

J. P. MORGAN AND HIS MONEY TRUST

J. Bradford De Long

Harvard University,

August, 1992

J. P. MORGAN AND HIS MONEY TRUST

J. Bradford De Long

*Harvard University and National Bureau of Economic Research*¹

September, 1991

I. Introduction

“They control the people through the people’s own money.” So wrote left-wing crusader and future Supreme Court Justice Louis Brandeis in 1913, as he tried to mobilize Progressives for a political offensive to break the financial stranglehold that he saw John Pierpont Morgan, Morgan’s partners, and their few peers hold over America at the turn of the century. Every time in the first decade of the twentieth century that an American corporation had sought to raise more than \$10,000,000 in capital, it had done so by hiring the services of and paying commissions to the partnership of J.P. Morgan & Co., or to one of its handful of smaller peers like Kuhn, Loeb; Kidder, Peabody; the James Stillman-headed National City Bank; or Lee, Higginson.²

If Morgan did not think he should help a corporation raise money, money would not be raised. The firm’s expansion plans would not be carried out. The flow of investment in the United States was thus directed to and the expansion of industrial capacity took place in industries and firms that Morgan and his few peers wished to see expand, not elsewhere. Morgan and his partners built the mold in which American turn-of-the-century industrial development was formed. The New York Central, Northern Pacific, Erie, and A.T.&S.F. railroads issued their bonds under Morgan auspices and had Morgan representatives on their boards of directors. Morgan partners had strong voices in the selection of management for and in the choice of corporate strategy of A.T.&T., General Electric, and Westinghouse. Morgan masterminded the merger that created U.S. Steel in 1901. He gathered the individual railroads of the United States

¹I would like to thank the National Science, Olin, and Paskus Foundations, and the NBER for financial support, and Carlos Ramirez, Dan Raff, Andrei Shleifer, Peter Temin, and Robert Waldmann for many, many helpful discussions

²Morgan’s long-time friend, First National Bank President, and Harvard Business School founder George F. Baker could not think of a single case in ten years in which any company had raised a significant amount of money from either the stock or the bond market without the participation or cooperation of at least one of the five investment banks.

into continent-spanning systems. Overall Morgan and a small band of fellow financiers exercised a degree of control over corporate America not even remotely paralleled by any group since World War II.

There were, however, parallels to the Morgan group in other nations. Imperial Germany's *Großbanken*—the largest banks, including the Deutsche, the Dresdner, and the Darmstädter—played a similar role to Morgan in that they had representatives on boards of directors and voted a significant number of the shares of the companies whose securities they issued. Insider analysts like Jakob Riesser at the turn of the century argued that this “finance capitalism” in Germany made its economy much more efficient than “disorganized” capitalism like that in Britain in which banks took little interest in the affairs of operating companies. Socialist politician Rudolf Hilferding wrote in his *Finanzkapital* that the big banks so dominated the economy that socialism could be achieved at one stroke by their nationalization alone.

In Japan the prewar *zaibatsu* and their more diffuse postwar *keiretsu* replacements have played a similar role. Even today, the bank and the trading company of a given Japanese “enterprise group” exercise substantial influence over the policies and senior personnel appointments of affiliated operating companies when they wish—that is, when the operating company needs restructuring or reform. Thus analogues survive today of the system of strong financier influence of which J.P. Morgan was the head in the turn-of-the-century United States.

Brandeis and other Progressives saw Morgan's financial dominance as a monopoly much more dangerous than any of the monopolies of individual industries, for Morgan's “Money Trust” held a monopoly over the ability to raise capital. Other monopolies were limited to single industries, like International Harvester in farm machinery, the repeatedly unsuccessful attempts to form cartels to manage railway freight prices, or the “Sugar Trust.” The “Money Trust” by contrast might ultimately subject every firm to its will.

Progressive Congressional investigator Samuel Untermyer examined the “Money Trust” at its high-water mark on the eve of World War I, and argued that Morgan, his partners, and their few smaller peers were directors, voting trustees, or principal shareholders of financial and non-

financial corporations capitalized at \$30 billion dollars—the equivalent, in proportion to the size of the economy, of \$7.5 trillion dollars today: perhaps forty percent of all industrial, commercial, and financial capital in the United States was in some way under the penumbra of this Morgan-centered “Money Trust.” These investment bankers reaped immense profits from their place at the center of American finance. The commissions paid to investment bankers on the creation of U.S. Steel in 1901 were as large a share of the economy then as a sum of \$15 billion today; today’s investment bankers did not reap even a fifth as much from the largest of the Wall Street deals of the 1980’s.

Morgan was feared. According to Ida Tarbell, he angrily dressed down his lawyer, future U.S. Steel head Elbert Gary, for advising him that a proposed course of action was illegal: “I don’t...want a lawyer to tell me what I cannot do,” said Morgan. “I hire him to tell me how to do what I want to do.” As Brandeis tells another story:

I found that the [financial] policy of the [Morgan-dominated] New Haven [Railroad was unsound]...I went to some of the leading Boston bankers...I said—‘If this thing continues, the New Haven is going to be bankrupt. Won’t you please act...?’ Their reply... was that they would not dare to...the New Haven was Mr. Morgan’s particular pet...and that it would be as much as their financial life...to try to poke their fingers in it.

Even Morgan’s favored executives hesitated to argue with him “What?” said Charles Mellen, Morgan’s choice as head of the New Haven Railroad, “go to Mr. Morgan a second time on a matter, after he has already expressed his opinion on it? No one would even dream of it!”

The years before World War I saw the creation of a mass market in industrial securities. The half-century before World War I had seen America’s population and standard of living both multiply fourfold. It had seen the capital intensity of the economy—the ratio of produced means of production to total output—perhaps double as well. The pace at which new capital was being put into place and new organizations built up was more also more rapid than it had been before or would be again. Before 1890 the stock and bond markets were overwhelmingly dominated by railroads and by government borrowings. Afterwards industrial securities—the stocks and bonds of U.S. Steel, International Harvester, and General Electric—came to take first place. The

Morgan partnership took as its business the raising and the channeling of the money to fund this wave of industrial development.

The turn of the century was also an era in which income inequality in the United States reached its peak. Large fortunes were made by those who could ride the waves of economic developments, and premium wages earned by those with the administrative and technical skills to work the organizations and machines of America's new industrial economy. Earlier the open land of the frontier had helped push up the wages of the relatively unskilled. But by the turn of the century the frontier was effectively closed. The flow of immigration from Europe was at its peak, and the large unskilled immigrant population put downward pressure on unskilled wages.

High income and wealth inequality made political and industrial conflicts between classes and parties more bitter, and more bloody, than at any other time in American history. Democratic presidential candidate William Jennings Bryan called for the end to the crucifixion of the farmer by a gold standard working in the interests of Morgan and his fellow plutocrats. Morgan feared these political currents and distrusted the immigrant groups—Jews, Slavs, and Italians—that might support them. Louis Brandeis told Thomas Lamont that it was in Morgan's interest to support the Progressive reform program: if they did not, the Progressives would recede and their successors on the left wing of American politics would be anarchists and socialists.

Morgan and his partners were hard-working and smart. Perhaps the hardest-working and the best financier among them was railroad reorganization expert Charles Coster, originally recruited by Pierpont Morgan's father, Junius Spencer Morgan. Coster was described by early Pierpont Morgan biographer Lewis Corey as a high-strung frail man with a faultless memory for small but important financial details. He was described by *Robber Barons* author Matthew Josephson as white-faced and nervous, as he carried his portfolios home in the evening back to the office in the morning and from meeting to meeting of the more than fifty railroads of which he was a director.

Perhaps the most politic was Thomas Lamont, who built bridges to the American left and

would spend most of the 1920's trying to commit American public and private capital to the support of Europe's post-World War I recovery. Perhaps the most intelligent was George Perkins, who had come to J.P. Morgan & Co. after being a mastermind behind the creation of the mass American life insurance industry, who served as Morgan's right hand in the Panic of 1907, and who would become Theodore Roosevelt's campaign manager.

Morgan and his partners examined and hand-wrote documents behind desks in large open rooms, and attending countless meetings of boards of directors and with prospective executives, investors, and owners. Matthew Josephson says that all the partners "were rewarded with liberal shares in profits, toiled madly, and died young....By 1900...the first generation of them were all dead" except for Morgan himself. They worked hard because they were so few of them. The Morgan partnership itself consisted at any one time of perhaps a baker's dozen of partners, with at most three clerks per partner—all male save for George Perkins' former secretary from New York Life, whose office was kept outside of the Morgan building at the corner of Broad and Wall Street.

For an extreme example, consider the pace of work in an exceptional time, the Panic of 1907 approached. As the panic approached, Morgan left the Episcopal church convention in Richmond; his personal railway cars carried him from Richmond to Northern New Jersey over Saturday night. By the late morning of Sunday, October 20 Morgan was meeting with a group of his partners in the library of his townhouse. Financiers and industrialists came to call. Meetings went on past midnight. At breakfast Monday morning, Morgan and George Perkins chose the *ad hoc* group of young analysts and bankers who were to make up Morgan's additional research staff during the Panic. Following days were the same. As Jonathan Hughes writes: "...the 70-year old Morgan had his breakfast at 8 A.M. with Perkins, worked at his office until 6 P.M. and the meetings in the library [at his townhouse] lasted until 3 A.M. Nineteen hours....[Moreover t]he old man had a cold..." Charles Coster had died from an untreated cold. He had continued working and it had turned into pneumonia. J.P. Morgan himself died in 1913, on the eve of World War I. Formal leadership of the firm passed to his son, J.P. Morgan Jr.

Morgan was also an American aristocrat. Pierpont's father Junius Spencer Morgan had been the leading banker channeling British savings into American railroads in the third quarter of the twentieth century. Morgan himself was used to good living, large yachts, and three-month tours of Europe: "I can do a year's work in nine months," he would say, "but not in twelve." He spent more than fifty million turn-of-the-century dollars buying art and antiquities, and served as president of New York's Metropolitan Museum during its years of most rapid expansion.

II. The Money Trust

In the minds of Progressives like Louis Brandeis, the Morgan partnership was evil if only because its interests were large. Brandeis saw American development as depending on "...the freedom of the individual. The only way we are going to work out our problems in this country is to have the individual...free to work and to trade without the fear of some gigantic power threatening to engulf him every moment." Thus the Morgan partnership's effective size alone made it "dangerous, highly dangerous."

The biggest danger seen by the Progressives was that the Morgan partnership was the source of multiple severe conflicts of interest. First National Bank head George F. Baker was one of Morgan's best friends—was in fact asked by Morgan to serve as referee and deciding voice in arguments among his partners after his death. He was also on the board of A.T.&T., and he was the prime mover behind A.T.&T.'s appointment of Theodore Vail as its president. Vail thought that A.T.&T. should sacrifice present profits for future market share by cutting prices and attempting to become *the* nationwide telephone company. When Morgan partners recommended the purchase of A.T.&T. bonds and stocks, were they doing so because they thought A.T.&T. was a good investment or because of Baker's friendship with Morgan?

Morgan partner George W. Perkins was also a director of New York Life, which invested heavily in securities underwritten by the Morgan partnership. Corporations sought to get as much for their securities as possible, and the Morgan partnership worked for them. Life insurance

companies sought to obtain high returns on their investments for the sake of policy holders. Would Perkins act so as to advance the interests of the corporations, his clients in his role as Morgan partner, or of New York Life's policyholders—or would he sacrifice the interests of both in order to increase the spread the Morgan partnership received as a middleman.

Perkins claimed that he could determine whether a deal had come to him in his capacity as Vice President of New York Life or as partner of J.P. Morgan & Co., and bargain accordingly. Others disagreed, including National City Bank president Frank Vanderlip. Vanderlip wrote that “there were times... when [acting as a board member of the Union Pacific Railroad] I opposed underwriting fees because I felt they were too high....I believed my obligation of trusteeship ran to the stockholders, and not to [railroad President E.H.] Harriman.” Vanderlip's fellow directors then “...pointed out to me, in a hurt tone, that the City Bank [of which Vanderlip was then president] was sharing in those underwriting profits that I thought were too fat...”

Progressives called for the elimination of all such conflicts of interest, for they saw the Money Trust's control over new issues of securities, its occupation of places on corporate boards of directors, and its high profits as the three corners of a self-reinforcing iron triangle of conflicts of interest. High profits voted by Money Trust-dominated boards of directors generated funds necessary to reward those who cooperated with present deals. Fear of the power of the Money Trust to deprive active competitors of profits from future deals restrained competition. And the absence of competition gave firms no choice but to accept Money Trust domination of their boards.

“Morganization” could mean the jacking-up of prices far above costs to create large monopoly profits. Morgan was eager to create U.S. Steel in order to keep Carnegie Steel from competing too fiercely with his previous creation, Federal Steel. Even in cases where no formal merger was contemplated, common directors and cross-ownership of shares created a “community of interest.” First National Bank Chairman George F. Baker sat on the boards of six railroads that together owned 90 percent and carried 80 percent of Pennsylvania anthracite. Morgan partner Thomas Lamont sat on the board of General Electric and Morgan partner

Charles Steele sat on the board of Westinghouse. How cutthroat was competition likely to be under such circumstances?

The Progressive position was that all possible conflicts of interest should be eliminated.

In Brandeis' words:

...interlocking directorates...must be...prohibited....The prohibition will no be an innovation. It will merely give full sanction to the fundamental law...that "No man can serve two masters."...[N]o rule of law has been...more rigorously applied than that which prohibits a trustee from occupying inconsistent positions....And a director of a corporation is as obviously a trustee as persons...called specifically by that name.

In retrospect, it is surprising that "finance capitalism" in America lasted so long, given the heat of the political hostility to it. The money trust was subject to two major congressional investigations, the first in 1912-1913 by a special House committee chaired by Arsené Pujo and counseled by Samuel Untermyer, the second in 1932-1933 by the Senate Banking Committee counseled by Ferdinand Pecora. Progressive concern over this concentration of the business of finance in the hands of a few investment banks led by the Morgan partnership dominated public policy debates over the securities industry for the first third of this century. In the reaction after World War I, the Morgan partnership was accused of working hand-in-glove with the "merchants of death," and of having dragged the United States into the war in order to protect its own investments in British bonds.

The debate over the Money Trust was resolved only by the Great Depression. The presumed link between the stock market crash and the Depression left the securities industry without political defenders, and so the old guard of Progressives won during the 1930's what they had not been able to win in the three earlier decades.

Ironically, it was Herbert Hoover who triggered the congressional investigations that were to remove Morgan's influence. Hoover thought that Wall Street was prolonging the Depression and refusing to take steps to restore prosperity—and he tried to use the threat of investigations to persuade New York financiers to turn the corner around which he was sure

prosperity waited. In fact the links between Morgan and the Depression were indirect and inconsequential. Morgan was only one of many who believed in the gold standard as a necessary instrument for sound finance—without the gold standard, inflation would rob the bonds that Morgan sold of their value. But during the Depression abandonment of the gold standard and rapid inflation was the one best thing the government could have done to restore employment and production.

As Franklin D. Roosevelt put it, “the money changers have been cast down from their high place in the temple of our civilization.” The Depression’s Glass-Steagall act broke the links between board membership, investment banking, and commercial banking-based management of asset portfolios that had marked American finance before 1930. Glass-Steagall said that investment bankers could no longer be commercial bankers: thus depositors’ money could not be directly used to support the prices of newly-issued securities. Glass-Steagall said that directorates could not be interlocked: that bankers could not be on the boards of directors of firms that were their clients. Glass-Steagall said that investors—those with money of their own or those who were fiduciaries for clients or policyholders—had to be separate from the bankers who issued and priced securities, who had to be separate from the executives who hired the bankers.

The links that the Morgan partnership had used to gather information, raise capital, and exercise influence were thus broken. Since World War II the pieces into which Morgan’s empire were divided have continued their business as commercial and investment bankers. They have earned high commissions. But their profits have been an order of magnitude lower and their influence over American industrial development nonexistent compared to what would have been had the pre-Depression order continued.

Finance historians have often argued that there never was a “Money Trust” and that Progressive fears were highly exaggerated—examples of the “paranoid style” in American politics. For example Vincent Carosso, whose knowledge of the history and workings of the Morgan partnership is unequalled, does not believe that investment bankers had lockholds on their traditional clients. Carosso argues that financiers did not dominate industrial firms:

investment bankers did not “purposely act together; and even if they had, they would have been unable to impose their will upon the other directors... always more numerous than the representatives of Wall Street.” Carosso concludes that Progressive investigators like Untermeyer were unable to demonstrate “the existence of a money trust...even in the sense...[he] defined it” not as an active conspiracy but as a “close... understanding among the men who dominate the financial destinies of our country and who wield fabulous power.. ” Citibank’s official history sees “aspiring politician” Progressives like Untermeyer, at least, as guilty of bad faith in his investigation. For “aspiring politicians” like Samuel Untermeyer an opportunity to throw mud at plutocrats “...was a godsend.”³ But Untermeyer, “not knowing... such an opportunity would come his way...had stated in November 1910...[that] ‘monopolies and substantial domination of industries... could be counted on the fingers of your hand’.” Moreover, in the same speech Untermeyer had “attacked ‘political partisans who seek to make personal and Party capital out of a demagogic appeal to the unthinking’.”⁴

Neither the finance historian nor the Progressive perspective can be complete. From the Progressive perspective the Morgan partnership was little more than a very large financial

³. Reading the transcripts of the hearings makes one more favorably disposed toward the finance historian view. It is easy to dislike Untermeyer, and almost as easy to dislike Ferdinand Pecora, the counsel of the Great Depression’s Congressional investigation. Neither Untermeyer nor Pecora had worked out “theory of the case.” Untermeyer bullies Chicago professor J. Laurence Laughlin for advocating banking system reforms close to those adopted in the founding of the Federal Reserve—and, worst of all, for having refused to accept money from bankers to fund his National Citizens’ League and thus having tried to hide his true orientation. In Untermeyer’s hearings Morgan is first pilloried for having issued clearing house loan certificates during the panic of 1907 (thus illegally assuming the role of a central bank) and then pilloried for not having issued enough clearing house certificates. It is much easier to like and respect Brandeis, and to respect Morgan.

⁴. It is also possible that Untermeyer’s conversion to progressivism was partly driven by a desire for revenge against the Rockefeller interests. Untermeyer had reportedly lost heavily in the dealings surrounding the formation of the Amalgamated Copper Company. Citibank’s then president, Frank Vanderlip, judged some of the bank’s deals in which William Rockefeller appeared as “the means of some of the worst abuses that occurred in Wall Street.” The relationships between Untermeyer, the Rockefeller interests, and Citibank are convoluted. See Thomas Lawson, *Frenzied Finance* (1906); Frank Vanderlip and Boyden Sparkes, *From Farm Boy to Financier* (1935); Thomas Huertas and Harold van. B. Cleveland, *Citibank* (1987).

protection racket, and there is no reason why firm owner-managers outside of the Morgan influence would ever wish to enter it. Yet many firms did so willingly. Entrepreneurs like Henry Ford who strained every muscle to avoid any form of dependence on Wall Street capital were exceptions.

On the other hand, historians of finance do not account for the Morgan partnership's high profits. If the market was as competitive as they believe, then the Morgan firm's profits should have been lower: if market discipline left the partnership little freedom of action it should have induced it to moderate its fees as well. If Morgan's profits were monopoly profits paid by captive firms, why did firms that had the option of remaining outside of Morgan control willingly enter it? But if the investment banking industry was competitive, why were Morgan's profits so high?

III. The Money Trust's Perspective on Itself

More to the point, Morgan's supporters at the time also rejected the finance historian perspective. For example John Moody, the founder of Moody's Investor Services, argued that there was a functioning money trust and that it was a good thing: supervision of firms by financiers was a necessity given the need of investors for trustworthy intermediaries and advisors. Moody thought that scattered individual shareholders could not monitor or evaluate the performance of firm managers. Only investment bankers could effectively do so. The presence of investment bankers on boards signalled to ultimate investors that firm management was honest and industrious.

Some executives did seek to make money not for but off of their shareholders by manipulating stock prices. Richmond Terminal executive W.P. Clyde was alleged to have told Morgan in a private meeting that "I've bought Richmond Terminal at 7 or 8 and sold it at 15 twice in the last few years. I see no reason why I shouldn't do it again." Morgan had little patience with such, telling one executive who did not know his place: "Your railroad? Your railroad belongs to my clients..." They attempted to remain outside of Morgan's influence.

Clyde tried unsuccessfully to block the inclusion of the Richmond Terminal in the Morgan empire.

John Moody's positive view of the money trust was not his own invention. His view was a commonplace in the early literature on investment banking: investment banks exercised control and influence over firms because knowing that the investment banks were doing so put investors' minds at ease. Firms welcomed investment bank oversight because it made it possible for them to tap investors' savings for expansion. As New York, New Haven, and Hartford Railroad president Charles Mellen said, "I wear the Morgan collar, but I am proud of it."

The Morgan partnership's explicit argument, as laid out in an extended private conversation between Thomas Lamont and Louis Brandeis and in a pamphlet written primarily by Morgan partner Henry Davison in response to Untermyer's Progressive attacks, followed the same line. Lamont argued that investment bankers found the business of serving on boards of directors an extraordinary burden, and would willingly lay it down if they felt that they could. "As you realize," he said:

we have...drifted onto these various...boards because we had first undertaken to place a large block of the corporation's securities with our [investor] clients, and we felt a sense of responsibility to those clients which we fulfilled by keeping an eye on the corporation in which they had invested. We have felt that this was a strong factor in enabling us to market these securities, and while the responsibility was a very onerous one, nevertheless, we shouldered it. Don't you think there is quite a little in that point?⁵

Davison similarly argued that the reason the partnership had *apparent* control over what was done with investors' funds was because: "thousands of investors... seeking...securities...have neither the knowledge nor the opportunity for investigating a great... enterprise." Lacking information, they "look to a banking house to perform those functions and to give its stamp of approval." Morgan's approval had become "...a large factor which inspires confidence

⁵ Brandeis agreed that investment bankers performed an important service by providing ultimate investors with information, but saw no reason that they needed to exercise control.

in the investor and leads him to purchase....” Moreover, Davison argued that in the long run the Morgan partnership’s influence over investors’ choice of securities was not genuine but only apparent. If the firm lost its reputation for “character”—placed investors in securities that were profitable to it but offered poor returns—or another firm acquired a reputation as a superior judge of risk, then Morgan influence would quickly disappear:

The public, that is the depositors, are the ones who entrust bankers with such influence and power as they today have in every civilized land.... The only genuine power which an individual... can gain is that arising from the confidence reposed in him... by the community....only so long as [bankers’] records are unblemished do they retain such trusts....The past is full of examples where the slightest suspicion as to the conservatism, or the method’s of a bank’s management, has destroyed confidence and drawn away its deposits overnight...

Moreover, the concentration of the business into the hands of a few firms may well have been a benefit. The wealth and dominant position of the Morgan partnership depended on its reputation for “character,” and thus the firm’s “character” was its most important asset. As a result, the Morgan partnership was not tempted—and investors could determine that it was not tempted—to sacrifice its reputation for the sake of the profits of a single large deal. By contrast a firm with a small market share might well decide to sacrifice future reputation for present profits, and so take the money and run.

For example, Standard Oil magnates H.H. Rogers and John D. Rockefeller’s financier brother William entered the corporate promotion business with the Amalgamated Copper Corporation. Rogers and William Rockefeller capitalized Amalgamated Copper at \$75,000,000, traded on their reputations as the financial wizards behind the growth of Standard Oil, and sold about half of the company off to other investors at approximately par value. It then developed that the only assets of Amalgamated were copper companies that Rockefeller and Rogers had purchased for \$40,000,000 immediately before. When the dust cleared, the original copper entrepreneur Marcus Daly had his \$40,000,000, Rogers and Rockefeller held half of Amalgamated—worth \$20,000,000 in fundamental value—and outside investors had put up

\$40,000,000 but had acquired in return only the other half of Amalgamated. Rogers and Rockefeller's reputations as investment bankers and corporate promoters were shot, but to them this was only a small cost because they had never been in the investment banking business in the first place.

The losers were investors who had bet that Rogers and Rockefeller's financial expertise would work in and not against their interest. This was a risk that they had taken by dealing with the individual promoters rather than with an established institution like the Morgan partnership that cared about its reputation. The stress on the importance of the Morgan partnership's reputation provides an answer to the question of what the competitive edge that allowed them to reap high profits and also attract clients voluntarily. High profit rates could coexist with ease of entry into investment banking because there was no rapid way for new firms to acquire that "reputation" that was the Morgan partnership's chief institutional asset: firms and investors came to Morgan because they knew that it had been an honest broker in the past and has too much at stake to risk not being an honest broker in the present.

It is ironic to find firm defenders of private privilege and property like Moody and Davison wound up advocating a system for the assessment and allocation of investment that might be termed "socialist." The Morgan partnership has approximately a dozen partners and forty-five employees. They approve and veto proposed top managers for individual firms. They decide which firms' securities they will underwrite, and thus implicitly which lines of business should receive additional capital and so expand.

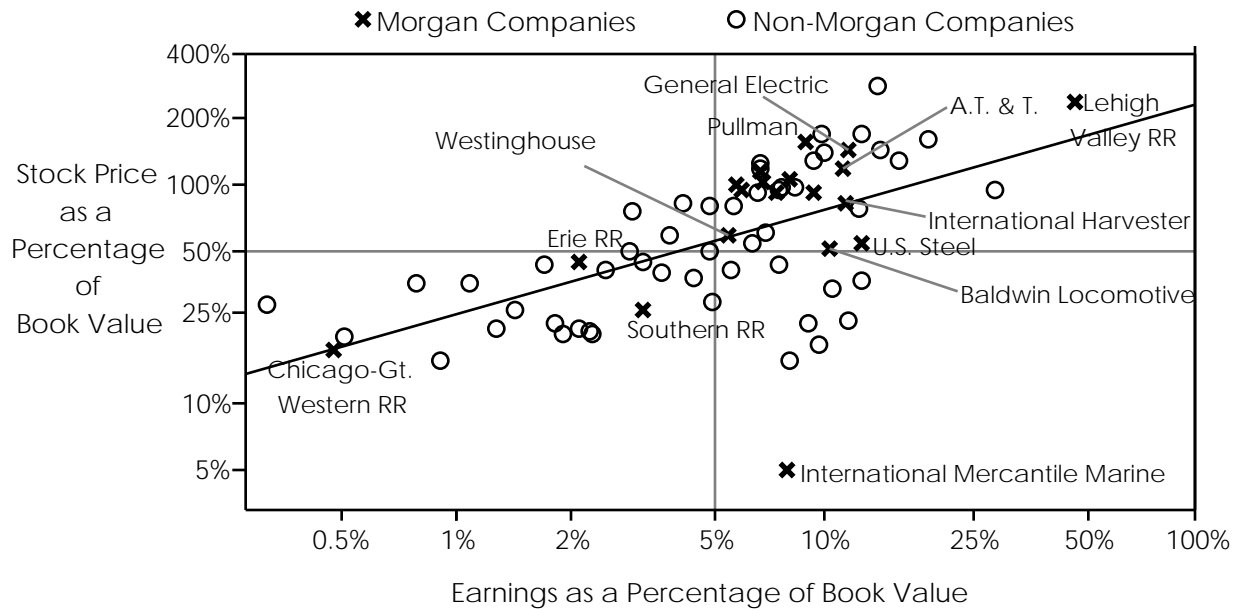
The net effect appears similar to what would be done by a centralized investment planning directorate. The major differences are three: the judgment of Morgan and his partners are substituted for that of the bureaucracy in deciding which investment projects are to be undertaken; Morgan and his partners are much more highly paid than bureaucrats; and the Morgan partnership feels itself under severe pressure to run an efficient operation and make investment decisions that will profit investors—for in the long run it faces competition for its privileged place from Kuhn, Loeb; from National City Bank; and from others.

IV. The Value of Morgan Control

Was there any truth to the Morgan partnership's self-justification? Was it more than just another plausible but specious argument thrown up to protect power and privilege against democratic reform? Figure 1 suggests that there was considerable truth in the Morgan partnership's self-justification, and that there was a clear sense in which Morgan domination and influence made corporations more profitable and investors richer than they would have been otherwise.

The horizontal axis plots, on a logarithmic scale so that equal distances reflect equal proportional changes, the ratio of earnings to book values for large American corporations in the years around 1910. "Book value" is an accounting concept that roughly captures how much it would cost to duplicate the machines, buildings, liquid assets, and intellectual property held by the firm. The ratio of earnings to book value is an index of how efficient the corporation is considered as a profit-making engine: how much profits are made for each dollar's worth of capital at work in the firm. The vertical axis plots, also on a logarithmic scale, the ratio of stock market value to book value. The vertical scale tells whether investors on the stock market believe that the corporation has bright prospects and is well managed—in which case they are willing to pay a premium over book value—or that it has dull prospects or is badly managed—in which case the market will value it at a discount. In figure 1, X's mark companies that have a Morgan partner on their boards of directors; circles mark other companies.

Figure 1
Relative Prices and Earnings of Morgan and Non-Morgan
Companies, 1910–12



The average non-Morgan company has a stock market valuation of about half its book value, and an earnings/book ratio of five percent. Of the twenty Morgan companies, sixteen have higher market values relative to book values than fifty percent and earn more than five percent on their book value. Three Morgan companies have lower than average price/book and lower than average earnings/book ratios. One—the International Mercantile Marine Company—has a higher than average earnings/book ratio and a severely depressed stock price.

Figure 1 thus shows that Morgan partners are on the boards of profitable companies that are more highly valued than average by the market. Having a high earnings/book value ratio, having a high stock price/book value ratio, and having a Morgan partner on the board of directors all go together.

It is a point against the Progressive position that Morgan companies have high ratios of earnings to book values. One of Brandeis' most frequent criticisms of Money Trust practices was the "watering" of stock to overstate book values—as in the case of Amalgamated Copper. Stock watering would inflate book values and tend to move Morgan companies down and to the left in figure 1. Yet they are clustered in the upper right.

Figure 1 also shows a solid line that plots the relationship between earnings and prices that holds on average for non-Morgan companies. Of the twenty Morgan-influenced companies,

fifteen lie above this line, and thus have higher stock prices than would be expected given their level of earnings and given the pattern established by the non-Morgan companies. With the exception of the disaster of the International Mercantile Marine combine, stock exchange traders appear to have more confidence that Morgan-influenced companies will continue to produce high earnings in the future than they have for non-Morgan companies.

Investors in Morgan companies did not as a group receive lower than average returns in their investments in Morganized companies. The profitability of investments in newly-Morganized companies did not decline over time: investors in Westinghouse and in Baldwin Locomotive toward the end of the 1900–13 period realized rates of return that were higher than those realized earlier. There is thus no sign that the high stock market value of Morganized companies is due to the stock market's willingness to pay too high a price for the Morgan name. Morgan companies did sell at higher multiples of book value, but they did so not because of the Morgan name but because the companies earned higher returns on capital.

On average, adding a Morgan partner to the board of directors appears to raise the value of common stock by roughly thirty percent. This is a measure of the extent to which the Morgan partnership “added value” for shareholders of companies under Morgan influence. Such an increase does not seem out of line if one considers how much Morgan's financial services cost. For International Harvester—a simple and straightforward deal—the investment bankers' share was about four percent of the capital value floated (equal in value to eight percent of the post-1906 common stock). For U.S. Steel the investment bankers' share was ten percent (in value thirty percent of the common stock). Such large fees can be justified—if they can be justified—only if the unique value added by this particular group of financiers is substantial. If the Morgan influence coefficient does accurately an increase in value resulting from reorganizing the corporation under Morgan's aegis, then investment banking fees appear to take up a sizeable chunk, but not all of the increased value.

It could be that the presence of a Morgan partner on a company's board of directors does no good by itself, and that Morgan partners join the board only if they already have confidence in

the management. Figure 1 shows us that if this is so then Morgan and his partners were skillful investors—that their judgments of firms' prospects and managements were by and large correct. In this case, however, the source of Morgan's high profits are unexplained: the company would be profitable or not whether or not Morgan was willing to finance it and whether or not a Morgan partner was willing to sit on its board of directors.

The alternative interpretation is that the presence of a Morgan partner is a signal that good things are happening to the company. Good managers are being promoted. Bad managers are being fired. The organization is being given free access to capital for expansion when it needs it, and thus can take advantage of the opportunities open to it. Experienced businessmen are giving executives advice and warning them of pitfalls. Historians from Fritz Redlich to Vincent Carosso have stressed the concern and care investment bankers applied to the selection of managers. Carlos Ramirez has examined flows of cash through firms around 1910 and concluded that firms with Morgan partners were better able to react to opportunities, and did find it very easy to obtain cash they needed for expansions on short notice. The balance of the evidence is that Morgan and his partners did create value—for shareholders at least—through their oversight of managers and their ease of access to investors.

One famous example of banker intervention is the return to the Bell System of Theodore N. Vail, who had been originally hired by Alexander Graham Bell's father in law, Gardiner Hubbard, at the end of the 1870's. Vail performed very well as General Manager of American Bell and as president of its long-distance subsidiary during the initial expansion of the telephone network to the urban East and Midwest. In 1887, however, Vail resigned. He had wished to plough retained earnings back into the rapid creation of a single national telephone network. The major stockholders and their nominees, for example John E. Hudson, President of American Bell from 1889–1900, had a different view. They saw that the telephone company was a money machine, and they wanted this money machine to start paying high dividends.

After Vail's departure the Bell system did pay high dividends and did steadily lose market share to a large group of alternative, local telephone networks. By the first years of this

century there was close to a consensus that the high-dividend slow-expansion strategy had been mistaken. And so Frederick Fish, president from 1902–07, attempted to raise money for renewed expansion. The massive financing requirements of the company's forthcoming expansion drive coupled with the approach of the Panic of 1907 brought the Bell system close to default. The Morgan group of investment bankers, led by George F. Baker, was willing to finance the Bell System's expansion drive only if its new president would be someone they were confident could do the job. Baker had been very impressed with Vail in other dealings. Vail's past record at the telephone company was superb and was well known. Who better to head up the new A.T.&T. devoted to rapid nationwide expansion than a man who had been advocating such a competitive strategy twenty years earlier?

Vail did do for AT&T what he was installed to do. He oversaw its expansion to a true nationwide telephone system. And he turned out to be very skillful at keeping the government and public convinced that AT&T was a productive natural, and not an exploitative artificial monopoly. In the choice of Vail the investment bankers appear to have performed a service not just from the perspective of shareholders' long-run interest but from the perspective of aiding the long-run economic growth of the United States as well.

V. The Decline of the House of Morgan

The eve of World War I saw the high water mark of both the Morgan partnership and the financier-centered organization that it dominated. The half century before 1914 had seen Morgan and his peers channel new capital into railroad construction and combination, into steel, into electricity, into telephones, and into the other high-tech growth industries of the turn of the century. Investors had followed their lead. And the horses that Morgan had bet on had run well: thanks in part to the skill with which Morgan had selected industries for expansion and selected executives for large rapidly-growing firms, the United States on the eve of World War I had surpassed Great Britain as the world's economic leader and the richest industrial nation.

As historians like Robert Sobel see it, the first stage in the decline of the House of Morgan came during World War I. Morgan had always sold bonds quietly to institutions and to relatively wealthy individuals, waiting for them to come to him and ask what securities he might recommend. World War I saw the government run unprecedented deficits and thus print an extraordinarily large supply of bonds. These could not be easily sold through standard passive channels but instead required active sales campaigns. National City Bank president Charles Mitchell became a master at selling government bonds through door-to-door cold calls by an active sales organization. After the war, he applied the same lesson to the sale of private bonds. Mitchell's predecessors James Stillman and Frank Vanderlip had attempted to break into the investment banking business by trying to build up a Morgan-style reputation as shrewd analysts. Mitchell realized that the City Bank would find it easier to expand its financial empire by using direct salesmanship to sell bonds to people who had never thought of buying them before.

The second stage was the popularization of the benefits of common stock ownership during the decade-long bull market of the 1920's. Books like Edgar Smith's *Common Stocks as Long Term Investments* argued that high profits could be made by investing in more or less any set of American common stocks. A near decade of stable economic growth reinforced this message and produced a boom in the demand for stocks. Many investors became willing to bet on the financial genius of financial celebrities like utility king Samuel Insull even without the Morgan partnership's or Kuhn, Loeb's implicit warranty. Morgan's or Kuhn Loeb's willingness to stand behind a security issue thus lost some of its relative importance, and so they lost some of their leverage.

The third stage was the creation of the Securities and Exchange Commission. It forcibly divorced the commercial bankers who had the capital to take substantial long-term positions in firms from the investment bankers who issued securities and set prices. And it removed both from their places on the boards of directors of operating companies, from which they had monitored managerial performance and exercised control.

The upshot was that after the Great Depression and World War II American finance

looked very different from how it had looked in 1913, or even in 1929. Investment banking was still an oligarchy, and investment bankers still became rich. But in relative terms they were much less wealthy than Morgan and his partners had been back at the turn of the century. And they no longer exercised substantial power over industrial or railroad companies. No executive of any major American corporation in the 1950's, 1960's, or 1970's would have said under any circumstances that he wore the Morgan—or the Goldman Sachs, or the Salomon Brothers—collar as Charles Mellen had said back before World War I.

The legal constraints placed on investment bankers by the Securities and Exchange Commission had severely reduced their leverage vis-a-vis firm executives. Changes in the economy reinforced the trend. The rise after World War II of high-advertising brokerage firms like Merrill Lynch, which catered to masses of relatively small individual investors by providing them with a stream of investment advice and tips of dubious value diminished further the potential value of the stamp of approval of a J.P. Morgan & Company. The extraordinarily strong long post-World War II boom under the Bretton Woods system that ran until its destruction by Richard Nixon provided firms with ample profits for reinvestment, and kept them from having to go to the capital markets for additional funding on a regular basis. These economic changes further diminished investment bankers' leverage vis-a-vis operating companies.

The post-World War II debate turned on a different issue: the fact that firm executives were no longer responsible to and subject to pressure from investment bankers raised the question of who firm executives were responsible to. During the 1920's, as the grip of the Morgan partnership and the other investment banks was being loosened, Adolf Berle and Gardiner Means (1932) raised the possibility that the relative decline of investment banking meant that firm executives had become effectively independent. Executives could use the resources of the firm to rally support for their slates of candidates in annual meetings, while slates of potential executives opposed to current management had no effective channels to use to rally support.

Before 1929 a potential insurgent management team seeking a change in a firm's policy

could have gone to talk to Morgan. If he found their arguments convincing the old management might soon be gone and old policies reversed. After 1945 they had to find some way of reaching widely-scattered individual shareholders and of convincing them that it was worth their while to support a change of control. It was this lack of long-term relationships between those investors who provided the money and the managers who governed the corporation that led John Maynard Keynes (1936, p. 160) to muse: “[t]he spectacle of modern investment markets has sometimes moved me towards the conclusion that to make the purchase of an investment permanent and indissoluble, like a marriage, except for reason of death or other grave cause, might be a useful remedy for our contemporary evils. For this would force the investor to direct his mind to the long-term prospects and to those only.”

Not surprisingly, management teams and boards of directors became inbred groups that chose their own successors. Concern grew among regulators and intellectuals that these inbred high corporate managers were not guiding corporations not on the paths that would produce the most value for shareholders or maximize the pace of industrial development. Instead, the self-replacing oligarchies of managers sought the paths that gave them the highest salaries, the largest empires, and the least risk. As economist John Hicks wrote, for these “the best of all monopoly profits is a quiet life.” Corporation presidents were no longer appointed because someone in the Morgan partnership had confidence in their skills and energy, but because they had the support of some coalition internal to the firm’s executive staff and have successfully won an internal tournament for the succession. While before the Great Depression the United States had possessed a loose form of “finance capitalism,” after World War II it possessed a form of “managerial capitalism.”

The story of this shift is not a story of the most efficient form of economic organization winning out in the long run as the logic of the marketplace makes itself clear. The SEC took the form that it did largely because the populists in Congress had always believed in Untermeyer’s and Brandeis’ critiques of how the bankers used other people’s money, not because Untermeyer’s and Brandeis’ critiques had suddenly become more correct than it had been in 1910. The Glass-

Steagall act was passed because of the Great Depression, not because an increase in individual investors' and institutions' abilities to assess and monitor firms made an organization like the pre-Great Depression Morgan partnership less effective. Organizations like the National City Bank and, later, Merrill Lynch prospered not because they were the best judges of the underlying worth of securities but because their active sales methods could directly tap pools of wealth that the Morgan partnership had been able to tap only indirectly after they had flowed into the life insurance and banking systems.

Subsequent years have seen several abortive roll backs of this shift in the balance of leverage. The conglomerate movement of the late 1960's and early 1970's implicitly argued that the most efficient form of economic organization was that of the conglomerate—many operating units pursuing independent businesses all under one top financial management that provided capital for and monitored and chose executives at each of the operating units. A chief executive like Harold Geneen of I.T.T. would act toward the bosses of I.T.T.'s operating companies like J.P. Morgan and George F. Baker had acted toward Theodore Vail and his predecessors at A.T.&T. Economists like Oliver Williamson explained that conglomerates were more efficient because they provided in miniature a hierarchically-organized information-rich capital market. The first conglomerates may have been efficient and productive forms of organization. But the mass of firms that jumped onto the conglomerate bandwagon in the 1970's were not. In fact, the leveraged buyout movement of the 1980's was in many respects an undoing of the conglomerate-creating mergers that had been popular in the previous decade.

The leveraged buyout movement of the 1980's was, similarly, sold as a way of enforcing discipline on corporation managers. It aimed to solve the Berle and Means problem by placing firm managers' backs to the wall: corporations took on extraordinarily high levels of debt and managers set to work to repay it under the implicit threat of losing their jobs and their savings should they not produce high short-term cash flows. Economists like Michael Jensen (1990) proclaimed the end of the public corporation, and the coming of organizations in which financiers would be the bosses. Once again, the first waves of LBO's were highly profitable and

appear productive. Later waves have been less so. Few today believe that Michael Milken and the other financiers of the 1980's did discover forms of investment and organization that promised extraordinarily high returns. More believe that the high investment banker profits of the 1980's arose from a combination of investor naïvete and the desire by institutions like S&L's which faced impending bankruptcy to try to regain solvency by one last large risky throw of the dice—even at unfavorable odds.

The even partial success of these movements came about only because groups of financiers believed and were willing to bet the money they controlled on the proposition that the organizations of post-World War II Wall Street were falling down on the job, that corporation managers had become largely exempt from any form of control or supervision, and that there were opportunities for massive profits in correcting this flaw in the market's organization. But their failure to last shows that their proposed remedies were not effective, and did not generate the increases in efficiency that they had promised.

Perhaps the Morgan-dominated “finance capitalist” pattern of the 1900's was peculiar to that age, and subsequent changes in organization—the wider diffusion of available information to individual stockholders mandated by the SEC, and the growth of procedures within firms for internally assessing, selecting, and promoting managers—eroded the competitive advantages of financiers that sustained “finance capitalism” in the early years of this century. Yet there are substantial reasons to doubt such an interpretation. The first of these is the recurrence of waves of financial innovation that promise to partially reverse the erosion of financier leverage that took place from 1930 to 1950. Even though neither of these waves of innovation has yet managed to successfully deliver on its promises, their popularity points to a perceived but unsatisfied need. However, perhaps the strongest reason is that other industrial economies that also had “finance capitalist” forms of financial organization at the start of this century have by and large maintained them up to the present day.

VI. Conclusion

Surely the most important unaddressed issue is the balance between J.P. Morgan's adding shareholder value by improving efficiency as opposed to by creating monopoly. Was the Morgan touch a source of stock market value because it made corporations more efficient productive and profit-making institutions, or just because it aided the formation of monopolies? This question is close to unresolvable. No one disputes that the Robber Barons sought monopoly; no one disputes that the Robber Barons took advantage of economies of scale. The relative weight to be given these two factors is hard to assess and evidence is never strong enough to convincingly overcome anyone's prior beliefs.

The Morgan partnership had a vision of industrial development in which firm executives had relatively little discretion and in which "community of interest" was to replace "competition" as the watchword. Progressives believed that this was the wrong vision of economic development for America's future—and that, indeed, its worst flaw was that Morgan could come close to implementing his vision. In the generation after World War II it appeared that the Progressives had been completely correct. American companies earned high profits. American technology and productivity levels were the highest in the world. Economic growth was strong.

In recent years economic growth has been weaker. American technology has not been so dominant. And American productivity levels in industry now lag behind those of other countries in the world. This loss of relative place has triggered a reexamination of the way the American industrial order has worked. It has focused new attention on the "managerial autonomy" and the "skittish stock market" problems, and directed attention to the relationships between finance and industry found in other countries.

German and Japanese securities markets today have to a large degree retained a "finance capitalist" pattern like that of the turn of the century. The growth of "finance capitalism" in Germany paralleled the rise of the House of Morgan in the United States: the largest of the German *Großbanken*, the Deutsche Bank, had its representatives on the boards of 159 companies

in 1912. The Morgan-like role played by the “Great Banks” in monitoring and supervising corporate managements was an accepted part of German finance in the years before World War I. Economist Jacob Riesser, for example, saw the German banks’ “regard for their ‘issue credit’, i.e., the permanent ability of maintaining among the German public a market for new securities issued under their auspices,” as ensuring the “permanent interest on the part of these banks in the [health of the] newly created [corporations] as well as in the securities which they were instrumental in placing on the market.”

While the Morgan partnership had forty-five employees, of whom perhaps two-thirds were analysts and partners, the Deutsche Bank had analysts, engineers, and industry experts by the hundreds. It was capable of doing much more thorough and detailed analyses, and of providing much more soundly based advice, than the Morgan partnership. How thorough could Charles Coster’s knowledge of each of the fifty-nine railroads of which he was a director have been? The German system today is weaker than it once was, but is still relatively strong. Today individual German shareholders routinely let the Deutsche Bank vote their shares for them as it sees fit in corporate elections.

In Japan, the prewar *zaibatsu* and their more diffuse postwar *keiretsu* replacements played similar roles at the turn of the century and play similar roles today (Hoshi *et al.* 1989). Banks and trading companies in these enterprise groups exercise influence over the policies and senior personnel appointments of the affiliated companies. Should an industrial company run into trouble, the enterprise group is there to assess the situation, shift directions, and to pump in additional expertise and resources. One example is the case of Mazda Motors after the tripling of oil prices in 1973. Mazda then had bet heavily on its technologically-sophisticated Wankel rotary engine, but the rotary engine required more gasoline per mile than conventional engines. With higher gasoline prices, Mazdas did not sell. The enterprise group examined the corporation, concluded that its current problems arose not because of organizational deficiencies but because of unexpected bad economic luck, and financed its reorganization and restructuring. Jack Donahue and Robert Reich (1985) draw pointed contrasts between the recovery of Mazda, in

which the dominant role of the enterprise group made considerations of productive efficiency and long-run economic progress were primary, and the plight of Chrysler at the end of the 1970's—saved by political lobbying, government money, and restrictions on competing imports that won it short-term profitability, but the government did not require the kinds of internal changes needed to rapidly improve productive efficiency.

Alfred Chandler (1990) draws a sharp contrast between the dominance of salaried management and of relatively wide direct and indirect ownership through investment and commercial banks in countries like Germany and the United States on the one hand, and the more “personal capitalism” in which founding families preserved substantial equity stakes and managerial positions that prevailed into the twentieth century in Great Britain. The relative industrial success of Germany, Japan, and Gilded Age United States has its counterpoint in the relative industrial decline of turn of the century Great Britain. As Arthur Lewis (1978) puts it, by the end of the nineteenth century: “organic chemicals became a German industry; the motor car was pioneered in France and mass-produced in the United States; Britain lagged in the use of electricity, depended on foreign firms established there, and took only a small share of the export market. The telephone, the typewriter, the cash register, and the diesel engine were all exploited by others.” Industry after technologically-sophisticated industry in which one would have expected British industry, by virtue of Britain's larger industrial base and head start, to have a strong position was dominated by producers from other, follower countries.

Alongside Britain's relative industrial decline went a surge of capital exports. In 1913 Great Britain's net interests, profits, and dividends from overseas investment amounted to 9.3 percent of gross domestic product. Britain in 1913 had far more than an entire year's total output invested abroad. Its net overseas assets may well have exceeded its total net domestic stock of reproducible capital. Britain had lost of capital to invest, but British investors did not believe that capital was worth investing in British industries or British firms.

German economists like Reisser criticized the pre-World War I organization of British banking and finance because it lacked an equivalent to the monitoring system performed by the

enterprise groups in Japan, the “Great Banks” in Germany, and the Morgan partners in the United States. Riesser argued that the “complete divorce between stock exchange and deposits...causes another great evil, namely, that the banks have never shown any interest in the newly founded companies or in the securities issued by these companies, while it is a distinct advantage...that the German banks, even if only in the interests of their own issue credit, have been keeping a continuous watch over the development of the companies which they founded.”

Perhaps Britain’s surge of overseas investment, its relative industrial decline, and its absence of financial capitalist institutions all went together. If “financial capitalist” institutions did in fact play the role in guiding and guaranteeing investments, then the absence of such institutions in Britain may have been a factor contributing to its anomalous combination of healthy domestic savings with anemic domestic investment and relative industrial decline.

Comparisons across nations and across eras prove little. Too many other factors shift from nation to nation and from era to era. Nevertheless, this extremely brief examination of finance capitalism in international historical perspective is suggestive: industrial economies that grew extraordinarily fast and were seen by contemporaries as undergoing “economic miracles”—like Germany and Japan both post-World War II and pre-Great Depression, and like the pre-Great Depression United States—had “finance capitalist” forms of organization. Other countries that grew more slowly—like Great Britain, or like the post-World War II United States—did not. The continued viability of “finance capitalism” in Germany and Japan suggests that the story of the relative decline of financier dominance in the United States cannot be attributed to the shifting logic of efficient forms of organization. And the association of rapid growth with finance capitalists suggests that perhaps not only shareholders but also the country as a whole got more than its money’s worth out of institutions like the Morgan partnership, even allowing for the very high prices they charged for their services.

Both the “managerial autonomy” and the “skittish stock market” ills appear to call for large-scale financial institutions to take an interest in firm management, by establishing and holding large long-term positions in individual companies. They appear to call for more waves of

financial innovation and reform like those of the conglomerate and the LBO movements in the hope that one such wave will get the balance between financier control and operating executive autonomy correct. Even an intellectual grandchild of the Progressives like Lester Thurow (1986), for example, calls for the rise of “merchant bankers” in the United States who will do for American industry what the Deutsche Bank does for German or the Mitsubishi *keiretsu* for Japanese—or what J.P. Morgan & Company did for American industry nearly a century ago. It is an irony that today the intellectual descendants of the Progressives are among the strongest voices calling for a return to “finance capitalism.”

References

- Adler, Cyrus. 1921. *Jacob Henry Schiff: A Biographical Sketch*. New York: p.p.
- Adler, Cyrus. 1928. *Jacob Henry Schiff: His Life and Letters*. New York: Doubleday, Doran, and Co.
- Allen, Frederick Lewis. 1949. *The Great Pierpont Morgan*. New York: Harper and Row.
- Atack, Jeremy. 1985. "Industrial Structure and the Emergence of the Modern Industrial Corporation." *Explorations in Economic History* 22 (January): 29–52.
- Berle, Adolf and Gardiner Means. 1932. *The Modern Corporation and Private Property*. New York: Macmillan.
- Brandeis, Louis D. 1914. *Other People's Money, and How the Bankers Use It*. New York: Frederick A. Stokes.
- Brooks, John. 1976. *Telephone: The First Hundred Years*. New York: Harper and Row.
- Bureau of Corporations; U.S. Department of Commerce. 1913. *The International Harvester Company*. Washington, D.C.: G.P.O.
- Burr, Anna Robeson. 1927. *Portrait of a Banker: James Stillman, 1850-1918*. New York: Duffield and Co.
- Carosso, Vincent P. 1987. *The Morgans: Private International Bankers, 1854-1913*. Cambridge, Mass.: Harvard University Press.
- Carosso, Vincent P. 1970. *Investment Banking in America: A History*. Cambridge, Mass.: Harvard University Press.
- Carstensen, Fred. 1987. "...a dishonest man is at least prudent: George W. Perkins and the International Harvester Steel Properties." *Business and Economic History Review*.
- Chandler, Alfred D. 1990. *Scale and Scope*. Cambridge, Mass.: Harvard University Press.
- Chernow, Ron. 1990. *The House of Morgan*. Boston: Atlantic Monthly Press.
- Cowing, Cedric B. 1965. *Populists, Plungers, and Progressives: A Social History of Stock and Commodity Speculation, 1890-1936*. Princeton, N.J.: Princeton University Press.
- Cowles, Alfred, *et al.* 1938. *Common Stock Indices*. Chicago: Cowles Commission.
- Danielan, N.R. 1939. *AT&T: The Story of Industrial Conquest*. New York: Harper and Bros.
- Davis, Lance. 1966. "The Capital Markets and Industrial Concerns: The U.S. and U.K., a Comparative Study." *Economic History Review* 19.

- Davis, Lance. 1963. "Capital Immobilities and Finance Capitalism: A Study of Economic Evolution in the United States." *Explorations in Entrepreneurial History* 1 (Fall): 88-105.
- Davison, Henry. 1913. *Letter from Messrs. J.P. Morgan & Co., in Response to the Invitation of the Sub-Committee (Hon. A.P. Pujo, Chairman) of the Committee on Banking and Currency of the House of Representatives*. New York: p.p. [Harvard Graduate School of Business Baker Library, Thomas W. Lamont Papers, Box 210-26.]
- Dewing, Arthur. 1914. *The Financial Policy of Corporations*. New York: Ronald Press.
- Dore, Ronald. 1987. *Taking Japan Seriously: A Confucian Perspective on Leading Economic Issues*. Stanford, CA: Stanford University Press.
- Eichengreen, Barry, ed. 1985. *The Gold Standard in Theory and History*. New York: Methuen.
- Feis, Herbert. 1964. *Europe: The World's Banker*. New Haven, CN: Yale University Press.
- Garraty, John. 1960. *Right-Hand Man: The Life of George W. Perkins*. New York: Harper and Bros.
- Gerschenkron, Alexander. 1962. *Economic Backwardness in Historical Perspective*. Cambridge, Mass.: Harvard University Press.
- Goldsmith, Raymond. 1954. *The Balance Sheet of the United States*. Princeton: Princeton University Press.
- Hoshi, Takeo, Anil Kashyap, and David Scharfstein. 1989. "Bank Monitoring and Investment: Evidence from the Changing Structure of Japanese Corporate Banking Relationships." Cambridge, MA: NBER Working Paper 3079.
- Hovey, Carl. 1912. *The Life Story of J. Pierpont Morgan*. London: Heinemann.
- Huertas, Thomas and Harold van B. Cleveland. 1987. *Citibank*. Cambridge, Mass.: Harvard University Press.
- Jensen, Michael. 1989. "The Eclipse of the Public Corporation." *Harvard Business Review* (September-October), 61-74.
- Josephson, Matthew. 1934. *The Robber Barons: The Great American Capitalists, 1861-1901*. New York: Harcourt Brace Jovanovich.
- Keynes, John Maynard. 1936. *The General Theory of Employment, Interest and Money*. London: Macmillan and Co.
- Kolko, Gabriel. 1963. *The Triumph of Conservatism*. London: Free Press.
- Lamont, Thomas W. 1913. "The Brandeis Talk." [A Conversation between Thomas W. Lamont and Louis D. Brandeis on December 2, 1913.] Baker Library, Thomas W. Lamont Papers, Box 84. An identical copy is in the Brandeis papers at Brandeis University.
- Lawson, Thomas W. 1906. *Frenzied Finance*. New York: The Ridgway-Thayer Company.
- Lewis, W. Arthur. 1978. *Growth and Fluctuations 1870-1914*. London: Allen and Unwin.

- Flynn, J.T. 1932. *God's Gold: John D. Rockefeller and His Times*. New York: Harcourt, Brace, and Company.
- McCormick, Cyrus. 1931. *The Century of the Reaper*. New York.
- Moody, John. 1904. *The Truth About the Trusts: A Description and Analysis of the American Trust Movement*. New York: Moody Publishing Co.
- Moody, John. 1912. *How to Invest Money Wisely*. New York: Office of John Moody.
- Nevin, Thomas, and Marian Sears. 1955. "The Rise of a Market for Industrial Securities, 1887–1902." *Business History Review* 29 (June): 109–120.
- O'Hagan, H. Osborne. 1929. *Leaves from My Life*. London: John Lane.
- Paine, Albert B. 1921. *Theodore N. Vail: A Biography*. New York.
- Peach, Nelson. 1941. *The Security Affiliates of National Banks*. Baltimore: Johns Hopkins University Press.
- Pecora, Ferdinand. 1939. *Wall Street Under Oath: The Story of Our Modern Money Changers*. New York.
- Poor's Railroad Manual Company. 1913 and earlier years. *Poor's Manual of Industrials*. New York: Poor's Railroad Manual Company.
- Poor's Railroad Manual Company. 1913 and earlier years. *Poor's Manual of Public Utilities*. New York: Poor's Railroad Manual Company.
- Poor's Railroad Manual Company. 1913 and earlier years. *Poor's Manual of Railroads*. New York: Poor's Railroad Manual Company.
- Pound, Arthur and Samuel Moore, eds. 1931. *More They Told Barron*. New York: Harper and Bros.
- Pujo Committee; U.S. Congress, House, Committee on Banking and Currency. 1913a. *Money Trust Investigation. Hearings Before the Committee Appointed Pursuant to House Resolutions 429 and 504 to Investigate the Concentration of Control of Money and Credit*. Washington, D.C.: G.P.O.
- Pujo Committee; U.S. Congress, House, Committee on Banking and Currency. 1913b. *Report of the Committee Appointed Pursuant to House Resolutions 429 and 504 to Investigate the Concentration of Control of Money and Credit*. Washington, D.C.: G.P.O.
- Pujo Committee; U.S. Congress, House, Committee on Banking and Currency. 1913c. *Minority Report of the Committee Appointed to House Resolutions 429 and 504 to Investigate the Concentration of Control of Money and Credit*. Washington, D.C.: G.P.O.
- Redlich, Fritz. 1951. *The Molding of American Banking: Men and Ideas*. New York: Hafner Publishing Co.
- Riesser, J. 1911. *The German Great Banks and Their Concentration in Connection with the Economic Development of Germany*. Washington, D.C.: G.P.O. Also under National

Monetary Commission, Senate Doc. No. 593, 61st Congress, 2d Session.

Satterlee, Herbert L. 1935. *J. Pierpont Morgan: An Intimate Portrait*. New York: Macmillan.

Seligman, Joel. 1982. *The Transformation of Wall Street: A History of the Securities and Exchange Commission and Modern Corporate Finance*. Boston: Houghton Mifflin.

Smith, Edgar L. 1924. *Common Stocks as Long Term Investments*. New York: Macmillan.

Sobel, Robert. 1965. *The Big Board: A History of the U.S. Stock Market*. New York: The Free Press.

Staples, Henry Lee. 1954. *The Fall of a Railroad Empire*. Boston.

Sylla, Richard E. 1975. *The American Capital Market, 1846-1914: A Study of the Effects of Public Policy on Economic Development*. New York: Arno Press.

Thurow, Lester. 1986. *The Zero-Sum Solution*. New York: Basic Books.

Untermeyer, Samuel. 1915. "Speculation on the Stock Exchanges, and Public Regulation of the Exchanges." *American Economic Review* 5: 24-68.

Vanderlip, Frank A. and Boyden Sparkes. 1935. *From Farm Boy to Financier*. New York.

White, Eugene. 1989. "Regulation, Taxes, and the Financing of American Business 1860–1960." New Brunswick, NJ: Rutgers University.

White, Eugene. 1983. *The Regulation and Reform of the American Banking System, 1900–1929*. Princeton: Princeton University Press.

Willis, H. Parker and J.I. Bogen. 1929. *Investment Banking*. New York: Harper and Brothers.