trustee when the Central Trust Company and Manhattan Trust Company were transfer agents. The First National Bank was similarly used in conjunction with the Guaranty Trust Company.

The activities of the Corporation Trust Company, Registrar & Transfer Company, and the Union Trust Company were less impressive. The Corporation Trust and Registrar & Transfer Company, both of New Jersey and New York, were more likely to act as transfer agents for smaller companies whose securities were not traded. Of the nine companies involved with the Registrar & Transfer Company, not one issued securities that were traded. Over half of the companies involved with the Union Trust Company of Pittsburgh did not have traded securities, while the Corporation Trust Company fared only slightly better. Like the trust companies associated with Morgan, these trusts also exhibited some familiarity with other companies, most notably the Fidelity Title & Trust and the Union Trust of Pittsburgh. The Corporation Trust Company was also frequently used in conjunction with the Colonial Trust Company of New York.

The use of the stock exchange provided a system for the constant valuation of corporate assets, upon which the extension of

corporate credit depended. While the number of consolidations whose securities were traded on the stock exchange only accounted for a small percentage of the total number of mergers, they accounted for over 70 percent of the total authorized capital created through merger activity during the period 1870 to 1904. The use of the stock exchange involved both the listing of new companies as well as an increase in the number of secondary issues.

Of the various financial agents involved in organizing a consolidation, the importance of fiscal agents outweighed that of promoters. The significance of fiscal agents becomes even more dramatic when taking into account the degree of interconnectedness between financiers, trust companies, banks, and insurance companies.

In looking at the relationships among financiers, it is clear that J. P. Morgan & Company held a dominant position. This Company had close relationships to National City Bank, Chase National, and First National Bank of New York which controlled several very active trust companies such as Central Trust Company, Manhattan Trust Company, Guaranty Trust Company, and Farmer's Loan and Trust Company. As noted above, Morgan & Company also had a clear working relationship with several of the most important international investment bankers as well as the very successful brokerage firm of Moore & Schley and its agent, Elverton R. Chapman. While there are notable exceptions to the Morgan influence, the Morgan network was important primarily because it provided a degree of security in the organization of the emerging

market for industrial securities, similar to the stabilizing influence Morgan had established in the reorganization of the railroads.

The consolidation of industry was therefore mirrored by a similar process of cooperation among the financiers and banking houses responsible for underwriting the merger securities. As this occurred, the relationship between industrial and financial practices also coalesced, with many prominent financial interests taking a controlling and supervisory position among the directors of the industrial combinations. The primary effect of this larger cooperation between industrial forces was the adoption of new business practices that allowed the restraint of production and the protection of the profitability of existing assets. Despite the decline in the visibility of financial interests on the boards of industry following the legislation of the 1920's and 1930's, the ability to uphold prices and limit the ruinous effects of cutthroat competition is a continuing legacy of this period of industrial evolution.

Chapter VI

SUMMARY AND CONCLUSION

The financial reorganization of U.S. business that accompanied the turn-of-the century merger movement has been written about extensively and often denounced. Recent work has suggested that the financial capitalism of the era was a passing phase in which financiers gained power and sat on boards because of the inadequacies of information. Later improvements in securities markets and the banking system removed the need for direct financier involvement and internal finance by modern corporations removed the opportunity.¹⁶⁴ These improvements include the establishment of state blue sky laws in the 1910's and 20's, as well as the Securities Act and Glass-Steagall Act of 1933.

This line of reasoning ignores the changes that Veblen described as taking place during his lifetime. What Veblen wrote about was a system in which vendable items came to include not simply the products produced by business firms and not simply the equipment used in making the products. Vendable items came to include as well claims on revenues that might be generated by sale of these more traditional items in the future. Financiers were the creators of the specific forms that these claims on future revenues

¹⁶⁴ George David Smith and Richard Sylla, "The Transformation of Financial Capitalism: An Essay on the History of American Capital Markets," Financial Markets, Institutions & Instruments 2: 2, 33-38.

took. Therefore, even when financiers ceased to dominate the boards of directors as they had at the turn of the century, and even when corporations turned inward for more of their funds, the financial innovations of the financiers continued to play a major role.

It would be an overstatement, however, to say that the innovations of the financiers caused the mergers described in this study. As the work of Lamoreaux makes clear, technological change produced instability in markets for goods. This instability in combination with fixed costs in a rapidly growing industry led to reorganization that was fertile ground for the financiers. They crafted the financial aspects of the solution to the problems faced by the firms that Lamoreaux describes.

In this study I have attempted to provide a detailed account of exactly what form the financial innovations took, to show the importance of changes in the legal system and the valuing and using of securities in the organization of consolidations.

The liberalization of key state charters accounted for the majority of incorporations. While each of the states which chartered more than 10 combinations attempted to liberalize parts of their corporate law, only New Jersey and Delaware reformed each of the five statutes reviewed. New Jersey went through this process during the small merger period, or trust period, from 1889 to 1891. Delaware did not make these reforms until the height of the large merger period, in 1899. New Jersey alone accounted for 255 of the 456 corporations that listed their state of incorporation. New Jersey took two additional steps in their revision of corporate law, which

helped to establish its importance in merger activity from 1895 to 1904. New Jersey was the only state which allowed corporations to purchase the stock of other companies with newly issued stock and it repealed their Antitrust Laws.

These legal changes allowed industrial companies to capitalize their businesses according to a new system of valuation. The capital stock ceased to be determined according to the market value of physical assets. The idea that capital stock should be determined as a ratio to the earning capacity of the going concern allowed the more complete extension of the system of corporate credit. It led to the rapid creation of new financial instruments, that represented the various types of value that were considered inherent in the going concern.

Preferred stock was a "compromise security" that became widely used by industrial consolidations. Most frequently, it was issued in conjunction with common stock. This dual issue allowed for the capitalization of two types of corporate values, where only one had resided previously. Preferred stock was frequently valued in terms of the physical assets of the corporation. Common stock was valued according to the expectations of future income. Eventually, this method of capitalization came to be considered as based on the earning capacity of the going concern. The expansion of this new extension of corporate values was described by Veblen as the emergence of a credit economy.

Preferred stock provided a greater degree of certainty for the corporate investor, and attracted the attention of both the public and

the banking community as representing investment grade stock. This position was further supported by the convention of making preferred dividends cumulative. This meant that the right of preferred stockholders to previously unpaid dividends preceded the dividend rights of common stockholders. Common stock, on the other hand, was considered more risky and attracted the attention of speculators. The introduction of preferred securities and the new methods of valuation for corporate assets supports the general conclusion that the market for industrial securities was in the process of a structural change.

The use of these new instruments and methods for valuing assets was important in organizing the financing of consolidation activity. The techniques of financing large scale mergers were first established in the trusts of the 1880's. Once the use of trust certificates became illegal, the use of common and preferred became the most common financial plan for a new consolidation. The method for gaining control of constituents was also established in the trusts, involving the exchange of newly issued securities for the stock or property of constituents. With the changes in the laws of New Jersey, this technique became feasible in a large number of industries that were considering consolidation through merger. This technique reduced the need for large sums of liquid capital, while also allowing corporations to usefully capitalize at very large values and create still larger mergers.

While the primary method of gaining control of constituent companies involved the exchange of new securities for stock or

property rights, some cash was necessary to carry through options, retire constituent company debt, and provide working capital. Very little of the capital values created through incorporation for merger were directly allocated for new capital investment. Therefore, the early development of the industrial stock market was not based on the need for additional investment capital. As William Doyle notes, the condition of destructive price competition prevalent in the economy suggests that businesses needed little help with capital investment.

For the portion of capital stock that did need to be underwritten, a market developed for the exchange of industrial securities and grew rapidly. Financial intermediaries became increasingly specialized, and developed working relationships with reciprocal agents. The use of investment banking firms and trust companies both became common features in the financing of the large corporations, with the influence of J. P. Morgan being evident in many of the most active firms and trusts.

The implications of the new financial instruments for the organization of industry were manifold. By monetizing industrial ownership, the ability to trade and consolidate businesses became possible on a grand scale. Due to their ability to negotiate and establish consolidations, the position of large creditors of corporations became apparent. This established a financial solution to the organizational problems apparent in industries with excess capacity and high fixed costs.

While this application of Veblenian theory to the role of legal and financial innovation in merger activity has been fruitful, it suggests additional areas of inquiry that were beyond the scope of this work. The use of the stock exchange and the creation of stock values in merger activity show that new creations of stock were rarely used for new capital expenditures. It is unclear, however, from the information discussed, whether this constituted the majority of entire new stock issues during the period covered. Since other works suggest the scenario described in merger activity is applicable to other stock issues, it appears this would be a fruitful line of inquiry.¹⁶⁵ Taking this into account, descriptions of the stock exchange as a method for increasing physical capital investment should be suspect. The interrelatedness of creditor and debtor positions in organizing consolidations also tempers the frequent assumption that the savers and lenders meeting at the exchange are two distinct groups of individuals.

The conditions of the stock market during the time of merger activity have not been fully described in this work. While Veblen refers to the reorganization of business assets during merger as a surrogate for a commercial crisis, it is unclear if the turn of the century merger period occurred as a component of a financial crisis or during a rising stock market. Although many studies have shown a positive statistical correlation between merger activity and stock prices, these works use the pre-existing state of stock prices as their

¹⁶⁵ George A. Eddy, "Security Issues and Real Investment in 1929" The Review of Economic Statistics XIX 1937. 79-91.

benchmark for comparison.¹⁶⁶ Detractors of this argument state that the condition of "high and rising stock prices" should be determined by comparison to the trend of prices. The estimation of a price trend would produce a series of justified prices that could then be compared to the movement of actual prices. Analysis from this perspective has come to the conclusion that stock prices and interest rates were lower than they could have been. Although Veblen's analysis does not depend on conditions of a rising stock market, further analysis of the conditions of the stock market would prove beneficial to clarifying this debate and its significance to merger activity.¹⁶⁷

Although all of the implications of Veblen's theory have not been considered, the material presented supports the general conclusion that evolution of legal and financial systems played an important part in shaping the merger activity of 1870 to 1904. This period, and the corporate form that emerged from this period, also have had a lasting influence on the organization and practice of business enterprise. Theories of merger activity which fail to take into account these factors therefore dismiss a significant field of inquiry into the history of industrial evolution.

¹⁶⁶ Ralph Nelson, Merger Movements in American Industry," 83-99.

¹⁶⁷ Richard Sylla, Jack W. Wilson, and Charles P. Jones, "Financial Markets and the Great Merger Wave of 1895-1904," 9-11, 16-17. Working Paper.

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APPENDIX

APPENDIX

Several categorizations for key variables were used to produce the tables which follow. These categories are briefly described below. The only categorization based on other work besides the information compiled in the worksheet is the Degree of Success. This category is based on the work of Shaw Livermore and the corporations which he studied in, "The Success of Industrial Mergers," Quarterly Journal of Economics. 50 (1935) : 68-95.

Total Authorized Capital

- 1 \$ 0.1 - \$3 million dollars
- 2 \$3.1- \$5 million dollars
- 3 \$5.1- \$10 million dollars
- 4 \$10.1- \$24.9 million dollars
- 5 \$ 25- \$50 million dollars
- 6 \$ 50 million dollars and over

Types of Securities Used

- 0 no securities listed
- 1 common stock
- 2 common and preferred
- 3 common, preferred, and bonds
- 4 common and bonds
- 5 preferred
- 6 trust certificates

Method of Control

- 0 no method listed
- 1 acquired property
- 2 acquired property with cash
- 3 acquired property with stock
- 4 acquired stock
- 5 acquired stock with cash
- 6 acquired stock with stock

Degree of Success

- 0 not listed
- 1 never completed, inactive
- 2 early failure
- 3 later failure
- 4 limping concern
- 5 rejuvenation/ reorganization
- 6 success
- 7 outstanding success

Table 3. Combinations Occurring from January through March, 1899.

Fields	Company 1	Company 2	Company 3
Name of Consolidation	Springfield Breweries	Virginia Iron Coal and Coke Co.	Columbia River Packer's Ass.
Date of Incorporation	1899-01-01	1899-01-02	1899-01-05
State of Incorporation	W.Va.	Va.	Ore.
Total Authorized Capital (categorized)	0	4	1
Total Authorized Capital	\$0	\$20,000,000	\$2,000,000
Total Issued Capital	\$0	\$16,850,000	\$1,725,000
Types of Securities Used (categorized)	0	4	1
Standard Industrial Classification index	2082	331.293	2031
Number of Constituent Companies	4	9	4
Location of Businesses	Mass	Va.Ky	
General Office		Bristol, Va.	
New York Office		80 Broadway	
Method of acquiring control		acq. prop w/ cash.stk.+bds. s+b underwr.	
Method of Control (categorized)	0	3	0
Degree of Success		reorg.rcvrshp'01to'03	
Degree of Success (categorized)		5	
Par Value of stock		\$100	
Type of Preferred Stock		none auth	
Use of Preferred Stock	\$2.3M cap. type unknown		
Preferred Stock Authorized			
Preferred Stock Issued			
Issued for Cash, working capital			
Issued for Cash to Buy Property			
Issued for Cash to Buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			
Use of Common Stock		cash.prop. exch. for prop. underwr.	
Common Stock Authorized		\$10,000,000	\$2,000,000
Common Stock Issued		\$8,425,000	\$1,725,000
Issued For Cash, working capital		\$1,000,000	
Issued for Cash to Buy Property		\$3,500,000	
Issued for Cash to Buy Stock			
Issued to Exchange for Property		\$4,000,000	
Issued to Exchange for Stock			
Place of Stock Trading (categorized)		1	
Date Stock Listed on New York Exch.		curb6/1900	not listed
Date Stock traded on curb or unlisted			
Par Value of Bonds			
Type of Bonds		1st mort 5s g	
Use of Bonds		cash. prop. exch. for prop.;retire prior liens	
Bonds Authorized		\$10,000,000	
Bonds Issued		\$8,425,000	
Issued for Cash, Working Capital		\$1,000,000	
Issued for Cash to buy Property		\$3,500,000	
Issued for Cash to buy Stock		underwritten	
Issued to Exchange for Property		\$4,000,000	
Issued to Exchange for Stock			
Date Bonds Listed			
Fixed and Contingent Charges		\$421.250	
Average Net Earnings			
Ratio of Charges to Earnings	0.00	0.00	0.00
Net assets of Corporation			
Par Value of Securities Acquired			
Legal Counsel of Corporation			
Fiscal Agent		Moore & Schley, NY. organized syndicate	
Promoter			
Transfer Agent			
Registrar			
Trustee of Mortgage			
Corporation Representative			
Is a list of directors on file		yes	
Are any of these dir. also fiscal agents		yes	
Notes		Reorg. w/out foreclosure	

Table 3, continued. Combinations Occurring from January through March, 1899.

Fields	Company 4	Company 5	Company 6
Name of Consolidation	American Steel and Wire co. (nj)	Pressed Steel Car Co.	International Power Co.
Date of Incorporation	1899-01-13	1899-01-13	1899-01-14
State of Incorporation	N.J.	N.J.	N.J.
Total Authorized Capital (categorized)	6	5	3
Total Authorized Capital	\$90,000,000	\$25,000,000	\$8,225,000
Total Issued Capital	\$90,000,000	\$25,000,000	\$8,225,000
Types of Securities Used (categorized)	2	2	3
Standard Industrial Classification Index	3312,3392	3742	3561,3742
Number of Constituent Companies	28	2	3
Location of Businesses	Mass, Ill, Cal, Ohio, Pa, Mo, Wash, Ind		Mass, RI
General Office	The Rookery, Chicago Ill	Pittsburgh	
New York Office	44 Wall, 71 Brdw	71 Broadway	253 Broadway
Method of acquiring control	acq. prop w/ cash + stock, stock swap for Ill.	acq. stock w/ stock	acq. prop. w/ cash, stock sub by vend.
Method of Control (categorized)	6	6	2
Degree of Success	successor to AmSt + Wr. Ill	limping concern	
Degree of Success (categorized)		4	
Par Value of stock	\$100		\$100
Type of Preferred Stock	7% cum	7% non cum	6% cum
Use of Preferred Stock	cash, prop., exch for prop/stk.	cash	prop.
Preferred Stock Authorized	\$40,000,000	\$12,500,000	\$600,000
Preferred Stock Issued	\$40,000,000	\$12,500,000	\$600,000
Issued for Cash, working capital	yes	\$3,000,000	
Issued for Cash to Buy Property	yes		\$600,000
Issued for Cash to Buy Stock			
Issued to Exchange for Property	yes		
Issued to Exchange for Stock	yes		
Use of Common Stock	cash, prop, exch. for prop. stock.	cash, bonus on pfd is to retire d property.	
Common Stock Authorized	\$50,000,000	\$12,500,000	\$7,400,000
Common Stock Issued	\$50,000,000	\$12,500,000	\$7,400,000
Issued For Cash, working capital	yes	\$3,000,000	
Issued for Cash to Buy Property	yes		\$7,400,000
Issued for Cash to Buy Stock			
Issued to Exchange for Property	yes		
Issued to Exchange for Stock	yes		
Place of Stock Trading (categorized)	1	4	3
Date Stock Listed on New York Exch.		4/1899	6/1900
Date Stock traded on curb or unlisted	2/1899		6/1899
Par Value of Bonds			
Type of Bonds	\$750,000	auth in 1901 for w.c.	1st mort 4s
Use of Bonds			exch. for outs. bonds
Bonds Authorized			\$225,000
Bonds Issued			\$225,000
Issued for Cash, Working Capital			
Issued for Cash to buy Property			
Issued for Cash to buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			\$225,000
Date Bonds Listed			
Fixed and Contingent Charges	\$2,800,000	\$875,000	\$45,000
Average Net Earnings	\$9,582,329	\$2,156,090	\$273,473
Ratio of Charges to Earnings	0.29	0.41	0.16
Net assets of Corporation	\$23,407,000		
Par Value of Securities Acquired	\$24,000,000		
Legal Counsel of Corporation	Seward, Guthrie & Steele, NY		
Fiscal Agent	Ellwood + Gates (dir) J. & W. Seligman & Co. NY		
Promoter			
Transfer Agent	Corporation Trust Co. NY	Guaranty Trust Co., NY	Atlantic Trust Co., NY
Registrar	Farmers' Loan and Trust Co. NY		Guaranty Trust Co., NY
Trustee of Mortgage			
Corporation Representative			
Is a list of directors on file	yes	yes	
Are any of these dir. also fiscal agents	yes		
Notes	Stk acq. by United States Steel Corp.		purchase price of const. \$5.2 Million

Table 3. continued. Combinations Occurring from January through March, 1899.

Fields	Company 7	Company 8	Company 9
Name of Consolidation	National Carbon Co.	Rubber Goods Manufacturing Co.	National Enameling and Stamping Co.
Date of Incorporation	1899-01-16	1899-01-26	1899-01-29
State of Incorporation	N.J.	N.J.	N.J.
Total Authorized Capital (categorized)	3	6	5
Total Authorized Capital	\$10,000,000	\$50,000,000	\$30,600,000
Total Issued Capital	\$10,000,000	\$22,755,300	\$20,975,000
Types of Securities Used (categorized)	2	2	3
Standard Industrial Classification index	3612	3011.3099	3411.3465.3466
Number of Constituent Companies	11	8	10
Location of Businesses	OH(primarily), Ind. Pa. Mo	Ill. Ind. Oh. N.J. Conn. N.Y. Mass	Ill. Wisc. Md. LI. N.Y. Conn. Ohio
General Office	W. Madison & Highland, Clev.	New Brunswick, NJ	
New York Office		13 Park Row	81 Fulton St. NY
Method of acquiring control	acq. property for cash	acq. stock and prop of const. w/ stk +cash	acq. prop. w/ purchase money mortg
Method of Control (categorized)	2	6	1
Degree of Success	success(U. carbide)		limping concern
Degree of Success (categorized)	6		4
Par Value of stock	\$100	\$100	\$100
Type of Preferred Stock	7% non cum	7% cum	7% cum
Use of Preferred Stock		exch. for prop.; tangible assets	
Preferred Stock Authorized	\$4,500,000	\$25,000,000	\$10,000,000
Preferred Stock Issued	\$4,500,000	\$7,621,300	\$7,375,000
Issued for Cash, working capital			
Issued for Cash to Buy Property			
Issued for Cash to Buy Stock			
Issued to Exchange for Property		yes	
Issued to Exchange for Stock			
Use of Common Stock		comm ls. for intang. assets	
Common Stock Authorized	\$5,500,000	\$25,000,000	\$20,000,000
Common Stock Issued	\$5,500,000	\$15,134,000	\$13,000,000
Issued For Cash, working capital			
Issued for Cash to Buy Property			
Issued for Cash to Buy Stock			
Issued to Exchange for Property		yes	
Issued to Exchange for Stock		yes	
Place of Stock Trading (categorized)	2	1	3
Date Stock Listed on New York Exch.	Chicago Unl.		3/1903
Date Stock traded on curb or unlisted	1900	5/1901	curb 12/99
Par Value of Bonds			
Type of Bonds	none auth	none auth	purch money mort
Use of Bonds			
Bonds Authorized			\$600,000
Bonds Issued			\$600,000
Issued for Cash, Working Capital			
Issued for Cash to buy Property			
Issued for Cash to buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			
Date Bonds Listed			
Fixed and Contingent Charges	\$315,000	\$533,491	\$516,250
Average Net Earnings	\$535,402	\$1,643,241	\$1,269,191
Ratio of Charges to Earnings	0.59	0.32	0.41
Net assets of Corporation	\$9,283,825		
Par Value of Securities Acquired			
Legal Counsel of Corporation		W.M. Ivins	
Fiscal Agent			
Promoter		Charles R. Flint	
Transfer Agent	Northern Trust Co., Chicago	Baring, Magoun & Co., N.Y.; Corporation Tr., NJ	
Registrar	Merchants' Loan & Trust Co., Chic	U.S. Mortgage & Trust Co., NY	Colonial Trust Co., NY
Trustee of Mortgage			
Corporation Representative			
Is a list of directors on file	yes	yes	yes
Are any of these dir. also fiscal agents			
Notes		blind pool used to raise cash for initial purcha	consolidation result of patent litigation

Table 3. continued. Combinations Occurring from January through March, 1899.

Fields	Company 10	Company 11	Company 12
Name of Consolidation	Columbia Elec. Car Lighting and Brake	Western Strawboard Co.	Kentucky Distilleries and Warehouse Co
Date of Incorporation	1899-02-00	1899-02-00	1899-02-03
State of Incorporation	N.J.		N.J.
Total Authorized Capital (categorized)	3	0	5
Total Authorized Capital	\$10,000,000	\$0	\$32,000,000
Total Issued Capital	\$0	\$0	\$29,000,000
Types of Securities Used (categorized)	1	0	2
Standard Industrial Classification index	3641	261	2085
Number of Constituent Companies	2	3	50
Location of Businesses		Ohio	Ky
General Office			
New York Office	No. 11 Broadway		20 Broad St.
Method of acquiring control	acquired stock, stk deposited and exchanged		acq. prop. with cash, stock oversubscrib
Method of Control (categorized)	6	0	2
Degree of Success			
Degree of Success (categorized)			
Par Value of stock			
Type of Preferred Stock			7% cum
Use of Preferred Stock		auth cap. \$5M. type unknown	prop.
Preferred Stock Authorized	none auth		\$12,000,000
Preferred Stock Issued			\$10,500,000
Issued for Cash, working capital			
Issued for Cash to Buy Property			\$10,500,000
Issued for Cash to Buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			
Use of Common Stock			property.
Common Stock Authorized	\$10,000,000		\$20,000,000
Common Stock Issued			\$18,500,000
Issued For Cash, working capital			
Issued for Cash to Buy Property			\$18,500,000
Issued for Cash to Buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			
Place of Stock Trading (categorized)			1
Date Stock Listed on New York Exch.			
Date Stock traded on curb or unlisted	not listed		curb 6/99
Par Value of Bonds			
Type of Bonds			none auth
Use of Bonds			
Bonds Authorized			
Bonds Issued			
Issued for Cash, Working Capital			
Issued for Cash to buy Property			
Issued for Cash to buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			
Date Bonds Listed			
Fixed and Contingent Charges			\$735,000
Average Net Earnings			
Ratio of Charges to Earnings	0.00	0.00	0.00
Net assets of Corporation			
Par Value of Securities Acquired			
Legal Counsel of Corporation			
Fiscal Agent			Manhattan Trust Co., NY
Promoter			
Transfer Agent			Manhattan Trust Co., NY
Registrar			
Trustee of Mortgage			
Corporation Representative			
Is a list of directors on file	yes		yes
Are any of these dir. also fiscal agents			
Notes	F.C. Hollins & Co. NY, has interest in co.		acq by Dist CoAm' 99.Org. by StandD&D

Table 3, continued. Combinations Occurring from January through March, 1899.

Fields	Company 13	Company 14	Company 15
Name of Consolidation	Pittsburgh Brewing Co.	American Saddle Co Electric Boat Co.	
Date of Incorporation	1899-02-04	1899-02-07	1899-02-07
State of Incorporation	Pa.	N.J.	N.J.
Total Authorized Capital (categorized)	4	1	3
Total Authorized Capital	\$19,500,000	\$1,800,000	\$10,000,000
Total Issued Capital	\$17,866,350	\$0	\$6,688,100
Types of Securities Used (categorized)	3	2	2
Standard Industrial Classification index	2082	3751	3731
Number of Constituent Companies	16	6	3
Location of Businesses			NY, Pa
General Office			
New York Office			100 Broadway
Method of acquiring control	ed		acq. prop and plants
Method of Control (categorized)	0	0	1
Degree of Success			
Degree of Success (categorized)			
Par Value of stock	\$50		
Type of Preferred Stock	7% cum	7% cum	8% non cum
Use of Preferred Stock			prop.
Preferred Stock Authorized	\$6,500,000	\$800,000	\$5,000,000
Preferred Stock Issued	\$6,100,100		\$1,690,300
Issued for Cash, working capital			
Issued for Cash to Buy Property			\$1,690,300
Issued for Cash to Buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			
Use of Common Stock			property, 250% bonus on sub. pf
Common Stock Authorized	\$6,500,000	\$1,000,000	\$5,000,000
Common Stock Issued	\$5,947,250		\$4,997,800
Issued For Cash, working capital			
Issued for Cash to Buy Property			\$4,997,800
Issued for Cash to Buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			
Place of Stock Trading (categorized)	1		1
Date Stock Listed on New York Exch.			
Date Stock traded on curb or unlisted	curb 12/99		curb 6/1899
Par Value of Bonds			
Type of Bonds	1st mort 6s		none auth
Use of Bonds			
Bonds Authorized	\$6,500,000		
Bonds Issued	\$5,819,000		
Issued for Cash, Working Capital			
Issued for Cash to buy Property			
Issued for Cash to buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			
Date Bonds Listed			
Fixed and Contingent Charges	\$776,147		\$135,224
Average Net Earnings	\$1,810,970		
Ratio of Charges to Earnings	0.43	0.00	0.00
Net assets of Corporation			
Par Value of Securities Acquired			
Legal Counsel of Corporation		James B. Dill?	
Fiscal Agent			
Promoter			
Transfer Agent	Union Trust Co., Pittsburgh		Manhattan Trust Co., NY
Registrar	Fidelity Title & Trust Co., Pittsburgh		
Trustee of Mortgage	Fidelity Title & Trust Co., Pitt		
Corporation Representative			
Is a list of directors on file	yes		yes
Are any of these dir. also fiscal agents	no		
Notes		inc. J. B. Dill	Isaac L. Rice, NY. pres.

Table 3, cont. Combinations Occurring from Jan. through March, 1899.

Fields	Company 16	Company 17
Name of Consolidation	United Shoe Machinery Co.	American Felt Co.
Date of Incorporation	1899-02-08	1899-02-09
State of Incorporation	N.J.	N.J.
Total Authorized Capital (categorized)	5	2
Total Authorized Capital	\$25,000,000	\$5,500,000
Total Issued Capital	\$17,750,000	\$3,754,600
Types of Securities Used (categorized)	2	3
Standard Industrial Classification index	3559	2291
Number of Constituent Companies	8	5
Location of Businesses	Boston, Mass	Mass,NY,NJ,Conn.
General Office	111 Lincoln St., Boston	110 E. 13th St. NY
New York Office		
Method of acquiring control		purchased plants and busin:
Method of Control (categorized)	0	1
Degree of Success	success	early failure
Degree of Success (categorized)	6	2
Par Value of stock	\$25	\$100
Type of Preferred Stock	6% cum	6% cum
Use of Preferred Stock		property
Preferred Stock Authorized	\$12,500,000	\$2,500,000
Preferred Stock Issued	\$8,875,000	\$1,627,300
Issued for Cash, working capital		
Issued for Cash to Buy Property		yes
Issued for Cash to Buy Stock		
Issued to Exchange for Property		
Issued to Exchange for Stock		
Use of Common Stock	d	prop.
Common Stock Authorized	\$12,500,000	\$2,500,000
Common Stock Issued	\$8,875,000	\$1,627,300
Issued For Cash, working capital		
Issued for Cash to Buy Property		yes
Issued for Cash to Buy Stock		
Issued to Exchange for Property		
Issued to Exchange for Stock		
Place of Stock Trading (categorized)	1	
Date Stock Listed on New York Exch.		not listed
Date Stock traded on curb or unlisted	Boston6/99	
Par Value of Bonds		\$1,000
Type of Bonds	none auth	1st mort 6s
Use of Bonds		acquiredprop
Bonds Authorized		\$500,000
Bonds Issued		\$500,000
Issued for Cash, Working Capital		
Issued for Cash to buy Property		
Issued for Cash to buy Stock		
Issued to Exchange for Property		
Issued to Exchange for Stock		
Date Bonds Listed		not listed
Fixed and Contingent Charges	\$532,500	\$127,638
Average Net Earnings	\$1,600,000	
Ratio of Charges to Earnings	0.33	0.00
Net assets of Corporation	est. from const. co's.	
Par Value of Securities Acquired		
Legal Counsel of Corporation		
Fiscal Agent		
Promoter		
Transfer Agent	American Loan & Trust Co., Boston	Registrar&Transfer Co.JerC
Registrar	Old Colony Trust Co., Boston	US Mort&Trust Co. NY
Trustee of Mortgage		US Mort&Trust Co. NY
Corporation Representative		Picton NJ
Is a list of directors on file	yes	yes
Are any of these dir. also fiscal agents		D.Clarke
Notes	William Barbour, William A. Read, of NY, on BOD	

Table 3, continued. Combinations Occurring from January through March, 1899.

Fields	Company 18	Company 19
Name of Consolidation	American Radiator Co.	General Chemical Co.
Date of Incorporation	1899-02-14	1899-02-14
State of Incorporation	N.J.	N.Y.
Total Authorized Capital (categorized)	3	5
Total Authorized Capital	\$10,000,000	\$25,000,000
Total Issued Capital	\$7,893,000	\$14,500,000
Types of Securities Used (categorized)	2	2
Standard Industrial Classification index	3439	28
Number of Constituent Companies	3	12
Location of Businesses	NY, Mich. Mo. Pa. Ohio	NY, I.I., Conn. N.J. Pa. OH. Ill. Mo
General Office	Lake & Dearborn St., Chicago	
New York Office	42 East 20th St.	32 Liberty St.
Method of acquiring control	vendors took common & pfd for purchase	acq prop w/ pfd. intangibles w/con
Method of Control (categorized)	3	3
Degree of Success	success. reorg. of Ill. co.	success
Degree of Success (categorized)	6	6
Par Value of stock	\$100	
Type of Preferred Stock	7% cum	6% cum
Use of Preferred Stock	exch. prop., < tang. assets	cash. exch. for prop.
Preferred Stock Authorized	\$5,000,000	\$12,500,000
Preferred Stock Issued	\$3,000,000	\$8,000,000
Issued for Cash, working capital		\$750,000
Issued for Cash to Buy Property		
Issued for Cash to Buy Stock		
Issued to Exchange for Property	\$3,000,000	\$7,250,000
Issued to Exchange for Stock		
Use of Common Stock	exch. for prop.	iss. for prop. const. intangibles
Common Stock Authorized	\$5,000,000	\$12,500,000
Common Stock Issued	\$4,893,000	\$6,500,000
Issued For Cash, working capital		
Issued for Cash to Buy Property		
Issued for Cash to Buy Stock		
Issued to Exchange for Property	\$4,893,000	\$6,500,000
Issued to Exchange for Stock		
Place of Stock Trading (categorized)		1
Date Stock Listed on New York Exch.		
Date Stock traded on curb or unlisted	not listed	curb 7/00
Par Value of Bonds		
Type of Bonds	none auth	none auth
Use of Bonds		
Bonds Authorized		
Bonds Issued		
Issued for Cash, Working Capital		
Issued for Cash to buy Property		
Issued for Cash to buy Stock		
Issued to Exchange for Property		
Issued to Exchange for Stock		
Date Bonds Listed		
Fixed and Contingent Charges	\$210,000	\$480,000
Average Net Earnings	\$628,467	\$1,374,948
Ratio of Charges to Earnings	0.33	0.35
Net assets of Corporation	\$6,592,395	\$7,400,000
Par Value of Securities Acquired		
Legal Counsel of Corporation	James B. Dill ?	
Fiscal Agent		none used, mf agreement
Promoter	Frank O. Lowden	none used, mf agreement
Transfer Agent	Equitable Trust Co. Chicago	
Registrar	Illinois Trust & Savings Bank, Chicago	
Trustee of Mortgage		
Corporation Representative	East Orange N.J.	
Is a list of directors on file	yes	yes
Are any of these dir. also fiscal agents	yes	no
Notes	linked to Nat. Steel Co., J.B. Dill dir. stk oversub.	

Table 3. continued. Combinations Occurring from January through March, 1899.

Fields	Company 20	Company 21	Company 22
Name of Consolidation	American Car and Foundry Co.	American Last Co	National Steel Co.
Date of Incorporation	1899-02-20	1899-02-27	1899-02-27
State of Incorporation	N.J.	Ohio	N.J.
Total Authorized Capital (categorized)	6	2	6
Total Authorized Capital	\$60,000,000	\$3,500,000	\$59,000,000
Total Issued Capital	\$58,180,000	\$0	\$60,561,000
Types of Securities Used (categorized)	2	2	2
Standard Industrial Classification index	3742	2492	3312
Number of Constituent Companies	17		10
Location of Businesses	MI,Mo,Pa,Ind,NY,WVa,OH,III,Del		Oh,Mich,Pa
General Office	Lincoln Trust Bldg. St. Louis		Marquette Bldg. Chicago off.
New York Office	71Bway.25 BrdS		21 State St.
Method of acquiring control	sold stock for cash to purchase stock and wc	0	acq. prop w/ cash, stock
Method of Control (categorized)	4		3
Degree of Success	success		
Degree of Success (categorized)	6		
Par Value of stock	\$100		\$100
Type of Preferred Stock	7% non cum		7% cum
Use of Preferred Stock	stock		prop. exch. for prop; subs for purch.
Preferred Stock Authorized	\$30,000,000	\$1,500,000	\$27,000,000
Preferred Stock Issued	\$29,090,000		\$26,000,000
Issued for Cash, working capital			
Issued for Cash to Buy Property			\$22,000,000
Issued for Cash to Buy Stock	\$15,000,000		
Issued to Exchange for Property			\$4,000,000
Issued to Exchange for Stock			
Use of Common Stock	15millbonus on pref. for prop		prop., exch for prop. bonus, \$5Mto promote
Common Stock Authorized	\$30,000,000	\$2,000,000	\$32,000,000
Common Stock Issued	\$29,090,000		\$32,000,000
Issued For Cash, working capital			
Issued for Cash to Buy Property			\$28,000,000
Issued for Cash to Buy Stock	\$15,000,000		
Issued to Exchange for Property			yes
Issued to Exchange for Stock			
Place of Stock Trading (categorized)	4		1
Date Stock Listed on New York Exch.	5/27/1899		
Date Stock traded on curb or unlisted			3/1899
Par Value of Bonds			
Type of Bonds	none auth.		assumed funded debt of const.
Use of Bonds			
Bonds Authorized			
Bonds Issued			\$2,561,000
Issued for Cash, Working Capital			
Issued for Cash to buy Property			
Issued for Cash to buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			
Date Bonds Listed			
Fixed and Contingent Charges	\$2,036,300		\$1,973,660
Average Net Earnings	\$4,145,793		
Ratio of Charges to Earnings	0.49	0.00	0.00
Net assets of Corporation			\$76,612,334
Par Value of Securities Acquired			gross assets
Legal Counsel of Corporation			
Fiscal Agent	Poor&Greenough NY accepting cash subs		
Promoter			William H. Moore, Chicago
Transfer Agent	Guaranty Trust Co. NY		Guaranty Trust Co., NY
Registrar			First National Bank, NY
Trustee of Mortgage			
Corporation Representative			
Is a list of directors on file	yes		
Are any of these dir. also fiscal agents	no		
Notes	prev. Mich.-Penin. Car. links to Pressed Steel Car		acq. Union Iron and Steel,1899. stk acq. by US St

Table 3, continued. Combinations Occurring from January through March, 1899.

Fields	Company 23	Company 24	Company 25
Name of Consolidation	Union Bag and Paper Co.	American Brick Co.	American Brass Co.
Date of Incorporation	1899-02-27	1899-03-00	1899-03-01
State of Incorporation	N.J.	N.J.	Conn.SpecC
Total Authorized Capital (categorized)	5	4	4
Total Authorized Capital	\$27,000,000	\$15,000,000	\$20,000,000
Total Issued Capital	\$27,000,000	\$0	\$6,000,000
Types of Securities Used (categorized)	2	2	1
Standard Industrial Classification Index	2661,2611	325	336
Number of Constituent Companies	6		5
Location of Businesses	NY,Wis,Mo,Ill	Hudson River, New Yor	Conn,Ill.
General Office	Fisher Bldg. Chicago Ill		Waterbury, Conn.
New York Office	51 Stone St.NY		
Method of acquiring control	acq. property, some stk underwritten		
Method of Control (categorized)	1	0	0
Degree of Success	limping concern		success(anaconda)
Degree of Success (categorized)	4		6
Par Value of stock	\$100		\$100
Type of Preferred Stock	7% cum	7% non cum	
Use of Preferred Stock			
Preferred Stock Authorized	\$11,000,000	\$7,500,000	none auth.
Preferred Stock Issued	\$11,000,000		
Issued for Cash, working capital			
Issued for Cash to Buy Property			
Issued for Cash to Buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			
Use of Common Stock			
Common Stock Authorized	\$16,000,000	\$7,500,000	\$20,000,000
Common Stock Issued	\$16,000,000		\$6,000,000
Issued For Cash, working capital			
Issued for Cash to Buy Property			
Issued for Cash to Buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			
Place of Stock Trading (categorized)	1		
Date Stock Listed on New York Exch.		not listed	not listed
Date Stock traded on curb or unlisted	3/1899		
Par Value of Bonds			
Type of Bonds	none auth		
Use of Bonds			
Bonds Authorized			
Bonds Issued			
Issued for Cash, Working Capital			
Issued for Cash to buy Property			
Issued for Cash to buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			
Date Bonds Listed			
Fixed and Contingent Charges	\$770,000		
Average Net Earnings	\$1,057,897		
Ratio of Charges to Earnings	0.73	0.00	0.00
Net assets of Corporation			
Par Value of Securities Acquired			
Legal Counsel of Corporation			
Fiscal Agent	Manhattan Trust Co., NY, accepting payment for sub.		
Promoter	William C. Sheldon,NY; W.H. and J.H. Moore,Chicago		
Transfer Agent			
Registrar			Waterbury Nat. Bank
Trustee of Mortgage			
Corporation Representative			
Is a list of directors on file	yes	yes	officers list
Are any of these dir. also fiscal agents	yes	yes	
Notes	George R. Sheldon of Sh.&Co., Moore Bros. on BO Failed to occur.		

Table 3, continued. Combinations Occurring from January through March, 1899.

Fields	Company 26	Company 27
Name of Consolidation	Maryland Brewing Co.	Royal Baking Powder Co.
Date of Incorporation	1899-03-01	1899-03-01
State of Incorporation	Md.	N.J.
Total Authorized Capital (categorized)	4	4
Total Authorized Capital	\$14,000,000	\$20,000,000
Total Issued Capital	\$12,803,000	\$20,000,000
Types of Securities Used (categorized)	3	2
Standard Industrial Classification Index	2082	2091
Number of Constituent Companies	16	5
Location of Businesses	Md(Baltimore)	
General Office	Fayette St. & Park Av. Balt.	
New York Office		100 William St.
Method of acquiring control	acq. prop. partial payment in bonds	acq. prop. owners took stock.
Method of Control (categorized)	3	3
Degree of Success	rcvrshp.3/1901	success
Degree of Success (categorized)	2	6
Par Value of stock	\$100	\$100
Type of Preferred Stock	6% cum	6% cum.n.v.
Use of Preferred Stock		cash 1/2 pub sub. exch. for prop.
Preferred Stock Authorized	\$3,250,000	\$10,000,000
Preferred Stock Issued	\$2,750,000	\$10,000,000
Issued for Cash, working capital		\$5,000,000
Issued for Cash to Buy Property		
Issued for Cash to Buy Stock		
Issued to Exchange for Property		
Issued to Exchange for Stock		\$5,000,000
Use of Common Stock		all taken by owners. exch. for prop.
Common Stock Authorized	\$3,250,000	\$10,000,000
Common Stock Issued	\$2,750,000	\$10,000,000
Issued For Cash, working capital		
Issued for Cash to Buy Property		
Issued for Cash to Buy Stock		
Issued to Exchange for Property		\$10,000,000
Issued to Exchange for Stock		
Place of Stock Trading (categorized)		1
Date Stock Listed on New York Exch.		
Date Stock traded on curb or unlisted	not listed	pdf on ?
Par Value of Bonds		
Type of Bonds	1st mort 6s	none auth
Use of Bonds	cash. exch. for prop.	
Bonds Authorized	\$7,500,000	
Bonds Issued	\$7,303,000	
Issued for Cash, Working Capital	\$4,000,000	
Issued for Cash to buy Property		
Issued for Cash to buy Stock		
Issued to Exchange for Property	\$3,303,000	
Issued to Exchange for Stock		
Date Bonds Listed		
Fixed and Contingent Charges	\$678,180	\$600,000
Average Net Earnings	\$848,036	\$1,365,000
Ratio of Charges to Earnings	0.80	0.44
Net assets of Corporation	\$13,564,316	
Par Value of Securities Acquired	gross assets	\$940,000
Legal Counsel of Corporation		sec. of const. co., unclear if sik was ac
Fiscal Agent		
Promoter	R.B. Sperry, Sperry Jones & c	
Transfer Agent		
Registrar		
Trustee of Mortgage	Citizens' Trust & Deposit Co., Balt	
Corporation Representative		
Is a list of directors on file	yes	yes
Are any of these dir. also fiscal agents		
Notes	reorg. as Gottlieb, Bauernschmidt & Straus, 1901	

Table 3, continued. Combinations Occurring from January through March, 1899.

Fields	Company 28	Company 29
Name of Consolidation	Arcadian Copper co.	Havana Commercial Co.
Date of Incorporation	1899-03-03	1899-03-03
State of Incorporation	N.J.	N.J.
Total Authorized Capital (categorized)	2	4
Total Authorized Capital	\$3,750,000	\$20,250,000
Total Issued Capital	\$0	\$16,000,000
Types of Securities Used (categorized)	1	2
Standard Industrial Classification index	1021	2121,2111
Number of Constituent Companies	2	14
Location of Businesses	Lake Superior District	Cuba
General Office	24 West St. Boston	
New York Office		135 Broadway
Method of acquiring control	stock swap with Mich. Co. How other co a-	acq. property w/ pfd. comm. iss. as bonus
Method of Control (categorized)	6	3
Degree of Success	successor to Mich Co.	
Degree of Success (categorized)		
Par Value of stock	\$25	\$100
Type of Preferred Stock		7% cum
Use of Preferred Stock		exch. for prop.
Preferred Stock Authorized	none auth	\$7,750,000
Preferred Stock Issued		\$6,000,000
Issued for Cash, working capital		
Issued for Cash to Buy Property		
Issued for Cash to Buy Stock		
Issued to Exchange for Property		yes
Issued to Exchange for Stock		
Use of Common Stock		exch. for prop.
Common Stock Authorized	\$3,750,000	\$12,500,000
Common Stock Issued		\$10,000,000
Issued For Cash, working capital		
Issued for Cash to Buy Property		
Issued for Cash to Buy Stock		
Issued to Exchange for Property		yes
Issued to Exchange for Stock		
Place of Stock Trading (categorized)		1
Date Stock Listed on New York Exch.		
Date Stock traded on curb or unlisted	not listed	curb 6/1899
Par Value of Bonds		
Type of Bonds	none auth	1900, 1 year notes \$1.5M for floating debt
Use of Bonds		
Bonds Authorized		
Bonds Issued		
Issued for Cash, Working Capital		
Issued for Cash to buy Property		
Issued for Cash to buy Stock		
Issued to Exchange for Property		
Issued to Exchange for Stock		
Date Bonds Listed		
Fixed and Contingent Charges		\$420,000
Average Net Earnings		\$597,412
Ratio of Charges to Earnings	0.00	0.70
Net assets of Corporation		\$17,943,069
Par Value of Securities Acquired		
Legal Counsel of Corporation	q.	
Fiscal Agent		H.B. Hollins & Co., NY
Promoter		
Transfer Agent		H.B. Hollins & Co. NY
Registrar		
Trustee of Mortgage		
Corporation Representative		
Is a list of directors on file	yes	yes
Are any of these dir. also fiscal agents		yes
Notes	BOD dominated by Standard Oil Co.	reorg. as Havana Tob. in 1902, control by Am Tob. Con

Table 3, continued. Combinations Occurring from January through March, 1899.

Fields	Company 30	Company 31
Name of Consolidation	Continental Cement Co.	American Ice Co.
Date of Incorporation	1899-03-07	1899-03-11
State of Incorporation	N.J.	N.J.
Total Authorized Capital (categorized)	5	6
Total Authorized Capital	\$30,000,000	\$60,000,000
Total Issued Capital	\$0	\$35,379,500
Types of Securities Used (categorized)	2	2
Standard Industrial Classification index	3241	2097
Number of Constituent Companies		2
Location of Businesses		NY,Pa,NJ,Md,DC,
General Office		23rd St.+Lexington Ave. NY
New York Office	156 Fifth St.	
Method of acquiring control		exchanged stock for stock, share for share
Method of Control (categorized)	0	6
Degree of Success		success
Degree of Success (categorized)		6
Par Value of stock	\$100	\$100
Type of Preferred Stock	7% non cum	6% cum
Use of Preferred Stock		cash, exch. for stock.
Preferred Stock Authorized	\$15,000,000	\$30,000,000
Preferred Stock Issued		\$12,440,400
Issued for Cash, working capital		\$22,939,100
Issued for Cash to Buy Property		
Issued for Cash to Buy Stock		
Issued to Exchange for Property		
Issued to Exchange for Stock		yes
Use of Common Stock		exch. for stock
Common Stock Authorized	\$15,000,000	\$30,000,000
Common Stock Issued		\$22,939,100
Issued For Cash, working capital		
Issued for Cash to Buy Property		
Issued for Cash to Buy Stock		
Issued to Exchange for Property		
Issued to Exchange for Stock		yes
Place of Stock Trading (categorized)		4
Date Stock Listed on New York Exch.		9/1899
Date Stock traded on curb or unlisted	not listed	
Par Value of Bonds		
Type of Bonds	none auth	
Use of Bonds		
Bonds Authorized		
Bonds Issued		
Issued for Cash, Working Capital		
Issued for Cash to buy Property		
Issued for Cash to buy Stock		
Issued to Exchange for Property		
Issued to Exchange for Stock		
Date Bonds Listed		
Fixed and Contingent Charges		\$806,424
Average Net Earnings		
Ratio of Charges to Earnings	0.00	0.00
Net assets of Corporation		
Par Value of Securities Acquired		
Legal Counsel of Corporation	Adams & Adams, NYC	
Fiscal Agent		
Promoter	W.H.Clark and T.F. Gilroy	
Transfer Agent		
Registrar		City,Central, and Knickerbocker Trust Co's R
Trustee of Mortgage		
Corporation Representative		
Is a list of directors on file	no	yes
Are any of these dir. also fiscal agents		yes
Notes	poss. acq. 80% of Portland Cement Pla Holding Co. 1905, Am. Ice Securities Co.,	

Table 3, continued. Combinations Occurring from January through March, 1899.

Fields	Company 32	Company 33
Name of Consolidation	American School Furniture Co.	United States Cast Iron Pipe and Foundry
Date of Incorporation	1899-03-13	1899-03-13
State of Incorporation	N.J.	N.J.
Total Authorized Capital (categorized)	4	5
Total Authorized Capital	\$11,500,000	\$30,000,000
Total Issued Capital	\$10,356,100	\$24,000,000
Types of Securities Used (categorized)	3	2
Standard Industrial Classification Index	2531	3321
Number of Constituent Companies	25	8
Location of Businesses	NY,Ind,MA,Pa,Wis,OH,MI,III,Iowa	Oh,Pa,NY,Ky,Tenn,Ala
General Office	111 Fifth Av. NY;(03)19 West 18th St. NY	The Rookery, Chic.sales off.
New York Office		80 Broadway
Method of acquiring control	plants purchased outright. no stock acqui	acq.prop of 7. stock of Am.P&F.w/stk+cash
Method of Control (categorized)	1	6
Degree of Success	rejuvenation	rejuvenation
Degree of Success (categorized)	5	5
Par Value of stock	\$100	\$100
Type of Preferred Stock	7% cum	7% non cum
Use of Preferred Stock	prop.	cash, prop. exch. for prop. pub. sub
Preferred Stock Authorized	\$5,000,000	\$15,000,000
Preferred Stock Issued	\$3,977,800	\$12,000,000
Issued for Cash, working capital		yes
Issued for Cash to Buy Property	yes	yes
Issued for Cash to Buy Stock		
Issued to Exchange for Property		yes
Issued to Exchange for Stock		
Use of Common Stock	prop.	100% bon.pfd.cash.prop. exch for pr
Common Stock Authorized	\$5,000,000	\$15,000,000
Common Stock Issued	\$4,878,300	\$12,000,000
Issued For Cash, working capital		yes
Issued for Cash to Buy Property	yes	yes
Issued for Cash to Buy Stock		
Issued to Exchange for Property		yes
Issued to Exchange for Stock		
Place of Stock Trading (categorized)		1
Date Stock Listed on New York Exch.		
Date Stock traded on curb or unlisted	not listed	curb6/1900
Par Value of Bonds		
Type of Bonds	1st mort 6s	
Use of Bonds	cash. lien on prop.	Am P&F has 6% bonds outst. of \$1.194M
Bonds Authorized	\$1,500,000	
Bonds Issued	\$1,500,000	
Issued for Cash, Working Capital	yes	
Issued for Cash to buy Property		
Issued for Cash to buy Stock		
Issued to Exchange for Property		
Issued to Exchange for Stock		
Date Bonds Listed		
Fixed and Contingent Charges	\$369,846	\$840,000
Average Net Earnings	\$527,675	\$705,592
Ratio of Charges to Earnings	0.70	1.19
Net assets of Corporation		
Par Value of Securities Acquired		
Legal Counsel of Corporation		
Fiscal Agent		Poor & Greenough, NY. offered stk for public s
Promoter		
Transfer Agent	Registrar&Transfer JersCl	Thomas & Thomas 71 Broadway
Registrar	NY	Central Trust Co., NY
Trustee of Mortgage	Oakman, Turnbull of Guaranty Trust Co. NY	
Corporation Representative		
Is a list of directors on file	yes	yes
Are any of these dir. also fiscal agents		
Notes	James C. Young, dir	Acq. stock of American Pipe & Foundry Co.

Table 3, continued. Combinations Occurring from January through March, 1899.

Fields	Company 34	Company 35	Company 36
Name of Consolidation	Empire Steel and Iron Co.	American Shipbuilding Co.	Erie Brewing Co.
Date of Incorporation	1899-03-14	1899-03-16	1899-03-20
State of Incorporation	N.J.	N.J.	
Total Authorized Capital (categorized)	2	5	1
Total Authorized Capital	\$5,000,000	\$30,000,000	\$1,500,000
Total Issued Capital	\$4,634,000	\$15,200,000	\$1,196,700
Types of Securities Used (categorized)	2	2	2
Standard Industrial Classification index	331	3731	2082
Number of Constituent Companies	9	8	4
Location of Businesses	Pa., N.J., N.C., Va.	Ohio, Wis., Ill.	
General Office	Catasauqua Pa.	120 Viaduct, Cleveland O	
New York Office	71 Broadway	36 Wall St.	
Method of acquiring control	acq. prop. for \$7.25M. interest in sev. RR	purchased plants	
Method of Control (categorized)	2	1	0
Degree of Success		success	
Degree of Success (categorized)		6	
Par Value of stock		\$100	
Type of Preferred Stock	6% cum	7% non cum	7%
Use of Preferred Stock			
Preferred Stock Authorized	\$2,500,000	\$15,000,000	\$500,000
Preferred Stock Issued	\$2,354,000	\$7,600,000	\$426,700
Issued for Cash, working capital			
Issued for Cash to Buy Property			
Issued for Cash to Buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			
Use of Common Stock			
Common Stock Authorized	\$2,500,000	\$15,000,000	\$1,000,000
Common Stock Issued	\$2,280,000	\$7,600,000	\$770,000
Issued For Cash, working capital			
Issued for Cash to Buy Property			
Issued for Cash to Buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			
Place of Stock Trading (categorized)	1	1	
Date Stock Listed on New York Exch.			
Date Stock traded on curb or unlisted	curb6/1900	curb6/1900	not listed
Par Value of Bonds			
Type of Bonds	none auth	none auth	
Use of Bonds			
Bonds Authorized			
Bonds Issued			
Issued for Cash, Working Capital			
Issued for Cash to buy Property			
Issued for Cash to buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			
Date Bonds Listed			
Fixed and Contingent Charges	\$141,240	\$532,000	
Average Net Earnings	\$145,384	\$1,866,974	
Ratio of Charges to Earnings	0.97	0.28	0.00
Net assets of Corporation			
Par Value of Securities Acquired			
Legal Counsel of Corporation		incorporators, J.B. Dill, Klein, Coleman	
Fiscal Agent	ub.		
Promoter			
Transfer Agent	City Trust Co., NY	Corporation Trust Co. NY	
Registrar			
Trustee of Mortgage			
Corporation Representative			
Is a list of directors on file	yes	yes	
Are any of these dir. also fiscal agents	yes		
Notes	exec. comm. E.R. Chapman, A. Brown, W. Si L.M. Bowers & J.A. McGean repr. Rockefeller		

Table 3, continued. Combinations Occurring from January through March, 1899.

Fields	Company 37	Company 38
Name of Consolidation	National Salt Co.	American Beet Sugar Co.
Date of Incorporation	1899-03-20	1899-03-24
State of Incorporation	N.J.	N.J.
Total Authorized Capital (categorized)	4	4
Total Authorized Capital	\$12,000,000	\$20,000,000
Total Issued Capital	\$8,200,000	\$19,000,000
Types of Securities Used (categorized)	2	2
Standard Industrial Classification index	2898	2063
Number of Constituent Companies	14	4
Location of Businesses	NY	Cal. Nebraska
General Office		
New York Office	26 Broadway	32 Nassau St.
Method of acquiring control	acq.prop. w/ stock-cash. add. acq. in Oc	properties owned fee simple
Method of Control (categorized)	3	2
Degree of Success	rejuvenation	limping concern
Degree of Success (categorized)	5	4
Par Value of stock	\$100	\$100
Type of Preferred Stock	7% non cum	6% non cum
Use of Preferred Stock	cash. exch. for prop. vend 55% val.	
Preferred Stock Authorized	\$5,000,000	\$5,000,000
Preferred Stock Issued	\$3,550,000	\$4,000,000
Issued for Cash, working capital	\$1,150,000	
Issued for Cash to Buy Property		
Issued for Cash to Buy Stock		
Issued to Exchange for Property	\$2,400,000	
Issued to Exchange for Stock		
Use of Common Stock	bonus.5Xearn. cash. exch. for prop.	
Common Stock Authorized	\$7,000,000	\$15,000,000
Common Stock Issued	\$4,650,000	\$15,000,000
Issued For Cash, working capital	\$1,150,000	
Issued for Cash to Buy Property		
Issued for Cash to Buy Stock		
Issued to Exchange for Property	\$3,500,000	
Issued to Exchange for Stock		
Place of Stock Trading (categorized)	3	1
Date Stock Listed on New York Exch.	9/1/1900	
Date Stock traded on curb or unlisted	curb6/1899	1/1900
Par Value of Bonds		
Type of Bonds	none auth	none auth.
Use of Bonds		
Bonds Authorized		
Bonds Issued		
Issued for Cash, Working Capital		
Issued for Cash to buy Property		
Issued for Cash to buy Stock		
Issued to Exchange for Property		
Issued to Exchange for Stock		
Date Bonds Listed		
Fixed and Contingent Charges	\$248,500	\$240,000
Average Net Earnings	\$751.179	\$275.971
Ratio of Charges to Earnings	0.33	0.87
Net assets of Corporation		
Par Value of Securities Acquired		
Legal Counsel of Corporation		
Fiscal Agent	Atlantic Trust Co., NY, offered stk for sut Kuhn, Loeb&Co; Spencer Trask&Co.	
Promoter		
Transfer Agent	United States Mortgage & Trust Co.	Corporation Trust Co. NJ
Registrar		State Trust Co NY, then Morton
Trustee of Mortgage		
Corporation Representative		
Is a list of directors on file	yes	yes
Are any of these dir. also fiscal agents	possible	
Notes	stk acq. by Int'l Salt. Linked w/ United S. Orig competed with AmSugRef;by 1903 ASR cont.	

Table 3, continued. Combinations Occurring from January through March, 1899.

Fields	Company 39	Company 40
Name of Consolidation	International Steam Pump.	United Zinc and Lead Co.
Date of Incorporation	1899-03-24	1899-03-25
State of Incorporation	N.J.	N.J.
Total Authorized Capital (categorized)	5	2
Total Authorized Capital	\$27,500,000	\$5,000,000
Total Issued Capital	\$21,112,500	\$749,500
Types of Securities Used (categorized)	2	2
Standard Industrial Classification Index	3561,3511	103
Number of Constituent Companies	5	5
Location of Businesses	NY,NJ,Mass,Ohio	Mo
General Office		2 Kilby St., Boston
New York Office	26 Broadway	
Method of acquiring control	H.C.,acq. stock with cash, stk underwritten	
Method of Control (categorized)	5	0
Degree of Success	later failure.reorg1915	early failure
Degree of Success (categorized)	3	2
Par Value of stock	\$100	cm\$5,pd\$25
Type of Preferred Stock	6% cum	8% cum
Use of Preferred Stock	stk; subs.\$1cash for \$1pd.75%com	
Preferred Stock Authorized	\$12,500,000	\$1,000,000
Preferred Stock Issued	\$8,850,000	\$375,000
Issued for Cash, working capital		
Issued for Cash to Buy Property		
Issued for Cash to Buy Stock	yes	
Issued to Exchange for Property		
Issued to Exchange for Stock		
Use of Common Stock	prop.	
Common Stock Authorized	\$15,000,000	\$4,000,000
Common Stock Issued	\$12,262,500	\$374,500
Issued For Cash, working capital		
Issued for Cash to Buy Property	yes	
Issued for Cash to Buy Stock		
Issued to Exchange for Property		
Issued to Exchange for Stock		
Place of Stock Trading (categorized)	3	
Date Stock Listed on New York Exch.	12/1900	
Date Stock traded on curb or unlisted	curb 6/99	not listed
Par Value of Bonds		
Type of Bonds	none auth	none auth
Use of Bonds		
Bonds Authorized		
Bonds Issued		
Issued for Cash, Working Capital		
Issued for Cash to buy Property		
Issued for Cash to buy Stock		
Issued to Exchange for Property		
Issued to Exchange for Stock		
Date Bonds Listed		
Fixed and Contingent Charges	\$531,000	\$30,000
Average Net Earnings	\$1,873,764	\$82,384
Ratio of Charges to Earnings	0.28	0.36
Net assets of Corporation	\$7,300,000	
Par Value of Securities Acquired		
Legal Counsel of Corporation	Guggenheimer,Untermeyer&Marshall	
Fiscal Agent	Lehman Brothers, syn man.	
Promoter		
Transfer Agent	Colonial Trust Co. NY	Corp. Trust c.15 Exchange Pl JersCi
Registrar	City Trust Co. 36 Wall Street NYC	Beacon Trust Co., Boston
Trustee of Mortgage		
Corporation Representative		Corp Trust Co.
Is a list of directors on file	yes	
Are any of these dir. also fiscal agents	yes	
Notes		

Table 3. continued. Combinations Occurring from January through March, 1899.

Fields	Company 41	Company 42	Company 43
Name of Consolidation	Consolidated Street Car Co.	American Woolen Co.	United Fruit Co.
Date of Incorporation	1899-03-27	1899-03-29	1899-03-30
State of Incorporation	N.J.	N.J.	N.J.
Total Authorized Capital (categorized)	4	6	4
Total Authorized Capital	\$18,000,000	\$50,000,000	\$23,500,000
Total Issued Capital	\$0	\$41,000,000	\$15,869,500
Types of Securities Used (categorized)	2	2	4
Standard Industrial Classification Index	3742	2232	2033, 0112
Number of Constituent Companies	11	25	11
Location of Businesses	Ill.,OH.,Pa.,N.J.,NY	RI.,Mass.,NY.,NH.,Me.,Conn	Mass.,Md.,Pa.,Cuba.,Cent.& South Am
General Office		Ames Bldg. Boston	60 State St. Boston
New York Office		74 Worth St.	
Method of acquiring control		acq. prop for comm+cash.also stk of 1 co	acq. stock, prop. w/ stk and cash
Method of Control (categorized)	0	4	6
Degree of Success	never completed	later failure	outstanding success
Degree of Success (categorized)	1	3	7
Par Value of stock		\$100	\$100
Type of Preferred Stock	7% cum	7% cum	none auth
Use of Preferred Stock		cash pub sub. prop.	
Preferred Stock Authorized	\$8,000,000	\$20,000,000	
Preferred Stock Issued		\$16,000,000	
Issued for Cash, working capital		yes	
Issued for Cash to Buy Property		yes	
Issued for Cash to Buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			
Use of Common Stock		w.c. prop. exch for prop.	
Common Stock Authorized	\$10,000,000	\$30,000,000	\$20,000,000
Common Stock Issued		\$25,000,000	\$12,369,500
Issued For Cash, working capital		\$8,000,000	
Issued for Cash to Buy Property			
Issued for Cash to Buy Stock			
Issued to Exchange for Property		\$17,000,000	
Issued to Exchange for Stock			
Place of Stock Trading (categorized)		3	
Date Stock Listed on New York Exch.		12/1899	
Date Stock traded on curb or unlisted		curb 12/99	not listed
Par Value of Bonds			
Type of Bonds		none auth	coupon bd 6%
Use of Bonds			is. in 1899, 1/2 paid off in '00
Bonds Authorized			\$3,500,000
Bonds Issued			\$3,500,000
Issued for Cash, Working Capital			
Issued for Cash to buy Property			
Issued for Cash to buy Stock			
Issued to Exchange for Property			
Issued to Exchange for Stock			
Date Bonds Listed			
Fixed and Contingent Charges		\$1,120,000	\$1,750,000
Average Net Earnings		\$3,056.025	\$1,335.175
Ratio of Charges to Earnings	0.00	0.37	1.31
Net assets of Corporation		\$20,000,000	
Par Value of Securities Acquired		stk of Nat&Providence Mills	
Legal Counsel of Corporation	William Nelson Cromwell,of Sull&C		Storey,Thorndike & Palmer
Fiscal Agent	W.C. Sheldon & Co.		
Promoter		F.S. Smithers & Co. NY	
Transfer Agent		perhaps Charles R. Flint(dir)	
Registrar		Guaranty T.,Old Colony T.,Reg&Transfer	Old Colony Trust Co., Boston
Trustee of Mortgage		Knickerbocker Tr. NY,Int'l Trust Co. Bost	Mercantile Trust Co., Boston
Corporation Representative		Newark, N.J.	
Is a list of directors on file	no	yes	yes
Are any of these dir. also fiscal agents			
Notes	incorp.W B. Chapman, A.G. Ridley, F. B. Pollak.		pres.of Old Colony Trust Co.onBOI

Table 4. Total Combinations, by Year and State

year	Arizona	Maryland	Oregon	Tennessee	Washington	Wyoming
1854						
1860						
1867						
1870						
1871						
1873						
1879						
1881				1		
1882						
1884						
1885						
1887						
1888						
1889						
1890						
1891						
1892						
1893						
1894						
1895						
1896						
1897						
1898						
1899		1	1			
1900					1	
1901						
1902	1					1
1903						
1904						
total by state	1	1	1	1	1	1

Table 4, continued. Total Combinations, by Year and State

year	Colorado	Kentucky	Louisiana	Michigan	Texas	California
1854						
1860						
1867						
1870						
1871				1		
1873						
1879	1					
1881						
1882						
1884						
1885						
1887						
1888					1	
1889						
1890		1				
1891						
1892	1					
1893						
1894						1
1895						
1896		1				
1897						
1898				1		
1899			1			1
1900						
1901					1	
1902						1
1903						
1904			1			
total by state	2	2	2	2	2	3

Table 4, continued. Total Combinations, by Year and State

year	Utah	Massachusetts	Missouri	later comb	Rhode Island	Connecticut
1854		1				
1860					1	
1867						
1870						
1871						
1873						
1879						
1881						
1882						
1884						
1885						
1887						
1888						
1889						
1890						
1891					1	
1892				1		
1893			1			
1894						
1895			1	1		
1896		1				
1897						
1898						
1899		1		2		3
1900			2			
1901		1			1	2
1902	3			1	2	1
1903						
1904						
total by state	3	4	4	5	5	6

Table 4, continued. Total Combinations, by Year and State

year	Trust Form	Virginia	Ohio	Illinois	Maine	West Virginia
1854						
1860						
1867						
1870			1			
1871						
1873						
1879						
1881						
1882	1		1			
1884	1					
1885				1		
1887	3					
1888						
1889	1			2		1
1890				4		
1891			2			
1892				2		
1893					1	1
1894						
1895		1			1	
1896						1
1897						
1898			1	2	1	2
1899		1	1		1	1
1900		2		1	1	4
1901			2	1	2	5
1902		2	1	1	5	2
1903			2		2	
1904			2			
total by state	6	6	13	14	14	17

Table 4, continued. Total Combinations, by Year and State

year	Delaware	Pennsylvania	New York	New Jersey	Unknown	total by year
1854						1
1860						1
1867					1	0
1870						1
1871						1
1873		1				1
1879						1
1881						1
1882		2			1	4
1884						1
1885						1
1887						3
1888						1
1889				2		6
1890				4	7	9
1891		2		4	5	9
1892			1	8	4	13
1893		3	1	4	3	11
1894						1
1895			3	4		11
1896			1	1	2	5
1897		2		6	1	8
1898		1	4	14	1	26
1899	6	12	5	93	12	130
1900	2	2	6	30	2	51
1901	3	3	7	34	3	62
1902	3	5	11	36	3	76
1903	3	3	2	15	1	27
1904	1	1	4	1	1	10
total by state	18	37	45	256	47	472

Source: Worksheets

Table 5. Total Authorized and Issued Capital
for the Most Commonly Used States.

State	Authorized Capital	Issued Capital
New Jersey	\$6,940,943,000	\$5,507,079,350
New York	\$424,120,000	\$337,779,107
Pennsylvania	\$205,400,000	\$178,602,600
Delaware	\$203,000,000	\$106,044,900
West Virginia	\$56,200,000	\$43,751,700
Maine	\$62,050,000	\$49,062,113
Illinois	\$249,300,000	\$222,311,135
Ohio	<u>\$22,500,000</u>	<u>\$15,743,250</u>
Total Capitalizations for top 8 States	\$8,163,513,000	\$6,460,374,155
Total Capitalizations For All States	<u>\$8,684,873,000</u>	<u>\$6,877,505,278</u>

Source: Worksheets

Table 6. Ratio of Annual Charges
to Net Earnings

Capital Size (In Millions)	Charges/ Earnings
Less than \$3	0.74
\$3 to \$5	0.47
\$5.1 to \$10	0.65
\$10.1 to \$24.9	0.78
\$25 to \$50	0.87
Greater than \$50	0.88

Source: Worksheets

Table 7. Average Ratio of Annual Charges to Net Earnings
by Combination Plan and Year

Year	<u>Combination Plans</u>		
	Comm + Pfd	Comm + Pfd + Bds	Comm + Bds
1887	0.89		
1889		0.5	0.2
1890	0.18	0.65	0.16
1891	0.48	0.48	
1892	0.93	0.78	0.53
1893		1.15	
1894			
1895	0.48		
1896			
1897	0.43	1.68	
1898	0.4	0.69	0.46
1899	0.46	0.77	0.85
1900	0.61	0.53	0.3
1901	0.7	0.5	0.39
1902	0.52	1	0.23
1903	0.68		
1904		0.56	
Avg. 1887-1894	0.77	0.75	0.32
Avg. 1895-1904	0.49	0.56	0.48

Source: Worksheets

Table 8. Types of Preferred Stock Issued, by Year

Year	<u>5 % Cumulative</u>		<u>5 % Non-Cumulative</u>		<u>6 % Cumulative</u>	
	Number	Value	Number	Value	Number	Value
1854						
1860						
1867						
1870						
1871						
1873						
1879						
1881						
1882						
1884						
1885						
1887						
1888						
1889						
1890						
1891					1	
1892						
1893	1	\$1,500,000				
1894						
1895			1	\$7,000,000	1	\$3,500,000
1896						
1897					2	\$6,800,000
1898	1	\$6,000,000			2	\$28,000,000
1899	1	\$3,000,000	1	\$2,200,000	16	\$131,450,000
1900			1	\$755,000	6	\$29,600,000
1901	1				9	\$47,400,000
1902			1	\$5,000,000	8	\$43,766,600
1903	2				1	\$10,000,000
1904						
Total	6	\$10,500,000	4	\$14,955,000	46	\$300,516,600

Table 8, continued. Types of Preferred Stock Issued, by Year

Year	<u>6 % Non-Cumulative</u>		<u>7 % Cumulative</u>		<u>7 % Non-Cumulative</u>	
	Number	Value	Number	Value	Number	Value
1854						
1860						
1867						
1870						
1871						
1873						
1879						
1881						
1882						
1884						
1885						
1887						
1888						
1889	1	\$15,000,000				
1890						
1891			3	\$40,850,000		
1892			1	\$10,000,000		
1893			1	\$1,000,000		
1894						
1895						
1896			1	\$1,750,000		
1897			2	\$19,000,000		
1898	4	\$105,000,000	10	\$98,650,000	1	\$37,500,000
1899	3	\$20,000,000	42	\$525,150,000	14	\$171,250,000
1900	1	\$12,500,000	7	\$99,500,000	2	\$4,500,000
1901	1	\$4,000,000	14	\$679,900,000		
1902	4	\$37,000,000	12	\$73,750,000	3	\$9,250,000
1903	2	\$3,750,000	5	\$35,226,000	1	\$5,000,000
1904	1	\$1,250,000			2	\$16,000,000
Total	17	\$198,500,000	98	\$1,584,776,000	23	\$243,500,000

Table 8, continued. Types of Preferred Stock Issued, by Year

Year	<u>8 % Cumulative</u>		<u>8 % Non-Cumulative</u>		<u>Total Preferred</u>	
	Number	Value	8%nc	8% non cum	Number	Value (in Millions)
1854					0	\$0
1860					0	\$0
1867					0	\$0
1870					0	\$0
1871					0	\$0
1873					0	\$0
1879					0	\$0
1881					0	\$0
1882					0	\$0
1884					0	\$0
1885					0	\$0
1887					0	\$0
1888					0	\$0
1889					1	\$15
1890	1	\$2,000,000	2	\$10,000,000	3	\$12
1891					4	\$41
1892	6	\$14,000,000	2	\$27,000,000	9	\$51
1893	3	\$67,000,000	1		6	\$70
1894					0	\$0
1895	1	\$6,500,000			3	\$17
1896					1	\$2
1897	1	\$1,000,000			5	\$27
1898	2	\$3,500,000			20	\$279
1899	1	\$1,000,000	2	\$6,500,000	80	\$861
1900	1	\$1,000,000			18	\$148
1901					25	\$731
1902	1	\$1,500,000			29	\$170
1903					11	\$54
1904					3	\$17
Total	17	\$97,500,000	7	\$43,500,000	218	\$2,494

Source: Worksheets

Table 9. Types of Bonds, by Year

year	<u>Collateral Trust 4s</u>		<u>Collateral Trust 5s</u>		<u>Collateral Trust 6s</u>	
	Number	Value	Number	Value	Number	Value
1854						
1860						
1867						
1870						
1871						
1873						
1879						
1881						
1882						
1884						
1885						
1887						
1888						
1889						
1890						
1891						
1892						
1893					1	\$7,500,000
1894						
1895						
1896						
1897						
1898	1	\$6,000,000				
1899			2	\$35,000,000		
1900			3	\$173,000,000		
1901	1	\$158,000,000	2	\$316,000,000	3	\$6,200,000
1902			2	\$19,000,000	1	\$750,000
1903						
1904					1	\$3,000,000
Totals	2	\$164,000,000	9	\$543,000,000	6	\$17,450,000

Table 9, continued. Types of Bonds, by Year

year	<u>1st Mortgage 4s</u>		<u>1st Mortgage 5s</u>		<u>1st Mortgage 6s</u>	
	Number	Value	Number	Value	Number	Value
1854						
1860						
1867						
1870						
1871						
1873						
1879						
1881						
1882						
1884						
1885						
1887						
1888						
1889						
1890					4	\$14,600,000
1891					1	\$10,000,000
1892			1	\$2,000,000	1	\$2,500,000
1893					1	\$500,000
1894						
1895					1	\$2,000,000
1896			1	\$2,500,000		
1897					1	\$2,800,000
1898			1	\$2,500,000	5	\$26,000,000
1899	1	\$225,000	7	\$38,750,000	12	\$61,420,000
1900			1	\$500,000	4	\$4,650,000
1901			5	\$16,750,000	4	\$9,000,000
1902			7	\$46,750,000	5	\$3,600,000
1903					1	\$1,750,000
1904					1	\$1,000,000
Totals	1	\$225,000	23	\$109,750,000	41	\$139,820,000

Table 9, continued. Types of Bonds, by Year

year	<u>Purchase Money Mortgages</u>		<u>Income Mortgages</u>		<u>Unspecified Mortgages</u>	
	Number	Value	Number	Value	Number	Value
1854						
1860						
1867						
1870						
1871						
1873						
1879						
1881						
1882						
1884						
1885						
1887						
1888						
1889						
1890						
1891						
1892					1	\$6,000,000
1893						
1894						
1895						
1896						
1897						
1898						
1899	1	\$600,000	1	\$13,000,000		
1900						
1901	1	\$20,000,000				
1902					3	\$15,100,000
1903						
1904					1	\$2,500,000
Totals	2	\$20,600,000	1	\$13,000,000	5	\$23,600,000

Table 9, continued. Types of Bonds, by Year

year	<u>1st Consolidated Mortgages</u>		<u>Debenture Bonds</u>	
	Number	Value	Number	Value
1854				
1860				
1867				
1870				
1871				
1873				
1879	1	\$3,500,000		
1881				
1882				
1884				
1885				
1887				
1888				
1889			2	\$11,200,000
1890				
1891			1	\$3,000,000
1892			2	\$18,000,000
1893			1	\$10,000,000
1894				
1895			1	\$2,500,000
1896				
1897				
1898			1	\$2,000,000
1899			2	\$14,000,000
1900			1	\$4,000,000
1901			1	\$7,000,000
1902				
1903			1	\$12,000,000
1904				
Totals	1	\$3,500,000	13	\$83,700,000

Table 9, continued. Types of Bonds, by Year

year	Totals					
	<u>Collateral Trust Bonds</u>		<u>Mortgages</u>		<u>Debentures</u>	
	Number	Value (millions)	Number	Value (millions)	Number	Value (millions)
1854						
1860						
1867						
1870						
1871						
1873						
1879			1	\$4		
1881						
1882						
1884						
1885						
1887						
1888						
1889					2	\$11
1890			4	\$15		
1891			1	\$10	1	\$3
1892			3	\$11	2	\$18
1893	1	\$8	1	\$1	1	\$10
1894						
1895			1	\$2	1	\$3
1896			1	\$3		
1897			1	\$3		
1898	1	\$6	6	\$29	1	\$2
1899	2	\$35	22	\$114	2	\$14
1900	3	\$173	5	\$5	1	\$4
1901	6	\$480	10	\$46	1	\$7
1902	3	\$20	15	\$65		
1903			1	\$2	1	\$12
1904	1	\$3	2	\$4		
Totals	17	\$724	74	\$310	13	\$84

Source: Worksheets

Table 10. The Use of Securities, by Type#

Preferred Stock							
Year	No. of Comb	Issued Capitalization	Iss. for Cash, W.C., Retire Debt	Iss. for Cash to Buy Prop.	Iss. for Cash to Buy Stock	Iss. to Exchange for Property	Iss. to Exchange for Stock
1879	1	\$10,198,600					\$10,198,600
1889	1						
1890	1	\$24,630,500					
1891	1	\$4,252,000					
1892	3	\$6,252,000				\$625,200	
1893	2	\$74,000,000				\$60,000,000	
1895	1	\$150,000					
1896	1						
1897	1	\$12,500,000	\$9,000,000	\$3,000,000			
1898	8	\$130,364,310	\$13,380,565	\$4,250,000		\$42,787,610	\$50,758,135
1899	36	\$262,363,184	\$71,399,100	\$36,153,884	\$28,000,000	\$46,612,045	\$23,244,800
1900	9	\$40,000,000	\$7,561,000		\$1,000,000		\$11,438,200
1901	11	\$36,021,400	\$5,850,000	\$10,200,000	\$15,269,400		
1902	12	\$64,664,800	\$7,225,200	\$1,000,000		\$9,118,000	\$25,962,210
1903	5	\$27,000,000	\$1,283,872	\$10,000,000	\$2,500,000		\$14,442,127
1904	2	\$15,908,000					\$15,907,450
Total	95	\$708,304,794	\$115,699,737	\$64,603,884	\$46,769,400	\$159,142,855	\$151,951,522
Percent of Issued Cap.			16%	9%	7%	22%	21%

This table only includes those companies which reported par values for the uses of stock and bond issues. Some underreporting of values does occur where data was unavailable. This table does not describe the methods of valuation for stock, but rather, the first uses of security issues.

Table 10, continued. The Use of Securities, by Type

Common Stock							
Year	No. of Comb	Issued Capitalization	Iss. for Cash, W.C., Retire Debt	Iss. for Cash to Buy Prop.	Iss. for Cash to Buy Stock	Iss. to Exchange for Property	Iss. to Exchange for Stock
1879	1	\$9,250,000					\$9,250,000
1889	1	\$20,237,100					\$20,237,100
1890	1	\$34,000,000					\$34,000,000
1891	1	\$24,641,700	\$11,000				
1892	3	\$67,646,500					\$39,710,000
1893	2	\$80,000,000	\$600,000			\$59,400,000	
1895	1	\$9,850,000					
1896	1	\$3,319,700					
1897	1	\$13,740,000	\$4,500,000	\$1,500,000			
1898	8	\$124,613,350	\$14,419,992	\$4,750,000		\$36,246,450	\$41,506,508
1899	36	\$515,895,961	\$41,900,000	\$75,458,061	\$95,000,000	\$108,943,075	\$38,812,400
1900	9	\$57,758,250	\$7,336,000		\$1,000,000	\$1,750,000	\$26,365,550
1901	11	\$141,742,800	\$52,750,000	\$2,950,000	\$26,542,800		\$39,183,333
1902	12	\$298,984,826	\$92,670,750			\$72,746,500	\$92,276,261
1903	5	\$36,500,000	\$4,502,117	\$5,000,000	\$6,500,000		\$23,797,881
1904	2	\$15,862,000					\$15,860,140
Total	95	\$1,454,042,187	\$218,689,859	\$89,658,061	\$129,042,800	\$279,086,025	\$380,999,173
Percent of Issued Cap.			15%	6%	9%	19%	26%

Table 10, continued. The Use of Securities, by Type

Mortgage Bonds								
Year	No. of Comb	Issued Capitalization	Iss. for Cash, W.C., Retire Debt	Iss. for Cash to Buy Prop.	Iss. for Cash to Buy Stock	Iss. to Exchange for Property	Iss. to Exchange for Stock/Bonds	
1879	1	\$2,725,000	\$1,225,000				\$1,500,000	
1889	1							
1890	1	\$1,000,000						
1891	1							
1892	3	\$4,244,000	\$4,244,000					
1893	2							
1895	1							
1896	1	\$2,304,000	\$584,000					
1897	1							
1898	8	\$14,822,747	\$500,000	\$3,150,000		\$11,172,747		
1899	36	\$54,978,000	\$30,180,000	\$3,500,000		\$18,148,000	\$225,000	
1900	9	\$155,000	\$155,000					
1901	11							
1902	12	\$21,250,000	\$1,000,000					
1903	5							
1904	2	\$681,000	\$181,000					\$500,000
Total	95	\$102,159,747	\$38,069,000	\$6,650,000	\$0	\$29,320,747	\$2,225,000*	
Percent of Issued Cap.			37%	7%	0%	29%	2%	

Notes:

* Of the \$2,225,000 par value of mortgage bonds issued in exchange for stock or bonds, The American La France Fire Engine Co. was the only company to use mortgage bonds to exchange for preferred stock, for a par value of \$500,000.

The remaining \$1,725,000 was exchanged for constituent company bonds.

Table 10, continued. The Use of Securities, by Type

Collateral Trust and Debenture Bonds									
Year	No. of Comb	Issued Capitalization	Iss. for Cash, W.C., Retire Debt	Iss. for Cash to Buy Prop.	Iss. for Cash to Buy Stock	Iss. to Exchange for Property	Iss. to Exchange for Stock/Bonds		
1879	1								
1889	1	\$4,000,000	\$4,000,000						
1890	1								
1891	1								
1892	3	\$17,500,000	\$10,000,000			\$7,500,000			
1893	2	\$12,076,000	\$7,441,000						
1895	1	\$2,500,000		\$2,500,000					
1896	1								
1897	1								
1898	8	\$1,400,000					\$1,400,000		
1899	36	\$58,041,928	\$4,080,000	\$15,487,045		\$3,200,000	\$29,900,928		
1900	9	\$12,468,500					\$6,000,000		
1901	11	\$173,624,839		\$3,000,000			\$164,058,400†		
1902	12	\$41,275,000	\$12,984,500				\$12,725,500		
1903	5								
1904	2	\$3,000,000	\$2,625,000						
Total	95	\$325,886,267	\$41,130,500	\$20,987,045	\$0	\$10,700,000	\$214,084,828†		
Percent of Issued Cap.			13%	6%	0%	3%	66%†		

† Of the \$214,084,828 par value of collateral trust and debenture bonds issued to exchange for stock or bonds, only \$710,000 par value was exchanged entirely for mortgage bonds. Of this total par value, \$156 million was issued by Consolidated Tobacco in 1901, in exchange for stock of constituents. If this flotation is ignored, only only 34 percent of issued capitalization was issued in exchange for stocks or bonds.

Source: Worksheets.

Table 11. Method of Control, Number of Occurrences and Capital Value (millions)

Year	<u>Acquired Property</u>		<u>Acquired Property with Cash</u>		<u>Acquired Property with Stock</u>	
	Occurrences	Capital Value	Occurrences	Capital Value	Occurrences	Capital Value
1854	0	\$0	0	\$0	0	\$0
1860	0	\$0	0	\$0	0	\$0
1867	0	\$0	0	\$0	0	\$0
1870	0	\$0	0	\$0	0	\$0
1871	0	\$0	0	\$0	0	\$0
1873	0	\$0	0	\$0	0	\$0
1879	0	\$0	0	\$0	0	\$0
1881	0	\$0	0	\$0	0	\$0
1882	0	\$0	0	\$0	0	\$0
1884	0	\$0	0	\$0	0	\$0
1885	0	\$0	0	\$0	0	\$0
1887	1	\$15	0	\$0	0	\$15
1888	0	\$0	0	\$0	0	\$0
1889	1	\$31	0	\$0	0	\$0
1890	6	\$72	0	\$0	3	\$39
1891	0	\$0	0	\$0	0	\$0
1892	4	\$59	1	\$3	1	\$38
1893	0	\$0	0	\$0	0	\$0
1894	1	\$10	1	\$10	0	\$0
1895	2	\$18	1	\$10	0	\$0
1896	0	\$0	0	\$0	0	\$0
1897	3	\$76	0	\$0	1	\$40
1898	14	\$318	1	\$2	13	\$316
1899	47	\$685	7	\$162	20	\$490
1900	10	\$99	0	\$0	4	\$17
1901	19	\$313	2	\$24	4	\$138
1902	13	\$241	1	\$3	7	\$215
1903	4	\$57	1	\$2	0	\$0
1904	0	\$0	0	\$0	0	\$0
Totals	122	\$1,994	15	\$215	53	\$1,306

Table 11, cont. Method of Control, Number of Occurrences and Capital Value

Year	<u>Acquired Stock</u>		<u>Acquired Stock with Cash</u>		<u>Acquired Stock with Stock</u>	
	Occurrences	Capital Value	Occurrences	Capital Value	Occurrences	Capital Value
1854	0	\$0	0	\$0	0	\$0
1860	0	\$0	0	\$0	0	\$0
1867	0	\$0	0	\$0	0	\$0
1870	0	\$0	0	\$0	0	\$0
1871	0	\$0	0	\$0	0	\$0
1873	0	\$0	0	\$0	0	\$0
1879	1	\$14	0	\$0	1	\$14
1881	0	\$0	0	\$0	0	\$0
1882	1	\$70	0	\$0	1	\$70
1884	1	\$30	0	\$0	1	\$30
1885	0	\$0	0	\$0	0	\$0
1887	3	\$99	1	\$15	2	\$84
1888	0	\$0	0	\$0	0	\$0
1889	2	\$131	0	\$0	2	\$131
1890	1	\$43	0	\$0	1	\$43
1891	2	\$93	0	\$0	2	\$93
1892	4	\$109	0	\$0	3	\$100
1893	3	\$192	0	\$0	1	\$42
1894	0	\$0	0	\$0	0	\$0
1895	4	\$79	0	\$0	4	\$79
1896	1	\$4	0	\$0	0	\$0
1897	1	\$6	0	\$0	0	\$0
1898	5	\$317	1	\$10	3	\$252
1899	31	\$1,143	3	\$51	16	\$751
1900	13	\$525	0	\$0	10	\$469
1901	14	\$1,861	0	\$0	11	\$1,798
1902	17	\$535	0	\$0	13	\$412
1903	7	\$164	0	\$0	6	\$154
1904	2	\$36	0	\$0	1	\$33
Totals	112	\$5,449	5	\$76	78	\$4,280

Source: Worksheets

Table 12. Method of Control by Combination Plan and Capital Size

<u>Combinations Using Common Stock</u>							
Assets							
Acquired	\$1-3M	\$3.1-5M	\$5.1-10M	\$10.1-24.9M	\$25-49M	\$50+ M	Total by Method
property	2	1	1	0	0	0	4
prop w/ cash	2	0	1	0	0	0	3
prop w/ stk	2	1	1	1	0	2	7
stock	2	0	0	1	0	1	4
stock w/ cash	0	0	0	0	0	0	0
stock w/ stk	0	3	3	3	1	0	10
Total Number							
Comb. by Size	8	5	6	5	1	3	28
<u>Combinations Using Common and Preferred Stock</u>							
Assets							
Acquired	\$1-3M	\$3.1-5M	\$5.1-10M	\$10.1-24.9M	\$25-49M	\$50+ M	Total by Method
property	6	4	8	1	5	3	27
prop w/ cash	3	1	2	1	1	1	9
prop w/ stk	1	2	6	8	3	3	24
stock	2	4	6	1	1	7	21
stock w/ cash	0	1	1	1	1	0	4
stock w/ stk	0	3	3	9	6	9	30
Total Number							
Comb. by Size	12	14	26	21	17	24	115
<u>Combinations Using Common, Preferred, and Bonds</u>							
Assets							
Acquired	\$1-3M	\$3.1-5M	\$5.1-10M	\$10.1-24.9M	\$25-49M	\$50+ M	Total by Method
property	1	3	3	2	1	1	11
prop w/ cash	0	0	1	0	0	0	1
prop w/ stk	1	1	3	5	5	2	17
stock	1	1	0	0	1	1	4
stock w/ cash	0	0	0	1	0	0	1
stock w/ stk	0	0	1	5	10	5	21
Total Number							
Comb. by Size	3	5	8	13	17	9	55

Table 12, continued. Method of Control by Combination Plan and Capital Size

<u>Combinations Using Common Stock and Bonds</u>							
Assets							
Acquired	\$1-3M	\$3.1-5M	\$5.1-10M	\$10.1-24.9M	\$25-49M	\$50+ M	Total by Method
property	2	4	4	1	4	0	12
prop w/ cash	0	0	0	2	0	0	2
prop w/ stk	1	1	1	1	1	0	5
stock	0	0	0	0	0	0	0
stock w/ cash	0	0	0	0	0	0	0
stock w/ stk	0	0	1	4	3	4	12
Total Number							
Comb. by Size	3	5	6	8	5	4	31

Source: Worksheets

Table 13. Growth of the Stock Exchange

<u>Commercial and Financial Chronicle Listings of Securities. Miscellaneous Category</u>			
Date	Companies	Stocks	
12/1876	19	20	Includes trust co., telegraph, land, bridge, and water power stocks.
6/1877	21	22	
12/1877	23	24	
6/1878	24	25	
12/1878	24	25	
6/1879	25	26	
12/1879	27	28	Telegraph and trust co.s stocks listed separately.
6/1880	30	31	
12/1880	22	23	
6/1881	22	23	
12/1881	25	27	
6/1882	24	26	
12/1882	25	28	Telephone and electric light stocks listed separately.
6/1883	28	31	
12/1883	28	31	
6/1884	33	36	
12/1884	24	27	
6/1885	24	27	
12/1885	23	26	Trusts listed separately
6/1886	22	25	
12/1886	25	28	
6/1887	26	29	
12/1887	27	30	
6/1888	27	30	
12/1888	28	31	Trusts, canal, and express stocks included in list
6/1889	34	37	
12/1889	35	38	
6/1890	53	61	
12/1890	60	72	
6/1891			
12/1891	59	71	
6/1892	59	72	
12/1892	58	72	
6/1893	57	73	
12/1893	58	75	
6/1894	64	83	
12/1894	60	78	

Table 13, continued. Growth of the Stock Exchange

Commercial and Financial Chronicle Listings of Securities. Miscellaneous Category

Date	<u>Active Stocks</u>		<u>Inactive Stocks</u>		
	Companies	Stocks	Companies	Stocks	
6/1895	20	26	32	37	Telegraph, gas, telephone, electric light, and coal given separate listing.
12/1895	19	26	32	37	
6/1896	19	25	34	39	
12/1896	18	25	35	39	
6/1897	19	26	35	39	
12/1897	17	25	34	39	
Date	<u>NYSE</u>		<u>Curb</u>		Heading changed.
	Companies	Stocks	Companies	Stocks	
6/1898	60	75	128	170	Curb includes Phil., Balt., Bost. exchange. Telegraph, telephone, gas, and electric light co.s given separate listing.
12/1898	51	71	113	149	
6/1899	56	86	118	148	
12/1899	59	89	135	191	
6/1900	58	85	130	191	
12/1900	62	93	136	198	
6/1901	60	92	122	182	
12/1901	57	88	118	180	
6/1902	60	92	124	184	
12/1902					
6/1903	60	91	132	201	
12/1903	60	91			
6/1904	60	91	118	185	
12/1904	62	94	131	202	

Source: The Commercial and Financial Chronicle.

Table 14. The Trading of Merger Securities

Year	Number of Mergers Traded on the Exchange				Total	Traded	Total	Untraded
	Curb	Unlisted	Cross-Over	listed on NYSE				
1854								1
1860	1					1		
1867								1
1870								1
1871								1
1873								1
1879	1					1		
1881	1					1		
1882				1		1		4
1884				1		1		
1885								1
1887				2		2		1
1888								1
1889	1		3			4		2
1890	4	1	1	1		7		9
1891	4					4		1
1892	8			2		1		8
1893	3			1		4		1
1894								1
1895	2			3		5		6
1896	2					2		5
1897	1		1	1		3		6
1898	6	1	3	3		13		14
1899	31	3	9	10		53		88
1900	5		1	1		7		46
1901	9	2	1	2		14		5
1902	6		2	5		13		66
1903	1			1		2		26
1904	1	0	0	0		1		1
Totals	87	7	21	34		149		369

Table 14 continued: The Trading of Merger Securities

Year	<u>Firm Disappearances</u>		<u>Capitalizations (millions)</u>		<u>Percentage of Traded to All Consolidation Activity</u>		
	Traded	Not Traded	Traded	Not Traded	Consolidations	Firm Dis.	Cap.(mill)
1854							
1860	2				100	100	
1867		5					
1870							
1871		4					
1873							
1879	3		\$13.50		100	100	100
1881	2				100	100	
1882	40	3	\$70.00		20	93	100
1884	66		\$30.00		100	100	100
1885							
1887	85	14	\$84.00	\$15.00	67	86	85
1888							
1889	109		\$169.79		67	100	100
1890	117		\$120.85	\$8.00	44	100	94
1891	38	7	\$99.25	\$7.00	29	84	93
1892	88	12	\$196.50	\$31.30	56	88	86
1893	57	33	\$194.50	\$6.50	29	63	97
1894		7		\$10.00			
1895	50	30	\$95.00	\$15.00	45	63	86
1896	10	17	\$3.50	\$8.10	29	37	30
1897	30	40	\$76.00	\$14.70	33	43	84
1898	164	129	\$572.50	\$91.10	48	56	86
1899	803	654	\$1,977.18	\$657.33	38	55	75
1900	68	319	\$249.50	\$522.55	13	18	32
1901	120	338	\$1,952.30	\$262.55	22	26	88
1902	79	271	\$514.75	\$337.45	16	23	60
1903	5	96	\$30.00	\$202.48	7	5	13
1904	6	47	\$5.00	\$41.00	2	11	11
Totals	1,942	2,026	\$6,454.12	\$2,230.05	29	49	74

Table 14, continued. The Trading of Merger Securities

Year	Average Firm Disappearances		Average Capitalizations (millions)	
	Traded	Not Traded	Traded	Not Traded
1854				
1860	2			
1867		5		
1870				
1871		4		
1873				
1879	3		\$14	
1881	2			
1882	4	1	\$7	
1884	66		\$3	
1885				
1887	43	14	\$42	\$15
1888				
1889	27		\$42	
1890	17		\$17	\$1
1891	10	1	\$25	\$1
1892	9	2	\$20	\$4
1893	14	3	\$49	\$1
1894		7		\$1
1895	1	5	\$19	\$3
1896	5	3	\$2	\$2
1897	1	7	\$25	\$2
1898	13	9	\$44	\$7
1899	15	7	\$37	\$7
1900	10	7	\$36	\$11
1901	9	7	\$139	\$5
1902	7	4	\$40	\$5
1903	3	4	\$15	\$8
1904	6	5	\$5	\$4
Totals	13	5	\$43	\$6

Source: Worksheets.

Table 15. Types of Financial Agents

Promoter	Role	No. of Companies involved	Location
Andrew McKinney & Co.	promoter	1	
Atterholt, F.M.	promoter	1	Akron, Ohio
Baker, William B.	promoter,mf	1	Chicago, Ill.
Baldwin, William	promoter,mf	1	
Barber, Greene, Elkins	promoter	1	
Black, Alexander Watson	promoter	1	
Calhoun, Patrick	promoter	1	NY
Chadbourn, Thomas L.	promoter	1	Chicago
Chapin, Chester	promoter	1	
Chickering, Thomas, Gregory	promoter	1	
Clark, W.H., and T.F. Gilroy	promoter	1	
Claus, J.H. and J.H. Parks	promoter,mf	1	
Coffin, Frederick C. and S. Walker Jones	promoter	1	Boston
Dean & Shibley, brokers	promoter,broker	1	Prov. RI
Dos Passos, John R.	promoter	2	NY
Duffy, Walter B.	promoter,mf	1	NY
E.L. Harper & Sons	promoter	1	
Edwin Corbin	promoter	1	NY
Finley, J. B.	promoter	1	
Flint, Charles	promoter,und	8,6 BOD or und.	NYC
Flower, R.P. of Flower & Co.	promoter	4	
Freer, Charles L.	promoter	1	
Gary, E.H.	promoter	2	
Hanford, G.B. and H.S. Stalknecht	promoter	1	
Harvey, Thomas F.	promoter	1	Chicago
Hatch & Ritcher	promoter	1	
Hatch, A.F.	promoter	1	Chicago
Hoadley-Cramp Syndicate	promoter	1	
Jackson, Newton	promoter	1	Phil.
Lowden, Frank O.	promoter	3	Chicago
McIntyre, Thomas A.	promoter	2	
mf promoted	promoter, mf	4	
Moore, William H. and James H.	promoter	8, 2 dir	Chicago, Ill
Nixon, Lewis	promoter	1	
Olcutt, F. P.	promoter	3	NY
Onffroy, Ronald	promoter	1	
Pam, Max	promoter,lawyer	1	Chicago, Ill
Park, John	promoter	1	NY
Park, Joseph H.	promoter	1	NY, Boston
Scott, Seymour and Chas. Warner	promoter	1	
Spalding, A.G.	promoter	1	
Sperry, R.B., of Sperry, Jones & Co.	promoter,broker	1	Balt.,Md
Steinfeld, Louis	promoter	1	
Walston H. Brown & Bros.	promoter	1	New York

Table 15, continued. Types of Financial Agents

Fiscal Agent	Role	No. of Companies	
		involved	Location
A.M. Kidder & Co.	fiscal agent	1	NY
August Belmont & Co.	inv. bankers	2	NY
Baring, Magoun & Co.	inv. bankers	5	NY
C.L. Rathborne & Co.	fiscal agent	1	
Chapman, Elverton R. (of Moore&Schley)	broker	3	NYC
Chrystie & Janney	offer pfd at par	1	
Culver, Frederick of Clarke & Culver	und	1	
Dean & Shibley, brokers	promoter, broker	3	Prov. RI
Elkins, George and W.	dir, backer	3	Phil. Pa
F.S. Smithers & Co.	und	2	NY
George B. Hill & Co.	syn man.	2	Pitts. Pa
Given, T. Hart	und	1	
H.B. Hollins & Co.	underwriter	5	NYC
Harvey Fisk & Sons	offerbds for pub.sul	4	NY
Henry Clews & Co.	fiscal agent	3	NY
Henry W. Poor & Co.	transfer and dir	2	NY
J & W Seligman & Co.	inv. banking	4	NY
J.P. Morgan & Co.	und	17	NY
Kessler & Co.	brokers, syn man	2	NY
Kidder, Edward H.	dir	1	
Kidder, Peabody & Co.	inv. bankers	3	Boston
Kuhn, Loeb & Co. (Jacob Schiff)	und, fiscal agent	3	NY
Lee Higginson & Co.	inv. bankers	3	Boston
Lehman Bros.	syn man, sub to und	2	NYC
Mills, D.O. and others	und	2	
Moore & Schley, John G. and Grant B.	broker	4	NYC
Poor & Greenough	off. stk for pub sub	3	NY
Ryan, Thomas F. of Whitney-Ryan syn.	syn. subscriber	3	NY
Sheldon & Co., George R. and William C.	fiscal agents	4	NY
Spencer Trask & Co.	fiscal agents	3	NY
Sperry, R.B., of Sperry, Jones & Co.	promoter, broker	1	Balt., Md
Thomas & Post, E.R. and E.M.	fiscal agents	4	NY
Thorne, Oakleigh	syn man	1	
Vermilyre & Co.	syn man.	1	

Table 15, continued. Types of Financial Agents

Transfer Agents, Registrars, and Trustees	Transfer Agents	Registrars	Trustees	Fiscal Agents	Location
American Loan & Trust	2				NY
Atlantic Trust	2			1	NY
Banker's Trust	2				NY
Baring, Magoun & Co.	3				NY
Bowling Green Trust	2				NY
Central Trust	6	1	2	1	NY
City Trust	2				NY
Colonial Trust	1	2			NY
Conner & Co.	1				NY
Continental Trust	2	1	1	3	NY, Balt.
Corporation Trust	13				NY, Jersey C.
Cuyler, Morgan & Co.	2				NY
Dick Bro's & Co.	1				Phil.
Equitable Trust	2				Chicago
Farmers Deposit National Bank	1				NY
Farmers' Loan & Trust	3	2	1		NY
First National Bank	1				NY
Fourth National Bank	1				Nashville
Girard Trust	1		1		Phil
Guaranty Trust	9		1		NY
Guardian Trust & Deposit	1				Balt.
H.B. Hollins	2				NY
H.W. Poor & Co.	1				NY
Hanover National Bank	1				NY
Harvey Fisk & Sons	1				NY
Henry Clews & Co.	1				NY
Hudson Trust	1				NY, NJ
J.P. Morgan & Co.	1				NY
John N. Kennedy	1				NY
Kessler & Co.	1				NY
Kidder, Peabody & Co.	2				Boston
Knickerbocker Trust	3				NY
Manhattan Co. Bank	1				NY
Manhattan Trust	8		1	2	NY
Merchant's Loan & Trust	1				Chicago
Metropolitan Trust	1				NY
Manufacturer's Trust	1			1	NY
Morton Trust	4	1	3	1	NY
National Bank of Commerce	1				NY
National City Bank	1				NY
New Jersey Registration & Trust	2				NY
New York Guaranty & Indemnity	1				NY
New Jersey Registry & Transfer	1				Jersey City
North American Trust	1	2			NY

Table 15, continued. Types of Financial Agents

Transfer Agents, Registrars, and Trustees	Transfer Agents	Registrars	Trustees	Fiscal Agents	Location
Northern Trust	1				Chicago
Old Colony Trust	4	1	1		Boston
Produce Exchange Trust	1				NY
Registrar & Transfer	9	1			NY, NJ
Security Trust & Safe Deposit	1				Delaware
Standard Trust	1				NY
Thomas & Post	2				NY
Trust Co. of America	2	1			NY
Trust Co. of the Republic	1				NY
Union Trust	9	2		1	Pitts.
U.S. Mortgage & Trust	1			1	NY
Walston H. Brown & Bro's	1				NY
William A. Turner	1				NY
William H. Corbin	1				NJ
Winslow Lanier & Co.	1				NY

Source: Worksheets

Table 16. New York Trust Companies

<u>Growth and Expansion of New York Trust Companies</u>				
Date	Aggregate Resources	Aggregate Deposits	Collateral Loans	Stock Investments
Jan. 1, 1891	\$280,688,769	\$211,320,275	\$166,685,758	\$47,180,478
Jan. 1, 1892	\$300,765,575	\$234,466,697	\$173,552,829	\$51,132,239
Jan. 1, 1893	\$335,707,780	\$264,295,048	\$196,321,422	\$57,185,649
Jan. 1, 1894	\$341,466,011	\$266,092,955	\$147,794,024	\$65,998,230
Jan. 1, 1895	\$365,419,729	\$285,741,794	\$148,953,820	\$97,555,798
Jan. 1, 1896	\$392,630,046	\$307,351,893	\$169,161,348	\$104,512,839
Jan. 1, 1897	\$396,742,948	\$305,354,637	\$169,894,938	\$101,983,600
Jan. 1, 1898	\$483,739,926	\$383,328,725	\$230,581,708	\$113,525,798
Jul. 1, 1898	\$527,084,533	\$419,795,776	\$222,826,874	\$124,744,724
Jan. 1, 1899	\$579,205,442	\$467,184,258	\$283,402,822	\$136,561,066
Jul. 1, 1899	\$722,356,523	\$594,462,708	\$378,218,698	\$148,971,045
Jan. 1, 1900	\$672,190,672	\$523,541,570	\$328,143,588	\$168,195,642
Jul. 1, 1900	\$796,483,877	\$640,837,145	\$370,483,337	\$178,789,114
Jan. 1, 1901	\$797,983,513	\$638,121,771	\$387,911,415	\$196,852,582
Jul. 1, 1901	\$966,528,398	\$802,518,096	\$527,040,175	\$209,624,054
Dec. 30, 1902		\$734,342,837		
Dec. 30, 1903		\$715,433,932		

Table 16, continued. New York Trust Companies

<u>Growth and Expansion of New York Trust Companies</u>			
Date	Loans on Personal Security	Holdings of Bonds and Mortgages	Cash on Hand and On Deposit
Jan. 1, 1891	\$9,755,643	\$17,537,008	\$26,564,978
Jan. 1, 1892	\$17,210,145	\$13,373,463	\$33,932,847
Jan. 1, 1893	\$19,698,925	\$15,062,290	\$35,033,016
Jan. 1, 1894	\$22,636,957	\$17,451,674	\$74,365,761
Jan. 1, 1895	\$22,791,215	\$21,569,504	\$61,206,703
Jan. 1, 1896	\$29,369,703	\$25,114,077	\$50,804,137
Jan. 1, 1897	\$25,788,188	\$38,692,428	\$54,642,344
Jan. 1, 1898	\$31,183,292	\$32,624,995	\$55,034,451
Jul. 1, 1898	\$39,150,212	\$32,157,082	\$87,544,519
Jan. 1, 1899	\$29,930,376	\$34,855,023	\$71,734,621
Jul. 1, 1899	\$39,865,910	\$37,139,510	\$93,604,261
Jan. 1, 1900	\$31,101,271	\$38,143,145	\$81,366,288
Jul. 1, 1900	\$47,937,934	\$38,790,726	\$131,888,581
Jan. 1, 1901	\$39,840,066	\$40,730,576	\$105,702,416
Jul. 1, 1901	\$42,524,584	\$43,862,482	\$116,183,077
Dec. 30, 1902			
Dec. 30, 1903			

Source: The Commercial and Financial Chronicle, (Aug, 1898) 251-252;
 (Aug, 1900) 209-210; (July, 1901) 162-162; (Feb, 1904) 790;
 (Mar, 1905) 1078-1079.

VITA

Eric Robert Hake was born in Ruston, Louisiana on January 15, 1965. He attended elementary school and high school in Knox County, Tennessee and graduated from Doyle High School in 1983. The following September he entered the University of Tennessee, Knoxville. In August 1988, he received a Bachelor of Arts degree in History, graduating with honors. In September of 1990, he began graduate work at the University of Tennessee, Knoxville. In August of 1994, he received the degree of Doctor of Philosophy with a major in Economics.