Institutional Economics in the Age of J.P. Morgan

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ABSTRACT

The cornerstone of early Institutional Economics was an analysis of the cyclical behavior of American capitalism during the era of corporate mergers and acquisitions. The foundation was in the work of Thorstein Veblen, in and around the turn of the 20th century. J.P. Morgan was the most prominent investment banker in the late 19th and early 20th centuries. By some accounts, Morgan served as the "unofficial central banker" for the federal government throughout most of that era. Veblen was fascinated by Morgan and his role in financial markets, and this influenced his analysis of corporation finance in *The Theory of Business Enterprise.* His observations of Morgan's investment banking activities became the central component of his theoretical explanation of Industrial Capitalism and the cyclical behavior of the modern industrial economy.

This paper analyzes the role of J.P. Morgan during the merger era of the last quarter of the 19th century. Next, the paper will review Veblen's observations about Morgan and his place in the realm of American corporation finance. Major developments in the U.S. securities markets during the Morgan era are analyzed. The central role of financial markets in the literature of early Institutional Economics is critically analyzed in this paper. Finally, a modern interpretation of Veblen's theoretical structure is provided, and his anticipation of later 20th century theoretical developments is underscored.

INTRODUCTION

J. Pierpont Morgan dominated the image of American financial markets in his era in a manner which has never been replicated in the past 100 years. To the American public, he was the personification of financial capitalism, for better or worse. The perception of his financial and economic power was even greater than his actual power, which was substantial and profound. For purposes of this paper, the Age of J.P. Morgan will be defined chronologically, from the early 1870s to the creation of the Federal Reserve System. The latter part of this age saw the transition of the securities market in the United States, what has been called the first speculative era. [Mitchell 2007].

Institutional Economics was born in the writings of Thorstein Veblen during the 1890s. His theoretical insights into the workings of industrial capitalism and finance sparked the development of a new school of economic thought. Veblen diverged significantly from the mainstream economic theories of neoclassical economists like Alfred Marshall and Irving Fisher. The strength of Veblen's theoretical approach was the focus on the interactions and fluctuations of the modern industry economy and the dynamics of financial markets. This analysis provided much greater attention on the role of investment banking in the merger movement in the U.S. and the increased speculation in common stocks in American securities markets. Stock market activity played a major role in Veblen's theory of business finance.

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Some historians date the "Age of Morgan" from the mid-1880s, with direct entry of the Morgans (Pierpont and his father Junius) into railroad cooperative management – a serious attempt to build an American railroad cartel. My preference is to select an earlier date to mark the inception of the J.P. Morgan age: the early 1870s, when Morgan pushed the House of Morgan into the market for federal government debt issues. Why go back to the decade of the 1870s to date the Morgan era? This venture into U.S. Treasury refinancing activities marked the beginning of J.P. Morgan's influence on Wall Street and London that survived beyond his own death.

BACKGROUND

In the modern financial world with a global financial structure in place, it may seem hard to look back to the investment scene a century and a half ago; during that time period, European financial centers, particularly London, dominated investment and finance. From the American perspective, major financial investments required an external source of funding. At the beginning of the 19th century, U.S. manufacturing and commercial activities were regional in nature and scope; therefore, regional and local investors were usually more than sufficient for the provision of investment funds. As cotton production expanded in the Southern states, the expansion of credit demands exceeded the capacities of regional financial markets. European, especially British, credit markets became a source of funds for the expansion of Southern cotton plantations.

George Peabody established the first significant American merchant bank in London's financial district in 1838. He managed to make his firm a prominent merchant bank through alliances with the Rothschilds and the Barings, the two leading international investment banks, and as the American voice in London that condemned the repudiation of bond debt by various states in the U.S. Peabody learned how to survive, and ultimately to strive, in an environment where American securities were often considered a joke.

> "London was the sun of the financial solar system. Only Britain had a huge surplus of funds in a capital-short world, and sterling was the currency of world trade; its official use dated back to William the Conqueror. In the afterglow of the Napoleonic Wars, bankers of the City – London's financial district – were self-styled potentates, often with access to more money than governments and companies they financed. Firms such as Barings and Rothschilds maintained an imperial reserve, omitting their names from doorways and letterheads, refusing to solicit business or open branches, and demanding exclusive client relations. Statesmen from Europe and Latin America trooped humbly to their doorsteps [Chernow 1990, p. 3].

After years of success, George Peabody decided he needed an American junior partner: enter Junius Spencer Morgan, J.P. Morgan's father. Here was a New England patrician with an excellent business reputation in dry goods and imports. After a few years on Wall Street, Junius Morgan entered the dry goods business in Hartford, Connecticut and eventually in Boston pp. [Strouse 2000, pp. 30-37]. Junius Morgan moved his family to London in 1854 as a partner to George Peabody. As a result, John Pierpont

Morgan, then a sixteen-year old, was exposed to international finance and culture, the two areas he would immerse himself in for the rest of his life.

When Peabody retired to become a renowned philanthropist (ironic, since he had been a Silas Marner-type hoarder of money all his life), Junius Morgan took over the firm and it became J.S Morgan and company. By then he had made sure that his son John Pierpont had an unusual combination of German university education in languages a stern moral education and apprenticeship in the financial world. From the time he was a young man in the business world until his father's retirement, Pierpont Morgan would serve as the New York agent and correspondent for the Peabody-Morgan merchant bank in London and their respective affiliates and business partners. While the Junius-Pierpont relationship was a fascinating one, we turn now to J. Pierpont Morgan's age in the world of finance.

THE AGE OF J.P. MORGAN

From the early days of the Republic through the entire 19th century, American economic expansion needed financial capital from outside the U.S. There was plenty of homegrown financial capital, and the financial markets, especially Wall Street, dated back to the early Dutch settlers. However, American economic growth was so great and the growing economy had such infrastructure needs that the American demand for capital was greater than the domestic supply. American financiers were never in short supply, but the prerequisite for the sophisticated growth of American financial markets was a financier who could straddle Wall Street and European financial markets.

John Pierpont Morgan was the perfect fit for American finance in the late 19th and early 20th centuries. Born in 1837 into a family where both sides of the family tree could trace their American roots to the first half of the 17th century, J.P. Morgan handled the rough and tumble world of financial speculation on Wall Street as well as he did the upper aristocratic financial circles of London or Paris. Morgan's name was synonymous with Wall Street wheeling and dealing from early in his well-groomed career.

J.P. Morgan was only 36 years old when he gained his first major success in investment banking. He successfully got his firm, Drexel, Morgan and Company the inside track on a share of the U.S. federal government's debt issue (government bonds to pay for government debt) in 1873. This fifty percent share of the $300 million bond issue was the first time a Morgan company had ever participated in an underwriting of national federal debt pp. [Chernow 1990, pp. 35-36]. This was to be the first phase of Morgan's financial relationship with Washington; the House of Morgan would continuously participate in funding federal debt issues. Pierpont Morgan often traveled to Washington to consult with Presidents, Vice-Presidents and numerous Secretaries of the U.S. Treasury. He played a behind-the-scenes role in cabinet appointments, and even presidential nominations.

A few years earlier Morgan had taken on the infamous Wall Street speculator in railroad securities, Jay Gould. Gould was one of the most notorious financial speculators of the 19th century; often known for stock manipulation and shady dealing. At issue was the control of a small upstate New York railroad that ran between Albany and Binghamton, the Albany and Susquehanna. Although it only ran 140 miles through the Catskill Mountains, its major financial asset was its rail links to the coal fields in Pennsylvania. Morgan beat Gould at his game: finding the right judge and paying off local officials to gain control of the railroad [Chernow 1990, pp. 30-32].

Railroad competition in the U.S. in the 19th century was simple to interpret. If a rail line appeared profitable, a new railroad might build a parallel tract to compete. Even if the direct competition did allow for profitable operations for the second line, competitive strategy might still justify the investment in the second line. Quite often the second parallel line was built to serve as a new route to connect an existing rail company with larger markets. Competition in the same rail market led to extreme rate competition, which made it very difficult to sustain profits, or even to break even. Investors were interested in building new lines because they projected control over railway markets in the long term; however, these investments often proved not to be profitable.

The expansion of railroad lines was usually funded by the issuance of bonds to European investors. The common stock of the railroad was owned by smaller groups of investors, and by speculators, who expected to gain control over other rail lines and build a bigger, profitable railroad line through consolidation. The model was Commodore Vanderbilt with the New York Central: the name itself reflected the consolidation of nine small upstate New York lines.

The scale of railroad finance vastly surpassed any industry in the U.S. economy by the mid-nineteenth century:

> “Investment in private railroad securities amounted to $1.1 billion by 1859, not including the value of government land grants and loans.” [Strouse 2000, p. 131].

Pierpont Morgan began buying up bankrupt railroads to control the industry through cooperative arrangements: the cartelization of American railroads. Contemporary observers and historians referred to it as the “Morganization” of railroads [Chernow 1990, pp. 66-67].

> “The lengthy catalogue of railroads that fell under his control included the Erie, Chesapeake and Ohio, Philadelphia and Reading, Santa Fe, Northern Pacific, Great Northern, New York Central, Lehigh…..Virtually every bankrupt road east of the Mississippi eventually passed though such reorganization, or Morganization….33,000 miles of railroads – one-sixth of the country trackage…Railroads then comprised 60 percent of all issues on the New York Stock Exchange.” [Chernow 1990, pp. 67-68].

By the second half of the 19th century, the New York Central was one of the four major East-West trunk lines in the U.S. After Cornelius Vanderbilt died, the family-controlled New York Central passed into the control of his son, William Henry Vanderbilt. The railroad covered over 4500 miles and was the main carrier between New York City and Chicago [Strouse 2000, p.197]. In 1879, the younger Vanderbilt (he was 58) had J.P. Morgan take the New York Central public through the sale of common stock. Morgan and his investment syndicate allies took seats on the New York Central board of directors, with the goal of the reduction of railroad competition [Strouse 2000, p. 198].

In that era, the early 1880s, the reduction of competition in the railroads did not work, but it was the first step toward later attempts to control the industry. By the 1890s fierce opposition to competition and private sector internal control was the essence of J.P. Morgan's approach to sound financial markets. There was no need for government regulation or control in the private sector. The investment banks would provide the managerial control and corporate strategy. No wonder Thorstein Veblen believed that the "immaterial capital" of J.P. Morgan's business deals had an almost spiritual quality to them.

Morgan was one of the first prominent Wall Streeters to think seriously about the stocks of industrial firms; in this he anticipated the merger wave of the late 1890s. For most of the 19^{th} century there were very few securities issued by industrial businesses because they were either too small or so large, like Standard Oil, that they could handle their own long-term finance. Electric power companies emerged as large capital-intensive industrial businesses with a great need to issue stock. In 1892 he facilitated the merger of two of the biggest electric power companies: Edison General Electric, Thomas Edison's company, and the Thomson-Houston Electric Company. The two were merged to create the modern day General Electric, with Thomas Edison losing out in the control of GE. Morgan's relationship with Edison was so strong that Edison continued to use Morgan's investment banking house in his other business ventures [Strouse 2000, pp. 311-313].

The single biggest financial deal anyone put together in that speculative era was the first billion dollar corporation. Morgan saw there would always be competition in the steel industry, so in 1901 he pulled together the three largest American steel companies into one merger. Although Andrew Carnegie initially resisted the deal, Morgan sweetened the pot and the U.S. Steel Corporation was created, capitalized at $1.4 billion. This was by far the largest company of its day, and continued to dominate the steel industry into the 1970s. The deal was Morgan's idea from start to finish, and demonstrated his power in investment banking, as well as the power of investment banking over the rest of the business community.

There were so many other deals that Morgan either created or participated in that it would take a book to detail them all. However, most historians have marveled over an entirely different feat of J.P. Morgan – his role in the financial panic of 1907. With a financial panic in full swing, and fear of another depression, Morgan singlehandedly eased the fears of the market by forming an informal syndicate of Wall Street bankers to keep the commercial banking system going and stem the slide in stock market prices.

Later economic historians have argued that in essence Morgan had acted as the central bank of the United States before one had been created in 1913: the Federal Reserve System. The public was delighted that J.P. Morgan had stopped the Panic of 1907, yet it was appalled that one man had so much power over the economy. Since that day no one person has ever held that much power over the American economy.

VEBLEN'S INSTITUTIONAL ECONOMICS

In retrospect it has been easy for economic theorists, and even historians of economic thought, to marginalize Thorstein Veblen's theoretical contributions to economics. In the late 1890s his analytical writings began the foundations of what was to become Institutional Economics. This was expanded in his *Theory of Business Enterprise* in 1904 and other writings over the next several decades. His focus was on the emergence of industrial capitalism and its impact on economic institutions and economic behavior. Over the course of the first three decades of the 20^{th} century, his work attracted enough followers to constitute a major school of thought in economics, particularly in America. Throughout the 1920s and 1930s Institutional Economics represented an alternative paradigm to Neoclassical economics.

Much has been written about why Institutional Economics lost the intellectual wars within economics [Yonay 1998; Hodgson 2005]. In the past decade even more has been written about the divergence between Veblen's original formulation of institutional analysis and the historical paths of those considered the followers of the Veblenian legacy. However, none of that is part of our purpose in the present paper. Here we turn back to the original attraction of Veblen's theoretical work: an explanation of the merger wave and the evolution of financial markets in advanced industrial capitalism. Financial panics and the fluctuations of the business cycles were part of Veblen's empirical analyses. He wrote *The Theory of Business Enterprise*_during the Rich Man's Panic of 1903 and his analysis reflected the very volatile economic movements in the American economy in the late 19^{th} and early 20^{th} centuries.

As the 21^{st} century began, the neoclassical models of economics and finance appeared to have inadequate explanations for the stagnancy of financial markets. Theorists turned to the historically dependent, bubble models to analyze and explain the collapse of the U.S. stock market in 2000, and its stagnation for the next several years. The collapse was accompanied by news of financial fraud, the corruption of accounting standards, pie-in-the-sky profit projections and the flow of false financial information. The tendency to treat each case as an aberration from standard finance lost much of its appeal. Yet if we turned back 100 years to Thorstein Veblen's *The Theory of Business Enterprise* we would find an interesting and robust analysis of present day corporation finance. Today, as the U.S. financial markets appear ready to collapse in a manner similar to the 1870s and 1930s, a visit back to the Veblenian model of earlier eras is more than called for: it is a necessity.

Unlike Alfred Marshall or Irving Fisher, Thorstein Veblen was never bound by the constraints of either physics envy or general equilibrium methodology. According to Veblen the giant corporations of the late 19^{th} and early 20^{th} centuries were not primarily interested in profit-maximization through the production and sale of products. Veblen put corporation finance as the centerpiece of his analysis of large, acquisition-minded companies. In Veblen's analysis, the corporate finance structure was capitalized on the earnings capacity of the corporation as a going concern [Veblen 1904, p. 137]. The capital of the company included not only its material capital but also its immaterial or intangible capital, measured by goodwill. This was one of the criticisms Veblen made about Fisher's theory of capital. He argued that

Fisher erroneously excluded immaterial capital from his definition of capital [Veblen 1998, p. 154]. American markets for securities had changed significantly in the J.P. Morgan era. Stock issued by industrial firms had become the new source of wealth and the cause of the fluctuations of the economy. The "speculation economy" began in earnest during the 1890s [Mitchell 2007, pp. 7-12]

The role of investment banking in corporation finance drew special attention from Veblen; he claimed that successful investment bankers had their own unique form of "goodwill," even though it was difficult to quantify [Veblen 1904, p. 171]. J.P. Morgan and Company was the prototype in investment banking, "and more unequivocally, the good-will of the head of that firm." [172]. Veblen extended this notion of the goodwill of a captain of finance to captain of industry like Andrew Carnegie in the steel industry. For Veblen this type of goodwill could be used over and over again, and was spiritual in nature:

> "But goodwill on this higher level of business enterprise has a certain inexhaustibility so that its use and capitalization in one corporation need not, and indeed does not, hinder or diminish the extent to which it may be used and capitalized in any other corporation……Like other good-will…it is of a spiritual nature, such that, by virtue of the ubiquity proper to spiritual bodies." [Veblen 1904, p. 173].

Corporate management had to make sure the "putative earnings" of a company were valued as highly as possible by the securities market. This was to be the case even if there was a substantial discrepancy between the putative earnings capacity and actual earnings. What is now called expected future earnings was the foundation of Veblen's theory of corporation finance. The ability to manipulate perceptions in the stock market was the essence of this management:

> "It follows…that under these circumstances the men who have the management of such an industrial enterprise, capitalized and quotable on the market, will be able to induce the putative and actual earning – capacity, by expedients well known and approved for the purpose, partial information, as well as misinformation, sagaciously given out at a critical juncture, will go far toward producing a favorable temporary discrepancy of this kind, and so enabling the managers to buy and sell securities of the concern with advantage to themselves [Veblen 1904, pp. 156-157].

How familiar this all sounds in the 21st century: the manipulation and falsification of financial information to lead investors in a direction determined by corporate managers and investment bankers. J.P. Morgan had spent twenty years trying to control the railroad industry; his goal was to stabilize the value of railroad securities. The control of industrial markets was always directed at the value of corporate securities.

There was no reason to believe the interest of corporate managers and the permanent interest of the corporation would coincide. Clearly, in Veblen's view, the management self-interest and the broader community interests in efficiently produced output would seldom coincide. The business interest of managers demanded the manipulation of the stock price of the company, not the production and sale of products [Veblen 1904, p. 159]. Stock prices would be pushed up or down by effective management.

These manipulations of the value of stock carried a risk to the company but little risk to the managers. Veblen commented that managers had less to risk because they held limited shares of stock [Veblen 1904, 167]. From his perspective, such market manipulation was not necessarily difficult:

> "Indeed, as near as one may confidently hold an opinion on so dark a question, the certainty of gain, though perhaps not the relative amount of it, seems rather more assured in the large-scale manipulation of vendible capital than in business management with a view to a vendible product." [Veblen 1904, p. 166].

FINANCIAL MARKET DYNAMICS

Was Veblen projecting future trends in the stock market, or the actual events of his own day when he analyzed stock market manipulation? Overcapitalization of a corporation going public was called "watering the stock" in Veblen's day; it was a common practice. In the 19th century, capitalization meant the nominal value of the stocks and bonds, as stated in its corporate charter:

> "A corporation's capitalization might not, and typically did not, reflect either the amount of the securities that it actually issued, nor their value as they traded on the market. Yet, a corporation's capitalization commonly was used as a proxy for its size." [Lawrence 2007, p. 58].

The expression "stock watering" or "overcapitalization" meant the following: the company stock issue was greater than the cash value of the balance sheet assets of the company. The expression "watering stock" came from an earlier practice in the sale of cattle: a herd driven to market with little water was "watered" last before the weigh-in in order to bloat the cattle and increase their weigh-in weight [Lawrence 2007, p. 59]. It is important to note that the practice was widespread, and today in corporation finance would not mean anything about a public issue of stock. Veblen followed the business practice of the use of the term "goodwill" as a way to explain the difference between the value of stock and the value of tangible assets; he referred to it as a form of immaterial capital.

The primary use of the process of overcapitalization was to provide incentives for investors and those who promoted mergers or consolidation. This biggest deal of the J.P. Morgan era was the formation of the U.S. Steel Corporation, the largest steel company in the world. This was the first billion dollar corporation, capitalized at $1.4 billion. Measured in terms of total economic activity in 1901, the deal would have been 7% of the gross domestic product. Andrew Carnegie received $240 million to merge his company with two other large steel producers; the total expenditures of the federal government in 1901 were $350 million [Strouse 2000, pp. 402-404]. This feat of early 20th century finance took twelve weeks for J.P. Morgan to put together. The overcapitalization was of a sizeable magnitude: tangible assets of the consolidated company, $676 million and overcapitalization of $727 million:

> "The Morgan syndicate took 1.3 million shares (common stock) as its fee, which it dumped on the market for ….$62.5 million…Economists of the time….left no doubt that promoters' and bankers'

> profits were to come from the sale of stock, not from holding the stock and receiving dividends." [Mitchell 2007, pp. 68-69].

What Veblen drew attention to was new to the merger era: investment bankers for shares in the old companies with shares in the new corporation, which was created. Other prominent economists of the day, like Marshall and Irving Fisher, ignored these developments in capital markets. Those economists with an interest in the phenomena were obsessed with the "stock watering problem," not with the evolution of financial markets; only Thorstein Veblen grasped the significance of overcapitalization in the fluctuations of the economy.

These financial developments were not unique to the U.S. Steel deal that J.P. Morgan put together. At the heart of the deal was the capacity to organize an investment syndicate. In 1879, Pierpont Morgan organized an underwriting syndicate for the last Civil War debt refunding. Two critical long-term consequences occurred as a result of this project. The first was straightforward: the end of the House of Morgan's dependence on foreign banks, like the Rothschilds. The House of Morgan would control the funding projects, often allied with other Wall Street banks [Strouse 2000, p. 186]. The second was to create the financial institution which moved from that era to the present day:

> "The syndicate system, under which groups of bankers shared selling, profits, and risks, came to serve as the prototype for underwritings of large securities issues….After 1879 the aggregation of the great sums of money was absolutely essential for the conduct of human affairs….and the head of the syndicate – the man with resources and temperament capable of conducting them – was about to concentrate the greatest financial power in the history of the world." [Strouse 2000, p. 187].

CONCLUSIONS

Thorstein Veblen's theoretical analysis of corporation finance during the Age of J.P. Morgan was one of the few explanations of industrial capitalism to focus on business decision-making and the role of investment banking. While he constructed a grand theoretical framework based on the evolution of institutions, Veblen's analysis was grounded in empirical observations, both systematic and causal. His goals were threefold: (1) apply Darwinian evolutionary analysis to the economy; (2) provide an explanation of business cycle trends and (3) explain the link between individual business decisions to the economy as a whole. Some heterodox economists have suggested that Veblen was a predecessor of John M. Keynes and Keynesian theory. Clearly it is worth exploring, as we have tried to do in earlier papers.

Veblen understood at least as well as Keynes that there was a direct link between business investment decisions, financial markets and the overall activity of the aggregate economy. Like Keynes, Veblen believed that the flow of financial information and the level of uncertainty could serve as a destabilizing force in the economy. However, Veblen saw the concentration of financial power and the capacity to manipulate information in financial markets in a manner not central to traditional Keynesian economic theory. The flow of investment capital was controlled significantly by the institutions of investment banking, especially the firms with links to international financial markets like Morgan; certainly not the seamless, smooth-flowing process envisioned by Irving Fisher in his general equilibrium approach.

The Darwinian world of industrial capitalism was reflected in business failures and business consolidations in American industry. At the very time Neoclassical economic theory was beginning the long process of rigorous interpretation of very competitive markets, the evolution of the real economy moved toward monopoly trust control and informal cartelization. While there has been an almost romantic sense of the Gilded Age's "captains of industry," the harsh reality was Wall Street control of industrial growth. By the turn of the 20th century there were public outcries against the "money trust" of Wall Street, the personification of which was J. Pierpont Morgan. Institutional Economics had the only substantial analysis of what evolved in the economy. The original movement of Institutional Economics toward the biological models of evolutionary analysis was in stark contrast to the atomistic framework that Neoclassical Economics borrowed from physics.

Thorstein Veblen was never critical of the scientific metaphors of physics. There was first the sense that they served as a poor theoretical foundation to explain industrial capitalism. Veblen understood, better than Alfred Marshall and Irving Fisher, the distinctions in scientific modeling between the biological and physical sciences. Financial panics were never captured by the neoclassical theories, either of the Age of J.P. Morgan or our era of housing bubbles and securitization. Veblenian attention to investment banking as the core of the economic system is as true today as it was a hundred years ago. In our modern era, the efficient market theories of neoclassical finance have yet to explain irrational exuberance or bursting financial bubbles. Now, in a real financial panic, it is only heterodox economics that offers a theoretical explanation as well as policy solutions.

The Age of J.P. Morgan created the institutional environment for the merger movement as a direct result of securitization. In this case, the securitization was the acceptance of the common stock of industrial firms as a major investment vehicle. Today it is hard to understand that the common stock of industrial business was too risky and not mainstream enough for financial markets until the turn of the 20th century. It was not until Pierpont Morgan and a handful of investment bankers made industrial common stock a "reasonable investment" asset that the U.S. stock market transformed itself into its modern format. Thorstein Veblen was the only economic theorist to grasp the transformation that had taken place. Without an appreciation of the financial environment at the very beginning of the 20th century, it is very difficult to comprehend Veblen's *The Theory of Business Enterprise*. It should be reread with that in mind, as we search for new answers in the latest financial panic of the 21st century. Once again mainstream economics has feeble interpretations of financial and economic events. It is ironic that neoclassical economists debate how to restore or rebuild confidence in financial markets. Post Keynesian, Marxists and Institutionalists have written about the sequence of events as they have unfolded in the past decade.

The point of this paper is that Thorstein Veblen's analysis of the interaction between financial markets and industrial activity remains a highly productive guide to our modern economic world.

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