Summary
of
Class II and Class III Railroad Capital Needs and Funding Sources

Federal Railroad Administration

A Report to Congress

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EXECUTIVE SUMMARY

The report of the Committee on Appropriations of the House of Representatives (H.R. Report No. 110-238) for the U.S. Department of Transportation directed the Secretary of Transportation (Secretary) to submit a report to the House and Senate Committees on Appropriations that summarizes the capital investment needs of Class II and Class III railroads and the extent to which such needs are met by sources other than the Federal government. The Secretary delegated this responsibility to the Administrator of the Federal Railroad Administration (FRA).

This *Summary of Class II and Class III Railroad Capital Needs and Funding Sources* marks the fifth time that this issue has been reviewed since FRA delivered to Congress in January 1993 the policy study titled *Small Railroad Investment Goals and Financial Options*. In 2002, the Upper Great Plains Transportation Institute (UGPTI, a University Transportation Center located at North Dakota State University) undertook a similar study. In addition, in 1999, the American Association of State Highway and Transportation Officials (AASHTO) and in 2000, ZETA-TECH Associates each undertook an assessment of the capital needs of Class II and Class III railroads for the American Short Line and Regional Railroad Association (ASLRRA).[1]

Class II and Class III railroads (collectively referred to as "short line railroads") play a critical role in originating and terminating goods transported by rail. Particularly important is the role that they play in providing rail service to rural America and their link to the Class I rail network. To understand the concerns with the financial and operating health of this segment of the rail industry, it is necessary to take a broad view and revisit the intent of the Staggers Rail Act of 1980 (Staggers). Staggers encouraged the sale of light-density lines, rather than their abandonment, in order to preserve rail service. In the decade following Staggers, more than 250 short line railroads were formed, adding to the approximately 220 such railroads that existed as of 1980. For Congress, policy makers, State and local governments, and other stakeholders, there was a concern at that time that this segment of the rail industry would not be able to generate sufficient traffic and revenues to sustain operations. Now, 34 years after Staggers and two decades after the growth in Class II and Class III railroads reached its zenith, this segment of the rail industry has survived. Today, there are more than 560 short line railroads operating in the U.S.

Aside from accessing funds in the private capital markets to invest in infrastructure and maintain facilities, this segment of the rail industry has relied on State and Federal programs. Many States, with the goal of ensuring transportation options and maintaining a balanced transportation system, have robust programs to assist short line carriers. At the Federal level, Class II and Class III railroads can access funding (loans) through the Railroad Rehabilitation and Improvement Financing (RRIF) program. A new offering at the Federal level is the Transportation

[1] For a complete discussion and references to each study, see section titled "Previous Studies" (pp. 6-9) of this report.

Infrastructure Generating Economic Recovery (TIGER) competitive grants program, where funding was initially provided under the American Recovery and Reinvestment Act of 2009 and later under subsequent appropriations. This has been very popular among short line railroads. The "Section 45G" tax credit has also been another option, when available.

The most significant change that this segment of the rail industry has seen is the consolidation of Class III carriers under the control of holding companies. Today, there are 27 holding companies that control nearly 270 small railroads. This development has changed the relationship between the railroad and the banker and has also changed the lending calculus. Holding companies have railroads that encompass geographic and commodity diversity and have essentially reduced the banker's risk of not being repaid. Holding companies have also taken a sophisticated approach to fund infrastructure projects and have relied on multiple combinations of funding from all programs available. However, as these holding companies explained, there are still significant investments to be made, particularly the upgrade of track to handle 286,000-pound rail cars as well as the repair and replacement of bridges. The holding companies also noted that the funding that is available often must be thinly spread among all carriers under their control in order to meet current and ongoing needs.

Independent Class III railroads (i.e., Class III railroads not under the control of holding companies) also face these same investment challenges and the need to access capital to upgrade track and bridges for heavier rail cars as well as maintain their systems.

A 2013 survey conducted by UGPTI confirms that there continue to be significant capital needs among Class II and Class III carriers. In conjunction with the American Short Line and Regional Railroad Association and the Association of American Railroads, UGPTI surveyed 470 short line railroads and received useful responses from 115. Those responding reported that slightly more than $599 million would be required among them to meet current service levels and expected growth. When asked about their estimated needs over the next five years for infrastructure spending and equipment, they reported a collective need of over $1.2 billion with 80 percent of these investment needs going to infrastructure. While it is difficult to determine the spending needs for this entire segment of the industry, FRA estimates, based upon the survey results, a current overall need of about $1.6 billion while future needs are $5.3 billion, bringing total investment needs to about $6.9 billion. The railroads also reported that they anticipated funding most of their expenses out of cash flow, bank loans, and the array of programs offered by State and Federal governments.[2]

The rise of holding companies followed by greater access and options to the private capital markets is not a panacea to short line railroads' access to capital to meet their investment needs. The holding companies interviewed stated that a mix of multiple funding sources is required.

[2] A complete discussion of the survey is provided in the section of this report titled UGPTI 2013 Survey Results (pp. 21-24).

With the emergence of the holding companies, FRA also asked the bankers, holding companies, and financial experts whether the trend toward short line consolidation under holding companies would continue. Each believed that it would, but only where there was value or potential value in the acquisition. But continued consolidation also creates concerns going forward. That concern lies with the independent railroad that is considered a poor performer. For those that are unable to sustain their systems due to very low traffic densities and unclear prospects for growth, the States where they operate, or a combination of States where they operate, will need to undertake an assessment of those operations and determine the public benefits that continued rail service brings. This will require good planning on the part of the State, which should be conducted through State Railroad Advisory Committees and the development of State Rail Plans and State Freight Plans. Also, some light-density lines that were once thought to be unsustainable have seen new surges in traffic due to natural resource discoveries. It is fortunate that Staggers encouraged the sale of these lines rather than their abandonment. It can be difficult to return abandoned rail lines or corridors to service.

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INTRODUCTION

As part of the 2008 Department of Transportation appropriations, the House Committee on Appropriations report (Report 110-238), explaining the appropriations bill, directed the Secretary of Transportation to submit a report to the House and Senate Committees on Appropriations that summarizes the capital investment needs of the Class II and Class III railroads and the extent to which such needs are being met by sources other than the Federal Government. While the direction to undertake the report is encompassed under "Committee Recommendations," no appropriation for the study and report was provided.

This report marks the fifth time that this issue has been reviewed since the Federal Railroad Administration (FRA) delivered to Congress in January 1993 the policy study titled *Small Railroad Investment Goals and Financial Options*. That study's findings led to the creation of the Railroad Rehabilitation and Improvement Financing (RRIF) loan and loan guarantee program.

In 2002, the Upper Great Plains Transportation Institute (UGPTI—a University Transportation Center located at North Dakota State University)—undertook a similar study by "piggybacking" off of the surveys and structure of the FRA study.[3] While the results were not delivered to Congress, they were, nonetheless, used by the American Short Line and Regional Railroad Association (ASLRRA) to bolster continued Congressional support for the RRIF program.

In 1999, the American Association of State Highway and Transportation Officials (AASHTO) and, in 2000, ZETA-TECH Associates each undertook an assessment of the capital needs of Class II and Class III railroads for the ASLRRA through railroad surveys.

In 2013, UGPTI undertook a new assessment of this segment of the rail industry by working with the ASLRRA and the Association of American Railroads (AAR) to survey many individual Class II and Class III railroads. Over the years, UGPTI has been a source of data and analyses of this segment of the railroad industry and their work has enabled Federal, State, and local governments, as well as the private sector, to better understand the financial and operating statistics of short line railroads. In the past, UGPTI's efforts have provided data benchmarks as the private capital markets have undertaken consideration of lending to smaller railroads. In conjunction with the ASLRRA and the AAR, UGPTI undertook its present analysis of Class II and Class III railroads and is in the process of completing its report, which will be forthcoming. To complete this report, FRA relied upon UGPTI's analysis to summarize the capital needs of the Class II and Class III railroads.

[3] UGPTI is a University Transportation Center so designated by the U.S. Department of Transportation's Office of the Assistant Secretary for Research and Technology.

To determine how these capital needs were being met by sources other than the Federal government, FRA also turned to industry and governmental sources such as financial experts that have worked with this segment of the railroad industry, the banking community, short line railroads and short line railroad holding companies, states with state rail programs, organizations such as AASHTO's Organization's Standing Committee on Rail Transportation, and the ASLRRA. Part of the assessment was conducted through interviews and publications from the various organizations and State websites.

CLASS II AND CLASS III RAILROADS

Class II and Class III railroads are defined by the Surface Transportation Board (STB) based upon the level of revenues earned in a year. The STB has economic regulatory jurisdiction over the railroad industry. For the most recent year of classification, 2013, a Class II railroad is defined as a carrier having revenues between $37.4 million and $467.0 million. A Class III railroad is one with yearly operating revenues below $37.4 million.[4] A railroad is reclassified when its revenues are above or below the threshold for three consecutive years. While Class II and Class III railroads are not required to report yearly revenue data to the STB, it is, nonetheless, the responsibility of any of these railroads to report to the STB if there is a need for reclassification.

Class II and Class III railroads play an important role in meeting the transportation needs of the Nation. Class II carriers have been referred to as regional railroads. They are much larger than most Class IIIs and often operate across several States. Class III railroads are often referred to as short line railroads suggesting a small enterprise generating less traffic and revenues than their Class II counterparts, while serving a small geographic area. Regardless of the size of the operation, these carriers fill a critical need by connecting their customers to the Class I rail network. In many cases, Class III railroads provide rural communities with an important transportation link to the national rail network to move goods both in and out of these areas by rail rather than over the highways by truck. This report will refer to Class II and Class III railroads collectively as short line or small railroads.

The number of small railroads has more than doubled since the Staggers Rail Act of 1980 (Staggers), from about 220 companies in 1980 to more than 540 today. Due to changes in the law which revised line sale mechanisms, many of the light density lines of the large Class I

[4] See Federal Register, Volume 79, No. 111, June 10, 2014, p. 33257. The STB defines class of railroad based on revenue thresholds adjusted for inflation. For 2013, the most recent available, Class I carriers had revenues of $467.0 million or more. Class II carriers have revenues ranging from $37.4 million to under $467.0 million. Class III carriers have revenues under $37.4 million. All switching and terminal carriers regardless of revenues are Class III carriers. (See 49 CFR 1201.1-1) Amtrak is considered a Class I carrier, but its requirement to file annual reports was waived by the STB's predecessor, the Interstate Commerce Commission.

carriers were sold in the years following Staggers rather than abandoned.[5] This approach maintained viable rail service for many communities, and today, short line carriers serve as a gathering network that feeds traffic to the high volume trunk line core system. About 18 percent of Class I carload freight originates or terminates on short line railroads.[6]

Once line sales were complete and the Class I systems were rationalized, the number of smaller railroads has been stable and their numbers have held in the 530 to 560 range, although the number of Class II railroads has decreased (see below). Since the line sales began after Staggers, an increasing number of short line railroads have fallen under the umbrella of holding companies.

For 2012, the AAR noted that 27 holding companies controlled nearly 270 short lines. This is around 50 percent of the total number of short line carriers. Of these holding companies, Genesee and Wyoming controls the largest number of short lines. Following its acquisition of Rail America in late 2012, Genesee and Wyoming now controls slightly over 100 railroads in the U.S.[7] The Class I railroads control 11 and state and local governments control 26. Shippers control 55.[8] While control of small railroads is constantly in flux, FRA estimates that there are around 200 railroads that remain independently owned and come under no controlling ownership.

To understand the size of these carriers and gain some perspective of how they fit into the STB revenue classification, it is best to show revenues, traffic, and employees of each of these classes of carriers.

There are seven Class I freight railroads operating in the U.S. Class I railroads report detailed financial and operating statistics to the STB in what is called the R1 report. These data are compiled each year by the AAR and published in the *Analysis of Class I Railroads*. As noted earlier, Class IIs and Class IIIs do not report data to the STB. Table 1 shows the size of each segment of the industry. The AAR defines three types of carriers—Class Is, Regional, and Local. The Regional railroad definition encompasses revenue and miles-of-road owned criteria, and is most closely associated with the STB Class II railroad, but not exactly. As noted from Table 1, the AAR lists 21 Regional railroads. Using STB's revenue threshold for Class II railroads, FRA determined that there are around 10 Class II railroads in the U.S. This was determined from available data, and interviews with the carriers. This number is down

[5] Pub. L. No. 96-448, Staggers Rail Act of 1980, Section 402 (94 Stat. 1941-1942), enacted Oct. 14, 1980. Also, see Staggers Rail Act of 1980, *Report of the Committee on Conference on S. 1946 to Reform the Economic Regulation of Railroads, and Other Purposes*, September 29, 1980, p. 125.

[6] This result is from an analysis of Table 6 (p. 15) and Table 7 (p. 16) of American Short Line and Regional Railroad Association, *Short Line Regional Railroad Facts and Figures*, 2012, and the Association of American Railroads, Railroad Facts, 2011 Edition showing Class I carloads originated for 2010. The year 2010 was used because that is the base year in the ASLRRA tables.

[7] Association of American Railroads, *Railroad Ten-Year Trends, 2003-2012*, July 2014, pp. 169-178.

[8] American Short Line and Regional Railroad Association, *Short Line Regional Railroad Facts and Figures*, 2012 Edition, p. 11.

significantly from 2000 when Class IIs numbered around 30 railroads. In part, this has been the result of Class I railroads acquiring these carriers.

Table 1. Railroad Profiles[9]

Railroad	Number	Miles of Road	Employees	Revenues ($ bil)
Class I	7	95,264	163,464	$67.6
Regional	21	10,355	5,507	1.4
Local	546	32,858	12,293	2.6
Total	574	138,477	181,264	$71.6

PAST CLASS II AND CLASS III RAILROAD INVESTMENT

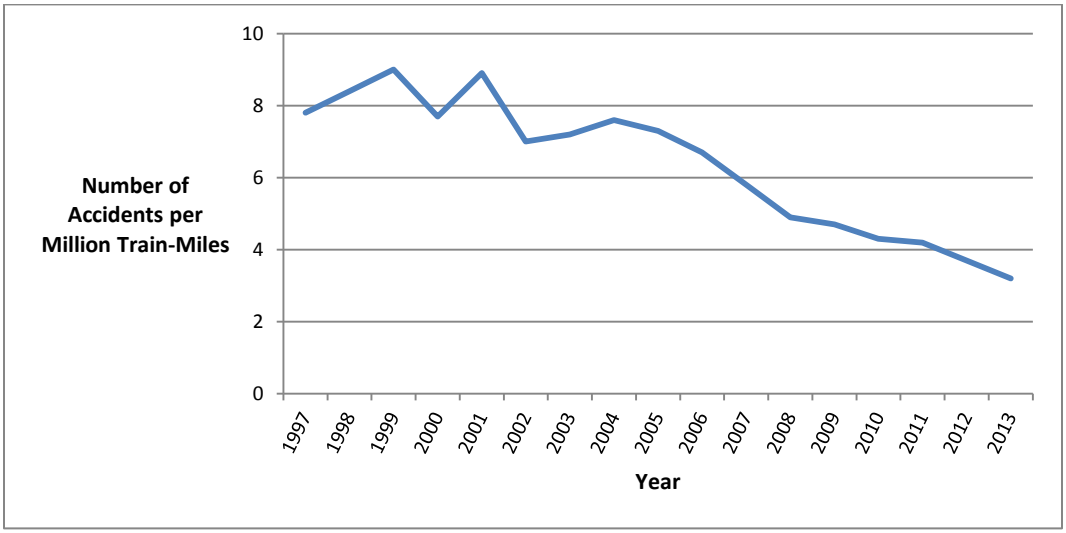
It is difficult to assess whether the level of spending for maintenance and infrastructure improvements that the Class II and Class III railroads have undertaken over the past several years has been adequate to maintain a state of good repair and to meet the needs of their customers. Since data for these annual spending levels and on the state of good repair of the rail infrastructure are not publicly available, FRA looked to safety data as well as an assessment that the ASLRRA undertook in their annual report regarding the total route miles capable of handling 286,000-pound weight cars.

Class II and Class III Railroad Safety Trend

From FRA safety data, an examination of reported track related accidents was undertaken. Examining safety trends can serve as a proxy for infrastructure investment and maintenance under the premise that if the track and related infrastructure are not maintained, then the number of accidents should increase. Figure 1 below shows accident rates for 1997 through 2013. On average, the number of accidents per million train-miles has been in the 7 to 9 range from 1997 through 2004. Then, short line railroad accidents per million train-miles operated, declines steadily from 2004 through 2013 as the absolute number of infrastructure accidents declined by 44 percent from 318 accidents in 2004 to 177 accidents in 2013. If this segment of the rail industry had deferred investments and maintenance spending over this period, then the accident rate would be expected to increase. The positive trend, illustrated by a decreasing accident rate, suggests improving maintenance and investment, but should, nonetheless, be monitored closely.

[9] Association of American Railroads, *Railroad Facts, 2013 Edition*, p. 3.

Figure 1. Short Line Railroads: Infrastructure Related Accidents per Million Train-Miles (1997 to 2013)[10]



Capability to Handle 286,000-Pound Axle Weights

During the late 1980s and 1990s, in an attempt to improve efficiency, several Class I railroads undertook studies of the economics of increased car weights and axle loads for cars carrying coal, grain, iron ore, intermodal containers, and other commodities. These studies, which indicated that an increase in car weight could lower costs, resulted in the industry moving from a standard maximum car weight of 263,000 lbs. to one of 286,000 lbs. A more robust track structure is required to handle these heavier cars. Many short lines did not have track and bridges capable of handling the heavier loads.

The ASLRRA reported in its 2012 Edition of *Short Line and Regional Railroads Facts and Figures* that from 2002 to 2010, the total number of miles of road that could handle 286,000-pound cars went from slightly over 18,000 miles to 30,000 miles, a two-thirds increase in route-miles with this capability. For the same period, total route-miles for short lines went from approximately 46,500 to around 52,650. ASLRRA reported that in 2002, 39 percent of the route-miles could handle the heavier cars and in 2010 this had increased to 57 percent. While it is difficult to account for total capital expenditures for this segment of the rail industry, the increase in the number of route-miles capable of handling 286,000-pound cars can serve as an additional proxy for ongoing capital investment. With the ability of track to handle heavier cars, bridges must also be able to handle these loads.

[10] FRA Accident Incident Data, 1997-2013.

In sum, using the positive trends in FRA safety data since 2006 and the increase in the number of route-miles capable of handling heavier cars, it is possible to make a general assessment regarding Class II and Class III railroad investment over the years. Even though exact spending numbers are not available, these data points and trends illustrate that these carriers in aggregate are maintaining their systems and enhancing infrastructure to meet their customer needs.

PREVIOUS STUDIES

FRA's 1993 Study

In January 1993, FRA submitted to Congress the policy study titled *Small Railroad Investment Goals and Financial Options*. At that time, Congress requested a detailed assessment of the need and demand by Class II and Class III railroads for Federal loan guarantees. Congress directed FRA to survey these carriers to determine the present and potential need for loan guarantees to fund rehabilitation and improvement to facilities and equipment, acquisition of facilities and equipment, and refinancing of existing debt.[11]

In its assessment and report to Congress, FRA found that, unlike large Class I railroads and some Class IIs, Class III railroads, even those that are credit worthy, face unique problems and difficulties in securing financing.[12] At the time of the study, the banking community reported that putting together a loan package required a significant amount of time. They reported that structuring a loan for a railroad was much different than one for a warehouse or an office building.[13] Their concerns with making railroad loans were associated, principally, with infrastructure loans.[14] The study found that securing loans for equipment was much more accessible because equipment served as collateral.[15] Another significant impediment to securing financing was the finding that there was an absence of available financial and operating data with which to assess small carriers. If such data were available, it could provide the banking community a better understanding of this segment of the rail industry and offer the opportunity to benchmark its performance.[16]

As noted, the study found that the capital markets had difficulty with infrastructure funding because railroad real estate, the right-of-way, has few, if any, alternative uses that can generate revenues to repay the loan. In addition, railroad assets, which include track materials and equipment, are long-lived and require long-term financing, something the private capital markets

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[11] Pub. L. No. 101-322, Amtrak Reauthorization and Improvement Act of 1990, Section 9 (104 Stat. 297), enacted July 6, 1990.
[12] Federal Railroad Administration, *Small Railroad Investment Goals and Financial Options*, January 1993, p. 27 and 43.
[13] *Id.*, p. 27.
[14] *Id.*, p. 31.
[15] *Id.*, p. 32.
[16] *Id.*, p. 32.

were unwilling to provide. The terms of the loans bankers were willing to offer were generally much shorter than the productive life of the asset for which financing was requested. The asset's life might reach 15 to 30 years while the banks would typically offer a term of not more than 8 years.[17]

Equipment loans covering locomotives and rolling stock were the easiest for this class of railroads to obtain. In addition to banks, there were a whole array of finance companies and manufacturers that were willing to provide credit or leasing. Underlying equipment financing is the realization that, unlike the infrastructure, equipment can be easily sold and moved to another carrier, ensuring the lender a continuing return.[18]

Finally, the study found that the unique regulatory environment of the railroad industry, including certain bankruptcy constraints, discourages lenders.[19] With regard to minimum loan amounts, the study found that, where lenders were willing to make a loan, they would only pursue those in excess of $5 million or, at least, those sufficiently large to cover the costs of making such loans.[20]

In sum, the study found that for a small railroad, infrastructure loans were difficult to obtain but equipment loans are readily available.

With regard to the capital needs of short line railroads, the 118 railroads that responded to the survey and were interested in loan guarantees said they would need to spend $1.77 billion to maintain and upgrade their systems for existing traffic and expected growth over a five-year period. The data showed that they would be able to fund internally or finance $1.33 billion, leaving $440 million in projects unfunded.[21] As noted previously, the projects difficult to fund were infrastructure projects, which were for track and bridges on Class III railroads. Class II carriers fared better in meeting their needs, but track also was the area where it was difficult to obtain funding. Overall, the study found that Class II and Class III railroads would be able to meet 75 percent of their investment goals. When examining Class IIIs only, the data showed that they would be able to meet only 50 percent of these goals.[22]

UGPTI 2002 Study

In 2002, UGPTI completed its study of Class II and Class III railroads titled *Small Railroads—Investment Needs, Financial Options, and Public Benefits*. Like the FRA study 10 years earlier,

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[17] *Id*., pp. 30-31.
[18] *Id*., p. 32.
[19] *Id*., p. 31. Section 1163 of the U.S. Bankruptcy Code requires the appointment of a trustee of the estate of the debtor. The trustee may continue interim rail operation or choose to file for abandonment, or attempt to sell the railroad's assets for either continued rail use or salvage value, or restructure the railroad so that it may continue operations as a reorganized entity.
[20] *Id*., p. 28.
[21] *Id*., p. vi.
[22] This result was not reported in the 1993 study. That data was revisited to make this assessment.

this report examined the capital needs of the short line railroad industry, how those loans were structured, the public benefits that short line railroads provide, and the relationship of short line railroads to the statutory responsibility of the Secretary of Transportation.[23]

UGPTI found that there were several banks that would make loans of as low as $300,000, which was well below the minimum threshold of $5 million that FRA identified. UGPTI, however, noted that two of the six banks that it interviewed still had a minimum loan requirement of $5 million.[24]

Typical loan terms have not changed. Banks still looked at a term of around 8 years at the maximum. Loans for rolling stock, including cars and locomotives, were still the easiest to obtain. The term on these loans can go up to 15-years.[25]

Similarly, as the FRA study found, infrastructure loans for track and bridges were the most difficult to obtain, and if available, came with a term of not more than 8-years.[26] While the banking community understood that the life of such assets extends well beyond eight years, they explained to UGPTI that the uncertainty around future traffic flows represents an area of risk. As FRA noted in 1993, UGPTI also found that if traffic is lost, the inability to liquidate the property severely limits loan recovery. [27] UGPTI asked lenders to rank the barriers that they perceived as the most significant to making a railroad loan. At the top of the list was the inability to liquidate railroad property.[28]

During the time that UGPTI made its assessment, the short line rail industry was concerned about being able to service its customers as the rail industry moved away from the 263,000-pound railcar standard to a 286,000-pound railcar. For short line railroads handling grain from rural areas, the inability to switch cars on and off the Class I network at the new standard meant that business would be lost and with it revenues. It also meant that some traffic that moved by rail would now shift to truck to travel over the highways to the nearest facility that could handle the new 286,000-pound standard. The study demonstrated the public benefits that short line railroads bring include "reduced transportation costs to shippers, increased local business volume, reduced highway maintenance costs, decreased highway user costs, and increased economic development opportunities."[29] While the concern around infrastructure to handle 286,000-pound cars still exists, the study concluded that substantial capital investment would be needed to upgrade lines to handle these cars.[30]

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[23] UGPTI, North Dakota State University, *Small Railroads – Investment Needs Financial Options, and Public Benefits*, September 2002, pp. 2-3.
[24] *Id*., pp. 12-13.
[25] *Id*., Table 2, p. 13.
[26] *Id*., pp. 15-16.
[27] *Id*., pp. 15.
[28] *Id*., Table 4, p. 17.
[29] *Id*., pp. 73.
[30] *Id*., pp. 72.

Other Studies (AASHTO and ZETA-TECH)

AASHTO: In 1999, AASHTO conducted a survey of 185 short line railroads to assess their investments needs for upgrading track to handle 286,000-pound cars, their investment needs over the next 10 years, and the extent to which they believed that they would be able to finance these needs through private funding.

Based on the survey, AASHTO reported that it cost on average $92,000 per mile for track rehabilitation and construction to respond to deferred maintenance, the need to meet safety requirements, and the need to upgrade track to handle 286,000 pound cars. As a consequence, total track rehabilitation costs were estimated for the 185 railroads to be $1.7 billion. For bridge strengthening and repairs, AASHTO estimated total costs of nearly $520 million. For the 185 railroads surveyed, AASHTO estimated total capital investment needs (infrastructure and equipment) of nearly $3 billion. When expanded to the industry, AASHTO estimated that total capital investment needs were in the range of $7.9 billion to $11.8 billion. Survey respondents believed that they would be able to fund 23 percent of their 10-year investment needs through private funding, but would require $6.1 billion to $9.5 billion from other sources.

ZETA-TECH: In 2000, ZETA-TECH Associates undertook an analysis to quantify the investment that would be required by Class II and Class III railroad to upgrade their systems to handle 286,000-pound cars. The study was funded jointly by FRA and ASLRRA. To determine the capital expenditures needed, the study looked at the amount of track that met the minimum characteristics to handle the heavier cars, how much did not, and the infrastructure that would need to be replaced and outfitted to bring this segment of the industry up to an acceptable standard.[31]

To understand the need, ZETA-TECH surveyed a representative sample of the industry composed of 10 percent of the firms and 10 percent of the route miles. This represented 55 railroads and 5,000 route miles. Responses were received from 46 railroads operating slightly over 4,700 track miles.[32] ZETA-TECH also contacted a number of carriers outside of the survey to determine their needs.[33]

Overall, ZETA-TECH estimated that it would take $6.9 billion to bring the Class II and Class III railroads up to the 286,000-pound standard. The two principal components, rail and bridges, were estimated to cost $3.8 billion and $1.8 billion, respectively.[34]

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[31] ZETA-TECH Associates, Inc., *An Estimation of the Investment in Track and Structures Needed to Handle 286,000 lb Rail Cars*, p. 9. ZETA-TECH Associates also produced a shorter paper that summarized this study. The paper was authored by Resor, Zarembski and Patel and titled *An Estimation of the Investment in Track and Structures Needed to Handle 129,844 kg (286,000 lb.) Rail Cars on Short Line Railroads*.
[32] *Id.*, p. 7
[33] *Id*., p. 9.
[34] *Id*., Table A, p. 2.

FEDERAL AND STATE FUNDING PROGRAMS

While there may be a concern with funding availability for short line railroads, both the Federal and State governments provide a limited number of financial support programs for this segment of the railroad industry. These programs recognize the difficulties that small carriers may have in accessing the private capital markets and are designed to ensure that transportation needs are met through a balanced approach to infrastructure development and preservation. These programs also anticipate that there will be continued growth in the volume of traffic that will be moved on the freight transportation system and that there are significant public benefits that can be obtained through investments in freight rail infrastructure.

Railroad Rehabilitation and Improvement Financing (RRIF)

At the Federal level, the most significant funding program is the RRIF program. This program administered by FRA was established by the Transportation Equity Act for the 21st Century (TEA-21) (Public Law 105-178) enacted in 1998,[35] and was amended by the Safe Accountable, Flexible and Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU) (Public Law 109-59) in 2005.[36]

Under Section 7203 of TEA-21, Congress provided for direct loans or loan guarantees to acquire, improve or rehabilitate intermodal facilities or rail equipment. Infrastructure loans for track, bridges, yard buildings and shops were included. The program also offered the opportunity to refinance outstanding debt for any of the items just noted and provided loans or loan guarantees to develop or establish new intermodal or rail facilities. Funding of operating expenses with RRIF loans was not permitted. Eligible applicants included State and local governments, government sponsored authorities and corporations, railroads, and joint ventures that include at least one railroad.

The statute set a ceiling on loans of $3.5 billion. Congress also directed that not less than $1 billion would be available for freight railroads other than Class I railroads. The program also provided the borrower a term not to exceed 25 years, significantly longer than what the private markets offer.

SAFETEA-LU was enacted on August 10, 2005, and made certain modifications to the RRIF program. Section 9003 widened eligible applicants to interstate compacts consented to by Congress under section 410(a) of the Amtrak Reform and Accountability Act of 1997 and also expressly made available loans available to construct track from a plant solely-served by a single

[35] Pub. L. No. 105-178, Transportation Equity Act for the 21st Century, Section 7203 (112 Stat. 471), enacted June 9, 1998.
[36] Pub. L. No. 109-59. Safe Accountable, Flexible and Efficient Transportation Equity Act: a Legacy for Users, Section 9003 (119 Stat. 1921), enacted August 10, 2005.

carrier to a second carrier. The statute also increased the loan ceiling to $35 billion, with up to $7 billion reserved for freight railroads other than Class I carriers.

An additional modification to the RRIF program came in the Rail Safety Improvement Act of 2008 (Public Law 110-432), where the maximum loan term was extended to 35 years.[37]

The following table shows the loan activity to Class II and Class III railroads since RRIF began.

Table 2. RRIF Class II and Class III Railroad Loans

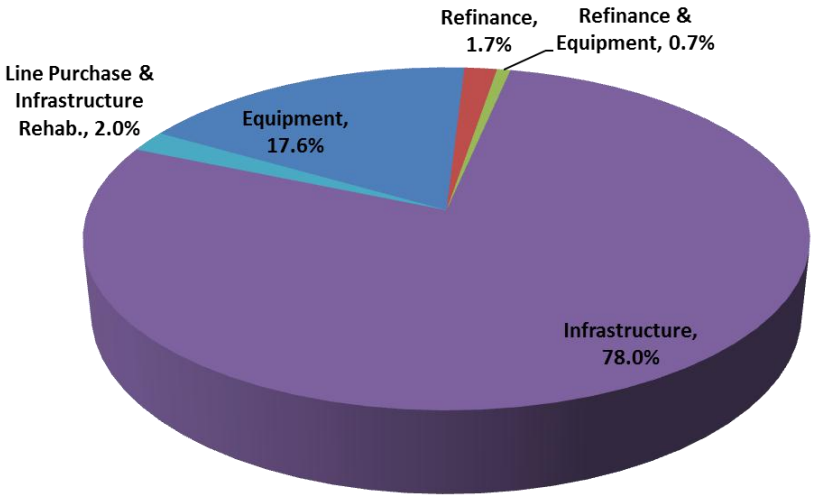
Year	Railroad	Amount ($)
2002	Mt. Hood Railroad	2,070,000
2003	Nashville and Western Railroad	2,300,000
2003	Arkansas & Missouri Railroad	11,000,000
2004	Dakota Minnesota & Eastern Railroad	233,601,000
2004	Wheeling & Lake Erie Railroad	25,000,000
2004	Stillwater Central Railroad	4,675,250
2005	Iowa Interstate Railroad	32,732,533
2005	Tex-Mex Railroad	50,000,000
2005	The Montreal Maine & Atlantic Railway	34,000,000
2005	Riverport Railroad	5,514,774
2005	Great Smokey Mountains Railroad	7,500,000
2006	Iowa Interstate Railroad	9,350,000
2006	Wheeling & Lake Erie Railroad	14,000,000
2006	RJ Corman Railway	47,131,726
2006	RJ Corman Railway	11,768,274
2007	Iowa Northern Railroad	25,500,000
2007	Dakota Minnesota & Eastern Railroad	48,320,000
2007	Great Western Railway	4,030,000
2007	Columbia Basin Railroad	3,000,000
2007	Nashville and Eastern Railroad	600,000
2007	Nashville and Eastern Railroad	4,000,000
2009	Iowa Interstate Railroad	31,000,000
2009	Permian Basin Railways, Inc	64,400,000
2009	Georgia & Florida Railways	8,100,000
2010	Great Lakes Central Railroad	17,000,000
2011	C&J Railroad	56,204
2011	Northwestern Pacific Railroad Company and North Coast Railroad Authority	3,180,000
	SUM	**699,829,761**

[37] Pub. L. No. 110-432, Rail Safety Improvement Act of 2008, Sec. 701(e) (122 Stat. 4906), enacted October 16, 2008.

In total, the RRIF program has executed 27 loan agreements of nearly $700 million to 20 Class II and III carriers. Several carriers such as the Dakota Minnesota & Eastern Railroad, Iowa Interstate Railroad, the RJ Corman Railway, Nashville and Eastern Railroad, and the Wheeling and Lake Erie Railroad have made use of the program more than once. To date, overall executed loan agreements under the program (including to Class I carriers and Amtrak) total over $1.725 billion with 40 percent of that going to Class II and Class III railroads.

FRA's assessment of RRIF loans to short line railroads shows that slightly over 78 percent went to infrastructure (bridges and track) while 17.6 percent went to equipment. (See Figure 2.) Figure 2 also shows that 1.7 percent of RRIF loans went to refinancing and 2 percent went to a combination of line purchases and infrastructure rehabilitation. Loans for a combination of refinancing and equipment purchases accounted for 0.7 percent.

Figure 2. Class II and Class III Railroad RRIF Loan Allocation[38]



State Programs

State programs are another source of funding for Class II and Class III railroads. Some States recognize that a strong system of small railroads is crucial to meeting their transportation needs in a balanced way. Many States also recognize the importance of Class II and Class III railroads as critical links to the national freight transportation network. These States have implemented short line railroad assistance programs that provide low interest loans and grants to improve service, upgrade track and bridges, and add capacity to the short line railroads operating within their boundaries. Local economic benefits of State rail assistance programs include increased farm and business opportunities, shipper cost savings (primarily increased speed), and avoided business closures. Such benefits can be measured at the regional, State, and local level as

[38] FRA analyses of RRIF loan portfolio.

increased business earnings, more employment, and increased wages. Additional benefits include the prevention of derailments and the abandonment of key short line miles.

Class I railroads' business models have evolved towards high density and high speed mainline networks intended to serve long-distance unit trains. For these models to succeed, the Class Is require strong short line business partners to create feeder systems to provide pick-up and delivery. Many short lines now play a major role in industry and customer-related switching in larger cities. Short lines may be more appropriate than some Class I railroads for the location of new businesses.

Many State DOTs take an active role in evaluating the importance of short line networks and quantifying success of their short line rail assistance programs. This includes conducting surveys of the number of short lines and short line miles within the State, identifying access to the Class I network, and determining the importance of the short line network to existing and potential businesses. States may also evaluate the condition of the short lines' track, their maintenance programs, and their safety records as key indicators of sound infrastructure management. State DOTs may work cooperatively with other State DOTs in developing assistance programs for short lines that cross state borders. For example, Kansas, Colorado, Oklahoma and Nebraska work together with the short lines to improve access between the States.[39]

Some of the advantages for short lines using State rail assistance programs include lower interest rates, longer loan terms, and the opportunity to combine loan with grant opportunities. Small railroads also face less stringent financial reporting requirements from States. However, State rail assistance programs can also create unintended risks, such as underestimation of future capital requirements by the financed short lines, freight market volatility, and crowding out of private investment (from holding companies and Class I railroads).

There are two primary forms of existing short line programs offered by States that are described below:[40]

1. **Annual revolving loan and grant programs, capitalized with annual appropriations, overseen by the State Secretary of Transportation:** In these programs, the applicant railroad provides matching funds for loan terms of up to 10 years. Once fully capitalized, new loans can be funded as existing loans are repaid. Loan and grant programs' objectives are to create jobs, promote economic development, preserve and improve the rail network, and assist in rail/port planning and development studies. In some cases, short lines can combine grants with matching funds as a loan down payment. Some programs include a requirement to re-pay a pro-rata share of any grant in the event of the loss of rail service. Applicants must compete for funding and

[39] Kansas State Rail Plan, 2011, pp. 53-86, http://ksdot1.ksdot.org/burRail/publications/StateWideRailPlan2011.pdf
[40] State websites and links to State Rail Plans. Also, see AASHTO web page titled *State Financing Programs for Short Line Railroads*; http://rail.transportation.org/Pages/rail_success.aspx.

recipients can include state businesses, community industrial parks, and short lines. (States offering such programs include Idaho,[41] Kansas,[42] New Jersey,[43] New York,[44] Ohio,[45] Oregon,[46] Pennsylvania,[47] Virginia,[48] and Wisconsin.[49])

a. The Oregon Short Line Credit Risk Premium Account provides grants that can cover up to 100% of the Credit Risk Premium set forth in the granting of a federal RRIF loan. In determining which projects receive funds, the Oregon State DOT considers the amount of funds available and the demonstrable public benefits of the project, including enhanced safety, air quality, rural development, and reduced demand for the expansion of highway capacity, among other things.

b. The New Jersey Rail Freight Assistance Program provides Class I and short line railroads with grants to fund capital improvement projects that demonstrate positive public benefits while supporting competitive freight transportation services. Sponsors are required to continue freight service on the improved rail line for at least five years after completion of the project. Acquisitions are limited to properties within the State Core Rail systems, and made available only when the private sector is unable to continue to provide service. Funds are available for reconstruction, improvement, or rehabilitation. The Rail Commissioner can approve demonstration projects that improve the quality and efficiency of the rail freight service and have potential long-term cost savings. State funds comprise 90 percent of project costs with a 10-percent sponsor match. Recent projects include bridge interchange improvements, replacing bolted rail with continuous welded rail, new turnouts, track expansions, and sidings.

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[41] Idaho State Rail Plan, Executive Summary, Page ES-2, April 10, 2013 http://itd.idaho.gov/freight/documents/DraftIdahoStatewideRailPlan41013.pdf.

[42] 2011 Kansas Statewide Rail Plan, page 16, http://ksdot1.ksdot.org/burRail/publications/StateWideRailPlan2011.pdf.

[43] New Jersey State Rail Plan, Final Draft, December 2012, page 5-37. http://www.state.nj.us/transportation/freight/rail/pdf/finaldraftnjstaterailplan122012.pdf.

[44] New York State Rail Plan, 2009, pp. 134-136. https://www.dot.ny.gov/divisions/policy-and-strategy/planning-bureau/state-rail-plan/repository/State%20Rail%20Plan%202009-02-10.pdf.

[45] Ohio Rail Development Commission, Freight Rail Planning and Projects at http://www.dot.state.oh.us/Divisions/Rail/Programs/freight/Pages/default.aspx.

[46] Standards to Determine Project Eligibility and Applications for Grants or Loans for Short Line Railroad Infrastructure at http://arcweb.sos.state.or.us/pages/rules/oars_700/oar_741/741_025.html.

[47] Pennsylvania Freight Rail Funding Programs at http://www.dot.state.pa.us/Internet/Bureaus/pdBRF.nsf/RailFreightHomepage?OpenFrameSet&frame=main&src=RailPlan2035?OpenForm.

[48] Virginia State Rail Plan: A Multimodal Strategy to Meet the Commonwealth's Passenger and Freight Transportation Needs Through 2025. pp. 125-128 and p. 160. http://www.drpt.virginia.gov/studies/files/VSRP-Print-Version-Full-Report.pdf.

[49] Wisconsin State Rail Plan 2030, Draft, Chapter 5: Freight Rail, page 5, 20, and 29. http://www.dot.wisconsin.gov/projects/state/docs/railplan-chapter5.pdf.

c. The Idaho Rural Economic Development and Integrated Freight Transportation Program Revolving Loan Fund assists qualified short line rail or intermodal freight shippers with loans for upgrading, expanding, rehabilitating, purchase or modernizing equipment for the Idaho freight shipping community.

2. **Tax Benefits:** States can recognize a railroad's contribution to economic growth by providing tax benefits. The States of Connecticut,[50] North Carolina,[51] and Pennsylvania[52] impose statewide gross earnings or receipt taxes on railroads rather than a property tax. Massachusetts and New Jersey, for the most part, exempt railroads from property tax. New York and Virginia provide railroads property tax relief by using an individual classification rule, which inventories each item of taxable property and values it separately regardless of the cooperative effect it may have on the railroad's other properties. New York provides additional relief by combining the individual classification rule with an established railroad property value ceiling that is adjusted upward based on railroad profitability. In 2002, New York passed the New York State Rail Infrastructure Investment Act (Chapter 698, L.2002) that expanded its ceiling program to allow for partial real property tax exemptions for certain capital improvements made by either interstate or intrastate railroads to provide incentives for both new investment and retention of existing underutilized infrastructure. The legislation provided a partial, 10-year property tax exemption for these capital improvements and provided New York State assistance to those municipalities and other taxing districts negatively affected, until 2012. According to a sponsor's memo, Chapter 689 attempted to create a positive effect on future rail capital and infrastructure improvements and to encourage railroads not to abandon or downgrade existing track, and to create a competitive equity environment among other competing transportation modes (highways, airports, and waterways).[53]

3. **State Rail Advisory Boards:** It can benefit short line railroads if States convene State Rail Advisory Boards. Members can include representatives from the short line and Class I railroads, short line holding companies, shippers, members of trade/industry groups, and spokespersons from local communities.[54]

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[50] Assistance for Freight Rail in Connecticut and Other States, March 13, 2008. James F. Fazzalaro, http://www.cga.ct.gov/2008/rpt/2008-R-0070.htm.

[51] North Carolina Article 8a, Gross Earnings Taxes on Freight Line Companies in Lieu of Ad Valorem Taxes, at http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/ByArticle/Chapter_105/Article_8A.html.

[52] Gross receipts tax, Pennsylvania Department of Revenue, at http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/ByArticle/Chapter_105/Article_8A.html.

[53] 2009 New York State Rail Plan, pp. 53-58 at https://www.dot.ny.gov/divisions/policy-and-strategy/planning-bureau/state-rail-plan/repository/State%20Rail%20Plan%202009-02-10.pdf and "Taxation of Railroads, Other Transportation Companies, and Other Businesses: A Survey of State Laws. Summary Report. David Gaskell, August 1983, Publication 1255, p. 22 and pp. 55-58.

[54] A State rail transportation authority oversees the development of State Rail Plans as required by the Passenger Rail Investment and Improvement Act of 2008 (PRIIA) (Pub. L. No. 110-432 (123 Stat. 4947-4951)). PRIIA

TIGER Grants

The American Recovery and Reinvestment Act of 2009 (ARRA or Recovery Act), signed by President Obama on February 17, 2009, provided the Department of Transportation $1.5 billion in funding for discretionary grants to go toward capital investments in the nation's surface transportation infrastructure.[55] In that same year, the Notice of Funding Availability (NOFA), announcing requirements for applicants, was published in the Federal Register, which designated the title as the Transportation Investment Generating Economic Recovery or TIGER. In four subsequent DOT appropriations, Congress provided funding to continue these discretionary grants. In each subsequent NOFA, the Department has continued to term this grant offering TIGER. TIGER grants are competitive and cover a wide array of surface transportation projects sponsored by State, local, and tribal entities that include investment in transit, ports, rail, highways, and bicycle and pedestrian trails. Eligible applicants include a wide range of public entities, including states, cities, counties, tribal governments, metropolitan planning organizations, and port and transit authorities. While a privately owned railroad is not an eligible applicant, in many cases one of these public entities will partner with a private railroad in applying for a grant to improve infrastructure.

The objective of TIGER grants is to improve and modernize the nation's transportation infrastructure. In addition, as the DOT guidelines state, a grant application submitted for a transportation infrastructure project must show how the project would advance the Department's strategic goals, providing long-term public benefits in safety, state of good repair, economic competitiveness, environmental sustainability, and livability. From the Recovery Act forward, there has been a total of $4.2 billion in funding for TIGER, including the most recent 2014 fiscal year appropriation. Of the $4.2 billion in the six offerings, nearly $810 million has gone toward freight rail projects, including port projects that have a rail component. The short line segment of the rail industry has received over $270 million, principally for capacity enhancements, track improvements, and bridge repairs.

TIGER grants also leverage other funding sources to maximize the available dollars going to these infrastructure investments. For short line rail projects, typically the railroad and/or State or locality will also make a contribution toward the project. In these cases, the Federal contribution, the State contribution, and the private rail contribution constitute a public private partnership (PPP). PPPs promise to deliver public benefits for which the public pays at least in part, and also private benefits, for which the railroad pays. When matching funds are included with TIGER awards to short line railroads, the funding provided for these short line projects is well in excess of $270 million. The amount of matching funds varies from grant to grant, but

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established the first intercity passenger rail capital grant program for states. A State's rail transportation authority ensures the Plan reflects the interests of both freight and passenger (intercity and commuter) rail operators, among other things.

[55] Pub. L. No. 111-5, American Recovery and Reinvestment Act of 2009, (123 Stat. 203- 205), enacted February 17, 2009.

considering a match in the range of 25 percent to 30 percent on a project demonstrates that as much as $338 million to $351 million of infrastructure investment might have gone to these projects.

As States have learned and as the TIGER applications have demonstrated, short line railroads can deliver significant public benefits. For example, in grain producing areas, railroads can minimize highway repairs by moving grain and other bulk materials over the railroad rather than the highways. States have also learned that a balanced transportation system that includes investments and support for all of the transportation modes (including rail) can add value for its citizens in the long term. Not only can highway damage and the consequent repair costs be reduced, but the inherent efficiencies of rail offer lower transportation costs that will find their way to consumers while enhancing the economic competitiveness of the locality and the Nation. Rail is also more fuel-efficient than highway freight transportation. Because of the competitiveness of the TIGER program, there are only a small number of projects funded compared with the number of applications that are submitted.

Railroad Track Maintenance Tax Credit (26 U.S.C. 45G)

The Section 45G railroad maintenance tax credit was originally enacted in the American Jobs Creation Act of 2004 (Public Law 108-357, § 245 Credit for Maintenance of Railroad Track). Section 45G provides a tax credit of up to 50 percent for Class II and Class III railroads to spend on infrastructure improvements, which include maintaining railroad track, roadbed, bridges, and related track structures that are owned or leased. The credit is capped at $3,500 per mile (compared with AASHTO's estimate that the cost of track rehabilitation is $92,000 per mile).

These provisions were initially in place from January 1, 2005 and were renewed in the Emergency Economic Stabilization Act of 2008 (Public Law 110-343), which extended the tax credit through December 31, 2009 and made its provisions retroactive to January 1, 2008.

The tax credit was renewed again in the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 (Public Law 111-312), which extended the tax credit through the Calendar Year 2011 and made its provisions retroactive from the beginning of 2010.

Today, the tax credit has expired, but due to broad bi-partisan support there is pending legislation in both Houses of Congress. In the House, H.R. 721, the Short Line Railroad Rehabilitation Act of 2013 is sponsored by Representative Lynn Jenkins (R-KS) and has 250 cosponsors (as of September 12, 2014). In the Senate, S. 411 under the same title, is sponsored by Senator Jay Rockefeller (D-WV) and has 50 cosponsors. Neither bill has been reported out of committee.

According to the ASLRRA, the tax credit has helped fund more than $300 million worth of short line infrastructure improvements annually. Since 2005, ASLRRA estimates that the tax credit has helped Class II and Class III railroads and their customers invest over $1.2 billion.[56]

Class I Railroads as a Source of Short Line Financing

A more recent trend in the railroad industry is for Class II and Class III railroads to partner with Class I railroads to make capital improvements.[57] Most of the situations in which this happens are when short lines own a strategic asset (e.g. efficient rail route or access to a regional freight market) and have the possibility to improve the competitive position of a Class I through the joint use of that strategic infrastructure.[58] In some of these cases, a part of the short line infrastructure is in a state of disrepair requiring trains to operate at low speeds and with limitations on the allowable gross weight of shipments. These conditions also make the potential freight service unreliable or uncompetitive, leaving the short line unable to efficiently interline with the Class I railroad. Implied strategic value of these short line routes and customer access can prompt Class I railroads to invest significant resources in the rehabilitation and improvement of the rail line. In exchange for the investment, the Class I receives improved access to the rail line.[59]

In the past, railroad joint ventures have allowed the preservation and rehabilitation of rail lines, generated public benefits, and reduced the need for financial support from the Federal or State governments.[60] Some significant improvements, typical of these partnerships, are bridge repairs and rail line upgrades to meet the maximum weight requirements of Class I railroads.[61]

This type of funding and the infrastructure investment enables short line railroads to receive every type of freight car that is currently moving on the North American rail network. Additionally, partnerships between short lines and Class I railroads have increased competition in certain regional freight markets where one of the Class I railroads had limited access. Recent experience indicates that both parties win by becoming more competitive. The short line rehabilitates the infrastructure and ensures all trains can operate on the rail line at higher speeds. In the end, the Class I secures access to a strategic market on a rail line that is in a good state of

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[56] http://www.progressiverailroading.com/mow/news/Senate-bill-would-extend-shortline-tax-credit-by-two-years-ASLRRA-says--31985.

[57] Some of the most notable examples of this type of short line financing are the financial agreements between the Norfolk Southern Railway (NS) and Pan Am Railways (PAR) in the Northeast and between CSX Transportation (CSXT) and Louisville & Indiana Railroad (L&I) in the Midwest.

[58] Decision of the Surface Transportation Board (March 10, 2009). Norfolk Southern Railway Company, Pan Am Railways, Inc., Et al. – Joint Control and Operating/Pooling Agreements – Pan Am Southern LLC. Finance Docket No. 35147 at page 22.

[59] The short line railroad typically contributes the rail assets to the joint venture and grants trackage rights to the Class I railroad. Contribution of rail assets is matched by the Class I railroad with a commensurate monetary payment.

[60] STB (2009), p. 22.

[61] These rail lines are normally upgraded to be able to handle rail cars weighting up to 286,000 lbs. gross weight (or even 315,000 lbs. gross weight).

repair, ensuring a reliable connection. In most cases short lines being able to enter such arrangements represent a significant addition to the strategic position of the Class I railroad.

INFRASTRUCTURE INVESTMENT AND FINANCIAL RESOURCES

While there are a number of diverse programs and opportunities available for Class II and Class III railroads to maintain and to improve rail infrastructure, the constant concern of Congress, State and local governments, railroad customers, and other stakeholders is whether this segment of the rail industry is adequately investing and whether it has adequate avenues to fund investments.

As noted earlier in this report, previous studies found that it is difficult for short line railroads to tap into the private capital markets to meet their capital and maintenance needs. This difficulty was one of the reasons the RRIF program was created by Congress. Another concern about short line railroad capital and maintenance needs was the term of the loan that the markets would provide if a carrier was fortunate enough to obtain one.

Continuing Infrastructure Needs

Track

At the outset, one of the most significant infrastructure investment needs on the part of short line railroads is rehabilitation of track and the need to upgrade track to handle 286,000-pound cars. Although Class I railroads migrated to heavier weight cars over the past 20 years, much of the rail infrastructure on lines owned and operated by smaller railroads was incapable of handling these heavier loads (although by 2010 the share of short line track able to handle such cars had reached 57 percent). Just as the 53-foot truck trailer is ubiquitous to the highway freight system today, the 286,000-pound car is now a permanent part of the rail freight system. A carrier unable to handle cars of this weight cannot offer its customers the efficiencies (and lower rates) that come from this service. These benefits manifest themselves in fewer cars to load and unload and lower shipping rates. Also, without the ability to handle these cars on the branch lines, the small railroads can face a situation where the Class I carrier will not interchange traffic, but choose rather to offload the goods onto trucks so that they can travel over the highways to their final destination.[62] There is also current research that is assessing the potential for moving even heavier cars on the railroad network, which could once again increase small railroad investment needs.

[62] See both the ZETA-TECH study for reference to free interchange, p. 3, and the 2002 UGPTI study (pp. 21-34) in reference to rail traffic diverting to truck and the subsequent effects. While the UGPTI study is associated with the broader assessment concerning the abandonment of rail lines, the concept here is the same. If a short line rail line is unable to freely interchange with a Class I due to weight issues, then the short line will suffer a loss in traffic, and as a consequence, a loss in revenues. In such an event, it might then be faced with the possibility of abandonment.

Bridges

Bridges are also a critical infrastructure component of small railroads. Like track, railroad bridges can require repair and upgrades to handle heavier cars as well as to meet growing shipper demand. In 1991, FRA undertook a review of railroad bridges.[63] This study grew out of a concern that the bridge inventory was aging and that traffic loads were increasing.[64] While the construction dates of railroad bridges often make them older than highway bridges, railroad bridges were built to handle the weights and stresses from heavy steam locomotives.[65] In the decades leading up to deregulation, the traffic densities on branch lines were diminishing; however, today the need to maintain rail lines due to increasing freight demand and traffic on the entire rail network has led to a new focus on the safety of railroad bridges. FRA has monitored railroad bridges over the years and in 2000 issued a policy statement that established guidance for railroads to use to ensure the structural integrity of railroad bridges.[66] The enactment of the Rail Safety Improvement Act of 2008 reinforced the need for bridge safety and required FRA to establish regulations for railroad track owners to adopt an internal Bridge Management Program.[67] FRA issued this regulation in July 2010 and it became effective in September of the same year. Among the requirements of the Act and regulation are that bridges be regularly inspected, railroads maintain and update a record of the safe load capacity of each bridge, and record keeping requirements be established to ensure the effectiveness of the internal Bridge Management Program.[68]

Class II and Class III Railroad Investment Needs

While there are a number of ways to look at maintenance and capital needs, the bottom line for all stakeholders, including the railroads, is fundamental: Is there a sufficient amount of investment going into Class II and Class III railroads to maintain their facilities to meet current and future needs, or will they fall behind and, as a consequence, defer maintenance? Such a scenario would obviously result in a loss of rail traffic, which would then move onto the highways and undermine goals that a State or locality might have in preserving a balanced transportation system.

To address these issues in part, FRA relied on the survey of Class II and Class III railroads conducted by UGPTI in 2013 and interviews that FRA undertook with small railroads, railroad financial experts, railroad holding companies, and bankers that make loans to this class of railroad.

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[63] FRA, Bridge Safety Standards, *Federal Register*, Vol. 75, No. 135, July 15, 2010, p. 41282.
[64] *Id.*
[65] *Id.*
[66] *Id.* (See also, FRA, Policy on the Safety of Railroad Bridges, *Federal Register*, Vol. 65, No. 169, August 30, 2000, pp. 52662-52667.)
[67] Pub. L.110-432. Division A, Railroad Safety Improvement Act of 2008, Section 417 (123 Stat. 4890-4891), enacted October 16, 2008.
[68] *Id.* (See also *Federal Register*, Vol. 75, No. 135, July 15, 2010, p. 41282-41309.)

UGPTI 2013 Survey Results

In conjunction with the ASLRRA and the AAR, UGPTI conducted a survey of the Class II and Class III railroads to determine their investment goals, including both infrastructure and equipment needs, and to identify funding sources. The survey is a snapshot of those needs today, but does look out through 2017. The survey was conducted over the period from June 15 through October 1, 2013. It was sent to Class II and Class III railroads by e-mail. Since the survey instrument was web-based, responses were electronically entered by participants, and recorded and tabulated by UGPTI.[69]

The survey's focus is in four main areas. These include:

1. Maintenance spending required to keep track up to current FRA track class considering current capacity;
2. Capital investment required to expand the capacity or improve the performance of the rail line, or to construct new rail line, yard track, siding, or spur track;
3. New equipment purchases or leases or rebuilt equipment purchase or leases (locomotives and rolling stock); and
4. Average annual dollar amount required from 2013 through 2017 to keep the railroad in a state of good repair assuming that funding is available, and the percent of those funds from cash flow, commercial lenders, owner investment, or Federal government grants or loans.

UGPTI with the AAR and ASLRRA identified 470 carriers to which to send the survey.[70] After an initial period, UGPTI contacted those that had not responded in order to increase the response rate. By the cut-off date of October 1, 149 railroads had responded. This included 9 Class II and 140 Class III railroads. An initial review of these responses shows that 115 carriers provided sufficient data to assess their capital needs.

Table 3 illustrates the preliminary assessment of current spending goals and spending needs for the next 5 years. UGPTI's survey addressed maintenance and infrastructure to meet current needs and expected growth. With only 115 railroads providing usable data, the current spending needs for these railroads are $599.1 million. When asked to estimate the total spending that would be required over the next 5 years for infrastructure and equipment, these railroads reported $985.9 million for infrastructure and $246.9 million for equipment, which includes both locomotives and rolling stock. Thus, total estimated spending for infrastructure and equipment over the next 5 years is $1.23 billion. When adding in current spending, the total spending requirements today and in the future for the reporting carriers is $1.83 billion.

[69] Campbell, Anne; North Dakota State University; Preliminary analysis and results of UGPTI short line railroad survey. These preliminary results were provided to FRA for this report in November 2013.
[70] The number of carriers surveyed represents membership list of the two associations.

Table 3. Current and Future Spending Needs for 115 Reporting Class II and Class III Railroads

Railroad Class	Spending Required to Meet Current Levels	Estimated Spending Required Over the Next 5 Years on Infrastructure	Estimated Spending Required Over the Next 5 Years for Equipment	Total Estimated Spending Over the Next 5 Years	Total Current and Future Spending Needs
Class II	$210,090,000	$ 26,175,000	$ 6,530,000	$ 32,705,000	$ 242,795,000
Class III	$389,026,387	$959,750,000	$239,433,333	$1,199,183,333	$1,588,209,721
Total	**$599,116,387**	**$985,925,000**	**$246,875,000**	**$1,231,888,333**	**$1,831,004,721**

The carriers were also asked how much of their spending requirement over the next 5 years they anticipated meeting. Table 4 shows available funding anticipated to meet those spending goals for infrastructure and equipment. Overall, out of the $985.9 million respondents estimated for infrastructure spending in Table 3, Table 4 shows that they believe that they will be able to meet $684.6 million of these needs. For equipment, Table 4 shows that respondent railroads can achieve $168.9 million in spending out of a total need of $246.9 million. Out of a total of $1.23 billion in spending needs over the next 5-years, the railroads anticipate that they will be able to meet $853.5 million of those needs.

Table 4. Available Funding to Meet Needs Over the Next 5 Years for 115 Reporting Class II and Class III Railroads

Railroad Class	Available Funding for Infrastructure Over the Next 5 Years	Available Funding for Equipment Over the Next 5 Years	Total Spending
Class II	$ 21,725,250	$ 4,658,067	$ 26,383,317
Class III	$662,832,143	$164,261,192	$827,093,335
Total	**$684,557,393**	**$168,919,259**	**$853,476,651**

Since the carriers reported that they did not believe that they would be able to meet all of these future spending needs, Table 5 shows unmet spending goals for infrastructure and equipment as well as the total spending shortfall. Overall, the Class II carriers responding reported that they would meet nearly 83 percent of their spending requirements for infrastructure. The Class IIIs reported that they would be able to meet 69 percent of their needs. For equipment, the Class IIs reported that they would be able to meet 71 percent of equipment, while the Class IIIs reported that they would meet nearly 69 percent.

Table 5. Unmet Spending Goals Over the Next 5 Years for 115 Reporting Class II and Class III Railroads

Railroad Class	Unmet Spending Goals for Infrastructure	Unmet Spending Goals for Equipment	Total Spending Shortfall
Class II	$ 4,449,750	$ 1,871,933	$ 6,321,683
Class III	$296,917,858	$75,172,141	$372,089,999
Total	**$301,367,608**	**$77,044,074**	**$378,411,682**

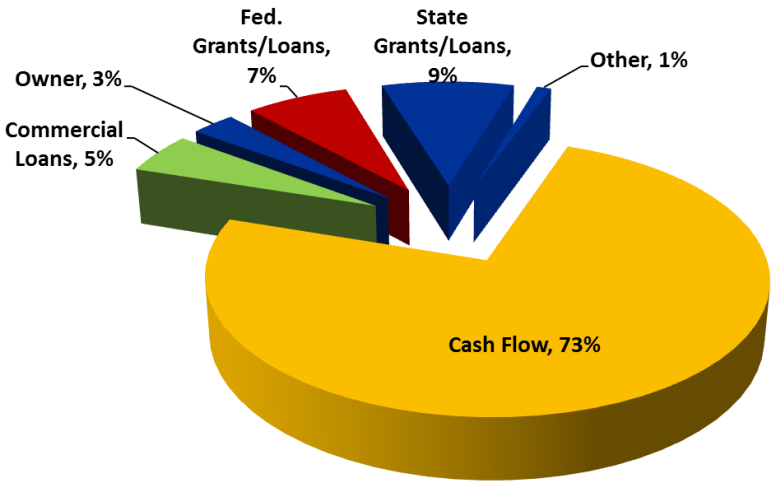
While it is difficult to determine the spending needs for this entire segment of the industry without each carrier responding to the survey, FRA, nonetheless, estimates these total spending needs by expanding the results to the entire short line industry. As a consequence, current spending is in the range of $1.6 billion while future needs are $5.3 billion. This brings total investment needs to $6.9 billion.[71]

Sources of Funding

Of particular importance to this analysis is what funding source the railroads anticipate they will be able to access to meet these needs. UGPTI framed the survey by asking the railroads to identify the source and the percentage of funds they expect to use for their needs over the next 5 years. The available choices were: 1) cash flow, 2) commercial loans, 3) investment by owners, 4) Federal government grants or loans, 5) State grants or loans, and 6) other. Figure 3 illustrates the anticipated source of funds. Respondents stated that they anticipated meeting 73 percent of their reported needs from cash flow. State grants and loans were 9 percent. Federal grants and loans were 7 percent. Commercial loans were 5 percent.

[71] To assess the estimated level of spending from the UGPTI survey, FRA developed a comparable estimate of track infrastructure capital requirements based on 2011Class II and Class III railroad industry-wide data: the American Short Line and Regional Railroad Association (ASLRRA*) Short line and Regional Facts and Figures*, 2012 Edition, and Carl Martland's Verified Statement for the ASLRRA before the Surface Transportation Board in Ex Parte No. 705, *Competition in the Railroad Industry*. The Fact Book reports that Class II and Class III railroads handled 570 million loaded car-miles in 2011, based on a survey of 444 railroads. The Martland Verified Statement reports short line average expenditures for track are $4 per loaded car-mile (Comments of the ASLRRA, April 12, 2011, V.S. Martland at page 25). Using these two sources, FRA estimates the short line industry required $2.28 billion in track expenditures in 2011 to maintain the system in its current state, which is a reasonable comparison to the $1.6 billion estimate based on UGPTI survey data. While the UGPTI survey provides expected capital needs, the ASLRRA Fact Book and the Martland Verified Statement data provide another estimate of capital expenditures that would be required to support the 2011 volume of traffic handled by the industry.

Figure 3. Source of Funds[72]



From this result, further scrutiny of the reporting carriers was conducted. That evaluation looked at whether the carriers responding to the survey were independent short lines or under the control of holding companies. Of the 115 carriers reporting spending needs, 32 were controlled by holding companies. These carriers reported that they expected to meet 78 percent of their infrastructure needs and 73 percent of their equipment needs over the next 5 years. The carriers not owned by holding companies reported that they anticipate meeting 65 percent of their infrastructure needs and 76 percent of their equipment needs.

FRA INTERVIEWS (2013)

To gain a clearer understanding of what is currently occurring in this segment of the rail industry, FRA conducted interviews with: 1) financial experts that assist short line railroads in developing and structuring loan and grant applications; 2) banks that make short line railroad loans; 3) short line railroads, and 4) short line railroad holding companies. Of particular importance in these interviews was to take into consideration and understand the consolidation that has occurred in this segment of the industry over the past 20 years, where holding companies control a large number of carriers today. This evolving structural change in the industry poses interesting results concerning access to capital.

The content of these interviews focused on a discussion about bank lending practices and how short lines have been able to, at the very least, maintain their systems and service their customers

[72] UGPTI analysis of Class II and Class III railroad survey.

over the 20 year period since the FRA study was completed. At that time, there was a concern that the industry would be unable to meet its capital and maintenance needs and would fall into a state of disrepair. For short line railroads, obtaining a bank loan for infrastructure was seen as meeting a very high threshold that other industries were not held to.[73] In addition, when a loan could be obtained the term did not reflect the asset's life, which could be well over 25 years. With regard to equipment loans, there seemed to be little if any problem. Banks were willing to make these loans and the loan term for equipment was more flexible than for infrastructure.[74]

From these interviews and from an evaluation of industry structural data since implementation of Staggers, a very different and positive complexion of this segment of the railroad industry emerges with regard to financial wherewithal. This change (discussed in greater detail below) is one that has taken place over the past 30 years and has benefited shippers and the railroads.

Short Line Railroad Lenders—Bank Interviews

FRA conducted interviews with banks that make loans to short line railroads. Of particular interest in these interviews was whether or not the conditions that existed 20 years ago are the same today. In other words, are the terms of the loans for infrastructure still in the 5 to 8 year range and are there minimum dollar thresholds that the banks require? Also of interest was the availability of financial and operational statistics, not only for a particular railroad, but for benchmarking the industry. Finally, FRA was interested in the number of banks that are currently in the market making loans. In 1993, there were approximately eight banks that were identified from discussions with the industry and from journal publications, indicating only a small number of banks participating at that time.[75]

In the new round of interviews, the banks responded that the first order of business with regard to a loan is the ability of the railroad to repay. The term of a loan is no different today and banks still look at a loan term of 5 to 8 years, if not less. There is, however, the ability to roll over a loan and refinance a loan. With regard to minimum loan amounts, a banker noted that $10 million was a good threshold, but they were willing to make exceptions. Another banker interviewed did not establish a threshold but stated that the bank would work with its short line partner to meet the railroads' needs. The considerations for establishing a threshold are centered on the resources required to put a railroad infrastructure loan package together. Although the $10 million threshold is higher than 20 years ago, it should be noted that inflation and rising project costs since 1993 make this threshold approximately comparable to the previous $5 million threshold.

Banks did not consider the issue about benchmarking this segment of the railroad industry significant today. The banks reported that their current railroad clients had no problems

[73] FRA, *Small Railroad Investment Goals and Financial Options*, January 1993, pp. 27-29.
[74] *Id*., pp. 30-31.
[75] *Id*., p. 29.

supplying financial and operations statistics that would support a loan application. And because of the structure of the industry today, data are easily available.

Finally, FRA wanted to know if there were banks and other financial institutions, both large and small, that were interested and willing to make loans to this segment of the railroad industry. The answer to this question was positive, and this was further confirmed by interviews with railroad owners. Those bankers interviewed commented that they (as well as others) were looking for opportunities to lend to this segment of the railroad industry.

The Emergence of Short Line Railroad Holding Companies

As previously noted, the structure of the Class II and Class III segment of the railroad industry has changed significantly over the past 16 years. There has been a consolidation of small railroads under the control of a small number of holding companies. Today, out of more than 540 small railroads operating, nearly 250 come under these holding companies.[76]

To understand how this consolidation occurred, it is necessary to look back at the changes that the enactment and the subsequent implementation of the Staggers Rail Act of 1980 initiated. The regulatory reforms in Staggers allowed the large Class I railroads the ability to rationalize their systems by spinning off for sale or abandoning light density lines. This could be accomplished with minimal regulatory delay. Under this climate, in the decade immediately following Staggers, the Class I railroads were encouraged to sell light density lines rather than abandon them.[77] As a consequence, there was a significant growth in the number of small carriers as the Class I railroads determined that they could no longer operate profitably on those lines. During that period, approximately 250 new carriers emerged from the sale of light density lines.[78] These spinoffs preserved rail service and prevented abandonments. In many cases, rural regions of the country were the beneficiaries of these line sales and were able to maintain critical access to the rail network.

In the early 1990s, there was a concern from policy makers as well as members of Congress that these new entities were having difficulty accessing capital to maintain their systems to meet customer demand and to provide for future needs. FRA's 1993 study illustrated that Class II and Class III railroads faced unique challenges in obtaining loans and there was a concern that there was a breakdown in the private capital markets for funding the necessary infrastructure projects that would keep these carriers providing safe and efficient operations. If funding could not be obtained, the benefits from line sales intended by Staggers would be lost as small railroads would have to cease operations

[76] AAR, *Railroad Ten-Year Trends, 2003-2012*, July 2014, pp. 169-178.
[77] Pub. L. No. 96-448, Section 402 (94 Stat. 1941-1942).
[78] This statistic was presented in FRA's 1993 study, referenced in this report. The result was based on analysis of *Statistics of Regional and Local Railroads*, AAR , 1988, and *Profiles of U.S. Railroads*, AAR, 1987-1991.

As FRA conducted this present analysis of Class II and Class III railroads' capital needs and funding sources, it became apparent that there had been a major change in the structure of this segment of the rail industry. While perhaps not intended, this change has, nonetheless, been more than responsive to the standards and requirements of the private capital markets. That change has been the emergence and growth of the railroad holding company.

While railroad holding companies have existed for some time, beginning in 1996, the AAR began publishing a list of those companies. Since 1996 through 2012, the last year that data are available, the number of holding companies has grown from 14 to 27. At the same time the number of small railroads under the control of holding companies increased from slightly over 100 in 1996 to nearly 270 in 2012.[79] (See Figure 4 and Figure 5.)

Figure 4. Number of Class II and Class III Railroad Holding Companies (1996 to 2012)

[79] AAR, *Railroad Ten Year Trends*, various years.

Figure 5. Short Line Railroads under the Control of Holding Companies (1996 to 2012)

Today, companies such as the Genesee and Wyoming, following its recent acquisition of Rail America (another small railroad holding company), control more than 100 short line railroads. While Genesee and Wyoming is by far the largest holding company, the remaining 26 holding companies control as many as 50 and as few as 3.

The dynamic shift has changed bankers' perceptions of Class II and Class III railroad lending and reduced the perceived risk of failure to repay a loan. This change is also helping to provide adequate financial and operating data to assess loan applications.

Short Line Railroad Holding Company Interviews

To understand how this consolidation by railroad holdings has changed the market for lending and access to capital, FRA interviewed three holding companies. The interviews focused on bankers' lending views, the availability of financial and operating data, terms of the loans, ongoing significant infrastructure needs, and the importance of different funding sources, which included both private and public.

From the outset, these interviews confirmed what the bankers had reported in discussions with FRA staff. First, there are funds available to provide to Class II and Class III railroads, and second, the holding company has changed the lending calculus as well as the banker and railroad relationship. The holding company has reduced the bankers' concerns of railroad lending risk. Because the holding company has a broad array of small railroads in its portfolio, operations can be in different regions of the country and create diversity in the mix of commodities from carrier to carrier, thus reducing the overall risk of lending to a holding company. If one region of the country is showing reduced traffic levels due to a reduction in commodity demand, another region of the country on another railroad owned by the holding company may be experiencing stable or increasing traffic levels. While holding companies may manage their railroad portfolio

differently, it appears from FRA interviews that decisions about borrowing are made at the corporate level.

With regard to data, many of these companies file with the Securities and Exchange Commission (SEC) and are publicly held. So performance data is readily available to a lender if the holding company applies for a loan.

In these interviews, FRA also asked about the period of time it takes to have a railroad bank loan application approved from when the application is first initiated. Responses indicated that it could range from 30 to 60 days. As an alternative to bank loans, one of the other advantages for many of these holding companies is the use of private equity markets to raise capital.

The railroad holding companies acknowledged that challenges remain for them and for independent short lines. Maintaining and upgrading track and bridges to handle 286,000-pound loads as well as routine upgrades remains daunting. While the holding companies have been able to meet the requirements that the capital markets have placed on them, they explained that for some of these projects, the capital needs are so large that they are unable to fund them from one source. They explained that a mix of funding from both public and private sources is required. Here, many State programs and Federal programs have assisted. This Federal assistance includes the Section 45G tax credits.

The companies interviewed believe that the public-private partnership model is appropriate, because many of the large railroad infrastructure investments provide substantial public benefits. The companies noted DOT's competitive TIGER grant offerings as a good model and one to which they have applied. They stated that the requirements for submitting TIGER grant applications, where public benefits must be quantified and monetized, have proven this.

For some, the RRIF program presents another opportunity, but concerns were expressed about the time that it takes between loan application and approval. One holding company told FRA that it would not consider a RRIF application today. Others, including independent short lines, said they still believe the program is needed and continues to be an important funding instrument. It was also noted by one interviewee that there is a trade-off between RRIF loans and commercial loans. While RRIF loans take longer to process, there is a lower interest rate in RRIF and a term that can go as long as 35 years.[80]

Finally, while adequate access to capital is still an issue, the move toward consolidation may be effective in helping short line and regional railroads meet their infrastructure investment and maintenance needs. Using FRA safety data as a proxy, Figure 1 on page 5 shows the decline in short line railroad infrastructure-caused accidents per million train-miles. In the graph, these accidents remained in the range of 7 to 9 accidents per million train-miles from 1997 through

[80] The term for commercial loans has not met this period as noted in this assessment, as well as the one FRA conducted 20 years ago.

2004 and then began a steady decline following 2004. One explanation for this decrease is that the number of railroads under holding company ownership increased with improved access to capital, including more sophisticated approaches to funding and financing projects.

Continuation of Small Railroad Consolidation

In these interviews, FRA asked if the current trend toward short line consolidation under holding companies would continue. Bankers, holding companies, financial experts, and an independent short line responded that they expected it would. They believe that the holding companies would look at independent short line operations and make an assessment if these entities would bring value to the holding company. If so, then they would move to acquire them.

As the Class II and the Class III segment becomes more consolidated, some independents that have had difficulties accessing capital will find that under a holding company, it will be easier to fund projects. The concern for policy makers, Congress, States, and stakeholders is with the carriers that are not acquired by these holding companies. If the trend is for more consolidation where there is value, then the independent operators that are considered poor performers could potentially fall by the wayside. For those that are unable to sustain their systems due to very low traffic densities and no prospects for growth, the States where they operate, or a combination of States where they operate, will need to undertake an assessment of those operations and determine the public benefits that continued rail service brings.

In assessing future needs and how these carriers can be able to be a part of a balanced transportation system, a good starting point is the development of a State Rail Plan and a State Freight Plan. If the traffic is insufficient for rail operations to be sustained, then the State, through its planning efforts, will need to determine if that particular rail service is needed and if the line needs to be preserved. Considering the changes that have occurred over the recent past, the need for good planning is imperative. Some of the lines today that were light density have now seen traffic levels rise, hence increasing the need for infrastructure investment. This has been particularly important in the areas where there has been a growth of hydraulic fracturing (fracking) for oil and gas. Without the preservation of these lines and State, local and Federal government support, the raw materials to undertake fracking as well as the crude oil traveling out of these locations would go by truck.

CONCLUSION AND RECOMMENDATIONS

Class II and Class III railroads play a critical role in originating and terminating goods, often providing the first and last mile of a rail move. This report has shown that even though this segment of the rail industry has better access to capital through a number of funding possibilities, there remain significant investments that must be made, especially for upgrading track to handle 286,000-pound loads and the bridges.

The emergence of holding companies and the consolidation of short line railroads under these companies has changed the relationship between the lender and the railroad as well as changed the lending calculus. Today, the geographic diversity and commodity diversity of these holding companies has helped to reduce the risk associated with lending to the short line segment of the rail industry. But there continue to be significant infrastructure and investment needs for these railroads. Because of these needs, it is important that adequate funding be available from the private capital markets as well as from Federal and State government programs.

While the holding company has represented a change to the industry, the likelihood of further consolidations continues. As increased consolidation plays out, States must be concerned with those railroads that are considered poor performers on light density lines with little or no potential for growth. These are the carriers that will not be brought under the umbrella of the holding company and will not have the financial wherewithal to maintain and improve facilities. The States where they operate, or a combination of States where they operate, will need to undertake an assessment of those operations and determine the public benefits that continued rail service brings. This will require careful planning on the part of the State, which should be conducted through the development of State Rail Plans and State Freight Plans.

Going forward, a more detailed assessment concerning the effects that short line railroad consolidation has had on this segment of the railroad industry should be undertaken. This should include an assessment of financial and operating changes, a detailed look at the conditions that led to this consolidation, an assessment of safety and the safety culture that each holding company brings to their holdings, and an assessment of the economic and safety regulatory issues that may arise through continued consolidation.