

Hauling More Freight

New Federal Initiatives Could Affect Rail Freight Growth

By RTA Forecast Team

There is a new president in the White House, and, so far, the public's reaction to his rhetoric, tweets and series of executive orders practically defies analysis. There's not much on his agenda—only new international trade agreements, tax cuts, regulatory reform, increased government spending, building walls, pressuring corporations and media outlets. And that's just this week. Add to this an environment poised for rising interest rates and the table is certainly set for a fascinating 2017.

Though it may be too early for any meaningful evaluation of Trump's economic policies and their impact on the tie industry, there are several items to consider that may offer hints on the direction of future demand. One of them may even provide a nominal, but surprising, boost to traffic.

Last year saw several highs and lows reached in the financial and commodity markets that had an impact on rail traffic. Average annual U.S.-GDP growth was 1.6 percent, down from 2.6 percent the year before. In July, the 10-year U.S. Treasury bond yield hit 1.37 percent, its lowest mark in 54 years (Federal Reserve Bank of St. Louis - FRED). Estimated coal production was the lowest in 36 years, and annual average crude oil pricing reached a 10-year low, dropping to \$43.30 per barrel (U.S. Energy Information Administration - EIA). Natural gas

prices also fell to their lowest level in several years. In addition, U.S. exports struggled under the strong dollar, which reached new highs (Figure 1). Carload volume in 2016 declined accordingly. Coal shipments fell 20 percent, nonmetallic minerals by 3 percent, petroleum and related products by 21 percent. Even intermodal traffic declined by 1.6 percent as compared to 2015.

On the other hand, U.S. grain producers had a very good year in which corn and wheat crops increased by 11 percent and 12 percent, respectively (U.S. Department of Agriculture - USDA). Automobile manufacturers also had an excellent year, with annual sales of cars and light trucks reaching an all-time high at 18.3 million vehicles (FRED). To top it off, new residential construction grew by 5.3 percent annual rate, and a steadily improving labor market produced upward pressures on wages. These few bright spots emerged: 1.4 percent increase in auto shipments and grain crop freight increasing by 7.3 percent. Railroad companies also managed to deliver good financial performance measured by their increase in productivity.

Peering around the corner, a rebound in traffic could be glimpsed by the end of 2016, as coal production stabilized, and the crude oil spot price rebounded from its lows to close the year \$53.75 per barrel. Conse-

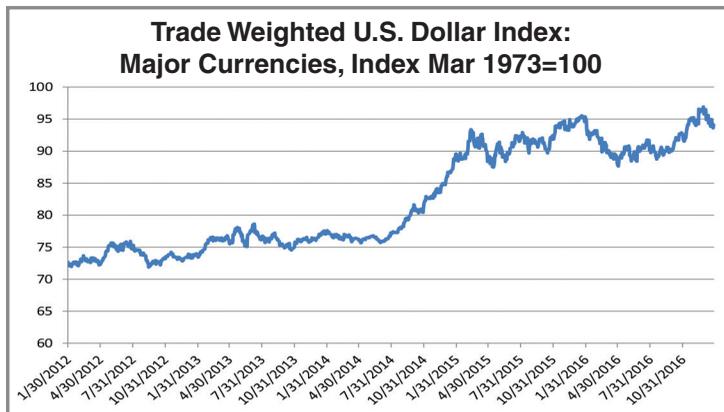
quently, oil rig counts have risen and are expected to increase this year (Figure 3).

In December, the Fed raised the federal funds rate by 25bps and the expectations are for two or three more increases this year. As a result, the 10-year Treasury bond yield jumped from its low to close the year at 2.45 percent. Yields were further boosted because international investors sold approximately \$200 billion of Treasury bonds (<http://ticdata.treasury.gov>).

Even though the Fed had signaled a more hawkish approach to future interest rate increases, the stock market continued its upward trend, in spite of some people expecting a pullback with interest rates increases. Fear in the stock market is virtually nonexistent as reflected in the market volatility index (VIX) which is just above its lowest reading in 10 years (Figure 2).

Analysis suggests that 2017 should see improvement in rail traffic. According to Standard & Poor's (S&P), the economy should grow by 2.4 percent. New residential construction should increase by 11 percent, and consumers should get more wage growth. The price of natural gas, as a substitute for coal in power generation, is predicted to rise by 9 percent. Together with the 12 percent decrease of coal stock at power plants in the second half of 2016, the production of coal should increase margin-

Figure 1



Source: Federal Reserve Bank of St. Louis

Figure 2



ally by 2 percent as forecasted by EIA. EIA also predicts that the average annual price of oil should reach \$52.50 per barrel, which at this point seems to be a low estimate. Furthermore, vehicle sales should remain as strong as last year. These factors should help rail freight see modest improvement. Fourth quarter earnings calls of reporting railroads also reflected this optimism.

Will the new U.S. administration's plans affect tie demand? The president signed several executive orders/memoranda that could be important for the tie industry. The president reversed Obama's order concerning the adjustment for the mortgage insurance premium reduction on mortgages originated by the FHA, but this will likely have negligible negative affect on the housing market. Another executive order regarding the U.S. withdrawal from the Trans-Pacific Partnership does not affect the current state of trade; however, it does potentially affect the future unless new bilateral agreements can be forged with those trading partners quickly. The memoranda pertinent to the Keystone XL and Dakota Access pipelines, requiring the use of domestically produced pipe, could generate more demand for energy resources and metallic minerals likely to be carried by the rail. If a rework of NAFTA materializes, that could be good or bad depending on the tweaks. Then there are tensions simmering with China which may produce hazards to growth.

One executive order, "Border Security and Immigration Enforcement Improvements," could provide a surprise nominal boost to rail traffic. In section 4(a) of this document, the secretary of Homeland Security has been assigned to "take all appropriate steps to immediately plan, design, and construct a physical wall along the southern border" in accordance with the Secure Fence Act of 2006 passed under former president George W. Bush administration.

Consider that the U.S./Mexico border is 1,954 miles long and it already has about 650 miles of fencing. If carried out to the full extent, 1,300 more miles would need to be finished. For a quick estimate of how much material will be required, assume that a wall would take the form of a fence similar to one that is already there. The fence would have a concrete in-ground footing two yards deep and one yard wide. The weight of one

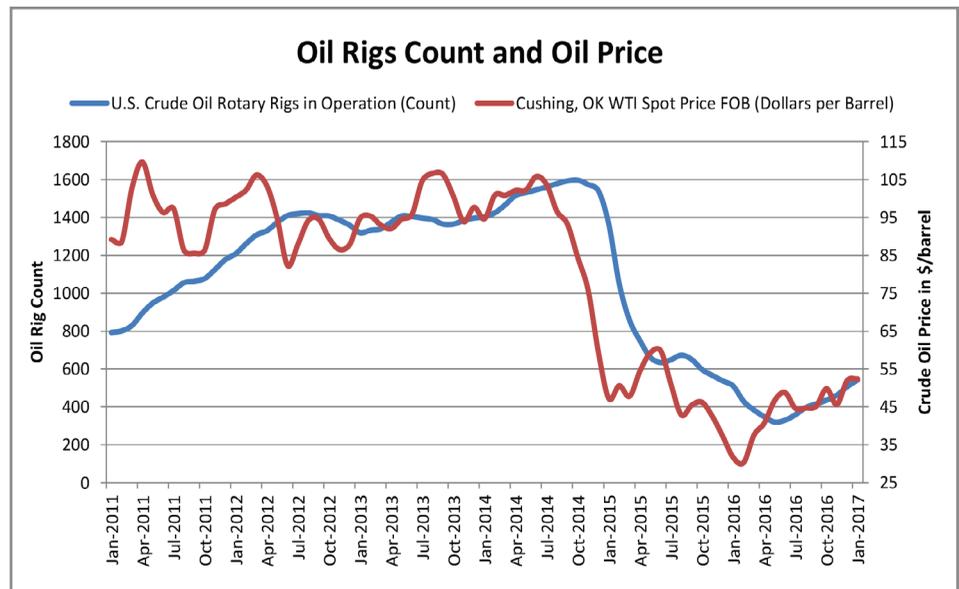


Figure 3

Source: Energy Information Administration

cubic yard of concrete is about 1.8 metric tons. That means the footing would require 8.3 million metric tons of concrete. The above-ground portion would be made out of steel, 21 feet high and 1/8" thick. Assuming about 490 pounds per cubic foot, the amount of steel needed is about 1.7 million metric tons. In addition, production of cement and steel for the project would require 5.9 million metric tons of coal and limestone. In total, that is about 15.9 million metric tons of material. Assume also that the material is transported by rail and the average distance for carrying this material would be 400 miles. That would equal about 6.4 billion ton-miles of freight. There may also be additional material needed for building access roads to places where the wall would be built. For comparison, the U.S. railroads carried 417.7 billion ton-mile of freight in the third quarter of 2016. Although a 6.4 billion ton-miles seem small in relation to that, it would be new incremental growth for just this one project.

Other larger anticipated projects related to infrastructure replacement/maintenance have not yet been discussed to any extent. However, the spillover effect of any increased infrastructure spending could boost rail traffic in even more meaningful ways.

With the majority of the new administration's plans still unclear and very much dependent on cooperation with Congress, the assumption is that much of the anticipated impacts to U.S. economic growth may not vest until 2018.

So, the RTA outlook for only a slight increase in tie demand in 2017 leaves the forecast virtually unchanged from May/June 2016 (Figure 4). Based upon the level of cooperation in D.C., among other things, S&P provides an upside and downside GDP growth forecast of 2.6 percent and 1.4 percent respectively (base case 2.4 percent). With the S&P outlook as its foundation and including the EIA data, the RTA forecast team presents base case, upside and downside tie demand forecasts (Figures 4, 5, 6).

Base Case Tie Demand Forecast					
New Wood Crossties (in thousands)					
Year approx	Real GDP	Class 1 Purchases	Small Market Purchases	Total Purchases	Pct
2013	1.5%	17,131	7,317	24,448	6.2%
2014	2.4%	15,931	7,083	23,014	-5.9%
2015	2.4%	16,566	7,417	23,983	4.2%
2016	1.6%	16,572	6,590	23,162	-3.4%
2017	2.4%	16,938	5,591	22,528	-2.7%
2018	2.3%	17,751	5,782	23,533	4.5%

Figure 4

Downside Scenario					
New Wood Crossties (in thousands)					
Year approx	Real GDP	Class 1 Purchases	Small Market Purchases	Total Purchases	Pct
2016	1.6%	16,572	6,590	23,162	-3.4%
2017	2.4%	16,848	5,243	22,091	-4.6%
2018	2.3%	17,183	5,136	22,319	1.0%

Figure 5

Upside Scenario					
New Wood Crossties (in thousands)					
Year approx	Real GDP	Class 1 Purchases	Small Market Purchases	Total Purchases	Pct
2016	1.6%	16,572	6,590	23,162	-3.4%
2017	2.4%	16,956	5,941	22,896	-1.1%
2018	2.3%	18,036	6,193	24,229	5.8%

Figure 6