

**DEBUNKING  
THE FREIGHT RAILROAD  
PRICING MYTH**

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## EXECUTIVE SUMMARY

In December 2000, the Surface Transportation Board (STB) published a paper entitled, Rail Rates Continue to Decline. At the core of the paper is the claim that despite inflation, railroad freight rates declined by 20% from 1984 to 1999. According to the Board, the lower rates were spurred by gains in railroad productivity, which in turn had been induced by railroad deregulation – that is, the Staggers Rail Act of 1980 (Staggers) and the regulatory interpretation of that law. Thus, it is the STB’s claim that railroad deregulation has universally benefited consumers and that “on the whole, the railroad industry operates in a competitive environment.”

There is much that is disturbing about the STB paper. Even on a surface level, the paper is questionable, for if the STB was correct in its assessment of the competitive environment of railroads, there would be no need for a regulatory agency. The STB exists because there are markets of railroad monopolization and because there are rail-dependent customers. The term “on the whole” has no meaningful application to railroad markets, and its use by the STB illustrates the shortcomings of its thinking.

The critical evaluation of the STB paper presented in this report shows that since Staggers, the general level of railroad freight rates has actually increased. But even so, it is not the general level of railroad rates that should be of concern to the STB. The development of effective regulatory policies requires the analysis of railroad rates in individual markets, relative to operating expenses and service levels in those markets. The STB presents no such analysis in its paper and identifies no such relationships. In fact, the Board does not even measure the changes in actual railroad freight rates, but rather adopts a somewhat modified version of the “freight revenue per ton-mile” (R/TM) financial measure as a surrogate for the general level of railroad freight rates. This is an improper use of that measure. History shows that railroad freight rates have often increased as R/TM declined, because R/TM is affected by a multitude of factors other than changes in freight rates.

The STB paper is also wanting in other areas. For instance, it assumes cause-and-effect relationships without adequate support. It adopts 1984 as a base year and inappropriately attributes long-term trends to that year. As a result, these trends become inappropriately linked to deregulation. Railroad downsizing and related productivity gains have been long-term trends that began just after World War I. Furthermore, the Board assumes that railroads are not monopolists because monopolists would not lower their prices, even when they were experiencing declining operating costs. Nonsense. Even monopolists can gouge only so far before they expose themselves to more regulation.

The reality is that rail-dependent customers have incurred higher, albeit constrained, railroad freight rates. On this score, the STB does not allude to changes in freight rates to rail-dependent customers for, in fact, the agency disavows the existence of such customers. It recognizes that railroads have varying degrees of market power, but does not admit to monopolistic power. Rather, it finds that critical railroad customers simply don't like the concept of differential pricing. This is clearly not the case as differential pricing is an acceptable business practice employed by rail-dependent customers themselves. The ability to have competitive choice does not preclude the application of differential pricing.

It is hard to fathom why the STB would release such a superficial paper. A reasonable person could conclude that it was an attempt by the Board to rationalize its past decisions and explain its insensitivity to rail-dependent customers. After all, the railroad industry is currently dominated by four railroads—UP, BNSF, CSX and NS—which control 95% of railroad traffic. These four railroads also control: industry-wide operating rules, car-repair billing rates and practices, interline agreements, service standards, investment practices, industry positions on public policies, and the financial clearinghouse. The Board has played no small role in creating this pronounced concentration of power.

Furthermore, the Board may have wished to divert criticism from its regulatory criteria and decisions, including: (1) its revenue-

adequacy standard which lacks credibility when, as has happened, STB-declared, revenue-inadequate railroads boast of record profits and reward their executives with maximum incentive compensation, (2) its time-consuming and costly rate proceedings—employing a theoretical “stand-alone” cost standard—which have inhibited rail-dependent customers from submitting complaints to the Board, (3) its highly unusual accounting treatment of billions of dollars in non-recurring or extraordinary railroad costs, as normal operating expenses, and (4) its reliance on projected economies in approving railroad mergers and acquisitions, while giving scant attention to the adverse impacts of limiting choice to railroad customers.

Whatever the reason for the Board’s paper, its attitude does not bode well for the future. If the STB is to fulfill its proper role in balancing the needs of railroads and their customers, it must acquire an adequate database—including actual freight rates—and not employ a poor surrogate measure. It must be a public advocate for rail-dependent customers. It must reexamine its regulatory standards, with the goal of restoring credibility to them. It must make its procedural process user friendly. It must take stock of where the railroad industry is, and where it is likely to go under the present regulatory direction. And, it must not undertake shoddy economic analysis or violate sound principles of statistics and economics. In short, it must change its perspective.

By regulating railroads as though rail-dependent customers did not exist, or if they did exist, that their concerns were ill founded, the STB has helped catapult railroad transportation down a slippery slope. It has simply gone too far in stressing potential economies at the expense of reducing competitive choice. If change is not forthcoming, the end result may be a one- or two-railroad system aided and/or controlled by the federal government. This was not the intent of Staggers nor is it the desire of rail customers. Meeting customer needs is the basis for the long-run viability of all for-profit businesses, and railroads are no exception. It is in the hopes of inducing a change in STB perspective that this report has been prepared.

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## I. TWO INITIAL AND TELLING CONCERNS

In its December 2000 paper, the STB concludes that railroad freight rates declined by 20% from 1984 to 1999. The Board's analysis and findings are based on a modified R/TM. Still, the STB concludes that its findings are "similar to the freight revenue per ton-mile measurement reported by the . . . AAR . . . in its pamphlet *Railroad Facts— 2000 Edition*." The unmodified AAR-calculated R/TM shows a 26% decrease from 1984 to 1999. Before addressing the deficiencies of R/TM as a surrogate for railroad freight rates—even as modified by the STB—two initial concerns regarding the STB calculation come to mind:

1. Why did the STB begin its post-Staggers analysis with the base year 1984?

It is well documented that immediately following the enactment of Staggers, railroads raised their rates precipitously.<sup>2</sup> In fact, Staggers permitted railroads to increase their rates in an uncontested manner, up to the levels of inflationary cost increases as measured by the Rail Cost Adjustment Factor (RCAF). From 1980 to 1984, the RCAF rose by 24%, and a number of railroad rates were increased by this same amount. In fact, railroad rates increased so much during this period that even R/TM (which tends to decrease regardless of rate increases because of the complexity of factors this statistic averages) accelerated during that time period, increasing from 2.76 cents in 1980, to 3.02 cents in 1981, and 3.18 cents in 1982, before falling to 2.89 cents in 1983 and 2.78 cents in 1984.<sup>3</sup> Thus, by selecting 1984 as the base year of measurement, the STB overstates even its own misguided calculation of railroad rate decreases.

2. Why did the STB ignore empirical evidence of rate increases based on measures of actual railroad freight rates?

The Bureau of Labor Statistics (BLS), United States Department of Labor, has historically collected monthly samples of actual railroad

freight rates as inputs to the Producer Price Index.<sup>4</sup> What is appealing about the BLS Series is that it measures changes in actual freight rates—that is, a “market basket” of movements which retains the same commodities, origins and destinations, and other shipping characteristics. This is customary in constructing pricing indexes and is the same approach used for the nation’s inflation indexes. On the other hand, the BLS Series is based on a relatively small sample size. Recognizing this limitation, during the 1980s the AAR undertook its own very comprehensive rate survey of two of the railroads’ dominant commodities: coal and grain.<sup>5</sup> The AAR then constructed its own AAR Composite Index, substituting BLS data for commodities other than coal and grain. Then, the AAR terminated its surveys in 1989 after having measured changes in railroad rates from 1980 through 1988. Still, for the major part of the 1980s, reliable railroad rate data were available, and could have been used as a basis for identifying not only the trends of railroad freight rates under deregulation, but also relationships, if any, between railroad freight rates and R/TM.

From 1980 to 1988, the BLS Series shows railroad rates to have increased by 38%, while the AAR Composite Index indicates a 28% gain. Without an AAR Composite Index after 1988, only BLS freight-rate data were available. The BLS Series shows railroad rates to have increased by 47% from 1980 to 1999. If adjusted in the same manner as the AAR Composite Index between 1980 and 1988, the increase would be 35%.<sup>6</sup> Thus, there are significant increases in railroad freight rates since 1980, even with a decline in R/TM. This is nothing new as a similar relationship between railroad freight rates and R/TM existed prior to Staggers.<sup>7</sup>

## 2. EXPOSING THE RAILROAD PRICING MYTH

The railroad pricing myth is that: **a change in the overall level of railroad freight rates is synonymous with a change in the aggregate amount of revenue that railroads collect for each ton-mile of traffic they handle.** The R/TM is derived by dividing freight revenue by ton-miles originated. Both figures are recorded in railroad

annual reports, but the accuracy of ton-miles is dubious; it is not audited by railroad accounting firms or by the STB.

In its December 2000 report, the STB acknowledges that R/TM is flawed as a surrogate for the general level of railroad rates. Thus, the Board makes 3 modifications to the traditional R/TM measure. First, it changes the source of data from an admittedly limited AAR publication to the AAR-processed railroad Waybill Sample. Second, the Board divides its analysis between East and West segments of the country, with the goal of eliminating geographic shifts in railroad movements. But this division does not capture traffic shifts within those large territories, and does not account for the differences among a host of other (non-distance) traffic characteristics.

Finally, the Board attempts to account for changes in the mixture of commodities handled by railroads, by weighting annual revenues from each commodity group in its overall adjustment process. However, this annual re-weighting violates the very nature of tracking changes in freight rates by undermining the universally accepted, market basket concept to measure price changes. When new railroad movements are introduced into the price-change calculation, the result is a blend of price modifications in steady markets, with new rates being offered to new shippers in new markets. These are not changes in railroad rates from a previous level.

In essence the STB's modifications to the R/TM represent statistical maneuvering which does not assure a proper accounting of freight-rate changes. Basically, the Board still employs the R/TM measure with its foibles, and that is why the difference between its modified calculation and the AAR-produced R/TM measure is not significantly different.

Perhaps the best way to understand the dichotomy between the railroad freight rates and R/TM is through a simple illustration. Assume that a railroad begins operations in 1980 and immediately attracts 10 customers. Each customer is offered a rate schedule. A schedule is not one rate, but a series of rates dependent upon: (1) the properties of the commodities to be shipped, such as density,

susceptibility to damage, size, and unusual features, (2) the volume of traffic being tendered, such as hundred-weight, tons, carloads or even a percentage of the customers' total shipments, (3) the locations of origins and destinations, (4) routing, (5) ownership of equipment, (6) number of participating carriers, (7) number of switches, (8) parties responsible for loading and/or unloading, and (9) in the case of contract rates, the length of time the freight rate is available. Now assume that in 1981, the railroad raises 8 of the 10 rates by amounts ranging from 1%-5% and holds the other rates steady, resulting in a weighted average rate increase in the 1980-level business of 2%. If a freight-rate index were constructed beginning with the year 1980, it would increase from 100 in that year to 102 in 1981 because the 1980 movements constituted the market basket of rates being measured. But the railroads' traffic movements in 1981 may be very different from its 1980 traffic, which could result in a decrease in the R/TM from 1980 to 1981.

When the railroad raised its rates in 1981, one of its customers could have ceased shipping via that railroad. That shipper's rate was still being published, but it would not be contributing to the railroad's revenue and ton-miles in 1981. If the shipper were a higher-than-average-margin customer, its absence would automatically lower the R/TM measure, without a corresponding change in the railroad's rate level. The absence may, or may not, affect the relative commodity-mixture of the railroad's traffic.

Other customers may have selected different rates on the rate schedule, because of their ability to ship more volume, or use alternative routes. These customers may be giving the railroad less revenue for each ton-mile that is generated by these different shipments, but their freight rates did not decline. They simply were able to shift their movements to other rates on the original rate schedule they were provided. Furthermore, it is possible that the railroad attracted additional customers in 1981 by offering new, relatively low-margin rates. These new rates would not be included as part of the 1981 rate index because they did not exist in 1980—that is, they were not part of the railroad's overall 2% rate increase. Yet, the ton-miles that this new traffic produced would become part of the

1981 R/TM calculation. Again, with new, lower-margin traffic, the railroad's average R/TM would decrease, without any corresponding action in the railroad's rate level.

Finally, if the railroad experienced a significant growth of intermodal traffic—where trucking companies were providing much of the service, including the marketing, billing, accounting, finance, pickup and delivery, and loading/unloading facilities—the railroad would probably be adding relatively little revenue, but significant ton-miles to its R/TM measure. The end result would be a decline in the railroad's overall R/TM. At the same time, the railroad could have increased its freight rates to a number of its customers.

### **3. THE DEFICIENCY OF RAILROAD RATES AS STAND-ALONE INDICATORS**

No matter how railroad rates are measured, in themselves they have little value as economic indicators. An effective rate analysis requires a comparison of rates to costs<sup>8</sup> and service levels. This is why the jurisdictional threshold established by Staggers is a revenue-to-variable-cost ratio. In fact, data from railroad annual reports submitted to the STB reveal that the industry's R/TM declined by 20% from 1980 to 1999 (2.867 cents to 2.280 cents), while at the same time, its expenses per ton-mile (E/TM) dropped by 24% (2.576 cents to 1.950 cents). Furthermore, the 1999 E/TM includes \$221 million in special (unusual or infrequent) charges, and other post-merger temporal expenses.

Thus, the railroad industry has improved its operating efficiency, and subsequently its operating earnings since 1980, no matter what the overall direction of freight rates and R/TM. This is evidence that railroads have retained at least some of the benefits from increased productivity.

In any event, railroad customers do not pay for ton-miles of service. They pay for time and place utility – that is, the value of having their

goods shipped and delivered at specific times, to and from specific locations. What is important to these customers is that their shipments arrive safely, on time, and in a consistently reliable manner. A decline in railroad service levels with no corresponding decrease in the R/TM—even if it were a proper surrogate for the general level of freight rates—constitutes an increase in freight rates. This is akin to replacing a used car with a similar new car, where the new car has fewer options, is constructed with lighter (and less safe) materials, and has an inferior warranty. An alteration of railroad shipping characteristics which adversely affects customer service and/or distribution costs represents an increase in freight rates. A shifting of investment costs from railroads to shippers represents an increase in freight rates. And a railroad action that causes customers to lose business represents an increase in freight rates. These indirect increases in railroad freight rates are not measured by R/TM. Nor are they measured by a railroad freight-rate index that does not employ the market-basket approach.

#### **4. STB PERSPECTIVE**

Largely based on its acceptance and embellishment of the railroad pricing myth, the STB reached other conclusions in its December 2000 report, which speak volumes about its perspective. These conclusions are identified and responded to below.

- 1. The STB contends that lower rail rates were spurred by railroad productivity gains realized as a result of the enactment of the Staggers Rail Act of 1980.**

There is a tendency to conduct railroad economic research as though history began with the enactment of Staggers, thereby attributing ensuing events to the economic deregulation of the industry. Such analysis can significantly overstate the impact of Staggers, as a number of post-deregulation railroad trends have their roots in pre-Staggers years. In fact, with the exception of more liberal provisions affecting the sale and abandonment of light-density lines,

there is no direct connection between railroad productivity and deregulation. When it comes to rationalizing the railroad plant, history began almost a century ago.

The drive to build a comprehensive system of railroads in the latter part of the 19<sup>th</sup> century – aided by regional competitiveness, rights of eminent domain, public financial assistance, and massive acreage of land grants – resulted in a vastly overbuilt railroad industry. By the early 1900s, the industry had hit its peak size. Since then, the railroad track structure, other fixed plant, and the labor force, have been steadily downsized. As shown below, the number of Class I railroads shrank from 230 in 1907 (the peak year) to only 7 today. Similarly, railroad mileage declined from 254,000 in 1916 (peak year) to 99,000 in 1999. In addition, the number of employees dropped from 2.1

| <u>Year</u> | <u>Miles of<br/>Road Owned<br/>(000)</u> | <u>Number of<br/>Railroads</u> | <u>Number of<br/>Employees<br/>(000)</u> |
|-------------|------------------------------------------|--------------------------------|------------------------------------------|
| 1907        | -                                        | 230                            | -                                        |
| 1916        | 254                                      | -                              | -                                        |
| 1920        | -                                        | -                              | 2,148                                    |
| 1929        | 230                                      | 162                            | 1,661                                    |
| 1955        | 211                                      | 126                            | 1,015                                    |
| 1970        | 196                                      | 73                             | 566                                      |
| 1980        | 165                                      | 36                             | 458                                      |
| 1990        | 120                                      | 14                             | 216                                      |
| 1999        | 99                                       | 7                              | 178                                      |

million in the peak year of 1920 to the 1999 level of 178,000. Since railroad ton-miles have increased during this long history, railroad productivity—as measured by the single output measure of ton-miles—has increased. Railroad productivity has been spurred by such long-term events as: more favorable labor agreements, elimination of passenger service, introduction of new technology, consolidation of plant and facilities, abandonment and sale of light-density branch lines, shifting of costs to shippers and other “third parties,” substitution of computers for labor, and management’s realization that it needed to reduce economic waste. In the case of railroad productivity, the long history of the industry must be recognized.

**2. The STB contends that railroad rate decreases and the avoidance of inflationary cost increases produced \$32 billion in savings in the year 1999.**

In its paper, the STB calculates that railroad customers saved \$32 billion in 1999 from reduced railroad freight rates. This figure is adjusted downward by \$4 billion or so, recognizing that railroads shifted some of their costs to their customers and other freight-car investors. The STB then asks a rhetorical question: “Where did the money go?” The Board responds, stating that: “. . . neither the railroads nor shippers have captured the majority of these savings. . . . rail customers . . . have been . . . the ultimate beneficiaries . . .”

While railroad freight rates have been constrained over the past 20 years, the magnitude of the STB-calculated savings is a mirage. In the first place, it is inappropriate to assume the hypothetical case that R/TM would not have changed since 1984, and then compare the unrealistic base number with actual figures. Railroad ton-miles increased significantly since 1984, and thus the R/TM would have automatically declined. Second, as previously discussed, since a decline in the R/TM does not mirror changes in freight rates, it similarly does not measure savings to railroad customers. Third, inasmuch as railroads reduced their costs by more than the rate of inflation, there is no reason to deflate the R/TM measure to calculate savings. Finally, the net \$28 billion in savings calculated by the STB for 1999 is mainly comprised of inflation-avoided monies. This means that the overwhelming majority of the alleged savings are not actual monies passed on to railroad customers. In essence, the STB establishes a “straw man” and then simply holds its breath.

**3. The STB contends that almost all railroad productivity gains were passed on to shippers, who in turn passed them on to consumers.**

The STB assumes that railroads did not keep a material portion of the benefits from their productivity gains, largely based on the declining R/TM. The Board explains away rail customers’ claims that they received no such benefits with the notion that those benefits

were passed on to consumers. However, the STB provides no evidence to support these assumptions. Moreover, the Board ignores railroad financial improvements and the ability to cover expenditures over the past 20 years. Consider the following examples:

a. Special Charges: Between 1984 and 1999, Class I railroads paid out \$14 billion in “special charges,” with the majority of this money going for labor buyouts associated with downsizing. Obviously, the railroads earned enough money during this period to pay for future productivity gains in the form of substantial “up-front” severance payments.

b. Financial Gains: The 4 dominant railroads improved their financial postures during the 1980s and the first half of the 1990s. In fact, these railroads were in sound condition just prior to their costly acquisitions of other Class I railroads over the past five years. For example, consider each railroad’s rate of return on equity (ROE) reported to the STB, just prior to their major acquisitions, as shown below. (The ROE is the return to the shareholders after debt providers receive interest payments, and after taxes are paid.)

| <u>Year</u> | <u>Railroad</u>     | <u>ROE</u> |
|-------------|---------------------|------------|
| 1994        | Burlington Northern | 16.9%      |
| 1996        | Union Pacific       | 16.6       |
| 1996        | Norfolk Southern    | 13.7       |
| 1997        | CSX Transportation  | 12.4       |

As high as they were, the above ROEs were consistently lower than the ROEs reported by the parent corporations of railroads in their annual reports to shareholders.<sup>9</sup> None of the railroads claimed to be revenue inadequate. On the contrary, they boasted of record profits. Railroad investors were virtually throwing money their way and stock prices had soared. The president of the AAR proclaimed that a second “Golden Age of Railroading” was upon us, and optimism was widespread. Magazines such as Time and U.S. News and World Report, headlined articles with such titles as, “Back At Full Throttle,” and “On The Right Track.”

Consequently, railroad executives received maximum incentive compensation. As an example, UP earned so much money in 1996 that after paying its executives the maximum incentive compensation, it established a surplus fund which was then used in 1997 to help pay for executive bonuses, even though its financial targets had not been met that year immediately after purchasing the Southern Pacific Railroad (SP).<sup>10</sup>

c. Acquisition Expenditures: Aside from other acquisitions and mergers over the past 20 years, three cases demonstrate the enormous amount of money expended by railroads for such consolidations. First, after a prolonged bidding war between the Burlington Northern (BN) and UP railroads, the BN prevailed, purchasing the Atchison Topeka & Santa Fe Railway Company (SF) for \$4.0 billion, effective September 9, 1995. Second, and in an acknowledged reaction to the BN acquisition, the UP purchased the financially failing SP for \$2.6 billion, effective September 11, 1996. And finally, effective June 1, 1999, CSX Transportation (CSX) and the Norfolk Southern Railroad (NS) shared in the purchase of Conrail (42% and 58% respectively) for about \$11 billion, and assumed another \$10 billion of Conrail debt.

d. Executive Compensation: Railroad executives received substantial increases in compensation over the past 20 years. For example, in 1980 the average annual compensation for railroad “Executives” was \$35,721. This figure increased to \$83,274 in 1999—equating to a 133% gain—but for the broader category of “Executives, Officials and Staff Assistants.”<sup>11</sup> Since officials and staff assistants earn less than executives, it is likely that the average annual executive compensation in 1999 was over \$100,000. No matter which figure is used, gains in railroad executive compensation far exceeded the 94% inflation rate between 1980 and 1999 (as measured by the GDP Implicit Price Deflator), and this

increase excludes deferred compensation, grants of stock, stock options, and other special executive perks and benefits.

The above four examples show that railroads have benefited from railroad productivity gains and that the STB is in error in stating that the gains have been almost entirely passed on through railroad customers to consumers.

**4. The STB contends that railroad rate setting since 1984 is “evidence that on the whole, the railroad industry operates in a competitive environment.”**

The STB’s conclusion that “on the whole the railroad industry operates in a competitive environment,” has no substantive meaning. Of course, railroads face adequate competition in a number of markets. That is why they were partially deregulated. But railroads also have monopolistic control in other markets. That is why some traffic and markets were left to regulation. And because of railroad mergers and acquisitions, the degree of railroad monopolization has increased. The phrase “on the whole” provides a false impression. It ignores the existence of major railroad rate proceedings and rail-dependent customers.<sup>12</sup> Using data from the railroads’ competitive markets to draw conclusions about the railroads’ monopolistic markets is a misuse of statistics and an inappropriate regulatory methodology.

**5. The STB contends that captive shippers are actually upset with the practice of differential pricing because they have not received the same level of railroad freight-rate decreases as some of their competitors.**

In its report, the STB states that “. . . while there are clearly instances where railroads retain a degree of pricing power, nearly all of these productivity gains have been passed along to rail customers.” In using the term “degree of pricing power,” the Board infers that it is differential pricing—rather than excessive rates—that is at issue to rail-dependent markets. This is a presumptuous theme proffered by

the railroad industry. In fact, a past vice president of a major railroad wrote in the January 4, 2001 Journal of Commerce that shipper dissatisfactions are really an assault on differential pricing. The STB goes on to support this notion by stating that, “Even when a shipper’s rates have declined in absolute terms, the shipper might feel disadvantaged if a key competitors’ rates have fallen relatively more.”

Attributing the concerns of rail-dependent customers to differential pricing is unsupported and, in fact, unsupported. As privately owned and operated businesses themselves, rail-dependent shippers understand that differential pricing is a sound economic principle that is practiced in competitive markets. Competitive choice is a ubiquitous business practice and does not preclude differential pricing. Rather, rail customers are concerned that monopoly power—rather than responsiveness to customer needs—has become the determining factor for railroads’ differential pricing.

## **5. REALITY SINCE STAGGERS**

Staggers was enacted largely to eliminate unnecessary economic regulation, to foster competition as an alternative to regulation, and to improve regulatory control where such control remained necessary. Staggers’ goals and policies can be subdivided into three general areas, as follows.

1. Retain Privately Owned Railroads: Staggers included a number of references to the desired characteristics of the railroad system in this country. Summarized in a single sentence, the STB is to preserve an adequate, safe, economical, efficient, environmentally benign, and financially viable, privately owned rail system that meets the needs of interstate commerce, energy conservation, and the nation’s defense. Thus, aside from other features, Congress clearly desired to preserve railroads in the private sector.

2. Encourage Competition: Staggers emphasized the need for competition in railroad markets. Not only did Congress

recognize that competition is the best determinant of reasonable railroad rates and adequate service, it directed the STB to promote and ensure effective competition. Barriers to entry were to be discouraged and undue concentrations of market power were to be avoided.

3. Develop Effective Regulation: Regulation did not disappear under Staggers, but it was intended to be efficient and effective. Staggers required “fair and expeditious regulatory decisions,” the maintenance of “reasonable rates where there is an absence of effective competition,” “the elimination of non-compensatory rates,” and prohibited “predatory pricing and practices” and “unlawful discrimination.”

A review of the STB’s performance since Staggers reveals many troubling decisions that seem to be in conflict with Staggers. As discussed below, examples of regulatory policies and procedures demonstrate how the ICC and the STB have mishandled their statutory duties over the past 20 years, and aided in the establishment of a disgruntled fraternity of rail-dependent customers.

#### Rail Cost Adjustment Factor (RCAF)

In 1981, the ICC adopted the RCAF as the inflationary cost index upon which a railroad could base uncontested freight-rate increases. However, the RCAF was not a cost index at all. It was purely an inflation, or input-price, index. For example, the RCAF did not measure increases in the cost of labor and fuel. It measured the increase in the hourly compensation of railroad employees and the price paid by railroads for a gallon of fuel. From 1980 to 1988, the RCAF increased by 35% while railroad-operating expenses for each ton-mile of traffic handled declined by 10%.<sup>13</sup> Since railroads were raising some of their rates up to the allowable RCAF level, a number of shippers bitterly complained that the RCAF required a productivity adjustment if it were to appropriately reflect changes in railroad costs. In 1989, the ICC adopted a productivity adjustment to the RCAF. Even then, the agency preserved the unadjusted RCAF, thus depriving many contract shippers of the benefit of its decision.

The RCAF is no longer used as a basis for changing the general level of railroad rates. Rather, it is mainly used as an escalator in railroad contract rates. This may be a useful role for the RCAF, but the point is that for 8 years (1980-1988), railroads implemented uncontested general rate increases tied to an index that had nothing to do with changes in their overall level of costs.

#### Revenue-Adequacy Standard

The requirement that the ICC adopt a revenue-adequacy standard was legislated by the Railroad Revitalization and Regulatory Reform Act of 1976. The ICC initially instituted such a standard in 1978. This standard changed over the ensuing years and a revamped measure has generally been in place since 1986. However, the revenue-adequacy criterion has been highly controversial, as have the annual revenue-adequacy determinations for each railroad. There have been many instances where railroads were declared revenue inadequate, while at the same time those railroads were informing their shareholders that their earnings were more than sufficient. Even in 1996, when the UP earned record profits, paid its executives the maximum incentive compensation, and established an excess-earnings fund, the railroad was declared by the STB to be revenue inadequate.

The dichotomy between the agency's revenue-adequacy findings and how the railroads described themselves to their shareholders has become so glaring that to a large degree the regulatory revenue-adequacy declaration has become irrelevant in the minds of many people. Unfortunately, the STB's declaration is far from irrelevant. The Board has cited the need for additional railroad earnings to rationalize a number of its decisions. Furthermore, the railroad industry has claimed revenue-inadequacy in opposing pro-competitive changes in national transportation policies. To the extent that the revenue-adequacy standard overstates the need for additional railroad revenues and gives the impression that pro-competitive rail policies will prevent the railroads from achieving their revenue needs, societal interests are not being served.

### Maximum-Rate Criteria

The agency has made numerous changes in its maximum-rate criteria, including the determination of market dominance, since Staggers. Maximum-rate standards have included: (1) the “Seven Percent Solution,” whereby a rate was reasonable if it did not exceed fully-allocated costs plus a 7% differential, (2) fully-allocated costs based on a “ton/ton-mile” allocation, up to a revenue-to-variable cost ratio of 160%, (3) revenue inadequacy combined with a comparison of rates on similar traffic, (4) the combination of revenue inadequacy, a management-efficiency constraint, and a stand-alone-cost constraint, and (5) stand-alone costs, calculated by a variety of methods.

The current stand-alone-cost standard is highly controversial and is based on data far more readily available to railroads than to their customers.

Furthermore, railroad customers are inhibited from filing rate complaints because the ensuing cases are lengthy and extremely expensive. For example, the infamous McCarty Farms case heads the list at 19 years at a cost of approximately \$3 million—during which the complainant first won and then lost the case. Other cases have exceeded a decade or cost millions of dollars to pursue. The result is that the number of maximum-rate cases is small. The connection between the burdens of regulatory proceedings and the small number of cases was demonstrated in a study undertaken by the General Accounting Office, dated February 1999. (It is worth noting that an analysis of STB proceedings shows that only 3% of the agency’s workload resolves shipper complaints; the overwhelming majority of STB cases respond to railroad requests for acquisition, construction or abandonment authority.) Nonetheless, protracted regulatory proceedings violate the spirit of Staggers, which called for the modernization of economic regulation and the reform of regulatory policy. The stand-alone cost methodology is prohibitively expensive for most shippers with multiple origins or destinations, and the methodology adopted for non-coal shippers holds out so little hope of success that it has never been tried.

### Treatment of Extraordinary Expense

Railroads have had countless billions of dollars of “extraordinary,” “non-recurring,” or “unusual” expenses over the past 20 years. Accountants have coined these terms to define expenses that are not normally part of the company’s operations. To treat them as operating expenses can distort reported operating profitability. In fact, before State Public Utility Commissions, certain types of special charges are excluded in the determination of an adequate return on investment. This means that the utilities are not permitted to recover such costs through rate increases.

Aside from the \$14 billion in identified “special charges” since 1980 (actually, since 1985, as there were no such expenses between 1980 and 1984), the railroad industry has incurred a host of other short-term expenses associated with post-merger integration and problems, including the well-publicized UP “meltdown.” Incredibly, the STB has allowed railroads to account for all of these massive charges as operating expenses. The STB’s view of merger-related costs differs from that accorded such costs by other regulatory agencies, such as FERC, and the Board’s inclusion of these expenses leads to a skewed version of railroad operating and financial performance, and raises the jurisdictional threshold. Ironically, in the pending proceeding to review rail merger rules, Ex Parte 582 (Sub-No. 1), BNSF and other railroads urge the STB to emulate FERC’s merger processing practices.

### Competition Policies

The ICC and STB have failed to preserve, let alone promote, competition among major railroads. The statutory provisions permitting the imposition of terminal trackage rights and reciprocal switching have never been successfully invoked by any shipper, and the Board’s “Competitive Access” regulations are considered by many rail shippers to be useless. The “Bottleneck” decision enables a railroad with monopoly power over a segment of a route to leverage its market power over the entire route, thereby restricting potential competition. And anticompetitive line sale contracts and trackage rights agreements that insulate large railroads from competition by short lines have been condoned by the agency.

### Merger and Acquisition Policy

No matter what the broad, explicit policies of the STB regarding mergers and acquisitions, its central criterion has been one of projected savings in costs.<sup>14</sup> However, the projected benefits have not been realized. The UP service “meltdown” has been well documented, and although the situation has since improved at that railroad, post-merger earnings have not reached pre-merger levels.

The NS, which had previously been declared to be revenue adequate by the STB, significantly overpaid for its partial acquisition of Conrail, and financial difficulties have depressed its stock. CSX is in a similar, albeit less precarious position as NS.

The merger process seems to be a vicious cycle of: consolidating in order to achieve operating economies; reducing capacity to realize such economies; and then complaining about the shortage of capacity to adequately handle traffic levels. This ultimately leads to another proposed merger or acquisition. The result is that since Staggers, the concentration of power among railroads has greatly increased. As shown below, in 1980 there were 36 Class I Railroads, with the largest four handling 43% of the industry’s ton-miles. In 1999, there were only seven Class I Railroads, with the largest four accounting for 95% of the traffic.

| <u>Year</u> | <u>No. of<br/>Class I<br/>Railroads</u> | <u>Percent Ton-Miles Carried<br/>By Four Largest Railroads</u> |
|-------------|-----------------------------------------|----------------------------------------------------------------|
| 1980        | 36                                      | 43%                                                            |
| 1985        | 23                                      | 47                                                             |
| 1990        | 14                                      | 66                                                             |
| 1995        | 11                                      | 69                                                             |
| 1999        | 7                                       | 95                                                             |

The four dominant railroads have the power to more than control freight rates and service levels in rail-dependent markets. They can substantially influence, if not totally control, the availability of freight cars, access to gateways, freight-car investment, the adoption of new technology, freight-car repair rates and practices, industry-wide operating rules, service standards, interline financial arrangements, and demurrage times and charges. They can render some of their

customers less competitive or can even put them out of business. They can make or break local and regional railroads that, in a major way, are also their customers, and have systematically blocked competition by short line and regional railroads through “paper” and “steel” barriers. They can inhibit customers from complaining about service, and similarly, inhibit employees from reporting injuries. And they can easily reach an industry-wide consensus on national policies, with agreement among only four major U.S. carriers.

Compounding the concerns raised by this pronounced concentration of power in the railroad industry is the expectation of additional consolidations. Clearly, the establishment of a transcontinental railroad will be met by the creation of a second such line, resulting in but two mega-railroads in the United States. Furthermore, with Canadian railroads expanding their markets in the United States, the era of North American railroads appears to be nearing. Such expectations give rise to a host of public policy considerations that, if they are to be properly addressed, require an examination of the regulatory policies that helped to create the present environment.

## **6. NEEDED CHANGES**

The December 2000 STB paper is a disconcerting document. It reflects insensitivity to the very railroad customers the Board has been mandated by Congress to protect. It makes findings based on inappropriate statistical techniques. And it reaches conclusions based on unsound economic analysis. Bad economics will lead to bad policy. If the Board is to be an effective agency, it must focus on the traffic that it is charged with regulating, develop a meaningful database, and educate itself as to the market characteristics of the subject traffic. Furthermore, it must acknowledge that something is amiss when 4 railroads control an entire industry; that rail-dependent customers exist and have legitimate concerns; and that regulatory standards have helped to create the current state of affairs. In essence, the STB must change its perspective. Sticking to the present course will not serve the long-term interest of railroads, railroad customers, the economy or society in general.

While there is much that is wrong with the rail regulatory system, it cannot be expected that the STB will have an epiphany on its own accord. What is needed to eliminate the adverse consequences of inadequate regulatory oversight is not only internal change, but change that emanates from outside the STB. Both the United States Department of Transportation (DOT)<sup>15</sup> and Congress should “step up to the plate.” Recommendations to the STB, DOT and Congress, are as follows:

1. Surface Transportation Board

- a) Prominently state that the December 2000 paper was not voted on by the Board and does not necessarily represent the conclusions of the Board.
- b) Acknowledge that rail-dependent customers exist and that efforts must be made to address their concerns.
- c) Develop a comprehensive railroad database with a focus on monopolistic markets and rail-dependent customers. Actual freight rates should be a component of the database.
- d) Establish and seek funding for an office of rail-customer advocacy with a voice in establishing STB policies and proceedings.
- e) Implement a process where the impact of regulatory decisions is monitored, and corrective action, if needed, can be taken.
- f) Re-examine major regulatory standards by re-opening “fast-track” proceedings, with one explicit consideration being the impact on rail-dependent customers, and

2. United States Department of Transportation
  - a) Coordinate efforts with the STB to develop and share a railroad database that focuses on rail-dependent customers.
  - b) Develop a comprehensive research program addressing the needs of freight railroads and their dependent customers.
  - c) Develop a national freight-railroad policy, giving consideration to the whole of North America. Coordinate efforts with the Canadian and Mexican governments.
3. United States Congress
  - a) Hold hearings on how to promote rail-to-rail competition and railroad competitiveness to best serve the needs of the national economy and the railroad industry's own long-term viability.
  - b) Act on legislation including provisions introducing guidelines and/or policies promoting competitive access, eliminating the annual revenue-adequacy determination and the RCAF, and other provisions determined to be necessary and appropriate.
  - c) Give serious consideration to eliminating the railroad industry's anti-trust immunity and transferring the authority to approve railroad acquisitions and mergers from the STB to the United States Department of Justice.

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#### **ENDNOTES**

1. Dr. Harvey A. Levine is an independent transportation economist

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with over 35 years of experience in the field. For 18 of those years, until 1997, he was the Vice President, Economics & Finance Department, Association of American Railroads. Previously, he held positions with the New York Central Railroad, the U.S. Department of Transportation, the Interstate Commerce Commission, and several consulting firms. Throughout his career, Dr. Levine has been an advocate of a financially viable, privately owned freight railroad system that is responsive to the needs of its customers. In fact, Dr. Levine believes that railroad financial viability depends on customer satisfaction. Nothing in this report deviates from that belief and advocacy.

2. In the early 1980s, railroad rate increases were identified in the industry's master tariff, which was based on changes in the Rail Cost Adjustment Factor (RCAF). In fact, the magnitude of RCAF-related rate increases created such a crescendo of shipper complaints that in 1989 the ICC reversed itself on the construction of the RCAF as a pure inflation index and instituted a productivity adjustment that converted the RCAF to an output-price, or cost, index.
3. Association of American Railroads, Analysis of Class I Railroads in the United States, annual publications.
4. As is customary with rate indexes, a market basket (fixed sample) of rates are collected from individual railroads and the data are aggregated to form the BLS Railroad Freight Rate Series. The BLS Series is one of hundreds of industrial groupings that comprise the Producer Price Index – the nation's wholesale inflation index. The BLS Series, like the Producer Price Index, is published solely in index form, showing the average change in price levels and the percent changes in prices over time. Dollar values are not shown and the names of the sample companies, who voluntarily submit the price information, are not disclosed.
5. In the 1980s, coal and grain constituted over half of total railroad traffic.
6. As a check on the increases in railroad freight rates identified in the BLS Series and AAR Composite Index, it is interesting to note that between 1980 and 1988, the Rail Cost Adjustment Factor (RCAF) – the railroad inflation index from which uncontested rate increases were

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permitted – increased by 33%. While railroads did not take the allowable maximum increases in all cases, the industry’s record in general rate proceedings prior to Staggers suggests that they implemented about 87% of the maximum level, reflecting a 29% increase in the general level of rates.

7. During the decade of the 1960s, railroads submitted general rate increases to the ICC, which cumulated to 18.6%. (Ex Parte No. 223 - 1.5%, Ex Parte No. 256 - 4.0%, Ex Parte No. 259 - 6.0% and Ex Parte No. 262 - 6.0%) At the same time, R/TM was virtually flat during the 1960s, having declined in a number of years and increasing in 1969 to 1% above its 1960 level.
8. A popular financial measure of a company’s economic efficiency is the “operating ratio” (OR) – the ratio of operating expenses to operating revenue. The lower the OR, the higher the residual amount of revenue that is available to pay interest charges on the debt, and reward equity shareholders. Herein lies the value of the R/TM measure. Comparing the railroads’ R/TM with the industry’s freight-operating-expense-per-ton-mile (E/TM) provides a measure of operating efficiency based on a unit-of-output (in this case, ton-miles). An increase in the residual “yields” or “margins” means that for each ton-mile carried, railroads are spending less money to generate more revenue. Thus, it is the relationship between R/TM and E/TM that has meaning to railroad investors, and in railroad regulatory analyses.
9. These reports are available on the EDGAR Internet database offered by the Securities & Exchange Commission – “[www.sec.gov](http://www.sec.gov).”
10. Ibid. This information is in Union Pacific Corporation’s 1997 Proxy Statement.
11. Association of American Railroads, Analysis of Class I Railroads, annual publications.
12. There have been a number of long and costly maximum-rate cases involving among others: Arkansas Power & Light, McCarty Farms, Westmoreland Coal Sales, Nevada Power Company, Coal Trading Corporation, West Texas Utilities Company, and Arizona Public Service Company.

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13. According to the Association of American Railroads', Railroad Ten-Year Trends 1980-1989, the decline was from 2.756 cents in 1980 to 2.478 cents in 1988.
  14. In early 1995, the BN claimed that its purchase of the Santa Fe would save \$450 million annually in operating and administrative expenses, and would result in another \$110 million in operating income on new revenue earned during the first three years. In 1996, the UP claimed that its acquisition of the SP would: add more than \$820 million to its operating income by the year 2001; provide for the "strongest possible rail competition in the West"; improve on-time performance to shippers; result in much faster transit times, expand single-line service; reduce costs through operating efficiencies, shorter routes, better equipment utilization and more reliable service; reduce congestion and delays; and, increase the speed and dependability of intermodal service. In the late 1990s, the CSX and NS acquisition of Conrail was based on some operating efficiencies, but relied more on the merged railroads' alleged ability to recapture lost motor carrier traffic, thereby alleviating congestion on our nations highways. The combination of cost savings and increased traffic was to result in the repayment of the \$11 billion purchase price in five years or so.
  15. Technically, the STB is a component of DOT. However, in practice the STB carries out its duties independent of DOT control.