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HIGHLIGHTS

- Geopolitical risk in the Middle East has propelled crude oil prices higher.
- WTI crude oil remains the relevant benchmark for North America.
- Worries of a supply disruption must be validated, or else oil prices will retreat to \$85-\$95 a barrel.
- If the recent increase to close to \$100 is sustained, it would not derail the global economy.
- If geopolitical risk in the Middle East widens to larger oil-exporting countries, oil prices would head materially higher.
- The world economy does appear more vulnerable to an oil shock than economic models would suggest.
- The rise in oil prices is making inflation fighting in the emerging market world more difficult.
- It will have a dampening impact on growth in Europe at a time of fiscal austerity.
- Higher energy costs will temper growth in the United States. As a net exporter, Canada is more insulated, but the rise in energy prices will increase regional differences.

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WILL RISING OIL PRICES DERAIL THE GLOBAL ECONOMY?

The past couple of months have demonstrated how geopolitical risks are virtually unforeseeable and how quickly they can impact economic and financial prospects. No one could have predicted that a youth setting himself on fire in protest would bring down the government in Tunisia, or that this event would have a rapid cascading effect on other Middle Eastern countries. As events have unfolded, financial markets have struggled to assess the implications and it has led to a significantly higher geopolitical risk premium in the price of oil. The concerns increased with the demonstrations in Egypt, as there were worries that oil shipments might be disrupted through the Suez Canal or that a pipeline in the region could be damaged. The odds of that

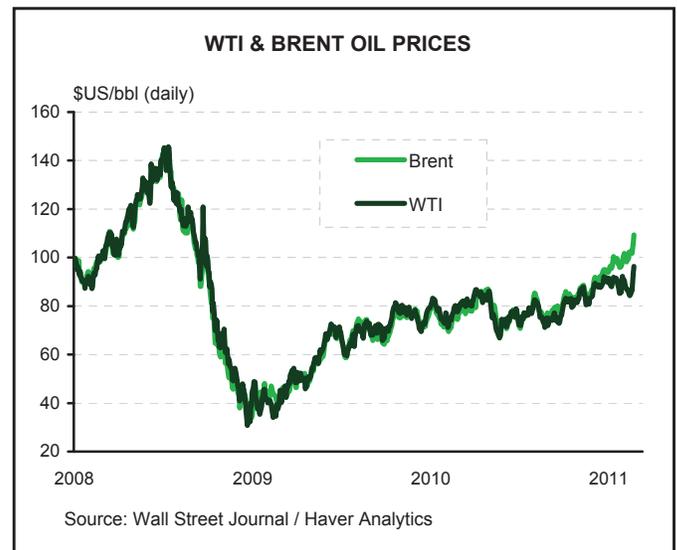
outcome were very low; and, with the fall of the government, the fears in fact did not come true. However, the worries returned in a more intense manner with the riots in Libya and the response by the government. In truth, Libya is a small exporter of oil on a global basis (representing 2% of total supply), but its energy exports are important to Europe. Moreover, the

major concern is that the dominos in the Middle East could continue to fall. The worst case scenario for oil prices would be if the political instability was to feed through to other OPEC nations, eventually reaching Iran or Saudi Arabia. Such an outcome is likely very low, but political scientists would be far more knowledgeable about the possibility than economists. Nevertheless, the fact that the Saudi government has introduced political reforms suggests that it has been viewing recent events with consternation.

In light of these developments, TD Economics has received many questions that are worth addressing. First, oil prices have risen – but what is the price of oil that North Americans should be focused on: West Texas Intermediate (WTI) crude oil or Brent crude oil? Second, what is the outlook for crude oil prices? Third, could the increase in oil prices derail the global economic recovery? Let's discuss each in turn.

WTI still the benchmark for North America

The traditional benchmark for oil prices in North America is the price of West Texas Intermediate crude priced at Cushing, Oklahoma, expressed in U.S. dollars.

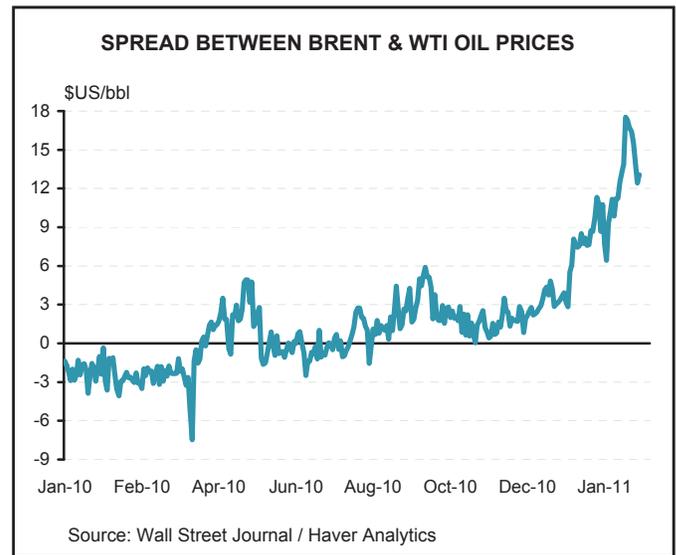


WTI is also the main reference for oil futures contracts traded on the New York Mercantile Exchange.

As of February 24th, WTI crude has risen to \$96 a barrel, which represents an increase of nearly \$7 a barrel from December 2010, when it averaged \$89.4, and January, when it averaged of \$89.5. WTI is at its highest level since September of 2008. It reached a peak of \$145.66 on July 11, 2008. It then fell to a low of \$30.8 on December 22, 2008. This demonstrates the extreme volatility in oil prices observed over the recession and recovery.

However, the price increase in WTI has fallen short of another international benchmark – Brent oil. Brent is mainly used in Europe, but it is also used in parts of the Eastern United States. Brent has recently climbed to around \$110 a barrel from an average of \$92.4 in December and \$97.5 in January. Brent oil, which usually trades at a discount to WTI because it is a slightly lower quality oil, has posted a rising spread over WTI since mid-August 2010, reaching a peak of \$17 per barrel in mid-February before narrowing to around \$13.

There are two main reasons for the deviations in the price of crude oil on the two benchmarks. First, there have been supply issues, leading to greater inventories, at Cushing that contributed to a lower price for WTI. Over time, this should be resolved. The relatively close substitutability between WTI and Brent oil mean that the spread between the two cannot diverge by more than the cost of transportation across the country. In other words, if the spread gets too large, it becomes economic to truck a load of crude from Cushing to the East coast. Futures markets show that financial markets are expecting the price of WTI crude to close the gap with Brent, with the former rising towards the price of the latter.



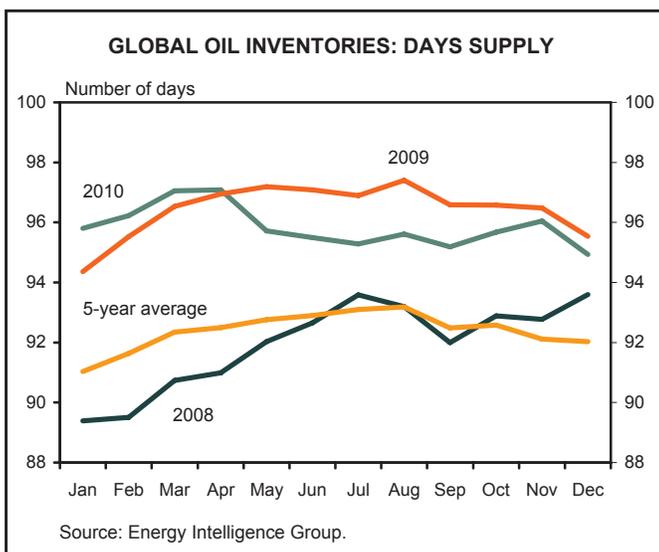
A second reason for the price differential is that Brent oil is an appropriate benchmark for crude oil in Europe, and the heightened political risks in the Middle East warrant a higher price on Brent crude than WTI crude.

In our opinion, WTI crude remains the most relevant benchmark from a North American perspective, and a narrowing of the differential with Brent should be incorporated into any projection of WTI prices. This leads naturally into the next section, which is a consideration of where crude oil prices are headed.

Outlook for WTI: fundamentals versus geopolitical risks

In the January 14th TD Economics commodity price outlook report, we outlined the case that WTI crude oil would reach \$90 by the end of 2011 and \$95 by the end of 2012. This projection was based on expectations for global demand and supply. It incorporated expectations for a moderation in global economic growth, reflecting efforts by emerging market economies to temper their expansions and reduce inflation risks. It also included an expectation of a narrowing price gap with Brent crude. The outlook did not incorporate an intensification of geopolitical risks.

In terms of the outlook, nothing has fundamentally changed on the demand front in terms of how the global recovery is proceeding up to this point, but if the recent rise in oil prices is sustained, it would dampen global growth and would correspondingly weaken energy demand (more on this later). On the supply front, crude oil inventories are still running at relatively high levels, and there is ample supply to offset a supply disruption from Libya. Indeed, current inventories, OPEC spare capacity and the oil currently



sitting in tankers all need to be considered when thinking about a potential supply shock. So, for the time being, TD Economics has not changed its assessment that economic fundamentals suggest that WTI crude should be around \$85-95 once the geopolitical risks abate. However, if the political instability in the Middle East intensifies and broadens to larger oil-exporting countries, there is no question that crude oil prices could head higher, potentially materially higher, than current levels.

The economic impact of high oil prices

This leads to the issue of what is the economic impact of higher oil prices. The International Monetary Fund (IMF) has some estimates that are useful. The analysis was done in 2000 on the impact of a \$5 increase in crude oil prices, but this was at a time when the price of crude oil was at \$25 a barrel. Accordingly, we have presented the findings in the accompanying table in terms of a 20% increase in crude oil prices. It should be noted that although the IMF report is dated, the findings are also broadly consistent with more recent impact assessments on the U.S. economy.

WTI is up less than 10% from its level in December. However, this doesn't take into account the rise in energy prices in 2010. WTI crude is up close to 20% over the past 12 months. The main conclusion from the IMF analysis is that the overall impact on the world economy from the recent increase in crude oil prices will be limited. It is knocking a couple of tenths of a percentage point off of global economic growth at the moment; and, it will continue to act as a drag over the next couple of years. However, a far greater oil shock would be required to derail global economic growth.

Canada does not appear in the IMF numbers, primarily because Canada is a net oil exporter. There have been various studies done on the effect of rising oil prices on the Canadian economy, and all conclude that the overall impact is very small. A Bank of Canada Working Paper in 2009, entitled "How Changes in Oil Prices Affect the Macroeconomy" concluded that there was a negative affect but "the impact is small, so their economic importance is limited". This intuitively makes sense. As mentioned, Canada is a net oil exporter, which is positive when oil prices rise. However, the Canadian economy is deeply tied to the U.S. economy, the latter of which is a major oil importer. To give an example of the offsetting impacts, the Global Insight macro model of the Canadian economy suggests that the positive impact from a \$10 increase in oil prices holding everything else constant is fully offset if U.S. real

Crude Oil Price Shock (Permanent 20% increase)					
Deviations from base case scenario, percentage points					
	Year 1	Year 2	Year 3	Year 4	Year 5
World GDP	-0.2	-0.3	-0.3	-0.2	-0.1
Industrial Countries					
Real GDP	-0.2	-0.3	-0.3	-0.2	-0.1
United States					
Real GDP	-0.3	-0.4	-0.4	-0.2	-0.1
CPI Inflation	0.8	0.5	0.3	0.2	0.1
Euro Area					
Real GDP	-0.2	-0.4	-0.4	-0.2	-0.1
CPI Inflation	0.7	0.5	0.4	0.3	0.1
Japan					
Real GDP	-0.1	-0.2	-0.3	-0.2	-0.1
CPI Inflation	0.3	0.2	0.1	0.1	---
Other Indust. Countries					
Real GDP	-0.1	-0.2	-0.2	-0.2	-0.1
Developing Countries					
Real GDP	-0.1	-0.2	-0.2	-0.2	-0.2

Source: TD Economics based on IMF research

GDP growth is lower by 0.2 percentage points. The bigger story for the Canadian economy is that higher oil prices create regional winners and losers. Oil-endowed provinces benefit from rising income when prices rise, while oil-importing provinces suffer. Higher oil prices also translate into a higher Canadian dollar, which is a boon to importers but is the bane of exporters.

Overall, one is struck by the fact that the various models suggest that oil price movements only have a limited impact on the global, U.S. and Canadian economies. However, one needs to be very careful when interpreting the economic model assessments, as there are numerous second round effects that are not incorporated in the traditional impact models, such as those done by the IMF. For example, higher oil prices can lift other energy prices and lead to wage demands to offset a higher cost of living. It can also alter inflation expectations of businesses. An energy shock can also affect a countries balance of payments and fiscal position. The estimates also don't take into account the current vulnerability of the economy under question when the oil price increase occurs. Finally, the models tend to run the impact from a moderate sustained rise in oil prices, typically 10% to 20%. One could reasonably expect that the economic impact might intensify in a scenario where there is a dramatic rise in crude oil prices, as the second round or indirect impacts could become significant.

Conclusions

So, what are the main points to take away? First, crude oil prices have been boosted by increased geopolitical risk. If the risk diminished, the price of WTI and Brent crude would likely rapidly retreat back to \$85-95. If political instability spreads and Middle East oil supply is significantly disrupted, crude oil prices could head significantly higher. Predicting geopolitical risks is problematic, so at this stage one needs to follow developments closely.

Second, if the current price is sustained at close to \$100, the economic models predict that it would only have a modest dampening impact on the global economy. However, the fallout could be greater this time around, given the vulnerability of the world economy to shocks at the moment. The risks of an inflation-driven-business cycle in emerging markets would increase. Even before the recent political problems, many developing nations were experiencing difficulty with inflation, fuelled by high food and energy prices. Since inflation expectations are not well anchored and central banks in these countries have less of a track record as inflation fighters, there is a risk that the rising cost of living will feed through to higher wage demands, causing an inflation spiral. Such an outcome would likely end badly. The recent rise in oil prices, if sustained, only increases the risk of such an outcome.

Similarly, the fragility of the European economy could be aggravated by the rise in oil prices, as it comes at a time of significant fiscal austerity. Moreover, the ECB has a track

record of responding to higher headline inflation (including energy) with tighter monetary policy – something that Europe does not need at the moment.

Third, the inflation risks and economic impact in North America is likely to be modest if oil remains at current levels. Inflation expectations are well anchored in the U.S. and Canada. When oil prices last ran up to above \$144 a barrel, there was limited pass-through to other consumer goods and services. In the United States, oil at \$100 per barrel would act as a constraint on consumer spending, but it would only dampen growth, not snuff it out. In Canada, the overall economy would feel little impact, but regional economic growth rates would show greater divergence. Both the Federal Reserve and the Bank of Canada are unlikely to respond to higher headline inflation.

To wrap up, crude oil prices need to climb dramatically higher before threatening the global recovery. However, the current inflation risks in the emerging markets and the fragility of the economic recoveries in the developed world do make the world economy more vulnerable to an oil shock. Market fears have propelled crude oil prices higher. These worries must be validated in the coming months, or else crude oil prices will retreat. However, if geopolitical risks escalate to major oil exporting countries, the geopolitical risk premium will escalate. Such an outcome, or a true supply disruption, could pose a threat to the world recovery. We do not feel that this is the most likely outcome; but, it is a risk to monitor extremely closely.