

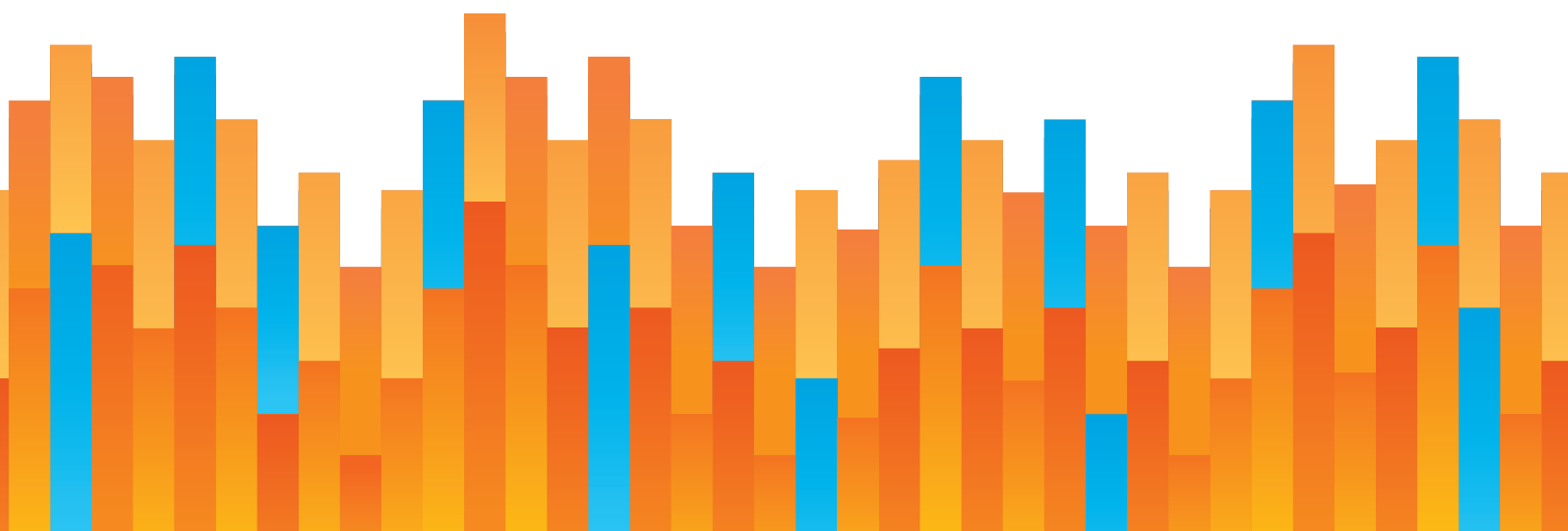


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FREIGHT RAIL DEREGULATION: PAST EXPERIENCE AND FUTURE REFORMS

by Marc Scribner

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PART 1

INTRODUCTION

Railroads were the first industry to face national industrial regulation, beginning with the Interstate Commerce Act of 1887. In the early 20th century, the common carrier rules imposed on railroads were applied in a similar fashion to motor carriers, pipelines, and telecommunications. The stringency of these rules on freight rail gradually increased for two generations despite vast changes to the economic landscape that resulted in growing competition from less-regulated modes of transportation.

By the middle of the 20th century, economic regulation began to take its toll on the railroad industry, favoring its fast-growing competitors in highway trucking and passenger aviation. Facing the imminent collapse of rail as a viable mode of freight transportation in the U.S., Congress began reducing harmful economic regulation of the industry in the 1970s, culminating in the Staggers Rail Act of 1980.

Four decades after partial deregulation, U.S. freight railroads are now the most extensive and productive in the world,¹ but new competitive and policy threats have appeared on the horizon. Part 2 surveys the history of economic regulation of the U.S. railroad industry. Part 3 examines the results of partial freight rail deregulation. Part 4 details emerging threats and recommends reforms to ensure the long-run productivity and viability of transporting freight by rail.

¹ Arne Beck, et al., "Railway Efficiency: An Overview and a Look at Opportunities for Improvement," International Transport Forum, Discussion Paper No. 2013-12 (May 2013). <https://www.itf-oecd.org/sites/default/files/docs/dp201312.pdf>.

PART 2

PRE-DEREGULATION ENVIRONMENT

The first railroads in the United States were chartered in the 1820s.² For the next two decades, the industry was largely unregulated. In 1844, New Hampshire became the first state to create a railroad commission.³ By 1885, 24 states and the Dakota Territory had established similar regulatory bodies.⁴

After a Supreme Court case greatly limited states' ability to regulate railroads,⁵ Congress responded by creating the Interstate Commerce Commission (ICC) in 1887, the first national industrial regulatory body in the United States.⁶ Congress declared that all freight and passenger rates "shall be reasonable and just," without defining those terms, as determined by the ICC.⁷ The law also restricted price discrimination over long- and short-distance trips,

² Paul H. Cootner, "The Role of the Railroads in United States Economic Growth," *The Journal of Economic History* 23, Dec. 1963. 488.

³ William S. Ellis, "State Railroad Commissioners," *The American Law Register and Review* 41, July 1893. 633.

⁴ Ibid. 633–634.

⁵ *Wabash, St. Louis & Pacific Railway Co. v. Illinois*, 118 U.S. 557 (1886). This decision greatly curtailed state regulation of interstate commerce by holding that regulation of any transportation movement or telegraphic transmission across state lines lies solely with Congress.

⁶ Interstate Commerce Act of 1887, Pub. L. 49-41 (4 Feb. 1887).

⁷ Ibid. § 1.

as well as pooling contracts between railroads.⁸ Subsequent Supreme Court decisions greatly weakened the ICC's enforcement powers.⁹



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This part surveys the history of economic regulation of railroads in the U.S. and is broken down into four time periods: the Progressive Era, interwar years, World War II and decline, and partial deregulation.

2.1

PROGRESSIVE ERA

The early legal setbacks in regulating railroads proved temporary. After a successful Department of Justice antitrust lawsuit in 1904 that dissolved the Northern Securities Company (which held the Great Northern Railway; Northern Pacific Railway; and Chicago, Burlington and Quincy Railroad, among others), Congress began steadily increasing the power of the ICC over the railroad industry. During this period, Congress also began extending the authority of the ICC to cover pipelines, telecommunications, motor carriers, and domestic waterborne transportation.

This environment of increasing railroad regulation—and of network industries more broadly—continued through the Progressive Era (from 1906 to 1920). Table 1 lists significant railroad regulatory legislation enacted during this period.

⁸ Ibid. §§ 3, 5.

⁹ See, e.g., *Interstate Commerce Commission v. Cincinnati, New Orleans and Texas Pacific Railway Co.*, 167 U.S. 479 (1897); and *Interstate Commerce Commission v. Alabama Midland Ry. Co.*, 168 U.S. 144 (1897).

TABLE 1: ENACTED PROGRESSIVE-ERA RAILROAD REGULATORY LEGISLATION

Year	Legislation	Key Provisions
1903	Elkins Act	Forbade rebates, required adherence to published rates
1906	Hepburn Act	Maximum rate authority, binding ICC rulings
1910	Mann-Elkins Act	Maximum rate reasonableness, Commerce Court
1913	Urgent Deficiencies Act	Commerce Court abolished
1918	Railway Administration Act	Railroads nationalized under U.S. Railroad Administration
1920	Esch-Cummins Act	Railroads de-nationalized, “fair return” rate-setting

While this approach remained popular with policymakers and the public, it did not take long for unintended consequences to become apparent. Perhaps the most obvious example occurred during the lead up to and during World War I.

When war broke out in Europe in 1914, U.S. companies began supplying the belligerents.¹⁰ Yet with Germany’s unrestricted submarine warfare on merchant ships in the Atlantic, ocean carrier capacity on the East Coast of the United States became greatly constrained.¹¹ Coupled with a large increase in wartime rail traffic, this led to serious congestion problems in many corridors, particularly those servicing export traffic bound for East Coast ports.¹²

The railroad industry, shippers, and government officials recognized that congestion problems needed to be resolved. Unfortunately, several laws and regulatory decisions had greatly restricted the ability of railroads to respond to market conditions and add capacity where it was most needed. Pooling equipment and facilities could have eased congestion, but the Interstate Commerce Act explicitly prohibited the voluntary pooling of railroad resources. In March 1917, railroads appealed to the ICC for a 15% general rate increase to help offset some of the rising costs associated with wartime traffic and afford them the opportunity to raise the revenue necessary to finance network enhancements.¹³ The ICC rejected their request.¹⁴

¹⁰ William J. Cunningham, “The Railroads Under Government Operation. I. The Period to the Close of 1918,” *The Quarterly Journal of Economics* 35, Feb. 1921. 291–293.

¹¹ *Ibid.* 297–298.

¹² *Ibid.* 291–293.

¹³ Richard D. Stone, *The Interstate Commerce Commission and the Railroad Industry: A History of Regulatory Policy* (New York: Praeger, 1991). 17–18.

¹⁴ *Ibid.*

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Later that year, President Woodrow Wilson, frustrated with railroad network deterioration during the war, nationalized the entire railroad industry.¹⁵ In December 1917, the newly formed U.S. Railroad Administration took over U.S. railway operations.¹⁶ The agency immediately pooled all railroad equipment and facilities, and six months later increased freight rates by 28%.¹⁷ Federal control of America's railways continued for the rest of the war until the Esch-Cummins Act, commonly known as the Transportation Act of 1920, was enacted in February 1920, returning railway operations to the private sector.¹⁸

2.2

INTERWAR YEARS

The Transportation Act of 1920 proved to be highly controversial. Congress intended to restore stability to the railroad industry largely by regulating rates to balance the interests of carriers and shippers, rather than trying to protect those shippers allegedly harmed by rates deemed excessive by regulators. Congress allowed the de-nationalized railroads a "fair return" of 6%. If the rate of return exceeded this threshold, half of those revenues were required to be deposited into a special federal recapture fund meant to insure against less

¹⁵ Presidential Proclamation 1419, 26 Dec. 1917.

¹⁶ Ibid.

¹⁷ Stone, *The Interstate Commerce Commission and the Railroad Industry*. 19. This came three months after Congress affirmed Wilson's December 26 presidential order with passage of the Railway Administration Act of 1918, Pub. L. 65-107 (21 Mar. 1918).

¹⁸ Esch-Cummins Act, Pub. L. 66-152 (28 Feb. 1920).

profitable times, with those funds to be used for issuing loans to weaker railroads at a 6% interest rate.¹⁹

The law had a perverse impact on both railroads and shippers. When rates of return were below 6%, the ICC regularly denied railroads' requests to *reduce* rates to remain competitive with motor carriers—decisions that went against the interests of both the railroads and shippers.²⁰



When rates of return were below 6%, the ICC regularly denied railroads' requests to reduce rates to remain competitive with motor carriers—decisions that went against the interests of both the railroads and shippers.



The Transportation Act's fatal flaw was its "fair return" provision, which was premised on the assumption that railroad assets had been accurately and consistently valued. They had not been.²¹ To illustrate the inherent problem with this regulatory mandate, consider that rate of return is partially a function of the value of assets. Yet the value of assets is also partially a function of rate of return. These circuitous accounting determinations had little basis in fact and various parties disputed their accuracy at every turn.²²

The Great Depression hit the railroad industry harder than other sectors. The industry was unable to shield itself from downward demand pressures due to its high fixed costs and increasing competition from other modes of transportation, particularly motor carriers. As the economy contracted, rail revenues fell by more than 50% between 1929 and 1933.²³

¹⁹ Herbert B. Dorau, "The Cost of Railway Capital under the Transportation Act of 1920," *The Journal of Land & Public Utility Economics* 3, Feb. 1927. 3–4.

²⁰ Stone, *The Interstate Commerce Commission and the Railroad Industry*. 32.

²¹ Eliot Jones, "The Status of Railroad Problems," *The North American Review* 219, May 1924. 596.

²² Ibid.

²³ Walter M. W. Splawn, "Railroad Regulation by the Interstate Commerce Commission," *Annals of the American Academy of Political and Social Science* 201, Jan. 1939. 158.



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In response, Congress passed and President Franklin D. Roosevelt signed into law the Emergency Railroad Transportation Act of 1933 in an attempt to coordinate the industry and take advantage of any available efficiencies.²⁴ This new law created the office of the Federal Coordinator of Transportation to carry out its objectives, which included encouraging facilities and equipment pooling and consolidation.²⁵ It exempted railroads from antitrust laws, shifted the rate-setting principle from fair return based on fair value to one that emphasized rates' impact on traffic,²⁶ and gave the ICC sole authority over railroad mergers.²⁷

Between 1920 and 1940, the number of U.S. railroad companies declined by 47%, from 1,097 to 574.²⁸ Most of this decline can be attributed to consolidation and market exits involving small railroads with less than 1,000 miles of track, which also resulted in track abandonments.²⁹ Taken together, it became clear to Congress and the Administration that another overhaul of laws governing railroads was needed.

On the eve of World War II, Congress passed the Transportation Act of 1940. This new law began by stating the National Transportation Policy, which ordered the ICC to “provide for

²⁴ Emergency Railroad Transportation Act, Pub. L. 73-68 (16 June 1933).

²⁵ D. Philip Locklin, “Railroad Legislation of 1933,” *The Journal of Land & Public Utility Economics* 10, Feb. 1934. 15–16.

²⁶ *Ibid.* 19.

²⁷ *Ibid.* 16.

²⁸ W. N. Leonard, “The Decline of Railroad Consolidation,” *The Journal of Economic History* 9, May 1949. 10.

²⁹ *Ibid.*

fair and impartial regulation of all modes of transportation subject to the provisions of the Act, so administered to *recognize and preserve the inherent advantages of each*” (emphasis added).³⁰

The problem with such a decree is that the “inherent advantage” of a given mode was open to such broad interpretation that the ICC could defensibly justify a wide spectrum of actions. To illustrate this problem, consider that for a given traffic movement, one mode could enjoy a cost advantage while another could enjoy a service advantage.³¹ For example, for consumer goods, motor carriers enjoy a service advantage given that roads allow door-to-door shipping that railways simply cannot provide, but railroads generally retain a cost advantage in moving these goods, particularly over longer distances. An arbitrary ICC decision of a mode’s “inherent advantage” could thereby harm another mode in moving the same traffic.

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In an attempt to restrain the ICC from picking modal favorites through its rate-making powers, the law required the Commission to consider the effect of a rate change only on the traffic of the carriers for which the rate applied.³² In reality, this generally meant forcing stronger carriers to keep their rates higher than they otherwise would in order to protect their higher-cost competitors. This practice, known as umbrella rate-making, would eventually prove to be one of the most significant regulatory burdens impacting the railroad industry. The burden of proof in showing reasonableness in all rate proceedings was now placed on the railroads, when previously it had only been placed on the railroads when they requested rate increases.

³⁰ Transportation Act of 1940, Pub L. 76-785 (18 Sep. 1940).

³¹ Stone, *The Interstate Commerce Commission and the Railroad Industry*. 43.

³² *Ibid.* 42.

2.3

WORLD WAR II AND THE DECLINE

During World War II, railroads enjoyed relative prosperity. Rail traffic increased due to the movement of war materials and military personnel. In addition, gasoline and rubber tire rationing led to a passenger and freight modal shift from motor carriers to railroads.³³ Between 1938 and 1939, rail freight tonnage increased from 771.9 million to 901.7 million, with tonnage rising to over 1 billion for the remainder of the war, peaking at 1.5 billion in 1944.³⁴ Railroad revenues enjoyed a similar trend. Between 1938 and 1939, rail industry revenue increased from \$2.9 billion to \$3.3 billion, and it also peaked in 1944 at \$7.1 billion.³⁵

Following World War II, railroads' fortunes again began to decline. Competitors were able to undercut railroads' rates, and rail carriers were unable to specialize sufficiently on cost-effective bulk shipments due to the ICC's power to set minimum rates and requirements to provide service to low-profit areas. Economists and industry insiders began expressing concerns that these supposedly pro-competitive mechanisms were actually harming the railroads' ability to compete in the marketplace. Journalist and economist James G. Lyne warned at a 1948 conference of financial analysts that, in the face of increasing competition from motor carriers, "[T]he railroads can meet truck competition equitably only if they are very greatly relieved from the excessive regulation from which they are now suffering."³⁶

By the 1950s, it had become clear that railroads were facing strong headwinds in the transportation marketplace. In the 10 years from 1945 to 1955, real passenger revenue in the railroad industry fell by 71.1% and real freight revenue by 12.5%, while rail's share of intercity freight traffic fell from 68.7% to 49.4%.³⁷

³³ Thor Hultgren, "American Railroads in Wartime," *Political Science Quarterly* 57, Sep. 1942. 323.

³⁴ Stone, *The Interstate Commerce Commission and the Railroad Industry*. 43.

³⁵ *Ibid.*

³⁶ James G. Lyne, "Proceedings, Third Annual Convention," *The Analysts Journal* 6, 2nd Quarter 1950. 35.

³⁷ U.S. Census Bureau, *Statistical Abstract of the United States*, various years, Tables: Volume of Domestic Intercity Freight Traffic, By Type of Transportation; and Railroads—Summary Statistics.



The first official federal government acknowledgment that the transportation sector was being harmed by overregulation came during the Eisenhower administration.



The first official federal government acknowledgment that the transportation sector was being harmed by overregulation came during the Eisenhower administration. In 1955, the Presidential Advisory Committee on Transport Policy and Organization (commonly known as the Weeks Committee, after then-Secretary of Commerce Sinclair Weeks) issued its findings to the president. The Weeks Committee report found that overregulation was harming the railroad industry and recommended that Congress revise the Interstate Commerce Act and National Transportation Policy. It suggested two main changes in federal transportation regulatory policy:

- 1) Allow for freer rates by curtailing the ICC's prescriptive rate-making; and
- 2) Eliminate the protection of high-cost competitors' traffic as the primary principle in rate regulation underpinning minimum rate regulation known as umbrella rate-making.³⁸

While the Weeks Committee ultimately did little to influence public policy in the 1950s, it was significant in that its report to President Eisenhower represented the first serious official recommendation of *less* regulation as means to improve the health of the railroad industry.

The next official attempt to address deteriorating conditions in the railroad industry came with the Transportation Act of 1958.³⁹ For the first time, the ICC was granted jurisdiction over passenger rail service discontinuances, a power previously held by the states.⁴⁰ The previous state-based regulatory system had mandated that railroads continue unprofitable service on many low-demand routes.⁴¹ Following enactment of the 1958 Transportation

³⁸ Maurice P. Arth, "Federal Transport Regulatory Policy," *The American Economic Review* 52, May 1962. 416.

³⁹ Transportation Act of 1958, Pub. L. 85-625 (12 Aug. 1958).

⁴⁰ *Ibid.* § 5.

⁴¹ Robert W. Harbeson, "The Transportation Act of 1958," *Land Economics* 35, May 1959. 167–168.

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The 1958 law also provided up to \$500 million in federal loan guarantees for railroad capital improvements, subject to ICC review.⁴² This provision, the clearest attempt by Congress to directly aid the railroad industry, was underused. By 1961, only \$86 million had been borrowed, because railroads were generally able to access sufficient private capital and many feared applying for federal financing would indicate desperation, thereby harming their future credit ratings.⁴³

The deregulatory momentum slowly began to grow, with economist James C. Nelson publishing an influential article in the *American Economic Review* concluding that deregulation of the railroad industry “can no longer be delayed.”⁴⁴ This was followed by the *Report on Regulatory Agencies to the President-Elect*, in which former Civil Aeronautics Board Chairman James M. Landis criticized the widespread inefficiencies of U.S. regulatory policy, singling out the ICC’s adjudication process as generating “the poorest category of all administrative agency opinions.”⁴⁵

In 1961, the Senate Committee on Interstate and Foreign Commerce published a report from the Special Study Group on Transportation Policies in the United States under the direction of John P. Doyle, former director of transportation for the Air Force.⁴⁶ Among other

⁴² Transportation Act of 1958. § 2.

⁴³ Stone, *The Interstate Commerce Commission and the Railroad Industry*. 48.

⁴⁴ James C. Nelson, “Effects of Public Regulation on Railroad Performance,” *The American Economic Review* 50, May 1960. 495–505.

⁴⁵ James M. Landis, *Report on Regulatory Agencies to the President-Elect*, 21 Dec. 1960. 39.

⁴⁶ Arth, “Federal Transport Regulatory Policy.” 419–420.

findings, the Doyle report predicted dire consequences for the railroad industry by the mid-1970s if inefficient regulation was not addressed.⁴⁷

These findings were soon bolstered by a notorious legal dispute between the ICC and a major rail carrier. In attempting to preserve waterborne traffic's favorable rate differential, the ICC rejected Southern Railway's 1961 request for a 58% rate reduction after the company had developed the far more efficient Big John aluminum hopper car to replace standard boxcars for grain transport.⁴⁸ In 1965, the Supreme Court overruled the ICC and allowed Southern's requested rate cut, but this had cost the railroad four years of potential business. It also underscored the fact that federal regulation was stifling technological innovation in the railroad industry as well as transportation competition.⁴⁹



In recognition of the railroad industry's declining prospects, the ICC was more permissive of railroad mergers in the 1960s.



In recognition of the railroad industry's declining prospects, the ICC was more permissive of railroad mergers in the 1960s. The largest was the February 1968 merger of the Pennsylvania Railroad and New York Central Railroad, which the troubled New York, New Haven and Hartford Railroad joined in January 1969 as a condition of the ICC's merger approval. The combined railroads became the Penn Central Transportation Company.⁵⁰ But by this time, rail freight revenues had fallen to such an extent that long-standing cross-subsidization of passenger service became a significant burden. As a result, the consolidated company's financial picture did not improve.

Following the trend of other railroad firms, Penn Central's management created a holding company, the Penn Central Company, to diversify into other less-regulated and more-

⁴⁷ Ibid.

⁴⁸ Richard Saunders, Jr., *Merging Lines: American Railroads, 1900–1970* (DeKalb, Ill.: Northern Illinois University Press, 2001). 295.

⁴⁹ Ibid. 296.

⁵⁰ Ibid. 377–378.

profitable business lines.⁵¹ By the end of 1970, 54% of Class I railroad assets were held by conglomerates.⁵² Unfortunately, the overall sluggish economy meant that these non-railroad investments performed little better than the core railroad assets.



After a number of bankruptcies, including Penn Central's, Congress became worried that the Northeast was on the verge of losing all meaningful rail service and fears of outright nationalization spread throughout the industry.



Facing ever-increasing losses, Penn Central petitioned the ICC in March 1970 for permission to discontinue 34 passenger trains, the largest single “train off” request ever submitted.⁵³ The Penn Central Transportation Company soon set another record when it filed for bankruptcy in June, which remained the largest corporate bankruptcy in U.S. history until it was eclipsed by the 2001 Enron collapse.⁵⁴ But even in bankruptcy, it was unable to free itself from burdensome passenger service mandates. In September, the ICC granted Penn Central 14 passenger train discontinuances of the 34 requested.⁵⁵ It refused to permit discontinuances of the other 20 trains, claiming that “the public interest would be better served” by continuing to mandate unprofitable passenger service.⁵⁶

In the early 1970s, northeastern U.S. railroads were facing dismal prospects, and significant regulatory relief did not yet appear in sight. After a number of bankruptcies, including Penn Central's, Congress became worried that the Northeast was on the verge of losing all

⁵¹ Saunders, *Main Lines: Rebirth of the North American Railroads, 1970–2002* (DeKalb, Ill.: Northern Illinois University Press, 2003). 12–13.

⁵² Isabel H. Benham, “Railroad-Based Conglomerates,” *Financial Analysts Journal* 28, May/June 1972, 44.

⁵³ John C. Spsychalski, “Rail Transport: Retreat and Resurgence,” *Annals of the American Academy of Political and Social Science* 553, Sep. 1997. 47.

⁵⁴ Saunders, *Main Lines*. 4.

⁵⁵ Spsychalski, “Rail Transport.” 47.

⁵⁶ *Ibid.*

meaningful rail service and fears of outright nationalization spread throughout the industry.⁵⁷

2.4

PARTIAL DEREGULATION

A month after the ICC's Penn Central "train off" decision, President Richard Nixon signed into law the Rail Passenger Service Act of 1970 in an attempt to revitalize passenger rail travel.⁵⁸ The law established the quasi-private National Railroad Passenger Corporation—commonly known as Amtrak—which took over passenger service the following year for railroads that joined it through the transfer of passenger rail assets and operations. While passenger rail hobbyists and advocates were enthusiastic about the prospect of Amtrak, the rail industry was simply happy to be free of costly passenger service obligations. Capturing the railroads' perception of Amtrak, one rail executive remarked at the time that Amtrak primarily served as "a sentimental excursion into the past for legislators over 50."⁵⁹

The 4R Act represented the first concrete shift in federal policy toward deregulation.

In early 1974, Nixon signed into law the Regional Rail Reorganization (3R) Act.⁶⁰ The 3R Act created the United States Railway Association (USRA), which was instructed to develop a Final System Plan for the emergency federal operation of northeastern freight rail service. In August 1975, USRA published the long-range plan, which recommended capitalizing a new Consolidated Railroad Corporation (Conrail) and that Conrail take over responsibility

⁵⁷ Al H. Chesser, "Nationalize U.S. Railroads?: It's a Better Way Than Involuntary Servitude," *The New York Times*, 30 Apr. 1972. F24.

⁵⁸ Rail Passenger Service Act, Pub. L. 91-518 (30 Oct. 1970).

⁵⁹ Edwin P. Patton, "Amtrak in Perspective: Where Goes the Pointless Arrow?" *The American Economic Review* 64, May 1974. 372.

⁶⁰ Regional Rail Reorganization Act, Pub. L. 93-236 (2 Jan. 1974).

for rail operations previously undertaken by Penn Central and six other bankrupt railroads in the affected 17-state Northeast/Midwest service region.⁶¹

On February 5, 1976, President Gerald Ford signed into law the Railroad Revitalization and Regulatory Reform (4R) Act.⁶² The 4R Act represented the first concrete shift in federal policy toward deregulation. While it adopted the USRA's Final System Plan and capitalized Conrail, which took over freight service in the Northeast, several other 4R Act provisions were decidedly pro-market.⁶³ These included allowing the ICC to exempt certain traffic from rate regulation, elimination of the ICC practice of umbrella rate-making, and the creation of a "zone of reasonableness," within which railroads could adjust their rates up or down by 7% per year without bearing a heavy burden of proof in ICC rate reasonableness proceedings.

Since the enactment of the Interstate Commerce Act in 1887, railroads had been required to publish their rates, and the Elkins Act of 1903 required railroads to adhere to them in dealings with all customers. This meant that railroads were forbidden from entering into contracts to provide specific rates to specific shippers for specific shipments. Many movements made by motor and water carriers were exempt from such common carrier tariff rates.

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Significantly, the ICC's interpretation of the 4R Act legalized contract rates and deregulated fresh produce rail transportation.

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Significantly, the ICC's interpretation of the 4R Act legalized contract rates and deregulated fresh produce rail transportation.⁶⁴ Movement of fresh produce by truck had long been exempt from rate regulation under the Motor Carrier Act of 1935, which put rail at a severe

⁶¹ Porter K. Wheeler, "Railroad Reorganization: Congressional Action and Federal Expenditures Related to the Final System Plan of the U.S. Railway Association," *Background Paper No. 2* (Washington, D.C.: Congressional Budget Office, 15 Jan. 1976).

⁶² Railroad Revitalization and Regulatory Reform Act, Pub. L. 94-210 (5 Feb. 1976).

⁶³ *Ibid.* § 601 et seq.

⁶⁴ Stone, *The Interstate Commerce Commission and the Railroad Industry*. 88–90.

disadvantage.⁶⁵ The ICC even created a contract advisory office after railroads failed to immediately take advantage of the new regulatory freedom. As railroad regulation scholar Richard D. Stone notes, “This action by the ICC was nothing short of incredible. Here was a case of the ICC lessening rail regulation and then going so far as to create an advisory service to encourage the use of the instrument.”⁶⁶

In 1979, President Jimmy Carter appointed economist Darius B. Gaskins to chair the ICC. He continued the procedural reforms enabled by the 4R Act and led an effort to drive opponents of deregulation from the ICC bureaucracy.⁶⁷ This deregulatory climate culminated in the Staggers Rail Act of 1980, which eliminated or significantly reduced economic regulation throughout the railroad industry.

Notably, unlike with airlines and motor carriers, the primary legislative purpose of railroad deregulation was not to benefit shippers and consumers. Rather, the decline of the railroad industry became so severe that policymakers’ primary aim was to save the private railroads from extinction.

These goals were elucidated in the Staggers Act’s introduction:

*The purpose of this Act is to provide for the restoration, maintenance, and improvement of the physical facilities and financial stability of the rail system in the United States. In order to achieve this purpose, it is hereby declared that the goals of the Act are ... to reform Federal regulatory policy so as to preserve a safe, adequate, economical, efficient, and financially stable rail system ... [while] assist[ing] the rail system to remain viable in the private sector of the economy[.]*⁶⁸

In the same way that the 4R Act prompted the unprecedented ICC action of advocating for contract rate exemptions, so too was the Staggers Act extraordinary in its stated intent: to preserve private sector ownership and operation of U.S. railways. Title I laid out the U.S. government’s rail transportation policy. It expanded on the stated goals by explicitly adding that the purpose of the law was “to minimize the need for Federal regulatory control over the rail transportation system and to require fair and expeditious regulatory

⁶⁵ Ibid.

⁶⁶ Ibid.

⁶⁷ Ibid.

⁶⁸ Staggers Rail Act of 1980, Pub. L. 96-448 (14 Oct. 1980), § 3.

decisions when regulation is required”⁶⁹ and “to reduce regulatory barriers to entry into and exit from the industry,”⁷⁰ among other provisions.

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The Staggers Act’s most significant reform elements related to rate-making, as railroads had been hindered relative to other freight transportation modes for over 40 years. Rigid rate regulation had greatly distorted railroad operations, which led to anemic productivity growth and a generally moribund industry climate.⁷¹

Title II of the Staggers Act exempted most movements from ICC rate reasonableness determinations. Such maximum rate regulation would only to apply in cases when 1) railroads were determined to have “market dominance,” and 2) rates exceeded a cost-recovery percentage threshold, initially set at 160% of variable cost and which rose over a four-year period to 180%.⁷²

In adopting provisions aimed to increase railroads’ freedom to set rates, Congress again made clear its intent in the Staggers Act conference report:

The purpose of this legislation is to reverse the decline of the railroad industry, which has been caused, in part, by excessive government regulation. The conferees believe that by allowing the forces of the marketplace to regulate railroad rates wherever possible the financial health of the railroad industry will be improved and will benefit all parts of the economy, including shippers, consumers, and rail employees.⁷³

⁶⁹ Ibid. § 101(a)(2).

⁷⁰ Ibid. § 101(a)(7).

⁷¹ Douglas W. Caves, Laurits R. Christensen, and Joseph A. Swanson, “The High Cost of Regulating U.S. Railroads,” *Regulation* 5, Jan./Feb. 1981. 42–46.

⁷² Staggers Rail Act of 1980. § 202.

⁷³ H.R. Conf. Rep. 96-1430 (29 Sep. 1980). 89.

PART 3

RESULTS OF PARTIAL DEREGULATION

History has proven the advocates of partial rail deregulation correct. Following the Staggers Act, Conrail began to turn a profit and was privatized in 1987.⁷⁴ A decade later, Norfolk Southern and CSX agreed to split Conrail's assets, ending Conrail as a Class I carrier.⁷⁵ In 1995, the ICC Termination Act abolished the ICC and created the Surface Transportation Board as its successor agency to wield the remaining post-Staggers economic regulatory authorities.⁷⁶

The gains enjoyed by carriers, shippers, and consumers in the decades following the Staggers Act are large and unambiguous. Even though the Staggers Act was concerned with economic regulation, not safety regulation, economists have found that partial economic deregulation enabled by the Staggers Act is associated with improved freight rail safety.⁷⁷ Since 1980, the U.S. has enjoyed:

⁷⁴ Saunders, *Main Lines*. 233–240.

⁷⁵ *Ibid.* 322–328, 340–345.

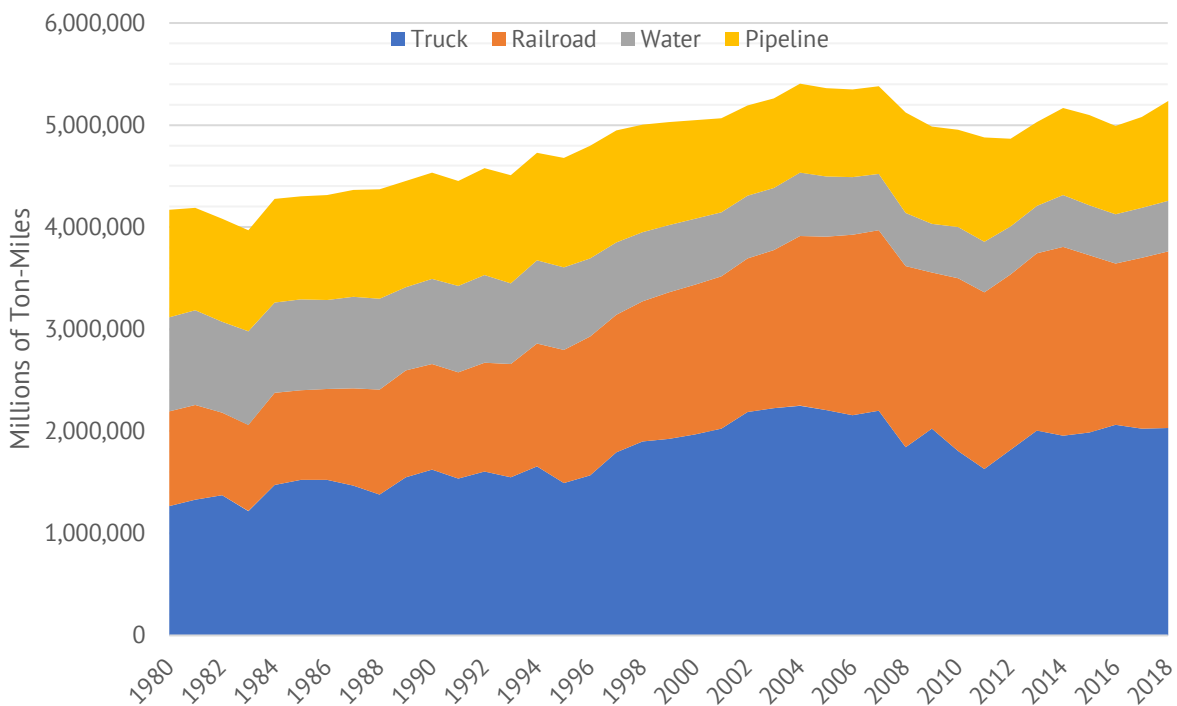
⁷⁶ ICC Termination Act of 1995, Pub. L. 104-88 (29 Dec. 1995).

⁷⁷ Jerry Ellig and Patrick A. McLaughlin, "The Regulatory Determinants of Railroad Safety," *Review of Industrial Organization* 49 (Sep. 2016). 371–398.

- A 44% decline in average inflation-adjusted rail freight rates (revenue per ton-mile);⁷⁸
- A 76% decline in train accident rates (accidents per million train-miles);⁷⁹ and
- An 85% decline in employee injuries and occupational illnesses (per 100 employees).⁸⁰

In contrast to its dismal outlook in the pre-Staggers 1970s, freight rail has reemerged as a vital freight mode in the United States. Today, freight rail effectively competes with road, water, and pipeline transportation. Figure 1 displays the changing modal mix of freight transportation volume over the last four decades in U.S., where total annual freight volume moved by all modes now tops 5.2 trillion ton-miles.

FIGURE 1: U.S. FREIGHT TRANSPORTATION VOLUME BY MODE, 1980-2018



Source: Bureau of Transportation Statistics, *National Transportation Statistics*, Table 1-50

⁷⁸ “Freight Railroads Under Balanced Economic Regulation,” *Aar.org*, Association of American Railroads, May 2022. <https://www.aar.org/wp-content/uploads/2020/08/AAR-Railroads-Under-Balanced-Economic-Regulation-Fact-Sheet.pdf>.

⁷⁹ Association of American Railroads, *Railroad Facts 2021 Edition* (Washington: Association of American Railroads, 2021). 62.

⁸⁰ *Ibid.* 63.

Since 1980, freight railroads have invested more than \$760 billion of their own funds to revitalize their networks, unlike other modes of transportation that rely on large government subsidies. The resulting improvements have supported a 57% increase in freight rail traffic (revenue ton-miles). According to a 2011 study from the Government Accountability Office, conservative estimates suggest that “freight trucking costs that were not passed on to customers were at least 6 times greater than rail costs” and that rail receives the lowest net government infrastructure subsidies when compared to truck, air, and waterborne freight transportation.⁸¹

Railroads have long served as the backbone of bulk commodity movements, especially in areas where inland waterway barge transportation is not feasible. Historically, coal was the largest single commodity group moved by rail, accounting for 25.5% of tons originated and 9.7% of gross revenue in 2020.⁸² However, the sharp decline of coal-fired electricity generation has led coal-by-rail tonnage to decline by nearly half since 2008.⁸³



Since partial deregulation of the railroad industry under the Staggers Act, the fastest growing traffic segment has been intermodal...



Since partial deregulation of the railroad industry under the Staggers Act, the fastest growing traffic segment has been intermodal—the shipping containers and trailers that can be moved between rail, truck, and waterborne carriers—where intermodal rail traffic increased by nearly 340% between 1980 and 2020.⁸⁴ Intermodal rail traffic in 2020 accounted for 9.4% of total tons originated and 17% of gross revenue, which would constitute the largest revenue share of any commodity group if intermodal traffic was

⁸¹ Government Accountability Office, “A Comparison of the Costs of Road, Rail, and Waterways Freight Shipments That Are Not Passed on to Consumers,” *Report to the Subcommittee on Select Revenue Measures, Committee on Ways and Means of the House of Representatives*, Jan. 2011. 20. <https://www.gao.gov/assets/gao-11-134.pdf>.

⁸² Association of American Railroads, *Railroad Facts 2021 Edition*. 32.

⁸³ “What Railroads Haul: Coal,” *Aar.org*, Association of American Railroads, May 2022. <https://www.aar.org/wp-content/uploads/2020/07/AAR-Coal-Fact-Sheet.pdf>

⁸⁴ Association of American Railroads, *Railroad Facts 2021 Edition*. 29.

grouped together. Much of the future growth of intermodal traffic on rail is likely to depend on how adequately rail can compete with and complement over-the-road trucking.

PART 4

EMERGING THREATS AND RECOMMENDATIONS FOR FUTURE REFORM

Despite the success of the Staggers Act in revitalizing U.S. freight rail transportation while lowering prices for shippers and consumers, some special interests are seeking to impose new regulatory burdens on the railroad industry. These measures would reduce the ability of railroads to compete in the marketplace and ultimately imperil the future viability of freight rail. This part examines three emerging economic and operational regulatory threats and recommends additional pro-market reforms in response.

4.1

RETURN ON INVESTMENT

Despite the success of the Staggers Act, new forms of direct economic regulation of freight railroads may be on the horizon, which could impact railroad innovation and long-run competitiveness. As explained in Section 2.4, the Staggers Act greatly curtailed the Interstate Commerce Commission's (ICC's) regulatory power over freight railroads. In the years following its enactment, ICC commissioners adopted a more cautious approach to railroad regulation, preferring markets over dictates. In 1995, Congress abolished the ICC and created the Surface Transportation Board (STB) to administer the remaining post-

Staggers economic regulatory authorities.⁸⁵ Like the ICC for its last 15 years following the Staggers Act, the STB has been largely conservative in the wielding of its economic regulatory power. However, in recent years, some large industrial shippers have stepped up their efforts to have the railroads re-regulated.



The STB is currently considering a re-regulatory proposal that includes making it easier to force competing Class I railroads to interchange each other's traffic and impose distortionary service mandates.



The STB is currently considering a re-regulatory proposal that includes making it easier to force competing Class I railroads to interchange each other's traffic and impose distortionary service mandates.⁸⁶ When rail carriers petitioned the STB to adopt the same type of benefit/cost analysis for economically significant regulations that has long been required of departmental agencies of the federal government, these shippers expressed strong opposition.⁸⁷

As an independent agency, the STB is not required to adhere to Executive Order 12866's regulatory review provisions like the Federal Railroad Administration (FRA), but it could adopt internal processes mirroring those provisions. Both the Federal Communications Commission and Securities and Exchange Commission have in recent years independently chosen to implement robust economic analysis for major rules, and the STB should follow suit.⁸⁸

⁸⁵ ICC Termination Act of 1995.

⁸⁶ Petition for Rulemaking To Adopt Revised Competitive Switching Rules; Reciprocal Switching, *Notice of Proposed Rulemaking*, Surface Transportation Board, Docket No. EP 711 (Sub-No. 1), 81 Fed. Reg. 51,149 (3 Aug. 2016)

⁸⁷ *Association of American Railroads Petition for Rulemaking*, Surface Transportation Board, Docket No. EP 752 (14 Mar. 2019).

⁸⁸ Jerry Ellig, "Why and How Independent Agencies Should Conduct Regulatory Impact Analysis," *Cornell Journal of Law and Public Policy* 28 (2018). 1–34.

Another concern, in light of a report from the STB’s Rate Reform Task Force, is that the STB could turn revenue adequacy accounting on its head in a way Congress never intended.⁸⁹ A railroad is considered by the STB to be “revenue adequate” when an estimated return on net investment equals or exceeds the estimated cost of capital for the industry, with five of the seven Class I carriers found to be revenue adequate in 2021.⁹⁰ Initially created by Congress under the Staggers Act as a proxy to gauge the health of railroads in response to deregulation, recent regulatory proposals may transform revenue adequacy into a rate ceiling by capping rate increases for railroads deemed revenue adequate.



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Alternatively, Union Pacific, Norfolk Southern, and Canadian National have suggested revising revenue adequacy determinations to better reflect economic reality. To that end, University of Chicago economists Kevin Murphy and Mark Zmijewski have proposed an alternative revenue adequacy methodology to increase the financial performance and capital cost estimate accuracy by considering other economic sectors with which railroads compete for capital. This would avoid the circuitous calculation problems inherent in the STB’s current revenue adequacy accounting.⁹¹ Using their alternative economic analysis in lieu of the STB’s flawed revenue adequacy accounting, Murphy and Zmijewski found that “each of the Class I railroads earned [a return on invested capital] net of capital below the

⁸⁹ Rate Reform Task Force, “Report to the Surface Transportation Board” (25 Apr. 2019). <https://prod.stb.gov/wp-content/uploads/Rate-Reform-Task-Force-Report-April-2019.pdf>.

⁹⁰ 49 U.S.C. § 10704(a); *Railroad Revenue Adequacy—2021 Determination*, Surface Transportation Board, Docket No. EP 552 (Sub-No. 26) (6 Sep. 2022).

⁹¹ *Joint Petition for Rulemaking—Annual Revenue Adequacy Determinations*, Surface Transportation Board, Docket No. EP 766 (1 Sep. 2020).

median S&P 500 company in each of the studied years,” suggesting claims that railroads are earning excessive returns that warrant price controls are not based in fact.⁹²

Finally, proposed regulations governing reciprocal switching arrangements may negatively impact railroads’ return on investment. The STB explains that reciprocal switching occurs when:

[A]n incumbent carrier transports a shipper’s traffic to an interchange point, where it switches the rail cars over to the competing carrier. The competing carrier pays the incumbent carrier a switching fee for bringing or taking the cars from the shipper’s facility to the interchange point, or vice versa. The switching fee is incorporated in some manner into the competing carrier’s total rate to the shipper. Reciprocal switching thus enables a competing carrier to offer its own single-line rate to compete with the incumbent carrier’s single-line rate, even if the competing carrier’s lines do not physically reach a shipper’s facility.⁹³

The Government Accountability Office provides a graphical representation of reciprocal switching, reproduced as Figure 2 on the next page.⁹⁴

Reciprocal switching arrangements occur voluntarily between carriers but can also be mandated by the STB to promote competition.⁹⁵ Among other requirements, current rules stipulate that anticompetitive conduct on the part of a rail carrier must be established in order for the STB to prescribe mandatory reciprocal switching as a remedy.⁹⁶

⁹² “Written Testimony of Professor Kevin Murphy, Ph.D., and Professor Mark Zmijewski, Ph.D., on Behalf of Union Pacific Railroad Company, Norfolk Southern Railway Company, and CN,” Surface Transportation Board, Docket No. EP 722 (26 Nov. 2019).

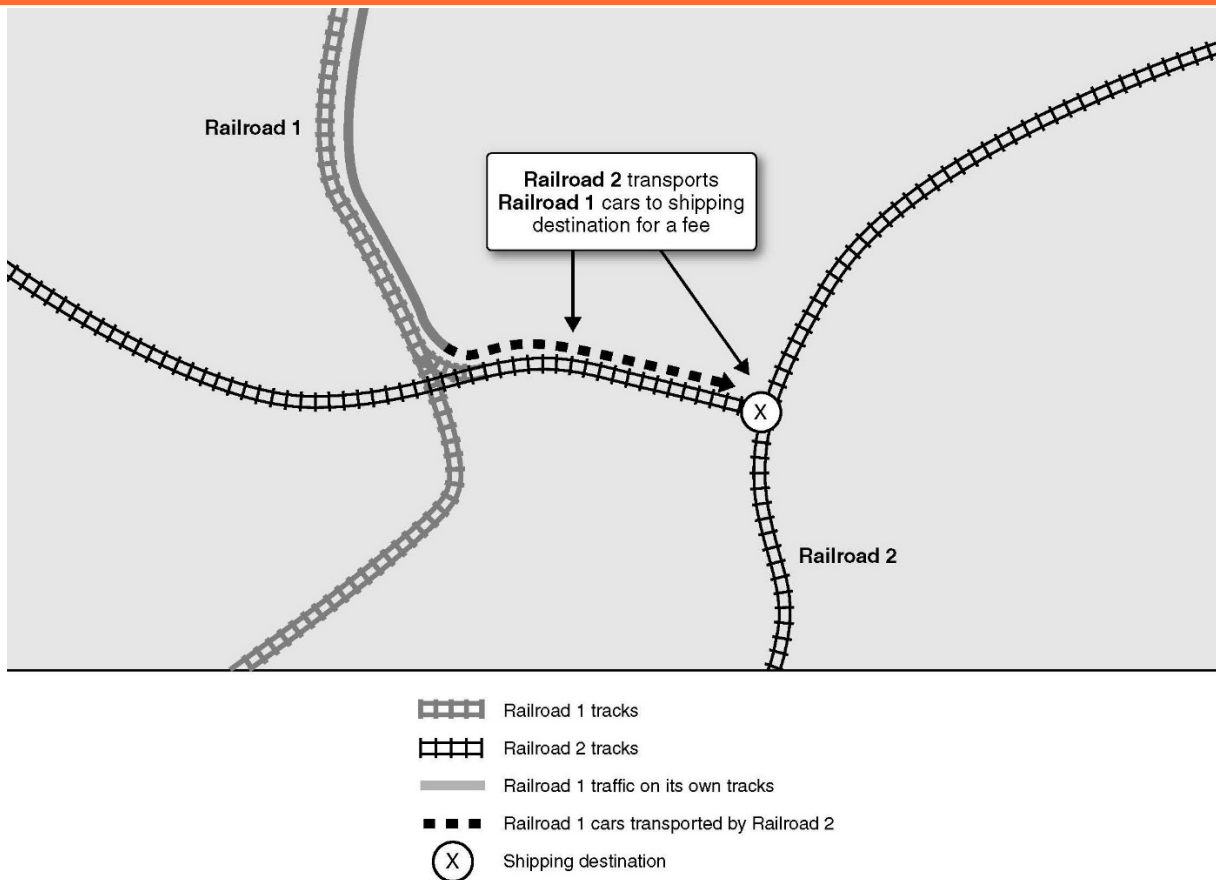
⁹³ Petition for Rulemaking To Adopt Revised Competitive Switching Rules; Reciprocal Switching, *Notice of Proposed Rulemaking*, Surface Transportation Board, Docket No. EP 711 (Sub-No. 1), 81 Fed. Reg. 51,149 (3 Aug. 2016). 51,150.

⁹⁴ JayEtta Z. Hecker, “Freight Railroads: Updated Information on Rates and Competition Issues,” *Gao.gov*, Government Accountability Office, 25 Sep. 2007. 18. <https://www.gao.gov/assets/gao-07-1245t.pdf>.

⁹⁵ 49 U.S.C. § 11102(c).

⁹⁶ 49 C.F.R. § 1144.2.

FIGURE 2: RECIPROCAL SWITCHING



Source: Government Accountability Office

In February 2022, the STB held a public hearing on revisions to reciprocal switching regulations first proposed in 2016.⁹⁷ Most significantly, the STB’s proposal would eliminate the anticompetitive conduct requirement and allow the STB to mandate reciprocal switching under diminished evidentiary standards because of “[t]he sheer dearth of cases brought.”⁹⁸ In fact, since the mid-1980s when the anticompetitive conduct requirement was established, the STB and the ICC before it have found precisely zero instances of anticompetitive conduct on the part of the rail carriers.

⁹⁷ Reciprocal Switching, *Notice of Public Hearing*, Surface Transportation Board, Docket No. EP-711 (Sub-No. 1), 87 Fed. Reg. 62 (2 Jan. 2022).

⁹⁸ Petition for Rulemaking To Adopt Revised Competitive Switching Rules; Reciprocal Switching. 51,152.

Weakening the evidentiary standards for mandatory reciprocal switching has long been a priority of some industrial shippers, who hope to enjoy below-market rates that may result. While it may provide temporary private benefits to select shippers in the form of below-market rates, the potential operational complexity and resulting delays (as well as reduced rail productivity) may offset those temporary benefits.⁹⁹



Weakening the evidentiary standards for mandatory reciprocal switching has long been a priority of some industrial shippers, who hope to enjoy below-market rates that may result.



More concerning is the long-run potential of capriciously mandated reciprocal switching. Rail carriers are likely to adopt strategies to minimize the costs and risks associated with this regulation in ways that harm shippers, such as reduced investment in new capacity and abandonment of the low-demand lines that presently serve many of the disgruntled shippers.

More broadly, the STB's proposed reciprocal switching regulatory changes would likely reduce investment in new technologies that are needed for freight rail to compete with increasingly automated trucking in the decades ahead,¹⁰⁰ which is likely why a 2017 paper published in *Transportation Research Record* surveying railroad managers and transportation engineers on freight rail automation found "significant concern that the industry will be unable to fund the development of new technology" and that economic regulations that reduce railroads' returns on investment could limit the development and deployment of rail automation technologies.¹⁰¹

The STB should ensure that any economic regulations it promulgates are supported by robust benefit/cost analysis. However, if the agency discards rigor in favor of rent-seeking

⁹⁹ Joanna Marsh, "No simple swap: Ins and outs of reciprocal switching on US railroads," *Freightwaves.com*, FreightWaves, 1 Oct. 2021. <https://www.freightwaves.com/news/no-simple-swap-ins-and-outs-of-reciprocal-switching-on-us-railroads>.

¹⁰⁰ Ibid.

¹⁰¹ James D. Brooks, et al., "Survey of Future Railroad Operations and the Role of Automation," *Transportation Research Record: Journal of the Transportation Research Board* 2608 (2017). 17.

politics, Congress should step in to limit potential economic harm generated by a rogue STB. This could range from repealing specific regulatory authorities to outright abolishment of the STB, as was proposed by economists Curtis Grimm and Clifford Winston in a 2000 study published by the Brookings Institution.¹⁰²

4.2

TRAIN AUTOMATION

In September 2008, a Metrolink commuter train crashed head-on into a Union Pacific freight train in the Chatsworth neighborhood of Los Angeles, killing 25. The National Transportation Safety Board determined the Metrolink engineer was distracted on his phone and had failed to notice a stop signal before overrunning it onto a stretch of single track authorized for the oncoming freight train.¹⁰³ A month later, Congress passed the Rail Safety Improvement Act of 2008.¹⁰⁴

One major provision of the law required the FRA to develop regulations to mandate the installation of positive train control (PTC) systems. PTC refers to a range of communication and automation technologies designed to prevent train-to-train collisions (like the 2008 Metrolink accident), over-speed derailments, incursions into work zones, and improper switching.¹⁰⁵ The PTC mandate was unfunded and forced railroads to spend billions of dollars to comply in the decade that followed enactment. One effect was growing interest in and development of freight train automation technologies.

The results of a survey of railroad managers and General Electric transportation engineers on their attitudes toward rail automation indicate there is broad support for increased automation to mitigate safety risks, but also broad concern about technology development without train crew input, crew skill atrophy, and personnel training.¹⁰⁶

Train automation is likely to be incremental as functions are gradually automated and personnel are relieved from certain tasks as safety is assured. For instance, an incremental

¹⁰² Curtis Grimm and Clifford Winston, "Competition in the Deregulated Railroad Industry: Sources, Effects, and Policy Issues," *Deregulation of Network Industries, What's Next?* Eds. Sam Peltzman and Clifford Winston (Washington, D.C.: Brookings Institution, 2000). 41–71.

¹⁰³ National Transportation Safety Board, *Collision of Metrolink Train 111 With Union Pacific Train LOF65–12, Chatsworth, California, September 12, 2008*, Railroad Accident Report NTSB/RAR-10/01 (21 Jan. 2010).

¹⁰⁴ Rail Safety Improvement Act of 2008, 122 Stat. 4848, Pub. L. 110–432 (16 Oct. 2008).

¹⁰⁵ 49 C.F.R. § 236.1005(a).

¹⁰⁶ Brooks, et al., "Survey of Future Railroad Operations and the Role of Automation." 10–18.

automation phase-in could allow for reducing train crew sizes from two to one, which consultancy Oliver Wyman in 2015 estimated could save U.S. railroads up to \$2.5 billion per year by 2030.¹⁰⁷ Certain lower-risk operations, such as those in railyards or those involving shorter trains, are likely to see automation technology deployed sooner. But international experience suggests fully automating at least some long-distance freight trains in the U.S. may be on the horizon.



Certain lower-risk operations, such as those in railyards or those involving shorter trains, are likely to see automation technology deployed sooner. But international experience suggests fully automating at least some long-distance freight trains in the U.S. may be on the horizon.



In 2019, mining giant Rio Tinto Group successfully launched its AutoHaul fully automated train operations in Western Australia.¹⁰⁸ AutoHaul involves simultaneous operation of up to 50 unmanned trains, each 1.5 miles long and carrying 240 cars of iron ore from mines to ports on an average 500-mile, 40-hour journey. Loading and unloading are completely automated, although crews still get on board and manually operate the trains as they approach ports. Rio Tinto's nearly \$1 billion effort took over a decade of planning, development, and testing, but reductions in travel time, fuel consumption, and track and locomotive wear-and-tear have already been realized.¹⁰⁹

Fully automated freight train operations like those of Rio Tinto's AutoHaul are unlikely to occur in the U.S. in the near term. Nevertheless, as with automated track inspection, unions representing railroad employees have expressed opposition to both full and partial train automation that could facilitate rail workforce reductions. The unions have increasingly

¹⁰⁷ "Analysis of North American Freight Rail Single-Person Crews: Safety and Economics," Oliver Wyman (3 Feb. 2015). <https://www.reginfo.gov/public/do/eoDownloadDocument?publd=&eodoc=true&documentID=1014>.

¹⁰⁸ Kevin Smith, "Rise of the machines: Rio Tinto breaks new ground with AutoHaul," *Railjournal.com*, International Railway Journal, 9 Aug. 2019. https://www.railjournal.com/in_depth/rise-machines-rio-tinto-autohaul.

¹⁰⁹ Ibid.

turned to their political allies for help in undermining the business case for train automation. If successful, these efforts are likely to prove self-defeating in the long run by making freight rail less competitive with increasingly automated trucks, especially in the lucrative market for intermodal traffic.

In 2016, when FRA first proposed such a minimum crew-size regulation, it conceded that “FRA cannot provide reliable or conclusive statistical data to suggest whether one-person crew operations are generally safer or less safe than multiple-person crew operations.”¹¹⁰ This admission of FRA’s lack of data to support its proposed rule did not originate from FRA. Rather, it came from the White House Office of Management and Budget’s Office of Information and Regulatory Affairs (OIRA), the executive branch’s regulatory watchdog. The draft notice of proposed rulemaking that FRA originally sent to OIRA for review instead claimed, “Studies show that one-person train operations pose increased risks by potentially overloading the sole crew member with tasks.”¹¹¹

“
Despite the absence of evidence, FRA continued forward on the proposed crew-size rule until it was withdrawn in 2019.
”

Despite the absence of evidence, FRA continued forward on the proposed crew-size rule until it was withdrawn in 2019. In its withdrawal notice, the agency concluded, “FRA’s statement in the [proposed rule] that it ‘cannot provide reliable or conclusive statistical data to suggest whether one-person crew operations are generally safer or less safe than multiple-person crew operations’ still holds true today.”¹¹²

The 2019 withdrawal notice also contained a nationwide preemption order that was aimed at overriding several state crew-size laws, which had been enacted in recent years at the behest of railway labor unions. This was challenged in federal court by two railroad unions

¹¹⁰ Train Crew Staffing, *Notice of Proposed Rulemaking*, Federal Railroad Administration, Docket No. FRA-2014-0033, 81 Fed. Reg. 13,917 (15 Mar. 2016). 13,919.

¹¹¹ “NPRM Crew Staffing OIRA Edits,” Federal Railroad Administration, Docket No. FRA-2014-0033 (8 Mar. 2016). 7. <https://www.regulations.gov/document?D=FRA-2014-0033-0003>.

¹¹² Train Crew Staffing, *Notice of Proposed Rulemaking; Withdrawal*, Federal Railroad Administration, Docket No. FRA-2014-0033, 84 Fed. Reg. 24,735 (29 May 2019). 24,737.

and three states. In February 2021, the U.S. Court of Appeals for the Ninth Circuit ruled in favor of the challengers, finding that FRA failed to meet procedural requirements in issuing the preemption order.¹¹³ The court remanded the matter to FRA to reconsider the underlying issues. The timing of this decision was especially fortuitous for rail unions because FRA was now controlled by their political allies following President Biden’s inauguration a month earlier.

While on the campaign trail in June 2020, then-candidate Biden raised industry eyebrows when he explicitly promised in a special video for rail union executives that, if elected, he would be “requiring two-person crews on freight trains...to get [unions] the thanks, respect, and opportunities that [they] so richly deserve.”¹¹⁴

“

Like the 2016 NPRM, FRA concedes that it does not possess “any meaningful data” to support the conclusion that two-person train crews are safer or that one-person crews are less safe.

”

FRA’s July 28, 2022 notice of proposed rulemaking (NPRM) makes good on that promise. Like the 2016 NPRM, FRA concedes that it does not possess “any meaningful data” to support the conclusion that two-person train crews are safer or that one-person crews are less safe.¹¹⁵ Its latest NPRM also appeals to two anecdotes from Canada and North Dakota that it previously cited in 2016, both of which fail to provide a reasonable basis for the rule.

In the case of the 2013 Casselton, North Dakota accident, FRA’s own recounting of the incident in the 2022 NPRM—“the conductor admitted that he had never been in a situation where a collision was imminent, did not know what to do, and therefore might not have gotten down on the floor and braced himself, as the locomotive engineer instructed”¹¹⁶—

¹¹³ *Transp. Div. of Int’l Ass’n-SMART v. Federal Railroad Administration*, No. 19-71787 (9th Cir. 2021).

¹¹⁴ “Vice President Joe Biden Addresses SMART Member Issues,” International Association of Sheet Metal, Air, Rail, and Transportation Workers (SMART), *Youtube.com*, YouTube, 19 June 2020. <https://www.youtube.com/watch?v=UDDyWdk-31M>.

¹¹⁵ Train Crew Size Safety Requirements, *Notice of Proposed Rulemaking*, Federal Railroad Administration, Docket No. FRA-2021-0032, 87 Fed. Reg. 54,564 (28 July 2022). 45,571.

¹¹⁶ *Ibid.* 45,570.

actually undermines the supposed safety basis of its proposal because one-person crew operations would have eliminated the on-board conductor who was put in harm's way in Casselton due to his own inexperience with proper safety protocols.

Because it has provided no evidence to support its proposed rule, this NPRM violates the basic principles of Executive Order 12866 that federal agencies such as FRA “should promulgate only such regulations as are required by law, are necessary to interpret the law, or are made necessary by compelling public need, such as material failures of private markets to protect or improve the health and safety of the public, the environment, or the well-being of the American people.”¹¹⁷

In this NPRM, FRA has neither “identif[ied] the problem that it intends to address (including, where applicable, the failures of private markets or public institutions that warrant new agency action) as well as assess the significance of that problem” nor “base[d] its decision[] on the best reasonably obtainable scientific, technical, economic, and other information concerning the need for, and consequences of, the intended regulation,” as required by Executive Order 12866.¹¹⁸

“

A two-person crew-size mandate would impose a perpetual rail labor cost floor, thereby disadvantaging freight rail to its increasingly automated trucking competitors.

”

The re-proposed crew-size mandate cannot be justified on safety grounds, as required by federal law. If finalized, rail carriers may challenge this rule as arbitrary and capricious under the Administrative Procedure Act and exceeding FRA's statutory authority from Congress.

The focus on protecting status quo unionized rail jobs may end up backfiring. The trucking industry is anticipated to automate long-haul trucking in the coming years, which could reduce truck operating costs by nearly half if trucks can fully automate and eliminate the

¹¹⁷ Exec. Order No. 12866, § 1(a) (30 Sep. 1993).

¹¹⁸ Ibid. § 1(b).

role of human drivers.¹¹⁹ A two-person crew-size mandate would impose a perpetual rail labor cost floor, thereby disadvantaging freight rail to its increasingly automated trucking competitors. This would cause some shippers to substitute trucks for rail, which would have economic, safety, and environmental consequences.

With respect to the environment, trucks emit far more pollutants than freight trains. According to the Environmental Protection Agency, when compared to freight rail, trucks produce approximately 10 times as much carbon dioxide (CO₂), more than three times as much fine particulate matter (PM_{2.5}), and two-and-a-half times as much nitrogen oxides (NO_x) per ton-mile.¹²⁰ Table 2 provides a breakdown of pollutant emissions intensity by mode. Actions that would displace rail freight traffic onto the highways contradict the Biden administration’s professed commitments to reducing the emissions intensity of the transportation sector.

TABLE 2: AIR POLLUTION EMISSIONS INTENSITY ACROSS MODES OF U.S. FREIGHT TRANSPORTATION

Freight Mode	CO ₂ (grams/ton-mile)	NO _x (g/ton-mi)	PM _{2.5} (g/ton-mi)
Barge	17.5	0.47	0.0111
Rail	20.7	0.29	0.0082
Truck	210.0	0.74	0.0270

Source: U.S. Environmental Protection Agency, 2021 SmartWay Online Shipper Tool: Technical Documentation.

To prevent the executive branch from undermining the long-run viability of freight rail and to promote market-driven environmental improvements, Congress should prevent FRA from regulating train crew sizes. This could be accomplished by expressly prohibiting FRA from regulating crew sizes in statute or, short of that, defunding enforcement of this rule through the annual appropriations process.

¹¹⁹ In 2020, driver wages and benefits were estimated to account for 45% of total truck operating costs in the U.S. Alex Leslie and Dan Murray, “An Analysis of the Operational Costs of Trucking: 2021 Update,” *Truckingresearch.org*, American Transportation Research Institute, Nov. 2021. 21. <https://truckingresearch.org/wp-content/uploads/2021/11/ATRI-Operational-Cost-of-Trucking-2021-FINAL.pdf>.

¹²⁰ “SmartWay Online Shipper Tool: Technical Documentation,” U.S. Environmental Protection Agency, Jan. 2022. 29. <https://nepis.epa.gov/Exe/ZyPDF.cgi/P1013XNL.PDF?Dockkey=P1013XNL.PDF>.



To prevent the executive branch from undermining the long-run viability of freight rail and to promote market-driven environmental improvements, Congress should prevent FRA from regulating train crew sizes.



4.3

AUTOMATED TRACK INSPECTION

In November 2018, the Federal Railroad Administration (FRA) approved BNSF’s proposed test program to evaluate manned and unmanned track geometry cars that could replace visual track inspections as well as augment those visual inspections through data-driven selections of track segment in need of closer monitoring.¹²¹ BNSF’s pilot program would last one year, allowing the railroad to collect, analyze, and share data on the usefulness of these technologies.

Manned track geometry cars have been in service for nearly a century after rail networks grew too large and dense for manual visual track inspections alone. While the parameters measured may vary, the general purpose for geometry cars is to examine track for defects to ensure compliance with industry and government standards, as well as inform and prioritize future maintenance actions. Today, automated track inspection vehicles may be hi-rail trucks (modified highway trucks with rail wheels that can be lowered to operate on tracks) or modified boxcars with inspection equipment that can accompany trains in revenue service.

BNSF found during its automated track inspection pilot program that its automated geometry cars not only identified many defects that went undetected by visual inspections, but also allowed for the redeployment of manual track inspectors to segments with greater known needs. As a result, its track inspectors on the pilot territory were “recording nearly

¹²¹ Approval of BNSF Railway Company Test Program To Evaluate Automated Track Inspection Technologies, *Notice of Approval*, Federal Railroad Administration, Docket No. FRA-2018-0091, 83 Fed. Reg. 55,449 (11 Nov. 2018).

three times the number of geometry defects per 100 miles than were identified by track inspectors systemwide.”¹²²

“

BNSF also found safety benefits arising from reduced track occupancy—the number of inspectors and the amount of inspection time required to perform their duties—which reduces track inspectors’ exposure to hazards in the field.

”

BNSF also found safety benefits arising from reduced track occupancy—the number of inspectors and the amount of inspection time required to perform their duties—which reduces track inspectors’ exposure to hazards in the field. Its pilot program saw 20% reductions in both the number of requests to occupy track and number of hours the track was occupied for inspections.¹²³ BNSF also believes increasing automation will lead to reductions in rail equipment accidents that may arise from track defects and human factors.¹²⁴

At this early stage of deployment, BNSF acknowledges it is difficult to quantify cost savings derived from its automated track geometry cars, which require substantial upfront investment. However, the railroad told regulators that it anticipates immediate taxpayer savings due to reduced FRA enforcement activities and “substantial savings to both BNSF and the public” from improvements in rail safety.¹²⁵

In July 2020, BNSF petitioned FRA for a system-wide waiver to build on this success.¹²⁶ In January 2021, FRA authorized BNSF to supplement visual track inspections with automated

¹²² BNSF Railway Company Petition for Waiver of 49 C.F.R. 213.233 to Allow for the Implementation of Automated Track Inspection Technologies to Supplement Visual Track Inspections, Federal Railroad Administration, Docket No. FRA-2020-0064 (28 July 2020). 8. <https://www.regulations.gov/document/FRA-2020-0064-0001>.

¹²³ Ibid. 9–10.

¹²⁴ Ibid. 10–11.

¹²⁵ Ibid. 11.

¹²⁶ Ibid.

geometry inspections over two territories of track—the Powder River Division, centered around Wyoming’s coal country, the site of BNSF’s earlier pilot program; and the Southern Transcon route from Los Angeles to Chicago—rather than system-wide as the railroad had requested.¹²⁷ BNSF’s request for a seven-year waiver was also denied, with the board limiting this waiver to the standard five years.

In June 2021, BNSF again petitioned FRA to expand the geographic scope of its waiver to include the Northern Transcon route from Seattle to Chicago and an additional 395 miles of track to the existing Power River Division ATI territory, subject to the same conditions and limitations imposed by the January 2021 waiver.¹²⁸ While it waited for a response, BNSF sent multiple letters to FRA asking the agency to approve the railroad’s waiver expansion request.¹²⁹

In March 2022, FRA finally responded by denying BNSF’s petition.¹³⁰ FRA’s rationale for its decision is peculiar for a safety regulator. The agency did not deny the safety benefits of ATI that it has documented and praised in the past. Rather, it stated it had collected enough data from BNSF for its ongoing ATI evaluation, arguing that allowing BNSF to expand its successful use of ATI would amount to “short-circuiting this evaluation process.”¹³¹

Despite FRA’s claims to the contrary, allowing BNSF to expand its ATI program would have no impact on FRA’s ATI evaluation. The agency itself says it already possesses data necessary to carry out this task,¹³² and granting BNSF’s modest expansion request

¹²⁷ Decision Letter Granting BNSF Railway Company’s Petition for Waiver of 49 C.F.R. 213.233 to Allow for the Implementation of Automated Track Inspection Technologies to Supplement Visual Track Inspections, Federal Railroad Administration, Docket No. FRA-2020-0064 (19 Jan. 2021). <https://www.regulations.gov/document/FRA-2020-0064-0011>.

¹²⁸ BNSF Railway Company Request to Expand Automated Track Inspection Program, Federal Railroad Administration, Docket No. FRA-2020-0064 (15 June 2021). <https://www.regulations.gov/document/FRA-2020-0064-0014>.

¹²⁹ Letter from BNSF Railway Company to Amit Bose (14 Jan. 2022). <https://www.regulations.gov/document/FRA-2020-0064-0018>; Letter from BNSF Railway Company to Amit Bose (11 Mar. 2022). <https://www.regulations.gov/document/FRA-2020-0064-0019>.

¹³⁰ Decision Letter Denying BNSF Railway Company’s Request to Expand Automated Track Inspection Program, Federal Railroad Administration, Docket No. FRA-2020-0064 (21 Mar. 2022). <https://www.regulations.gov/document/FRA-2020-0064-0020>.

¹³¹ *Ibid.* 3.

¹³² *Ibid.*

could not impact a historical dataset and certainly not “short-circuit” a program evaluation that makes use of those data.

“

Despite FRA’s claims to the contrary, allowing BNSF to expand its ATI program would have no impact on FRA’s ATI evaluation.

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In its letter denying BNSF’s petition, FRA notes that the only opposition it received came from the Brotherhood of Maintenance of Way Employees Division (BMWED) of the Teamsters Union.¹³³ In its denial, FRA quotes BMWED’s opposing comment to BNSF’s petition that the union “‘does not feel’ that any of the test programs or waivers issued related to railroads’ Automatic Track Geometry Measurement Systems programs provide a ‘level of safety equal to the minimum safety requirements’ of FRA’s Track Safety Standards.”¹³⁴

FRA’s safety decisions should be supported by more than unions’ feelings. In April 2022, BNSF sued FRA in the U.S. Court of Appeals for the Fifth Circuit, seeking to overturn FRA’s decision “on the grounds that FRA’s action is arbitrary, capricious, an abuse of discretion, and otherwise contrary to law, all in violation of the Administrative Procedure Act.”¹³⁵

Rather than waiting for a potentially favorable court decision on the restoration of the pilot program, Congress should authorize a permanent ATI program that is not subject to the whims and waivers of FRA political appointees.

¹³³ Comments of the Brotherhood of Maintenance of Way Employees Division - IBT (BMWED) in Response to BNSF Railway Company’s Request to Expand Automated Track Inspection Program, Federal Railroad Administration, Docket No. FRA-2020-0064 (23 Aug. 2021). <https://www.regulations.gov/comment/FRA-2020-0064-0017>.

¹³⁴ Decision Letter Denying BNSF Railway Company’s Request to Expand Automated Track Inspection Program. 2.

¹³⁵ *BNSF Railway Co. v. Federal Railroad Administration*, No. 22-60217 (5th Cir. 2022).

PART 5

CONCLUSION

The U.S. railroad industry’s regulatory experience offers an important cautionary tale for proponents of additional regulation of the economy. History and practice show that even the best-intentioned regulations—those carefully seeking to balance the interests of the parties involved—can lead to distorted markets, reduced prosperity, and a variety of other unintended consequences.

This is not to say that regulatory balance, which was explicitly addressed in the Staggers Act, is not something to be considered. But the public interest is not served when regulators acquiesce to the demands of self-interested parties overly focused on the short-run impacts on a narrow slice of economic activity. Rather, advancing the public interest demands that regulators consider the unique characteristics of the industry in question and its role in the broader economy over the long-run.

“
... the public interest is not served when regulators acquiesce to the demands of self-interested parties overly focused on the short-run impacts on a narrow slice of economic activity.
”

Shippers and unions, as well as the U.S. as a whole, have greatly benefited from the partial deregulation that followed the enactment of the Staggers Act. Even with the COVID-19-era supply chain chaos currently plaguing carriers and shippers alike, inflation-adjusted rail freight rates remain far below the heavily regulated rates of the 1970s.

While righting market wrongs is a powerful impulse for many, the error costs of government action frequently exceed the costs of market failures. As shown by the history of railroad regulation, the costs of government failure can not only be enormous, but can persist over many decades—and difficult to undo once in place. When it comes to railroad regulation, Congress and regulators should tread lightly to avoid repeating the mistakes of the past.

ABOUT THE AUTHOR

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Scribner's work focuses on a variety of public policy issues related to transportation, land use, and urban growth, including infrastructure investment and operations, transportation safety and security, risk and regulation, privatization and public finance, urban redevelopment and property rights, and emerging transportation technologies such as automated road vehicles and unmanned aircraft systems. He frequently advises policymakers on these matters at the federal, state, and local levels.

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