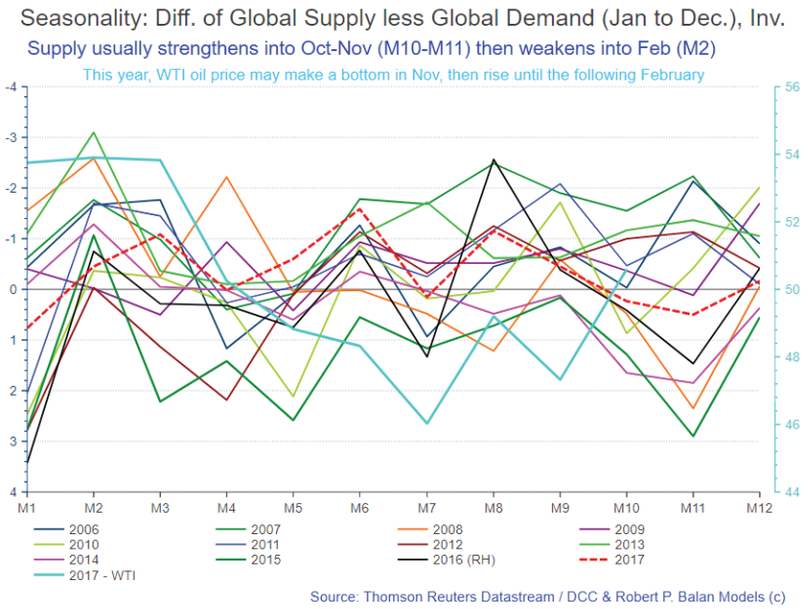
38 / Seasonality in Oil may trigger a short term dip until late but the uptrend reasserts thereafter

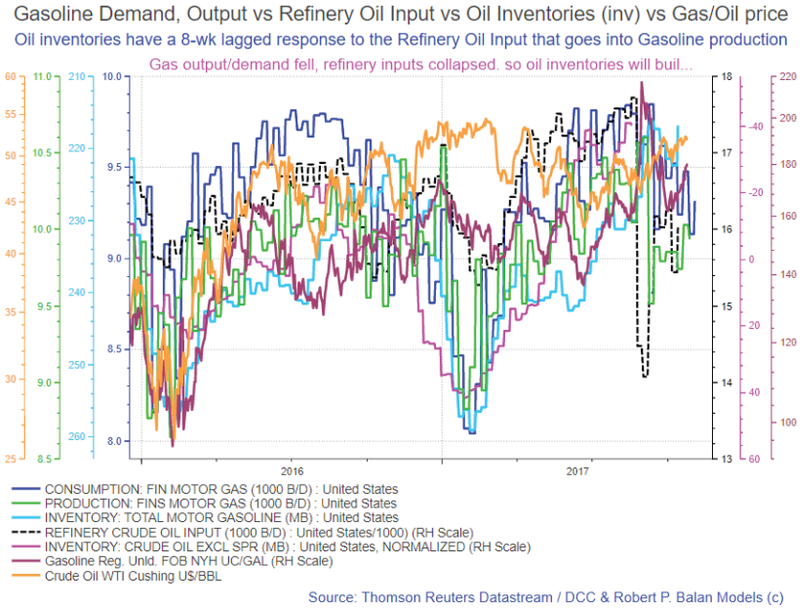
Global oil consumption ebbs and flows from one season to the next – the seasonality of the oil market is well established and widely understood. From many indications, the oil market has just finished a seasonal peak in many of its fundamental vectors (which have helped push prices higher in past weeks). But the market is due for another, countervailing phase, which may bring price lower over the next few weeks – at least if we go by historical patterns. During other times, this would not invite much discussion, but the fact that the OPEC-NOPEC have been trying to put a firm bid on oil prices, puts the historical pattern at some risk. OPEC-NOPEC has been jawboning oil prices higher in past weeks, with hints of further oil production cuts to come. OPEC-NOPEC have been struggling to clear the global oil glut that has kept prices below $60 a barrel – less than half the oil price level three years ago. **Indeed, for analysts looking for clues which will lead to a good forecast of oil prices in the near-term, the seasonality in the variance of global supply and demand will continue to provide guidance due to its consistent pattern (see 1st graph on this page).** There is a distinct seasonality in the variance between global supply and demand – the supply variance strengthens (more supply) into Oct-Nov (M10 - M11), then weakens (less supply) into Feb (M2). This impacts oil prices accordingly, after a short lag.

With OPEC and Russia apparently keeping their obligation to keep output under control per recent agreements, it will be US oil production and oil consumption which hold the key to further changes in the global oil price. US production and oil consumption have become the swing data – the annual rhythms of refiners,



Source: Thomson Reuters Datastream / DCC & Robert P. Balan Models (c)

US motorists and the weather will play crucial parts in determining whether the cartel's effort to boost prices is successful or not. US oil supply and consumption will be crucial oil price determinants over the next few months, so this makes it important to understand how product consumption (mainly gasoline) play out from here. Demand for oil did increase during the summer as U.S. households hit the road for their vacations. Consumption started to tail off last month (in September) as the driving season ended and refineries halt for maintenance. But product demand should rise again at the start of winter as people burn oil for heating. For now, the product cycle has turned. In the following graphs, we document what we believe will be a consolidation/ correction in the current uptrend in oil prices due to the onset of a weaker phase in product demand in the US. This, however, may be a brief respite to what we see as a trend for stronger oil prices until Q1 2018.



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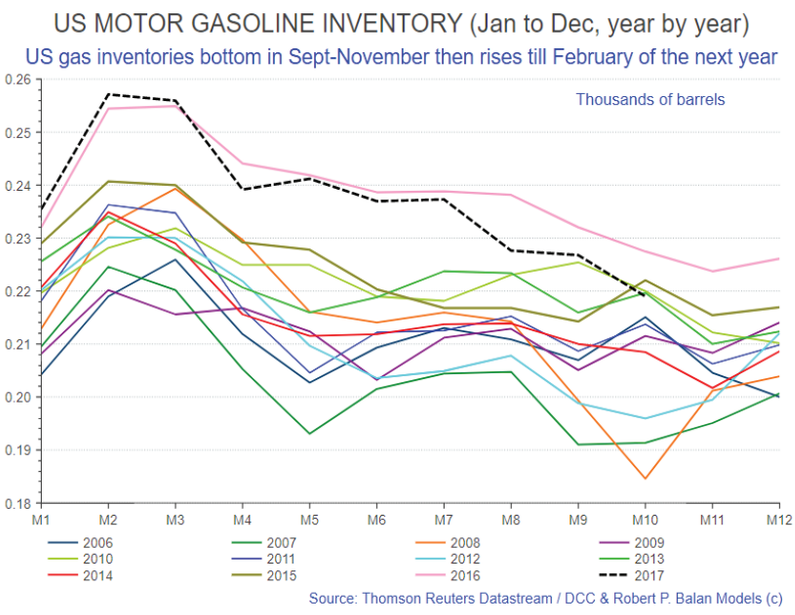
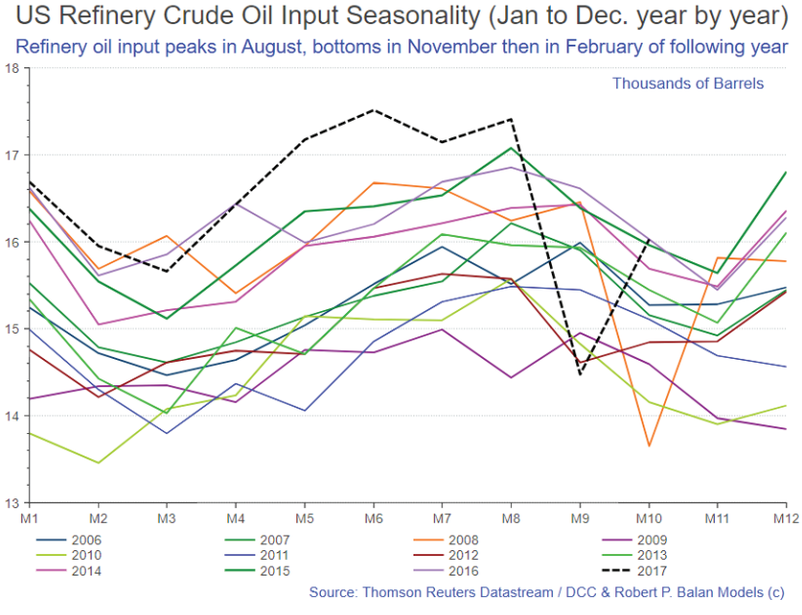
US product demand cycle seems to have already tipped over -- crack spreads leading the way and have been coming off their spike high in September (see 2nd graph on previous page). The bearish seasonality for products and crude is knocking on the door. The product universe is important because consumers do not buy crude oil -- they buy products. So, watch the decline of gasoline consumption and production closely. Refinery inputs will follow their trajectory, and oil inventories follows the trajectory of the oil inputs after a short lag. Gasoline and oil price usually follow the trajectory of gas consumption, after a very short lag. And although oil inventory is a lagging vector, it impacts market sentiment. We expect oil inventories to stop drawing in 2 to 3 weeks (even sooner), and will start building, and could weigh on market sentiment.

The 1st chart on this page and the previous charts show the seasonality of gasoline inventory. We expect reports from the EIA to reflect the seasonality of falling gasoline consumption, production and inventory over the next 4 to 5 weeks. EIA reported a decline in gasoline stockpiles for the most recent period, of 5.5 million barrels, which was only to be expected as refinery maintenance season begins and production declines. This decline is more likely a result of lower refinery activity than an increase in production, but traders are apparently oblivious to the causes behind inventory movements as long as these movements are in the right direction. This underlines the bullish sentiment prevailing in the market. If the seasonal pattern holds true this year, gasoline inventory should bottom in November, this year (see 1st chart on this page).

Last week, the EIA said refineries in the US processed an average 16 million barrels of crude, versus 15.4 million bpd in the week before, producing 9.9 million barrels of gasoline daily, down from 10 million bpd in the week before. The facilities ran at 87.8



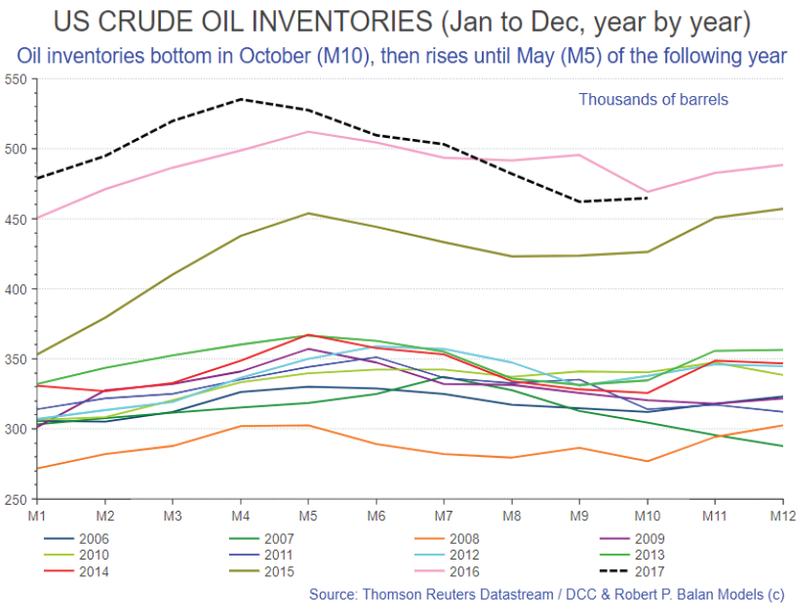


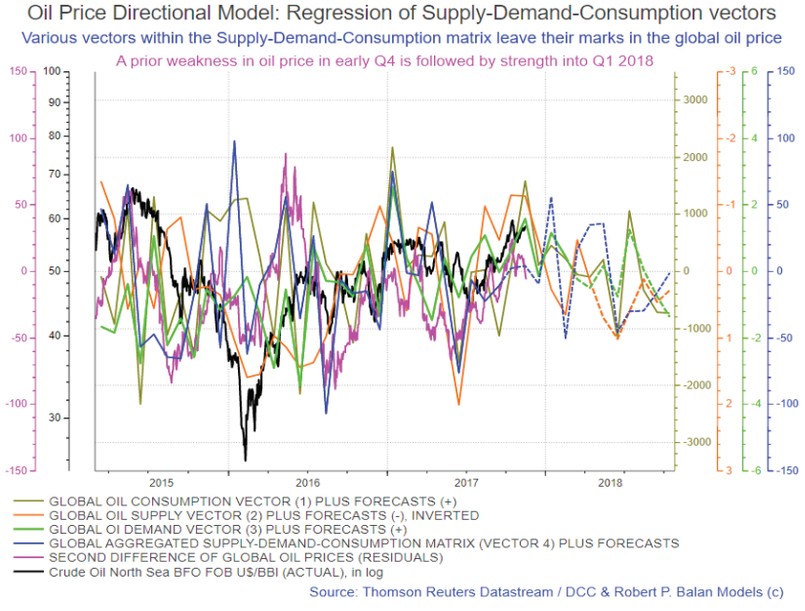
percent of capacity, versus 84.5 percent in the prior week, and could fall further in the coming weeks as maintenance season sets in. US is the world's largest gasoline consumer, and earlier processed a near record of 17.6 million barrels a day. But the usual seasonal pattern is reasserting, and demand dropped to about 16.5 million by late September. **Those numbers show that the seasonality inherent in oil refinery input is on course this year (see 2nd graph above). If the seasonality patterns run true to form, refinery inputs will fall further in November before rising in December, and then falling again in February.**

Meanwhile, US oil inventories draws continue to be a positive vector for oil prices. The EIA said crude stocks last week fell by 5.7 million barrels, dropping from 462.2 million barrels down to 456.6 million barrels. While this decline is smaller than the 7.1 million barrel drop estimated by the API (American Petroleum Institute), it was quite a bit bigger than the 3.2 million barrel decline forecasted by analysts. Nonetheless, inventory draws are coming to a seasonal end, and we expect builds to grow as we go through the winter months. The seasonal pattern in US inventories call for a peak in build sometime in April, next year (see 1st graph on this

page). US inventory draws in the past few months have been a huge factor in building positive sentiment for oil prices, but that supportive element will likely come to an end in a few weeks. US oil inventories follow global and US oil consumption trends, after a lag. Hence, better over-all demand going into year-end and early next year should reinstate the interrupted builds during the past three months, when oil demand slackened.

The EIA says that economic conditions appear to be strengthening globally, which could contribute to oil demand growth in 2018. However, it looks like the work is cut out for OPEC-NOPEC partnership which is trying to push prices higher -- data from the International Energy Agency (IEA) show that inventories in industrialized nations could remain oversupplied even after the end of 2018. The US Energy Information Agency (EIA) also forecasts that US production will continue growing next year to more than 10mb/d. The latest data shows that U.S. crude production rose 1.1 million barrels per day (bpd) last week to 9.5 million bpd, recovering from a decline due to Hurricane Nate. Compare this to the 8.9 million bpd output in January.





Conclusion

A positive trend for oil prices has been set by several factors. Prices have edged upward in recent weeks thanks to the decline in US inventories and strong signs of OPEC members' compliance with the agreed-upon output cuts, which were renewed last May and could be renewed again this coming November 30th, when OPEC holds its annual meeting in Vienna. Nonetheless, seasonal factors should provide a brief dip in oil prices sometime soon. But we expect the uptrend to reassert thereafter, and oil prices to carry on higher into Q1 2018. This outlook is illustrated by our directional price model shown in the 2nd graph above.