Accounting Historians Journal

Volume 35
Issue 1 *June 2008*

Article 5

2008

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Accounting Historians Journal
Vol. 35, No. 1
June 2008
pp. 83-110

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EARLY BOOKS ON INVESTING AT THE DAWN OF MODERN BUSINESS IN AMERICA

Abstract: The purpose of this study is to enhance understanding of early investment practices and the role financial and other information played in those practices. The primary method employed is to examine early books on investing published in the U.S. Early authors described stock market operations including manipulations of security prices by the bulls and the bears. Their solution to this manipulation was to educate investors and provide company information, mostly through directories and manuals. This study shows that financial and other information was thought by the authors to be critically important at the time that the securities markets were first called upon to provide capital to the railroad industry, the first modern business in America.

INTRODUCTION

Jim Cramer [2006] of CNBC's *Mad Money* advocates doing homework before purchasing a stock. This entails knowing how a company makes money; those factors that influence its sector; assessing its performance; checking out its competition, including evaluating earnings and growth; and analyzing its balance sheet and cash flow statement. Billionaire investor Warren Buffet's [2001] approach involves studying the prospects of a business, assessing the quality of its management, and purchasing its stock at a reasonable price. He is interested in easy to understand businesses that are very likely to have long-term earnings growth. Fama and French [1992] have found that factors other than beta from the capital asset pricing model are associated with stock returns [Sharpe, 1964; Lintner, 1965]. These factors are company size and book-to-market equity. In short, prudent investing requires information.

Acknowledgments: The author is grateful to two anonymous reviewers for their helpful suggestions, as well as to participants at the 2006 and 2007 American Accounting Association Midwest annual meetings for their comments on earlier versions of this paper.

While information is currently important to investors, was this always the case? And, if so, what type of information was considered useful? To help answer these questions, this study examines the role of information in early securities markets. In particular, it investigates the development of the financial markets for corporate securities in the U.S. and the attendant demand and supply of financial and other information for those markets.

The primary method of investigation entails examining the earliest books on investing published in the U.S. The time period covered ranges from 1848 through the 1860s, which, by no coincidence, corresponds with the rise of the railroad, the first modern business in America. The books examined portray the security markets, the need for information to make informed decisions, and the initial attempts to fulfill that need in a systematic way through directories and manuals. Those initial attempts to provide information are consistent with the Financial Accounting Standards Board's main rationale of financial reporting, namely providing information useful in investment and credit decisions [FASB, 1978]. By enhancing understanding of the development of investment practices and information needs, this study should lead to a greater appreciation of both the role and the evolution of financial reporting.

Two methods are used to identify books for this study. First, using WorldCat [2005], books are identified based on a fairly comprehensive list of search terms.[1] The search period ranges from the founding of Jamestown in 1607, the first permanent English settlement in the future U.S., through 1869, the closing date of this study. Second, also included in this study are the earliest railroad directories and manuals identified by Chandler [1956].[2]

Since the focus is on investment in corporate securities, the following additional criteria are used to identify a book for this

[1] Terms include investments, investment, invests, invest, investor*, common stocks, common stock, preferred stocks, preferred stock, joint stock, stocks, stock, bonds, bond, securities, financial statement*, annual report*, Wall Street, and speculat* (as with search engines, the asterisk accounts for all forms of endings for a word). As such, this study extends backwards in time the work of Janson and Thompson [2003] who performed a similar search using investing, financial statement analysis, and security analysis. The earliest work identified in that study was Hume [1888].

[2] Some of these were not identified by the previously described search of WorldCat. A supplemental search of WorldCat using a variety of search terms involving "directory" and "manual" identified two additional relevant sources from the 1860s that are also included in this study.

study. First, the book must deal with investing in stocks or bonds of corporations; governmental securities are excluded. The book must address more than one corporation and not be limited to corporations in a single region (e.g., railroads in the Confederate States of America). Since the emphasis is on general investing practices, a book on a single corporation or a single region, which often appeared to be promotional, seemed of limited usefulness. Books focusing on the legal aspects of corporations or acts of legislatures, for which there were a fair number of hits, were omitted. While legal aspects undoubtedly play a role in the selection of securities, the emphasis here is on investing practices, taking the legal background as given although it does change over time. As noted, the book had to be published in the U.S. and concerned with American markets and companies. Though securities are certainly traded in other countries, the focus is on the U.S., which currently has the most extensive security exchanges in the world. It is the development of investment practices and the provision of financial information in that context that is of interest here. Corollaries are that the book had to be written in English, not be an Americanized version of a book initially published elsewhere (e.g., London), and be non-fiction. Finally, candidate books had to be available through interlibrary loan so that they could be reviewed.

Using these criteria, the earliest book identified is Armstrong [1848] and the first railroad directory/manual is Homans [1856]. Several other railroad directories/manuals are also examined in this study along with manuals from other sectors. This study terminates in the late 1860s with the inception of the most successful railroad manual, Poor [1968]. Poor's manual continued annually for 56 years through 1924.

This study is organized as follows. After the early development of the stock market is described in the next section, the nature of the securities markets and the demand for information is discussed. The subsequent section covers the supply of information which came primarily through railroad directories/manuals. The final section includes a summary and concluding remarks.

DEVELOPMENT OF THE NEW YORK STOCK MARKET TO THE 1860S

Although a stock market was first started in 1792, the New York Stock and Exchange Board was formerly organized in 1817 with the adoption of a constitution and a set of bylaws [Geisst, 2004]. This more formal organization was necessitated by an increase in the number of securities following the War of 1812 [Eames, 1894]. To help with its formation, a representative was sent from New York to Philadelphia to inquire of the method of organization and workings of that city's more mature exchange [Financier Company, 1887].

Even after 1817, the number of securities traded on the New York exchange was still small, typically ranging from a daily volume of a few hundred shares in the 1820s to a few thousand in the early 1840s. Myers [1931] reported a daily peak of 8,700 shares in 1834, while only 14 shares were traded on a day in 1827. However, by the 1850s, weekly volume had increased to hundreds of thousands of shares [Chandler, 1977]. Remarkably, for the year ended June 30, 1865, the New York average daily dollar value of trades including gold transactions grew to $20 million [Stedman and Easton, 1905].

Other than governmental securities, banks and insurance companies dominated the early New York exchange. In 1830, the listings contained 14 New York City banks, 31 New York insurance companies, and 11 miscellaneous companies (including the U.S. Bank) [Anonymous, 1861]. In August 1830, the Mohawk and Hudson Railroad was the first railroad to have its securities traded [Myers, 1931]. Railroad securities would increase in importance with the industry's rapid growth starting in the late 1840s. Track mileage in the U.S. went from 5,265 miles at the beginning of 1848 to 24,290 miles by 1857 [Train, 1857]. Mileage doubled to 48,860 miles by the end of 1869 [Lyles, 1870].

At the beginning of this period of rapid railroad growth, New York became the leading security market, surpassing Boston [Chandler, 1977].[3] The number of railroads with common stock on the New York exchange grew from 26 in 1848 to 39 in 1857, while even more striking, during the same period, the number of railroad bond issues traded went from four to 77 [Anonymous, 1861]. Nationwide, by the late 1860s, there were over 360 railroads with stock outstanding and over 700 bond issues [*American Railroad Journal*, 1869].

One of the most notable events for American stock markets in the first half of the 19th century was the Panic of 1837. Precipitated by the specie circular of that year and the distribution of surplus federal funds to the states, there was a severe contraction of bank loans, ultimately leading to a crash of security prices and, after a brief recovery and problems with American

[3] Boston had briefly been the leading market, surpassing Philadelphia when the charter of the second Bank of the U.S. expired in 1836 [Chandler, 1977].

credit in England as well as declining cotton prices, to an economic depression from 1839 through 1843 [Govan, 1959; Garraty, 1995]. In brief, the specie circular required purchases of government lands to be paid for in coin rather than paper money. In addition, the U.S. government's return of surplus federal dollars to individual states also drained banks of their specie which was the basis of the currency in circulation. As a result, banks had to reduce their outstanding loans to correspond with their reduced specie reserves. Unfortunately, with the expiration of the charter of the second Bank of the U.S. in 1836, the U.S. lacked a central bank that might have been able to avert the crisis [Geisst, 2004]. One of the consequences of the panic and subsequent depression was that several states repudiated their debt obligations issued in conjunction with internal improvements, especially canals [Myers, 1931]. Consequently, it would not be until the late 1840s and early 1850s that foreign investors, a necessary supplier of capital for the U.S., would be tempted to make significant purchases of American securities [Chandler, 1977].

Another notable shock was the Panic of 1857. Precipitated by the default of the Ohio Life Insurance and Trust Company on August 24 of that year, security prices plummeted and banks had to suspend specie payments as they found that the value of the collateralized securities on their overextended loans proved inadequate [Medbery, 1870]. The economic conditions of the time were also affected by a decline in wheat prices as Russia entered the market after the Crimean War, railroad shipments declined, unemployment increased, and banks experienced runs [Garraty, 1995]. The economy recovered quickly but after rebounding somewhat, railroad security prices fell again in the Panic of 1860 due to the approach of the Civil War [Anonymous, 1861; Medbery, 1870; Stedman and Easton, 1905; Garraty, 1995]. However, spurred by war production, increases in gold prices, government issuance of paper money (greenbacks), and merchants speculating, railroad stock prices would improve dramatically during the Civil War [Medbery, 1870; Stedman and Easton, 1905]. Speculation was rampant as security prices changed, leaving Hamon [1865, p. 142] to conclude that "Paper money brought every one into Wall Street…"[4]

With respect to raising capital, during the first half of the

[4] Stock prices would fall in the "Morse Panic" of April 1864, when Secretary Chase sold gold bullion, thereby reducing the supply of greenbacks. Another panic occurred on "Black Friday," September 24, 1869, as a consequence of an attempt to corner the gold market [Stedman and Easton, 1905].

19th century, most businesses such as textile mills and iron firms did not need capital from outside their regions [Chandler, 1977]. Moreover, corporations were slow in supplanting the partnerships of colonial times; those that did were generally self-financing [Myers, 1931]. However, conditions changed in the late 1840s with the rise of the railroads as the first modern businesses in America as professional managers, rather than owners, started to operate them. Unlike canals that were mostly publicly financed, railroads were predominately privately financed through corporate stocks and bonds. Significant capital was required of the security markets; investment in railroad securities from the late 1840s to the late 1850s would jump from about $400 million to $1.1 billion [Chandler, 1977]. It was on the eve of the expansion that the first book on investing in the U.S. was published.

THE STOCK MARKET AND THE DEMAND FOR INVESTMENT INFORMATION

In this first book, Armstrong [1848, preface] explained the workings of the stock market at this time to his readers as well as to warn of its pitfalls. He believed that his was the first such work: "...hitherto there have been no means of an uninitiated person to acquire such knowledge, as might be necessary for an operator, except from experience, which is generally a dear schoolmaster."[5] After defining some basic terms, Armstrong embarked on describing price changes or "fluctuations." Importantly, he noted that, "The market price of Securities is principally determined by their intrinsic value, that is, the state of affairs of the Company which the Stocks represent, the amount of dividend which they pay, the state of interest, &c." (p. 6).[6] He added that also affecting the market price are general conditions and, particularly, the money market.

Armstrong classified price changes as natural and unnatu-

[5] It is possible, of course, that earlier works touched upon investing, especially if only part of the book addressed stocks or bonds, but was not reflected in the bibliographic record in WorldCat. One such interesting case was authored by Noah Webster [1802] who, in an appendix, included capital and dividend information for banks and insurance companies. Yet, Webster was more concerned with the economic development of a young U.S. than investing opportunities. Similarly, in an early book on railroads and canals, Tanner [1840] focused upon physical characteristics of a highly desired transportation system rather than "pecuniary" concerns that he considered secondary.

[6] Armstrong referred to securities as having an "intrinsic value," one of the fundamental tenets of Graham and Dodd [1934], published 86 years later.

ral. He continued that, while "…Government and State Stocks and Securities, which are valuable for investment, are, comparatively speaking, but slightly affected by the latter…Strange as it may seem, the greater part of the transactions on the Exchange are those relating to a class of *in*-securities, called Fancy Stocks" (p. 7). Armstrong noted that it is the bulls and bears that operate in fancy stocks or stocks of corporations that have essentially failed, hence incapable of paying dividends. However, "Their [sic] real worth, or rather worthlessness, is so little known, that it seldom interferes with an unlimited expansion or contraction in prices, as according as the wealth or talent employed on either side may preponderate" (p. 13). Armstrong commented that, "The more worthless and uncertain in value any Stock may be, it is proportionately a favorite among Stock Gamblers" (p. 30). Henry Varnum Poor, editor of the *American Railroad Journal* (*ARJ*), expressed similar sentiments [*ARJ*, 1851a, p. 6]: "The favorite foot-balls in the stock market are those whose value is *problematical*...So long as its capacities remain a matter of conjecture anything may be predicated of it."

This lack of information sustained a gaming environment, especially through margin buying at 5% of par and time operations that allowed the purchase/sale of stock with delivery and payment at a future date. A time buyer (seller) contract is where the buyer (seller) has the right to demand (make) delivery of a set number of shares of a security at an agreed price with one day's notice up to the term of the contract, typically three, 30, or 60 days, at which point delivery would be made if not demanded by the buyer or made earlier by the seller.[7] Armstrong disparaged time operations as betting.[8]

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[7] As further evidence that Armstrong's work was one of the first on the stock market, *Hunt's Merchants' Magazine* [1849a, p. 670], a business periodical of the time, also described time and stock market operations, noting that the article "…contains some information that will be new to many readers of the *Merchants' Magazine*..." Similarly, *The Bankers' Magazine and Statistical Register* [1851] reprinted an article explaining what stock brokers do, including what are "bulls" and "bears."

[8] Time operations would dominate transactions until the call loan market developed sufficiently in support of margin purchases in the late 1850s [Myers, 1931]. Nevertheless, time operations would continue on Wall Street [Medbery, 1870]. Today, time operations have essentially been replaced by margin buying and short sales. It is worth noting that the initial margin requirement is currently 50% of market value, a far cry from the 5% of par value, usually $100, in Armstrong's time. The initial margin requirement is now set by the Board of Governors of the Federal Reserve System and has ranged from 40 to 100% since 1934 [Sharpe, 1981].

Armstrong returned to this gambling idea in several places in his manuscript. In discussing the actions of the bulls and bears, he added that, "…the excitement and infatuation which it induces is not surpassed by any description of gambling" (p. 16). He asserted that it is the excitement of gambling that leads to single speculations, against which he advised. It is not just material wealth, according to Armstrong, that the participants are pursuing. Instead, it is "…an almost irresistible infatuation, no less powerful than that which exercises such control over the votaries and victims of gambling hells. It has all the excitement and uncertainty of cards and dice, and is consequently as seductive and alluring" (p. 27).[9]

Others expressed similar conclusions as Armstrong's. *Hunt's Merchants' Magazine* (*HMM*) [1852b, p. 713] warned against speculation, noting "…that the promise of great gains at a small expense and risk, is always a deceit." The *New York Times* (*NYT*) [1858] also equated time operations as speculations and gambling and was skeptical that a legislative effort could prohibit them.[10] Freedley [1859, p. 33] stated that, "No business is in fact more uncertain or more certainly disastrous than stock speculating." Hamon [1865, pp. 141, 143] observed that when speculation "…has for its object securities imperfectly known, the income of which is a mystery, and the real value of which is a secret but to originators, it falls to the level of mere gambling, with all concomitant evils of swindling and sharping." He added that few are successful, but that, "Men see the display of one… leading thousands of noble geniuses to sacrifice themselves in wild adventures, which terminate in cruel disappointment." Forty years after Armstrong's work was published, Hume [1888, pp. 120-121] also characterized the New York Stock Exchange essentially as a casino: "The Exchange, while having a share of

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[9] Apparently, temptation to speculate in the stock market was so strong that Sabine [1852] thought it necessary to warn new bank cashiers not to do it with the bank's money. Moreover, some of the early securities brokers had been lottery ticket salesmen before lotteries were largely outlawed in the U.S. [Redlich, 1951]. Perhaps, both they and many of their customers viewed a share of stock as more or less a lottery ticket.

[10] Poor did not like speculation because of its effect on security prices and the potential for leading to the demise of a railroad. Poor wrote: "Speculations in stocks is the worst form of gambling…" [*ARJ*, 1851b, p. 73] and felt that selling on time should be outlawed. On the other hand, not everyone at the time viewed "speculation" as necessarily bad. An article in *HMM* [1851b, p. 782] pointed out that merchants speculate when they buy goods on credit. It added that everyone speculates in that they "…are all endeavoring to acquire something of which they are not now in possession…"

legitimate business, is chiefly an immense gambling establishment." He added that, "Wall Street is a place where a few fortunes are made and a great many are lost."

What with the presence of "swindling and sharping," it was not a fair game. The nature of time operations creates, according to Armstrong [1848, p. 12], conflicting interests where the bulls are trying to raise prices and the bears depress them. With the bulls and the bears acting in their self-interest, "...inevitable fluctuations are aggravated, and unnecessary or unnatural actions and reactions are produced by the various manoeuvres [sic] resorted to." The bulls tried to corner the bears by quietly purchasing a large number of shares and buying contracts, waiting for the rise in price as the bears, sellers on time, had to fulfill their contracts at higher prices given the scarcity of the securities.

Armstrong [1848, p. 17] warned that participants' actions "…are often characterized, not only by extreme acuteness and subtility [sic], but also by the most infamous and remorseless treachery and duplicity." The participants often employed others in their cause to espouse or denigrate a stock, including bribing newspapermen. Along these lines, an article in the *NYT* [1856a] accused a broker, Jacob Little, who was "short," of enlisting the *Herald* to do his bidding by forecasting disaster in the stock market. On other occasions, the *Herald* "puffed" the value of other worthless stocks [*NYT*, 1856b, c]. A bull might have also tried to induce bears into selling by having an agent sell some of the bull's shares and leading the bears to believe that a decline was on the way. At the same time, the bull secretly authorized another agent to purchase the bull's and other shares offered in the market, thus recovering the shares initially sold and more besides. Street operations also provided the opportunity to deceive others through wash sales where two bears (or bulls) agreed to buy and sell a security below (above) its market price, giving the other brokers nearby the impression that the security's price was falling (rising). Armstrong also warned of unscrupulous brokers, who might be the counterparties of time purchase contracts, and, therefore, might manipulate their clients for their own advantage. Armstrong related an anecdote where a broker encouraged a client to hold on to his time purchase contract while the client was out of town, knowing the stock was due for a fall. The broker had sold the contract to the client. Cornering and wash sales were also described in an article reprinted in the *HMM* [1849b, p. 118] which commented that while brokers honored their contracts, "By common consent every stock broker is allowed to lie as much as he pleases when making a bargain…"[11]

Given this state of affairs, Armstrong [1848, pp. 23, 28] was skeptical of achieving success in the stock market, concluding, "Therefore, the most rational mode of deciding, in our opinion, with regard to the expediency of being a Bull or a Bear, is to close one's eyes, toss up a penny, and abide by the result." Nevertheless, Armstrong provided some suggestions – not risking all one's resources on one security, obtaining contracts in writing, requiring deposits on contracts, and using trustworthy brokers. Most importantly, in his concluding remarks, Armstrong advised novice investors to "…invest only in securities of known value; for if this were the case, there would be fewer bubbles manufactured, and a smaller portion of the aristocracy would owe their *exalted* position to the ruin and heartrending misery of the hundreds of poor and credulous people whom they have entrapped with their damnable knaveries."[12] Hamon [1865, p. 142] gave similar advice: "Small capitalists should invest their funds in well-authenticated securities, but always for cash, for fear of being cornered and obliged to sell when their Stock declined..."

To this end, Armstrong [1848, p. 28] included an appendix that should have helped outsiders to carry out his advice. Here, Armstrong gave a brief description of ten fancy stocks: "…to give outside speculators generally an idea of what they are meddling with, as in nine cases out of ten, speculators know no more of the Stock they buy or sell than their names." His descriptions entailed a brief history, including financial troubles and such items as par value, recent market values, price ranges for the stock, any dividends paid, leading shareholders, debt burdens, and occasional comments on the management.[13] Hence, Armstrong believed that information should help outsiders in making rational decisions.

Others thought information was the key as well. Poor in *ARJ* [1849c, p. 581] urged state commissions to inspect a railroad and report related financial information when it opened a new section. The hope was that, "It will give a steady and uniform

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[11] Members of the stock exchange also honored their contracts. Through August 1865, only three members of the exchange had been expelled for dishonesty [*NYT*, 1865].

[12] Apparently, Armstrong had first hand experience with coming out on the losing end of the stock market given that he signed his title page as "A Reformed Stock Gambler."

[13] In the other two appendices, Armstrong provided brief descriptions of brokers and brokerage firms to help outsiders select them more wisely, as well as a listing of the members of the old and new boards of the stock exchange.

value to railway stocks, and preserve it against those violent fluctuations so often witnessed, and effectually put an end to the present enormous amount of gambling in railway stocks, by which so many are ruined, by putting it out of the power of designing and cunning men, to make dupes of the weak and inexperienced." Train [1857, p. 213] encouraged railroad stockholders to attend stockholder meetings in person and not to send proxies. He urged them to "Ask for the accounts; examine well the details, especially of the 'construction account'." Stow [1859] thought stockholders have no one to blame but themselves since they rarely kept track of directors' actions. Thus, Poor, Train, and Stow, in addition to Armstrong, each thought that accounting and other information could help investors improve their understanding of railroads and investment decisions.

THE SUPPLY OF INVESTMENT INFORMATION

As noted, Armstrong and others thought that one of the solutions for the stock market was to provide information so that outsiders would know what they were buying. This was one of the motivations for ensuing railroad and other sector directories or manuals. Poor [1860, preface], in his initial attempt at a manual, concluded in consideration of obtaining the needed information:

> What is wanted, consequently, is a work which shall embody within convenient compass a statement of the organization and condition of all our companies and at the same time present a history of their operations from year to year, which would necessarily reflect the character of their management, the extent and value of their traffic, and supply abundant illustrations, with which to compare similar enterprises that might be made the subject of investigation and inquiry.

Annual Reports and Periodicals: It should be noted that some companies did provide annual reports to shareholders. For example, railroads in Massachusetts and New York were required to do so in the 1840s [Chandler, 1956], and New York's general incorporation law of 1848 required annual reports of paid-in capital and debt [Baskin and Miranti, 1997]. The Baltimore and Ohio Railroad provided reports from its inception in 1827 [Previts and Samson, 2000]. Examples of reports from the 1840s include those of the Utica and Schenectady and the South Carolina railroads [Previts and Merino, 1998].

Periodicals of the time also provided some information. For example, *HMM* devoted a section to "Railroad, Canal, and Steamboat Statistics," which included sporadic summaries of annual reports of railroads. These typically reported abbreviated earnings, dividend, operating, and fare information. Sometimes balance sheet information was provided. A few of the entries were extensive, such as for the Camden and Amboy Railroad and the Raritan Canal [*HMM*, 1848] that included details of the cost of the road, monthly receipts and expenditures for 1832-1847, and passenger and freight information. All in all, for 1848, information for about two dozen railroads was provided. Longer articles also occasionally appeared, such as "Massachusetts Railroads" [Balfour, 1848], which contained a table showing breakdowns of receipts and expenses, net income, percent of net income to the cost of the railroad, passenger and freight miles, and some ratios, such as net income per mile run, for 18 railroads. But, overall, the information was neither consistently provided from year to year nor very comprehensive. By the end of 1849, *HMM* also included a section entitled "Commercial Chronicle and Review," discussing the money market, banking, imports/exports, and general comments on the stock market.

HMM [1852a] began to provide in tabular form annual operating and financial information for railroads in Massachusetts.[14] The financial information included the following data: cost of railroad; receipts, broken down by passengers, merchandise, and mails; expenses, broken down by road bed, motive power, and miscellaneous; net income; and net income as a percentage of cost. Receipts, expenses, and net income were also calculated per mile run. Similarly, a table first appeared in *HMM* in 1854 for Connecticut railroads. The financial data included capital, capital paid-in, cost of road, gross earnings, working expenses, net earnings, dividends, debt, surplus, and calculations of various costs and earnings per mile run. However, such tables were the exception rather than the rule.[15]

Although less extensive than *HMM*, the *Bankers' Magazine and State Financial Register* (*BM*) [1848, 1850b] also provided some information. Monthly closing prices for selected stocks for

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[14] The table replaced textual information provided the previous two years [*HMM*, 1850, 1851a]. With the notable exceptions of dividends and interest, the tabular form contained more financial information.

[15] Tables sometimes were included for other industries. For example, *HMM* [1853] presented a table showing balance sheet information for banks in Pennsylvania. As for railroads, *Hunt's* included bank information, often capital and dividends, on a sporadic basis.

1847 were given in 1848 and, subsequently, in 1850, a monthly exhibit of the ranges of stock prices was given. Elsewhere, Boston bank statistics were provided infrequently, including capital and dividends [*BM,* 1846], and occasional write-ups on railroads, such as for the Boston and Worchester, showing breakdowns of receipts and expenses for 1842-1849 [*BM*, 1850a]. It also had a section, "Notes on the Money Market," devoted to the money market that contained mostly general statements about the stock market.

The *NYT* also had a stock and money market column, initially entitled "Commercial and Money Affairs," that reported stock transactions; made comments on specific companies including revenue, net earnings, and dividends; and discussed the money market, such as commercial paper and bills of exchange. It also had sections in a classified ad format, entitled "Financial," where company financial results and notices of security availabilities were posted, and "Dividends" for dividend announcements.

Like the other periodicals examined, *ARJ* provided sporadic reports on railroads in 1848, including a few that were quite detailed, showing balance sheets, earnings information, and operating results. These reports increased once Poor became editor at the beginning of 1849. However, many of these were brief, mentioning earnings information, prospects, acts of state legislatures, etc., and were often excerpts of articles published elsewhere.

Similar to the other periodicals, at the beginning of 1851, Poor started a column entitled "The Stock and Money Market." In his column, Poor related the money market more directly to railroad shares than the other periodicals and included selected stock prices for both Boston and New York. In addition to covering such topics as the availability of money, imports/exports, tariffs, and specie payments, he discussed and editorialized on the prospects for different railroads, including the advisability of issuing securities.

Like *HMM*, the *ARJ* [1849a, 1850] provided tables of information on the railroads in several states. However, more interesting were the systematic attempts by the *ARJ* to provide tables of data on all of America's railroads. In conjunction with its initial attempt to appeal to stockholders [*ARJ*, 1844], the journal [*ARJ*, 1845] started providing tables with its first issue the next year. Initially, an updated table appeared weekly, but later more sporadically, with the final table published on May 2, 1846. Subsequent attempts with tables recommenced the next year [*ARJ*, 1847, 1849b, 1853], but it would not be until 1855 that the "Railway Share List" essentially appeared continuously. When revived [*ARJ*, 1855], it also included a list of "Railroad Bonds." Also provided were the offered and asked prices of U.S. government, state, and city securities. These lists were consistently published on a weekly basis until spring 1859 [*ARJ*, 1859a, b].

After a hiatus, in fall 1859 Poor expanded the details of the "Railway Share List" and also increased the issues listed in the "American Bond List" [*ARJ*, 1859c]. Table 1 shows the type of data listed in the "Railway Share List." However, not all this information was available for all railroads. The new bond list provided description, amount, interest rate, due date, and price. The number of bond issues with dollar amounts listed went from 77 in May 1859 to 435 in November [*ARJ*, 1859b, c]. In 1860, selected closing daily prices were first included on a consistent basis, and, in June, an expanded list of daily price data for the week for securities traded on the New York Stock Exchange was published along with the share and bond lists [*ARJ*, 1860].

TABLE 1

"RAILWAY SHARE LIST" DATA

Basic descriptors – name and year
Length – main track, branch, second, and in-progress track
Rolling stock – number of engines and cars by type (passenger and other)
Balance sheet amounts – railroad, rolling stock, investment in foreign works, capital paid-in, bonded and mortgage debt, floating debt, and totals
Transportation results – mileage operated and miles run by trains
Other financial data – gross and net earnings, dividend rate, and price of shares

Source: *ARJ* [1859c]

Updated versions of these lists were consistently published through the 1860s. By the end of 1869, additional tables were published [*ARJ*, 1869]. The first, "Railroad and Canal Dividend Statement," showed stock outstanding, dividend months, and date of last dividend payable. "Railroad Earnings-Monthly" contained information for selected railroads. Also included was an expanded list of "National and State Securities," a list for "City Passenger Railroad Share and Bond Lists," and a list of "Preferred & Guaranteed Stocks." In addition to the daily prices for the week for securities traded on the New York Stock Exchange, prices from the Philadelphia, Baltimore, Boston, and London (American securities) exchanges were published. As for the older tables, the "American Railroad Bond List" was expanded to include when and where interest was payable. The information for the "Railroad Share List" was also slightly expanded to include B.M.E. cars (baggage, mail, and express), land, &c., accounts, as well as cash, liability accounts, surplus income, and number of passengers and tons of freight carried one mile. These tables that started out as a modest undertaking came to fill a majority of the *ARJ*'s pages. For example, these weekly tables comprised 16 of the 26 pages (exclusive of advertising) of the December 25, 1869 issue.

Yet, providing information on railroads via a periodical was apparently too limiting, necessitating a different medium. A single row of data in a table is inherently constraining. Moreover, Poor himself was involved in developing a more comprehensive mechanism for providing information. He was motivated to help fill the void in annual reports that then existed. Poor [1860, preface] explained that the void was due to the fact that relatively few states required annual reports, and that where it was required, "…it is often neglected, no penalty being suffered thereby." He added that "Reports that are full and explicit are accessible only to a small number of parties interested."

The First Railroad Directories and Manuals: As noted, the first railroad directory in the U.S. is Homan's *The United States Railroad Directory, for 1856*. Though it proclaimed on the title page "To Be Continued Annually," this was the only edition that Homans, editor of the *BM*, produced [Chandler, 1956]. Homans [1856, p. iii] claimed that "…such a compilation…had never before been attempted."

His basic entry for a railroad included name, route (termini), length, location of office, and lists of officers, directors, and conductors. Some of the entries contained brief notes commenting on the leasing or operation of a railroad by others, stage of construction, important connecting lines, etc. There was no financial information in the basic entries and only a few financial items were provided in an appendix for the railroads in three states. However, in his introduction, Homans stated that in subsequent editions he would like to include chartered and paid-in capital, details of cost of construction and average cost per mile, funded and floating debt, interest rate, and payment dates and places. Note, however, that earnings information was lacking in his list of additional information.

Homans was the first to start a railroad directory. Not only did others include the information that he provided in his basic entries, but they also included the information that he suggested would be useful, although unable to publish it himself. Thus, Homans began the journey and pointed the way for others to follow.

The next contribution, started in 1858 and continuing annually through 1865, was originally authored by James F. Low and Josiah J. Burgess. Low and Burgess were partners in a railroad supply house [Chandler, 1956], and their directory was presumably a means for vendors and manufacturers to contact railroad officials. Nevertheless, financial information was included. The earliest volume that could be obtained for this study is that for 1864 when Low was publishing the volume by himself. The extended portion of the title read [Low, 1864]: "containing an official list of all the Officers and Directors of the Railroads in the United States & Canada, together with their financial condition, &c., &c."[16]

A typical entry for a railroad included name, route, length, branches, location of office, time of election, and names and cities for the officers and directors. The financial information entailed paid-in capital, funded debt, total cost of road, gross and net earnings for the previous year, and dividend rate. Hence, Low was providing basic financial information on capital structure, assets, earnings, and dividends.

It should be noted that some of the entries contained less information. Also included were the number of locomotives and various types of cars (e.g., passenger, first and second class, freight, service, gravel, and baggage). The gauge of the road was reported.[17] Low mentioned that a few railroads were leased or operated by others. Overall, Low's emphasis appeared to be the route, equipment, officers, and directors. More importantly, however, after 30 years of railroad development in the U.S., Low (and Burgess) began the process of providing basic financial information in a directory.[18]

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[16] Earlier editions, at least back to 1859, also contained the phrase "with their financial condition" in their titles [Chandler, 1956]. Hence, Low and Burgess were acknowledging the importance of financial considerations by the late 1850s.

[17] As will be seen, other authors included operating information as well. The inclusion of non-financial operating data in financial reporting was one of the suggestions by the Special Committee on Financial Reporting [AICPA, 1994].

[18] Two other directories were very similar to Low's. One, Keeling [1866], appears to be the successor to Low's directory. Apparently, this was the only volume. The other, Ashcroft [1862], was published from 1862 through 1870. *King's Railway Directory* by A. H. King, published 1867-1870, could not be obtained for this study.

Frederick Stow [1859] went well beyond Low and Burgess in not only providing more detailed financial information, but analyzing it as well. After introductory sections on the railroad industry and estimated earnings available to stockholders for 1859, the main part of the text began. Table 2 shows the basic entry for a railroad. Note that as early as 1859, Stow was calculating profit margins and various returns on investment. Overall, Stow provided the following items: (1) detailed balance sheet and income account information; (2) comparative income data; (3) ratio analyses; and (4) monthly earnings.

TABLE 2

Contents of a Basic Entry in Stow [1859]

Basic descriptors and personnel – name, office location, directors, and officers
Termini and length – main track and branches
Connections – with other railroads or steamships
General comments – touching on purpose (e.g., coal shipment), important connections, history, prospects, construction progress
Financial comments – touching on overall financial condition, financing, debt, and dividends
Financial statements – balance sheet with notes and an income account

For 1857 and 1858:
Comparative data – gross earnings, operating expenses, and net earnings
Percentages (ratios) – net earnings to gross receipts, to cost of road, to stock and debt, and to common stock after deducting interest on debt
Other earnings data – net earnings per mile of road and monthly earnings

Source: Stow [1859]

Unfortunately, Stow was unable to obtain in many cases either balance sheet or earnings information. From his descriptions, he provided what information he could obtain from recent annual reports, old annual reports, or reports to legislatures or railroad commissions. Stow sometimes expressed cynicism and concern about the lack of information.

Stow had several supplementary sections to his book, including a listing of railroad bonds by maturity date, noting the amount outstanding and interest rates. Next was a listing of railroads that were paying dividends with dividend rates and percentages of net earnings to paid-in capital. Following was a tabulation of "Railways in Good Credit," or companies that paid their interest when due, and a list of "Delinquent Railway Companies," indicating which issues were in default. Thus, Stow was also providing data on the credit worthiness of the railroads.

This is truly a remarkable book. Not only did Stow believe in the importance of financial statements, he analyzed them. He demonstrated understanding both of comparative income statements and several financial percentages or ratios. As he noted himself, the difficulty that he faced entailed getting the information from the railroads. Once obtained, though, he provided a thorough analysis. Coupled with his obvious knowledge of railroads and what made them successful, the book was clearly a pioneering effort on investing in the U.S. Unfortunately, no subsequent editions were produced. Though living in New York for much of the 1850s, Stow was a founding banker of a southern banking house that was closed during the Civil War [*National Cyclopaedia*, 1907].

Henry Varnum Poor's [1860] book, though lacking in financial ratios for the individual railroads, rivaled Stow's in the amount of balance sheet and income data provided and surpassed Stow's in providing comparative earnings data over the years since the inception of the railroad and in presenting details regarding features of each bond issue. Poor's work covered the railroads and canals in New England and the Middle Atlantic states. Intended to be the first of three volumes and supplemented by annual updates, Poor never published the remaining two volumes due to the Civil War [Johnson and Malone, 1935].

The book was divided into 11 chapters, one for each of the covered states. Each chapter began with a "Preliminary Memoir," detailing by year the opening of railroads in that state and including a table listing each railroad, its share capital, funded debt, and total indebtedness. Poor classified the share capital and total indebtedness as being "productive" (dividend or interest paying) or "unproductive."

Most of the book was devoted to providing the individual write-ups for the railroads. The extent of the write-up depended upon the amount of information that Poor could obtain and whether the railroad was still in existence. Table 3 shows the type of data in a "full" entry. Note that Poor included annual information for selected data including earnings and dividends since the inception of a railroad. Several of the railroad entries were briefer while some were more detailed, especially the longer railroads.

All in all, Poor's contribution was amazing in the details provided and the obvious pains-taking effort on his part. From the basic entry, a reader can obtain information on capital structure, interest and dividend payments, status and special features of bond issues, and earnings, not only for the current year but

TABLE 3
Contents of a "Full" Entry in Poor [1860]

Basic descriptors and personnel – name, fiscal year, board of directors, and officers
Termini and length – main track, branches, second track, sidings, and turnouts
Rolling stock - numbers of locomotives and different types of cars (e.g., passenger, baggage, freight, and gravel)
History – dates (charter, construction, and opening), changes in authorized capital, expansions, leases, consolidations, and joint operating agreements
Share capital – authorized and paid-in
Funded debt – payment dates, where payable, if in default, and sometimes special features or purpose of issue
Other debt financing aspects – sinking funds and floating debt
Financial statements – income account for latest year, latest general ledger balance sheet, and details of cost of road and equipment
"Cost, Earnings, Expenses, Etc., Yearly" – a table showing, since inception, cost of road, mileage, earnings information (gross earnings by source, operating expenses, and net earnings), and dividend information (dollar and percentage).

Source: Poor [1860]

since the beginning of operations. However, unlike Stow [1859], Poor did not provide percentage or ratio analyses for the individual railroads.[19] On the other hand, the reader can learn of the development of the railroads (and canals) in each of the covered states in Poor's volume. Regrettably, Poor was unable to publish the remaining volumes for the other states.

Other Manuals: Manuals did exist for industries other than railroads.[20] The *Guide-Book for Investors in Petroleum Stocks* was published by the American News Co. [1865, p. 1]. The most helpful advice to investors was given in the initial section entitled "Investments in Petroleum Stocks." The authors noted that investments in petroleum stocks had become widespread in that, "…the glowing pictures of suddenly-gained riches have aroused a speculative mania almost unprecedented in history." On the other hand, "…it is equally true that this circumstance has given

[19] Poor did include ratios for state totals in his "Preliminary Memoirs."

[20] Another interesting book of this period is *Notes on the New York Money Market, 1800 to 1860, Inclusive* [Anonymous, 1861]. Although no author is listed, the book is laid out in a similar format to the regional book of Martin [1856]. The book gave a year-by-year summary of money market events and rates for 1800 through 1860. Organized by industry, tables were included showing the highest and lowest prices for each year for each security traded on the New York Stock Exchange. However, the author's focus was on the broader money market rather than just the stock market.

rise to a growth of fraudulent impositions and extravagant expectations." Therefore, "…it requires judgment and thorough investigation to sift the wheat of good companies from the chaff of mere bogus affairs…" As with Armstrong and others, the authors were concerned with manipulative and deceitful practices on Wall Street, and they prescribed information and judgment as the proper remedy.

The company information that should be obtained according to American News [1865, p. 2] included capital, "…the *real* value of its shares," working capital, location, relevant mining laws, resources, and the "…honesty and integrity of the managing men." After reproducing the mining laws of several states, about half of the book lists petroleum companies in various states. Most of these are under "New-York Petroleum Companies" which included 177 companies and for which the most information was provided. A typical company entry included amount of capital, number of shares, par or share value, subscription price, amount of working capital, location of property, company officers, and address of office. Thus, the authors advised investors to gather information so that they could make informed judgments about the stock of a petroleum company. In that respect, they provided some rudimentary information in their book. However, the information given was slight, considerably less than that provided in railroad manuals. In particular, no earnings or debt information was included, and the only dollar amount for an asset was for working capital.

A more general manual is Hamon [1865] who divided his book into two parts, the first dealing with exchanges and how they operate and the second providing information on particular securities. In Part I, Hamon discussed the history of exchanges, provided constitutions and bylaws of various New York exchanges, described stock jobbers whom he classified as bulls and bears, advised the use of brokers who did not trade on their own account, explained different types of transactions including time operations and buying on margin, and defined various terms including buyers' and sellers' options and cornering. In Part II of the text, Hamon [1865, p. 144] provided information about specific securities, governmental and corporate, and gold: "Our purpose is now to describe all those securities quoted at the Board, and to give all the information that may be required by those who desire to judge fully of the value of the stock upon which they would speculate." Similar to Armstrong's viewpoint, he added: "Speculation…ought never to bear on stock imperfectly known."

After discussing U.S. securities, state bonds, gold, and bank stocks (providing information on address, capital, circulation, officers, directors, dividend rate, dividend months, discount days, and market price), Hamon devoted the most space to the railroad industry. He included write-ups on 19 railroads and a table on others of significance. The first write-up was on the New York Central for which he gave its dividend history, location of the road, its distances, branch lines, number of locomotives, and number and types of cars. Also provided were the amounts of its capital, funded debt (no floating debt), and gross and net profit for 1864. Note that this financial accounting information paled in comparison to that provided by Stow [1859] or Poor [1860]. Hamon did present, however, in tabular form the earnings and expenses for each of the six months from October 1864 through March 1865 (the last month is estimated). The monthly stock price ranges were included for January 1860 through March 1865. The last table listed "New York Central Bonds," showing the issue, the amount, interest rate, months of interest payment, where payable (New York), year due, and market price.

For most of the other 18 railroads for which he provided write-ups, Hamon had a table with monthly price ranges of the stock and a bond table. Typically included were a description of the road, the area it served, important revenue sources (e.g., passengers, iron ore, coal, grains, milk), equipment, some earnings information, dividends, officers, and any other particulars he deemed important. In a table for 87 additional railroads, Hamon listed name, share capital paid in, dividend rate, sales (market price per share), and net earnings. Subsequent chapters covered other businesses including miscellaneous, mining, petroleum, and insurance companies. For miscellaneous companies, he typically gave information on their history, property, operations, directors, price of stock, and financial condition. In respect to the latter, the financial information ranged from a brief description of the capital stock to a run-down of the entire capital structure, some assets, and earnings. Only limited information was provided for mining, petroleum, and insurance companies with earnings, debt, and most asset information omitted.

Nevertheless, Hamon's purpose was to educate and present information to those interested in speculating in securities. He desired to reduce the "mystery" surrounding investments and elevate speculating above "mere gambling." Railroads had the most information, including in some instances earnings and capital structure. Comparative information and ratios were even presented in some cases. However, the information was spotty and varied between companies, even among the railroads. Considerably less information was given for companies in other industries. Yet, he clearly believed in providing information so that investors could make informed decisions.

Poor's Railroad Manual: As noted, the longest enduring series began with Poor [1868]. Poor included in his manual other businesses besides steam railroads – about a dozen canals; tables for street (horse) railroads in New York, Massachusetts, and Pennsylvania; a couple of gravity railroads; one railway bridge company; the Pacific Mail Steamship Company; and Western Union Telegraph. A classified index of advertisers containing about 100 entries was provided.

There were over 750 items in his index, including U.S. and state debt, street railroads, and railroads known by more than one name. Most of the entries for typical railroads were short, being about one-third of a page to a page, while those for railroads leased and operated by another railroad or those under construction tended to be even briefer. The short entries usually included information only for the latest year. Table 4 shows the typical types of data provided. Some of the entries were slightly longer, including tables containing capital, debt, and earnings information for six years and other additional information such as a statement of cash flows of sorts.

TABLE 4

Poor's Basic "Short" Entry

Basic descriptors and personnel – name, directors, officers, and locations of principal and transfer offices
Termini and length – for main track and branches
Rolling stock – number of locomotives and cars by type
Operating results – miles trains ran, passengers and miles transported, tons of freight and miles moved
Financial results – gross earnings, operating expenses, net earnings, and sometimes interest and dividends
General balances – capital stock, funded debt, cost of road, rolling stock, material, cash

Source: Poor [1868]

About 30 entries featured extensive write-ups for steam railroads. Information for these railroads could be quite detailed. Table 5 shows the type of data included for the New York Central, Poor's first entry. Perhaps in an attempt to fill the gap since his 1860 book, Poor presented information for each of the previous six years, ending in 1867.

TABLE 5

Poor's New York Central Entry

Basic descriptors and personnel – brief history, fiscal year, annual meeting date, directors, officers, and principal office location
Termini and length – main track, lateral and branch lines, second track, sidings, turnouts, and switches
Tables covering 1861-1867:
Physical descriptors – track length and number of locomotives and cars by type
"Doings in Transportation" – miles run by train type, passengers and tons carried (total and for one mile), and financial results for passengers and freight per 100 miles (revenues, expenses, and profits)
Operating profit information – gross earnings (by source), expenses (passenger and freight), and profits
Financial statements (in considerable detail) – income account and general ledger balance sheet
"Funded Debt" – outstanding dollar amount for each debt issue
Stock prices – monthly ranges at New York

Source: Poor [1868]

Overall, Poor provided basic operation and financial information of the railroads and other transportation companies of his time.[21] As described, some of his entries were very detailed. Compared with most of the manuals of his contemporaries, the notable exception was the then defunct manual authored by Stow [1859], the information was much more specific, especially with respect to details on both physical operations and financial results and conditions.[22] This information, along with his appendix on U.S. and state securities, should have helped investors to select securities more carefully, based on what Armstrong called "known intrinsic value."

SUMMARY AND CONCLUDING REMARKS

These are the earliest books on investing published in the U.S. that could be located. They show that at the time of the early development of modern business, information was a crucial concern to their authors. In general, the authors of the various

[21] See Chandler [1956] for an analysis of Poor's *Manuals* in subsequent years.

[22] Less thorough than Poor's *Manual*, but more than Low's *Directory*, is Lyles [1869, 1870]

directories and manuals focused on capital structure, operating assets, earnings, and interest and dividend payments, along with the physical operations of the railroads. As time passed, more details were typically provided and went well beyond what could be presented in a periodical. Yet, the authors of the directories and manuals were often frustrated with the lack of and difficulty in obtaining information.

This study also shows that without adequate information, the securities markets were often at the mercy of manipulative practices. In fact, the first book identified, Armstrong [1848], focused on exposing the potentially deceitful practices of many of those in Wall Street and urged caution to outsiders tempted to invest in securities. In many cases as Armstrong and others warned, they were patronizing little more than a gambling hall, one that did not offer a fair game. More generally, Armstrong wanted to educate his readers on the mode of operation of the stock market, to explain the effect on security prices of what he called natural and unnatural influences, and to provide some information for a handful of companies that should be considered in making investment decisions. Although the information was slight, it was a start to providing information in book form that would soon be expanded by railroad and other manuals.

These manuals started in the form of directories, but quickly grew in sophistication, incorporating detailed comparative balance and income information and even ratio analyses. With their development interrupted by the Civil War, the manuals regressed somewhat in that a relatively few key financial items were included. This was the case until the inception of Poor's *Manual of the Railroads of the United States*, which began publication in 1868. However, like others, Poor could not obtain information for some railroads, and his information was spotty for others.[23]

In any event, financial accounting information mattered at the time that the security markets were first called upon to help fund modern business in America. Its use, along with company physical operating data and knowledge of general economic and money market conditions, could in the view of the contemporary

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[23] Standardized formats for the financial statements of railroads would not be required until 1887 by the Interstate Commerce Commission, and standardized accounting methods would not be required until 1906 by the Hepburn Act. And, although many corporations issued certified financial statements earlier, more general federal regulation of corporate financial reporting by the Securities and Exchange Commission would not follow until the 1930s [Baskin and Miranti, 1997].

authors help fight against the manipulative practices of the bulls and the bears. Then, as now, the availability of reliable information was critical to investors in making rational decisions.

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