Article

Derailed: How Government Interference Threatens to Destroy the Rail Industry—and How To Get Back on Track

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I. INTRODUCTION

Imagine an average American in virtually any city in the country. She wakes up, turns on the light, and gets ready for work. She has an orange and a slice of toast for breakfast, then drives to her job at the paper company. She rides the elevator to the 45th floor of the high rise, sits behind her desk, and checks her email. No more than two hours have passed and already this woman has encountered dozens, probably hundreds of products that have traveled via the freight rail system. She was able to turn on the light because the railroad transported coal to the power plant that supplies her electricity.[2] The railroad transported the metals necessary to create the light bulb, the textiles for her bedding, the furniture in her home, the plastic pellets that eventually became her toothbrush, hairbrush, and the bottles of her toiletries and the chemicals that made up their contents.[3] The orange and the wheat for the toast probably were shipped on the rail system.[4] The gasoline to fuel her car was refined from the oil transported by rail and the car itself may have been transported by rail.[5] The steel frame of the building she works in was created from the raw ore and taconite transported from mines to smelting factories.[6] The wood for her desk, the chemicals and lumber used to make paper, and countless other items were all probably hauled at some point on the U.S. freight rail network.[7]

As pervasive as rail-transported goods are in our daily lives, many Americans are relatively unaware of how important the rail system is to the health of the American economy. Moreover, fewer people are aware of the constant battle railroads fight against government regulatory interference in this ostensibly deregulated industry. This Comment seeks to change both of these facts.

2. *See* ASS'N OF AM. R.R.S, THE ECONOMIC IMPACT OF AMERICA'S FREIGHT RAILROADS 3 (2012) [hereinafter ECONOMIC IMPACT], *available at* https://www.aar.org/keyissues/Documents/Background-Papers/The-Economic-Impact-of-Freight.pdf.
3. *See id.*
4. *See id.*
5. *See id.*
6. *See id.*
7. *See id.*

Gone are the days of the robber barons and the excess capacity that plagued struggling new rail companies.[8] Contrary to the opinion of certain critics, the railroads are not profit machines hell-bent on putting the little guy out of business, charging excessive rates, and creating monopoly power.[9] Most of these criticisms by interest groups and academics alike focus on "fairness," or rather "unfairness," instead of the actual economics of the matter.[10] But the economics cannot be ignored. The railroads are a vital part of our national economy and unique in that they are the only transportation sector that must self-fund their infrastructure.[11] To keep our economy moving over the next decades, there must be more rail capacity and extensive maintenance on the aging existent tracks, requiring huge amounts of capital from the railroads.[12] If reregulation continues on its current trajectory, the railroads will be stripped of the power to set rates high enough—market price—to fund their investment. Resultantly, the quality and efficiency of service will decline and shippers will move to other modes of transportation to transport their goods.[13] The rail sector will be put in much the same position it was before deregulation: uncompetitive with other transportation modes and sickly, leaving death and government takeover as very bad—but the only—options.[14]

But this does not have to happen. The Surface Transportation Board (STB) and other regulatory agencies with jurisdiction must strike the proper balance between completely free markets and excessive regulation that turns this ostensibly deregulated industry into a de facto government enterprise. Furthermore, these agencies need to show due respect for bedrock principles of the American economic and, in some cases, legal system of free markets, freedom of contract, and private property.

While economic regulation is the most controversial area of railroad

8. *See* discussion *infra* Part II.

9. *See* discussion *infra* Part IV, V.

10. *See* discussion *infra* Part IV; *see also* CONSUMERS UNITED FOR RAIL EQUITY, http://dev.railcure.org (last visited Feb. 10, 2013).

11. Beau B. Bump, Comment, *Held Captive: How Increased Regulation Arrests Railroads' Ability to Serve the Nation*, 5 DEPAUL BUS. & COM. L.J. 731, 754 -75 (2007).

12. *See id.* at 756–57. *See generally* JAYETTA Z. HECKER, U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-07-1245T, PREPARED STATEMENT FOR H. COMM. ON TRANSPORTATION AND INFRASTRUCTURE (2007) [hereinafter GAO STATEMENT], *available at* http://www.gao.gov/assets/120/117832.pdf; CONG. BUDGET OFFICE, FREIGHT RAIL TRANSPORTATION: LONG TERM ISSUES (2006) [hereinafter CBO REPORT], *available at* http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/70xx/doc7021/01-17-rail.pdf; ASS'N OF AM. R.R.S, AMERICA NEEDS MORE RAIL CAPACITY (2012), *available at* https://www.aar.org/keyissues/Documents/Background-Papers/America-Needs-More-Capacity.pdf.

13. *See* discussion *infra* Part VI.

14. *See* discussion *infra* Part II, VI.

regulation, it is far from the only area.[15] Railroads are regulated at both the state and federal level on topics as diverse as drug testing standards for employees, grade crossing safety, train speed, mergers, whistle procedures, rail incline, carbon emissions, abandonments, and many more.[16] In addition to the statutes regarding economic regulation, they are subject to FELA, RLA, RSIA, and others, and are constantly the subject of proposed legislation.[17] Essentially, the railroad industry does not sneeze without an administrator taking notice.

While much has been written about the rise and fall of the Interstate Commerce Commission (ICC),[18] little has been written regarding the regulation the rail industry still faces—and fights against—from the ICC's successor, the STB, and other regulatory agencies. This Comment seeks to fill this gap by analyzing three specific regulatory issues: mandatory transportation of toxic inhalation hazard (TIH) materials, the required implementation of a positive train control system throughout most of the national rail network, and the captive shipper debate. Together, these three topics show the difficult position the rail carrier occupies in society: on the one hand is the common carrier obligation that requires railroads to provide transportation to anyone upon reasonable request, while on the other is the duty the railroads have to their investors and employees as a for-profit company and the broader societal interest in railroads operating profitably.

Like a pendulum, the regulatory approach toward railroads has swung back and forth over time. Since the 1980s, the trend has been toward deregulation; however, the pendulum appears to be swinging back the other direction. Examination of these three regulatory topics will demonstrate how harmful reregulation of railroads could be to the industry's health and the health of the economy as a whole, and why it is vital to give railroads as much freedom as possible. An unconstrained railroad is an efficient railroad, and an efficient railroad is good for America.

To understand this regulatory resurgence, it is necessary to under-

15. *See* CBO REPORT, *supra* note 11, at 17.

16. *Id.*; *see generally* 49 U.S.C. subtitle V.

17. CBO REPORT, *supra* note 11, at 19; *see, e.g.*, ASS'N OF AM. R.R.S, MAINTAIN RAILROAD ANTITRUST LAWS 2 (2011), *available at* https://www.aar.org/keyissues/Documents/Background-Papers/Maintain-RR-Antitrust-Laws.pdf; *see also* ASS'N OF AM. R.R.S, POSITIVE TRAIN CONTROL 1 (2011), *available at* https://www.aar.org/keyissues/Documents/Background-Papers/Positive-Train-Control.pdf.

18. *See, e.g.*, Paul Stephen Dempsey, *Transportation: A Legal History*, 30 TRANSP. L.J. 235, 265 (2003) [hereinafter *Transportation: A Legal History*]; Paul Stephen Dempsey, *The Rise and Fall of the Interstate Commerce Commission: The Tortuous Path From Regulation to Deregulation of America's Infrastructure*, 95 MARQ. L. REV. 1151, 1152-153 (2012); Robert M. Hardaway, Faculty Comment, *Transportation Deregulation (1976-1984): Turning the Tide*, 14 TRANSP. L.J. 101, 107 (1985).

stand what sparked the initial drive for regulation and, conversely how regulation became so burdensome as to convince lawmakers from parties that change was necessary. Part II will provide this brief history from the end of the Civil War to the present. Part III will introduce and analyze the contentious issue of mandatory TIH material transport. Part IV will address mandatory implementation of positive train control systems, and Part V will focus on the captive shipper problem. Finally, Part VI will provide some final thoughts on what can be done going forward to maintain a healthy rail industry that can continue to serve the United States for generations to come.

II. HISTORY

A. AN INDUSTRY IS BORN

The first common carrier railroad in the United States, the Baltimore and Ohio Railroad, began construction in 1828 linking Baltimore and Harper's Ferry.[19] Other railroads soon developed, leading to more than 9,000 miles of track—albeit poorly connected—operating in 1850.[20] Governments, including the Federal government, incentivized and facilitated this railroad development through millions of acres of land grants, tax exemptions, stock subscriptions, loans, loan guarantees, and capital donations.[21]

As more lines developed throughout the United States, towns began to form around railroad routes, such as modern day population centers Denver and Atlanta.[22] The railroads connected older eastern cities with these new towns, which began America down the path to becoming a more cohesive, unified country.[23] Railroad development also opened up new land to resource exploitation, which energized the economy and helped the North win the Civil War.[24]

B. AN INDUSTRY IN CRISIS

The decades following the Civil War saw a boom in railroad development to the point of over expansion.[25] Railroads laid seventy thousand miles of track in the 1880s alone, and according to transportation scholar Paul Stephen Dempsey, "much of it was built hastily and carelessly" and

19. *Transportation: A Legal History*, *supra* note 17, at 246–47.

20. *Id.*; ASS'N OF AM. R.R.S, A SHORT HISTORY OF U.S. FREIGHT RAILROADS 1 (2012) [hereinafter SHORT HISTORY], *available at* https://www.aar.org/keyissues/Documents/Background-Papers/A-Short-History-of-US-Freight.pdf.

21. *Transportation: A Legal History*, *supra* note 17, at 248-51.

22. *Id.* at 247–48.

23. *Id.* at 251; SHORT HISTORY, *supra* note 19, at 1.

24. SHORT HISTORY, *supra* note 19, at 1.

25. *Transportation: A Legal History*, *supra* note 17, at 251.

required prompt rebuilding.[26]

This was also a period of fierce competition characterized by consolidation among railroads, excessive expansion, underbilling, rebates, and severe rate discrimination.[27] Rate wars and rate instability were common.[28] Often shorter hauls would cost more than longer hauls and shippers with no other option than the railroads would be made to subsidize the below-cost rates of other, more competitive routes so the railroad could squeeze out its competitors.[29] Once the competitors were gone, then the railroad would exercise monopoly pricing power.[30] Eventually, a few competitors, notably Cornelius Vanderbilt, used the rail network to dominate the nation's entire economy.[31] Politicians were frequently part of the corruption in this cutthroat period in the industry.[32] Dempsey explains, "The enormous concentrations of wealth and power stemming from railroading led to political corruption, as railroad entrepreneurs bribed legislators and judges, sold them stock at less than fair market value, and gave them free passes, so as to avoid taxation and regulation."[33] Labor unrest was common as well, with arduous working conditions precipitating the formation of unions, wage cuts triggering "one of the bloodiest battles in American labor history," and "the first great American industrial strike," which only ended when state militias and federal troops intervened after an entire week of railroad stoppage.[34]

At this point, much of the trackage in the U.S. was in bankruptcy and rates were falling fast.[35] The Panic of 1873 did nothing to help the matter. Ironically, the Panic was itself precipitated by the failure of James J. Hill and the Northern Pacific Railroad.[36]

The rate wars, discriminatory pricing, and corruption caused widespread dissatisfaction with the railroad system and created a situation ideal for regulation. The early regulatory movement was led by the Grangers, a farm interest group that coalesced around the shared enemy of high rates and discriminatory pricing and called for regulation to prevent these abuses.[37] State governments, fed up with corruption and financial misdealing, responded and were the first to attempt to regulate the

26. *Id.*
27. *Id.* at 252–53.
28. *Id.* at 253–55.
29. *Id.*
30. *Id.*
31. *Id.* at 252.
32. *Id.* at 255-56.
33. *Id.* at 255 (citations omitted).
34. *Id.* at 259–60.
35. *Id.* at 259.
36. *Id.* at 258–59.
37. *Id.* at 260–62.

rail industry.[38] While some states attempted to regulate rail directly by passing legislation restricting certain activities, others established expert independent commissions to implement a more comprehensive system of regulation.[39]

By this time, the federal government had taken notice of the problems plaguing the rail industry and the effect on the public welfare.[40] The Federal government created advisory groups to evaluate the condition of the industry and its practices, all of which recommended regulation to help curb the reported abuses.[41] These requests would soon be heeded.

C. The Birth of the Interstate Commerce Commission

The creation of the Interstate Commerce Commission in 1887 was a watershed in American history.[42] Congress, for the first time, delegated its power under Article I Section 8 of the Constitution to regulate interstate commerce to an independent expert regulatory agency.[43] The ICC would serve as the model of the independent agency, and in the opinion of some, of good government for the next seventy-five years.[44]

Early regulation focused on protecting shippers from railroad abuse and creating a national network through forced cooperation among railroads.[45] Congress empowered the agency to regulate the rates charged by railroads for interstate routes, require their publication, and prohibit rate discrimination, and freight and revenue pooling.[46] Health of the railroads was not a concern.[47]

Despite the initial vesting of considerable power in the ICC, rulings from the Supreme Court squelched much of that power, allowing many of the problems that prompted regulation to persist.[48] But Congress returned much of this power to the ICC through subsequent legislation in the early 20th Century.[49] One commentator noted that "by the early 1910s the ICC exercised dominant control over the railroad industry, es-

38. *Id.* at 262.
39. *Id.* at 262–63.
40. *Id.* at 264.
41. *Id.* at 264-65.
42. *Id.* at 265.
43. *Id.* at 265-66.
44. *Id.* at 314-15.
45. Robert L. Calhoun, *The Staggers Act and the New Railroad Regulation, in* Commercial Law and Practice Course Handbook Series, Deregulation of the Transportation Industry 599, 602 (Practising Law Institute ed. 1981).
46. *Transportation: A Legal History*, *supra* note 17, at 265.
47. *Id.*
48. *Id.* at 267–68.
49. *Id.* at 268–69; Bump, *supra* note 11, at 738.

pecially in the realm of rate regulation," and frequently prevented railroads from operating as efficiently as possible.[50] This caused railroads to be uncompetitive with each other and with other modes of transportation for nearly a century.[51]

D. Railroads in the 20th Century

During World War I, the struggling rail industry was nationalized to support the war effort, but was again privatized after the war.[52] Deferred maintenance and over-expanded networks led to a change in Congressional policy from "one of protecting the public from the market abuses of the transportation industry to one of preserving a healthy economic environment for common carriers."[53]

Pursuant to this goal, Congress increased ICC power over minimum rates, market entry and exit, mergers, and various other corporate and financial issues of railroads.[54] However, the Great Depression soon struck, which meant bankruptcy for many railroads and thousands of track miles.[55] As a result, the railroad industry became one of many industries subject to the Federal government's top down economic approach.[56] That approach did little to improve the health of the struggling industry.[57] Only once World War II struck did the railroads begin to gain strength.[58]

Railroads, like other sectors of the transportation industry, met the call to service during World War II and were crucial in the supply chain for the war effort.[59] This revitalized the industry and left it healthy for the first time in decades.[60] But this all came crashing down in the 1970s.[61] Competition from the emerging trucking industry and migration of industry from northeast to southeast hit the railroads hard.[62] Bankruptcies resulted in consolidations and government bailouts kept some railroads afloat.[63] Because of all of this turmoil and the general instability of the industry, the political tide turned against economic regulation.[64]

50. Bump, *supra* note 11, at 738.
51. *Id.* at 738-39.
52. *Transportation: A Legal History*, *supra* note 17, at 272.
53. *Id.*
54. *Id.* at 272–73.
55. *Id.* at 280.
56. *Id.*
57. *See id.* at 280–81.
58. *Id.* at 294.
59. *Id.*
60. *Id.*
61. *Id.* at 325–26.
62. *Id.* at 325.
63. *Id.*
64. *Id.* at 325–26.

E. On Track for Deregulation

Unlike the previous generation, "the generation that grew up in the 1960s and 1970s, grew up cynical, perceiving government to be a malignant sore."[65] Spurred by this younger generation, the movement that started as seeking regulatory reform soon became an all-out assault on the regulatory system.[66] This assault enjoyed bipartisan support and was not limited to the transportation industry.[67] A report issued by long serving democratic stalwart Senator Ted Kennedy "concluded that deregulation would allow pricing flexibility which would stimulate new innovative service offerings, increase industry health, allow passengers the range of price and service options dictated by consumer demand, enhance carrier productivity and efficiency, and result in a superior allocation of society's resources."[68] He asserted in a hearing, "Regulators all too often encourage or approve unreasonably high prices, inadequate service, and anticompetitive behavior. The cost of this regulation is always passed on to the consumer. And that cost is astronomical."[69] This new mood is further evidenced by Executive Order 12291 that mandated, among other things, regulatory impact analysis and review by the Office of Management and Budget and the newly created Office of Information and Regulatory Affairs.[70] Everyone was jumping on board the train. Deregulation was the next stop.

Passage of the Regional Rail Reorganization Act of 1973 (3R Act), the Rail Road Revitalization and Reform Act of 1976 (4R Act), and the Staggers Rail Act of 1980 marked the beginning of a decline in power for the ICC and foreshadowed its eventual demise.[71] These Acts abolished the Commission's power over ratemaking in situations where there was not an issue of market dominance, made it easier to abandon unprofitable routes, "partially preempted state jurisdiction over rail rates and operations", and "freed railroads to enter into contracts with shippers that established rates and services."[72] The Staggers Rail Act included a strong policy statement emphasizing the legislature's goal of "(1) reducing regulatory burdens, (2) favoring competition, (3) enhancing railroad earnings,

65. *Id.* at 329.

66. *Id.* at 328–30.

67. *Id.*; Simon Lazarus III, *Deregulation: The Role of the White House, in* Commercial Law and Practice Course Handbook Series, Deregulation of the Transportation Industry 115, 117 (Practicing Law Institute ed. 1981).

68. *Transportation: A Legal History*, *supra* note 17, at 331–32.

69. *Id.* at 331.

70. Exec. Order No. 12291, 3 C.F.R. 127 (1981), 46 Fed. Reg. 13193 (Feb. 17, 1981); *see also* Exec. Order No. 12044, 3 C.F.R. 152 (1978), 43 Fed. Reg. 12661 (Mar. 23, 1978).

71. *See Transportation: A Legal History*, *supra* note 17, at 326.

72. *Id.*

and (4) facilitating the rationalization of the rail network."[73] The findings section of the Staggers Act is also illuminating:

> The Congress hereby finds that (1) historically, railroads were the essential factor in the national transportation system; (2) the enactment of the Interstate Commerce Act was essential to prevent an abuse of monopoly power by railroads and to establish and maintain a national railroad network; (3) today, most transportation within the United States is competitive; (4) many of the Government regulations affecting railroads have become unnecessary and inefficient.[74]

Perhaps Staggers' most important provision restores the freedom to contract between carriers and shippers and use of differential pricing.[75]

Following this wave of deregulation, Presidents Carter and Reagan, both committed to deregulation, appointed ICC commissioners of similar mind.[76] As a result, the executive branch increasingly controlled this purportedly independent agency.[77] Still, the ICC enjoyed enough authority to do what many saw as considerable damage.[78] The "anomaly of de facto deregulation and de jure regulation" led to the sunsetting of the ICC in 1995.[79] However, the industry was not left without a regulatory agency; the Surface Transportation Board succeeded the ICC, although it does not enjoy nearly the same power.[80]

F. The Rail Industry Today

1. Chugging Right Along

Since deregulation, the freight rail industry has flourished. There are currently seven Class I railroads operating in the United States, with two dominating the west, two dominating the east, and three operating in the central United States.[81] Mergers reduced redundant capacity and railroads abandoned or divested themselves of unprofitable lines.[82] Class I railroads owned only 169,000 miles of track in 2003 compared to nearly 271,000 in 1980 and seems to have stabilized at 170,000.[83] Traffic density

73. Calhoun, *supra* note 45, at 608.

74. Staggers Rail Act of 1980, Pub. L. No. 96-448, § 2, 94 Stat. 1895 (codified as amended in scattered sections of 49 U.S.C.).

75. 49 U.S.C. § 10701; Ass'n of Am. R.R.s, The Impact of the Staggers Rail Act of 1980 (2012), *available at* https://www.aar.org/keyissues/Documents/Background-Papers/The-Impact-of-Staggers.pdf.

76. *Transportation: A Legal History*, *supra* note 17, at 333-34.

77. *Id.* at 348.

78. *Id.* at 348–49.

79. *Id.* at 350.

80. *Id.*; Bump, *supra* note 11, at 741.

81. CBO Report, *supra* note 12, at 4.

82. *Id.* at 8.

83. *Id.*

has also improved.[84] This has allowed freight railroads to employ more than 175,000 workers in well-paying jobs; the total average compensation for railroad workers including fringe benefits is $103,120, in comparison to just $66,000 for all other industries.[85] Freight railroads today carry 47% of intercity freight.[86]

Despite the companies having flourished, rates have markedly declined since 1980.[87] Rates in 2011 were 45% lower than in 1981, meaning a shipper could ship nearly twice as much today for the same price as 30 years ago.[88] "Railroads help their customers control their prices, saving them (and, ultimately, consumers) billions of dollars each year, enhancing the global competitiveness of U.S. goods, and improving our standard of living."[89] Average freight rail rates in the United States are the lowest in the world.[90] Lower rates mean that the things we use everyday are less expensive than they would be if rail were not involved.[91] If all of the freight currently transported on rail were to move by truck it would cost shippers an additional $69-$100 billion.[92] However, since rail rates are lower than trucking or airline rates, railroads only take in about 13% of intercity freight revenue.[93]

Rail is also a very safe industry. "From 1980 to 2012, the train accident rate fell 80 percent, the rail employee injury rate fell 85%, and the grade crossing collision rate fell 82%."[94] Railroads also have lower employee injury rates than trucking, inland water transportation, airlines, agriculture, mining, manufacturing, and construction.[95] They are constantly investing in research and development of new safety technologies and programs, such as track detectors to identify defects on passing rail cars and Operation Lifesaver to improve education about grade crossing safety.[96] Railroads also have an excellent record in transporting hazard-

84. *Id.*

85. ECONOMIC IMPACT, *supra* note 1, at 1.

86. *Id.*; CBO REPORT, *supra* note 12, at 3–4.

87. ECONOMIC IMPACT, *supra* note 1, at 2.

88. *Id.*

89. *Id.*

90. *Id.*at 1.; ASS'N OF AM. R.R.S, THE COST EFFECTIVENESS OF AMERICA'S FREIGHT RAILROADS 2 (2013) [hereinafter COST EFFECTIVENESS], *available at* https://www.aar.org/keyissues/Documents/Background-Papers/Cost-Effectiveness-of-Freight-RRs-October-2012.pdf.

91. COST EFFECTIVENESS, *supra* note 90, at 2.

92. *Id.*

93. CBO REPORT, *supra* note 12, at 4.

94. ASS'N OF AM. R.R.S, RAILROADS: MOVING AMERICA SAFELY 1 (2013) [hereinafter MOVING AMERICA SAFELY], *available at* https://www.aar.org/keyissues/Documents/Background-Papers/Railroads-Moving-America-Safely.pdf.

95. *Id.*

96. *Id.* at 2-3.

ous materials, as will be discussed in Part III.[97]

Freight transportation by rail also has positive ancillary effects that benefit more than just shippers. Railroads are among the most fuel-efficient methods of freight transportation, moving a ton of freight an average of 469 miles on a single gallon of fuel.[98] Rail is four times more fuel-efficient than trucks, and reduces highway congestion and greenhouse gas emissions by taking hundreds of trucks off the road per train.[99] Freight railroads are also constantly working to improve efficiency, which further reduces the environmental impact of transportation.[100] For example, the amount a freight train can carry was 59% higher in 2011 than it was in 1980.[101]

2. *Rough Track Ahead*

The most significant issue facing freight railroads today is the need for additional capacity. Since deregulation, rail traffic has nearly doubled, and before the recession, "railroads were carrying more freight than ever before."[102] A Federal Highway Administration report predicts that total freight transported will increase by 61% between 2010 and 2040.[103] Critical to meeting this increased demand is railroads' ability to generate profits sufficient to fund maintenance and investment in new equipment, technology, and infrastructure.[104] Since 1980, freight railroads have reinvested $480 billion of their own money in infrastructure and equipment, representing 40 cents of every dollar of revenue earned.[105] It is important to remember that this is all private money; railroads, unlike the other modes of freight transportation, must finance their own roadways.[106] For railroads to continue to expand and provide quality service to meet the needs of a growing society, they must be able to earn sufficient profits to fund major capital investments.[107] Railroads already spend five times

97. *Id.* at 3.

98. ECONOMIC IMPACT, *supra* note 1, at 2.

99. *Id.* (stating that the use of freight rail instead of other modes of transportation reduces greenhouse gas emissions by 75% and eliminates $101 billion a year of lost productivity that results from highway gridlock).

100. ASS'N OF AM. R.R.S, THE ENVIRONMENTAL BENEFITS OF MOVING FREIGHT BY RAIL, 1–2 (2012) [hereinafter ENVIRONMENTAL BENEFITS], *available at* https://www.aar.org/keyissues/Documents/Background-Papers/The-Environmental-Benefits-of-Rail.pdf.

101. *Id.* at 1.

102. ASS'N OF AM. R.R.S, RAIL EARNINGS TODAY PAY FOR CAPACITY AND SERVICE IMPROVEMENTS FOR TOMORROW 1 (2011) [hereinafter EARNINGS TODAY], *available at* https://www.aar.org/keyissues/Documents/Background-Papers/Rail-Earnings-Today.pdf.

103. *Id.* at 2.

104. AMERICA NEEDS MORE RAIL CAPACITY, *supra* note 12, at 2.

105. *Id.* at 1.

106. *Id.*

107. *Id.* at 1-2.

more revenue on capital than the average U.S. manufacturer.[108] Fortunately, railroads also enjoy return on equity and return on capital that is on par or slightly higher with the average among all other industries.[109] However, critics of freight rail allege that the corporations are earning excessive returns by exercising monopoly power and exploiting captive shippers.[110] This issue will be discussed in depth in a later section.

III. MANDATORY TRANSPORT OF TIH MATERIALS

Every day, Americans use products that were made using hazardous materials.[111] From the water we drink to the shampoo we use to the medications we take, hazardous substances are a basic production input in many of our most necessary products.[112] Toxic inhalation hazards (TIH) materials, a subset of hazardous materials, are dangerous hazardous materials because of their extreme toxicity and ability to travel through the air.[113] "Movement of TIH materials through the supply chain creates risk for shippers, rail carriers, and the general public that is not quantified and is not adequately reflected in the costs, leaving a significant portion of the risk as an externality."[114] However, "[w]ithout the movement of these hazardous materials, gas stations would close, crop yields would diminish, potable water prices would rise, and many manufacturing activities would come to a halt."[115]

A. WHAT ARE TIH MATERIALS?

Two of the most widely used and lethal TIH materials are chlorine and anhydrous ammonia.[116] Chlorine is used in water purification around the country and is transported as a liquid.[117] If it is released, it is a skin, eye, and respiratory irritant in small doses. In large doses, it will cause internal drowning as hydrochloric acid burns through tissue and the lungs

108. *Id.* at 2.

109. EARNINGS TODAY, *supra* note 102, at 2.

110. *See, e.g.*, Anthony Johnstone, *Captive Regulators, Captive Shippers: The Legacy of McCarty Farms*, 70 MONT. L. REV. 239, 239 (2009); Fritz R. Kahn, *Railing at Railroads*, 28 TRANS. L.J. 1, 1 (2000).

111. LEWIS M. BRANSCOMB, ET. AL., RAIL TRANSPORTATION OF TOXIC INHALATION HAZARDS, POLICY RESPONSES TO THE SAFETY AND SECURITY EXTERNALITY 3 (Harvard Kennedy School, Belfer Center for Science and International Affairs, Discussion Paper No. 2010-01, 2010), *available at* http://belfercenter.ksg.harvard.edu/files/Rail-Transportation-of-Toxic-Inhalation-Hazards-Final.pdf.

112. *Id.* at 4.

113. *Id.*

114. *Id.* at 3.

115. *Id.* at 4.

116. *Id.* at 4-5.

117. *Id.* at 9.

fill up with fluid.[118] Because chlorine gas is used so broadly, it frequently travels long hauls from the shipper to the recipient, which may be located in heavily populated areas.[119] The second of the most widely used TIH materials, anhydrous ammonia, is primarily used in fertilizer and will cause severe burns to moist parts of the body when released into the air in large quantities.[120]

The magnitude of the spread of these chemical clouds is highly unpredictable before an actual leak because of variables in terrain, source, meteorological conditions, quantity, time of day, proximity to dense populations, and duration.[121] Both chlorine and anhydrous ammonia leaks have resulted from derailments in the past, although in most cases the time of day, location, and weather conditions were favorable and a major disaster with mass casualty did not result.[122] Regardless, considering the amount of money relatively minor accidents have cost the rail carriers,[123] the liability for a major accident or terror attack on a train carrying these chemicals could easily reach into the billions of dollars.[124]

B. The Role of Railroads

Railroads are subject to what is commonly termed the common carrier obligation under 49 U.S.C. § 11101(a).[125] This obligation requires railroads to provide transportation to anyone upon reasonable request,[126] but it is unclear how far this duty extends. Put differently, what is a reasonable request? The railroads contend that the reasonableness inquiry is based on the totality of the circumstances and that the obligation to provide service is by no means absolute.[127] The industry cites cases for the proposition that they do not need to provide wasteful or excessive services and they must only take reasonable steps to provide service.[128] The shippers groups, however, interpret the common carrier obligation to mean that railroads must provide them service and should bear the liabil-

118. *Id.*

119. *Id.* at 11.

120. *Id.* at 9-10.

121. *Id.* at 10.

122. *See, e.g.*, Branscomb et al., *supra* note 111, at 16–21.

123. *See, e.g.*, Branscomb et al., *supra* note 111, at 16–23.

124. *Id.* at 15.

125. Ass'n of Am. R.R.s, Written Testimony for Surface Transportation Board Ex. Parte No. 667, Common Carrier Obligation of Railroads—Transportation of Hazardous Materials, 40-41 (2008) [hereinafter Ex Parte], *available at* http://www.stb.dot.gov/TransAndStatements.nsf/8740c718e33d774e85256dd500572ae5/0ba1235cd453bb6485257486005ea396?OpenDocument.

126. *Id.*

127. *Id.* at 170-171.

128. *Id.* at 35-36.

ity burden.[129] Rail has proven to be the safest and most expeditious way of transporting hazardous materials, which the government relies on as the primary justification for this imposition.[130] Additionally, shippers are happy with the current state of the law because it shields them from crushing liability and keeps their transportation rates low.[131]

Railroads are the only mode of transportation required to transport hazardous material, specifically TIH material.[132] Despite the known dangers of transporting TIH material, by law railroads are not permitted to pass on the enormous cost of liability insurance to the shippers of these chemicals.[133] Railroads are free to contract with shippers of TIH materials, but if the parties cannot come to an agreement in contract, the railroad must publish a common carrier rate, which the shipper can then challenge with the STB.[134] The STB then determines the reasonableness of the rate using calculations that "do not incorporate the unique handling and risk characteristics of the TIH traffic."[135]

The most troubling aspect of this obligation for the railroads is that they will be held liable for a leak that occurred through no fault of their own.[136] "Thus, the current regulatory scheme means that the risks of carrying a product that could cause billions of dollars in damage and impose potentially huge liability on a railway in the event of a release are rarely reflected adequately in rail transportation rates."[137] While these accidents are rare, it puts railroads in an untenable position where one major spill could send an entire railroad into bankruptcy, closing its network and costing thousands of jobs, which means fewer shippers would have access to rail.[138] Furthermore, even without an accident, the cost of insurance associated with transporting these materials is immense.[139] Since railroads are not allowed to pass this cost on to the shipper of these substances, all shippers serviced by the railroad are made to pay higher rates

129. BRANSCOMB ET AL., *supra* note 111, at 28.

130. *See* Zachary T. Abel, Note, *Getting Hazmat Transportation Back on Track: The Need for Hazmat Liability Reform for Rail Carriers*, 35 WM. & MARY ENVTL. L. & POL'Y REV. 973, 979 (2011).

131. *See* BRANSCOMB ET AL., *supra* note 111, at 15.

132. ASS'N OF AM. R.R.S, HAZMAT TRANSPORTATION BY RAIL: AN UNFAIR LIABILITY 1 (2011) [hereinafter HAZMAT TRANSPORTATION], *available at* https://www.aar.org/keyissues/Documents/Background-Papers/Hazmat-by-Rail.pdf.

133. *Id.* at 2.

134. BRANSCOMB ET AL., *supra* note 111, at 15.

135. *Id.*

136. HAZMAT TRANSPORTATION, *supra* note 132, at 1–2; *see* BRANSCOMB ET AL., *supra* note 111, at 22-23.

137. BRANSCOMB ET AL., *supra* note 111, at 15.

138. *See* HAZMAT TRANSPORTATION, *supra* note 132, at 1–2.

139. *Id.* at 2.

to offset the cost.[140] This makes railroads less competitive with other modes of transportation and skews the overall market dynamics for rail rates.[141]

C. Potential Solutions and Analysis

1. Risk Reduction

Risk reduction is an important element in the TIH transport debate. The FRA, the DOT, DHS, and other federal agencies have promulgated numerous regulations to try and reduce the risk.[142] For example, in 2009 following a derailment in Minot, North Dakota where a tank car was breached, the Pipeline and Hazardous Materials Safety Administration issued a final rule establishing new standards for tank cars that would make puncture or breach less likely.[143] Speed limits, hours of service restrictions, and mandatory rerouting have also been the subject of proposed or final rules.[144] The positive train control mandate, which will be discussed later in this Comment, is also partially a risk mitigation effort related to TIH transportation.[145]

2. The Externality Problem

In addition to risk management, commentators have proposed a number of ways to fix or reduce the externality problem associated with TIH material transportation. One commentator has suggested a Pigouvian tax may be the simplest way to do this.[146] "Pigouvian taxes work when an increase in the price of any existing good, service, or input into a production process leads to a decrease in its use."[147] However, the desired result cannot be assured because the success of this approach depends on the availability of good substitutes, which may not currently exist for certain chemicals.[148] Another approach would have the government fund research and development for safer alternatives to these dangerous chemicals.[149] This is also an imperfect solution since money cannot guarantee a positive outcome, and also because this type of investment may not produce the desired results.[150]

140. *See* Abel, *supra* note 130, at 1000.
141. *See id.*; *see also* Hazmat Transportation, *supra* note 132, at 1–2.
142. *See generally* Branscomb et al., *supra* note 111, at 36–61.
143. Branscomb et al., *supra* note 111, at 37–40.
144. *Id.* at 40-42, 45, 48–59.
145. *Id.* at 47.
146. *Id.* at 31.
147. *Id.*
148. *Id.*
149. *Id.*
150. *See id.* at 31-32.

Some scholars and railroad industry organizations have suggested that an insurance system similar to that established for nuclear facilities in the Price-Anderson Act would be a good solution to this problem.[151] The Price-Anderson Act requires reactor licensees to carry a minimum coverage of private insurance and contribute to a secondary industry insurance pool that will be used only if the private insurance is insufficient to cover the cost of the incident.[152] Other industries have similar systems, such as the Oil Spill Liability Trust Fund, the FDIC, and the Terrorism Risk Insurance system.[153] However, these systems cannot be perfectly translated to the rail industry because of the nature of the market and the relatively small number of firms that could contribute to the secondary insurance pool.[154] As an ultimate solution, one commentator suggested, "If the TIH risk could be quantified and incorporated into the price of TIH products and their transportation, this would allow stakeholders to make economically rational decisions concerning production, use, and shipping of TIH chemicals."[155]

3. *Analysis*

All of the risk mitigation solutions are based on the assumption that the market will not solve the TIH transport problem on its own. As the party with the most to lose, railroads were already taking steps to prevent accidents involving TIH. They were researching the most technologically advanced, efficient dispatch systems, and tank car designs prior to regulations mandating such behavior.[156] They were educating local law enforcement and emergency personnel on how to best and most quickly prevent human casualty and contain the spread of the toxic substance in case of a leak.[157] They were even working on developing systems similar to PTC to neutralize the effect of human error.[158] Perhaps most significantly, railroads were encouraging water treatment facilities and other users of TIH materials to use less of these chemicals or phase out their use altogether.[159] Railroads were also encouraging suppliers of TIH materials to locate closer to the consumer or were encouraging the consumer to pro-

151. *See id.* at 33.

152. *Id.*

153. *Id.* at 34–35.

154. *See id.* at 65.

155. *Id.* at 29.

156. *See, e.g.*, BRANSCOMB ET AL., *supra* note 111, at 38, 47, 52–53; *see also* HAZMAT TRANSPORTATION, *supra* note 132, at 2–3.

157. BRANSCOMB ET AL., *supra* note 111, at 52; *see* HAZMAT TRANSPORTATION, *supra* note 132, at 2.

158. BRANSCOMB ET AL., *supra* note 111, at 47.

159. *See id.* at 59-60, 63.

duce their own TIH materials.[160] All of this happened without government interference or regulation to the same effect, which proves that the regulations were largely unnecessary and duplicative.[161]

A fact that seems to be lost on the legislators, who purport to know about these issues, is that railroads have no interest in facilitating derailments or other accidents.[162] Rather, there is much to be lost in the form of lost freight and equipment, inefficiency, loss of life and injuries, bad press, and expensive lawsuits.[163] Obviously then, railroads have a very serious interest in preventing accidents. Findings indicate that railroads are constantly and generously reinvesting in their own infrastructure and working to improve safety generally and for TIH transportation.[164] 2012 was the safest year ever for freight rail.[165] This regulation therefore: 1) wastes time and resources to mandate something that railroads are already doing voluntarily; 2) harms efforts to improve safety by forcing railroads to divert resources from infrastructure maintenance, improvement, and research and development to various mandates by the government such as positive train control, which is an immature, unproven technology with costs that greatly outweigh the benefit; and 3) prevents the market from working and making it economically unfavorable to produce or use TIH materials.[166]

Regardless, because accidents will still happen despite the railroads' best efforts, a Price-Anderson like system for railroads is one option to protect them from ruinous liability. However, such a system does nothing to shift the costs from the railroads that are forced to shoulder this burden against their will to the producers and consumers who are responsible for risk creation.[167] Shifting this burden is essential to the solution of the TIH transport problem because it eliminates the externality, thus incentivizing producers and consumers to take steps that reduce their potential liability, such as investing in research and development for safer substitute chemicals.

The two most viable ways to accomplish this cost-shift are a Price-Anderson-like system for the *chemical* companies or allowing railroads to raise rates for shipment of TIH materials to their market cost. Allowing

160. *See id.* at 57–58, 63; HAZMAT TRANSPORTATION, *supra* note 132, at 3.

161. *See, e.g.*, BRANSCOMB ET AL, *supra* note 111, at 38, 47, 57-58.

162. *See* Clean Railroads Act of 2008, Pub. L. No. 110-432, § 102, 122 Stat. 4848 (2008).

163. *See id.* at 4966.

164. HAZMAT TRANSPORTATION, *supra* note 132, at 2–3; EARNINGS TODAY, *supra* note 102, at 1.

165. MOVING AMERICA SAFELY, *supra* note 94, at 1.

166. *See* BRANSCOMB ET AL., *supra* note 111, at 48; HAZMAT TRANSPORTATION, *supra* note 132, at 3.

167. *See* BRANSCOMB ET AL., *supra* note 111, at 33-34; HAZMAT TRANSPORTATION, *supra* note 132, at 3.

railroads to demand indemnity for accidents is also, theoretically, a viable option. However, while shippers of TIH enjoy rate protection there is no incentive for them to contract to indemnify.

The Price-Anderson option and the indemnity option both leave the door open for years of lawsuits between the railroad and the shipper over whose negligence actually caused the accident. Thus, the best solution would be to allow railroads to raise rates on TIH shipments to actually reflect the total cost of that service. Hopefully, this would allow railroads to afford plenty of insurance protection without passing that cost onto non-TIH shippers.

IV. Positive Train Control

In September 2008, a Union Pacific freight train collided head-on with a Metrolink passenger train when the train operator for Metrolink was texting.[168] This horrific crash caused 25 deaths and hundreds of injuries, as well $200 million in settlement costs.[169] Just over a month later, Congress enacted the Rail Safety Improvement Act of 2008 (RSIA), which, in part, mandated the implementation of positive train control (PTC) systems on all main line routes that carry passenger trains or TIH materials.[170] As part of the RSIA, railroads are required to create a plan for the implementation of a positive train control system and implement that plan by December 31, 2015.[171]

Though rail carriers have worked hard to meet the mandated requirements, the fact that the technology is so new creates a significant barrier to implementation. .[172] Also, costs are high as compared to the negligible benefit.[173] In the fifteen years leading up to the RISA, separate study groups found that implementation of such technology, if even possible, was not justified based on the cost-benefit analysis.[174] Nonetheless, Congress mandated the implementation of PTC and left the details to the Department of Transportation.[175] Over four years have passed, and sig-

168. Kevin Freking, *Federal Panel Takes Up Commuter Train Wreck*, San Diego Union-Tribune (Jan. 21, 2010, 8:12 AM), http://web.utsandiego.com/news/2010/Jan/21/federal-panel-takes-up-commuter-train-wreck/; Brian Watt, *Chatsworth crash survivors, victims learn their share of $200 million settlement*, O89.3 KPCC: Southern California Public Radio (July 14, 2011, 3:52 PM) http://www.scpr.org/news/2011/07/14/27740/chatsworth-crash-survivors-victims-learn-their-sha/.

169. Freking, *supra* note 168.

170. Rail Safety Improvement Act of 2008 § 104, 49 U.S.C. §20157(a) (2008).

171. *Id.*

172. Positive Train Control, *supra* note 17, at 2–3.

173. *See id.*

174. Brief of Petitioner at 10-12, Ass'n of Am. R.R. v. Dep't of Transp., (D.C. Cir. 2011) (Nos. 10-1198, 10-1308) 2011 WL 758646 at *10.

175. *See* 49 U.S.C. § 20157(g).

nificant obstacles still lie in the way of implementing PTC.[176] Thanks to the original congressional mandate and Congress' inaction in revising the mandate, the railroads and the FRA together are grappling with how to implement a system that is predicted to cost the Class I railroads over $10 billion initially and millions, maybe billions, of dollars in yearly maintenance for less than a billion dollars in benefit.[177]

A. WHAT IS POSITIVE TRAIN CONTROL?

As defined in the RISA, positive train control is "a system designed to prevent train to-train collisions, over-speed derailments, incursions into established work zone limits, and the movement of a train through a switch left in the wrong position."[178] The FRA describes it as an "integrated command, control, communications, and information system for controlling train movements with safety, security, precision, and efficiency."[179] Positive train control is a predictive technology unlike the technologies the railroads currently embrace, which are reactive.[180] One creator of PTC systems asserts:

> A PTC system can track the location and speed of a train more accurately than was previously possible, provide movement authorities to trains based on this precise information, and enforce speeds and limits or authority, as necessary. By providing better tracking of train location and speed, PTC increases operational efficiency, allows higher track capacity, enhances crew safety, and results in a safer environment for personnel working on the track.[181]

Another advocate explains that PTC provides valuable information such as, "status of approaching signals, the position of approaching switches, speed limits at approaching curves and other reduced-speed locations, speed restrictions at approaching crossings and speed restrictions

176. *See generally* JEFFREY C. PETERS & JOHN FRITTELLI, CONG. RESEARCH SERV., R42637, POSITIVE TRAIN CONTROL (PTC): OVERVIEW AND POLICY ISSUES 4, 11-15 (2012) [hereinafter CRS REPORT], *available at* http://www.purdue.edu/research/gpri/publications/documents/Peters_CRS_Report.pdf.

177. *Id.* at 9; Jeff Berman, *Despite Challenges, AAR Remains Committed to Positive Train Control*, LOGISTICS MANAGEMENT (Nov. 20, 2012), http://www.logisticsmgmt.com/article/despite_challenges_aar_remains_committed_to_positive_train_control/blog.

178. 49 U.S.C. § 20157(i)(3).

179. *Positive Train Control*, FED. R.R. ADMIN., http://www.fra.dot.gov/Page/P0152 (last visited Feb. 10, 2013).

180. JIM BAKER, POSITIVE TRAIN CONTROL: WHITE PAPER – MAY 2012, 7 (2012) [hereinafter JCTWC], *available at* http://transitwireless.org/wp-content/uploads/2012/05/PTC_whitepaper_may2012_ver2.pdf.

181. *Positive Train Control*, ARINC, http://www.arinc.com/sectors/transportation/rail/control_systems/positive_train_ctrl..html (last visited Feb. 10, 2013).

at areas where work is being performed on or near the tracks."[182]

A PTC system typically involves four key components: back office, wayside, locomotive, and maintenance of way.[183] As the Joint Council on Transit Wireless Communications explains, "[t]he Back Office typically comprises a computer-aided dispatching system, and a PTC server and database storing information about tracks, train consists, work zones, and speed restrictions."[184] Then, "[t]he Back Office issues movement authorities to Locomotives based on aspect information received from PTC-enabled Wayside signals and switches, location information received from trains, and work status from Maintenance of Way vehicles and personnel."[185] Since a train engineer is already monitoring this information through other mediums, the purpose of PTC is to serve as a safety net for human error.[186] While there are similarities among the systems, the statute left railroads free to adopt whatever PTC system they choose, except for the interoperability requirement.[187]

B. Criticisms and Analysis

Despite the purported safety and business benefits of PTC systems, doubts about their utility remain.[188] The cost of implementation is estimated at $10 billion for all affected railroads, with expected annual maintenance costs of $850 million.[189] It is the largest federal mandate ever for America's rail system and provides only $1 in benefit for every $20 spent on the system.[190] Furthermore, the anticipated safety benefits are between only $440 million and $674 million over twenty years.[191] PTC preventable accidents account for less than 2% of the approximately 2000 railroad derailments or collisions every year.[192]

Considering the yearly infrastructure investments of the railroads, PTC implementation will eat up the entire capital spending budget of

182. *An Introduction to Positive Train Control*, Metrolink, http://www.metrolinktrains.com/agency/page/title/ptc (last visited Feb. 10, 2013).

183. JCTWC, *supra* note 180, at 7.

184. *Id.*

185. *Id.*

186. *See id.* at 4.

187. CRS Report, *supra* note 176, at 4, 11.

188. *See id.* at 9-10; Positive Train Control, *supra* note 17, at 2-4.

189. CRS Report, *supra* note 176, at 9; *see also* Brief of Petitioner, *supra* note 174, at 7-8 ("[T]he FRA has described the costs of installing PTC as 'tremendous' and 'prohibitive' . . .") (quoting Positive Train Control Systems, 75 Fed. Reg. 2598-01 (Jan. 15, 2010) (to be codified at 49 C.F.R. pts. 229, 234-36)).

190. Jessica Meyers, *Railroads, GOP try to delay crash prevention plan*, Politico (Apr. 24, 2012, 10:39 PM), http://www.politico.com/news/stories/0412/75547..html.

191. Berman, *supra* note 177; *see also* Brief of Petitioner, *supra* note 174, at 1.

192. Brief of Petitioner, *supra* note 173, at 9 (citing transmittal letter for 2004 FRA report, FRA-2008-0132-0054, *available at* www.fra.dot.gov/downloads/safety/ ptc_ben_cost_report.pdf).

railroads in a single year.[193] Perhaps even more significant is the impact this will have on state and local budgets, which will likely finance these costs for commuter rail.[194] Southeastern Pennsylvania Transportation Authority Chief Engineer Jeff Knueppel laments, "Next year, we won't have a single substation or bridge project under construction, and we usually have one or both every year."[195] Knueppel goes on to say, "We're putting all our eggs in one basket . . ."[196] The business and social benefits of PTC are uncertain at best and only accrue as the result of full computer-based train control and not PTC alone.[197] "[T]he FRA has acknowledged that such benefits are too speculative and uncertain to predict with a meaningful degree of accuracy."[198]

Part of the requirements of the RSIA was that the PTC systems be completely interoperable,[199] meaning that any PTC equipped locomotive be able to operate on any PTC equipped track, even that of a competitor.[200] This complicates the PTC issue by rendering any pre-RSIA research or implementation done by railroads obsolete since it may not be compatible with or adaptable to the system of a competing railroad.[201] A Kansas City Southern Railroad official explained, "PTC is not a single application or technology that can be neatly packaged, implemented and managed. Instead, it is a diverse collection of radically different technologies, deployed within vastly different operational environments and subsystems, affecting many different functional areas spanning a wide range of geographic locations."[202] The mandate reduces a railroad's ability to choose the best system to meet the needs of its network.[203] It also functionally requires that each railroad update its system at the same rate

193. CRS REPORT, *supra* note 176, at 9.

194. *Id.*

195. Jeff Stagl, *Train Control in a Commuter-Rail Context: Uncertainty Still Clouds Positive Train Control Implementation Efforts*, PROGRESSIVE RAILROADING (July 2012), http://www.progressiverailroading.com/ptc/article/Train-control-in-a-commuterndashrail-context-Uncertainty-still-clouds-positive-train-control-implementation-efforts—31629# [hereinafter *Train Control in a Commuter-Rail Context*].

196. *Id.*

197. CRS REPORT, *supra* note 176, at 10.

198. Brief of Petitioner, *supra* note 174, at 9.

199. CRS REPORT, *supra* note 176, at 11.

200. *Id.*

201. *Id.*; *see also Train Control in a Commuter-Rail Context*, *supra* note 194 (explaining that some passenger railroads have begun implementing PTC at great cost without full coordination among operating systems).

202. Jeff Stagl, *PTC: Railroads, suppliers still have a ways to go to meet the 2015 positive train control mandate*, PROGRESSIVE RAILROADING (August 2010) [hereinafter *Railroads, Suppliers*], http://www.progressiverailroading.com/ptc/article/PTC-Railroads-suppliers-still-have-a-ways-to-go-to-meet-the-2015-positive-train-control-mandate—24053.

203. *See* CRS REPORT, *supra* note 176, at 11-12 (explaining the need for uniformity in PTC systems to facilitate interoperability of locomotives and tracks owed by different railroads).

despite differences in financial strength among various classes of railroads.[204] PTC also prevents new railroads from entering the market.[205] Moreover, PTC is projected to add an additional $50,000 per mile to the cost of installing new rail lines, around $55,000 for each locomotive, and additional operating and maintenance costs.[206]

Another issue concerns the spectrum through which the communication between the various onboard, wayside, back office, and maintenance of way computers would occur.[207] For efficiency, many railroads, including Amtrak, have decided to use bands between 217 and 222MHz; however, licenses for these bands have already been issued in FCC auctions, so any allocation to the railroads would require a forced transfer from those customers.[208] The existing owners of these bands have suggested that the railroads should have to lease the bands from them, or investigate other bandwidths, both of which would be costly for the railroads.[209] An additional problem is that the bandwidth sought by railroads, while fine for most rural and some urban environments, may not contain the necessary capacity in high-density urban areas.[210]

All of the foregoing analysis of PTC rests on the assumption that standard PTC technology exists. However, that may not be the case.[211] The FRA acknowledges that PTC projects are currently in the planning and testing phases.[212] One railroad industry expert explained, "The technology is immature at best and unproven at worst. Systems have not been tested with all the components working together or in a field environment."[213] Thus, it is important to consider not only the cost of the system itself and its maintenance, but also the time and money it will take to perfect the system. Unfortunately, because of the RSIA, testing will be on a large scale at full cost, rather than implemented in small segments to test the technology.[214] If it turns out that the system is a failure, the railroads will be out all of the costs for this unfunded mandate.

While railroads have invested for years in research for similar systems, there is no guarantee that the development companies are far enough along in the development process to deliver.[215] *Progressive Rail-*

204. *See id.* at 13-14.
205. *Id.* at 13.
206. *Id.*
207. *Id.* at 12.
208. *Id.* at 13.
209. *See id.*
210. JCTWC, *supra* note 180, at 12.
211. Brief of the Petitioner, *supra* note 174, at 6.
212. FED. R.R. ADMIN., *supra* note 179.
213. *Railroads, Suppliers*, *supra* note 202.
214. *See id.*
215. *See Train Control in a Commuter-Rail Context*, *supra* note 195.

roading asserted in 2010, "A few technological developments that could occur by year's end will barely scratch the surface of all the equipment and components that need to be designed and tested."[216] A Union Pacific executive echoed that sentiment: "Three years into the project, significant software, hardware and systems development work still needs to be achieved."[217] Brian Tynan, director of government relations at the American Public Transportation Association, explains, "If this was a plug-and-play scenario, I don't think anyone would have an issue, [b]ut we're not pulling existing technology off the shelf at Best Buy."[218] Security concerns also arise with this new system since PTC databases can be corrupted.[219] With all of these issues, it seems unwise to enforce this deadline.

No government carrot or stick can prevent all railroad collisions; all this interference will do is create a sophisticated game of Whack-a-Mole where as soon as the government takes care of one issue, another resultant issue arises. Lawmakers as a group appear to be ignorant about the realities of the rail industry. Most know only what industry groups tell them, which gives them an incomplete picture of the issues. Moreover, even if our current legislators had a full and meaningful grasp on the issues, as a group of 535 people from disparate backgrounds - the majority of whom are not engineers nor have they ever worked for or with a railroad[220] - they cannot pretend to have a well-formed solution that considers every aspect of the issue and every possible outcome. Depending on one's view of government, he may believe that someone in the federal government has the necessary expertise and authority to make such technical policy. Regardless, it is unlikely that the legislators themselves have such necessary expertise to actually understand the consequences of the requirements they put in place.

This lack of expertise, combined with the proclivity of legislators to act hastily in the wake of a tragedy, breeds poorly thought-out, knee-jerk legislation that may seem like a good idea in the short term but proves costly, imprudent, and unnecessary once the dust has settled. Case in point is the Metrolink-Union Pacific collision in California in 2008.

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216. *Railroads, Suppliers*, *supra* note 202.

217. Jeff Stagl, *Positive train control: FRA expects to ramp up PTC regulatory efforts as railroads amp up implementation work*, PROGRESSIVE RAILROADING (Feb. 2012), http://www.progressiverailroading.com/c_s/article/Positive-train-control-FRA-expects-to-ramp-up-PTC-regulatory-efforts-as-railroads-amp-up-implementation-work—29872# [hereinafter *FRA Expects*].

218. Meyers, *supra* note 190.

219. Brief of Petitioner, *supra* note 174, at 8.

220. *See* JENNIFER E. MANNING, CONG. RESEARCH SERV., R42964, MEMBERSHIP OF THE 113TH CONGRESS: A PROFILE 1, 4 (2013), *available at* https://www.fas.org/sgp/crs/misc/R42964.pdf.

Twenty-five people died and more than one hundred were injured.[221] Slightly over a month later, Congress passed the RSIA of 2008, which contained the positive train control mandate.[222] Years later, the realities of this mandate are still becoming apparent.[223]

In the last session of Congress, a bill was introduced in both houses that would have delayed the deadline for PTC implementation.[224] H.R. 7 would have delayed the deadline until 2020, while S. 1813 would have allowed for 1 year delays that could be renewed until 2018.[225] Bearing in mind the haste in which the RSIA was passed, it is advisable to delay the deadline so that Congress has ample time to consider the wisdom of its actions or, alternatively, the railroads have more time to test this technology.[226]

The experience of one passenger rail system demonstrates why the deadline should be extended. The Los Angeles transit agency Metrolink, which anticipated being significantly ahead of schedule by finishing its implementation of PTC at the close of 2012, did not meet that goal because of the unavailability of technology and radio spectrum, procurement delays, resource shortages, and interoperability issues.[227] Unexpected delays are bound to arise, and restricting railroads to such a tight time frame is an idea bound for failure. In a report issued August 2012, the FRA reported similar concerns: "[B]oth freight and passenger railroads have encountered significant technical and programmatic issues that make accomplishment of these plans questionable."[228] The report continued, "Given the current state of development and availability of the required hardware and software, along with deployment considerations, most railroads will likely not be able to complete full RSIA-required implementations of PTC by December 31, 2015," and even partial deployment depends on resolution of significant issues.[229] In fact, "The reality is [that] the deadline is unrealistic."[230]

Moving forward, Congress should pass legislation overturning the positive train control mandate. Even though railroads have already invested huge sums of money in this unproven technology, there is no sense compounding this by continuing to throw money down the PTC drain.

221. Freking, *supra* note 168.
222. Berman, *supra* note 177.
223. *See generally* CRS REPORT, *supra* note 176, at 11–15; *Railroads, Suppliers*, *supra* note 202.
224. CRS REPORT, *supra* note 176, at 15-16.
225. *Id.* at 15.
226. *Id.* at 16.
227. *FRA Expects*, *supra* note 217.
228. Berman, *supra* note 177.
229. *Id.*
230. Meyers, *supra* note 190.

Railroads have proven that they are concerned about safety. For example, 2012 was the safest year ever for freight rail.[231] This is not the case because of government regulation; it is the case because railroads have a very strong vested interest in preventing accidents, which cost them money, time, customers, and reputation. Regulation is not the way to increase safety. Regulation is the way to sap time and resources from railroads that could be spent more wisely. Railroads, and even administrators, are the experts on how to best solve the rail industry's problems and improve safety. Congress should stay out of it

V. Captive Shippers

A. The Problem

"Captive shipper is an STB term of art describing a goods shipper lacking economic alternatives to the single railroad serving it, those alternatives being either intramodal . . . or intermodal . . . competition."[232] "[T]he STB may intervene in the rate set by a railroad to a particular shipper if three conditions are met: (1) the rate exceeds 180% of the variable cost of carrying the traffic; (2) a 'qualitative' STB assessment determines that there is no feasible, economic transportation alternative for the traffic involved; and (3) the rate is found to cross-subsidize other traffic on the railroad."[233] While it is difficult to estimate just how many shippers are truly captive, the STB has estimated the number to be around 35%.[234] Consumers United for Rail Equity (CURE), a group united behind the interest of allegedly captive shippers,[235] explains that captive customers are usually producers of bulk commodities such as coal, grain, and lumber.[236]

On one side of the captive shipper debate are the shippers. CURE asserts that rail-dependent shippers have no competitive options, no antitrust protection, and an STB that is falling down on the job, leaving them with "monopoly rates and . . . unreliable service."[237] The organization claims that the railroad companies are enjoying record profits and stock prices, while transportation costs "have skyrocketed," forcing some com-

231. Moving America Safely, *supra* note 94, at 1.

232. Russell Pittman, *The Economics of Railroad "Captive Shipper" Legislation*, 62 Admin. L. Rev. 919, 921 (2010).

233. *Id.* at 921–22.

234. *Rail-Dependent Shippers*, Consumers United for Rail Equity, http://www.railcure.org/about/rail-dependent-shipper/ (last visited Nov. 20, 2013, 5:48 PM).

235. *About CURE*, Consumers United for Rail Equity, http://www.railcure.org/about/ (last visited Nov. 18, 2013, 5:52 PM).

236. *Rail-Dependent Shippers*, *supra* note 234.

237. *Why Captive Rail Is A Problem*, Consumers United for Rail Equity, http://www.railcure.org/about/why-captive-rail-is-a-problem/ (last visited Nov. 20, 2013, 5:56 PM).

panies to consider shipping jobs overseas.[238] To support its claims of anticompetitive behavior, CURE lists a burdensome rate challenge process and rail consolidations and track abandonment as factors that have led to higher rates and railroad monopoly power.[239]

On the other side of the issue are the railroads, which argue that shippers wield considerable power over railroads.[240] The AAR contends that, "Most shippers (including most of those served by only one railroad) do not need regulatory protection because they can negotiate competitive rates for rail service."[241] The group attributes the leverage shippers exercise to inter- and intramodal competition, product competition, geographic competition, strategic planning of plant locations along particular rail routes, and technological advancement that causes goods formerly shipped by railroads to become obsolete.[242] "The intensity of the competition the Carriers face means that . . . [they are not] guaranteed any particular piece of that [freight transportation] pie. They will have to earn it by providing transportation service more safely, efficiently, and cost effectively than their customers can obtain from someone else."[243] One Union Pacific executive testified that the company loses and must replace over 10% of its business each year.[244] Furthermore, "[f]or most industries, the cost of rail transportation is very low compared to total industry revenue."[245]

The rail industry also claims that the shippers' lobby distorts the actual impact of rail consolidations.[246] Critics claim that in 1980 there were

238. *Id.*

239. *The Issue: Issue History,* CONSUMERS UNITED FOR RAIL EQUITY, http://www.railcure.org/the-issue/issue-history/ (last visited Nov. 20, 2013, 6:10 PM).

240. *Shipper Leverage Over Freight Railroads,* ASS'N AM. R.RS. (June 2010), [hereinafter *Shipper Leverage]* http://web.archive.org/web/20111024073540/http://www.aar.org/~/media/aar/Background-Papers/Shipper-Leverage-over-Freight.ashx [hereinafter *Shipper Leverage*] (accessed by searching for AAR Background Papers in the Internet Archive index).

241. *Id.* at 1.

242. *Id.* at 1-2.

243. Carriers' Exhibit No. 7: Report of Dr. Robert E. Gallamore & Mr. John T. Gray at 29, Nat'l Carriers' Conference Comm. v. Rail Labor Bargaining Coal., N.M.B. No. A-13569, Emergency Board No. 243 (Oct. 10, 2011), *available at* http://www.pennfedbmwe.org/docs/National_Agreements/Negotiations/PEB243/PEB243_Carriers_Ex7_Gallamore_Gray.pdf (from homepage search "PEB 243"; click on "PEB 243" hyperlink; follow "Carrier Submissions" hyperlink; the follow "Exhibit #7" hyperlink).

244. *Competition in the Railroad Industry: Hearing on Ex Parte No. 705 Before the Surface Transp. Bd.*, at 3 (June 22, 2011) (statement of Jim Young, Chairman, Union Pacific Railroad), *available at* http://www.uprr.com/newsinfo/attachments/stb/young-testimony_062211.pdf.

245. *Shipper Leverage, supra* note 240, at 2.

246. *Compare Mergers Have Led to More Efficient, Lower Cost U.S. Freight Railroads,* ASS'N AM. R.RS. 1 (Apr. 2013), https://www.aar.org/keyissues/Documents/Background-Papers/Mergers-US-Freight-RR.pdf [hereinafter *Mergers*] (contending that rail consolidation has improved efficiency, reduced rates, and opened new markets for freight customers), *with* CONSUMERS

forty Class I railroads, and today there are only four.[247] AAR claims this is incorrect for two reasons.[248] First, many of the railroads being counted in 1980 as Class I would not be counted as Class I by today's standard, which has been adjusted upwards by hundreds of millions of dollars.[249] Others soon went into bankruptcy, and still others were counted as individual railroads even though their operations had been unified.[250] Second, there are seven Class I railroads today, not four.[251] AAR also points out that mergers made rail transportation more efficient by eliminating the need for traffic interchange between railroads and excess capacity.[252] Furthermore, "[t]he vast majority of rail customer facilities have always been served by only one railroad. In other words, a world in which multiple railroads chase every or nearly every customer has never existed."[253] Finally, says AAR, mergers have not reduced intra-railroad modal competition since regulators either rejected or imposed mitigating conditions on any merger because deregulation threated to do so.[254] Thus, "shippers that had multiple railroads serving them prior to the merger still had multiple-railroad service following the merger."[255]

B. Analysis

The four proposals that have gained the most traction to address the captive shipper problem are: 1) requiring railroads to set bottleneck rates; 2) eliminating paper barriers; 3) eliminating railroad antitrust exemptions; and 4) requiring railroads to interchange with other railroads.[256] One commentator put forth the radical idea of requiring open access on the nation's entire freight and passenger network.[257] Each of these ideas will be analyzed in turn.

Among shippers, there is a widespread misunderstanding of the railroad's place in the economy and society. Railroads are not a benevolent enterprise. They have shareholders and boards just like every other com-

United for Rail Equity, *supra* note 239 (contending that rail consolidation has resulted in unreliable service, unreasonable rates, and inadequate system capacity).

247. *Mergers*, *supra* note 246, at 2.

248. *Id.* at 2-3.

249. *Id.* at 3.

250. *Id.*

251. *Id.* at 2-3.

252. *Id.* at 1.

253. *Id* at 2.

254. *Id.*

255. *Id.*

256. *See* Bump, *supra* note 11, at 748-751; *see* Salvatore Massa, *Injecting Competition in the Railroad Industry Through Access*, 27 Transp. L.J. 1, 40 (2000); Mina Kimes, *Railroads: Cartel or Free Market Success Story?*, CNN Money (Sept. 13, 2011, 5:00 AM), http://features.blogs.fortune.cnn.com/2011/09/13/showdown-on-the-railroad/.

257. Massa, *supra* note 256, at 31, 33.

pany and have a fiduciary duty to maximize profits.[258] This naturally involves charging the rate the market will bear. Admittedly the railroad industry does require some safeguards against monopoly power, but those safeguards exist in appeal to the STB. Those shippers and commentators who claim the STB is beholden to the rail industry and does not use a fair method to compute the rate ceiling seem to base their criticisms more on "fairness" than any real economic rationale or proof of gouging, and they gloss over the existence of intermodal competition.[259]

Shippers enjoy freedom *from* contract just as they possess freedom *to* contract, and are free to take their business to trucks or take advantage of a voluntary interchange agreement between the railroads. The simple fact is that the railroad wants the shippers' business, and the only way to get that business is to work with shippers on rates and terms or service or, alternatively, to use the STB to set the rate. The shippers, by virtue of the common carrier obligation of railroads, are in an equal if not better bargaining position than railroads. If bargaining fails, the shippers can always appeal to the STB. By utilizing the STB process, the shipper will secure a below market price requiring the railroad and its other shippers to absorb the difference.

Another misunderstanding of the shippers and, more frighteningly, of legislators, is that railroads are exempt from antitrust laws.[260] True, railroads are exempt from oversight by the Department of Justice and other government agencies that typically monitor monopoly power in a few limited areas.[261] However, those limited areas are nevertheless subject to STB oversight. .[262] Shippers complain because the railroad industry has consolidated significantly since 1980.[263] But consolidation was largely a result of stiff competition and the poor financial health of many firms that made mergers necessary to stay afloat.[264] Furthermore, consolidation is not proof or even evidence of nefarious intention by the railroads; that may just be what the market will bear. One author estimates that there are 5000 grain farmers in Montana.[265] While this seems substantial in isolation, when considered with train capacity and traffic den-

258. *See, e.g.*, *Company Overview of Burlington Northern Santa Fe, LLC*, BLOOMBERG BUSINESSWEEK (Nov. 18, 2013, 5:51 PM), http://investing.businessweek.com/research/stocks/private/board.asp?privcapId=257198; *Directors and Officers*, UNION PAC. CORP., http://www.up.com/investors/direct_officers.s.html (last visited Nov. 18, 2013, 5:59 PM).

259. *See, e.g.*, CONSUMERS UNITED FOR RAIL EQUITY, *supra* note 239.

260. *See About CURE*, *supra* note 235; Kimes, *supra* note 256.

261. *Maintain Railroad Antitrust Laws*, ASS'N AM. RAILROADS 1 (Apr. 2013), https://www.aar.org/keyissues/Documents/Background-Papers/Maintain-RR-Antitrust-Laws.pdf.

262. *Id.*

263. *See Mergers*, *supra* note 246, at 1.

264. *See* SHORT HISTORY, *supra* note 20, at 3-4.

265. Johnstone, *supra* note 110, at 239.

sity it quickly becomes manageable for one Class I railroad.[266] Considering also that it costs approximately $1 million to $3 million per mile of new track,[267] the upside to expansion must be significant, certain, and long term to be worth a second railroads' investment, and that is rarely the case in these allegedly captive situations.

Now shippers are pushing for the government to force railroads to create artificial competition by mandating that railroads issue bottleneck rates, disallow paper barriers, and enforce mandatory reciprocal switching and trackage rights.[268] This is a bad idea for three reasons. First, railroads can contract to grant trackage rights on their own. All a regulatory mandate like this will do is interfere with the market, thus skewing rates by restricting the freedom of contract. Such a restriction will have unintended consequences and is unnecessary. Second, prohibiting paper barriers will decrease the locations getting rail service by making it more efficient to abandon a rail route than to sell off portions of track to a group that wants to form a shortline or regional railroad. This will either put those shippers out of business, or put more trucks on the highway, meaning more traffic, more pollution, and a loss of market share for railroads. Finally, forcing railroads to allow their competitors to use their track to reach customers disincentivizes the individual railroads from maintaining their own infrastructure. Why would railroad A maintain its track for the use of railroad B if it receives no contribution from B? It also raises liability issues in the case of a derailment and would, theoretically, give a railroad with no track of its own the ability to compete with the other railroads by acting as a parasite on their track.

To reduce the captive shipper problem down to its very essence, shippers served by only one railroad do not want to pay the market price for transportation of their goods. They perceive these rates to be unfair. In the quest for lower rates shippers allege monopoly power, high prices, and obscene profits, but fail to back up these claims with numbers. Any numbers they do provide are misleading at best. Ironically, some of the very companies that are making these complaints are themselves often vilified for making obscene profits or charging monopoly rates.[269]

The railroad's standpoint on the issue, however, is supported by strong empirical evidence.[270] Prices have been declining over the last 30 years and railroad revenues do not stand out as high in the larger econ-

266. *See id.; see Mergers*, *supra* note 246, at 2.

267. CRS REPORT, *supra* note 176, at 13.

268. Bump, *supra* note 11, at 748-51.

269. *See* Kimes, *supra* note 256; *see CURE Members*, CONSUMERS UNITED FOR RAIL EQUITY, http://www.railcure.org/about/members/ (last visited Nov. 19, 2013, 9:10 PM).

270. *See generally* GAO STATEMENT, *supra* note 12; CBO REPORT, *supra* note 12; *Mergers*, *supra* note 246, at 1-2.

omy.[271] Most significantly, railroads need every dollar of revenue they can get to maintain and expand their infrastructure to meet the growing capacity needs of the country. Rail is an extremely capital intense industry, and if railroads cannot attract investors by showing healthy returns, the long term effect will be decline or government funding, neither of which are good options.[272] Thus, the current level of regulation in this area should be maintained, or even reduced to give greater weight in the calculation of the rate ceiling to geographic and product competition.

VI. CONCLUSION

America's freight rail network is the backbone of our economy. Harm to the rail industry means harm to the economy. Since deregulation in the 1970s and 1980s, railroads have worked to maximize the efficiency of their operations, which has resulted in lower rates and unprecedented health of the industry. All indications show that America's demand for freight rail transport will only increase in the coming decades, meaning that maintenance and expansion will become a main focus of the industry. However, to maintain and expand, railroads need capital. Mandatory TIH transportation, the positive train control mandate, and the captive shipper problem all demonstrate how government overreach threatens to derail the industry by robbing the railroads of adequate capital. Whether through forcing railroads to "bet the company" by transporting TIH materials at below market prices and with full liability, mandating major resource diversion for unproven technology as a knee-jerk reaction to a tragedy, or failing to recognize that the antithetical interests of shippers and railroads in terms of rates will lead shippers to complain about rate gouging even where none exists, government intervention in the rail industry only harms the industry and the American economy. To ensure the long-term health of the freight rail industry, legislators need to stop looking for new ways to regulate and start looking for ways to roll back regulations that inhibit the railroads from running their businesses in the most efficient and safest way possible.

271. ECONOMIC IMPACT, *supra* note 2, at 2; *The Cost Effectiveness of America's Freight railroads*, ASS'N AM. RAILROADS 1-3 (Apr. 2013), https://www.aar.org/keyissues/Documents/Background-Papers/Cost-Effectiveness-of-Freight-RRs-October-2012.pdf.

272. *Railroad Infrastructure Investment*, ASS'N AM. RAILROADS, https://www.aar.org/keyissues/Pages/Infrastructure-Investment.aspx#.Uov9ZWSglF8 (last visited Nov. 20, 2013, 9:18pm).