



Derailed Benefits:

How the Resurgence of STB Regulations Will Impact Consumers

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The reduction in price and route regulations during the early 1980s brought back the U.S. railroads from the brink of bankruptcy, as rail doubled its productivity. With real prices 45% lower today than in 1980, consumers receive an estimated \$10 billion in annual economic benefits. However, the success of the industry is now in jeopardy, as regulators ponder new rules that would control the use of traffic on privately-owned track and do so at regulated prices. This study reviews the historical turnaround in the industry and the new regulatory threat it faces. Our economic analysis of market structure, conduct and performance finds no evidence of a market failure to justify reregulating the industry and reversing the gains made in the last thirty-five years.

The Success of Rail Deregulation

Created in 1887, the Interstate Commerce Commission (ICC) was tasked with regulating the railroads, in part, to ensure fair rates. In the ensuing decades, mounting railroad regulations—including strict controls over rail routes, use of investments, and prices—had become so onerous that they threatened the financial viability of the industry.² By the 1970s, several carriers faced imminent bankruptcy, including Penn Central, the largest in U.S. history at the time. From 1962 to 1978, industry returns on investment averaged only 2.4%.

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² For a more complete discussion and references to railroad deregulation and the resulting market outcomes, see “Regulating Railroads is the Wrong Track for Consumers,” The American Consumer Institute, 2017, at <http://www.theamericanconsumer.org/wp-content/uploads/2017/03/RR-CG-Final.pdf>.

Congress, facing the potential for costly bailouts and the possible nationalization of the U.S. railroad system, took a bold step to reduce ICC regulations, permitting the abandonment of unprofitable routes and allowing flexible and differential pricing by passing the Railroad Revitalization and Regulatory Reform Act of 1976 and the Staggers Rail Act of 1980. Over the next decade, the industry experienced an unprecedented recovery. Since 1980, industry productivity and volumes of business more than doubled, and inflation-adjusted rail rates significantly declined for shippers. Profits rose, spurring reinvestment in rail networks. Today, consumers receive approximately \$10 billion in annual benefits because of these reforms.³

Coincident with these reforms was the passage of the Airline Deregulation Act of 1978 and the Motor Carrier Act of 1980, which encouraged intra- and inter-modal competition. These reforms eventually led to the dissolution of both the ICC and the Civil Aeronautics Board. Today, these reforms are largely credited for contributing tens of billions more in consumer benefits.⁴

While the economic facts provide overwhelming evidence of the positive correlation between the reduction in regulations and massive consumer benefits, a more recent proposal to re-regulate the rail industry appears to ignore the lessons learned more than thirty-five years ago. In 2015, Congress passed the Surface Transportation Board Reauthorization Act, which expanded the size and role of the Surface Transportation Board (STB), the agency now responsible for regulating railroads. Since then, the STB has written proposals in two key regulatory areas: forced switching and revenue adequacy. The purpose of this study is to focus on the former regulatory proposal and assess whether there is a market failure that would justify a regulatory remedy.

³ Steve Pociask, "Smart Rail Regulations Protect Consumers, *Morning Consult*, April 5, 2017, <https://morningconsult.com/opinions/smart-rail-regulations-protect-consumers/>.

⁴ Sam Peltzman and Clifford Winston, *Deregulation of Network Industries – What's Next?* AEI-Brookings Joint Center, 2000; Robert Crandall and Jerry Ellig, "Economic Deregulation and Customer Choice – Lessons for the Electric Industry," Mercatus Center, George Mason University, 1997; Clifford Winston, et. al., *The Economic Effects of Surface Freight Deregulation*, Brookings, 1990; Elizabeth E. Bailey, "Price and Productivity Change Following Deregulation: The U.S. Experience," *The Economic Journal*, March 1986.

The Threat of Reregulation

As regulatory reforms swept through the industry decades ago, the expectation was that market forces would ultimately determine railroad prices and routes, thereby promoting revenue adequacy, operational efficiency and capital investment. Along with increased pricing flexibility, as a safeguard, the ICC adopted Competitive Access Rules in 1985 intended prevent isolated anticompetitive behaviors on the part of rail operators.

Under these rules, the ICC would have the option to impose forced switching as a regulatory remedy, but only if regulators were to find a market failure that demonstrated a competitive harm. Forced switching, also referred to as *reciprocal switching* or *forced access*, would require a railroad operator to take traffic from a competitive railroad onto its privately-owned and maintained rails at rates as prescribed by the STB.

The idea behind these Competitive Access Rules was to protect captive shippers from anticompetitive actions by railroads, as noted under the Staggers Act, thereby permitting shippers to arrange for competitive bypass as a last resort. Over the years, there were only a few complaints by captive shippers that resulted in regulatory investigations, but none found sufficient reason to grant forced switching. To be clear, regulators did not find a single incident of anticompetitive actions by the railroads that required a regulatory remedy.

However, in 2012, the STB opened a proceeding at the behest of a lobbying group, the National Industrial Transportation League, that filed a petition calling for weakening the anticompetitive standard, thereby increasing the likelihood of forced switching. The proposal would apply to only Class I railroads operating in a market with limited competitive alternatives and where railroads had a working exchange within a reasonable distance to a shipper. If regulators found switching to be feasible and not overly disruptive to the railroad's services, reciprocal switch could be mandated.

Despite no evidence of market failures to warrant revisions to the Competitive Access Rules, in 2016, the STB released an order on reciprocal switching along the lines advocated by the lobbying group. For its justification, the STB cited the lack of forced switching by regulators as an indication of a problem, although that same information demonstrates a lack of a problem. Equally troubling is that the order uses vague terminology – like *feasible, reasonable distance, unduly hamper and potential benefits* – inviting wide discretion to regulators and broadening the potential for increased and unbounded regulatory intervention in the future. Gone would be the well-established competitive harm and market failure standards that would possibly trigger a regulatory remedy, and potentially lost would be the consumer gains from historical regulatory reforms.

Forced switching would limit negotiation between the parties, which would lead regulators to set prices –potentially set these prices below market rates. Shippers granted relief would be advantaged by lobbying for artificially low rates, while railroads would be potentially impacted by declining cashflows that are necessary to pay for operations, maintenance and investment. In other words, shippers would have an incentive to make the most of the regulatory process in search of below market rates. The new rules would return the railroad industry to its disastrous past when regulations nearly put the railroads out of business.

In addition, the STB is considering imposing rules that would affect the rate adequacy standard, thereby allowing regulators to shave earnings from rail operators. Much like forced access, this regulation would reduce cashflow and, in turn, reduce rail investment and safety. If deregulation provides a \$10 billion annual consumer benefit, as economists have concluded, then bringing back these regulations would reduce consumer welfare. On the surface, the new threat of re-regulating the railroads is not in the public's interest.

Before these regulations take effect, regulators should have a public obligation to demonstrate there is market failure and one that is worth fixing. To do this, the STB needs to fully analyze the market structure, conduct and performance. Without some evidence of systematic market failure, implementing new competitive rules would amount to regulatory

malpractice – regulating for the sake of regulating. History has taught that more transportation regulation is not better for consumers.

Structure, Conduct and Performance Paradigm

As noted earlier, economic regulation is typically justified based on the presence of some market failure. Determining if a market failure exists is only a first step in evaluating whether a government remedy is even worth considering. Since government policies and regulations can be costly and do more harm than good, the presence of a market failure is not a sufficient condition for justifying any regulation or remedy. The fact is that imperfect markets can, in some cases, outperform government failure.

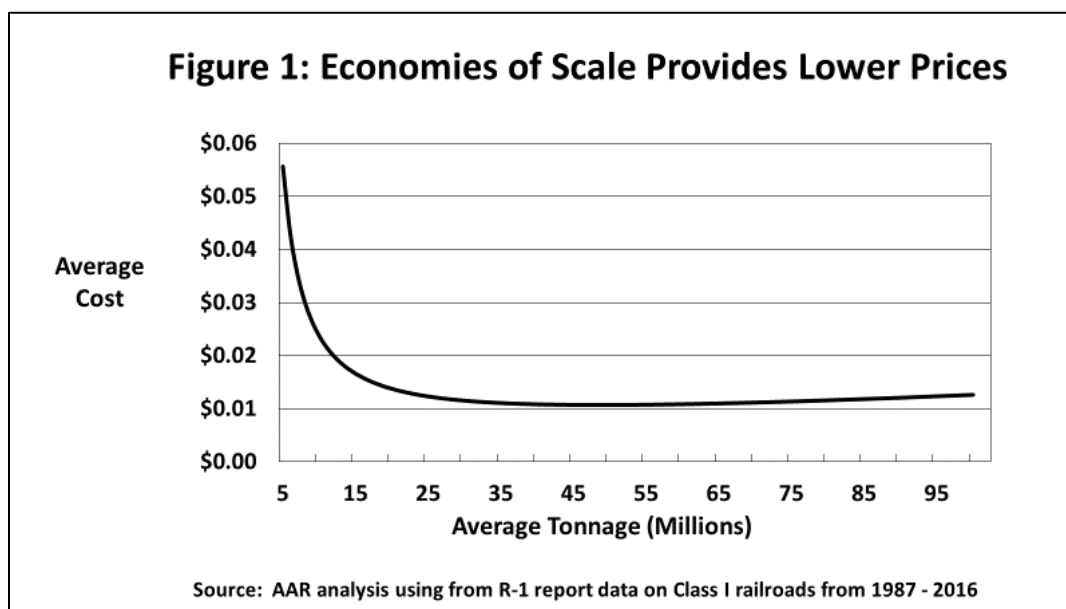
To determine if a market failure exists and produces anticompetitive harms, this study explores the railroad's market structure, conduct and performance, including reviewing market indicators of concentration, competition, prices, profits and investment.

1. Market Structure

The economic literature is inconclusive on the notion that market structure results in higher prices or exorbitant profits. In fact, markets characterized by high fixed costs often benefit from sizable economies of scope and scale, which in turn enable concentrated markets to set prices lower and to expand market output more than atomistic markets would. At the optimal scale of production, lower prices and increased output, by definition, enhance consumer welfare, and this should be the goal of regulatory policy. Because policymakers do not know what the optimal number of producers in any given market should be, regulations designed to create more competitors can work to misallocate resources, create market inefficiencies and unintentionally increase consumer prices. Therefore, creating artificial competition should not be the role of regulators.

The railroad industry is characterized as a capital-intensive industry, which explains the nature of its market structure. While there are 547 short line railroad operators (Class III) and

21 regional operators (Class II), there are only seven large railroad operators (Class I) in the U.S.⁵ However, as shown in **Figure 1** (below), these few large railroad operators have unquestionably lower direct operating costs per mile compared to smaller railroad operators. Declining average cost provides strong evidence of the industry's significant economies of scale. This means that high market concentration is necessary to achieve lower per unit costs, which ultimately yield lower consumer prices.



Even with higher market concentration, competition in the industry is significant. While Class I railroad operators frequently compete head-to-head amongst other railroad operators, they are also subject to substantial intermodal competition. In 2015, distribution of transported freight (in tons) was 66% by truck, 19% by pipeline, 9% by rail, 4% by water and 2% by multiple modes.⁶ Rail represents only 3% of revenues among all modes of freight transportation, and its share of freight (in tons) was less than 30% for any of 16 major commodities listed by the U.S. Department of Transportation, apart from solid coal (61%), now in decline.⁷

⁵ "2017 Infrastructure Report Card," American Society of Civil Engineers, section on rail infrastructure, at <https://www.infrastructurereportcard.org/wp-content/uploads/2017/01/Rail-Final.pdf>.

⁶ Airlines account for less than 1%. See "2016 Freight Quick Facts Report," Federal Highway Administration, Department of Transportation, Table 1, <https://ops.fhwa.dot.gov/publications/fhwahop16083/ch1.htm>.

⁷ Ibid., Table 2.

In general, trucks dominate the intermodal market with unsurpassed geographic accessibility, and shippers have the flexibility to relocate their operations based on a host of considerations. Unlike trucks and most shippers, railroad routes have been in place for many decades and they are not easily moved.

In summary, the economic literature provides no definitive empirical evidence to conclude that markets should be regulated solely because they are concentrated.⁸ Based on evidence of economies of scale and intermodal competition, there is no obvious market failure that would warrant government remedies.

2. Investment, Prices and Profits

Railroads invest nearly \$30 billion each year, making the industry a major investor in U.S. infrastructure. Unlike trucks that ride on publicly-owned and financed roads, however, rail operators are responsible for building and maintaining the industry's privately-owned transportation system. In addition to 100,000 bridges, the rail network consists of 140,000 miles of track.⁹ The healthy rate of capital formation makes the industry dependent on scale economies, as previously noted, but it also requires differential pricing to recover the costs of embedded in plants and equipment.

Average railroad prices have not increased as fast as the prices of other goods, and generally have increased less than prices for other modes of transportation. Since railroad deregulation, freight rates have decreased by 45% in inflation-adjusted terms.¹⁰ The superior historical price performance of rail was cited in a report by the Government Accountability

⁸ Erwin A. Blackstone, Larry F. Darby and Joseph P. Fuhr, "The Case of Duopoly: Industry Structure is Not a Sufficient Basis for Imposing Regulation," *Regulation*, Winter 2011-2012, p. 12.

⁹ "2017 Infrastructure Report Card," American Society of Civil Engineers, section on rail infrastructure, at <https://www.infrastructurereportcard.org/wp-content/uploads/2017/01/Rail-Final.pdf>.

¹⁰ Marc Scribner, "Surface Transportation Board Seeks to Impose Backdoor Rail Price Controls," Competitive Enterprise Institute, September 26, 2016, <https://cei.org/blog/surface-transportation-board-seeks-impose-backdoor-railroad-price-controls>. Rail prices were deflated by the Gross Domestic Product Price Index and resulted in a 45% decline since 1980.

Office (GAO).¹¹ A more recent uptick in prices lead the STB to commission an independent economic analysis, the Christensen Report, which found the recent increase in prices to be strongly correlated with increases in energy prices over the same period.¹² Based on this, we see no evidence of escalating prices, but rather lower real prices for shippers and, ultimately, consumer goods.

However, the STB's independent report made other interesting observations. The report concluded that Class I operators do "not appear to be earning above normal profit" and that there was no evidence of an exercise of market power. The report also warned against plans to force competition by stating:

"Current market circumstances imply that providing significant rate relief to certain groups of shippers will likely result in rate increases for other shippers or threaten railroad financial viability."¹³

Based on the historical evidence on decreasing real prices, and the Christensen Report's finding that price increases appeared to be in line with rail costs, we conclude there is no evidence of price gouging or the exercise of market power. In fact, our independent review of the change in Producer Price Indexes covering the last twenty-five years shows that railroad prices have increased slower than all modes of transportation, apart from trucking.¹⁴ However, if truck freight operators were required to build their own roads and bridges, it is safe to expect trucking prices would be substantially higher today.

Based on the review of market structure, conduct and performance, the railroad sector does not appear to have any obvious market failures. Investment is healthy, profits are normal, and prices have increased far less than prices in other competitive markets and are in line with

¹¹ "Freight Railroads: Highlights of GAO Report on Freight Rail Industry Performance, Competition and Capacity," presented to the STB on November 2, 2006, and "Freight Railroads: Updated Information on Rates and Competition Issues," Testimony before the Committee on Transportation and Infrastructure, House of Representatives, September 25, 2007.

¹² "A Study of Competition in the U.S. Freight Railroad Industry and Analysis of Proposals that Might Enhance Competition," Laurits R. Christensen Associates, November 2009.

¹³ Ibid, p. ES-5.

¹⁴ Rail prices decreased by less than deep sea freight, inland freight, crude pipelines and refined pipelines, according to data from the Bureau of Labor Statistics, Producer Price Indexes, 1993 to 2017.

costs. The STB's conclusion that a return to regulations is needed comes without any supporting empirical evidence of an exercise of market power. Without a problem to fix, there is no need for regulations as a government remedy.

Regulations Are Not Costless

The previous section demonstrated that there are no benefits to be achieved from regulations, like forced switching, because there are no apparent market failures to correct. However, benefits aside, these regulations will likely create substantial costs – costs to investors, rail operators, some shippers and consumers – as will be discussed in this section.

Decisions about where and how much to invest have long been fodder for introductory economic and financial textbooks. Firms invest to maximize shareholder value. The decision to invest is affected by uncertainty, which is influenced by regulatory changes that cannot be reasonably forecasted or estimated. There is no question that the STB regulations will create financial risks for rail operations by affecting the prospects for growth and recovery of costs, as viewed by investors who supply the scarce funding to achieve high rates of capital formation. Funding this investment is required for efficient, robust and safe networks. In short, the STB's recent inclination to regulate increases uncertainty and risk, which reduces incentives and opportunities for rail investment and adaptation to changing market and competitive conditions.

However, there are other negative consequences from these regulations. Specifically, these regulations would restrict the ability of operators to manage rails networks in ways that are privately beneficial without being publicly detrimental; they require infrastructure providers to subsidize would-be rivals and shippers through below cost wholesale rates irrespective of the relationship between expected costs, revenues and cash flows; and they impose onerous regulations without first demonstrating a market failure.

1. Consequences on Cash Flow and Investment

The risks stemming from STB forced switching regulations are obvious. Because capital expenditures on plant and equipment have long lives, their worth rests on the present value of future cash flows. These cash flows are influenced by future regulatory changes that lack transparency, can create ambiguity, take away opportunities of value, and lead to rent-seeking and gaming by competitors. Administrative procedure requirements dictate long pleading cycles, while the resulting long records contribute to delays in review and analysis, as well as added costs. One can easily find each of these sources of risk in recent STB regulatory proceedings, including forced switching, revenue adequacy and differential pricing regulations.

It is also unlikely that the added costs from switching and congestion will be covered by offsetting revenues. Rail operators and financial investors alike will regard the added operational costs and regulatory uncertainty as undermining efforts to forecast costs and revenues, thereby increasing investment risk and raising capital costs. In turn, higher costs will mean less investment, which will mean less output and a deterioration of service quality and safety. Consumers will pay more for less.

As these regulations take hold, the rail market's cashflow would suffer serious consequences. Shippers will need to rely more on trucking at a cost estimated to be as high as \$1.4 trillion, and taxpayers will incur increased maintenance costs for highway and bridge improvements from the wear and tear of more trucking.¹⁵ Compared to trains, trucks create three times more pollution per ton.¹⁶ The bottom line: shipper, consumers, taxpayers and the environment will be worse off from these regulations.

The impact of these regulations on the industry and consumers is clear. Onerous price and route regulations did not work for railroads decades ago, and they will not work today.

¹⁵ Marc Scribner, "Bait and Reciprocal Switch: Forced Access Regulation Threatens the Rail Renaissance," Competitive Enterprise Institute, *OnPoint*, No. 190, March 24, 2014, p. 2.

¹⁶ According to a University of Wisconsin-Madison study, see "Freight Trains a Clear Winner Over Trucks in CO2 Emissions Stakes," Sci GoGo, December 12, 2011. Also see Bay Rail Alliance, citing California High-Speed Train Final Program EIR/EIS, CSX estimates, and a 1984 AASHTO Report, at http://www.bayrailalliance.org/why_trains.

Moreover, as the next section will show, the regulatory model of forcing private infrastructure sharing did not work for other industries.

2. Regulatory Analogy: Infrastructure Sharing Almost Killed the Internet

Looking back at early high-speed Internet regulations provides an example of how forced access led to network disinvestment and losses. In 1995, unregulated cable operators had a quick start in market deployment of broadband services, led by a handful of cable modem trials.¹⁷ Even though Incumbent Local Exchange Carriers (ILECs) had publicly tested digital subscriber line (DSL) services as far back as 1992, the Federal Communications Commission's (FCC) use of common carrier regulations hampered the rollout of these services to consumers. The holdup was due to regulations that prevented these telecommunications providers from controlling the video content on their own privately-owned networks. Years later, Professor Thomas Hazlett, a former FCC Chief Economist, said that the FCC's regulatory debacle could be summarized by a single number -- 1.47 -- the ratio of the number of DSL regulatory filings divided by the number of DSL video subscribers.¹⁸ Consumers were worse off because of this "managed competition."

With little competition against cable providers, the FCC revised its regulations to allow ILECs to control content over their networks, so long as they "shared" at least two-thirds of their capacity with other competitors. The forced sharing of the ILECs networks was again a failure with no customers beyond a few trials. The policy delayed the introduction of high-speed Internet services for consumers and resulted in giving cable modems a 90% market share during these early years of broadband rollout.

In the years to follow, DSL services for Internet access were deployed, albeit more slowly than cable modem services, due to regulations that singled out ILEC services. In the

¹⁷ Much of this section's discussion is detailed in the book -- Steve Pociask, "Putting Broadband on High-speed: New Public Policies to Encourage Rapid Deployment," *Economic Policy Institute*, Washington, DC, 2002.

¹⁸ Thomas W. Hazlett, "Economic and Political Consequences of the 1996 Telecommunications Act," AEI-Brookings Joint Center for Regulatory Studies, Working Paper 99-8, September 1999.

name of increasing *competition*, ILECs were saddled with many additional regulations, notably unbundling and line-sharing, which required ILECs to lease their network components to competitors. Rules also required forced access via interconnection and collocation at incumbents' telephone switching centers.

In addition, unbundling and line-sharing regulations required ILECs to make network facilities available to competitors at greatly subsidized prices. As an example of the degree of subsidy, Professor Hazlett cited ILEC investment to be \$2,311 per line, compared to \$2.92 a month that a California competitor would pay to rent access to the ILEC's line – a return that did not even recover the interest on investment.¹⁹

As for other artificially low wholesale prices, one study found that unbundled network element prices gave ILECs only 42% of their normal retail revenues,²⁰ another study found that regulated prices would need to be increased by 60% to prevent losses,²¹ and other economists noted that it would take 20 years of aggressive productivity improvements to recover from the one-time drop to the new regulated wholesale prices.²² Because of the onerous cost of regulations and the risk associated with renting facilities to competitors at bargain prices, ILECs were discouraged from investing in their own broadband services, and competitors were discouraged from investing too, because leasing unbundled elements was cheaper than building. In short, common carrier regulations that forced sharing infrastructure with competitors “almost killed the Internet.”²³

When the FCC finally recognized the failures in its competition policy in 2002, broadband services were removed from common carrier regulations and reclassified as an

¹⁹ Thomas W. Hazlett, “Regulation and Vertical Integration in Broadband Access Supply,” AEI-Brookings Joint Center for Regulatory Studies Conference, Broadband Communications: Overcoming the Barriers, Oct. 2001, p. 12.

²⁰ Randolph J. May and Larry F. Darby, FCC Comments of the Progress and Freedom Foundation, CC Docket N. 01-338, N. 96-98 and No. 98-147, 2002, p. 24.

²¹ Steve Pociask, “Competition at Bargain Prices,” *America's Network*, December 15, 1998.

²² Alfred Kahn, Timothy Tardiff and Dennis Weisman, “The Telecommunications Act at Three Years: An Economic Evaluation of Its Implementation by the Federal Communications Commission,” *Information Economics and Policy*, Vol. 11, 1999, pp. 330-32.

²³ Steve Pociask, “Regulations almost Killed the Internet,” *The Hill*, November 14, 2014.

information services, putting them out of reach of similar onerous price regulations. The market rebounded, and investment surged as DSL service market shares peaked.²⁴ Today, firms compete by rolling out fiber-based services and race to deploy 5th generation wireless broadband services – requiring a high rate of capital formation and pricing flexibility.

Comparing the video and broadband regulatory missteps to the current STB focus on forced access provides some lessons to consider. Requiring rail operators to share their private facilities with its competitors will fail to benefit consumers, particularly if regulators set below-market prices and prices that do not recover the cost of externalities, such as congestion effects on existing freight. From these regulations, it is reasonable to expect reductions in investment, decreases in operating cashflow, decreases in productivity due to switching congestion, and substitution of traffic away from rail to trucking.

Since regulation is not costless, these “sharing” policies will increase consumer prices, which will only create “failures” to justify even further government remedies. In the end, regulatory policies will breed more regulations that restrain normally functioning market forces, contrary to the spirit of the Staggers Act. This represents a regulatory failure in the absence of market failure and a step backwards to a pre-1970s regulatory era.

Recommendations

The STB has failed to identify market failures that would cause significant anticompetitive harms, and they have failed to evaluate, by a proper cost-benefit analysis, whether economic regulation lead to significant long-term benefits for consumers. Nowhere in the economic literature is there evidence that a forcible welfare transfer between producers will yield a consumer welfare benefit. From our analysis, the proposed STB regulations do not stand up to sound economic thought and they fall well short of demonstrating benefits to consumers. That simple public interest test is important before promulgating these rules.

²⁴ Steve Pociask and Joseph Fuhr, Jr., “Concentration by Regulation: How the FCC’s Imposition of Asymmetric Regulations Are Hindering Wireline Broadband Competition in America,” American Consumer Institute, January 2016.

Without economic evidence and based solely on complaints from lobbyists, the STB would be ill-advised to impose corrective remedies, such as regulations that would expediate forced access policies. In addition, for similar reasons, regulators should rethink regulations that revise differential pricing and rate adequacy rules. These regulations threaten the solvency of the freight rail industry and would ultimately lead to higher increased consumer prices. The STB would reject these regulations, and Congress needs to take steps to limit additional regulatory creep.