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FREIGHT RAILROADS

Preliminary Observations on Rates, Competition, and Capacity Issues

Statement of JayEtta Z. Hecker, Director,
Physical Infrastructure Issues

June 21, 2006

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Highlights

Highlights of GAO-06-898T, a testimony before the Subcommittee on Surface Transportation and Merchant Marine, Committee on Commerce, Science, and Transportation, U.S. Senate

FREIGHT RAILROADS

Preliminary Observations on Rates, Competition, and Capacity Issues

Why GAO Did This Study

The Staggers Rail Act of 1980 largely deregulated the freight railroad industry, giving the railroads freedom to price their services according to market conditions and encouraging greater reliance on competition to set rates. The act recognized the need for railroads to use demand-based differential pricing in the deregulated environment and to recover costs by setting higher rates for shippers with fewer transportation alternatives. The act also recognized that some shippers might not have access to competitive alternatives and might be subject to unreasonably high rates. It established a threshold for rate relief and granted the Interstate Commerce Commission and the Surface Transportation Board (STB) the authority to develop a rate relief process for those "captive" shippers.

This testimony provides preliminary results on GAO's ongoing work and addresses (1) the changes that have occurred in the freight railroad industry since the enactment of the Staggers Rail Act, including changes in rail rates and competition in the industry, (2) the alternative approaches that have been proposed and could be considered to address remaining competition and captivity concerns, and (3) the projections for freight traffic demand over the next 15 to 25 years, the freight railroad industry's projected ability to meet that demand, and potential federal policy responses. To fulfill these objectives, GAO examined STB data, interviewed affected parties, and held an expert panel.

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To view the full product, including the scope and methodology, click on the link above. For more information, contact JayEtta Z. Hecker at (202) 512-2834 or heckerj@gao.gov.

What GAO Found

The changes that have occurred in the railroad industry since the enactment of the Staggers Rail Act are widely viewed as positive. Railroad industry financial health improved substantially and rates generally declined between 1985 and 2000, but increased slightly from 2001 through 2004. Concerns about competition and captivity remain because traffic is concentrated in fewer railroads and some shippers are paying significantly higher rates than others. It is difficult to precisely determine the number of shippers that are "captive" because proxy measures can overstate or understate captivity. However, GAO's preliminary analysis indicates that while captivity may be dropping, the share of potentially captive shippers that are paying the highest rates—those substantially above the threshold for rate relief—has increased.

A number of alternative approaches have been suggested by shipper groups and others to address remaining concerns about competition and captivity; however, any alternative approaches should be carefully considered. Two areas are particularly integral to further improvement. First, while STB has broad authority to investigate industry practices and has assessed competition—generally in railroad merger cases—there has been little assessment by any federal agency of the state of competition and of where specific areas of inadequate competition and the inappropriate exercise of market power might exist. Such an assessment would allow decisionmakers to identify areas where competition is lacking and to assess the need for and merits of targeted approaches to address this situation. These approaches include requiring reciprocal switching arrangements, which allow one railroad to switch railcars of another railroad, and/or terminal access agreements, which permit one railroad to use another's terminals. Second, a number of different approaches have been suggested that could make the rate relief process less expensive and more expeditious, and thus potentially more accessible, such as arbitration and increased use of simplified guidelines. Each of the proposed approaches has both advantages and drawbacks. Any alternative approach to address competition and captivity should be carefully considered to ensure that the approach will achieve the important balance set out in the Staggers Rail Act of allowing the railroads to earn adequate revenues while assuring protection for captive shippers from unreasonable rates.

Significant increases in freight traffic over the next 15 to 25 years are forecasted, and the railroad industry's ability to meet future demand is largely uncertain. Investments in rail projects can produce benefits for the public–for example, shifting truck freight traffic to railroads can reduce highway congestion. As a result, the federal and state governments have been increasingly participating in freight rail improvement projects—for example, Congress provided $100 million to the CREATE project in 2005 to improve the rail network in Chicago. Congress is likely to face additional decisions in the years ahead regarding federal policy toward the nation's freight railroad system. GAO would note, based on past work, that federal involvement should occur only where demonstrable public benefits exist, and where a mechanism is in place to appropriately allocate the cost of financing these benefits between the private and public sectors, and between national, state, and local interests.

Mr. Chairman and Members of the Committee:

We appreciate the opportunity to testify on our preliminary observations on the impact of deregulation of the freight railroad industry. As you know, over 25 years ago, Congress, with the leadership of this committee, transformed federal transportation policy. After almost 100 years of economic regulation, the railroad industry was in serious economic trouble in the 1970s, with rising costs, losses, and bankruptcies. In response, Congress passed the Railroad Revitalization and Regulatory Reform Act in 1976 and the Staggers Rail Act in 1980 that substantially deregulated the railroad industry. The 1980 act encouraged greater reliance on competition to set rates and gave railroads increased freedom to price their services according to market conditions, including using differential pricing—that is, recovering a greater proportion of their costs from rates charged to shippers with a greater dependency on rail transportation. Furthermore, the act anticipated that some shippers might not have competitive alternatives, and gave the Interstate Commerce Commission (ICC), and later the Surface Transportation Board (STB), the authority to establish a rate relief process so that shippers could obtain relief from unreasonably high rates.

At the request of several members of this committee, we have ongoing work providing a retrospective on the performance of the rail industry since the Staggers Rail Act. My comments today focus on (1) the changes that have occurred in the freight railroad industry since the enactment of the Staggers Rail Act, including changes in rail rates and competition in the industry, (2) what alternative approaches have been proposed and could be considered to address remaining competition and captivity concerns, and (3) the projections for freight traffic demand over the next 15 to 25 years, the freight railroad industry's projected ability to meet that demand, and potential federal policy responses.

To fulfill our objectives, we examined STB's Carload Waybill Sample from 1985-2004 (the latest data available at the time of our review). This document includes data on rail rates, tonnage, federal regulation, and other statistics but disguises some revenues to avoid disclosing confidential business information to the public. We obtained a version of the Carload Waybill Sample that did not disguise revenues. We also interviewed, and reviewed information from representatives of each Class

I railroad in North America,[1] shipper groups, economists, and experts in the rail industry, and held an expert panel consisting of individuals with expertise in the freight railroad industry and the economics of transportation deregulation, interviewed shipper groups, railroads, and economists, and reviewed pending legislation and literature. We also reviewed forecasts of future freight rail demand and capacity, including synthesizing forecasting, and transportation planning literature, and interviewed federal and state transportation officials, financial market analysts, national association representatives, and transportation experts. While we are aware that service issues such as on time performance and the supply of railcars by the railroads are of concern to many people here today, service issues are not included in the preliminary observations I will present today. Instead, we will leave comments about service to other individuals testifying. My comments today are based on our past body of work on the freight rail industry as well as our ongoing work, which we are conducting in accordance with generally accepted government auditing standards (see app. I for a list of our past reports on the freight railroad industry).

In summary:

- The changes that have occurred in the railroad industry since the enactment of the Staggers Rail Act are widely viewed as positive, as the financial health of the industry has improved and most rates have declined since 1985, although concerns about competition and captivity in the industry remain. The freight railroad industry's financial health improved substantially as railroads cut costs through productivity improvements, streamlined and "right-sized" their rail networks, implemented new technologies, and expanded business into new markets such as the intermodal market, which consists of containers and trailers that can be carried on ships, trucks, or rail. Between 1985 and 2000, rates generally declined, but have increased slightly from 2001 through 2004.[2] Several factors could have contributed to recent rate increases, including continuing consolidation in the industry and broad changes in the domestic and world economy and emergence of a capacity constrained environment, where demand exceeds supply. Concerns about competition and captivity in the industry remain because traffic is concentrated in

[1]As of 2004, a Class I railroad is any railroad with an operating revenue above $277.7 million.

[2]While rate data are not available for 2005 and 2006, shippers, railroads, and financial analysts we spoke with told us that rates have generally increased during those years.

fewer railroads and, although rates have declined for most shippers since the enactment of the Staggers Rail Act, rates have not declined uniformly and some shippers are paying significantly higher rates than others. It is difficult to precisely determine the number of shippers who are "captive" to one railroad because proxy measures that provide the best indication can overstate or understate captivity. However, our preliminary analysis indicates that while the extent of potential captivity may be dropping, the share of potentially captive shippers who are paying the highest rates—those substantially above the threshold for rate relief—has increased. Whether this increase reflects an exercise or possible abuse of market power or is simply a reflection of rational economic practices by the railroads in an environment of excess demand remains uncertain.

- A number of alternative approaches have been suggested by shipper groups, economists, and other experts in the rail industry to address remaining concerns about competition and captivity—however, any alternative approaches should be carefully considered. While a number of approaches have been suggested, I would, based on our preliminary work, like to focus on two areas that are particularly integral to further improvement. First, while STB has broad legislative authority to investigate industry practices and has assessed competition practices—generally in reviewing railroad merger cases—there has been little assessment of competition nationally by any federal agency of the state of competition nationally and where specific areas of inadequate competition and the inappropriate exercise of market power might exist. Given widespread disagreement about the adequacy of competition in the industry and the fact that proxy measures can understate or overstate captivity, such an assessment would allow decisionmakers to identify areas where competition is lacking and to assess the need for and merits of targeted approaches to address it. These approaches include requiring reciprocal switching arrangements, which allow one railroad to switch railcars of another railroad, and/or terminal access agreements, which permits one railroad to use another's terminals. Second, although the Staggers Rail Act recognized that some shippers might not have access to competitive alternatives and might be subject to unreasonably high rates, there is widespread agreement that the rate relief process does not provide expeditious handling and resolution of complaints, is expensive, time-consuming, and complex, and that, as a result, it is largely inaccessible to most shippers. A number of different approaches have been suggested by shipper organizations and others that could make the process less expensive and more expeditious, and thus more accessible, such as arbitration and increased use of simplified guidelines. Each of the proposed approaches has both advantages and drawbacks. Any alternative approaches to address competition and captivity should be carefully

considered to ensure that the approach will achieve the important balance set out in the Staggers Rail Act of allowing the railroads to earn adequate revenues and invest in its infrastructure while assuring protection for captive shippers from unreasonable rates.

- Significant increases in freight traffic over the next 15 to 25 years are forecasted, although many factors can affect the accuracy of these forecasts, and the railroad industry's ability to meet future demand is largely uncertain. Although railroads have reported significant increased investment and have told us that they plan to continue making infrastructure investments, they also expressed uncertainty as to their ability to keep pace with some of the higher projections of future freight rail demand. Besides securing benefits for private rail networks, investments in rail projects can produce benefits for the public—for example, shifting truck freight traffic to railroads can reduce highway congestion. As a result, the federal and state governments have been increasingly participating in freight rail improvement projects—for example, a number of states are involved in joint projects with the railroads and, in 1997, the U.S. Department of Transportation provided a $400 million loan to the Alameda Corridor Transportation Authority for the Alameda Corridor project to consolidate rail and other freight traveling to and from the ports of Los Angeles and Long Beach. In addition, in 2005, Congress authorized $100 million for the Chicago CREATE project to improve the rail network in Chicago. Congress is likely to face additional decisions in the years ahead regarding federal policy toward the nation's freight railroad system. While our work continues, we would note, based on our past work, that federal involvement should only occur where demonstrable public benefits exist, and a where a mechanism is in place to appropriately allocate the cost of financing these benefits between the public and private sectors, and between national, state, and local interests.

Background

Freight rail is an important component of our nation's economy. Approximately 42 percent of all inter-city freight in the United States, measured in ton miles, moves on rail lines. Freight rail is particularly important to producers and users of certain commodities. For example, about 70 percent of automobiles manufactured domestically, about 70 percent of coal delivered to power plants, and about 32 percent of grain moves on freight rail.

Beginning in 1887, the Interstate Commerce Commission (ICC) regulated almost all of the rates that railroads charged shippers. Congress passed the Railroad Revitalization and Regulatory Reform Act in 1976 and the Staggers Rail Act in 1980, and these acts greatly increased the reliance on

competition in the railroad industry. Specifically, these acts allowed railroads and shippers to enter into confidential contracts which set rates and prohibited the ICC from regulating rates where railroads had effective competition or if the rates had been negotiated between the railroad and the shipper. The ICC Termination Act of 1995 abolished the ICC and transferred its regulatory functions to STB. Taken together, these acts anchor the federal government's role in the freight rail industry and have established numerous goals for regulating the industry, including the following:

- to allow, to the maximum extent possible, competition and demand for services to establish reasonable rates for transportation by rail.
- to minimize the need for federal regulatory control over the rail transportation system and to require fair and expeditious regulatory decisions when regulation is required.
- to promote a safe and efficient rail transportation system by allowing rail carriers to earn adequate revenues, as determined by STB.
- to ensure effective competition among rail carriers and with other modes to meet the needs of the public.
- to maintain reasonable rates where there is an absence of effective competition and where rail rates provide revenues which exceed the amount necessary to maintain the rail system and to attract capital.
- to prohibit predatory pricing and practices, to avoid undue concentrations of market power; and
- to provide for the expeditious handling and resolution of all proceedings.

Two important components of the current regulatory structure are the concepts of revenue adequacy and demand-based differential pricing. Congress established the concept of revenue adequacy as an indicator of the financial health of the industry. STB determines the revenue adequacy of a railroad by comparing the railroad's return on investment with the industrywide cost of capital. If a railroad's return on investment is greater than the industry-wide cost of capital, STB determines that railroad to be revenue adequate. Historically, the ICC and STB have rarely found railroads to be revenue adequate, which many observers relate to characteristics of the industry's cost structure. Railroads incur large fixed costs to build and operate networks that jointly serve many different

shippers. While some fixed costs can be attributed to serving particular shippers, and some costs vary with particular movements, other costs are not attributable to particular shippers or movements. Nonetheless, a railroad must recover these costs if the railroad is to continue to provide service over the long run, and, to the extent that railroads have not been revenue adequate, this may indicate that they are not fully recovering these costs.

Consequently, the Staggers Rail Act recognized the need for railroads to use demand-based differential pricing in the deregulated environment. Demand-based differential pricing in theory permits a railroad to recover their joint and common costs across its entire traffic base by setting higher rates for traffic with fewer transportation alternatives than for traffic with more alternatives. This means that a railroad might incur similar incremental costs in providing service to two different shippers that ship similar tonnages in similar car types traveling over similar distances, but that the railroad may charge quite different rates. In this way, the railroad recovers a greater portion of its joint and common costs from the shipper that is more dependent on railroad transportation, but, to the extent that the railroad is able to offer lower rates to the shipper with more transportation alternatives, the other shipper makes a contribution toward those costs.

The Staggers Rail Act further required that the railroads' need to differentially price its services be balanced with the rights of shippers to be free from, and to seek redress from unreasonable rates. Railroads incur variable costs—that is the costs of moving particular shipments—in providing service. The Staggers Rail Act stated that any rate that was found to be above 180 percent of a railroad's variable cost for a particular shipment was potentially an unreasonable rate and granted the ICC, and later the STB, the authority to establish a rate relief process. In response, the ICC established two criteria for allowing a rail rate case. First, as stated in law, the rate had to be above 180 percent of the revenue-to-variable-cost (R/VC) ratio. Second, the shipper had to demonstrate that it had no other reasonable transportation alternative. Such a shipper is referred to as a "captive shipper."

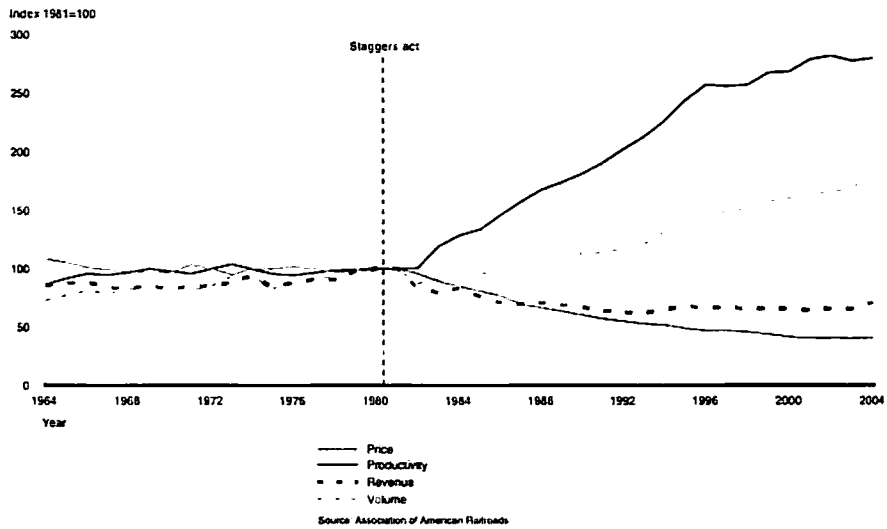
Railroad Industry Increasingly Healthy and Rates Down Since Enactment of the Staggers Rail Act, but Competition and Captivity Concerns Remain

The changes that have occurred in the railroad industry since the enactment of the Staggers Rail Act are widely viewed as positive. The railroad industry's financial health improved substantially as it cut costs, boosted productivity, and "right-sized" its networks. Rates generally declined between 1985 and 2000 but increased slightly from 2001 through 2004. Concerns about competition and captivity in the industry remain because traffic is concentrated in fewer railroads and, although rates have declined for most shippers, some shippers are paying significantly higher rates than others. While it is difficult to precisely determine the number of shippers who are "captive" to one railroad, our preliminary analysis indicates that while the extent of potential captivity may be dropping, the share of potentially captive shippers who are paying the highest rates—those substantially above the threshold for rate relief—has increased.

Railroad Industry Financial Health Improved Substantially

There is widespread consensus that the freight rail industry has benefited from the Staggers Rail Act. Specifically, various measures indicate an increasingly strong freight railroad industry. Freight railroads' improved financial health is illustrated by increases in productivity, volume of shipments, and stock prices. Freight railroads have also cut costs by streamlining their workforce and "right-sizing" their rail network, through which the railroads have reduced track, equipment, and facilities to more closely match demand. These measures are shown in figure 1.

Figure 1: Railroads' Financial Performance: 1964-2004



Freight railroads have also expanded their business into new markets – such as the intermodal market - and implemented new technologies, including larger cars, and are currently developing new scheduling and train control systems. Some observers believe that the competition faced by railroads from other modes of transportation has created incentives for innovative practices, and that the ability to enter into confidential contracts with shippers has permitted railroads to make specific investments and to develop service arrangements tailored to the requirements of different shippers.

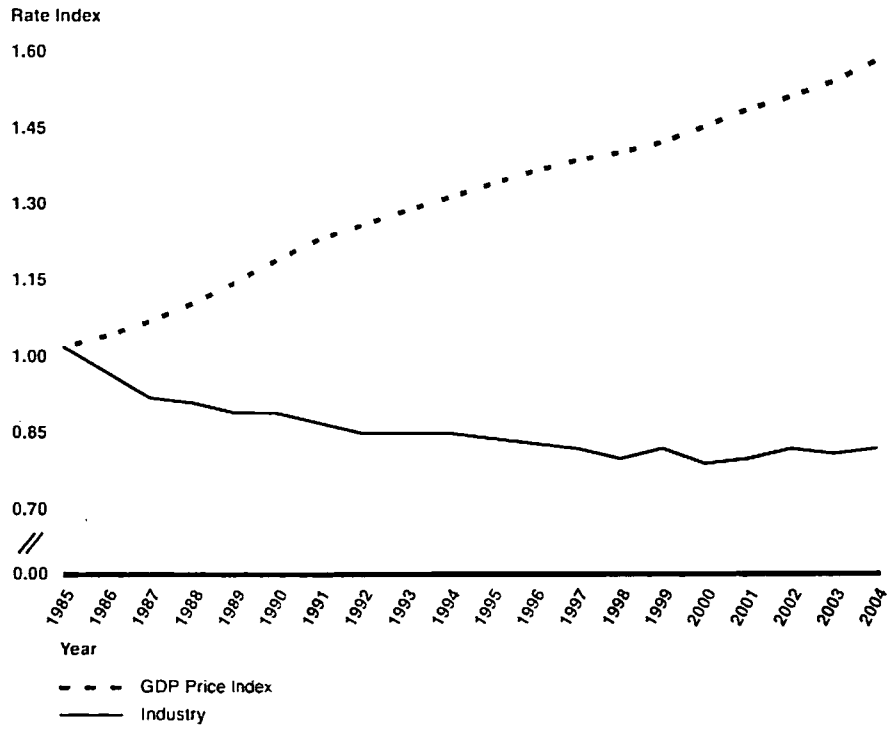
Rates Declined From 1985 through 2000 and Rose Slightly from 2001 through 2004

Rail rates across the industry have generally declined since enactment of the Staggers Rail Act. Because changes in traffic patterns over time (for example, hauls over longer distance) can result in increases in lower priced traffic and a decrease in average revenue per ton mile, it can present misleading rate trends. Therefore, we developed a rail rate index[3] to examine trends in rail rates over the 1985-2004 period. These indexes account for changes in traffic patterns over time which could affect revenue statistics but do not account for inflation. As a result, we have also included the price index for the gross domestic product.

Although there has been a slight upturn in rates from 2001 through 2004, the industry continues to experience rates that are generally lower than they were in 1985. During this time some costs have also been passed on to shippers, such as having shippers provide equipment. There was a steep decline in rates from 1985 to 1987 when rates dropped by 10 percent. Rates continued to decline, although not as steeply, through 1998. Rates increased in 1999, then dropped again in 2000. In 2001 and 2002 rates rose again. Rates were nearly flat in 2003 and 2004, finishing approximately 3 percent above rates in 2000, but 20 percent below 1985 rates. This is shown in figure 2.

[3] We constructed rate indexes to examine trends in rail rates over the 1985 to 2004 period. These indexes define traffic patterns for a given commodity in terms of census region to census region flows of that commodity, and we calculate the average revenue per ton mile for each of these traffic flows. The index is calculated as the weighted average of these traffic flows in each year, expressed as a percentage of the value for 1985, where the weights reflect the traffic patterns in 2004. By fixing the weights as of one period of time, we attempt to measure pure price changes rather than calculating the average revenue per ton mile in each year. Over time, changes in traffic patterns could result in a substitution of lower priced traffic for higher priced traffic, or vice versa, so that a decrease in average revenue per ton mile might partly reflect this change in traffic patterns. The rate index for the overall industry was defined similarly, except that the traffic pattern bundle was defined in terms broad commodity, census region of origin, and mileage block categories. For comparison purposes, we also present the price index for gross domestic product over this period.

Figure 2: Industry Rail Rates 1985-2004



Source: GAO analysis of STB data.

These data include rates through 2004. According to freight railroad officials, shippers, and financial analysts, since 2004 rates have continued to increase as the demand for freight rail service has increased, rail capacity has become more limited, and as a result, freight railroad companies have gained increased pricing power.

A number of factors may have contributed to recent rate increases. Ongoing industry and economic changes have influenced how railroads have set their rates. Since the Staggers Rail Act was enacted, the railroad industry and the economic environment in which it operates have changed considerably. Not only has the rail industry continued to consolidate, potentially increasing market power by the largest railroads, but after years of reducing the number of its employees and shedding track capacity, the industry is increasingly operating in a capacity-constrained environment where demand for their services exceeds their capacity. In addition, the industry has more recently increased employment and invested in increased capacity in key traffic corridors. Additionally,

changes in broader domestic and world economic conditions have led to changes in the mix and profitability of traffic carried by railroads.

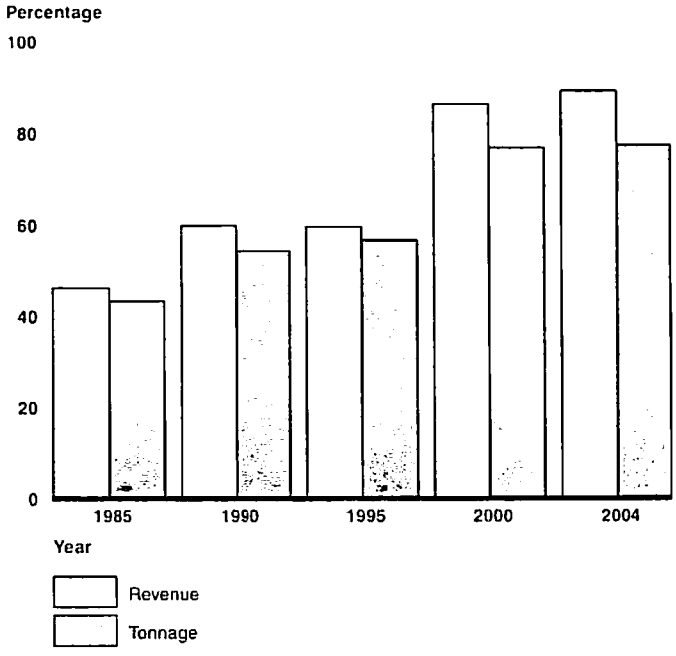
Competition and Captivity Concerns Remain

Concerns about competition and captivity in the railroad industry remain because traffic is concentrated in fewer railroads and even though rates have declined for most shippers since the enactment of the Staggers Rail Act, some shippers are paying significantly higher rates than other shippers—a reflection of differential pricing. There is significant disagreement on the state of competition in the rail industry. In 1976, there were 63 Class I railroads operating in the United States compared with 7 Class I railroads in 2004.[4] As figure 3 shows, 4 of these Class I railroads accounted for over 89 percent of the industry's revenues in 2004. While some experts view this concentration as a sign that the industry has become less competitive over time, others believe that the railroad mergers and acquisitions actually increased competition in the rail industry because STB placed conditions on the mergers intended to maintain competition. These experts also point to the hundreds of short line railroads[5] that have come into being since the enactment of the Staggers Rail Act, as well as other increased competitive options for shippers from other modes such as trucks and barges.

[4]In addition to consolidation, which is the main reason for the reduction in the number of Class I railroads, other reasons were carrier bankruptcies and a 1992 ICC change in the threshold for qualifying as a Class I railroad (from $5 million in annual revenue in 1976 to $250 million in 1992).

[5]A short line railroad is an independent railroad company that operates over a short distance.

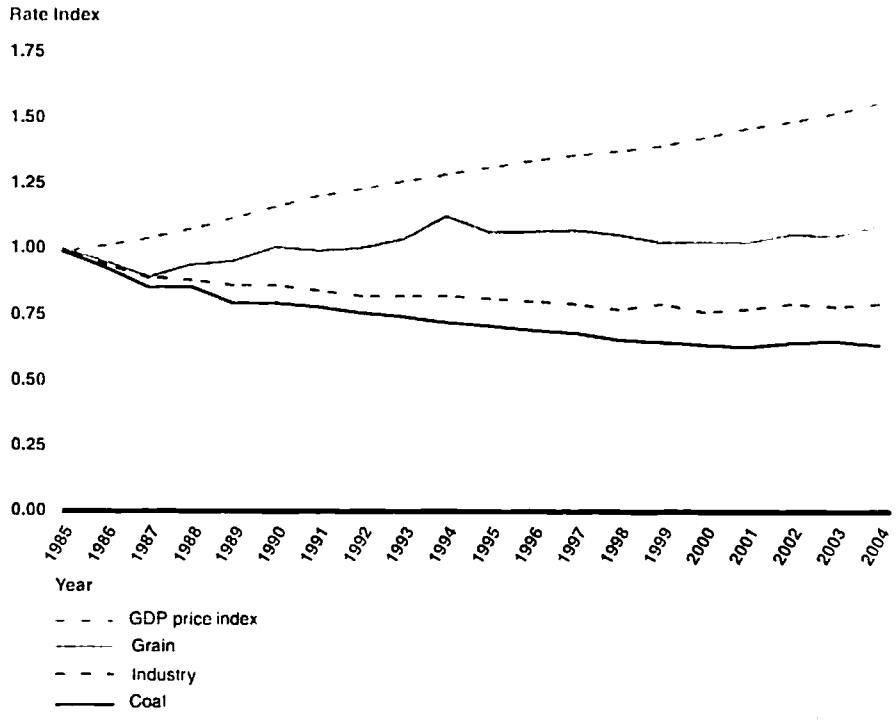
Figure 3: Railroad Market Concentration, 1985-2004



Source: GAO analysis of STB data.

According to our preliminary analysis, some commodities and shippers are paying significantly higher rates than other shippers. This can be seen in rates charged to commodities and at specific routes. Figure 4 compares commodity rates for coal and grain prices from 1985 through 2004 using our rail rate index. As figure 4 shows, all rate changes were below the rate of inflation and thus all rates declined in real terms. However during that period, coal rates dropped even more sharply than industrywide rates, declining 35 percent. Grain rates initially declined from 1985 to 1987, but then diverged from industry trends and increased, resulting in a net 9 percent nominal increase by 2004.

Figure 4: Industry, Coal, and Grain Rate Changes, 1985-2004



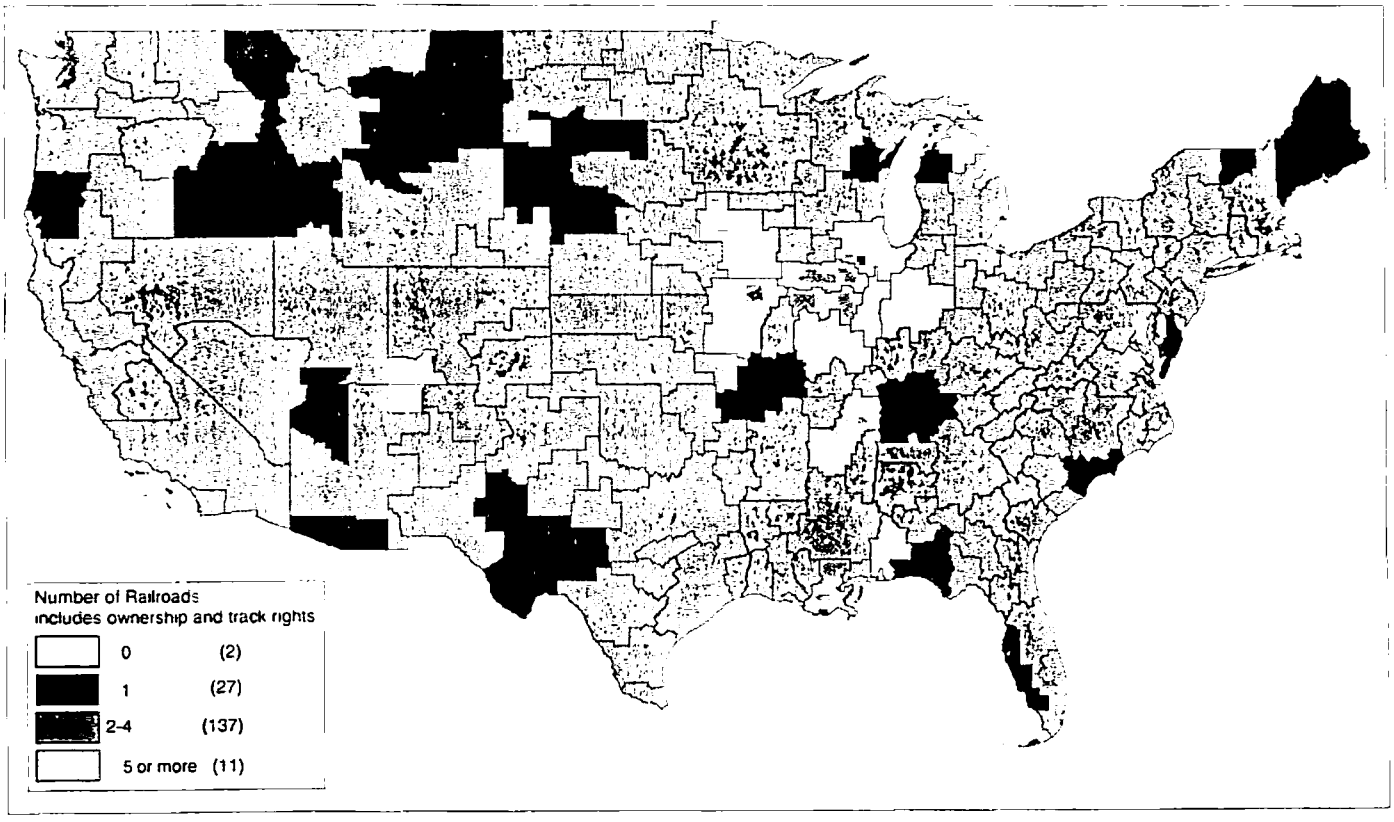
Source: GAO analysis of STE data.

It is difficult to precisely determine the number of shippers who are "captive" to one railroad because proxy measures that provide the best indication can overstate or understate captivity. One way of determining potential captivity in our preliminary analysis was to identify which Bureau of Economic Analysis (BEA) economic areas were served by only one Class I railroad. [6] In 2004, 27 of the 177 BEA economic areas were served by only one Class I railroad. As shown in figure 5, these areas include parts of Montana, North Dakota, New Mexico, Maine, and other states. We also examined specific origin and destination pairs and found that in 2004, origin and destination routes with access to only one Class I railroad carried 12 percent of industry revenue. This represents a decline from 1994, when 22 percent of industry revenue moved on routes served

[6]Economic areas are those areas defined by the Bureau of Economic Analysis which define the relevant regional economic markets in the U.S.

by one Class I railroad. This decline suggests that more railroad traffic is traveling on routes with access to more than one Class I railroad.

Figure 5: Number of Class I Railroads Serving Economic Areas



Source: GAO analysis of BEA and GIS data.

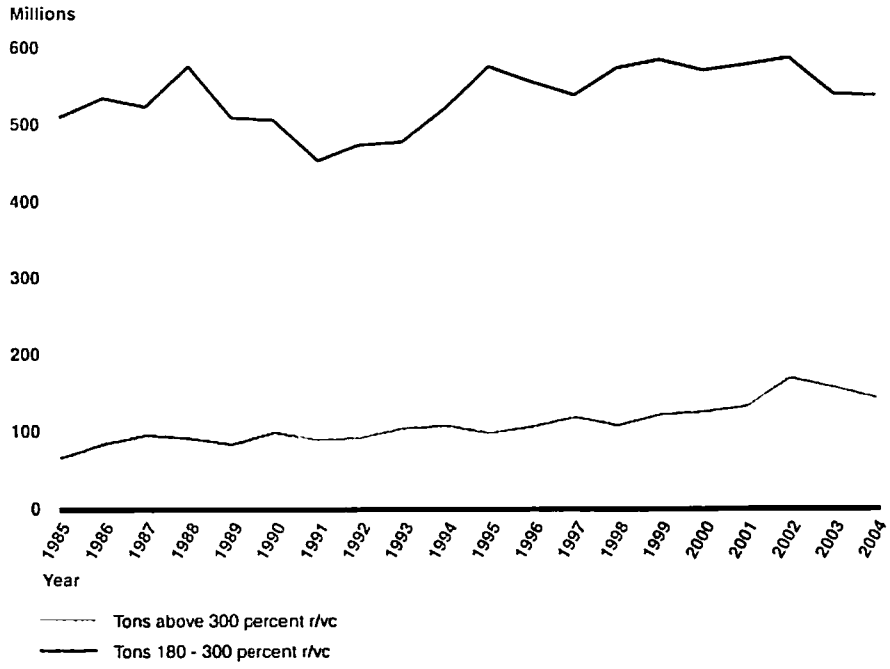
While examining BEA areas provides a proxy measure for captivity, a number of factors may understate or overstate whether shippers are actually captive. The first two of these factors may work to understate the extent of captivity among shippers. First, routes originating within economic areas served by multiple Class I railroads may still be captive if only one Class I railroad serves their destination, meaning the shipper can use only that one railroad for that particular route. Second, some BEA areas are quite large, so a shipper within the area may have access to only one railroad even though there are two or more railroads within the broader area. Two additional limitations may work to overstate the number of locations captive to one railroad. First, this analysis accounts

for Class I railroads only and does not account for competitive rail options that might be offered by Class II or III railroads such as the Guilford Rail System, which operates in northern New England. Second, this analysis considers only competition among rail carriers and does not examine competition between rail and other transportation modes such as trucks and barges.

To determine potential captivity during our preliminary analysis, we applied another proxy measure—the definition of potentially captive traffic used in the Staggers Rail Act. The act defines potentially captive traffic as any that pays over 180 percent of the revenue-to-variable cost (R/VC) ratio. As a percentage of all rail traffic, the amount of potentially captive traffic traveling over 180 percent R/VC and the revenue generated from that traffic have both declined since 1985.

However, our preliminary analysis indicates the share of potentially captive shippers who are paying the highest rates—those substantially above the threshold for rate relief—has increased. While total tons have increased significantly (from about 1.37 billion in 1985 to about 2.14 billion in 2004), figure 6 shows that tons traveling between 180 and 300 percent R/VC but have remained fairly constant—an increase from about 497 million tons in 1985 to about 527 million tons in 2004. However tons traveling above 300 percent R/VC have more than doubled—from about 53 million tons in 1985 to over 130 million tons in 2004.

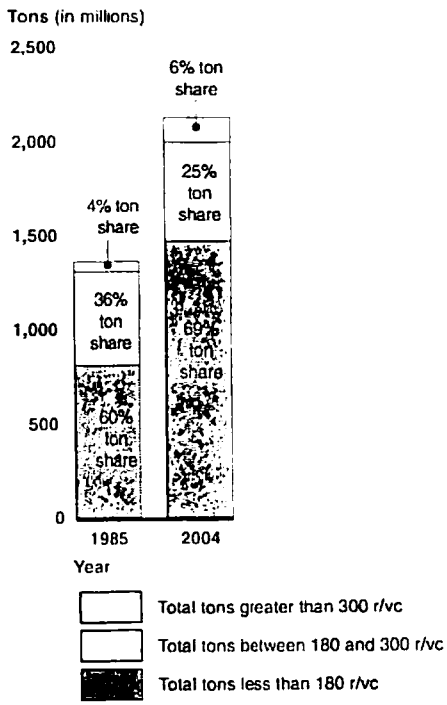
Figure 6: Tons Traveling Over 180 Percent R/VC: 1985-2004



Source: GAO analysis of STB data.

This pattern can also be seen in the share of traffic traveling above and below 180 percent R/VC between 1985 and 2004. As figure 7 illustrates, the percent of all traffic traveling between 180 and 300 percent R/VC decreased from 36 percent in 1985 to 25 percent in 2004. In contrast, the percent of all traffic traveling above 300 percent R/VC increased from 4 percent in 1985 to 6 percent in 2004.

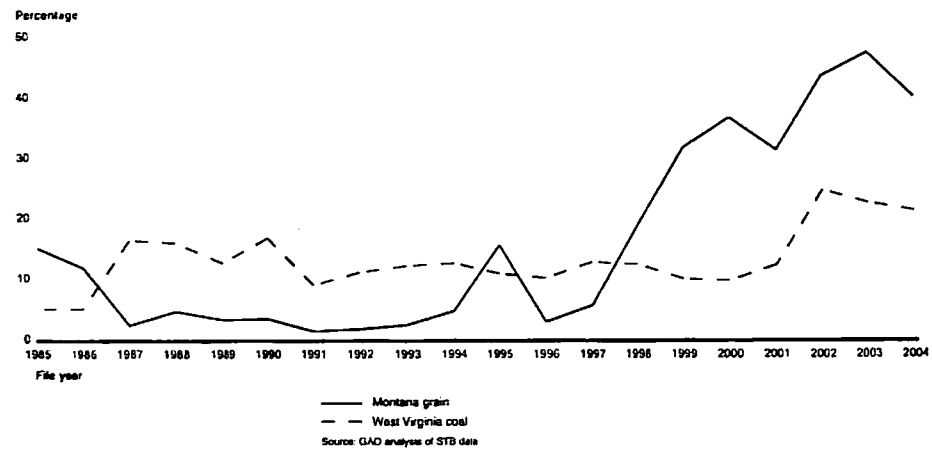
Figure 7: Percent of Traffic by R/VC, 1985 and 2004



Source: GAO analysis of STB data.

Our preliminary analysis indicates that this overall change in traffic traveling over 300 percent R/VC can be seen in certain states and commodities. For example, 39 percent of grain originating in Montana and 20 percent of coal in West Virginia traveled over 300 percent R/VC in 2004. As shown in figure 8, this represents a significant increase from 1985, when 14 percent of grain in Montana and 4 percent of coal in West Virginia traveled over 300 percent R/VC.

Figure 8: Percent of Tonnage Traveling Over 300 Percent R/VC, 1985-2004



As with BEA areas, examining R/VC levels as a proxy measure for captivity can also understate or overstate captivity. For example, it is possible for the R/VC ratio to increase while the rate paid by a shipper is declining. Assume that in Year 1, a shipper is paying a rate of $20 and the railroad's variable cost is $12. The R/VC ratio—a division of the rate and the variable cost—would be 167 percent. If in Year 2 the variable costs decline by $2.00 from $12 to $10, and the railroad passes this cost savings directly on the shipper in the form of a reduced rate, the shipper would pay $18 instead of $20. However, as shown in table 1, because both revenue and variable cost decline, the R/VC ratio increases to 180 percent.

Table 1: Possible Changes in R/VC Ratios

Year	Revenue collected	Variable costs	R/VC
Year 1	$20.00	$12.00	167%
Year 2	$18.00	$10.00	180%

Source: GAO.

Although proxy measures have inherent limitations, they can serve as useful indicators of trends in railroad pricing, how the railroads may be exercising their market power to set rates, and where competition and captivity concerns remain. Whether these trends reflect an exercise or possible abuse of market power or is simply a reflection of rational economic practices by the railroads in an environment of excess demand remains uncertain.

Proposed Alternative Approaches To Address Remaining Competition and Captivity Concerns Should Be Carefully Considered

A number of alternative approaches have been suggested by shipper groups, economists, and other experts in the rail industry to address remaining concerns about competition and captivity—however, any alternative approaches should be carefully considered. Two areas—an assessment of competition and addressing problems with the rate relief process—are particularly integral to further improvement. Any alternative approaches to address competition and captivity should be carefully considered to ensure that the approach achieves the important balance set out in the Staggers Act of allowing the railroads to earn adequate revenues and invest in its infrastructure while assuring protection for captive shippers from unreasonable rates.

Assessment of Competition Has Been Limited

Our preliminary work shows there has been little assessment by the federal government of where areas of inadequate competition might exist or how changes in industry concentration might be resulting in the inappropriate exercise of market power. Although the STB has broad legislative authority to investigate industry practices, it has generally limited its reviews of competition to merger cases. STB is responsible for reviewing railroad merger proposals, approving those that it finds consistent with the public interest, and ensuring that any potential merger-related harm to competition is mitigated. STB's mitigation efforts have focused on preserving competition, such as granting the authority for one railroad to operate over the tracks of another railroad (called trackage rights). As we reported in 2001, STB found little competition-related harm during its oversight of recent mergers. However, rail mergers can have different effects on rail rates. For example, using an econometric approach that isolated the specific effects of the Union Pacific/Southern Pacific merger on rail rates for certain commodities in two geographic areas—Reno, Nevada, and Salt Lake City, Utah—we found that the merger reduced rates for four of six commodities, placed upward pressure on rates for one commodity, and left rates relatively unchanged for one commodity. In analyzing rail rates as part of merger oversight, STB examines the merger oversight record, which generally focuses on the overall direction and magnitude of rate changes, rather than specific commodities or geographic areas. According to STB officials, in general, the records have not permitted STB to reliably and precisely isolate the effects of mergers on rates from the effects of other factors (such as the price of diesel fuel).

STB is not unaware of concerns about competition. In addition to reviewing competition in terms of mergers, STB has also instituted proceedings to review rail access and competition issues. For example, in

April 1998, STB commenced a review at the request of Congress to review access and competition issues in the rail industry. In an April 1998 decision on these issues, STB agreed to consider revising its competitive access rules. However, in its December 1998 report to Congress, STB declined to take further action on this issue because it had adopted new rules allowing shippers temporary access to alternative routing options during periods of poor service. In addition, STB observed that the competitive access issue raises basic policy questions that are more appropriately resolved by Congress. Furthermore, in a December 1998 ruling on a Houston/Gulf Coast oversight proceeding, STB recognized the possibility that opening up access could fundamentally change the nation's rail system, possibly benefiting some shippers with high-volume traffic while reducing investment elsewhere in the system and ultimately reducing or eliminating service for small, lower-volume shippers in rural areas. Finally, STB adopted new regulations for rail mergers in 2001. These new regulations require the applicant to demonstrate that the merger would enhance, not just preserve, competition.

Given the disagreement about the adequacy of competition in the industry and the fact that proxy measures can understate or overstate captivity, an assessment of competition and how changes in industry concentration might be resulting in the inappropriate exercise of market power would allow decisionmakers to identify areas where competition is lacking and to assess the need for and merits of targeted approaches to address it. The targeted approaches most frequently proposed by shipper groups and others include reciprocal switching arrangements, which allow one railroad to switch railcars of another railroad, and terminal access agreements, which permits one railroad to use another's terminals. We will discuss the potential costs and benefits of these approaches further in our final report. Use of these approaches should be carefully considered to ensure that the approach achieves the important goals set out in the Staggers Rail Act. For example, if these approaches expand competitive options and decrease the number of captive shippers, which could decrease the need for federal regulation and the need for a rate relief process. On the other hand these approaches could also reduce rail rates and thus railroad revenues and affect the ability of the railroads to earn adequate revenues and invest in its infrastructure.

Rate Relief Process Is Largely Inaccessible, but Different Approaches Should Be Carefully Considered

The principal vehicle through which shippers seek relief from unreasonable rates is the rate relief process. The Staggers Rail Act recognized that some shippers may not have access to competitive alternatives and may therefore be subject to unreasonably high rates. For these shippers, the act gave ICC, and later STB, the authority to establish a rate relief process so that shippers could obtain relief from unreasonably high rates, as well as more general powers to monitor the railroad industry. Under the standard rate relief process, the Board requires a shipper to demonstrate how much an optimally efficient railroad would need to charge that shipper. Therefore, the shipper must construct a hypothetical, perfectly efficient railroad that would replace its current carrier.

There is widespread agreement the rate relief process is inaccessible to most shippers and does not provide expeditious handling and resolution of complaints. The process is expensive, time consuming and complex, and, as a result, several shipper's organizations told us that it is unlikely they would ever file a rate case. Since 2001, only 10 cases have been filed, and these cases took between 2.6 and 3.6 years—an average of 3.3 years per case—to complete. In addition, while STB does not keep records of the cost of a rate case, shippers we interviewed agreed that the process can cost approximately $3 million per litigant. As a result, shippers told us that, for them to bring a case, the case would need to involve several million dollars so that it was worthwhile to spend $3 million on a case that they could possibly lose. The process is complex because the legal procedures requires that (1) the shipper construct a model of a hypothetical, perfectly efficient railroad and (2) the railroad and shipper have opportunities to present their facts and viewpoints as well to present new evidence.

Congress and STB have recognized the problems with the rate relief process and taken actions to address them. First, Congress required STB to develop simplified guidelines. STB developed guidelines to streamline the process when the value of traffic at stake did not make it feasible to incur the costs of conducting a full rate case. Under these simplified guidelines, shippers do not have to construct a hypothetical railroad and can instead rely on industry averages to try to prove that their rate is unreasonable. Although these simplified guidelines have been in place since 1997, the process set out by the guidelines has not been used. Second, STB worked to improve the standard rate relief process. Specifically, STB now holds oral arguments to begin cases and, according to STB officials, these oral arguments help to clarify disagreements

without adding any time to the process. In addition, STB has added staff to process cases.

According to shippers and railroad officials we spoke with, the simplified guidelines are confusing regarding who is eligible to use the process and how it would work. In addition, several shippers' organizations told us that shippers are concerned about using the simplified guidelines because since they have never been used, they believe it will be challenged in court and result in lengthy litigation. STB officials told us that they – not the shippers – would be responsible for defending the guidelines in court. STB officials also said that, if a shipper won a small rate case, STB could order reparations to the shipper before the case was appealed to the courts.

During our preliminary work we identified a number of different approaches that have been suggested by shipper organizations and others that could make the rate relief process less expensive and more expeditious, and therefore potentially more accessible. Each of the proposed approaches has both advantages and drawbacks. These approaches included the following:

- Increased use of arbitration: Under arbitration, the two parties would present their case before an arbitrator, who would then determine the rate. This approach would replace the shipper's requirement to create a hypothetical railroad. Proponents of this system argue that it provides both the railroads and the shippers with an incentive to suggest a reasonable rate (because otherwise the arbitrator could select the other's offer) and that the threat of arbitration can induce the parties to resolve their own problems and limit the need for federal regulation. However, critics of this approach suggest that arbitration decisions may not be based on economic principles such as the revenue and cost structure of the railroad and that arbitrators may not be knowledgeable about the railroad industry.

- Increased use of simplified guidelines: The simplified guidelines use standard industry average figures for revenue data instead of requiring the shipper to create a hypothetical railroad. This approach would reduce the time and complexity of the process; however, it may not provide as accurate and precise a measure as the current process. However, as noted above, the use of STB's simplified guidelines has not been fully reviewed by the courts, and many railroad industry experts believe the first use of the guidelines will result in lengthy litigation.

- Increased use of alternative cost approaches: For example, STB could use the long-run incremental cost approach to evaluate and decide rate cases. This process, which is used for regulating pipelines, bases rates on the actual incremental cost of moving a particular shipment, plus a reasonable rate of return. This approach allows for a quick, standard method for setting prices, but does not take into account the need for differential pricing or the railroad's need to charge higher rates in order to become revenue adequate. Structuring rate regulation around actual costs can also create potential disincentives for the regulated entity to control its costs.

Again, these alternative approaches should be carefully considered to ensure that the approach achieves the important balance set out in the Staggers Act. A significant factor in evaluating each of these alternatives is the revenue adequacy of the railroads. The Staggers Rail Act established revenue adequacy as a goal for the industry and allowed the railroads to use differential pricing to increase their revenues. The act further gave the ICC (and later STB) the authority to determine the revenue adequacy of the railroads each year. While the specific method for determining revenue adequacy has been controversial, the overall trend in revenue adequacy may be more important. In its last report in 2004, STB determined that one railroad is revenue adequate and that others are approaching revenue adequacy. While it is too early to determine that the industry as a whole is achieving revenue adequacy, this is a significant shift in the rail industry because for decades after enactment of the Staggers Rail Act, the railroads were all considered revenue inadequate.

Different approaches to addressing remaining competition and captivity concerns will likely recognize to some degree the railroads' continued need to more consistently recover their cost of capital and become revenue adequate. The railroads need additional revenue for infrastructure investment to keep pace with increased demand. On the other hand, different approaches also raise the question as to what degree the railroads should continue to rely on obtaining significantly higher prices from those with greater reliance on rail transportation in a revenue adequate environment where total railroad revenues are increasingly sufficient to meet the railroad's investment needs.

Significant Growth in Freight Rail Traffic Demand Is Forecast But Continued Capacity Building Is Uncertain

The demand for freight and freight rail is forecast to increase significantly in the future, although many factors can affect the accuracy of these forecasts. Freight markets are volatile and unpredictable and thus freight demand forecasts may prove to be off the mark. For example, much freight demand is determined by trade that originates outside the United States. Many of the data used to develop these freight demand forecasts are proprietary and a result, we could not assess the validity or reasonableness of the assumptions used to develop the predictions. However, forecasts of freight and freight rail demand are useful as one possible scenario of the future. As the Congressional Budget Office (CBO) observed in a January 2006 report, forecasts of future demand can be viewed as more illustrative than quantitatively accurate.[7]

Major freight railroads have reported that they expect to invest about $8 billion in infrastructure during 2006—a 21 percent increase over 2005—and have told us that they plan to continue making infrastructure investments.[8] Although railroads are sufficiently profitable to be investing at record levels today, it is not certain whether in the future investments will keep pace with the projected demand. Railroads secure private benefits by investing in their infrastructure and have many considerations in making new infrastructure investments such as the need to obtain the highest return on their investment, optimize the performance of their network, and respond to other significant capital needs of rail operations. The railroads we interviewed were generally unwilling to discuss their future investment plans with us as this is business proprietary information. We are therefore unable to comment on how companies are likely to choose among their competing investment priorities for the future.

In addition to securing private benefits for railroad networks, investments in rail projects can produce benefits for the public—some of these public benefits are, as CBO's report pointed out, large in comparison to anticipated private railroad benefits. For example, shifting truck freight traffic to railroads can reduce highway congestion and reduce or avoid public expenditures that otherwise would be needed to build additional highway capacity or provide additional maintenance to accommodate growth in truck traffic. These and other public benefits can be realized at

[7]Congressional Budget Office *Freight Rail Transportation: Long Term Issues January 2006.*

[8] According to STB, some portion of this $8 billion investment is focused on maintenance as opposed to capacity expansion.

the national, state, and local levels. For example, rail investment may generate benefits to the national economy by lowering the costs of producing and distributing goods. Since rail uses less fuel than trucks, energy use and emissions may be reduced. In contrast, a rail project that eliminates or improves a highway-rail crossing could deliver primarily local public safety benefits by reducing accidents, time lost waiting for trains to pass, and pollution and noise from idling trains and lessening the risk of delays for emergency vehicles at crossings.

In pursuit of these public gains, the federal and state governments have been increasingly participating in freight rail improvement projects. For example, the State of Delaware spent about $14 million to rehabilitate a bridge in exchange for receiving a fee for each railroad car that crosses the bridge. The federal government has also become more involved in freight rail partnerships. Specifically, in 1997 the U.S. Department of Transportation provided a $400 million loan to the Alameda Corridor Transportation Authority for the Alameda Corridor project, which included a number of rail and road improvements to consolidate freight traveling to and from the ports of Los Angeles and Long Beach. These ports are a significant gateway for freight that is imported from Asia and distributed throughout the U.S. In addition, in 2005, Congress provided $100 million to the Chicago CREATE project to improve the rail infrastructure and ease congestion in and around Chicago— the busiest freight rail center in the U.S.

In the years ahead Congress is likely to face additional decisions regarding potential federal policy responses and the federal role in the nation's freight railroad infrastructure. Based on our ongoing and past work, I would like to make three observations. First, any potential federal policy response should recognize that subsidies can potentially distort the performance of markets and that the federal fiscal environment is highly constrained. Second, any such response should occur in the context of a comprehensive National Freight Policy that reflects system performance based goals and a framework for intergovernmental and public-private cooperation. DOT initiated this effort by publishing a draft Framework for a National Freight Policy this year for comment. Third, federal involvement should only occur where demonstrable wide-ranging public benefits and a mechanism to appropriately allocate the cost of financing these benefits between the public and private sectors exists and, to the extent possible, focuses on benefits that are more national than local in scope. Although new freight rail investment tax credits have been suggested, our past work has pointed out that it is difficult to target this approach to desired activities and outcomes and ensure that it generates

the desired new investments as opposed to subsidizing investment that would have been undertaken at some point anyway. This approach can also have problematic fiscal impacts because it either lowers tax revenues or leads to higher overall tax rates to offset revenue losses. We will be discussing these areas in greater detail when we issue our report.

Mr. Chairman, this concludes my prepared statement. I would be happy to respond to any questions you or other Members of the Committee may have at this time.

Contact and Acknowledgments

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Appendix I Related GAO Products

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