The Good, The Bad & The Oily

BY RTA FORECAST TEAM

The U.S. economy is performing relatively well, with an increasing GDP growth rate outlook (S&P). The job market is improving as well, and is up by 2.1 percent in 2014, the highest growth rate in 15 years (Federal Reserve Bank of St. Louis website). Furthermore, real median household income is finally increasing (1.2 percent as of November 2014), after a huge decline during and after the most recent recession (*The Economist* Jan. 3, 2015, p. 21).

This shows the economic expansion, which began in mid-2011, is benefiting ordinary households. In addition to this, the rapid and unexpected reduction in the price of gasoline and other fuels has released extra spending power…another boon for the U.S. consumer.

However, falling crude oil prices create a headwind in other quarters. As reported by Reuters on Jan. 21, three major oil companies announced current or future layoffs. Baker Hughes has so far cut 1,000 jobs, while Halliburton and Schlumberger announced future job cuts of 7,000 and 9,000, respectively.

Many small shale drillers are scaling back development of new wells, and the falling revenue for some leveraged companies may be detrimental as is the case of WBH Energy Partners filing for chapter 11 bankruptcy as reported by CNBC on Jan. 12. U.S. oil producing states have also been affected. Alaska's government contemplates a 50 percent cut on CAPEX, mainly roads and bridges.

Furthermore, decreased oil revenue is expected to cause budget short falls in Louisiana. Texas has lost 2,300 oil and gas-production-related jobs to date *(New York Times,* Dec. 27, 2014).

All of these events will have some negative impact on regional banks in these states and Wall Street investors are trying to assess the downside risk (Nathan Stovall, SNL Financial). If affected in this way, banks could be caught in a sudden wave of uncollectable loans. This, in turn, would likely squeeze credit available to small and medium businesses in those same states.

Looking Back

In recent years, there was a substantial increase in U.S. oil production resulting in an increase of crude oil transported by rail as well as supplies for oil fracking, such as sand and drilling equipment.

Table 1

Agency	Month of Forecast	2015e	2016e
S&P	May-14	86.45	95.40
S&P	Sep.-14	88.53	97.38
S&P	Dec.-14	65.25	70.13
S&P	Jan.-15	50.75	60.67
EIA Forecast	Jan.-15	54.58	71.00
Goldman Sachs	Jan.-15	47.15	65.00

Table 2 - Base Case Forecast

NEW WOOD CROSSTIES *(in thousands)*

Year Approx	Real GDP	Class 1 Purchases	Small Market Purchases	Total Purchases	Pct
2011	1.8%	16,525	5,363	21,888	11.8%
2012	2.8%	16,968	6,054	23,023	5.2%
2013	1.9%	17,131	7,317	24,448	6.2%
2014	2.4%	17,091	6,171	23,262	-4.8%
2015	3.3%	18,132	6,216	24,348	4.7%
2016	2.9%	18,306	6,212	24,518	0.7%

The 52nd weekly report by AAR shows increases of petroleum and petroleum products carload shipments by 12.7 percent from 2013 to 2014 and 11.6 percent increase of crushed stones, sand and gravel in the same period.

Based on these events, the Railway Tie Association (RTA) published a tie forecast in the September/October 2014 issue of *Crossties.* That forecast was the result of altering the econometric model to include fracking and crude by rail (CBR) wherever possible in the model's equations based on Department of Energy (EIA) U.S. oil production forecasts. The outcome was a model that predicted very high tie demand especially in 2015 and 2016. Since then, tie purchases have not picked up; the latest 12-month-ended December purchases are 7.3 percent below year-ago levels.

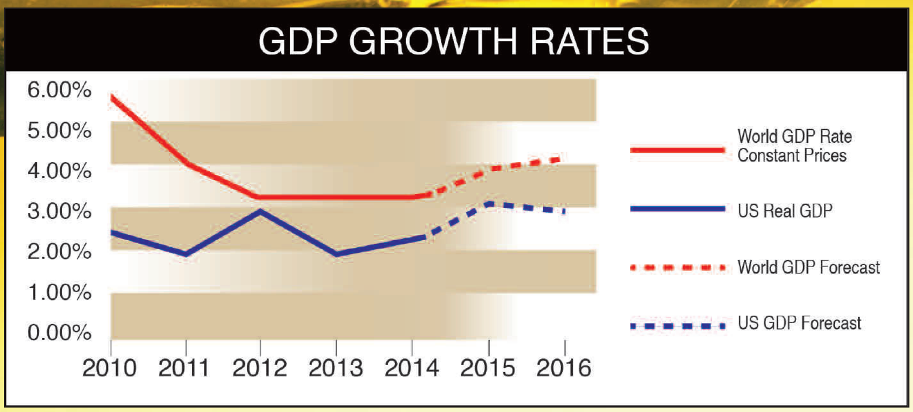
Much of the drop in tie purchases is probably due to limits on the supply side, which have been well chronicled. Nevertheless, this caused some head scratching and revisions to the econometric model. One equation (Class 1 purchases) was returned to its former state, with no CBR (crude by rail) variable present. Another equation was modified to include the effects of pipelines on CBR volume. The result of this second modification produced a better fit with the historical data.

A second shock that created issues for the September/October forecast took the form of precipitous declines in crude oil prices; West Texas Intermediate fell from a peak of $107.95 in June to $46.06 on Jan. 12, a drop of 57 percent.

Table 1 shows the forecasted oil prices for 2015 and 2016 that RTA worked with, as well as the forecast revisions in the following months.

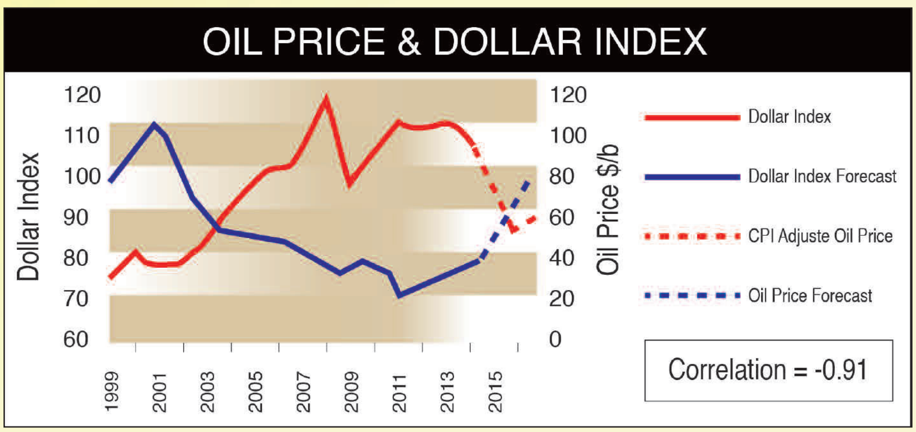
So far, the precipitous price decline has prompted oil companies to decommission a growing number of rigs. For example, Baker Hughes reports that the number of vertical rigs is down 9 percent in the last few months. ➤

Figure 1



Source: IMF, BEA, and S&P

Figure 2



Source: Federal Reserve Bank of St Louis, EIA, and BLS Trade weighted dollar index: EUR 34.29%, CAD 29.97%, JPY 19.30%, GBP 9.43%, CHF, AUD, and SEK

Rail shipments of drilling pipe, fracking sand and products related to new rig construction could decline in short order.

At this time, the Department of Energy's forecasters expect U.S. crude production to continue growing through mid-2015, decline in the second half, and then resume growth in 2016: oil production in 2014 is expected to be 8.67 mb/d. An increase of 7.4 percent is expected in 2015, and further increase of 2.4 percent is expected in 2016.

RTA's econometric model utilizes forecasts from the Department of Energy, as well as from Standard and Poor's as inputs for forward-looking tie purchases. Results are shown in Table 2.

This outlook is significantly lower than RTA's previous forecast for reasons mentioned above, but does return demand expectations to the 2013 levels for 2015. The most likely downside risk to the forecast is that crude prices will remain lower for an extended period of time, further disrupting shale and tar sands drilling activity, resulting in declines for CBR as well as shipments associated with new fracking endeavors.

As illustrated in Figure 1, the world GDP growth rate has been slowing down for several years and with it the demand for crude oil. Furthermore, RTA found that the trade weighted dollar index of major currencies has a strong negative correlation with oil prices as illustrated in Figure 2. The S&P forecast expects the index to rise in 2015 and level off in 2016.

Since the level of oil production depends on the crude price, for which there is a high level of uncertainty, the RTA forecast team created an adverse scenario for tie demand where the U.S. oil production in 2015 and 2016 does not increase and is held flat at 8.67 mb/d.

For concerns stated above, this forecast is derived from lower CBR, fracking sand and other equipment shipments affecting not only short lines but also Class 1 railroads. The results follow in Table 3.

Upside potential could include a number of factors. Rail industry analyst Tony Hatch reports that domestic intermodal will achieve investable returns and that the big bet railroads have made in the intermodal market will pay off with more balanced and sustainable growth. Hatch also suggests that there is an impending boom expected for chemical and plastics production with U.S. exports forecasted to rise 45 percent by 2020. This would arguably increase rail shipments and could buffer any downside to reduced growth in CBR.

Finally, a change in Saudi oil output policy, stabilizing crude prices at a higher level than today, plus a successful monetary stimulus in Europe would bolster overall rail shipments. At this time, the RTA forecast team sees no reasonable way to quantify these factors to produce a model based on them, but acknowledges that the possibility for upside to the base case forecast (Table 2) exists. ■

Table 3 - Adverse Scenario Forecast

NEW WOOD CROSSTIES *(in thousands)*

Year Approx	Real GDP	Class 1 Purchases	Small Market Purchases	Total Purchases	Pct
2011	1.8%	16,525	5,363	21,888	11.8%
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2014	2.4%	17,091	6,171	23,262	-4.9%
2015	3.3%	17,239	5,838	23,077	-0.8%
2016	2.9%	17,586	5,967	23,554	2.1%