



December 2016

FREIGHT RAIL PRICING

Contracts Provide
Shippers and
Railroads Flexibility,
but High Rates
Concern Some
Shippers

GAO Highlights

Highlights of [GAO-17-166](#), a report to congressional committees

Why GAO Did This Study

The nation's freight rail network is vital to the economy, moving about 40 percent of U.S. freight and generating over \$73 billion in revenue in 2013. Railroads charge various rates for moving freight from a particular origin to a particular destination. A rate may be set by the railroad in a public pricing document—known as a tariff—or negotiated through a private contract with a shipper. While most freight ships under contract, some shippers have raised concerns with how railroads negotiate contracts that contain multiple origin-to-destination routes. Though shippers that use rail to transport freight under tariff may seek relief from STB for rates they view as unreasonable, STB has authority to review tariff rates, but not contract rates.

The Surface Transportation Board Reauthorization Act of 2015 included a provision for GAO to review rail transportation contract proposals containing multiple origin-to-destination routes. This report addresses (1) similarities and differences in shipping freight under a tariff versus a contract, and the potential benefits to using each, and (2) views of selected stakeholders on the implications of shipping freight under a tariff versus a contract. GAO analyzed STB data from 2005 to 2014, reviewed documents provided by and interviewed representatives of the four largest freight railroads, the Association of American Railroads, STB officials, and representatives of nine shippers selected to represent a mix of commodities transported by rail.

View [GAO-17-166](#). For more information, contact Susan Fleming at (202) 512-2834 or flemings@gao.gov.

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Contracts Provide Shippers and Railroads Flexibility, but High Rates Concern Some Shippers

What GAO Found

While rail contracts and tariffs are similar, contracts offer the flexibility to customize rates and terms to a specific shipper, according to selected stakeholders GAO interviewed. Both contract and tariff rates are based on market factors, such as competition, according to representatives from the four largest U.S. freight railroads. However, they noted that in developing contract rates, a railroad will also examine factors specific to each shipper and may negotiate discounts in exchange for the shipper committing to provide a specified volume over the contract's duration. According to railroad representatives, the volume commitments negotiated in a contract allow the railroad to more efficiently allocate its resources and ensure consistent revenues. Also, selected shippers told GAO that they can more efficiently manage multiple shipping routes under one contract because of the stability in rates over the duration of the contract. In contrast, tariffs may be preferred for smaller shipments.

Despite the volume discounts contracts can offer, some selected shippers said that contracts that include rates for multiple origin-to-destination routes can contain high rates on some routes. This is particularly an issue for shippers that are "captive"—that is, shippers served by a single railroad without an economically viable transportation alternative.

Captive versus Non-Captive Routes for Freight Rail



Source: GAO. | GAO-17-166

Representatives of the four largest freight railroads said they charge what shippers are willing to pay to cover infrastructure costs for the entire rail network. However, according to selected shippers GAO interviewed, combining captive and non-captive routes together in one contract can compel shippers to accept some unreasonable rates. Shippers subject to contract rates they view as unreasonable cannot challenge those rates at the Surface Transportation Board (STB) because contracts are not subject to STB oversight. A railroad official said that a shipper may ask the railroad to switch rates the shipper views as unreasonable to a tariff. However, selected shippers said that tariff rates are generally higher than contract rates, so they are reluctant to forgo a contract with a mix of rates in favor of using a tariff. While the STB process for reviewing tariff rates was designed, in part, to protect captive shippers from unreasonably high rates, selected shippers said the process is complicated, time-consuming, and expensive. In 2016, STB began to reform the tariff review process with the goal of improving its efficiency.

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Abbreviations

ICC	Interstate Commerce Commission
O-D	origin-to-destination (route)
SAC	Stand-Alone Cost
STB	Surface Transportation Board

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December 7, 2016

The Honorable John Thune
Chairman
The Honorable Bill Nelson
Ranking Member
Committee on Commerce, Science, and Transportation
United States Senate

The Honorable Bill Shuster
Chairman
The Honorable Peter DeFazio
Ranking Member
Committee on Transportation and Infrastructure
House of Representatives

The nation's freight transportation network is vital to the functioning of the national economy. The national rail network accounts for the movement of about 40 percent of U.S. freight.¹ U.S. railroads reported over \$73 billion in revenue in 2013.² Shippers have two options for arranging transport with railroads: a contract—which is a private agreement of terms, conditions, and rates for moving freight—or a tariff, which is a published rate railroads are required to provide to shippers when requested. Most freight ships under contract, but some freight-rail shippers have raised concerns about how railroads negotiate certain contracts. Specifically, these shippers claim that railroads package a mix of reasonable and unreasonable rates in contracts that contain multiple routes between multiple origins and destinations. The Surface Transportation Board (STB) is the economic regulator of the railroads and resolves rate and service disputes between shippers and railroads for regulated goods shipped under tariff, but does not have authority to address rate and service disputes for freight shipped by contract.

The Surface Transportation Board Reauthorization Act of 2015 included a provision for us to review the effects of railroad freight contracts that

¹U.S. intercity freight as measured in ton-miles. Federal Railroad Administration, *National Rail Plan Progress Report*, (September 2010).

²Federal Railroad Administration, Office of Rail Policy and Development, *Freight Railroads Background*, (April 2015).

contain multiple origin-to-destination (O-D) routes.³ This report presents information on: (1) known similarities and differences in shipping freight under a tariff versus a contract, and the potential benefits to using each; and (2) views of selected stakeholders on the implications of shipping freight under a tariff versus a contract.

To address the similarities and differences in shipping freight under a tariff versus a contract, and the potential benefits to using each, we reviewed our past reports and other academic and governmental studies on the economics of rail rates. We also reviewed sample tariffs provided by the four largest Class I railroads (BNSF Railway, CSX, Norfolk Southern, and Union Pacific), as well as redacted sample contract templates provided by some of these railroads.⁴ We interviewed representatives from these four railroads and the Association of American Railroads. As contracts between railroads and shippers are private, we were not able to analyze specific contract language, including specific rates and terms for a particular shipper. We also initially selected 20 shippers or shipper associations to interview. We selected these shippers to represent five commodities: agriculture, chemicals, coal, food, and nonmetallic minerals. We chose these commodities because they were the five commodities with the largest shipments by weight in 2014 that are either wholly or partially subject to rate regulation by STB.⁵ To select shippers and associations, we reviewed comments filed by shippers in a 2011 STB proceeding “Competition in the Railroad Industry” that discuss terms and rates of contracts as compared to tariffs.⁶ About half of the shippers and associations we contacted either did not respond to our requests or declined to meet with us. Some of these shippers stated that they or their members have no views on these issues. However, we interviewed representatives from nine shipper associations and companies and reviewed documents they provided. As a result, we are

³Pub. L. No. 114-110, § 14, 129 Stat. 2228, 2238 (2015).

⁴Freight railroads are categorized by class on the basis of their revenue, with Class I railroads generating annual operating revenue of \$475.5 million or more in 2014 operating in the United States. Class II and III railroads, which generate less revenue, are outside the scope of this report. There are seven Class I railroads operating in the United States. For this report, we interviewed the four largest Class I railroads.

⁵Commodity-weights were measured in tonnage and based on STB’s 2014 Carload Waybill Sample.

⁶Surface Transportation Board, COMPETITION IN THE RAILROAD INDUSTRY, Docket Number Ex Parte 705, June 22, 2011.

reporting aggregate statements from the nine shippers across commodities.⁷ Further, these interviews are not generalizable to all shippers or all railroads.

To identify the views of selected stakeholders on the implications of shipping freight under a tariff versus a contract, we analyzed relevant economic literature on freight rail contracts and shipping rates to provide additional context for evaluating what we heard in interviews with railroads and shippers. We also interviewed representatives of the four Class I railroads and shippers selected as described above about their views. Finally, we reviewed documents filed in the 2011 STB proceeding that discuss terms and rates of contracts as compared to tariffs.⁸ We also interviewed STB staff about the agency's rate-relief process for addressing unreasonable rates in tariffs and their efforts to improve it.

In addition, to provide contextual information on shippers using contracts and tariffs, we analyzed STB's Carload Waybill Sample, from 2005 to 2014 (the most recent year available) to determine the total volume and trends of freight moved under contract and tariff, by commodity, in ton-miles, which is a measurement of weight and distance. STB requires the railroads to compile a random sample of their waybills (a document that accompanies a shipment and describes its characteristics). The Carload Waybill Sample consists of over 600,000 records and contains information on various characteristics of the freight being shipped, including tonnage, revenue, and miles, among others. The sample is statistically weighted to be nationally representative of all rail freight movements that occur in the United States each year. We used agency technical documentation for the Carload Waybill Sample and guidance from STB to estimate the sampling error associated with our estimates derived from the waybill data. We express our confidence in the precision of estimates derived from the Carload Waybill Sample as 95 percent confidence intervals. This is the interval that would contain the actual population values for 95 percent of the waybill samples that STB could have drawn. We determined that STB's Carload Waybill Sample data were sufficiently reliable for our purposes of our reporting objectives by

⁷Specifically, the nine shippers we interviewed included an association representing multiple types of shippers and between one and three shippers of each commodity type except nonmetallic minerals, since shippers of that commodity we contacted declined to be interviewed or did not respond to our requests.

⁸Surface Transportation Board, COMPETITION IN THE RAILROAD INDUSTRY, Docket Number Ex Parte 705, June 22, 2011.

comparing our analysis with published STB figures and by interviewing STB staff and STB's contractor about their data collection and validation efforts.

We conducted this performance audit from February 2016 to December 2016 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Freight shipped by rail travels over an extensive network that consists of 140,000 route-miles across the United States. Freight railroads are generally privately owned and rely on their revenues to invest in maintenance and operations that support safe and efficient transportation services. During the last 40 years, the freight railroad industry has consolidated. Currently, the U.S. railroad industry includes seven major Class I freight railroads. Railroads carry a variety of commodities and may compete with each other and other shipping modes such as trucks and barges for business.

The Interstate Commerce Commission (ICC) was established in 1887, originally to regulate almost all of the rates that railroads charged shippers to ensure that the rates were reasonable and just. The Railroad Revitalization and Regulatory Reform act of 1976⁹ and the Staggers Rail Act of 1980¹⁰ were enacted in response to economic slowdown in the 1970s, with rising costs, losses in traffic and revenues to motor carriers, and bankruptcies affecting the railroad industry. These laws substantially reduced federal regulation and encouraged greater reliance on competition to set rates. In particular, the Staggers Rail Act gave railroads increased freedom to price their services according to market conditions, including the freedom to use differential pricing, a practice in which railroads can charge higher rates to shippers of commodities such as coal and chemicals, which are more dependent on the rail network. The ICC Termination Act of 1995 transferred the ICC's regulatory functions to the

⁹Pub. L. No. 94-210, 90 Stat. 31 (1976).

¹⁰Pub. L. No. 96-448, 94 Stat. 1895 (1980).

Surface Transportation Board (STB), an independent adjudicatory body.¹¹ The STB now serves as the industry's economic regulator, resolving rate and service disputes between shippers and railroads for regulated goods shipped under tariff. The acts also allowed railroads and shippers to enter into confidential contracts to set terms and rates. STB has no authority to review the terms or rates for freight shipped by contract.¹² To protect shippers served by only one railroad with no competitive shipping alternatives—known as “captive” shippers—from unreasonably high rates, STB established a process in which shippers that transport their freight by tariff could potentially challenge the reasonableness of a rail rate and seek financial relief from the railroads, a process that we refer to as a “rate-relief” process.

Some commodities were later exempted from STB's jurisdiction, primarily commodities that could be shipped by boxcar or intermodal containers, in part because these goods can also be transported by other competitive alternatives such as barge or truck and are therefore unlikely to be captive. According to a Department of Agriculture report, these exemptions, in addition to contracts, effectively freed about 75 to 85 percent of freight traffic from economic regulation by STB.¹³ Currently, the most frequently transported commodities that could be subject to STB rate regulation, by tons shipped, are agricultural, specifically, grain soybeans, and sunflower seeds; assorted food items; coal; chemicals; and nonmetallic minerals.

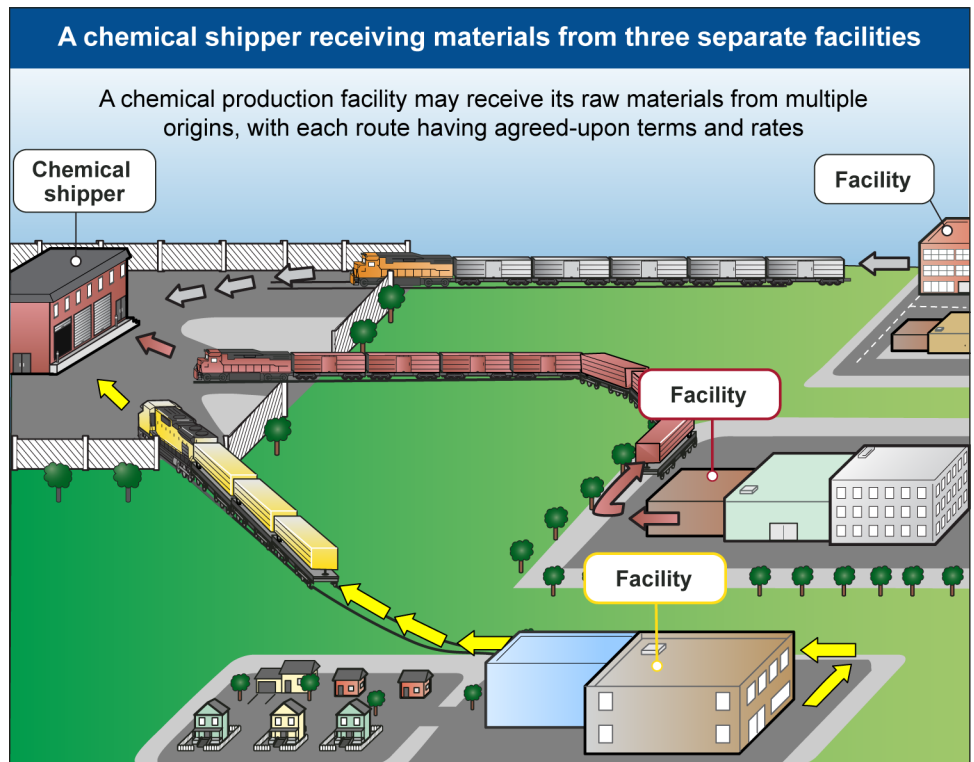
Railroads are required, upon request, to offer tariff terms and rates to shippers, but railroads are not required to offer a contract. Contracts are confidential, mutually agreed upon, and may contain rates for specific routes and other service terms for a specific shipper. According to the selected railroads and shippers we spoke to, contracts generally contain multiple, shipper-specific O-D routes—agreements on terms and rates for specific shipments over specific shipping routes—because a shipper may have multiple routes. For example, according to a Class I railroad representative, a chemical production facility may receive its raw materials from multiple origins, with each route having agreed upon terms and rates, as shown in figure 1.

¹¹Pub. L. No. 104-88, 109 Stat. 803 (1995).

¹²49 U.S.C. § 10709(c).

¹³Department of Agriculture, Agricultural Marketing Service, *Study of Rural Transportation Issues* (Washington, D.C.: April 2010).

Figure 1: Contracts for Shipment of Freight by Rail Can Contain Multiple Origin-to-Destination (O-D) Routes



Source: GAO. | GAO-17-166

STB has the authority to review the reasonableness of rates and service terms for regulated commodities if shipped by tariff. Tariffs are a pricing document issued by the railroads showing rates that are usually not customer-specific. Tariffs also spell out the standard terms of the railroad. These standard terms differ by commodity, covering everything from loading specifications to billing procedures.

Under STB's rate-relief process, in which it resolves disputes regarding the terms or rates in a tariff, in order for STB to review a rate as potentially unreasonable, the rate must not be under contract and the commodity must not be exempt from STB rate regulation. STB may then consider the reasonableness of a rate only if it also finds that the railroad has market dominance over the shipment at issue—that is, if (1) the rate is equal to or exceeds 180 percent of the railroad's variable costs for providing specific services to the shipper and (2) the railroad does not

face effective competition from other railroads or other modes of transportation. If STB decides the rate is unreasonable, it can order the railroad to pay reparations to the shipper for past shipments and decide the maximum rate the railroad is permitted to charge for future shipments.

Under its authority, STB considers the reasonableness of a challenged rate using one of its three tests, as chosen by the shipper. There is a financial limit imposed on the relief available depending on the test chosen:

- **Stand-Alone Cost (SAC):** The most commonly used test is the Stand-Alone Cost test, which requires the shipper to design a hypothetical railroad, tailored to serve the specific route(s), to simulate the competitive rate that would exist in a perfectly efficient network. STB then compares the challenged rate to the hypothetical rate. During the rate relief process, both the railroad and the shipper have the opportunity to present their views to STB.
- **Simplified SAC:** The simplified SAC seeks to create a cost-effective alternative to the SAC test. The simplified test eliminates or restricts the evidence parties can submit to the actual operations and services provided by the railroad.
- **Three Benchmark:** The Three Benchmark test is faster and less rigorous, but limits the potential return for a successful rate challenge. STB determines the reasonableness of a challenged rate by examining three benchmarks, or tests, that assess rate markups.

Between 1996 and 2016, STB reviewed 50 rate reasonableness cases.¹⁴ Of these cases, 36 used the SAC rate case process, 5 used the simplified SAC, 5 used the three benchmark process, and 4 used a different methodology.¹⁵ To date, most of the 50 STB rate cases have been for coal (32) or chemical (16) shippers. Among the 50 cases brought before STB since 1996, about half (26) were settled without an STB decision, while those that were decided by STB were split fairly evenly in favor of the shippers (11) or the railroads (10).¹⁶

¹⁴The timespan includes all cases with final outcomes since STB's inception in 1996.

¹⁵The fourth methodology was used in cases between 2001 and 2009 where the railroad did not wish to undergo a SAC test, and therefore the railroad and shipper agreed to use a different methodology instead.







¹⁶Rates were prescribed for 1 case and 2 other cases were withdrawn.

Contracts Provide Certain Advantages, and Their Use by Certain Shippers Has Increased

Contracts Are Private and Include Negotiable Terms

According to representatives of the four Class I railroads we spoke to, while contracts' and tariffs' terms and rates are developed using similar methodologies, they may contain key differences. For example, selected stakeholders said that contracts are often customized to a specific shipper and may reflect the railroad's and shipper's preferences for a given route or shipment. Figure 2 describes the similarities and differences between contracts and tariffs, based on our interviews with representatives from the four largest Class I railroads and selected shippers, pertinent laws, as well as sample contract language and tariffs provided by the railroads.

Figure 2: Similarities and Differences between Rail Contracts and Tariffs, according to Selected Railroads and Shippers

	Contracts	Tariffs
 Structure	A private, negotiated agreement between the railroad and shipper that covers agreed-upon terms and rates, and can cover shipping from one origin to one destination or multiple origins and destinations. According to selected shippers, negotiations may take up to a year.	A document issued by the railroad that covers the rate and terms the shipper must abide by to ship from any specified origin to any included destination and the standard terms that govern the shipment.
 Terms	Contracts may include additional negotiable terms to the railroad's standard terms, such as volume commitments and service standards. According to sample contract language provided by Class I railroads, contracts may contain language that states any provisions not found within the contract are governed by the standard terms.	Tariffs rely on the railroad's publicly available standard terms for a given commodity that govern the shipment.
 Rates	According to representatives from the four largest Class I railroads, a railroad proposes negotiable rates by examining market factors, considering factors particular to the shipper. These factors include the rates of competing transportation methods and determining how much shippers are willing to pay. In addition, railroad representatives and selected shippers said railroads may offer discounts based on the shipper's volume.	According to representatives from the four largest Class I railroads, a railroad sets rates by examining market factors. These factors include the rates of competing transportation methods and determining how much shippers are willing to pay.
 Procurement	The Railroad Revitalization and Regulatory Reform Act of 1976 and the Staggers Rail Act of 1980 allowed railroads and shippers to enter into contracts to set terms and rates. Railroad representatives told us, typically, a shipper initiates the negotiation process by submitting a formal request outlining the services it may require, though the process may be less formal in some instances. Railroads are not required to offer a contract to a shipper and shippers do not need to accept a contract.	For shippers of Surface Transportation Board (STB)-regulated rates for certain commodities, railroads are required by their common carrier obligation to offer a tariff rate upon request.
 Duration	The railroad and shipper mutually agree to the length of the contract. Railroad representatives and selected shippers told us most contracts are no longer than about 1 to 5 years, and contracts that span multiple years generally include periodic rate adjustments.	Railroads can adjust tariffs at any time; however, increases in rates or changes to terms require 20 days' notice (rate decreases require no advance notice).
 Disputes	Railroads and shippers generally must settle contractual disputes in court or through arbitration; according to a sample contract provided by Class I railroad, a contract may contain language concerning the process for dispute resolutions. STB is not involved.	STB maintains authority to resolve railroad rate and service disputes for rates for certain commodities shipped by tariff and has authority to review the reasonableness of the rates and rules that govern the tariff.

Sources: GAO analysis of interviews with Class I railroads and selected shippers, pertinent laws, and provided documentation. | GAO-17-166

Railroad representatives said they rely on publicly available standard terms to govern shipments over their network, regardless of whether the shipments are moving under contract or tariff. These terms are unique to each railroad and potentially negotiable for shipments under contract—as are all aspects of a contract. A railroad's standard terms cover all aspects of a shipment, from loading specifications to billing procedures, and may be contained in multiple documents. As a result, according to one railroad representative, contracts typically incorporate or reference all of the

railroad's applicable standard terms unless certain terms are specifically negotiated by the shipper.

Sample contract language provided by three Class I railroads show contracts may also include negotiable terms not typically found in tariffs, such as volume commitments, discounts, and service standards. However, according to two shipping associations representing coal shippers, in recent years, contracts have become more standardized and often reference other governing documents that spell out additional rules and conditions. More specifically, a representative from one of these shipper associations said that some contract features have become more difficult to negotiate, in part, because of the increased standardization. For example, they told us most contract negotiations now are generally limited to rates, fuel surcharges, train size, loading and unloading timeframes, and volume commitments.

According to three of the selected Class I railroads and a representative from a shipper association, to start a contract negotiation, typically a shipper may issue a request for proposal outlining its needs or informally contact the railroad. Railroad representatives said the railroad will typically respond with a standard contract. One railroad representative told us the railroad may administer thousands of contracts at any given time, so maintaining standard terms across their contracts allows the railroad to manage its business portfolio and operations more efficiently. For example, a representative from another Class I railroad said its standard terms allow it to efficiently handle different shippers' cars on the same train.

Contract and Tariff Rates Are Based on Similar Market Factors

According to representatives from the four Class I railroads we interviewed, they individually determine contract and tariff rates based on a number of similar market factors associated with the supply and demand for the commodity the shipper plans to transport. Because railroads must offer a tariff rate upon request, railroad representatives said they consider more general market factors in determining tariff rates. Selected shippers told us that tariff rates are usually, but not always, higher than contract rates, and sometimes are the same, in part, because contract rates, according to a railroad representative, can be negotiated and reflect market factors specific to the shipper as well as discounts for

volume commitments.¹⁷ In our discussions with the four Class I railroads, they said they look at the extent of competition when determining contract and tariff rates. According to one railroad representative, this includes considering customer feedback, past experience, and market research to determine the level of three types of competition:

- Competition from other forms of transportation: Generally, a railroad can charge more if it does not have to compete with another railroad or other transportation forms, such as barge, pipeline, or truck. As a result, a shipper served by more than one railroad or competitive alternative can create more leverage during contract negotiations. For example, representatives of the selected railroads told us if they are competing with the trucking industry for business, they may offer lower rates to obtain the shipper's business.
- Competition from other freight being shipped to the same market: A chemical shipper, as part of its comments to STB's 2011 competition proceeding, stated that rail rates may impact a shipper's ability to compete nationally and globally. According to railroad representatives we spoke to, they examine commodity markets to ensure they are pricing rates to allow shippers to be competitive. For example, a railroad representative told us it examines the rates it charges domestic crude oil shippers to ensure it remains competitive with imported crude oil. Representatives from the railroad industry also said understanding the extent of geographic competition within a market ensures the railroad maintains volume over their network. If rates are priced too high, a shipper may lose business and transport less freight. However, according to coal and grain shippers we interviewed, tariff rates may not always reflect current commodity market conditions.
- Competition through substitution: Some shippers may be able to obtain a commodity it needs from a different location, or it may use an alternative commodity. For example, a railroad told us a power plant

¹⁷ Depending on their duration, contracts may also include agreed upon rate adjustments, which according to railroad representatives we spoke to, may adjust the rate on a periodic basis and consider changes in the market over time. These representatives also said tariffs do not need similar adjustment factors because railroads can increase tariff-rates with 20 days' notice (decreases require no advance notice), thereby eliminating the need to consider market changes over time. Rate adjustments agreed upon in contracts are not uniformly applied and typically take into account various market factors, including inflation. Fuel costs often are not included as an adjustment factor because railroads often use a separate charge to take into account fuel costs, which are also adjustable. According to railroad representatives, rate adjustments can be negotiated by the shipper.

may choose to obtain its coal from another mine or switch from coal to natural gas if prices make doing so advantageous and the plant is able and configured to do so.

Contract and tariff rates also reflect the characteristics of a given shipment. More specifically, representatives from the four Class I railroads we interviewed said the rates reflect the characteristics of the commodity being shipped and its particular origin and destination. For example, a shipper association representing chemical shippers and a railroad representative said that commodities such as toxic inhalation hazards are more expensive to ship under contract and tariff because of their hazardous nature and liability concerns. In addition, railroad representatives also told us rates may vary by distance, and longer routes may be more expensive.

Railroads rely on selling freight transportation services at a particular rate to recover their operating and infrastructure costs. However, while representatives from all four Class I railroads we spoke to told us they do not develop their rates to provide transportation based on these costs, they also said they will not typically set rates below the cost of providing rail transportation. According to a Department of Agriculture report,¹⁸ the costs associated with providing rail transportation for each shipment, such as maintenance and rail crew costs, serve only as a floor below which rates should not go and bears little relationship to individual rail rates, which are closer to what the shippers are willing and able to pay. According to a representative from one Class I railroad, competitive factors may sometimes require the railroad to charge less than its costs to ship. However, railroads can also charge higher rates where its network is highly valuable to its shippers.

Volume Commitments and Other Contract Features Provide Advantages to Shippers and Railroads

Selected shippers and railroad representatives also said contracts generally provide key advantages by allowing for increased financial and logistical certainty for both parties. According to selected shippers we spoke to, they prefer to maintain the minimal number of contracts to meet their transportation needs. A shipper association said shippers can more efficiently manage multiple routes under one contract because of the stability in rates over the duration of the contract. As a result, according to the railroad representatives, shippers often request contracts covering

¹⁸Department of Agriculture, Agricultural Marketing Service, *Study of Rural Transportation Issues*, (Washington, D.C.: April 2010).

multiple routes—potentially up to thousands of routes, according to one railroad representative—because managing each route under a separate contract, or by tariff, would be too complex to administer. For example, one chemical shipper told us it may move one or two carloads per day across 1,000 separate routes over a year. In addition, contracts allow shippers and railroads to customize terms to better fit their shipping needs, such as offering guaranteed pickup and delivery times or specific services. For example, according to one railroad representative, in a contract with multiple routes, a railroad may offer a lower rate on some routes, while increasing rates on others, to allow a shipper to break into a new market. Another railroad representative said the railroad can also provide additional logistics services at a lower cost within a contract that contains multiple routes because the economy of scale offered by a large contract allows the railroad to provide services at a lower rate due to gains in efficiency.

Furthermore, according to representatives from three Class I railroads, a contract's overall volume commitment and certainty helps the railroads better plan future investments. Specifically, one railroad representative said a contract allows the railroad to allocate locomotives and rail crews more efficiently and ensure a consistent source of revenue. As a result, contracts generally include agreements on the amount of volume a shipper is willing to commit. Railroad representatives and selected shippers told us that the guaranteed volume from a contract may also create additional leverage for the shipper during contract negotiations. To gain additional volume guarantees, railroads and shippers said railroads typically offer discounted rates to shippers in exchange for volume commitments. Railroad representatives also said these discounts may be for one, multiple, or all of the routes in contract, and they said the more volume a shipper is willing to commit, the better deal it can expect to receive. However, if the shippers fail to meet their expected volume commitment, they may be subject to financial penalties. Moreover, according to one railroad representative, higher-volume shippers are also more likely to request custom terms.

However, some selected shippers said tariffs may provide advantages in certain situations. For example, they said contract negotiations may be too long and costly for shippers with infrequent or small volume shipments. Furthermore, according to coal shippers, in some instances, the tariff rate may be the same as the contract rate, and shippers incur potential penalties associated with failing to meet contractual volume commitments.

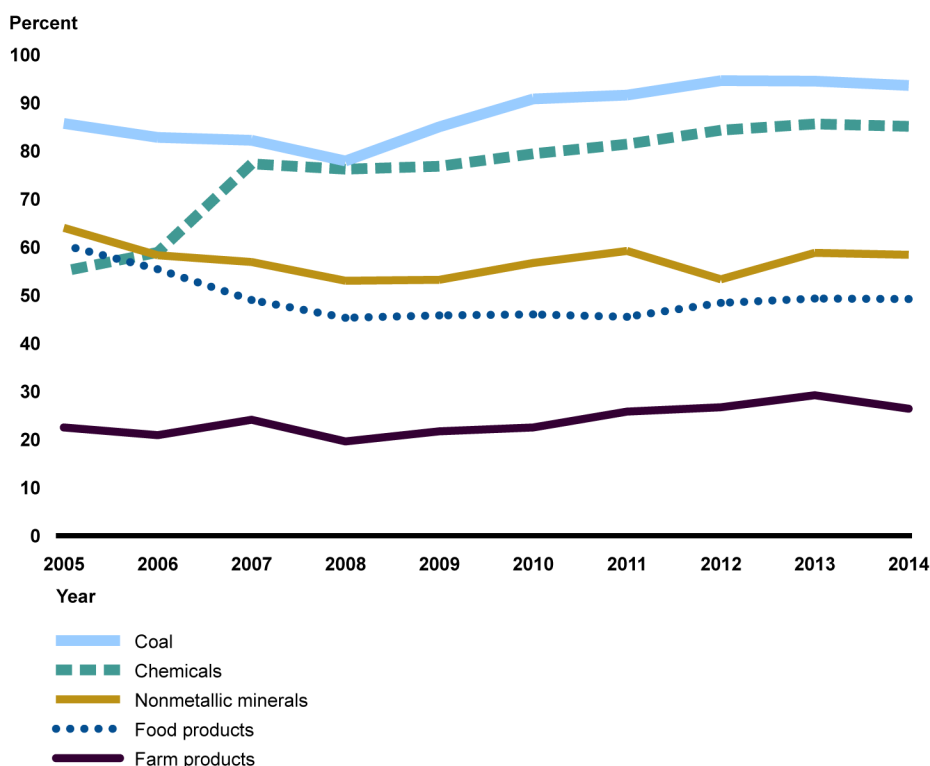
Freight by Contract Has Increased, and Shippers Said Some Contract Features Have Changed

Contract usage across the most frequently transported commodities regulated by STB has generally increased or stayed relatively the same in recent years.¹⁹ Specifically, from 2005 through 2014, the ton-miles shipped under contract for these commodities have increased by 6 percent, from about 705,000 ton-miles to about 800,000 ton-miles, a measurement that combines weight and mileage. In 2014, about 76 percent of regulated freight was shipped by contract.²⁰ However, according to railroad representatives, each railroad's business differs. Figure 3 shows the percent of selected commodities with regulated rates by ton-miles shipped under contract from 2005 through 2014.

¹⁹We chose these commodities because they were the five commodities with the largest shipments by tons in 2014 that are either wholly or partially subject to STB rate regulation.

²⁰As part of our analysis of the Carload Waybill Sample, we excluded boxcar and intermodal shipments, both of which are exempt from STB rate regulation. Shipments moving by equipment not classified as boxcar or intermodal, based on STB guidance, are included in our analysis.

Figure 3: Annual Percentage (by Ton-Mile) of Selected Commodities Shipped under Contract, 2005 through 2014



Source: GAO analysis of Surface Transportation Board data. | GAO-17-166

Note: The data are estimates from a sample and have a margin of error no greater than plus or minus 1.5 percentage points at the 95 percent level of confidence.

From 2005 to 2014, the percentage of coal and chemicals shipped under contract has increased when measured on a ton-mile basis. Specifically, in 2005, 55 percent of all chemical shipments, measured in ton-miles, were shipped by contract; by 2014, that percentage had increased to 85 percent. Similarly, over the same time period, the ton-miles of coal shipped increased from 86 percent to 94 percent. A representative of a shipper association said chemical shipments under contract increased, in part, because the potential for improved negotiated terms may provide additional certainty and lower rates. Both coal and chemicals are also heavily dependent on the railroad's network.

We were unable to obtain contract duration data from selected railroads and shippers, but selected coal and grain shippers as well as a railroad representative told us that the duration of contracts has generally

decreased during the last 10 years. According to another rail representative, contract duration depends on the commodity and the market; for example, this official said shippers in markets that change frequently may prefer shorter contracts. Additionally, representatives from two selected shipper associations that represent various commodities told us the duration of contracts has decreased over the years, with longer contracts becoming increasingly uncommon, though they prefer longer contracts because of their rate stability. A coal-shipper association representative also told us current coal contracts are typically for about 3 to 5 years, in part because a shorter contract would result in more frequent contract renegotiation. Another coal shipper association representative said the duration of contracts to transport coal has gotten shorter, mostly because of the increased uncertainty in the energy market. In the past, we have reported that the duration of contracts has declined, in part, because of the railroads' desire to quickly react to shifting market demand.²¹ One railroad representative we spoke to said as markets become more dynamic, shippers can continue to expect to receive shorter contracts.

In addition, selected shippers told us the railroads may also be shifting certain costs to shippers. More specifically, according to a grain shipper, railroad service commitments that used to be common are no longer included in contracts. Further, one coal shipper said the railroad previously supplied its own personnel to load the coal, but now, with no reduction in rates, the shipper is required to do so.

²¹GAO, *Freight Railroads: Industry Health Has Improved, but Concerns about Competition and Capacity Should Be Addressed*, [GAO-07-94](#), (Washington, D.C.: Oct. 6, 2006).

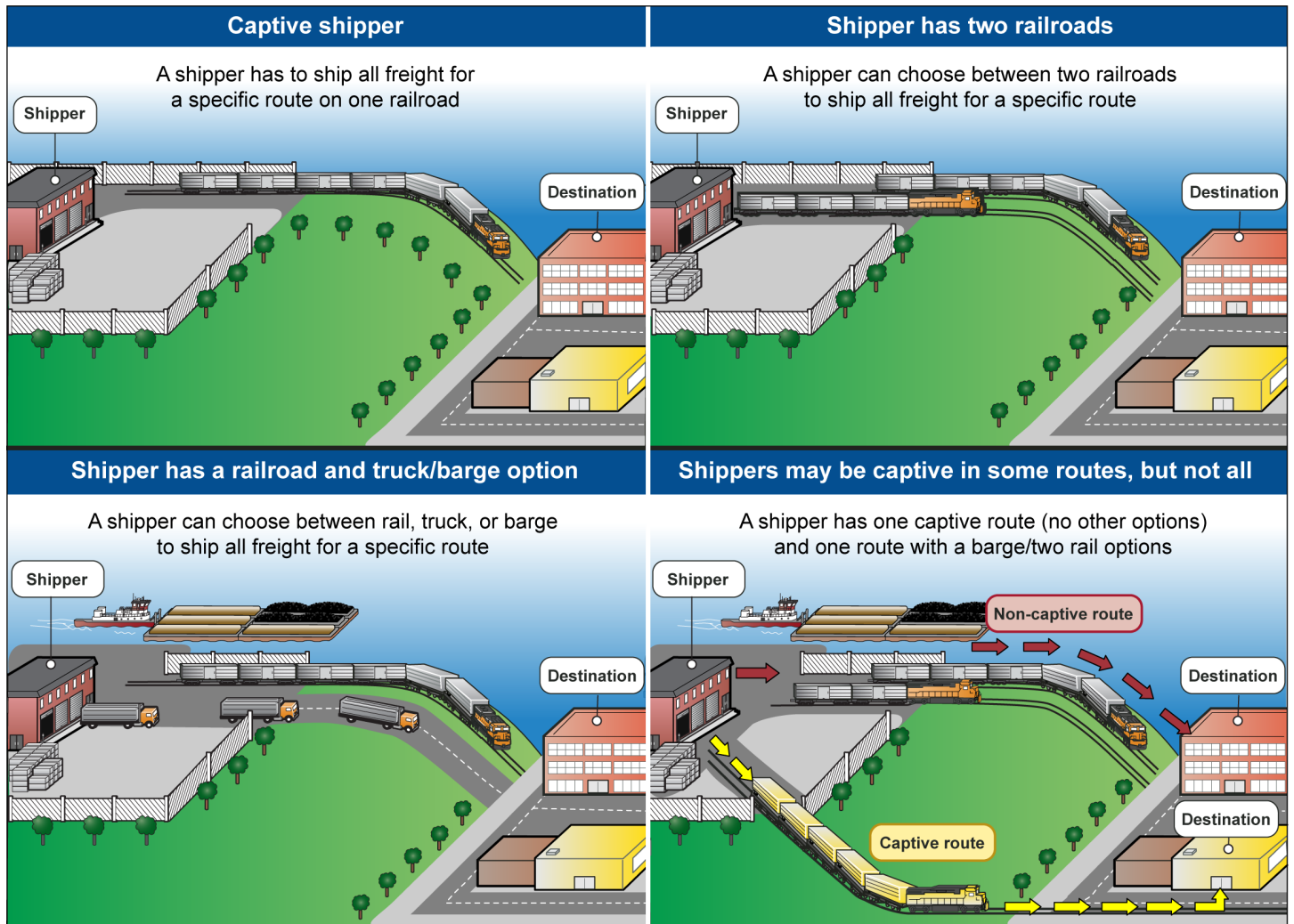
Some Selected Shippers with Fewer Shipping Options Said They Have High Rates for Some Contract Routes and Limited Recourse for Rate Relief for Tariffs

Selected Shippers with Fewer Options Said They May Have High Rates for Some Routes in Contracts

Despite the volume discounts and other advantages to contracts with multiple O-D routes, some shippers said that contracts effectively constrain them into paying higher rates on some routes, because railroads will propose contracts with multiple O-D routes where some of the routes are priced unreasonably high, in the shippers' view. This is particularly an issue for shippers that are "captive"—that is, shippers served by a single railroad without an economically viable transportation alternative because a trucking or barge route either does not exist or would be too costly.²² Figure 4 below illustrates the ways in which a shipper can be captive on all routes or just some routes.

²²Captive shippers can either be entirely captive or captive only on specific routes.

Figure 4: Captive versus Non-Captive Routes for Freight Rail



Source: GAO. | GAO-17-166

Eight of the nine shippers we interviewed stated that captive shippers have no other options than the one railroad that serves them, which can result in higher freight rail rates. Further, according to our analysis of a 2011 STB proceeding on rail competition, 6 of the 11 shippers that provided comments to the proceeding about being a captive shipper said that captive shippers have no other options than the railroad that serves

them, which can result in higher rates.²³ Additionally, a 2010 study commissioned by the STB concluded that captive shippers tend to pay higher shipping rates than otherwise similar shippers with access to additional railroad or water competition.²⁴

As previously discussed, the selected railroads we interviewed said they develop prices based on market forces and the railroad's supply of available equipment and rail lines. This is the basis for differential pricing, a pricing strategy where railroads charge shippers with few or no other options more than shippers with more options for their freight. Differential pricing is permitted and encouraged in the rail freight market by design. The Staggers Rail Act of 1980, which reduced the economic regulation of railroads, provided that rail rates should be set by the competitive market forces to the maximum extent possible. According to railroad officials, railroads make up for lower revenues from highly competitive routes by charging higher rates in less competitive routes where they have market dominance. All four railroads and the Association of American Railroads also said that railroads use differential pricing to charge the highest rate shippers are willing to pay so railroads can cover infrastructure costs.

Although shippers have the option of challenging a tariff rate before the STB, they do not have this option for challenging rates they view as unfair if agreed to in a contract, since the STB has authority to review tariff rates but not contract rates. Although contracts are negotiated between railroads and shippers, some shippers told us that because contracts often contain rates for multiple routes, they may be pressured to accept higher rates they view as unfair as part of the package of rates they agree to, particularly if some of the shipper's routes are captive. Specifically, three selected shippers said this situation can arise when faced with a contract containing multiple O-D routes where they view some routes as priced too high by the railroads. In this situation, they have two choices: 1) accept the contract and pay higher rates for some routes, or 2) reject the contract and opt instead to move their freight by tariff, which could result in higher prices for all the routes since, as previously discussed, shippers and railroads said that tariff rates are generally higher than contract rates. According to two of the shippers we interviewed,

²³Surface Transportation Board, COMPETITION IN THE RAILROAD INDUSTRY, Docket Number Ex Parte 705, June 22, 2011.

²⁴Christensen Associates, *An Update to the Study of Competition in the U.S. Freight Railroad Industry*, Final Report. Prepared for the Surface Transportation Board, (January 2010).

combining captive and competitive routes together in one large contract can create high rates on captive routes. In contrast, officials from one railroad said that the STB tariff rate-relief process prevents railroads from forcing shippers to pay unreasonable rates, even in contracts. The railroad representatives said this occurs because railroads do not want to have a rail rate case before the STB and a shipper that thought a contract rate was unreasonable could always ask for the tariff in place of the contract to be able to file a rate case.

The STB Tariff Rate-Relief Process Can Be Complicated and Expensive

When an STB rate case is an option, six of the interviewed shippers said that STB tariff rate-relief cases are complicated, time consuming, and expensive, in part, due to the challenges in determining reasonable and unreasonable rates. Consequently, these shippers said they are deterred from pursuing cases or from requesting tariff rates from railroads in order to pursue a rate case. An STB staff member said that when a rate case involves hundreds of O-D pairs, resolving the case can take substantial resources and time for STB, the railroads, and the shippers involved in the litigation. This STB staff member also stated that cases can take up to 3 years and be so costly that some shippers may think it is not worth bringing a case.

The STB rate-relief process was designed, in part, to maintain reasonable rates for captive shippers. However, determining reasonable versus unreasonable rates can be challenging given the market forces involved. Once a rate case is filed, STB must determine whether the rate is reasonable because it allows a railroad to earn adequate revenue for its fixed costs, or whether the rate is unreasonable because it allows the railroad to earn more than adequate revenue from its market dominance. According to economic literature, differential pricing allows railroads to collect adequate revenue to cover all costs and earn a reasonable return on their investments. Railroads not earning adequate revenue to remain in business and to adapt their network to meet future shipper demands would be problematic for both railroads and the shippers that rely on them. However, some research shows that railroads may be recovering from the rising costs, losses, and bankruptcies in the 1970s. For example, according to two economic studies of railroad economics, the Class I railroads may now be earning adequate returns on investment, and perhaps sometimes in excess of adequate returns, so measures to reduce the amount contributed by captive shippers to railroad returns may

be appropriate.²⁵ More recently, in September 2016, STB determined that four Class I railroads were revenue-adequate for the year 2015, specifically that these railroads achieved a rate of return equal to or greater than STB's calculation of the average cost of capital to the freight rail industry.²⁶

STB is currently reviewing its rate relief process as required in the Surface Transportation Board Reauthorization Act of 2015. In June 2016, STB released an Advance Notice of Proposed Rulemaking outlining measures to expedite its handling of SAC rate cases.²⁷ Comments were due in August 2016. STB staff said that measures such as standardizing evidence submissions would expedite SAC cases for purposes of fairness to litigants and improving overall agency efficiency. They also said that since the current proceeding on expediting SAC rate cases had just begun, it was too soon to know how changes might affect the SAC process.

Agency Comments

We provided a draft of this product to STB for comment prior to finalizing this report. We received technical comments from STB which we incorporated as appropriate.

We will send copies of this report to appropriate congressional committees. In addition, we will make copies available to others upon request, and the report will be available at no charge on the GAO website at <http://www.gao.gov>.

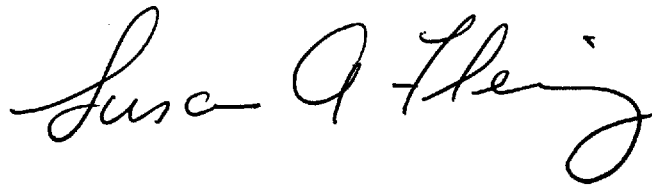
If you or your staff have any questions about this report, please contact me at (202) 512-2834 or Flemings@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on

²⁵Christensen Associates, *An Update to the Study of Competition in the U.S. Freight Railroad Industry*, Final Report. Prepared for the Surface Transportation Board, (November 2010). & Pittman, Russell; *The Economics of Railroad "Captive Shipper" Legislation*; EAG 10-1 (January 2010).

²⁶ Surface Transportation Board, RAILROAD REVENUE ADEQUACY—2015 DETERMINATION, Docket No. EP 552 (Sub-No. 20), September 6, 2016.

²⁷Surface Transportation Board, EXPEDITING RATE CASES, Docket Number Ex Parte 733, June 15, 2016.

the last page of this report. GAO staff who made key contributions to this report are listed in appendix I.

A handwritten signature in black ink, reading "Susan A. Fleming". The signature is written in a cursive style with a large, stylized "S" and "F".

Susan A. Fleming
Director,
Physical Infrastructure

Appendix I: Contact and Staff Acknowledgments

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Staff Acknowledgments

In addition to the individual named above, other key contributors to this report were Andrew Huddleston, Assistant Director; Sarah R. Jones, Analyst-in-Charge; Namita Bhatia Sabharwal; Herbert J. Bowsher; Stephen M Brown; Russell C. Burnett; Ross A. Gauthier; Richard A. Jorgenson; Grant M. Mallie; Cheryl M. Peterson; Malika Rice; Kelly L. Rubin; Amelia (Michelle) Weathers; Alwynne Wilbur; and William T. Woods.

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