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AMERICA'S RAILROAD DEPRECIATION DEBATE, 1907 TO 1913: A STUDY OF DIVERGENCE IN EARLY 20th CENTURY ACCOUNTING STANDARDS

Abstract: In June 1907, the Interstate Commerce Commission (ICC) released new reporting rules that would require railroads to change from betterment to depreciation accounting for equipment. The new rules set off a firestorm of protest because the railroads felt they were already recognizing physical depreciation through the current system. The ICC, however, was looking at the concept of economic depreciation to match the cost of equipment with revenue over the life of the asset in much the same way that industry was beginning to account for its fixed assets. Such economic depreciation, it was felt, would give the rate-setting ICC more stable reported incomes to determine return on assets and the investing public a better feel for the results of railroad operations. The debate began in a cordial fashion but deteriorated into bitter name-calling, civil disobedience, and litigation that challenged both the accounting rules and the authority of the ICC to issue and require them. The ICC partially won the debate, yet railroads were able to keep betterment accounting for track structures another 70 years before the full convergence of industry and railroad accounting standards occurred.

INTRODUCTION

After nearly 20 years of ineffective railroad regulation by the Interstate Commerce Commission (ICC), the U.S. Congress in 1906 passed the Hepburn Amendment to clarify several Supreme Court decisions and to force the railroad industry to publish its rate schedules. The new act also gave the ICC legal authority to set "fair and reasonable" rail tariffs and rates. The law authorized the ICC to develop uniform accounting procedures for railroads to meet this new mandate. The ICC quickly issued new accounting and financial reporting rules for all railroads that came under its jurisdiction. Though the rules were similar

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to the ones issued in 1894 and largely ignored by the industry, the railroads were now required to recognize a depreciation expense and a corresponding reserve for their "non-permanent" fixed assets – rail equipment. Protests quickly erupted over the new rules and a fiery debate ensued between the railroad's traditional concept of "physical depreciation" and the ICC's application of a new theory called "economic depreciation." Though the debate solidified the ICC's authority to issue and require specific accounting rules, it eventually compromised and allowed betterment accounting for track and way structures, a compromise that would result in divergent accounting standards between railroads and industry for the next 70 years.

This paper tracks the debate over these depreciation issues from their inception in 1907 to the final disposition by the Supreme Court in 1913. The debate is well documented through the records of the ICC and related articles published in the national press like the *Wall Street Journal* (the *Journal*), the *New York Times* (the *Times*), and the railroad industry's own publication, the *Railway Age Gazette* (the *Gazette*).[1] Prominent public accountants also weighed into the debate on both sides of the issue, indicating an unsettled debate within the profession over the course of the modernization of accounting principles in the U.S. in the early 20th century. Though each source has its own biases, taken together, they give a sense of the passion on both sides of America's great railroad depreciation debate.

BACKGROUND TO THE DEBATE

In 1902, the newly constituted U.S. Steel Company developed innovative financial reporting procedures that included recognition of depreciation charges on fixed assets. Though the concept of physical depreciation of fixed assets had been recognized for nearly three quarters of a century, according to Younkins and Flesher [1984, p. 257], the U.S. Steel disclosures were unique among contemporary firms because they reported depreciation as a separate expense on the income statement. Such an innovation helped to institutionalize the concept of economic depreciation and paved the way for the modern accrual accounting standards currently in use a century later. Because of its mission to control rail rates through the analysis of accounting and other operational data, such an innovation in

[1]First published in 1856, the *Railroad Gazette* absorbed a smaller competitor called the *Railway Age* and changed its name to *Railway Age* in January 1908, with a further name change in July 1908 to the *Railway Age Gazette*.

accounting could hardly have missed the attention of the country's primary railroad regulatory agency, the ICC, and its longtime chief statistician, Professor Henry Carter Adams.

The Desire for a Uniform Railroad Accounting Policy[2]: Since the inception of the ICC in 1887, Henry Adams had attempted to standardize railroad reporting in the U.S., using Section 20 of the Interstate Commerce Act[3] as his authority. The section read, in part, "the Commission may … the purposes of the act, prescribe a period of time within which all common carriers subject to the provisions of this Act shall have, a uniform system of accounts and the manner in which such accounts should be kept."

His first attempt to create uniform accounting rules was in 1894, when the ICC issued *Classifications of Operating Expenses* to guide railroads in their data-reporting requirements. The requirements included modern double-entry accounting practices; however, its modified accrual nature left a limited articulation between the balance sheet and income statement (actually a profit and loss account). Though the American Association of Railroad Accounting Officers (AARAO) was instrumental in developing the pamphlet, the reporting requirements went largely ignored by other regulators and the industry. First, the ICC-instituted National Association of Railroad Commissioners (NARC) balked at their usage because state commissioners felt that the new accounting rules would hinder their ability to control rail rates within their respective jurisdictions. This process led to multiple and conflicting accounting procedures across state jurisdictions that caused confusion among the railroads, leading them to resist the new national standards. Finally, legal rulings and legislative inaction stymied Adams' goal of a uniform accounting system for all railroads. Though Adams and the ICC knew that the nation's railroad reporting practices needed modernization, they could take no action until Congress gave the ICC further authority.

In the meantime, Adams continued to issue minor revisions and clarifications to the ill-fated *Classifications of Operating Expenses* to make the reporting process more understandable. The nature of the accounting, however, changed very little

[2]For a review of the development of ICC reporting requirements before 1900, see Heier [1994, pp. 101-110].

[3]*Act to Regulate Interstate Commerce,* February 4, 1887, amended June 29, 1906, 34 Stat. 584.

from the 1894 document. The NARC [1905, p. 30] augured a change when discussing the ICC's clarification in the definition of additions, betterments, and improvements for the AARAO. The clarification read: "Operating Expenses should include all expenditures necessary to keep up the general standard of efficiency." The meaning was clear; the expenses currently reported by the railroads regarding fixed asset usage were not sufficient to give a clear picture of rail operations. The railroads, however, were probably not too concerned with such a course change because the ICC's position (both politically and legally) had not changed, at least not yet.

The Hepburn Amendment: On June 6, 1906, Congress finally acted and passed the Hepburn Amendment to the Interstate Commerce Act. The new act also gave the ICC the legal authority to set fair and reasonable rail tariffs. To meet this new mandate, regulators were authorized to "develop uniform accounting rules, and to prescribe the forms of all accounts, records and memoranda to be kept by carriers" [ICC, 1907b, p.139]. The law now empowered the ICC to have rate setting as its primary mission. A uniform accounting system for railroads became Adams' focus. As one would imagine, the railroad industry was not elated over the new legislation as evidenced by an editorial published in the *Gazette* [January 11, 1907, p. 32]. In a muted and measured tone, the industry expressed the opinion that, "The new rate law gives the Interstate Commerce Commission the fullest authority over railroad statistics and accounts, with the power, not only to prescribe what accounts shall be kept, but to forbid keeping an unapproved statistic."

The rail industry had resigned itself to the fact that the ICC had substantially more power, but it also suggested in the article that slow and deliberate change in reporting requirements would better serve the traveling public and shippers. Though protests would soon erupt over required depreciation charges, the rail industry at this point was more concerned with the ICC's potential inclusion of "out-side" or non-rail income as part of tariff rate calculations. Such an inclusion would disrupt the sensitive rate-of-return formulas that the ICC would be using to set passenger and freight rates. Regardless of what the changes were going to be, it was clear that the industry was going to face new accounting rules soon.

During the transition from the amendment's ratification and the issuance of new uniform accounting standards, the ICC again enlisted the help of the AARAO. Professor Adams acted

as the ICC's liaison to a newly created Committee of Twenty-Five. The ICC's annual report [1907b, p. 40] indicated: "Conferences [with the AARAO] developed interesting and instructive differences of opinion on many accounting questions. But it may be said that, with a few exceptions, the results arrived at were in harmony with a consensus of opinion of a majority of its members." The annual report did not disclose the nature of the discussions, but changes in accounting procedures at the large manufacturers, like U.S. Steel, must have been on the minds of the conferees. Depreciation could well have been at the top of this list in light of comments from Price Waterhouse's George O. May [1962, p. 190] who indicated in his memoirs that "in 1906 the straight-line amortization concept of depreciation was in fairly general use in the industrial field."

The ICC planned to issue new financial reporting rules for all railroads that came under its jurisdiction by June 1907. Though the prospective rules were very similar to the ones issued in 1894, the new system would include more accruals that would increase balance sheet and income statement articulation similar to modern financial statements. To foster the modernization of railroad reporting, the ICC also focused on the fixed asset and capital accounts. Like U.S. Steel, the railroads would probably now, in all likelihood, be required to recognize depreciation expense instead of their traditional manner of accounting for fixed assets called betterment accounting. Succinctly put, depreciation represented the systematic expensing of fixed asset costs in contrast to the periodic (or irregular) recognition of expense under betterment accounting.

A Short Explanation of Betterment Accounting: An early discussion of fixed asset accounting and profitability for railroads came in the 1870s from Albert Fink, the superintendent of the Louisville and Nashville Railroad. Fink suggested in an addendum to the 1875 L&N annual report [Fink, 1875, pp. 6-7] that renewal accounts that compared actual repair costs with estimated repair costs to determine annual "due to that year's operations"…[and]…"To make the annual reports of a railroad company of value, the accounts of the company should be so kept as to show the expenses." Fink's methodology would be refined and institutionalized over the next thirty years, and came to be known simply as "betterment accounting." The name of the methodology would evolve into the more theoretically descriptive retirement-replacement-betterment (RRB) accounting, and the Financial Accounting Standards Board (FASB) [1983,

Para. 5], at the time of RRB discontinuance in 1983, defined this practice as follows:

> Under RRB, the initial costs of installing track are capitalized, not depreciated, and remain capitalized until the track is retired. The costs of replacing track are expensed unless a betterment (for example, replacing a 110-lb. rail with a 132-lb. rail) occurs. In that case, the amount by which the cost of the new part exceeds the current cost of the part replaced is considered a betterment and is capitalized but not depreciated, and the current cost of the part replaced is expensed. Railroads generally have used RRB for financial reporting.

Unlike the use of modern depreciation accounting, which actually matched fixed asset cost to revenues over a given period, the railroad under betterment accounting did not recoup the cost of the track until replaced. It could happen in some years that no charges to current operating expenses from track usage were matched against revenue if no track was replaced.

By 1907, the methodology described above had been in widespread use and acted as the basis for reporting the account balances of the railroad's two primary fixed asset accounts, equipment and track structures. As the depreciation debate developed, the ICC would take the position that betterment accounting did not reflect the true cost of a railroad's operations because in lean years it would simply not do any replacements or upgrades, a major safety concern for the ICC. The ICC hoped that the upcoming depreciation requirements would provide a more "accurate" rendering of these fixed asset balances through a more systematic matching of fixed expenses with revenue. As the ICC moved towards the rate-of-return basis for evaluating rail rates, it would become clear to the rail industry that depreciation was at the heart of the evolution of the concept of "reasonable rates" and "reasonable returns" as articulated by the 1898 *Smyth vs. Ames* [169 U.S. 466] decision.

Exhibit 1 below shows a hypothetical comparison of rail returns due to the impact of the new 1907 depreciation charges on a railroad's financial results compared with betterment accounting. With betterment accounting intact, the pre-1907 income levels per train mile were lower due to an artificially high expense ratio. This helped the railroads to either maintain a lower return ratio and, consequently, higher tariff rates or justify their request for an increase. It was also possible for the railroads to schedule betterment expenditures to plan or smooth

annual income levels.[4] This expense timing was the central problem voiced by the ICC in its 1905 annual report. On the other hand, with the partial accounting for depreciation charges on equipment, the financial position of the railroad may be improved, leading regulators to construe the higher income levels as unreasonable. The railroad could then expect a revision of the rail rates downward to compensate for the "excess income."

EXHIBIT 1

Estimated Change in Railroad Financial Accounting Results

	Accounting before 1907	**Accounting After 1907**
Rail Structure Costs	$2,500,000	$2,500,000
Depreciable Equipment Costs	$ 500,000	$ 500,000
Total Assets	$3,000,000	$3,000,000
Revenues	$1,000,000	$1,000,000
Operating Expenses	$ 400,000	$ 400,000
Rail Structure Betterments	$ 200,000	$ 200,000
Equipment Betterments	$ 150,000	
Depreciation Assume 7.00% X $500,000		$ 35,000
Total Expenses	$ 750,000	$ 635,000
Net Income	$ 250,000	$ 365,000
Train-Miles	10,000,000	
Revenue Per Mile	$ 0.1000	$ 0.1000
Costs Per Mile	$ 0.0750	$ 0.0635
Income per mile	$ 0.025	$ 0.0365
Return on Assets = Income ÷ Assets	8.33%	12.16%

THE ICC ISSUES NEW REPORTING RULES

The Preliminary Debate over the New Depreciation Rules: With little fanfare and with even less guidance, the ICC [1907a], on June 3, 1907, released new accounting rules as an update to the ICC's original document, *Classifications of Operating Expenses*.[5] The first look at the new rules had actually occurred in April 1907 when the ICC issued Circular No. 5 to detail the

[4]For the effects of the ICC accounting changes on income smoothing, see Sivakumar and Waymire [2003].

[5]The newly required equipment depreciation was highlighted essentially through the reorganization and renumbering of an official account classification scheme.

proposed accounting changes and to give the industry due process to comment on them before final publication. The *Journal* [May 21, 1907, p. 3] reported that a large number of railroads had indeed commented on the new rules, especially with regard to depreciation accounting. The written replies to the circular expressed a wide range of views on the formal depreciation account. According to the article, comments regarding Circular No. 5 framed the coming issue by saying, "it may be said that current practice [betterment accounting] allows for depreciation by including renewals or replacements in operating expense and consequently railways do not need a formal depreciation account." The article continued by making the editorial comment that, "It is at least our opinion [that the ICC] question whether or not this is an appropriate method of procedure." It was reported that the railroads felt that "there seems to be no disagreement on the proposition that operating expense should be charged with the full amount of wear incident to the use of the property, and that any excess over that amount should be separately charged to income." These types of comments again signaled the railroad's coming stance that depreciation was physical in nature and not economic, and reinforced the railroads' fear that any depreciation account would degrade the balance of the asset accounts and upset the delicate balance of the return-on-asset ratios.[6]

Even with the preliminary ICC circulars issued in April and May, it still appears that the railroads may have been caught off-guard by some of the new depreciation rules, as evidenced by the silence in the *Gazette* before June on the process leading up to the promulgation of the new accounting rules. In fact, an early article in the *Gazette* [April 19, 1907, p. 507] contained no discussion of depreciation but instead stressed an upcoming rule that would make the railroad's head accountant a sworn agent of the government and the issue of non-rail related income being used in the rate-of-return formulas. In an article published after the issuance of the rules, the *Gazette* [June 21, 1907, pp. 883-884] indicated that the present rules only applied to equipment but that there was a possibility of the application of depreciation rules to track and structures. The article further explained that such a move would make the accounting for track additions or repairs less flexible than the current

[6]It appears that companion circulars were also issued during 1907 for the more contentious issue of classification of "additions and betterments" related to those costs of upgrading permanent fixed assets such as structures and rail beds.

American system that allowed for management decisions related to the recognition of no capital costs in bad years, a safety concern to be sure.

According to Barret [1907, p. 486], a competing publication, *Railroad World,* did express tacit support for the new accounting rules when it wrote, "Hitherto this question has been thrust aside with scanty apology that due attention to repairs, renewals and replacements excuses the omission. At its worst, the omission to make allowance for depreciation leads to unearned payments to capital, to eventual overcapitalization, and finally to bankruptcy." *Railroad World* then expressed concern that any rate-of-return calculations from the ICC must take into account depreciation charges or there would be a reduction in asset values. Although this industry publication was moderately positive about the change to depreciation, it seemed to suggest that the ICC had ulterior safety motives for the change.

Even before the official release of the new accounting rules, Adams and members of the ICC readied the markets, the public, and especially the railroads for the announcement. For example, the *Journal* [May 21, 1907, p. 3] reported on the prospective accounting changes, indicating that they "were to be set up providing for the replacement of property – annual percentages to be left to the carriers." The same article reported that the ICC's aim for the new system of accounts was to "simplify the now complex problem of determining what a railroad is earning." Adams was quoted in an interview as saying, "it was the intention of the commission to draw a clear line between charges [that] merely made good the actual wear and due tear or represented depreciations and such as represented by betterments and additions whether the latter is chargeable directly to income or to capital." Here the argument went beyond the recognition of depreciation, and moved towards a more modern differentiation between capital improvements that would be depreciated and operating expenses that would have a direct effect on the earnings of a railroad.

Adams went on to indicate that in the present railroad accounting system, the definitions of such items as repairs, betterments, and additions did not convey a definite meaning, "hence the necessity of establishing principles of accounting as will enable the commission to determine whether operating expenses as charged on the company's books properly represent the cost of transportation." In the eyes of the ICC, the railroads were now charging only "capital improvements" against current income, which masked the true earnings of the corporation

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because under betterment accounting there was never a recovery of the original cost of the railroad's equipment through the income statement until replacement. Adams further explained the depreciation provision would better allow for the replacement of property before wear and tear finally forces the issue. Unfortunately, at this point in the interview Adams made a modern theoretical mistake by saying: "Provisions should be made out of earnings of property during the period of its use to replace it....The purpose of depreciation is to provide a replacement fund."

Though it was clear that Adams was moving toward the application of economic depreciation and away from accounting for the physical depreciation of the railroad equipment, he did seem to harbor the perspective that depreciation, though non-cash in nature, would provide a direct funding source for the replacement of equipment. Such an idea may have come from contemporary manufacturers like U.S. Steel, which reported equipment depreciation with extinguishments of debt. For example, in the 1904 U.S. Steel annual report [p. 11], the company stated: "The appropriation of these funds has been made with the idea that, thus aided, the Bond Sinking Funds will liquidate the capital investment in the properties at the expiration of their life." In addition, the report also mentioned: "These funds are used to improve, modernize, and strengthen properties." In the short term, Adams' early misunderstanding of the cash nature of depreciation would cause some confusion in the application of the new rules and overshadow the ICC's purpose better to match railroad expenditures with revenue. Finally, the article also reported that the railroads did not object to the idea of taking expenditures in excess of wear and tear out of earnings, but they were leery that investors would construe a formal depreciation fund as cash available for dividends.

The rationale for the new ICC accounting rules may have gone beyond a more uniform accounting system and may have focused on two other motivations. The first of these may have been to foster safer railroad operations by actually forcing the continued replacement of railroad equipment on a scheduled basis through a change in accounting procedures. A more pernicious consideration may have been the ICC's desire eventually to standardize rail tariffs through railroad valuation. This possibility was made evident in a *Journal* article [May 23, 1907, p.1] that reported a speech by ICC Commissioner, Charles A. Pouty, before the National Association of Manufacturers in which he discussed the ICC's reasons for changing the regulatory rules.

First, Pouty indicated that government itself was on trial, and that regulation must be "sufficiently strong to choke the cry for national operation." The concept of federal ownership and operation of the railroads had become popular as anti-capitalist views began to spread in the U.S. in the early part of the 19th century. Though he did not like the idea of government control and felt the private sector the better place to control rail operations, he did feel that a cabinet-level department of railroads should be set up to oversee rail operations and set national transportation policy.[7] Pouty also explained that the government, and not private individuals, should have over-sight responsibility in rate setting. This appears to have been a criticism of the federal courts and their intervention in ICC decisions on behalf of private litigants. Most importantly for this story, Pouty indicated that, "it is probable that the interstate railways should be valued by the national government." Pouty, the ICC, and the rail industry knew that valuation needed proper (and uniform) accounting data. The news report quoted Pouty as saying: "The popular impression that if the value of our railroads were known it would be easy to adjust rates that a fair return upon that value and only a fair return would be obtained is entirely erroneous. The cost of reproduction is but a single factor which enters just value." Although Pouty never mentioned the subject of the new depreciation rules, he did focus on a set of criticisms regarding the methods railroads used to determine and account for the value of their long-term capital. According to Pouty, railroads could easily hide investments in the form of stocks and bonds in related and sometimes competing railroads.[8]

In a related *Journal* article [May 22, 1907, p. 5], Adams echoed Pouty's comments when he said: "The valuation of railroads on a scientific basis is quite feasible, but the reasonableness of railroad rates is and must be a matter of human judgment exercised beyond the bounds of mere valuation." Adams went on to explain that the individual subjects of railroad capitalization, valuation, and rates are related by giving a convoluted example where income should not be above the amount needed to maintain operations if it is to be deemed reasonable

[7]It would be nearly 60 years later when the Department of Transportation was established by an act of Congress on October 15, 1966, with its first official day of operations on April 1, 1967.

[8]This was a direct reference to the stock manipulation case where E.H. Harriman of the Union Pacific and Rock Island Railroads secretly bought a directly competing line called the Alton Railroad.

income by the Commission. In a more modern sense, he then differentiated between the valuation used to set rates and that of the market valuation of the railroad securities themselves. Market valuation he felt did not equate to regulatory valuation when it came to setting freight and passenger rates.

The popular view in this era was that high railroad market valuations were the result of high and unfair rail tariffs. Through his example, it appears that Adams saw this controversy differently. He felt that the high market valuations and high rates were only tangentially related by the fact that the most profitable railroads also seemed to have the highest market value. In the end, Adams and the ICC would continue to focus on the return on assets to determine the reasonableness of tariffs in keeping with legal rulings. Finally, like Pouty, Adams was laying the groundwork for acceptance of the upcoming accounting rule changes. It was clear that physical valuation of the railroads was on the ICC's agenda, and that the ICC was going to gather the necessary data on the railroad's capital assets needed to complete this task.[9] When asked about progress towards completing the new accounting system, Adams said: "They have progressed much further than I thought they would by this time. Operating revenues and operating expense accounts are practically done and the accountants are pulling together and mean business."

After the official release of the new rules the next week, an article published in the *Journal* [June 7, 1907, p. 6] highlighted the major accounting changes promulgated by the ICC. In general, the required revenue and expense items mirrored those of the 1894 requirements; however, the railroads were now supposed to report those financial results monthly to the ICC, presumably so that the ICC could maintain control over both short-term and long-term tariffs. According to the article, the major change in accounting regulations for 1907 included the requirement for a formal provision of depreciation charges and reserves for all companies covered by the Interstate Commerce Act. This depreciation requirement also differentiated operating expenses and capital improvements by indicating, "The purpose of these depreciation charges is to have the exact cost

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[9]As a side note, in a compromise to get the Hepburn Amendment passed, the explicit ability of the ICC to value railroad assets directly was not given; however, it was not expressly forbidden either, a point of contention for years. For a review of the political environment surrounding the development of the ICC and the 1906 Hepburn Amendment, see Miranti [1989].

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of a particular month or a particular year, and thus enable a correct statement of net revenue from operations." The article then explained that the new definitions of betterments and additions will also result in keeping the cost improvements out of current operating expenses.

The lack of depreciation of track and way structures had been noted just a week before in the *Journal* [May 29, 1907, p. 6], anticipating the new accounting rules. The article quoted an ICC official who said, "operating expenses must not be burdened with expenditures for additional equipment, tracks, ballast, or additions to the railroad, the purposes of which are to improve the property operated." In addition, the official further divulged: "The chief new feature of these primary accounts is that a depreciation account, set aside for renewal accounts, has been supplied for every item of equipment. [However] there is no depreciation account for way and structures." The article then quoted Adams as saying, "it is impossible to arrive at any final conclusion as to how the rule of depreciation should be applied to roadbed and buildings, and that the subject will be specifically investigated during the coming fiscal year." Adams' trepidation over any change of betterment accounting rules for track and way structures would continue in ICC policy making for years to come due to the ICC's indecision about just how to depreciate permanent structures given conflicting theories of wear and tear and cost matching. The issues would be a focus of railroad depreciation debates lasting into the early 1980s.

THE REACTION TO THE ACCOUNTING CHANGES

Reactions by Industry through the Railroad Press: As expected, protests over the new accounting rules were almost immediate but surprisingly cordial. One of the first was an innocuous attempt by L.F. Loree, president of the Delaware and Hudson RR, to circulate a petition asking the ICC to postpone the implementation of the accounting rules for one year. He made the request, "on the grounds that it will make it impossible for railroads to make comparisons in the results of their operations for the previous year" [the *Gazette*, 1907, p. 869]. In an era of pen and ink accounting systems, a better request would have been for a delay in the implementation of the new rules due to the short period, approximately four weeks, given the railroads to comply with the new regulations. For the ICC, they felt the transition, which was scheduled for the post-June 1907 reporting period, actually gave the railroads one year to imple-

ment the new accounting system before the June 1908 reports. Any delay at this point would have pushed its implementation back to 1909.

A *Times* article [June 15, 1907, p.12] provided a better preview of the coming opposition from the railroad industry, reporting that, "efforts are being made by some large railroads to thwart some of the plans of the [ICC] in the matter of standardizing the accounts of all railroads, and for the establishment of such form of accounts as will set forth clearly all financial operations." Rail industry leaders had supposedly gathered to discuss the matter and cooperate on a response. As an interesting side note, both the newspaper and the industry must have misunderstood the new ICC regulations due to an erroneous impression that tracks and roadway were included in the depreciation order. In a surprising revelation, the article pointed out that the other railroad officials put the blame for the ICC's new rules on the Pennsylvania Railroad's decision to use depreciation accounting, an interesting comment considering the Pennsy's later protests.The rail officials felt that Pennsy's move gave the ICC the final impetus to modify its stance on the emerging depreciation issue. Finally, the rail industry also saw that the new rules were probably rooted in politics, with President Roosevelt pushing for the changes. The writer of the article, however, felt the new accounting rules, "set the true [financial] position of railroads, and enable investors…to determine more easily just what each railroad is doing in the matter of maintaining property and the extent earnings are used to improve it." The writer's last argument may have again signaled the ICC's hidden safety agenda.

In an attempt to define the industry's objections to the new accounting rules, the *Gazette* began publishing a series of specific articles about the rules. In an article with the combative title "A Defective Accounting System" [the *Gazette*, June 21, 1907, pp. 883-884], the industry put forth its early arguments against the new system. The three-page technical article (its tone though was that of an editorial) began with an explanation of the process used to develop the new rules including the participation by the AARAO, an issue that would spilt railroad officials later. First, the article criticized the way the ICC used the accountant's recommendations, which "serves to illustrate how easy it is for railroad regulation to go astray and make mistakes unless the persons doing the regulating possess the broadest kind of outlook of the entire situation." Next, the industry saw the ICC as a threat due in part to its politicized nature and its lack

of direct experience in rail operations. Finally, the editorial explained that there were only two purposes for keeping accounts. The first purpose was to prevent unauthorized expenditures and the second was to control operations. Essentially, the industry felt that the new rules applied quite well to the first, but failed in their attempt to meet the second purpose for four primary reasons.

First, the railroads rejected the new system based on the structure of accounts because they feared that the new account scheme would commingle labor and material costs for both track and equipment betterments. Next, they went on to point out that the new account system, "interrupts the continuity of rail statistics at a time when statistical details are most needed to point the way to necessary economies and to test the efficiency of operating methods." This continuity issue would continue for some time to come. The roads were also against a monthly reporting of depreciation because they felt that such costs could not be efficiently apportioned on a regular basis because of the irregular pattern of wear and tear. This issue might have been mitigated by a compromise to use units-of-usage (probably based on ton-miles) methodology to determine the depreciation charge. This would have allowed railroads that had operational disruptions due to weather or seasonal business history to deal with equal apportionment problems. Finally, the article explained that the new rules would handicap rail operations and analysis because they would not be able to keep accounts and data not specifically approved by the ICC. This may have referred to operational measures (e.g., cost per ton-mile) that the railroads did not want the ICC to see because this may have lent support to their depreciation theories.

A *Journal* report [August 20, 1908, p. 5] articulated a similar continuity argument when it said that, "railroads are finding a great deal of trouble in compiling their annual reports to conform with all the requirements.... Unless they issue two reports, one after the plan followed in the previous years, and one under the new accounting system, it will be very difficult for the humble stockholder to get an idea of what the company has been doing by comparison with last year." In this same article, a comptroller at a "large New York railroad" was quoted as saying, "it is useless to make any comparison of figures under the new rules with those in the old way... you are bound in the end to get results that are misleading.... We spent a lot of money and put in a lot of night work, but when the results were ready, they were not worth a picayune."

The problems related to the continuity of rail statistics were also explained to railroad stockholders in annual reports. For example, the Louisville and Nashville Railroad (Exhibit 2 below) in its fiscal year 1908 annual report discussed these accounting changes in a tenor that shows its displeasure with the regulations.

EXHIBIT 2

Note on ICC Accounting Change as Presented in the 1908 L&N Annual Report

Uniform Accounting System Prescribed by the Interstate Commerce Commission:

On July 1, 1907, the new system of Accounts prescribed by the Interstate Commerce Commission became effective. Principle changes caused by the orders of the Commission were:

1. *Elimination of Expenditures for Additions and Betterments from Operating Expenses, and,*
2. *The inauguration of formal Replacement Accounts for Depreciation and Renewals of Equipment.*

The changes wrought by the new system should be borne in mind when making comparisons of tables in this year's reports with those in reports of previous years.

[Louisville and Nashville Railroad, 1908, p.13]

In a follow-up editorial to "A Defective Accounting System" [the *Gazette*, September 27, 1907, p. 86], the editor pointed out that the "errors in the new system are on the whole more hurtful than those in the old, and we believe it to be a matter of the greatest regret that at the time a change is made…a change, moreover, which works permanent injury to the continuity of records." In an historical irony, when betterment accounting was finally discontinued by the ICC in 1983, the FASB had to issue a standard (SFAS 73) to deal with continuity of reporting problems.

Another problem raised by this article centered on a perceived uneven application of the rules. For example, the article noted that a northeastern railroad that is no longer growing would have a smaller amount of depreciation charges due to a lower rate of equipment additions. Intuitively this would lead to less expense, higher income, and a correspondingly higher rate of return on assets. A higher return would, of course, lead to a reduction in tariff rates. By comparison, the expanded depreciation charges of a railroad in California that continues to grow due to migration would have a lower rate of return and,

thus, get rate relief from the ICC. Such perceived inconsistencies in rate setting, however, had been a regulatory problem at the ICC since its inception in 1887. The infamous "long haul vs. short haul" clauses in the original Interstate Commerce Act that essentially equalized, under the theory of price discrimination, all railroad operations in the country regardless of operational efficiencies. The depreciation charges only exacerbated the problem.

Theoretical Arguments: The *Gazette* [October 11, 1907, p. 90] published "Equipment Depreciation and Renewal," written by the controller of the Union Pacific, William Mahl. In the article, Mahl seemed to imply that there is no depreciation if the railroad is constantly upgrading or replacing its equipment. Making a distinction between physical and economic depreciation, he ends the article by pleading to drop the depreciation requirements in favor of the old "provision for 'renewals' to represent the current cost of replacing all equipment vacated." Mahl point out that, "This change will furnish the Commission with reliable data about the depreciation which has been carried into the operating expenses of the railroads will enable it to order adjustments suitable to each case if any such should be necessary."

Even with the protests, Adams and the ICC issued more accounting regulations in January 1908. These focused on the specific information that the ICC required from railroads every six months, starting in March 1908. The new regulations, however, did not change track and way structure accounting nor did they provide guidance on the actual rates a railroad should use to depreciate its equipment. The one clarification to the 1907 rules noted that the equipment was to be reported on the balance sheet net of depreciation and that the asset book value was to be "reduced periodically to the extent of the depreciation charge." Under the original 1907 regulations, the railroads assumed that the depreciation was a current operating expense, but not necessarily a reduction of book value on the asset. This new regulation unsettled the railroads because of its impact on the return-on-assets ratio and the public's perception of railroad over-capitalization due to a depreciation of equipment that is faster than the payment of bonds.

The *Gazette* [January 16, 1908, p. 54] reported on this new set of regulations and others to come. In general, the article discussed the process by which the ICC modified its rules and some related changes to income statement and balance

sheet rules. In an attempt to portray the ICC as an inflexible and bureaucratic organization, the *Gazette* reported that, "An erroneous impression has been created that the [ICC] is disposed to reconsider the propriety of depreciation on equipment accounts.…In working out the details of such an account the commission is willing to consider all practical suggestions and is working with members." The views of Professor Adams were unaltered on this subject.

To combat the new regulations, Frederick Delano, the president of Wabash Railroad, wrote his "Notes on the Application of a Depreciation Charge in Railway Accounting," which was published by the *Gazette* [March 1908, pp. 471-473]. In this article, he criticized the ICC's depreciation rules on rolling stock and then warned that the regulators would soon be issuing new accounting rules regarding fixed structures. Delano wanted to make his opinion clear to the ICC that depreciation does not exist in an economic sense, but is solely related to wear and tear and obsolescence. He wrote: "There is admittedly a depreciation or deterioration…but it is difficult drawing the line between the cost of making good this sort of depreciation and ordinary maintenance." Further to the point, he observed that, "in the case of cars depreciation goes on at a rate of 5 percent or 6 percent per year until the car is 60 per cent depreciated of its original value. Beyond that it is assumed there is no depreciation if maintenance is properly kept up." This type of deterioration was a concept he called "limited depreciation" because the property is eventually replaced through the betterment system at which time the costs would be absorbed into current expenses. He relates these facts to a perceived public controversy regarding the arcane problems of railroad overcapitalization. Essentially, in a long diatribe, Delano felt that the capitalization of American railroads was solid, and used this fact as evidence of the efficacy of betterment charges. Delano also felt that the current system was more flexible than the new depreciation system, allowing better decision making by the board of directors regarding the integrity of the property. This can only mean that railroad management wanted to retain the right to decide when and if betterments and replacement occurred.

Delano then criticized the ICC requirements for depreciation as fictitious by explaining: "To put expenditures into operating accounts that have not been actually made has been regarded as 'padding' accounts. To make a charge of depreciation every month on a purely arbitrary basis, when the money which is charged is not actually spent in replacement is

obviously charging against operating expenses something for which no expenditures has been made."[10]

It is clear from Delano's objections that the railroad industry was resisting any rapid change in its accounting methods from largely cash basis to one that necessitates extensive accruals for matching current expenses with income. In addition, it is also clear from Delano's comments that industry suspected the ICC's new rules did have an ulterior safety motive after he pointed out that the public and stockholders had the right to know the condition of a railroad's property. Delano ended his article by concurring with "A Defective Accounting System" that the change in accounting would be unevenly applied and mature railroads like Delano's Wabash would suffer the most. To counteract the problem, Delano felt that any depreciation charge must be offset by a corresponding adjustment in the appreciating value of the property. This would have been even more onerous to the industry because the ICC rate setters would have probably recognized such appreciation as income and lowered tariffs correspondingly.

Railway Age [May 1, 1908, p. 623] synthesized the arguments of both Mahl and Delano and indicated that the ICC's intentions for the new accounting rules were two-fold. The first was to charge depreciation over and above current repairs to operating expenses monthly (economic depreciation). Second, the ICC's purpose was to charge this "average life of property" to the profit or loss or surplus account, essentially the modern matching principle. The article felt that these were neutral issues when taken separately, but that the industry objected to them taken in operating expense money that was not spent. A monthly charge for accruals would, in the industry's opinion, make the system too rigid and inflexible and deprive the railroad of the ability to judge when expenditures should be made. The argument from the editorial was simple, "since the charge for depreciation is not met with payment of money, it is not an expense, and since depreciation continues…even though operations cease, it certainly is not an operating expense." The concepts of modern accruals and matching had not yet taken hold in the railroad industry. Since it appeared that the ICC was not going to relent, the article finally suggested a compromise

[10]Delano's arguments may have come from a 30-year-old court case, *United States vs. Kansas Pacific Railway Company* [99 U.S. 455]. In this case, the court disallowed the railroad from using depreciation to determine the amount of net earnings available to pay back certain government sponsored bonds.

where there would be a presentation of two forms of operating accounts, "operating expenses other than depreciation" and "depreciation."

H.A. Dunn, a partner at Haskins and Sells, made a similar argument in a letter to *Railway Age* [May 29, 1908, p. 726], but he wanted to name the account "expired outlay on productive plant" (the basic definition of economic depreciation). According to Previts and Merino [1998, p. 219], the founder of Dunn's firm, Elijah Watts Sells, was critical of the ICC's new accounting rules. He essentially believed that, "depreciation charges should be sufficient to ensure asset replacements." Previts and Merino then explained that Sells and Price Waterhouse partner Arthur Loews Dickinson argued this based on the assumption that depreciation recognition was the only way that one could prevent the erosion of capital, an argument closely allied with railroad executives.

In an April 20, 1908 letter to Adams, Dickinson [1980, pp. 13-14] wrote: "The object of a depreciation is, we take it, to make a provision for the decreases in value from year to year by reason of wear and tear, etc., as it accrues instead of as it is made good." Dickinson continued by saying that, "It seems to us that to such a proposition there is an obvious corollary that renewal expenditures made to arrest Depreciation should be charged against a Fund created in the years depreciation accrues, and not against the operating expenses of the year in which the expenditures are made." It is clear that Dickinson had not moved to the concept of economic depreciation, favoring the 30-year-old accounting methodology articulated by Albert Fink.

The opinions of Sells and Dickinson would soon run contrary to that of the accounting profession in general. For example, Arthur Teele [1908, pp. 89-91], an early supporter of the ICC's new depreciation rules, indicated, "that I do not think it is necessary for me to present arguments…as to the necessity of promptly taking depreciation of capital…for I believe anyone who gives careful thought will agree to the principle of providing for the loss out of revenues earned in the period the loss is occurring." Teele was on the side of matching and economic depreciation. The next year, William Lybrand [1909, pp. 224-227] took much the same view of the need for depreciation except he stressed the balance sheet rather than the income statement because he felt betterment accounting would result in the assets appearing at cost regardless of deteriorated value, wear and tear, or replacement.

Later in that year, Adams used the same themes as Teele and Lybrand in a speech to the annual meeting of the American Association of Public Accountants on October 23, 1908. Adams [1908, p. 381] explained to the audience, "When carried to its final analysis, the question of formal depreciation charges to operating expenses is simply a question of what constitutes cost of operation and the time when such cost shall be acknowledged." He further told the gathering that the new system assumed "the depletion through the use of that asset in operations creates an item of cost of operation that should be reflected in the accounts when the fact of this depletion takes place." He further pointed out that, "a statement of net revenue made without including this element of cost in operating expenses, is an erroneous statement." Adams finished this section of the speech by saying, "an expense arising through the consumption of property employed in operations ought to be acknowledged on the accounts with the same scrupulous fidelity as an expense caused by the consumption of labor or material."

Adams had obviously solidified his conclusions related to the matching principle and the conservative timing on the recognition of costs. He summed up his feelings on the subject: "[It is my] proposition, however, that depreciation is a proper charge to operating expenses [and] is one which is regarded as an established principle in the science of accounts." Because railroad accountants had helped the ICC create these accounts, it appears that he meant these comments for the consumption of his opponents, the railroad executives and some of their public auditors.

An Internal Industry Debate: In a front-page article, the *Journal* [May 2, 1908, p. 1] weighed into the depreciation argument, more or less on the side of the railroads. The article detailed the "modifications" that railroad officials wanted the ICC to make to the new accounting rules. Many of these changes dealt with a reduction in the total number of accounts required by the ICC. Most of these accounts dealt with equipment reporting detail and the corresponding depreciation for each. The argument was that 90% of all operating costs were contained in these accounts.

The report further explained that railroad officials had criticized and chastised the railroad accountants (the AARAO committee) for insufficiently studying the effect that depreciation would have on the bottom line. The railroad officers also

complained that net operating revenues were down due to the new rules, although they omitted to explain that there was a general economic downturn of the American economy at this time. In the end, the rail executives seemed to want the accountants to help them in two contradictory ways. First, the accountants were to report high net income for stock market purposes, while at the same time reporting low net income for rate-setting purposes, an error already pointed out by Adams in his valuation example. Even after a year, the railroad officials were still having problems with ICC definitions of what economic depreciation actually represented, the matching of cost to revenues. It became clear that debate over depreciation had moved from an industry/ICC conflict to an internal rail industry debate.

The controller of the Erie Railroad, M.P. Blauvelt, was one of those executives who criticized the AARAO in an April 29, 1908 speech. Blauvelt said that the AARAO's Committee of Twenty-Five "caved in" and "materially altered" its position on many aspects of the new accounting system to meet Adams' demands. The speaker then echoed the rail industry's party line regarding the new accounting rules by stating that, "to depreciate is to lessen the value" of the equipment [*Railway Age,* May 15, 1908, p. 81]. C.F. Calvert [1908, p. 230] disputed Blauvelt's accusations by explaining that the "loss in value feared" by the railroad executive should actually be viewed in much the same way the ICC saw it, as a part of the cost of production.

After chastising the AARAO, Blauvelt then brought a new dimension to the anti-depreciation argument when he suggested that the ICC might not have the authority to compel railroads to show properly maintained equipment in a state of depreciation. This was an early indication that if rhetoric and public opinion would not change the mind of Professor Adams, then maybe the courts could. The Commission probably foresaw these future arguments from Blauvelt when it wrote in its 1907 annual report [ICC, 1907b, p. 141] that it interpreted the Act, "as imposing upon it the duty of protecting the integrity of the net revenue statements published by carriers, and it believes that formal depreciation charges, conservatively administered, are essential for attainment of this end."

The *Gazette* [October, 1908, p. 1,050] presented another compromise by urging the ICC to drop depreciation accounting and require current replacement cost accounting, which it felt would be an improvement over betterment accounting. The article focused on the fact that no two railroads were alike, and that any standardized depreciation rates and accounts were not

feasible. The article went on to address ten more problems with the new system. Most of these dealt with procedures and theoretical questions like obsolescence and reserve accounts. However, the most prominent was the ICC's assumption that depreciation charges would better protect the stockholder by making the charges more standardized and understandable.

Nearly 15 months before, the *Times* [August 12, 1907, p. 10] had supported this position when it focused on the impact the new accounting changes had on the stockholder and the market. The article went on to say, "the new system would enable both the bondholders, and stockholders of the railroad to better understand the nature and amount of the company's income." By contrast, the issue was raised that the new ICC rules favored railroad accountants and not line operations people. The argument behind this complaint was unclear, but seemed to center on the supposed rigidity of the new rules. As noted previously in the June *Gazette* article, the railroads were worried that the new rules would preclude the gathering of additional and specific "non-financial operating data" used for efficient rail operations. This type of managerial accounting data may have included studies of wear and tear on locomotives, not the corresponding economic depreciation as intended by the ICC.

Problems with the Application of the New Rules: As the reporting period for June 30, 1908 came and went, it was clear that the railroads were "suffering" under the new rules. The *Journal* [October 13, 1908, p. 1] reported that annual reports of the railroads for the first fiscal year since the adoption of new depreciation rules "… may not fully justify the present form of such rules, but they go towards affirming the necessity for some more uniform and systematic principles for the treatment of equipment maintenance." The article went on to point out that the results of the new accounting rules for fiscal 1908 were marked by an "enormous divergence as between one road and another." The *Journal* felt that these problems revealed "to what extent each has in the past been a law unto itself not merely as to meeting the individual idiosyncrasies of its own service, but also to the ideas concerning the maintenance of the integrity of capital investment." These comments seem to correspond with the ICC's hidden maintenance agenda that would force the roads to upgrade equipment. In fact, the *Journal* articles stressed this point when it opined that the "popular idea of the new rules has been that they required all roads to increase their maintenance

charges to cover a more or less imaginary or at best theoretical depreciation not previously provided for."

Though its editorial policy had been decidedly against the new rules, the *Journal* did say it was surprised to find that some railroads' costs actually decreased with the new system as Delano and others had predicted. The real reason for the great diversity of operating results was the fact that each railroad had a free hand in setting its depreciation rates. The *Journal* awaited future developments: "It remains to be seen whether the commission will continue to leave the percentage of depreciation to the individual determination of the carriers, or attempt to fix the percentages for them." Yet, the *Journal*'s assessment was not totally pessimistic: "Thus far this plan seems to work well and pretty directly toward the ends the commission set out to accomplish."

Were the new rules a failure? From the railroad industry's perspective, the answer was an unequivocal yes! The tone of the *Journal* seemed oddly contradictory when it implied that that the ICC's new rules were failing due to the railroad industry's intransigence and not because of the concept of depreciation itself. Regardless of the reasons, it was clear that the ICC had a problem on its hands.

A full year before the *Journal's* editorial, a *Times* article [October 3, 1907. p. 13] reported these potential problems this way: "As matters stand, each road has been left to decide for itself what percentage it will charge off for depreciation, but all are obliged to charge off some percentage. There is no uniformity in making these charges for depreciation." This article pointed out that the Rock Island Lines would use a 4% rate for locomotives while the Gould Lines were more conservative with a corresponding 2% rate. The only guidance on the subject that came from the ICC was as an introductory letter from Professor Adams in the 1907 *The Classification of Operating Expenses.* In the section entitled "Consideration of Depreciation," Adams had indicated that the depreciation charges should be based on the value of the equipment with a percentage applied to the original cost. Adams went on to say, "the percentage rate required for depreciation of equipment should be limited to the rate required to replace the price paid" [ICC, 1907a, pp.10-12]. In the 1908 update [ICC, 1908, p. 22] of the rules, Adams expanded and modified his comments to include a depreciation calculation net of scrap value, and declared that there should be no depreciation recognized past the equipment's estimated useful life. Again, the ICC failed to give guidance on useful lives and

rates. Adams, in the report, only indicated that the monthly charge for depreciation should be computed "using a percentage of original or purchase price."

Inevitably, the decision that allowed rail companies to select individual depreciation methods rather than mandating a common methodology created a loophole for operating expenses reporting. The *Times* [October 3, 1907, p. 13] noted that the larger rail systems were seeing a decrease in earnings because of the new depreciation rules. The article then indicated that the railroad community "in principle approved of the requirements of the commission…but in their practical application, many have found flaws." Surprisingly, this article also mentioned that some U.S. railroads were already depreciating equipment on the books, but this was far from a uniform practice. The article then closed with a prophecy: "One thing the Interstate Commerce Commission will be asked to do is to reduce these charges to some uniform basis. Meanwhile some of the roads, which have adopted a percentage of depreciation, find their net earnings are reduced at a rate, which is very discomforting to the men in charge of finance." Although this high rate of depreciation may have resulted in reduced profits in the short run, its probable long-term result may be to increase tariff rates by showing the ICC that return on investment was not reasonable since current income is compared to assets whose values were reduced by depreciation reserves. The only way to stabilize this trend for the railroad was, of course, the continued replacement of equipment.

In a companion article, the *Times* [October 15, 1907, p. 10] reported that some roads were concerned that the new depreciation rules might result in a double counting of expenses because, according to the article, "the commission ruled that in addition to the charges for depreciation all charges for renewals must be included in operating expenses." Again, the railroads misunderstood that a charge for depreciation reduced book value as the expense was recognized. The article concluded by forecasting that, "unless the commission does change, some railroads will resort to a reduction in the percentages of depreciation which they have been charging." The *Times* [December 30, 1907, p. 10] noted that, "It is doubted…whether the Commission will be able to decide on any uniform percentage of depreciation." In essence, the railroads were required to choose rates that fit their situations, and the Commission had put off the temptation of standardizing depreciation rates across the board. The article finishing by saying, "it is admitted on all

sides that very great care will have to be exercised on the commission in fixing any precise percentage for depreciation charges in order to avoid establishing a standard which would meet the case of some roads, but either exceed or fall short of the requirements."

Revised Reporting Rules: The ICC fought back in January 1908 with the publication of new reporting rules for depreciation, which included the aforementioned six-month ICC reporting requirements and a new balance sheet classification showing equipment at original cost less accumulated depreciation. The *Journal* [February 27, 1908, p. 8] reported on this development indicating that the ICC and Henry Adams had "undertaken an exhaustive review of the treatment of depreciation charges by interstate carriers during the six months ending December 31, 1907." The new reporting rules were, in and of themselves, exhaustive and included "blanks" for listing all equipment and providing separate valuations and depreciation rates, as well as the impact per month on income and expenses. The *Journal's* article went on to observe that this was a technical issue, and it took familiarity with the railroad accounting to "appreciate fully the labor involved in answering such a series of questions." These new rules were not merely clerical in nature because they also included onerous regulations that required the chief railroad accounting officer to certify the accounting and depreciation results.[11] Finally, the article went on to relate that a great many railroad companies had determined their depreciation charges, "making an intelligent guess at the average life of locomotives…charging them accordingly." The writer added sympathetically: "It will be no small undertaking to apportion these charges as minutely as the Commission's desires."

The problems over depreciation rates would continue for many years as indicated in the ICC's 1913 annual report where it was noted [p. 39] that depreciation rates for similar equipment varied from 7% per year to zero. The report said that the rates were due to differences in "policy" and were unrelated to "physical depreciation." Although the ICC report provided no standard for depreciation rates, it did give an example that indicated a 1% charge rate would be unacceptably low as assets

[11]In a similar fashion to the Hepburn Amendment, the Sarbanes-Oxley Act of 2002, Section 302, *Corporate Responsibility for Financial Reports,* required that executives of all publicly held corporations had to sign an affidavit regarding the accounting procedures used in the financial statements.

would be overstated and a fictitious surplus created. The example then indicated that a 7% rate was probably too high, leading to an understatement of income and the creation of "secret reserves." The "manipulation" of depreciation rates was of concern to the ICC; it planned to rein in these problem reporters. The Commission made it clear to its readers that it had the power to do so under law, but the tactics of the railroads themselves were about to change. Since rhetoric and protest had failed to dislodge the new accounting rules, it was evident that the tide of power had turned against these once politically powerful railway concerns. They were left with only one recourse – challenge the new accounting rules directly, first through civil disobedience and then, if necessary, the courts.

LEGAL CHALLENGES TO THE DEPRECIATION RULES

The rail industry, in a brief but combative article in the *Times* [March 2, 1908, p. 10], continued to protest the high cost of the application of the new depreciation rules. The article noted that there had been plenty of grumbling from railroad officers because the ICC had compelled them to include monthly depreciation charges in operating expenses. It was reported that the politically powerful Pennsylvania Railroad had gone so far as to refuse to comply with the order. Naturally, the ICC wished to fortify its position with complete knowledge of past and present accounting practices.

The *Gazette* [January 31, 1908, p. 681] confirmed the Pennsy's stance on this issue and that of the New York Central as well. The publication indicated that the railroads, in making monthly earnings reports to the ICC, declined to sign an ICC affidavit to that effect. In response, the government proceeded against these roads for non-compliance by sending a ten-day notice compelling the roads to sign the affidavit. Earlier in the debate, the *Journal* [October 5, 1907, p. 8] had reported that there was no uniformity among railroads in their planned actions against the new accounting rules. At this point, it was reported that companies like the Pennsylvania Railroad had not yet made final decisions to defy the accounting and reporting orders permanently. The railroads' indecision over litigation may have had as much to do with the unknown future effect that depreciation would have in the future financial outcomes of the companies as to the authority of the orders themselves because some roads were actually benefiting from the change.

Regardless of the vacillating opinions of the industry, at

this late date, any legal recourse appeared limited due to a Supreme Court ruling in January 1909 that supported depreciation charges for determining rates in the public utility industry.[12] In *City of Knoxville vs. Knoxville Water Company* [212 U.S. 1], the Court ruled that "a deduction for depreciation from age and use must be made from the estimated cost of reproducing a waterworks plant when determining the present value of the tangible property for the purpose of testing the reasonableness of the rates fixed by a municipal ordinance." This ruling indicated that depreciation was a "determinant of, not an allocation of net income," rendering invalid the utility's argument that depreciation was confiscatory in nature.

The possibilities for legal action began to improve when the Lehigh Valley Railroad announced in the *Times* [October 18, 1909, p. 13] that it was refusing to recognize the authority of the Commission. In short, their argument was that the ICC had the authority to promulgate accounting requirements, but not to force them on the roads. This protest was directed against the ICC's final installment of the uniform accounting regulations in August 1909. These regulations, according to the report, "restrict(s) the discretion of the directors in the matter of charges for depreciation of equipment."[13]

These issues reported by the *Times* may have been only "shadow problems," while the real issue centered on the new form of a balance sheet formulated by the ICC that showed more detail about capital and asset accounts. The formal protest to the ICC from the Lehigh Railroad indicated that the company believed that the accounting orders "assumed an authority which was not intended to be granted to the commission by Section 20 for the act…and further believes the adoption of said orders will not before the best interests of the railroad." Essentially the railroad felt that the accounting rules were an unwarranted appropriation of the company's surplus.

The railroad also contended that those depreciation charges applied to the cost of betterments (repairs) and not the purchase of additional or replacement equipment. It argued that, "it is not the desire of the [railroad] to enter at this time into

[12]Public utilities included water, gas, and power companies which did not come under the jurisdiction of the ICC.

[13]As a side note, the new rules actually gave the railroads more flexibility in determining what amounts should be capitalized by allowing labor to be expensed under certain conditions. In addition, the ICC relented and combined the accounting for betterments and additions. This had the effect of streamlining the number of accounts required.

any argument with the commission regarding the merit or lack of merit of the systems of accounting prescribed in the orders mentioned above, as the statistician of the commission, we understand has been favored in conference with the views of our representative." The ICC had apparently listened to the Lehigh's complaints but had either dismissed or ignored them. The article went on to comment that while there were no current plans for litigation, the railroad was thinking "about testing the validity of the orders in law or equity." It should be noted here that the railroad, in its discussion, moved from mentioning Adams' name to the more pejorative "statistician of the commission." The debate was turning personal.

To add another wrinkle to the rail industry's anti-depreciation stance, the article mentioned, "the system promulgated by the commission partakes in many respects the practice followed by the British railroads, the financial condition of which, and their cost of performing service, not withstanding lower wage rates paid in that country, being too well known to elaborate explanation." Delano also complained about this perceived British bias and the apparent inefficiencies in its transportation system. The "anti-British" focus may have started when Adams, in a letter to the railroads in 1908, quoted a British accountant as having said: "No profit can exist until the expired outlay of productive plant has been provided out of gross revenue" [Chapman, 1908, p. 623].

A similar article in the *Journal* [October 18, 1909, p. 6] a week later framed much the same argument by claiming that capitalizing betterments (repairs in the eyes of the railroads) is an appropriation of income and an increase in asset value on the balance sheet that the stockholders would improperly perceive as source of new capital rather than a charge to profit and loss. The 1909 rules apparently changed the focus of the roads because they were now worried about a public perception of too little expense rather than the 1907 problem of too many new charges.

The *Journal* also thought that it would be unwise for American railroads to adopt excessive capitalization that had worked "so disastrously" for English railroads. W.G. Taylor defined the term "overcapitalization" as "capitalization (stocks and bonds) merely in excess of the cost of production or reproduction of the plant" [Johnson, 1908, p. 325].[14] It was thought that in the

[14] The British also felt that the Americans were moving to their system. A sarcastic article regarding the situation was published in the British account-

absence of a dollar for dollar match in long-term bonds and fixed assets, it would be assumed that the railroads were gouging the public because of the higher rates needed to cover any "excess borrowing." Overcapitalization went against the public good. The more colloquial term for this methodology was "stock watering," which had given the railroads a bad reputation in the past. This issue would continue contentious for the next 20 years and would be the crux of future rate arguments. It constituted the central reason why the ICC was going to attempt systematically to standardize the "value" of all railroads in the U.S.

Before any of the railroads could file against the ICC, a parallel set of lawsuits began working their way through the courts. The Goodrich Transportation Company and the White Star Lines attempted to have the 1910 issuance of Special Report Circular 10, which required them to report certain accounting data to the ICC, overturned in court. In *ICC vs. Goodrich Transportation Lines and White Star Line* [224 U.S. 194], the two companies argued that they did not come under ICC jurisdiction because the law creating the ICC implied that only shipping lines affiliated with railroads could be regulated. As independent Great Lakes steamship lines, they were therefore exempt. The *Times* [April 2, 1912, p. 15] reported that that the court disagreed and indicated that they were required to follow ICC regulations because they were a business in the pursuit of interstate commerce by definition of the law.

Because the courts allowed the ICC to require formal reporting by the water-borne carriers, the railroads' protests over accounting and reporting issues appeared to be dead, except for one challenge from the Kansas City Southern Railroad filed in November 1911. The *Journal* [November 17, 1911, p. 1] reported that the railroad sued in Commerce Court over the refusal of the Commission to allow the capitalization of certain outlays. The argument was narrow and dealt with a $10 million charge that the ICC wanted taken into income because the railroad did not "charge against earnings the estimated replacement value of six parcels of abandoned roads incident to grade reduction." Simply put, it had not offset the cost of new railroad grades

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ing journal *Accountant* on July 20, 1907. It noted: "The 'reform' is curiously interesting inasmuch as it affords a rather pathetic spectacle of the United States striving to get back to the low level of British railroad statistics and Great Britain struggling to attain the fullness of perfection exhibited by the now discarded American method" [*Journal of Accountancy*, 1907, p. 318].

they had completed with the value of the abandoned right-of-ways for depreciation purposes. The railroad felt that this process not only hurt income but also impaired the market value of bonds issued to pay for the betterments. There appeared to be a contradiction in the ICC regulations because it allowed capitalization on the grade changes to the existing right-of-way but not for the change in location of the same rail system that would have substantially reduced operating costs.

The Supreme Court issued its ruling in *Kansas City Southern vs. U.S.* [231 U.S. 423], upholding the ICC's rules [the *Journal*, December 6, 1913, p. 1]: "The Supreme Court sustained a ruling of the ICC, and established absolute authority of that body to decide questions of accounting practice." Adams, however, could not savor this 1913 victory as he had retired two years earlier from the ICC after nearly 25 years of service. Although the seven-year debate over accounting policy had started out cordially enough, by the time of his retirement it was beginning to get ugly with civil disobedience, litigation, and recriminations. A *Times* editorial [September 24, 1910] eyed the suspicious nature of the ICC as it pertained to the dual issues of accounting treatments and railroad valuation. The article took the stance that no two railroads could ever be valued the same, "Yet, it is the [holy] grail of the Interstate Commerce Commission."

The critical tone of the editorial seemed to point to the ill-advised concept that all railroads were equal and that such regulations would harm the industry. Adams was portrayed sarcastically: "In obedience to the theories of Prof. Adams [the ICC] has adopted a system of accounting designed to impede the methods of betterments from earnings which has made the capitalization of American railroads a world's marvel." This was probably another veiled reference to the opinion that English roads were overcapitalized. Whether the ICC indeed viewed the English system of accounting to be superior is not known, but it probably saw most other industries embracing economic depreciation and became unrelenting on the issue, wavering little from its basic theory. Such regulations, as the railroads and the press felt, penalized the efficient and well-run railroad.

AFTERMATH AND CONCLUSIONS

By the end of 1913, the ICC had essentially won on the issues of uniform accounting measures and its authority to impose reporting requirements on the railroads. The ICC's

annual report [1913, p. 39] noted: "The Commission continues to receive…the cooperation and assistance of different classes of carriers in formulating accounting systems which will furnish the Commission with the largest possible measure or information while recognizing the practical limitations." Within the next year, the ICC would issue a wide range of accounting regulations for all the constituent industries and companies under its jurisdiction. Round one of the great American depreciation debate was over.

The ICC and the related concepts of "economic depreciation" and "cost matching" were clear winners, but the necessity of maintaining efficient rail operations in a large, prosperous, and growing country would take precedence over theory for the near future. In an apparent vindication and a mild rebuke to the theories of Henry C. Adams, the ICC granted the railroads a five percent rate increase on December 18, 1914. Although reported as a victory for the railroads, it was indicated in the *Times* [December 19, 1914, p. 1] that gross revenues compared to expenses had dropped drastically since 1910 due to the "inelastic nature of many expenses." According to the Commission, the "recent increased provisions for depreciation…that may militate against a fair comparison of…comparable statistical items…we cannot say this on the record that such charges as the present returned by the carriers are excessive, viewed with from the standpoint of proper accounting."

The ICC commissioners, even with the accounting data before them, could not decide upon the reasonableness of rates of return as envisioned by Adams, but neither did they scrap the new system in favor of the old pre-1907 betterment accounting rules. In this case, it appeared that regardless of what the rates of return were telling the ICC about them, the railroads were not generating enough income and corresponding cash flow to cover operations and complete the necessary asset replacements mandated by the ICC. In fact, the ICC realized that the roads were in a dire situation because they would be unable to float bonds in Europe to finance replacements due to the war that had erupted in August 1914. In the end, even with Professor Adams' rate theories and uniform accounting data, the decision had come down to one of expediency and necessity to maintain the integrity of the American rail system for the traveling and shipping public. In the meantime, the accounting policy of the railroads would remain at odds with those of American industry in general for some time to come.

The depreciation debate was again renewed in 1923 when

the ICC ordered the depreciation of track right-of-way and way structures. This order set off another ten years of protests and litigation that would culminate in the ICC's canceling the orders in 1933 due to the economic depression. The final phase of the debate over betterment accounting would recommence in the mid-1950s with an attempt by Arthur Andersen to reinvigorate an economically moribund rail system through the convergence of railroad accounting practices with industry GAAP. This time Arthur Andersen challenged the theoretical underpinnings of railroad accounting rules in light of depreciation standards issued by the Committee on Accounting Procedures during World War II. The debate created a strange coalition as Arthur Andersen stood against the American Institute of Certified Public Accountants which sided with the railroads and the ICC. The final demise of betterment accounting for rail structures would occur in February 1983 when the ICC, bowing to pressure from the Internal Revenue Service and the Securities and Exchange Commission, abolished its usage. Congress abolished the ICC itself in December 1995.

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