EX PARTE NO. 290 (SUB-NO. 4)

RAILROAD COST RECOVERY PROCEDURES - PRODUCTIVITY ADJUSTMENT

Decided March 22, 1989

The Commission's regulations at 49 C.F.R. Part 1135 govern railroad cost recovery procedures. In this decision, we are modifying those regulations to provide for an index of rail costs adjusted for productivity. Productivity is to be measured by a multi-year lagged average. The Commission declined to restate the existing index for past productivity or to adopt any mechanism for partial sharing.

DECISION

BY THE COMMISSION:

In Ex Parte 290 (Sub-No. 4) *Railroad Cost Recovery Procedures - Productivity Adjustment*, served November 17, 1988 and published at 53 Fed. Reg. 17,558 (1988)(Collectively referred to as the, *November NPR*), the Commission announced its intention to make a prospective adjustment to the Rail Cost Adjustment Factor to compensate for the impact of changes in productivity. The Rail Cost Adjustment Factor is an index established by statute[1] intended to reflect the impact of inflation. Rail rates that rise no faster than the index are generally protected from challenge as to their reasonableness.

When the Commission initially published the index in 1981, it did so in a manner that reflected the impact of inflation on the prices paid by the railroad industry for the various inputs from which rail service is produced -

[1] Section 203 of the Staggers Rail Act, Pub. L. No. 96-448, 94 Stat. 1895 (1980), now 49 U.S.C. § 10707a(a)(2)(B) provides that the Commission shall publish a rail cost adjustment factor which shall be a fraction, the numerator of which is the latest published Index of Railroad Costs (which index shall be compiled or verified by the Commission, with appropriate adjustments to reflect the changing composition of railroad costs, including the quality and mix of material and labor), and the denominator of which is the same index for the fourth quarter of 1980, or for the fourth quarter of 1982 or for the fourth quarter of every fifth year thereafter.

- labor, fuel, equipment and material.[2] The Commission considered, but rejected, proposals to restate this input index by recognizing the impact of improved productivity on the cost of rail outputs. The Commission reasoned that (1) given the tenuous level of earnings in the industry it would be unwise to limit pricing flexibility, (2) that to do so by offsetting productivity would impair the industry's incentive to become more efficient, and (3) that no workable methodology was available by which to make such an adjustment. The Commission's decision establishing the Rail Cost Adjustment Factor (RCAF) without a productivity adjustment was affirmed by an appeals court, although not precisely along the lines of the rationale offered by the Commission.[3]

In the *November NPR*, the Commission indicated that it would now proceed to make a prospective adjustment to the index because (1) several of the policy considerations relied on in the earlier decision were no longer compelling, and (2) an acceptable methodology had been developed. On this basis, the Commission proposed that a productivity adjustment should be made prospectively to the RCAF index and that the adjustment be based upon the methodology developed by the Commission's independent contractor, Reebie Associates.[4] Under that methodology, the adjustment would be based on the traditional index number approach to productivity measurement. Accordingly, productivity would be measured as the change in the ratio of the output index (based on a composite, revenue-weighted, average of the year-to-year changes in ton-miles for various segments of traffic in the ICC Waybill Sample) over the input index (as measured by total freight expenses calculated using depreciation accounting, plus fixed charges). The Commission further proposed that the annual measurement of industry-wide productivity be based on a five-year moving average, or productivity trend, with a two year lag (to delay the reflection of current productivity gains in the index). Under this proposal, the productivity measure, if implemented in 1989, would be based on the consultant's measurement of average, annual productivity growth over the period 1982-1986 and annual changes in productivity would be evenly spread over the four quarters of each year.

---

[2] *Railroad Cost Recovery Procedures*, 364 I.C.C. 841 (1981) (*RCRP*).

[3] *Western Coal Traffic League v. United States*, 677 F.2d 915 (D.C. Cir.), *cert. denied* 459 U.S. 1086 (1982) (hereafter, *Western Coal*).

[4] Reebie Associates evaluated various methodologies, and recommended, with some modifications, use of the Caves-Christensen methodology originally proposed by a shipper party to this proceeding.

Work on the development of a usable methodology for a productivity adjustment had commenced with the issuance of an Advance Notice of Proposed Rulemaking in 1982, and had focused to a degree on the work of economists Douglas Caves and Laurits Christensen, whose work had been sponsored by a group of shippers. In 1987, the Railroad Accounting Principles Board (RAPB) recommended that the Commission undertake further study of the methodological problems surrounding productivity measurement. The Commission entered into a contract with Reebie Associates (Reebie) to perform this work, and the "Final Report" of Reebie was published for comment in connection with the issuance of the NPR. After review of several possible methodologies, Reebie found that the Caves/Christensen methodology was the most promising and, with certain recommended adjustments, the contractor believed that a satisfactory methodology had been achieved.[5]

Because the Commission tentatively agreed that a usable methodology had been developed, the *November NPR* revisited the policy considerations that had controlled the 1981 decision declining to make such an adjustment. The Commission found that the rail industry had made substantial improvement from what had been a tenuous financial position and that, importantly, this improvement had not come from the widespread use of rates at or near the maximum levels permitted by the RCAF. While the RCAF had risen more than 15% between 1981 and 1986, actual prices averaged something near a 2.2% rise during the same period. (The real, inflation-adjusted, price for rail transport had thus been declining since Staggers, a reversal of earlier trends.)

The fact that most prices had risen far more slowly than the legally protected index rate indicated that rail service was widely disciplined by market forces, demonstrating that productivity improvement was driven by the need to compete and was widely shared with shippers under the existing arrangement. However, captive traffic, where market forces move slowly, if at all might not be likely to benefit proportionately from this process, even though such traffic might contribute to productivity achievement. In order to meet its responsibilities under the Staggers Act to maintain reasonable rates where there is an absence of effective competition, the Commission sought comments as to whether it would now be appropriate to adjust the RCAF index for productivity, such that differential pricing

[5] Reebie was also asked to develop a productivity adjustment for use in connection with the Commission's general purpose costing system. The contractor believed such an adjustment was impracticable given limitations on existing data.

in captive markets would be subject to challenge to a greater degree than during the early, more financially uncertain post-Staggers years.

In response to its *November NPR* the Commission received comments and replies from a wide variety of shipper, rail and government parties. Among those whose participation will be discussed below are the "Concerned Shippers," a group chiefly made up of coal, electric utilities, and other heavy industrial or agricultural users; the Southern Electric System (SES), a group of electric utilities; the National Industrial Transportation League (NITL); the Agribusiness Shippers Group (ASG), generally large agricultural and related shippers; the Association of American Railroads (AAR) representing its membership; Consolidated Rail Corporation (Conrail) appearing on its own behalf and supported by other individual railroads; and the United States Department of Transportation (DOT).[6]

In light of the comments received and for the reasons discussed below, the Commission is adopting, with one minor exception, the use of the productivity adjustment as proposed in the *November NPR*.[7] We will implement this decision by use of two indices, the RCAF (Unadjusted), an index reflecting input prices which will continue to be filed by the AAR, and the RCAF (Adjusted), an index that reflects output (productivity-adjusted) costs. The AAR will also be required to file the RCAF (Adjusted), using numerical values for the productivity adjustment supplied by the Commission. The Commission believes that the record in this proceeding supports the adoption of the productivity adjustment at this time. However, the record has raised several issues concerning implementation of the adjustment, none of which is serious enough to delay today's action, but which warrant additional consideration. These issues will be the subject of our forthcoming Advance Notice of Proposed Rulemaking to be issued in Ex Parte No. 290 (Sub-No. 7), *Productivity Adjustment-Implementation*. The issues to be addressed in that proceeding are: 1) how

---

[6] Other parties filing commentary include: the Illinois Central Railroad, the Motor Vehicle Manufacturers Association, the Southern Pacific Transportation Company, the American Paper Institute, Certain Coal Shippers, Intermountain Power Agency and the National Association of Regulatory Utility Commissioners. In reaching its determinations in this docket, the Commission has given full consideration to the arguments of all parties whether or not they are discussed specifically.

[7] The *November NPR* proposed using only above-the-line expenses in the construction of the input index. A below-the-line item for one railroad was added to the 1986 expenses in order to treat all special charges consistently. Additionally, the NPR proposed that the productivity adjustment be based on prior industry average productivity over a full business cycle. The rule adopted here provides that a five-year period will be gradually lengthened as more comparable data becomes available.

the impact of contracts on revenues as reported by the waybill sample should be measured and whether and to what extent reported contract revenues create a bias in the productivity measure; 2) how long an averaging period should be adopted, given the determination that the present five-year period may not be the best measure of an entire business cycle; 3) whether the physical input approach for measuring the input index should be substituted for the expenditure approach adopted here; and 4) what is the proper role of below-the-line charges in the construction of the input index. Comments on these issues will assist us in monitoring the impacts of and improving the implementation of the productivity adjustment adopted here.

APPLICABLE LEGAL STANDARD

It is the Commission's view that 49 U.S.C. § 10707a neither directs nor forbids the use of a productivity adjustment to the Rail Cost Adjustment Factor. The language establishing the RCAF process specifies that the Commission shall make appropriate adjustments to reflect the changing composition of railroad costs including the quality and mix of material and labor. But the definition of "appropriate" is not specified and the system of indexing used since the inception of the adjustment index has been weighted so that changes in the composition of costs are recognized. Had Congress intended to require adjustment for productivity it would have been simple enough to say so, but the greater probability is that the Congress believed the issue was complex and better left to the expert discretion of the regulatory agency. We regard this understanding to have been reached by the *Western Coal, supra*, court and the RAPB. *See* n. 3. AAR also believes that the decision whether to include an adjustment is "committed to the Commission's expert judgment." There is, however, opposition to this view.

Mandatory Adjustment

Concerned Shippers view the matter differently. Their argument is that the Staggers Act deliberately created two distinct mechanisms to give rail carriers rate-making flexibility -- the RCAF process and the Zone of Rate Freedom (ZORF).[8] RCAF was to be used for no more than (output) cost recovery while the ZORF, which permits carriers with insufficient

[8] The ZORF provisions are found at 49 U.S.C.§ 10707a(c) and (d).

earnings to take increases of up to 4% above the RCAF index,[9] was the mechanism intended to permit profit enhancement. Concerned Shippers argue that with the RCAF based on input prices, profit levels are now enhanced through productivity improvement, hence there has been little use of the ZORF procedure in the post Staggers period. Concerned shippers believe that their viewpoint was accepted by the *Western Coal, supra,* court. They read the decision in that case as largely rejecting all alternative grounds for refusing an adjustment other than the absence of a trustworthy methodology. Most shippers also take the view that the Commission is under separate obligation to make the adjustment once the RAPB designated productivity as a principle to be recognized in rail costing and recommended its adoption in the RCAF process.

The arguments of Concerned Shippers have more than theoretical interest. If they were to be accepted, the decision we take here would lose its discretionary character, and with it the agency might well lose the authority necessary to monitor and modify the outcome of the adjustment process. Furthermore, the past indices might be found, as Concerned Shippers declare them to be, in error. Hence the arguments for restatement of the index to a level reflecting the accumulated productivity of the post-Staggers period would have some (although we would think still inadequate) support. Such a restatement would have unknown and potentially serious financial implications. We cannot quantify the impact of restatement on contracts, but suspect it would be substantial. There is also no way of foretelling how fast and to what extent revenue recovery through other means would succeed, if restatement led to an immediate substantial reduction in permissible tariff rates.

We do not, however, find the legal arguments of Concerned Shippers persuasive. In the first place, the rate-making framework established by the Staggers Act, which all parties agree was intended to replace a poorly working arrangement under the pre-existing laws, was a substantial departure from prior practice. It included a number of new and untried features, and it is quite logical to believe that Congress would have left the details of implementation to the Commission. Where Congress chose not to, as for instance in the specification of the frequency of publication of the RCAF, it was quite able to spell out its intentions in detail. Unlike Concerned Shippers, we read the *Western Coal, supra*, court as having

---

[9] These increases are not provided the same level of protection from shipper challenge as are increases taken under RCAF. Carriers are permitted to increase their rates within the statutory limit free from the threat of Commission suspension (49 U.S.C. §10707a(e)(1)(A)(i)), and (49 U.S.C. § 10707a(e)(1)(A)(ii)). However, these increases remain subject to shipper complaint (49 U.S.C. § 10707a(e)(1)(B)).

recognized that the Commission has discretion to make judgments about the index, so long as they are made within the rules of administrative process that govern the exercise of discretion elsewhere.

As to whether the Commission must simply make a mechanical transfer of RAPB principles into Commission rules, we think the answer is that this is clearly not the case. Under the statutory arrangement laid out in Staggers,[10] the Commission must give, and has given, great regard to the recommendations of the Board for modification in our costing rules. For example, in the present context we have felt obliged to consider a productivity adjustment through the rulemaking process, and the recommendations of the Board have had substantial impact on the course of this proceeding. The Commission has given great weight to RAPB's recommendation that "by relying on existing work and presently available expertise, an appropriate productivity measure should be implemented within 18 months of the publication of the Railroad Accounting Principles."[11] As described above, the Commission, with the assistance of Reebie Associates and the expert testimony offered in this proceeding, has endeavoured to determine the availability and workability of a reliable methodology on which to base a productivity adjustment to the RCAF. But it is another matter to say that what the Board recommends must become the rule of law. So saying would undermine the Commission's responsibility to administer the Act and deprive all parties of meaningful judicial review of the substance of the principles laid down by the Board. We do not believe RAPB thought that its findings translated automatically into agency rules.[12]

---

[10] 49 U.S.C. § 11161 *et seq.* These provisions establish the Railroad Accounting Principles Board, outline its mission, and require that the Commission promulgate rules to implement and enforce such principles. We take as significant the statute's use of the word "implement" in relation to our responsibility and do not read it to mean that the principles need be adopted without opportunity for analysis in the light of the statutory framework for rail regulation. That the Commission is charged with reviewing its implementation and making such changes in the principles as may be required after a five-year period is inconsistent with the notion that the Commission has only ministerial responsibility regarding the adoption of RAPB's findings.

[11] RAPB *Final Report*, at 90.

[12] "A productivity adjustment to the RCAF is neither statutorily required nor precluded. Adjusting the RCAF for productivity is an issue which must be resolved by the ICC in rulemaking. However, the RAPB believes that a productivity adjustment is necessary for the RCAF to measure cost changes accurately." RAPB, *Final Report*, at 90.

Conrail Argument

Conrail believes that the Staggers Act, properly interpreted, forbids an adjustment to the RCAF for productivity. Conrail's argument proceeds from a view of legislative history that sees the decision to "deregulate productivity" as the critical compromise fashioned in the debates over the reform of rail regulation. Conrail finds the elements of this compromise in the so-called "Staggers-Rahall-Lee amendment"[13]
which made major modifications on the floor of the House to the rail reform bill initially reported from committee. As a part of this amendment, shippers were given an opportunity under a special provision (ultimately incorporated in Section 229 of the Staggers Act)[14] to challenge any of their existing rates. But so long as these "base rates," as resolved after challenge or left unchallenged -- did not increase in "real terms" -- they would then be considered as conclusively reasonable. Furthermore, as to inflation-driven erosion of these base rates, railroads were to be freed from the lag and burden of regulation -- the rates might be increased without shipper challenge "on a quarterly basis to reflect inflation."[15]

According to Conrail's view, a productivity adjustment, which it refers to as the "re-regulation" of productivity, impermissibly strikes at the heart of the compromise amendment, which (with modifications not fully addressed by Conrail) became the Staggers Act. In support of this view, Conrail points to a variety of Committee and floor statements indicating the Congress' concern with the impact of excessive regulation. Conrail also points to an apparent anomaly to support its view that Congress meant to deregulate productivity. According to Conrail, if there had been no inflation subsequent to Staggers, a productivity-adjusted index would have declined rapidly. But rates could not have been forced below the base rate floor since such reductions would have been prohibited by operation of Section 229. Hence productivity could have been retained in the absence

---

[13] 126 Cong. Rec. 24376-24386 (1980). The amendment contains new or modified language covering many of the most critical features in the final Staggers law.

[14] Section 229 first appeared in the House as section 330 of the Staggers-Rahall-Lee amendment.

[15] This language is contained in section 305 of the Staggers-Rahall-Lee amendment to H.R. 7235; it was adopted by the House on September 9, 1980 and sent to the Senate for conference. *See* 126 Cong. Rec. 24380, 24883, and 24888 (1980).

of inflation, but, under the Commission's proposal, it must be passed through to shippers when inflation occurs.[16]

Conrail further states that the decision in *Western Coal, supra*, leaves open the possibility that a declination to adjust the RCAF for productivity on policy grounds would be sustained if a more adequate rationale were articulated. Conrail finds the basis for such a rationale in its argument over the proper interpretation of the Staggers Act legislative history.

Just as we are not convinced that we lack discretion to order an adjustment, Conrail has not convinced us that we are forbidden to proceed. Conrail's view of the legislative history of Staggers is too narrow to be credited and in parts it is lacking in significant detail -- detail which substantially undermines the Conrail view. The Staggers-Rahall-Lee amendment was indeed central to the design of the final reform bill, but the amendment went far beyond the RCAF issue. It was a broad rewriting of the original House committee bill (a part of which had already been adopted and would be modified), and the amendment's purpose seems to have been to bring the House bill more in line with provisions that had been adopted in the Senate.

Earlier in the legislative debate the Senate had transmitted a bill to the House which contained an RCAF provision in which the escalator was to be a quarterly restatement of an index of rail costs "with appropriate adjustments to reflect the quality and mix of material and labor." The Staggers-Rahall-Lee amendment differed from the Senate approach by indicating that the quarterly index was simply "to reflect inflation." Unfortunately for Conrail's argument, it was not the House version that survived conference but a modified version of the Senate bill.[17] The legislative language actually enacted gives the Commission the authority to "make appropriate adjustments to [the RCAF] to reflect the changing

[16] While the language of Section 229 may superficially support this reading, we attach little weight to the apparent anomaly. Given the historical circumstances facing Congress (specifically, substantial and apparently chronic inflation) in 1980, we have no doubt that Congress did not address or have any intentions regarding the working of the RCAF adjustment process in a period of prolonged price stability.

[17] As the Staggers Conference Report states "[t]he adjusted base rate is computed quarterly by means of a rail cost adjustment factor, as contained in the Senate bill." H.R. Rep. No. 1430, 96th Cong., 2d Sess. 93 (1980). Conrail points to Report language characterizing the Senate provision as an inflation safeguard. The report language is not sufficient to overcome the fact that, as a result of the conference between the Senate and the House, the pure inflation adjustment of the House was dropped in favor of an index that was to be adjusted by the Commission to reflect changing cost patterns as the Commission judged appropriate.

composition of rail costs, including the quality and mix of material and labor."

Whether a productivity adjustment is "appropriate" is a judgment requiring exercise of our discretion and expertise. It involves, as we will next consider, a variety of policy and methodological issues. But it is not, as Conrail would like to characterize it, an argument over the "re-regulation" of productivity. The Staggers Act, as influenced by the Staggers-Rahall-Lee amendment, contains a host of provisions involving the enunciation of a new national policy, the recognition of the right to contract, the use of exemptions, the statement of new standards for judging reasonableness, the creation of a jurisdictional threshold -- none of which are at issue here. These provisions have completely altered the pre-1980 regulatory framework. Adjusting the RCAF for productivity, while certainly important, does not constitute wholesale rewriting of the Staggers "compromise." We are engaged in a rather more limited inquiry into the question of whether the Commission's responsibilities to maintain reasonable rates in the absence of competition and to foster independent pricing by individual railroads should now be given precedence over earlier concerns regarding the uncertain financial state of the rail industry and its incentives to become productive and efficient.

POLICY CONSIDERATIONS

The AAR and Conrail object to the Commission's proposal on the grounds that it would reduce profits and thus inhibit progress toward the statutory goal of revenue adequacy. The railroads identify three problems. First, they argue that a productivity adjustment would result in "double recovery" -- the pass through to shippers of more than 100% of all productivity. Market forces, they say, already force railroads to pass all productivity gains through to shippers in competitive markets. Second, the railroads contend that adoption of the proposal will result in the "re-regulation" of rates. Additional rate regulation will result and is, in their view, objectionable because alternative rate-making provisions which could be used to increase profitability are more difficult, costly, and subject to greater regulatory scrutiny. It is also objectionable because increasing the costs and risks of rate making will further jeopardize the achievement of revenue adequacy. Third, they assert that the proposal reduces the incentive to become more productive by reducing the expected benefits of adopting cost saving productivity measures. If railroads do not believe that their earnings will improve sufficiently by investing in productivity-enhancing projects, they will not undertake many socially worthwhile investments.

This, they argue, will result in higher costs and less chance for a financially sound rail industry.

Pass Through of Productivity Gains

AAR contends that productivity gains are already being passed through to the shippers and that the inclusion of a productivity adjustment in the quarterly RCAF process would result in a double recovery for shippers. AAR argues that the competitive marketplace already transfers specific productivity gains to particular shippers in the form of lower rates which reflect traffic-specific productivity improvements. It contends that productivity gains do not occur evenly across all railroads and across all segments of traffic, although it recognizes that some improvements, such as national collective bargaining, occur industry-wide and that system-wide improvements on individual railroads are not uncommon. But AAR concludes that the use of the proposed industry-wide average would result in the improper distribution of gains and a double recovery.

Concerned Shippers and other shipper parties argue that a productivity adjustment would not result in a double pass through. They argue that there is no proof that productivity improvements occur at a greater or a lesser rate in captive markets than in competitive markets. They also allege that, on average, rail rates are above costs and that there is a growing divergence between rates and cost. Concerned Shippers believe that this is proof that no double recovery occurs. They argue that rates would more clearly track the cost of service if all productivity had been passed through. Shippers recognize that railroads which use *only* the RCAF mechanism to set rate levels would be forced to pass on productivity gains to captive shippers -- though on a delayed basis. But they contend that the RCAF is not a rate ceiling but a challenge-free zone. They argue that there are several alternative ways to raise rates. Concerned Shippers conclude that, since a reduced maximum RCAF rate level may not necessarily result in a reduced rate, uneconomic pass through is not likely to occur.

AAR has not convinced us that there will be a "double" pass through in any meaningful sense. While there is agreement that much achieved productivity is now passed on to shippers, where it is achieved and to whom

it is passed are less clear. And why there would be an excess pass through is simply not established.[18]

AAR inconsistently argues that productivity is achieved primarily in specific markets, but later, that it is often achieved in national bargaining or in system-wide labor buy-outs. Clearly, there is a substantial element of both kinds of improvement. And just as clearly, the latter have an impact on output costs in many captive markets. There is also no reason not to believe that market-specific improvements are made with some frequency in captive markets. And there is reason to ask whether any of the productivity achieved in a captive market or affecting it through system-wide improvement is passed to the captive shipper. The implication from AAR's double-pass through argument is that the pass through in captive markets is negligible. Consequently, AAR's argument may be restated as follows: the RCAF process was meant to allow the railroads to recover all costs imposed on the system through inflation; recovery is stymied in many markets by competition; railroads are thus permitted to make this up by increasing the margin of recovery from captive traffic.

Once the argument about avoiding a pass through in captive markets is seen in these terms, we think the issue of double pass through can be redefined as another version of the more general argument over the degree to which differential pricing is an essential part of the achievement of revenue adequacy. We do not dispute that it is important, nor do we believe that price differentials between customers, commodities, markets, and regions are necessarily perfect or should necessarily remain undisturbed. It may be that captive traffic needs to contribute more to the bottom line of some railroads, perhaps less to others. That is not the point here. The point underlying the policy enunciation in the NPR is that we believe that the health of the industry is such that any further upward adjustment in the margin contributed by captive traffic should generally be taken outside of the RCAF process so that if any abuse of market power

---

[18] The offer of a mathematical demonstration in the Verified Statement of Witness Baumol is not convincing, proceeding as it does from a combination of incorrect and unproven assumptions. Baumol argues that where productivity is produced in competitive markets, competition forces at least partial pass through, and that if there has been no similar productivity achieved in captive markets, an RCAF adjustment will leave the rates recovered through the combination of competitive pricing and RCAF recovery below the level of increase in output costs. However, there are alternative means to raise rates in captive markets, a point which standing alone thoroughly undermines this offer of mathematical proof. An equally telling point is that the proof assumes that productivity is not achieved in captive markets, or that, if it is, it is passed to shippers despite the fact that under existing procedures neither the market nor the Commission compel it.

exists, it will be subject to redress.[19] Since we believe, as next discussed, that effective pricing alternatives are available, we are not convinced that this decision will deprive the rail industry of the opportunity to continue to adjust its prices in an economically efficient manner. [20]

Re-regulation of Railroad Ratemaking

AAR and Conrail assert that the proposed productivity adjustment would lead to increased regulation of railroad rates. This alleged "re-regulation" would occur because the RCAF index, if adjusted for productivity, would rise too slowly (or decline) thereby lowering the adjusted base rate. The adjusted base rate is the challenge-free rate level established by the RCAF. To preserve their challenge-free status, maximum RCAF rate levels would have to be reduced when the RCAF declined. But since rates at the new index level would no longer suffice to provide sufficient capital recovery, the railroads claim that they would have to charge prices outside of the challenge-free zone.

The alternative non-RCAF rate making provisions which would allow railroads to recover fully cost increases and enhance their profits by increasing rates above the challenge-free zone are, in the railroads' opinion, too risky, costly and slow to be applied in a broad fashion. Accordingly, the railroads contend that non-RCAF rate mechanisms simply cannot be used to change the large number of individual and joint rates that need to be increased in the face of rising costs. The railroads claim that non-collective rate increases could require "several hundred thousand concurrences by

---

[19] When considering rate levels, abuse of market power is found to exist when rates exceed stand alone costs (the costs that would be incurred by a shipper or group of shippers in offering alternative service). AAR and its experts have championed this stand alone concept in other proceedings, but here seem to ignore it in favor of index-driven rates that could exceed stand alone costs over time and yet remain free from challenge. Witness Kahn for the Concerned Shippers has identified this inconsistency and argued the existence of a necessary connection between stand alone costs and the sharing of productivity. Verified Statement of Alfred E. Kahn, (Jan. 1989), particularly at 6-9.

[20] Conrail, asserting that the current mechanism has not harmed any shippers and that the only justification for forcing the railroads to share productivity is evident abuse, offers as an alternative to index adjustment the proposition that the railroads be permitted to retain all productivity gains except where a captive shipper shows that its rates are unreasonable under stand alone costing. The Conrail proposal would put the burden of making this showing on the shippers in every case, and that is its principal fault. Like Conrail we do not believe that abuse has been demonstrated, but we also believe that the traditional procedures for judging the reasonableness of rates should be followed.

other participants in the railroad's joint rates."[21] The alternative of abandoning the joint rate structure is in their opinion even more cumbersome and difficult. Apart from the difficulty of filing individual rate increases, the railroads state that defending them will also be costly and time consuming.[22] In such an environment, the railroads assert that their financial condition will decline.

For their part, shippers argue that the proposed adjustment would not undo the deregulation which the railroads have experienced under Staggers. To the contrary, they assert that the RCAF was never intended to permit the railroads to recover any more than output cost increases and that the railroads are free to enhance revenues via other rate making mechanisms in accordance with market forces or, in the case of captive shippers, the Commission's maximum rate guidelines. These shippers further argue that the railroads' contentions regarding the risks and costs of using other rate making provisions are exaggerated. Under Staggers, the shippers assert, most railroad rates have been deregulated. Some traffic has been completely exempted from regulation while other traffic is exempt because its rates are below the jurisdictional threshold. Even where rates are above the jurisdictional threshold, a challenge requires showings of both market dominance and rate unreasonableness. These rate provisions have, in the shippers' opinion, established barriers for shippers that are very difficult and costly to overcome. As a consequence, shippers claim few rates are ever challenged and virtually none are suspended.

With regard to the joint rate issue, Concerned Shippers dismiss the railroads' arguments as exaggeration. They note that under the current

---

[21] Reply Comments of AAR, (Jan. 1989) at 22. The railroads contend that since each connecting carrier must concur in each joint line adjustment, a great deal of time must be spent sending requests for concurrences, waiting for responses, analyzing responses and deciding on and making counter proposals when connections do not concur. AAR argues that the back-and-forth negotiations between railroads involved in the making of and agreeing on counter proposals is time consuming and results in both delay in achieving rate adjustments and diversion of marketing and sales staff from developing new markets and increasing market share. AAR concludes that, unless railroads invest in vast additional marketing staff, extensive delay will result and massive revenues will be lost. One major railroad's witness estimates that it would take six months to ascertain the proper information and propose joint line rate adjustments and a year or more before concurrences were received.

[22] Although railroad witnesses concede that single-line increases can be published relatively promptly, they argue that the period required to decide such increases is lengthy. AAR claims that the decision to make selective single line increases involves intensive internal debate on which elements of traffic to increase and by how much. Additionally, AAR argues that even a unilateral adjustment equal to an RCAF increase would require a separate quarterly adjustment to each tariff. The result, the railroads argue, is delay and lost revenue.

procedures, carriers have to agree in advance on the automatic application of the RCAF. These shippers assert that the railroads could in a similar fashion agree on other escalation mechanisms which supplement the RCAF. In any event, these shippers argue that the railroads could always cancel their joint rates and publish proportional rates.

We are unpersuaded by the railroad's arguments that their ability to achieve revenue adequacy would be impaired by the potential for increased regulatory supervision of future rate increases. In the first place we believe the railroads have overstated the case significantly. The Staggers Act provided the railroads with rate freedoms which extend beyond the challenge-free zone of the RCAF. One of the primary objectives of the Act was to permit the railroads broad rate flexibility as long as the rates on captive traffic did not exceed reasonable levels. To insulate the railroads from excessive regulation, the Act established several provisions that would operate to minimize the impact of unnecessary regulation.

To begin, § 10709, 49 U.S.C. § 10709 (containing language introduced into the 1980 law by the Staggers-Rahall-Lee amendment discussed above), establishes a jurisdictional threshold below which rates cannot be challenged. That threshold currently requires rates to exceed variable costs by more than 180% before the Commission can entertain a complaint arguing that a rate is unreasonably high.[23] An analysis of railroad rate levels based on the ICC's costed waybill study for the last several years indicates that only 20 to 25% of all railroad movements (measured by tons) exceed the jurisdictional threshold. Much traffic moves under contract and thus is not challengeable.[24] Other traffic, including broad categories such as TOFC/COFC and box car carriage, have been removed from rate regulation under the enhanced exemption authority provided in the Staggers Act.[25] As a consequence of these Staggers Act changes, the possibility that a change in indexing policy will re-invent the excessive rate and tariff regulation of the pre-Staggers years is very slight.

That adoption of our proposal will result in some change in the industry's and the Commission's way of doing business is not disputed. The

---

[23] Section 10709 further requires that it be shown that the offending rail carrier has market dominance over the traffic at issue. Finally, the rate itself must be shown to be unreasonable.

[24] In 1986 the AAR estimated that, as of June 1985, 62% of coal and 57% of grain tonnage was under contract. (*See Railroad Freight Rates in the Five Years Since Staggers*, Association of American Railroads, January 1986.) Traffic moving under contract is subject to very limited challenge not directed to the level of the rate charged. Prior to Staggers the legality of contract pricing was unclear and the use of contracts was minimal. *See* Staggers Act, section 208, amending §§ 107 of Title 49 to add new § 10713.

[25] *See* Staggers Act, section 213, amending 49 U.S.C. § 10505.

Staggers Act encourages individual pricing, and the present action will lead in that direction. We recognize that the most likely area for difficulty will be the implementation of price changes involving joint rates. But the argument that joint rate negotiation between railroads will now become unworkable is not convincing. At present the industry is capable of deciding on its concurrences under the RCAF tariff and the selection of discounts and flag outs and such from the RCAF index as they affect joint line movements. We are confident that new procedures can be developed should it turn out that the rate of increase in the new index necessitates them. Necessity forces invention, as has been said elsewhere.[26]

Still the major point in rebuttal of the re-regulation argument is, however, that only some fraction of the traffic base regulated in the pre-Staggers years is likely to be affected at all by the changes made here, at least so far as reasonableness challenges before this Commission are concerned. The jurisdictional threshold and the exemptions issued under 49 U.S.C. § 10505 insure that an even smaller percentage is likely to be found captive. But as to captive traffic, Congress intended that the Commission continue supervision. Without some modification of the present indexing methodology, this supervision might be hard to retain.

Nor are we convinced that such increased transactional costs as might arise under our proposal are sufficient justification to maintain the status quo. Estimating the costs that will arise from non-RCAF pricing is difficult. Where the railroads have relied on the RCAF, this course of action has been followed because it resulted in the lowest costs and risks -- had independent actions been cheaper and easier, we would have seen many more of them. Thus, the railroads are correct when they argue that the use of other rate making provisions will be somewhat more expensive and risky.[27] However, this self evident argument is not sufficient to justify the

[26] *See American Short Line RR Assn. v. ICC*, 751 F.2d 107 (2d Cir. 1984). Here the railroads argued the unworkability of the RCAF process as a replacement for the pre-existing general rate increase format. These fears have since been overcome.

[27] The internal railroad procedure for increasing a given rate via the RCAF or via another means is not likely to be substantially different. Since market forces really dictate price levels for most railway traffic, as the railroads contend, it is unclear how the decision-making processes of pricing officers would differ just because a productivity adjustment is added to the quarterly RCAF. Railroad pricing officers now make RCAF rate decisions and then communicate with a tariff publishing officer who files a tariff within ten days of AAR's quarterly proposal. There is no insurmountable reason why rate increase decisions outside the RCAF cannot be made just as quickly. While some additional resources may be required by the railroads to make such independent rate changes, we have not been persuaded that the railroads will incur excessive risk or expense in taking such rate actions. But only experience will demonstrate the degree to which such problems are real. The Commission will observe the consequences of its decision with care.

current system if it is not consistent with goals and provisions of the Interstate Commerce Act as amended by Staggers. As noted, Staggers encouraged independent ratemaking. Section 10101a of Title 49 states that it is the policy of the United States Government to require rail carriers, to the maximum extent practicable, to rely on individual rate increases, and to limit the use of increases of general applicability. That same provision expresses the Congressional desire that reasonable rates be maintained in the absence of competition. Regulation was to be minimized, but not to the point of excluding the achievement of other goals.

Productivity and Railroad Incentives

The AAR and Conrail contend that the adoption of a productivity adjustment to the RCAF would weaken railroads' incentives to improve productivity by increasing the costs and reducing the expected benefits of innovation. Recognizing that the proposal contained in the NPR limits the flow through of productivity growth to a lagged industry average, AAR concedes that individual carriers will still retain some incentives to innovate. Nonetheless, it asserts that these incentives will be diminished, particularly for revenue inadequate carriers. Accordingly, it argues that revenue inadequate railroads will have more difficulty in raising capital. If carriers perceive that investment in productivity-increasing activities will not improve their earnings, otherwise productive investment will decline, and the Staggers Act goal of an efficiently maintained, privately-owned, revenue adequate rail system will be jeopardized.

AAR also asserts that the use of an industry average is not necessarily in the public interest. In an effort to make this point, it argues that the substitution of an arbitrary target for the industry average should, under the NPR's premise, yield the same or more incentives to individual carriers to increase their productivity. AAR's witness Baumol suggests, as an example, that if a 30% target were set, "[it] would still leave individual carriers with the same sort of 'incentive' to increase their productivity that is cited by proponents of adjustment as a means of minimizing the penalty."[28] Yet, such an extreme standard would destroy the cost recovery aspects of the RCAF--the AAR's point being that retaining some incentives is a necessary but not a sufficient condition for an adjustment of the index.

---

[28] V. S. of William T. Baumol (Dec. 1988), at 21.

AAR also believes that the proposed use of industry average productivity will negatively affect productivity growth in the railroad industry because much of the research and development is conducted at the industry level. Since these activities are essentially collective, the incentives to conduct such activities would be sharply reduced by an industry average adjustment. Similarly, AAR asserts that individual firms will be reluctant to innovate if they believe that other firms will imitate their improvements.

In addition to its theoretical arguments, AAR provides the testimony of railroad executives representing several major carriers. In essence, these executives assert that investment decisions in the railroad industry, as in other industries, are made on the basis of expected return. Typically a target rate of return is established. Investments not meeting that target are not undertaken. The various executives state that the adoption of the proposed productivity adjustment to the RCAF would force them to review their investment decisions and the result would likely be that fewer potential investments would meet the target return.

Shippers such as Concerned Shippers, American Paper Institute, Inc. and Agribusiness Shippers Group disagree with the railroads' conclusion that the proposed productivity adjustment will reduce incentives to engage in cost cutting activities. Noting that most railroad rates are set in competitive markets, Concerned Shippers argue that railroads must improve their productivity in order to survive in these markets. Concerned Shippers also dispute the AAR's contention that incentives to innovate are weakened by the revenue inadequacy of the railroad industry. They point to two major flaws in the railroads' argument.

First, they assert that the focus must be on individual firms, not the industry. In competitive industries an individual firm will undertake productivity enhancing activities if it believes it can improve its earnings. Failure to undertake such activities, on the other hand, results in declining profit and eventual extinction. Second, the AAR fails to distinguish between return on average investment and return on incremental investment. According to Concerned Shippers:

> The economic test of when and which productivity-improving methods or investments should be introduced is that the *incremental* cost of making the change--including the cost of any *incremental* investments it requires--be lower than the promised savings, both in present value terms.[29]

---

[29] V. S. of Alfred E. Kahn (Jan. 1989), at 9.

They further assert that to the extent that innovation requires the application of additional capital, capital markets will provide the necessary funding as long as the incremental investment promises to cover its cost of capital. It is the Concerned Shippers' opinion that the proposed productivity adjustment--with its lagged implementation based on an industry average--preserves such incentives in a revenue inadequate industry because the economic test described above will be unaffected by the adjustment. In addition, they assert that competition in competitive markets requires the pass through of productivity gains in spite of the industry's revenue inadequacy. What the railroads object to, in the opinion of Concerned Shippers, is providing the same adjustments in captive markets.

In *RCRP* we concluded that the adoption of a productivity adjustment, even when based on an industry average, would discourage railroads from making productivity related innovations. In addition, we expressed some concern that the use of an industry average might unfairly penalize individual railroads which could not take advantage of productivity enhancing innovations because of their traffic mix or geographic location. The record in this proceeding and the changes in the nature of the transportation market have caused us to re-think our prior conclusion on this issue. As amply pointed out by both sides, competition in transportation markets has increased dramatically since the passage of the Staggers Act. By their very nature, these markets *require* individual carriers to seek out and implement ways to reduce costs. Failure to do so, as recognized by witnesses on both sides, would eventually require non-innovative carriers to exit from the market. Thus, the incentive issue is not one-dimensional. It is not simply the size of the carrot which is at issue. Equally important is the stick which penalizes carriers which fail to effectively compete. It is hard for us to imagine that railroads would forego important productivity enhancing innovations so that they would not, over time, have to share them with that portion of the market which may be captive. And this is equally true for productivity gains achieved at the industry level. The credibility of the railroads' arguments is further damaged by the commonly agreed upon fact that few rates have been increased by the full RCAF. Competition is forcing the railroads to share productivity gains, as expected.

Our 1981 decision in *RCRP* suggested that harm to an individual carrier which cannot take advantage of productivity improving innovations might be avoided by making the productivity adjustment on a carrier-by-carrier basis. We now believe that the possibility that a carrier might be harmed by a productivity adjustment because it cannot participate in such innovations is relatively remote. Railroad consolidation over the past nine years has resulted in fewer railroads. These railroads now comprise broad

systems which compete geographically and are similar in other ways. Consequently, technologies and innovations which improve productivity tend to have broader applicability than they might have had in 1981 when railroads were more heterogeneous and geographically dispersed.

While the use of carrier-by-carrier productivity might solve the potential problem raised in the 1981 decision, it would take away a significant share of the productivity gains achieved by a railroad and would certainly discourage investment. However, the use of a lagged average of at least five years allows each railroad to preserve the benefits of productivity over an extended period of time. More importantly, the use of an industry average provides each railroad with both the incentive and opportunity to beat the average. The AAR's argument that an arbitrary target (such as 30% annual productivity growth) would be equally effective in retaining some incentives but would destroy the cost recovery aspects of the methodology is misdirected. Once we decide to reflect actual productivity in the index, the industry average is the only reasonable target. As Concerned Shippers point out, this target has been attained in the past and it is the only measure of productivity which converts the industry average RCAF input price index into an industry average output cost index.

The statements by railroad executives suggesting that they would re-evaluate investment decisions by reducing the magnitude of the expected benefits if the proposal is adopted are unconvincing. In order for a carrier to correct for the proposed productivity adjustment, it would have to anticipate the rate at which other carriers would imitate its innovations, compute the impact of its innovation on industry productivity, and then compute lost benefits over the phase in period, while taking into account the possible losses in profitability from erosion of market share if costs are not reduced. The ability of any carrier to make these computations accurately is questionable at best. The same problem exists with their assertion that the proposed adjustment would have the greatest negative impact on revenue inadequate railroads. These carriers presumably have powerful incentives to improve their financial condition. Furthermore, the decision of whether or not to invest in productivity enhancing activities is not primarily a function of average return on investment. As witness Kahn for Concerned Shippers explains, a railroad's decision to make investments is a function of the incremental costs and benefits associated with each investment. Thus, a railroad's willingness to undertake productivity enhancing projects only depends on the costs and benefits of those specific projects and not on whether the railroad's overall earnings are inadequate. It is simply not credible that the diffused and non-quantifiable sharing of productivity gains with a limited number of captive shippers would influence a railroad's investment decision-making to the exclusion of all other

considerations. In sum, we do not believe that the productivity adjustment, as proposed in the NPR, destroys the incentive to improve productivity. The issue is discussed further in the context of partial or shared adjustment.

METHODOLOGICAL ISSUES

Shippers generally support the proposed (Reebie) methodology, although ASG submits its own proposal.[30] DOT supports implementation only after modification. Additionally, DOT believes that certain aspects of the methodology must be reviewed periodically and suitable modifications made if problems occur. AAR argues that the proposed methodology is so flawed that it cannot be adopted even if modified. AAR contends that the methodology does not correctly measure inputs or outputs and that it therefore incorrectly measures productivity. Furthermore, AAR alleges that, even if the methodology were accurate, random errors in the input data are likely to cause sizable errors in the productivity estimates. AAR also argues that the methodology's failure to distinguish between pure efficiency gains and other phenomena that affect output costs also renders it useless for the proposed purpose. These various methodological issues are discussed in greater detail below.

Agribusiness Proposed Methodology

The Agribusiness Shippers Group concurs in the Commission's proposal to compute an RCAF which reflects changes in output costs rather than input prices. However, ASG objects to the Reebie methodology because it entails two steps: (1) computation of the RCAF based on input prices; and (2) adjustment of that index by productivity to reflect output cost. It also believes the NPR's proposal relies on data which are unverifiable. ASG attempts to show that the Commission's proposed approach can be simplified. It proposes an alternate index which would purportedly allow the direct computation of an output cost RCAF which reflects productivity change. ASG has also provided, for the intended purpose of showing that the Commission's proposal can be simplified, another index which would produce a measure of productivity with which to adjust the current RCAF.

The first index suggested by ASG would have the Commission compute the allowable revenue increase (or RCAF) directly by measuring the change in total costs and relating it to (dividing it by) a measure of the

[30] Agribusiness prefers the Reebie methodology to a decision declining any adjustment.

change in total output. The result purportedly would yield an index of actual costs, related to actual output, adjusted for the effect of change in the composition of freight service. ASG asserts that the index could then be trended for forecasting purposes by regression analysis. In addition, the trend line could also be adjusted to reflect "nonmathematical" or historical data. This approach, it avers, is superior to the methodology proposed in the NPR because it is less complex and uses actual, rather than estimated, costs and output.

ASG would compute a productivity adjusted RCAF directly as follows: the adjusted index would be computed by comparing input costs between two periods and adjusting that result by an output measure. ASG's proposed output measure is the number of revenue ton-miles deflated by the change in revenue *per* ton-mile. These "Adjusted Revenue Ton Miles", in ASG's opinion, correct for the non-homogeneity of ton-miles (*i.e.*, they capture changes in the composition of freight service) and thus yield a measure of output which can be compared over time.

Concerned Shippers show that ASG's and the Commission's proposal are the same in principle. The only difference is whether the computations are viewed as adjusting the RCAF to arrive at an allowable rate increase, or calculating such an increase directly. There is no argument that the measure of railroad cost used by the Commission and that proposed by ASG for use in its first recommended index are different. Thus, Concerned Shippers state the real question is whether or not the ASG proposal really provides a valid simplification of the railroad output measure. Both Concerned Shippers and the AAR demonstrate it does not.

ASG's attempt to simplify the measure of railroad output is in error. Mathematical inconsistencies and flawed implementation contained in ASG's proposal are fatal. Examples provided by Concerned Shippers and AAR demonstrate mathematically the fallacious results which could be obtained from the application of ASG's proposed ton-mile index.

Specifically, ASG's failure to segment railroad ton miles into various categories as proposed by Reebie and Caves-Christensen leads to misstatement in the railroad output index. Two simple examples are provided by Concerned Shippers witnesses Caves and Christensen. In the first example, they show for a simple two commodity railroad that a rate increase with *no change in output* leads to a decline in the index of rail output. Using the same data, the second example assumes a change in the composition of traffic with an increase in ton miles for the lower revenue commodity and an offsetting decrease in ton miles for the higher revenue commodity. Again using the ASG approach Caves-Christensen show an increase rather than a decrease in the output index. Applying the Reebie methodology to the same data shows no change in output for the first

example and a decline in output in the second example. These examples clearly demonstrate that ASG's methodology is invalid.

In short, we do not believe that ASG accomplished what it set out to accomplish. The rail output measure cannot be simplified in the manner described. Caves-Christensen and Reebie have shown that a weighted output index is necessary to capture changes in the composition of various rail outputs.

Another approach proffered by ASG employs total freight revenues as the measure of output and total freight expenses, plus interest, less depreciation as a measure of inputs. The index proposed in this fashion is intended to be used as a productivity index and yields a comparison of year to year changes in revenues relative to year to year changes in costs. Total freight revenues are the product of output and the prices charged for that output. Total freight expenses are simply inputs multiplied by their unit costs. Given that productivity is defined as the change in output divided by a change in inputs, ASG's formulation will bias the productivity measurement due to the inclusion of input and output prices. Only if the changes in input and output prices are identical will the ASG methodology correctly measure productivity. AAR has related ASG's proposed productivity index to Caves-Christensen's equation which shows allowable revenue increases to be equal to the RCAF divided by a productivity index. AAR demonstrates adequately that when ASG's proposed productivity index is substituted into the Caves-Christensen equation, a clearly unacceptable answer would result.[31] We agree with AAR that the results obtained from ASG's second approach is not the increase in costs contemplated by the RCAF. Consequently, we reject ASG's proposed approach (and its auxiliary example) in favor of a simplified rate adjustment mechanism reflecting productivity measurement.

Additionally, we observe that the ASG proposal goes far beyond the scope of the *November NPR*. ASG proposes not only a variation in the methodology for productivity measurement but a wholesale change in the way that the RCAF itself is calculated. Even if the ASG proposal were conceptually sound, adoption would require re-noticing and reopening of the *RCRP, supra*, proceeding concerning the RCAF indexing methodology. Consequently, we will focus our attention on the Reebie methodology and the reasons why we believe it to be sound.

---

[31] In fact the ASG methodology computes the allowable revenue increase as the square root of the RCAF. This is clearly different than the result obtained from the Reebie methodology which computes the allowable revenue increase as the RCAF divided by a productivity index.

Construction of the Input Index

Productivity is defined in terms of the efficiency with which resources (inputs) are turned into products (outputs). Under the Reebie proposal, total freight expenses calculated using depreciation accounting, plus fixed charges are used as the measure of input consumption. AAR argues that there are a number of errors in this choice of measurement. It concludes that these errors understate recent rail inputs and result in overstated productivity. The alleged errors include failure to recognize the opportunity cost of capital, omission of certain tax expenses, and understatement of depreciation expense. Additionally, AAR contends that certain expenses which were accounted for as "below-the-line," *i.e.*, as non-operating expenses, should be included in total rail inputs.

DOT also believes that the proposed productivity adjustment is overstated because all relevant costs such as labor buyout expenses recorded below-the-line are not included. It argues that a properly constructed measure would count only the net savings produced by operational efficiencies. DOT believes that implementation should be delayed until these expenses are made part of the calculation.[32]

Current or Book Depreciation. We find no basis to believe that the understatement of the index alleged by AAR precludes adoption of the Reebie methodology. To begin with, the basic undertaking we are engaged in is the measurement of change between periods rather than the estimation of the absolute size of any particular activity or account. If the description of the objects under measurement remains consistent over time, arguments about the method of description may be of little practical consequence.[33]

Furthermore, attempts at introducing what may be seen as greater theoretical purity may only introduce greater uncertainty as to practical measurement. For example, AAR champions the use of current value

---

[32] DOT also expressed other reservations which it did not believe serious enough to delay implementation of the adjustment. It observes that the Bureau of Labor Statistics is currently developing a multi-factor index which should be reviewed when it becomes available. Additionally, DOT suggests that we carefully monitor the reporting of contract traffic revenues in the ICC Waybill Sample and examine the use of alternative data if the divergence between reported and actual revenues grows too large. Both of these concerns will be considered in Ex Parte No. 290 (Sub-No. 7), *Productivity Adjustment-Implementation*, served April 10, 1989. (Not printed) An Advance Notice of Proposed Rulemaking (ANPR) in that proceeding will be issued shortly.

[33] The shippers argue, correctly, that if the "economic" and the "accounting" costs change in the same proportion, there is no real significance to the AAR argument. There is no empirical evidence to suggest otherwise.

accounting for the measurement of depreciation rather than the use of historic values (book values) that are produced by reference to the Commission's Uniform System of Accounts. While we would not dispute the fact that the use of replacement values can be a superior method of estimating the real economic costs incurred in production, the problems in estimating the current replacement value of groups of assets are inherently so difficult that we have rejected it in other contexts, as has the Railroad Accounting Principles Board.[34]

Because there are drawbacks to the measurement of the depletion of capital assets under either the book value or the replacement value methods, reliance on the standard accounting approach is fully justified. Furthermore, as cost saving technology is adopted both measurements of depreciation can be expected to decline as the level of inputs required to produce a given level of output is reduced. Since its inception in 1980 (and currently) the RCAF index has employed book values for depreciation in the measurement of the change in input prices. Apart from the fact that the methodology used may make little or no difference, it would make no sense to use book values for calculating the RCAF and replacement values for productivity measurement.

Taxes and the Opportunity Cost of Capital. Turning to the issue of the inclusion of several "below-the-line" items, AAR's contention is that costs that are not reported as operating expenses (but are accounted for after the statement of operating income, *i.e.* below-the-line) will not be reflected in the productivity adjustment. That is correct, though, to the extent certain of the items pointed to are correctly below-the-line items, they have also not been reflected in the RCAF index used for the past eight years. The principal costs that need consideration are the opportunity cost of capital and certain taxes.

According to AAR's witnesses Tretheway, et al, accounting conventions cause:

> an asymmetric treatment of capital * * * Fixed charges are recognized as a cost of acquiring and using capital inputs, but the opportunity costs of capital supplied by *shareholders goes unrecognized.*
>
> (Note) The situation is more complex. It is the opportunity costs of rail-owned capital supplied by the shareholders which are not recognized. There is an asymmetric and inconsistent treatment of the costs of capital in conventional accounting classifications.[35]

---

[34] *Final Report* (1987), at 60. *See Standards for Railroad Revenue Adequacy*, 3 I.C.C.2d 261 (1986), at 11-17.

[35] V. S. of Michael W. Tretheway, W. Edwin Diewert, W. G, Waters, II (Dec. 1988) at 27.

From what little is said here it is difficult to assess the exact nature of the problem troubling the AAR witnesses. We can agree with the assertion that economists widely accept opportunity costs as true economic costs and that if they are not recognized some understatement may occur. But, if the understatement is consistent across periods, the impact on the measurement of productivity growth is not likely to be significant, and we do not understand the argument about symmetry to suggest inconsistent treatment across periods. Thus, we assume the argument about symmetry refers to our inclusion of debt but not equity in the productivity adjustment. But it is vital to maintain consistency between the RCAF and the productivity measure used to adjust it. Deflating input expenses by a productivity measure which includes cost categories not captured in the accounting expenses reported by the railroads yields an invalid result. Since economic costs are not included in the RCAF, they cannot be included in the productivity adjustment. Given the practical problems involved in the estimation of opportunity cost, reliance on conventional measurement is preferable.

AAR is no more convincing on the issues of taxes. Again citing to Tretheway, it is argued that:

> * * * income taxes occur below the line and are excluded. However in comparing across industries, and from the viewpoint of investors who require a return on their investment, taxes are a cost of doing business. Corporate profit taxes are an additional expense incurred by suppliers of equity capital. By excluding these capital related expenses from the estimate of total rail costs, opportunity costs, hence total input use, are understated for the rail industry.[36]

It is not questioned that the exclusion of tax on income and profit result in an understatement of the total costs of doing business. But that is not the same as saying that they should be included in the measurement of productivity. Increased taxes are not so much a change in the cost of producing a good, or service as they are a cost of having profited from so doing. The need for consistency between the RCAF and the productivity measure used to adjust it requires the exclusion of income taxes, which are a function of carrier and non-carrier profits, from the measurement of productivity. Since taxes are not included in railroads' operating expenses, they should not be included as an adjustment to these expenses.

Labor Buyouts. The argument raised by AAR regarding below-the-line expenses is excessively broad--claiming that, in general, there may be

---

[36] Tretheway, *supra*, at 28.

certain non-operating expenses which should be considered in the calculation of the input index. Rather, what AAR should be saying is that in 1986 a single railroad recorded a particular expense below the line which should properly have been recorded above-the-line and, therefore, included in total freight operating expense. During 1985 and 1986 (as well as in subsequent years), several roads have taken special restructuring charges which consisted primarily of labor buyout expenses and writedowns of the net investment in road and equipment. Except for the one case cited by AAR, these charges were recorded above-the-line as ordinary operating expenses. The one exception was granted upon request by the Commission's Accounting and Valuation Board on the condition that the amounts involved be separately disclosed to satisfy the Commission's need for the data. For our purposes in this proceeding, we have added the $659.7 million in question to total freight operating expense for 1986. This permits consistent treatment of those special charges for all railroads. The effect of this adjustment is to reduce the five-year average productivity gain from 2.2% to 1.7%.[37] We will also include the handling of below-the-line charges as one of the items to be considered in Ex Parte No. 290 (Sub-No. 7) *supra*.[38]

Direct Physical Measurements. Having raised what it believes are substantial objections to the input measurements proposed by the Commission,[39] AAR offers as an alternative the direct measurement of physical assets. The issue here is whether the use of expenses accumulated in accounting pools (and deflated across time periods to permit comparison) is acceptable when compared to the intuitively more appealing approach of actually measuring the amount of fuel, or labor hours, or track life expended during a given period. Adopting the latter approach would

---

[37] At oral argument counsel for the Concerned Shippers stated that the labor buyouts should be recorded above-the-line. Counsel noted that there was only one documented instance where this was not already the case, and that this one instance could be fixed so that the Commission could "consider them in the mix."

[38] Our general approach is to consider for productivity purpose only those accounting data that are considered in developing the RCAF itself. It is not feasible given the complexity of this matter to resolve the issue at this time. We will consider the question in Ex Parte No. 290 (Sub-No. 7), *supra*.

[39] AAR also asserts that the proposed productivity measure could be inaccurate because of random measurement errors in the input index series. This criticism fails to recognize that the input index is based on total reported expenses with some limited exclusions. Unlike the output index which is based on a sample, the input index is based on the total of the relevant expense accounts and is not subject to random sampling error. In addition, the reported expenses of the railroads are audited by this agency and have been found to be highly reliable. Consequently, we find the railroads' criticism to be unfounded.

require significant delay in the use of productivity adjustment, but AAR sees the increase in accuracy as worth the wait. We do not.

In the first place, the measurement of actual usage is not a straightforward undertaking. This much is apparently acknowledged by AAR's expert witnesses.[40] Second, it is not likely to produce substantially better results. In its argument, AAR points to work showing that the use of direct physical measurement would significantly lower estimated productivity, but the more recent work of their own witnesses produced productivity estimates nearly identical to those estimated by the Reebie methodology.[41] If interested parties can demonstrate that measurement of actual usage is in fact superior and practicable,[42] the Commission may consider modification of the adjustment methodology. For the present, we are satisfied with the accuracy of the deflated cost approach.

Construction of the Output Index

AAR notes that a valid output index must identify and measure the various railroad outputs and combine them with a consistent weighting scheme which reflects their relative importance. The Reebie methodology proposes to accomplish this by relying on an analysis of year-to-year changes in the traffic captured by the annual ICC Waybill Sample. To account for possible changes in the character of rail service, movements in the waybill sample are segregated by such characteristics as length of haul, shipment size, and car type. The year-to year change in ton-miles for each service segment is computed, and a composite change is calculated as the weighted average of all the individual segments. Weights are based on each segment's share of revenue within the waybill sample. AAR objects to the use of revenues in the waybill sample as a weighting factor. AAR admits that use of revenue weights is a convenient approach, but believes that it is flawed both conceptually and as to data reliability.

As to the data, AAR argues that a growing trend toward the use of contract rates and the corresponding overstatement in the waybill sample of revenues attributed to contract traffic creates a bias. AAR argues that the revenues reported in the waybill are typically greater than the actual revenues generated by contract traffic. AAR concludes that the increasing trend toward use of contract carriage causes a corresponding overstatement

---

[40] *See* Tretheway, *supra*, at 33-37.

[41] Tretheway, *supra*, Appendix 4, at 19.

[42] We observe that, although AAR's witnesses engage in lengthy discussion, they draw no conclusion as to the relative merits of these approaches as compared with the methodology suggested by the NPR.

of productivity.[43] AAR also believes that the use of shipper supplied cars for contract movements creates a bias, because the waybill revenues will be overstated while, at the same time, the railroads will report fewer inputs.[44]

In addition, AAR contends that the use of revenue weights is conceptually flawed because such weights are not an accurate indicator of the effect on input use of different traffic types. In its opinion, correct weighing must be based on marginal costs.

Concerned Shippers disagree with the AAR's arguments concerning contract rates. They note that not all contracts result in actual rates below the reported waybill revenues. As examples, they point to "take or pay minimum clauses"[45] which could result in higher actual rates. Thus, they believe that the presence of a bias and its direction are empirical issues and that AAR has not provided any data or analysis supporting its contention that there is a severe overstatement in revenues. In addition, the shippers assert that even if a bias exists, as the AAR contends, a vast overstatement would be required to cause a significant bias in the output index.

We are not persuaded by the AAR's criticisms of the output measures. Although the waybill does not always correctly record the actual level of contract rates, AAR has not demonstrated that this seriously biases the index of rail output over time. As the shippers point out, the question is an empirical one and the railroads have not provided data to support their allegations. If this matter is thought to have a significant impact, it may be raised again during the periodic review of the productivity adjustment ordered here.

We also do not find that the use of revenue weights invalidates the output index. AAR concedes that "there is a great deal of uncertainty in the theoretical literature as to what the conceptually correct set of weights and functional form for the output (or input) index should be."[46] Thus, there is no categorical "right choice." Furthermore, as a part of its work for the Commission, Reebie Associates tested both revenues and costs and

---

[43] Contract rates are generally lower than tariff rates. The revenues reported on the waybill sample may be different from what are actually collected. This occurs because there is no consistent reporting criteria for contract rate movements. Sometimes the tariff rate is reported while at other times it is the contract rate without discounts. Other times it may be the actual contract rate paid.

[44] The use of shipper owned cars for contract movements further complicates the revenue question because additional discounts may be offered for shipper owned cars.

[45] These types of contracts require the shipper to pay a set minimum fee based on a specified volume regardless of whether a service is used or not. If a minimum volume is not met the actual charge will exceed the amount reported on the waybill.

[46] Comments of the AAR, Railroad Cost Recovery Procedures-Productivity Adjustment, V. S. of Dr. Michael W. Tretheway *et al.*, (Dec. 1988) at 22.

found few material differences between the two approaches.[47] Furthermore, the AAR concedes that theory does not provide any guidance on this question.

Finally, AAR criticizes the proposed use of a chained Laspeyres[48] index formula which it believes overstates output. We do not find that the AAR has uncovered any flaw in our approach. The critical issue in indexing over extended periods during which weights change is to account for these changes in the indexing formula. Reebie has done so by using a "dynamic" chained index rather than a fixed weight index. While there may be some disagreement among experts on which dynamic index should be used, the Reebie method is clearly one acceptable choice.[49] Thus we would be remiss to reject it when there is no indisputably correct choice and when it is consistent with the method by which the RCAF is itself calculated. AAR has neither demonstrated that Reebie's output measure is flawed nor provided an alternative proposal which is shown to be superior. Therefore we accept the Reebie method as valid.

Business Cycle Duration

In the *November NPR* we proposed averaging over a full business cycle for smoothing out variations in the productivity trend. The Reebie study included a complete work-up on data for the five-year period 1982-1986,[50] and the *November NPR* asked for comment on whether this period was adequate. The business cycle may be defined as the period of time involving a complete rise and fall of economic activity. While parties disagree on the length of the business cycle for railroads, they do agree that the 1982-1986 period falls short of capturing the present business cycle.

AAR argues that the 1982-1986 five-year period is too short. Although it does not suggest an alternative period of time, it asserts that the

---

[47] Reebie concluded that: "Given the same average performance and the lack of a systematic difference between the two approaches on an annual basis, the revenue weighting system should be selected." Reebie Associates, *Final Report*, at 62.

[48] The Laspeyres index is an aggregate price index in which the prices are weighted by the quantities associated with a fixed historical base period. In a chained Laspeyres index the base period is changed from period to period so that the comparison is always between the current period and the period immediately preceding it.

[49] Concerned Shippers dismiss AAR's criticism of the chained Laspeyres indexing formula. First they point out that AAR's own economic witness has, in the past, supported the use of such an indexing formula. Additionally, they note that the RCAF itself is based on a chained Laspeyres index formula and thus the productivity measure is consistent with the RCAF.

[50] There are serious comparability problems with data available for periods before 1982.

productivity improvements measured by the proposed trend are not typical. It contends that the immediate post-Staggers regulatory reforms enabled the railroads to achieve unprecedented productivity gains that will not be matched in the future.[51]

Intermountain Power Agency favors a seven to 10-year period, noting that a five-year 1984-1988 average would not include the low traffic years of 1982 and 1983. It recommends lengthening the period as more depreciation accounting data become available. Similarly, DOT suggests that we carefully review the reasonableness of using a five-year period, contending that a longer time period to reflect the full length of the business cycle may be desirable.

Concerned Shippers argue that the length of time used for the average is unimportant since the average merely reflects an historic trend. They believe that the purpose of using a multi-year average is to produce a smooth trend and eliminate year-to-year distortions. They contend that use of a five-year average coupled with a two-year lag in implementation actually favors the railroads by allowing a full seven years before productivity gains are fully reflected. Concerned Shippers also argue that the railroad industry's contention that post-Staggers productivity growth was unique is wrong. They contend that there was little difference in the pre-Staggers and the post-Staggers rates of productivity growth.

We have concluded that a moving average, as proposed in the *November NPR*, is the proper method for calculating annual adjustments. Initially we will use the five-year average provided by the data developed by Reebie Associates. We believe that a longer period will be required and propose to lengthen the base as compatible data becomes available. We will continue to lengthen the time period used to calculate the trend as data becomes available. We will also include the time frame used to calculate the productivity trend as one of the items to be considered in Ex Parte No. 290 (Sub-No. 7), *supra*.

While we believe that the use of a longer period will add stability to the productivity calculation, we do not anticipate that initiating the adjustment with the existing data will materially affect its size or direction. If this should be shown not to be the case, corrective action can be taken. However, under our methodology, changes in productivity will be reflected on a delayed basis. Because the productivity adjustment is based on a

---

[51] AAR's argument on this issue is substantially marred by a computational error in its trend. By assigning a positive value to the negative productivity growth in 1982, AAR perceived a startling trend that actual numbers did not support.

lagged trend, rail carriers will have temporary benefit of the full extent of their gains in productivity.

AAR's argument that the productivity growth captured by the Reebie study is the result of a post-Staggers surge is largely beside the point. The Reebie study also reviewed a number of prior productivity studies of the railroad industry. That review showed that since World War II long term annual productivity growth has been in the 1% to 2.5% range.[52] Consequently, we are not convinced that using the period initially compiled by Reebie results in an arbitrary adjustment.

Definition of Productivity

AAR argues that the proposed productivity measure is invalid because it does not distinguish between pure efficiency gains and productivity from other sources. It contends that total factor productivity has to be partitioned into components. In its opinion, the effects of economies of scale, scope and density, capacity utilization due to the business cycle and changes in traffic mix should be separated from efficiency improvements due to technological change. To make this separation, the railroad witnesses describe an analytical technique that uses regression analysis which yields "an approximation to the net shift in the underlying cost function".[53] This shift purports to measure pure productivity.

Concerned Shippers object to the railroads' proposal to partition total factor productivity and only consider technological change for the purpose of adjusting the RCAF. The shippers contend that such a limited notion of productivity growth violates the cost recovery principle. If there are economies of scale, density and capacity utilization, then scale, density and capacity utilization affect railroad input requirements. But such changes do not affect unit revenues. Thus, productivity gains associated with the aforementioned factors change the ratio of revenues to costs. The productivity adjustment is in their view intended to restore the initial relationship.

We conclude that the productivity measure used to adjust the RCAF should not be limited to the narrow definition proposed by the railroads. As noted, by witnesses Caves and Christensen, while the exact cause of productivity growth may have intrinsic interest, it is not germane to the issue of cost recovery. To the extent that the RCAF index will now be used to reflect changes in output costs, total factor productivity is the relevant

---

[52] Reebie Associates *Railroad Productivity Evaluation Final Report* (Oct. 1988), at 13.
[53] V. S., Tretheway, *supra*, page 59.

measure, since all forms of productivity growth tend to reduce cost. And, in any event, the railroads cannot claim to be disadvantaged by the use of total factor productivity, since it would appear that calculations limited to technological productivity would produce larger adjustments to the inflation index since other components of total factor productivity appear to have fallen during the period under consideration.[54]

SHARED PRODUCTIVITY OR PARTIAL ADJUSTMENT

In the *November NPR* parties were asked to comment on the possibly that the RCAF index might not be adjusted for the full measure of achieved productivity gain. The principal reasons for consideration of a shared measure of productivity gains are twofold: (1) measured productivity change might exceed actual productivity change, resulting in an index that fails to cover real output costs; and (2) full pass through of gains in productivity might have a negative impact on the willingness of rail carriers to undertake productivity enhancing programs of investment or other cost-cutting. Comments filed on this issue do not warrant the adoption of any procedure for sharing or partial adjustment, and we have determined that the index should be adjusted for the full measure of achieved productivity as proposed in the notice.

In general, the railroad parties favoring sharing do so only as a fall back from their opposition to any adjustment, and they base their support for a partial adjustment on the belief that its impact on incentives and adequate earnings would be less than that of a full adjustment. We do not believe that the methodology proposed here will overstate productivity improvement, that adjusting the RCAF will significantly weaken the incentives for continued improvement, or that it has necessary consequences for financial performance, given the limited number of rates covered by the maximum index level and the existence of alternate means of revenue enhancement. These matters have been discussed above. While there is no experience with the use of an adjusted index at this point, the Commission can and will give careful consideration to the impact of the adjustment over time. Parties are free to petition, should facts arise that demonstrate the necessity for further consideration of these issues.

DISCOUNTING FOR A PROFIT ELEMENT

---

[54] *See* Exhibit 3, V. S. of Douglas W. Caves and Laurits R. Christensen, (Jan. 1989).

Originally the RCAF was calculated using an interim methodology which used the Producer Price Index rather than railroad-specific data to measure certain index components. Subsequently the methodology for the calculation of an "all-inclusive" index was adopted. That methodology was adopted through a rulemaking procedure in *Railroad Cost Recovery Procedures*, 1 I.C.C.2d 207, 225-26 (1985), and included more railroad-specific data. During the comment period several parties made various suggestions which did not involve the indexing methodology itself. One of those suggestions was to discount the RCAF for a profit element.

Subsequently the issue was transferred to this proceeding. Previously we had requested comments providing a specific justification for discounting the RCAF for a profit element. While methodological suggestions were offered, no party submitted any specific basis in fact for determining the amount, if any, of that discount.

In *RCRP, supra,* various parties argued for an RCAF that is discounted for profit. They contended that the RCAF is designed to cover only increased costs, argued that profits are the results of decisions which reflect factors other than cost, and concluded that discounting is in order.

Shipper parties were generally silent on this issue in their responses to our *November NPR*. One party, Intermountain, believes that the RCAF should be discounted for profit if the railroad industry's return on investment either closely approaches the revenue adequacy level or exceeds that level. It argues that the RCAF should be discounted by a percentage equal to the percentage by which the rate of return exceeds the cost of capital. Another party, the Motor Vehicle Manufacturers Association, opposes a discount believing that it would unnecessarily encumber the index.

AAR opposes discounting for profit. It argues that profits are part of the cost of capital that railroads pay to investors and, as such, are part of the cost of doing business. It also believes that profits, like other costs, are subject to inflation, arguing that failure to pay a sufficient return will result in the inability to retain adequate amounts of investment capital. Finally AAR argues that there is no statutory authority for discounting for profit.

We will not discount the RCAF for a profit element. Addition of a productivity adjustment recognizes the trend in efficiency gains and other productivity improvements made by the railroads. This action alone reduces the margin created by the RCAF itself. We also find nothing in the statute requiring or even discussing discounting for profit. Furthermore, profit (and loss) levels differ widely among different railroads and among various traffic items on a given railroad. In light of that wide variation we

do not believe that it is possible to implement a discount for profit as a practical matter.

IMPLEMENTATION

Restatement and Retroactivity

The *November NPR* proposed to apply the productivity adjustment on a prospective basis only. The *November NPR* emphasized the belief that prior policy was a valid exercise of discretion and that the Staggers Rail Act neither requires nor precludes a productivity adjustment. We concluded that a policy change was necessary to give assurance that future profit enhancement on captive traffic would not be immune from challenge. We made no findings, nor do we now, that existing rate levels are unlawful. Consequently, the rule proposed in the *November NPR* did not include any restatement of the existing index.

Some shipper parties such as Concerned Shippers, Southern Electric System and NITL argue for restatement, although they do not all propose the same starting point.[55] NITL favors a January 1, 1988 starting point with a bank of credits established to offset increases from that date to the actual date when an adjustment is finally implemented. It cites its pending petition for refund provisions filed on December 11, 1987. The American Paper Institute, in its reply, supports NITL's suggested starting date and banking proposal. Concerned Shippers contend that we are required by law to correct the RCAF, arguing that only the restatement of a productivity-adjusted RCAF from 1981 to date will satisfy the statute's requirement of an output index. NARUC, in its reply, supports Concerned Shippers.

Shipper support for restatement of the RCAF is not unanimous. Several shippers argue that the index should be restated and some appear to suggest that it might be applied retroactively. Intermountain, while favoring some form of recognition of prior productivity gains, believes that any such application would be followed by administrative concerns and probably by legal challenge. Intermountain argues that it would be better to implement a productivity adjustment now on a prospective basis and consider the issue of retroactivity later. Another shipper party, MVMA, supports retroactive application only if a productivity adjustment does not become effective by the third quarter of 1989. In that event it believes that retroactive application to the third quarter of 1989 is proper.

---

[55] Most of the shippers seek only "restatement" of the index, that is, recalculation of the current index level to reflect prior productivity.

DOT does not support retroactive application of a productivity adjustment or recalculation of prior values. Nonetheless, it notes that case law supports the view that we have the discretion to revise the RCAF if we find that a prior period's values had been miscalculated or that cost declines justify a roll back in rate levels.

Concerned Shippers argue that the *November NPR* assessed the law incorrectly. In their view, the Staggers Act requires a quarterly productivity adjustment and that they must be applied to each RCAF since 1981. Furthermore, they contend that a failure to restate the RCAF causes it to be inaccurate. They argue that a purely prospective application would cause future RCAF's to continue to be overstated by the accumulated past overstatements. They conclude that the RCAF will accurately measure railroad output costs as required by the statute only if all past values are restated. Thus, if the RCAF is recalculated, they estimate the fourth quarter 1988 adjusted RCAF index level to be 122.7 while if it is not re-computed it is 133.7. At the same time, Concerned Shippers recognize that a purely prospective application is independent of the RCAF level. Thus, their analysis shows that the rate of growth in the RCAF would be the same and re-statement would only affect the level of the RCAF and not its rate of change.

AAR and Conrail strenuously object to any retroactive application of a restated RCAF. Aside from the policy issue, AAR contends any such application is not lawful. It argues that 49 U.S.C. § 10707a does not authorize the Commission either to retroactively change the RCAF value it published for a prior quarter or to take any other action with the effect of rescinding any portion of the adjusted base rate protection applicable to prior freight movements. Thus, AAR concludes if a rate was reasonable when it was charged, the rate is immune from regulatory challenge thereafter. It cites 49 U.S.C. § 10707(a)(2)(A),(B) as the authority. As support for its argument, AAR also cites the Supreme Court decision in *Bowen v. Georgetown University Hosp.*, 109 S. Ct. 468, 477-78 (1988) This decision, it contends, shows that in a similar situation involving medicare, the court held that rates of payment could not be retroactively changed because (1) there was an absence of any express statutory authority for retroactive applications of changes in the index formula and (2) the existence of a legislative policy of permitting hospitals to "know in advance the limits to Government recognition of incurred costs that are not reimbursable (cite omitted)."

AAR also objects to future RCAF adjustments to "correct past understatements" through a re-statement of the index. Although this approach would not require each quarter's RCAF to be restated, AAR believes that adoption of such a proposal would reduce the 1988 fourth

quarter RCAF by over 8% It concludes that the result of the correction process would be a substantial reduction in contract rates which are tied to the RCAF. Further, a large number of tariff rates would become subject to challenge. The financial impact of such restatement would thus be extremely difficult to absorb. AAR contends that the adoption of a productivity adjustment at this time would not require a correction of past RCAF levels. It explains that the RCAF measures relative changes in cost levels from one quarter to the next, not absolute cost changes, thus prior "errors" have no impact on future quarter to quarter relationships.

As stated in the *November NPR*, the decision to consider the adoption of a productivity adjustment to the RCAF is based on a change in policy, not the correction of an error in law or method. It is not necessary to restate the present index to any particular level to measure accurately changes in productivity or show correctly changes in the RCAF index under the Reebie methodology. Thus the issues regarding recalculation for past productivity are whether the statute compels restatement or, alternatively, whether the level of existing rates warrants a substantial lowering of their present level and whether a decision to cause this through restatement of the RCAF would be a lawful exercise of the Commission's discretion.[56]

We do not believe that the statute compels restatement, and we have no record on which to conclude that existing rates are excessive. In these circumstances, it would be imprudent to order a restatement of the index when the impact on rail earnings is unknown and, at least in advance of taking such an action, unknowable but potentially substantial.[57] Furthermore, there are very serious methodological problems with restatement. While we are certain that restatement would cause a substantial drop in the existing index, the correct measure of the restated index -- whether for the present quarter or for all past quarters -- cannot be readily developed. The Reebie methodology is based on a five-year trend chosen largely because of data limitations for earlier periods.[58] Trended data are not available for earlier periods and the use of data for

---

[56] Because we decline to order restatement, we do not reach or consider the issue of whether so doing would be a sustainable exercise of the agency's authority over rates.

[57] Estimates in the record vary greatly. It is reasonable to conclude, however, that restatement would place the index substantially below its present level and the immediate impact of a roll-back under the *RCRP*, *supra*, procedures would be significant. It is also reasonable to question whether the railroads can make up the revenue losses associated with restatement through other tariff procedures, as we believe they can do with respect to quarter-to-quarter productivity adjustments.

[58] As described below (above), the Commission intends to extend the averaging period to encompass a full business cycle. The precise number of years is part of the subject matter of Ex Parte No. 290 (Sub-No. 7), *supra*.

individual years is subject to serious question. The approximations of the Reebie methodology offered by Concerned Shippers are based on data which required substantial restatement because of their inconsistency with those available for the current periods. These early data are subject to serious question on reliability grounds.

Given the real problems with ascertaining the "correct" restated levels and the absence of grounds for concern over the existing rate structure, restatement will not be undertaken. Rates in effect today have been set in reliance on rules that we do not believe have been shown to have been unlawful. Had the rules been different throughout the post-Staggers period, rail carriers could have availed themselves of alternatives -- the shippers have argued extensively in this docket that these alternatives represent effective means of raising rates. Under these circumstances, any Commission action permitting shippers to challenge, under a recalculated RCAF, past rates that did not exceed the cost index levels in effect when the rates were collected would be retroactive rulemaking. In effect, such a rulemaking would make carriers financially liable for rate actions that were protected when they were taken, a result that would be clearly improper under *Bowen, supra.*

Conversely, permitting shippers to use a restated RCAF to challenge, in the future, rate levels that enjoyed protected status in the past, would have the attributes of what the judiciary refers to as "secondary retroactivity."[59] This condition, even if insufficient to void our actions automatically and as a matter of law, gives this agency good cause to exercise its discretion with care. For this reason, and the others cited above, the Commission declines to restate the index for past productivity.

Calculation of the Current Index

Our proposal contemplates the use of two indices --an index that reflects input prices, denominated RCAF (Unadjusted), and an index that reflects output (productivity-adjusted) costs, denominated RCAF (Adjusted). The use of two indices is designed to provide the Commission and the public with readily available information necessary to monitor the course and impact over time of the decisions taken here. It is our initial view that the AAR should file both such indices, although the numerical values for the productivity adjustment will need to be supplied by the

[59] *See Bowen, supra,* (concurring opinion of Justice Scalia, at 477.) "A rule that has unreasonable secondary retroactivity--for example, altering future regulation in a manner that makes worthless substantial past investment incurred in reliance upon the prior rule-- may for that reason be arbitrary and capricious * * * and thus invalid."

agency until such time as the issues surrounding the business cycle are resolved.

We note that various parties have proposed different methods of relating the productivity adjustment to the RCAF, each of which they argue is necessary for the Commission to remain neutral on the issue of contract impact. (All sides agree that contracts frequently contain rate adjustment clauses based on the RCAF.) As we see it, rather than preserving our neutrality, each such proposal would inject us into the process of contract interpretation and dispute resolution. That is contrary to the Congressional design of the Staggers Act. Beyond limited review of contracts at the time of filing, the content of contracts and disputes over their interpretation are, according to Staggers, to be left to the parties and the courts. It is inconsistent with this statutory design for the Commission to shape its rules so as to affect the results of particular contract rate disputes. Consequently, we intend that the process for specification of the indices outlined here should be regarded as neutral with regard to the interpretation of contracts.

The *November NPR* proposed that the annual productivity growth be spread equally over four quarters of a given year. None of the parties disagreed with this concept nor suggested an alternate method. It is both logical and equitable to implement the adjustment this way. Various factors influencing productivity growth usually occur randomly, each affecting productivity at its own unique rate. The proposed methodology does not measure productivity growth at intervals shorter than a year -- nor is it practical to do so. Thus, it is not unreasonable to treat the annual changes in productivity as if they occurred in quarterly increments. Accordingly, the proposal to spread the annual growth evenly over four quarters will be adopted. The mechanics of computing the RCAF (Adjusted) are described in the following steps:

(1) Due to the compounding character of productivity growth, the quarterly productivity adjustment factor (PAF) is computed by taking the fourth root of one plus the multi-year average annual growth.

(2) The quarterly RCAF (Adjusted) is computed by dividing the quarterly RCAF (Unadjusted) by the cumulative quarterly PAF, compounded by quarter.
(3) If the RCAF (Adjusted) increases, the allowable percentage increase in maximum RCAF (Adjusted) rate levels for the current quarter will be the RCAF (Adjusted) for the current quarter divided by the RCAF (Adjusted) for the prior quarter, less 1.0 times 100.0.
(4) If the RCAF (Adjusted) decreases, any ordered decrease in maximum RCAF (Adjusted) rate levels for the current quarter will be to the level of the RCAF (Adjusted) for the current quarter.

Inasmuch as the revised rules from this decision are being implemented in the middle of an ongoing process and at a time other than the beginning of a calendar year, special treatment for the transitional

period is both appropriate and necessary. Accordingly, the following procedures will apply for the remaining quarters of 1989:

(1) The allowable increase in rates for the second quarter 1989 will be determined by comparing the RCAF (Adjusted) for the second quarter 1989 with the RCAF (Unadjusted) published for the first quarter 1989. Effective April 1, 1989, the ceiling for tariff increases taken under these procedures will be the RCAF (Adjusted).
(2) The annual percentage change in productivity will be calculated initially using the five-year trend data as modified herein. Commission staff will, as soon as possible, add year six (1987 waybill file and expenses) and recalculate the value for use in the remaining quarters of 1989. Year seven will be added for use in all four quarters of 1990. As each recalculation is completed, the parties will be notified of the new value and the quarters to which it applies.

Commencing with the third quarter of 1989 the Railroads' (AAR's) quarterly submissions of the all-inclusive index data must also show both RCAF (Unadjusted) and RCAF (Adjusted). Rates increased in RCCR tariffs may not exceed the level of the RCAF (Adjusted).

Rates increased in RCCR tariffs may not exceed the level of the RCAF (Adjusted). The regulations at 49 C.F.R. Part 1135 are amended as follows:

Authority: 49 U.S.C. 10321 and 10707a; 5 U.S.C. 553.

Section 1135.1 is amended to read as follows:

§ 1135.1 Quarterly Adjustment of Rates
(1) Section 1135.1 (b) is revised by adding the following language:
(b) * * * quarter. Additionally, AAR shall file an index adjusted for productivity changes. The adjustment will be made by applying the multi-year average annual growth in productivity spread evenly over four quarters, compounded each quarter. Productivity adjustments shall compound in the same manner as rate changes.

(2) Section 1135.1 (c) is amended to read as follows:
(c) The Association of American Railroads must file its calculations with the Commission on the fifth day of the last month of the prior quarter (or the closest business day if the fifth is a Saturday, Sunday or holiday). The calculations are to be for the mid-point of the next quarter.

ENVIRONMENTAL AND ENERGY CONSIDERATIONS

This decision will not significantly affect the quality of the human environment or the conservation of energy resources.

We certify that the inclusion of a productivity adjustment in the quarterly RCAF process will not have a significant adverse impact on a substantial number of small entities because only Class I railroads and the AAR, an industry trade association, participate in the construction of RCAF data.

VICE CHAIRMAN SIMMONS, commenting:

I believe there is some merit in the NITL proposal to establish a bank of productivity credits earned since January 1, 1988. Such a banking procedure was judicially affirmed in the RCAF context in *Alabama Power Co. v. ICC*, 852 F.2d 1361 (D.C. Cir. 1988), and in my view this action would not necessarily run afoul of the retroactivity considerations discussed in the decision. Unfortunately, there was insufficient support at the Commission for consideration of any banking provision. Given the importance of finally adopting a prospective productivity adjustment and of implementing this adjustment immediately, I have joined in issuance of today's decision. Nevertheless, I would have preferred to consider giving some recognition to prior productivity gains, in a manner which would avoid any unreasonable disruption in the rail industry.

COMMISSIONER PHILLIPS, concurring in part and dissenting in part:

I support the majority in adopting the productivity adjustment to the RCAF set forth in today's decision, as I believe that the costing techniques we impose on the industry should reflect reality to the greatest possible extent. Further, I believe that the methodology adopted here will not overstate productivity improvement, or that adjusting the RCAF will greatly weaken the industry's incentives for continued innovation.

Nonetheless, given our lack of experience with the new productivity adjustment, I believe that there remain conceptional and empirical questions regarding its effect. Therefore, unlike the majority, I would not rule out further consideration of a partial adjustment (*i.e.* a sharing of productivity gains between carriers and shippers) and I would have called for such consideration in our forthcoming Advance Notice of Proposed Rulemaking in Ex Parte No. 290 (Sub-No. 7).

The record in this proceeding indicates the need for further consideration of the concept of partial adjustment or sharing. The Railroad Accounting Principles Board has expressed concern over the possibility of inaccurate measurement and listed several procedures, including partial adjustment, as a potential means of relief. And the railroad parties have sought the use of a partial adjustment, arguing that the incentive to become productive is better preserved if some portion of the gain is not subject to mandatory pass through to customers under a full adjustment.

The railroads have also expressed concern that Commission procedures mandating rate roll backs when the RCAF declines could force them to lower their maximum protected rates if productivity should outstrip inflation during a given period. This concern and possible methods for

addressing it certainly warrant additional consideration. One such method, on which I would have requested comment in Ex Parte No. 290 (Sub-No. 7), would limit the adjustment for productivity (so as to recognize only inflation) in periods when the adjustment would otherwise have a negative numerical value.

COMMISSIONER LAMBOLEY, dissenting in part:

I am pleased to join my colleagues in adopting a productivity adjustment to the quarterly Rail Cost Adjustment Factor (RCAF). This outcome is long overdue[60] and I am on record as being a proponent of the adoption.[61] I find the methodology here adopted to be appropriate. Further, I agree that the present determination should operate prospectively, and not be made to apply retroactively. However, I do part company with my colleagues' views over (1) the reasons for the adoption of the adjustment and (2) the failure to implement the adjustment by restating the current RCAF for prospective application.

The majority considers the adoption of the productivity adjustment as solely a matter of policy, within the Commission's discretion. As a statement of policy, the adjustment may be valid and appropriate. However, it is not, in my view, the compelling reason to adopt a productivity adjustment. For me, it is both a question of statutory interpretation as well as of equity and fairness.

My views are shaped by broad considerations of statutory policy and purpose. For me, the legislative history of the various Staggers Act provisions evidence a Congressional awareness and recognition of the need to alleviate regulatory impediments and enhance the opportunities for the financial recovery and sustenance of rail carriers. Congress addressed several revenue issues in passing the Staggers Act of 1980, and in doing so, set out various provisions related to rail carrier revenues and ratemaking.[62]

For purposes of this case, certain statutory sections are particularly relevant as evidence of the fairly comprehensive Congressional remedial scheme envisioned by the Staggers Act. Section 201 authorizes rail carriers to establish any rates, subject to a test of reasonableness in instances of

---

[60] This proceeding began with an Advance Notice of Proposed Rulemaking issued July 26, 1982 and has been pending ever since.

[61] Please see my separate expressions in Ex Parte No. 290 (Sub-No. 5) *Quarterly Rail Cost Adjustment Factor*, decisions served December 21, 1986, and March 31, 1988.

[62] Apposite legislative history is extensively discussed by the Court in *Western Coal Traffic League v. United States*, 677 F.2d 915 (D.C. Cir. 1982) *cert. denied* 459 U.S. 1086 (1982) in reviewing the Commission's initial RCAF determination, and will not be reiterated here.

market dominance.[63] Provisions of Section 203 set out revenue methods by which rail carriers may raise rates to recapture costs as indexed[64], as well as achieve revenue enhancement through rate increases which fall within established percentages for varying times.[65] Additionally, Section 206 authorizes rate increases based upon a Commission prescribed percentage rate or rate index in order to compensate for inflationary cost increases.[66] Section 217 permits joint rate surcharges and cancellations.[67] Finally, among the other measures designed to benefit railroad transportation and financial capabilities, Congress expressly authorized rail transportation contracts[68] and overall, in seeking to protect existing rate structures and establish a basic rate reasonableness flooring for the future, Congress enacted a savings clause.[69]

While as noted, the broad spectrum of revenue and ratemaking have influenced my views, what is at issue here are not rail revenues generally. Rather, the question is more narrowly focused on the meaning and content of the RCAF, and the composition of the quarterly index.

Section 203 provides, among other things, that the Commission must publish a quarterly RCAF by which to determine the permissible amount of the railroads' cost recovery rate increases necessary to recover the changing composition and level of railroad costs. Significantly, these rate increases, if they do not exceed the Commission established benchmark, are not subject to challenge by shippers, irrespective of competitive or non-competitive transportation environment. The statutory provision which allows immunity from legal challenge must be read within the narrow context and purpose which I believe Congress intended.

I conclude that the RCAF was not meant to be a mechanism for revenue enhancement. Congress provided other methods for that purpose, such as the zone of rate flexibility provision (where the issue of revenue adequacy is relevant) inflation based rates, or general rate increases. The purpose of the RCAF provision was simply to allow carriers to raise their rates to reflect current *costs*. This Congressional intent was emphasized by the Court in *Western Coal, supra*, at n.3.

---

[63] *See* 49 USC § 10701a; also Section 202, 49 USC § 10709(d)(1-4).

[64] *See* 49 USC § 10707a(a)(2)(B) provisions referring to Rail Cost Adjustment Factor (RCAF).

[65] *See* 49 USC § 10707a (b), (c) and (d) provisions referring to a Zone of Rate Flexibility (ZORF).

[66] *See* 49 USC § 10712 provisions for inflation-based rates.

[67] *See* 49 USC § 10705a.

[68] Staggers Act, Section 208; 49 USC § 10713.

[69] Staggers Act, Section 229.

The Commission recently considered the Congressional purpose of the cost recovery procedures, and declared they were "to permit prompt, risk free recovery of increased costs, and no more."[70]

In order to accurately reflect the *costs* incurred, no more and no less, I believe a productivity adjustment is essential.[71] Otherwise, RCAF rates may rise faster than the actual cost of providing service and shippers, especially those in captive markets, will have no recourse against such increases. Once a productivity adjustment method is found to be accurate and feasible, the Congressional purpose of § 10707a cannot be reasonably fulfilled until it is adopted.[72]

The propriety and necessity of a productivity adjustment was recognized by the Congressionally created Railroad Accounting Principles Board (RAPB) when it adopted as one of its principles the need to incorporate changes in productivity, as well as changes in input prices, in the indices used for regulatory purposes, in order to ensure the accurate measurement of *cost* changes.[73] Congress has directed the Commission to promptly promulgate rules to implement the RAPB once established. I believe the Commission is certainly now obligated to act on the RAPB conclusions and to adopt a productivity adjustment to the RCAF.[74]

In my view, the Commission's initial determination should have included a productivity adjustment to further the Congressional purposes of § 10707a. Presently, it has also become a matter of adherence to the mandated directive under § 11163. Moreover, the Commission has failed to monitor the RCAF as initially intended, and until now, has not acted upon available RCAF methodologies. The failure to incorporate productivity adjustment into the RCAF has resulted in years of profit enhancing rate increases, immune from challenge. And contrary to the Congressional intent of the RCAF provision, primarily undertaken at the expense of captive shippers.

Pleased that the Commission is finally adopting a productivity adjustment, I also believe it must act to restate the current RCAF index to correct its prior error and to adjust calculation inaccuracies of the past. Failure to do so will effectively perpetuate these faults in prospective applications, which for legal and equitable reasons I find unacceptable. Restatement of the current RCAF to offset past costing inaccuracies in the

---

[70] Ex Parte No. 290 (Sub-No. 2), *Railroad Cost Recovery Procedures*, 3 I.C.C. 2d 60, 65 (1986) *aff'd sub nom, Alabama Power Co. v. I.C.C.* 852 F.2d 1361 (D.C. Cir. 1988).

[71] *See Western Coal, supra*, at 925.

[72] *Id.* at 926.

[73] *RAPB Final Report*, Volume 1, at 23, and Volume 2, at 89-92 (September 1, 1987).

[74] 49 USC § 11163, *see* 49 USC § 11161-11168.

implementation base for future RCAF's - and application to future movements - is not contrary to law, unreasonable, arbitrary or capricious.[75] I disagree with the view that restatement would be imprudent. Nor do I find the issue of whether existing rates are excessive to be relevant. The reasonableness of RCAF rates is not at issue - but accuracy of the cost calculation is. I am not convinced that a correct measure of a restated index cannot be readily developed, if not for this quarter's index, then for the next.

Finally, as the Commission initially intended, I believe the RCAF should be continually monitored to ensure achievement of and consistency with Congressional intentions. For just as the RCAF will now include a productivity adjustment, common sense and fairness dictate that this decision and methodology should not become cast in concrete.

It is ordered:

1. Revised rules are adopted as set forth above.
2. The quarterly Rail Cost Adjustment Factor will be adjusted for productivity as described herein beginning with the second quarter of 1989.
3. This proceeding is discontinued.
4. This decision is effective April 1, 1989.

By the Commission, Chairman Gradison, Vice Chairman Simmons, Commissioners Andre, Lamboley, and Phillips. Vice Chairman Simmons commented with a separate expression. Commissioner Phillips concurred in part and dissented in part with a separate expression. Commissioner Lamboley dissented in part with a separate expression. Chairman Gradison recused herself from participation in this proceeding.

---

[75] See Justice Scalia concurring in *Bowen v. Georgetown University Hosp.* 109 S. Ct. 468, 477-478 (1988).