River Valley Asset Management

Newsletter for February 2016

Crude Cacophony: Facing the Facts

Crude oil and China bashing have become the favourite pastime of headline writers in the media these days. No media coverage is complete without these two making some negative headline news to the point where the public at large have been bludgeoned into believing that crude oil and China are responsible for all the economic miseries that befall the world today.

We have written a fair amount on China in the past in this space hence this month we decided to weigh in on crude oil.

We figured that a good starting point would be to scan through the reports from the IEA (International Energy Agency) as well as the reams of research which pile up in our mailboxes these days. Most of the narrative in the markets focusses on the supply side of the equation while making a summary assumption on demand being 'weak'. Both these assumptions are purportedly extrapolated into the long term as if they are permanent in nature.

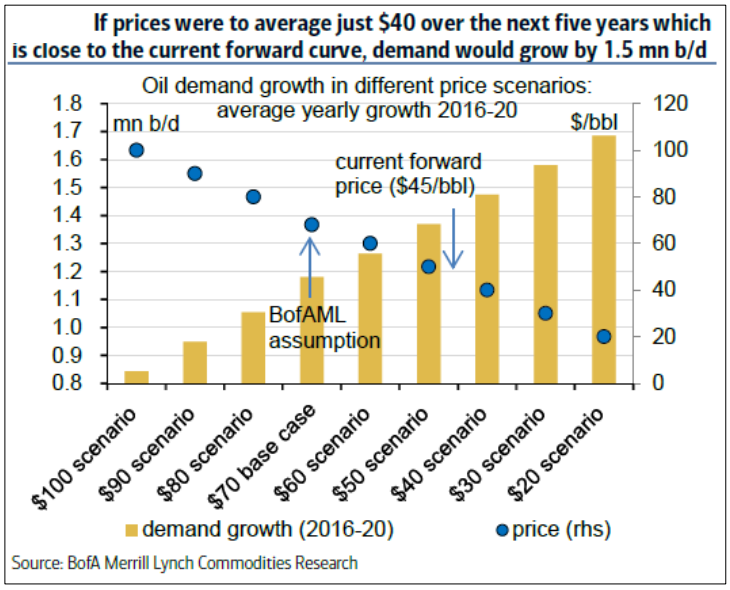
Journalists have a saying they use among themselves – "Never spoil a good story with facts". Now we want to shed some light on facts and spoil this story.

The Demand Story – Much stronger than perceived

The demand side of the story is good, in fact very good. But the market and media have either chosen to ignore it or worse obfuscate it.

The decline in oil prices from $115 in mid-2014 to $35 today is having a long-lasting effect on global oil demand. Oil is predominately a transportation fuel. Transportation amounts to 55% of global oil demand and over 80% of this is for road transport. Very low oil prices influence the trajectory of oil demand growth fundamentally by stimulating demand for transportation. This could be in the form of more car purchases, larger (less fuel efficient) car purchase, cheaper air transport, lower freight rates, etc. While long term demand may have already peaked in developed markets, it gets a short term boost up due to an increase in preference for larger and less fuel efficient cars. In emerging markets, demand is still growing due to rising incomes, urbanization and low vehicle penetration.

In 2015, average Brent crude oil prices declined 46% YoY to $54/bbl from $99 in 2014, the largest yearly decline ever (the current price of USD 35/barrel, if sustained, would mean a further drop of 35%). Global demand responded by growing by 1.7mbd, the second highest pace in over a decade. Two thirds of this growth, i.e. 1.1 mbd, was a pure price response, as per BAML Research estimates - the strongest single-year price response ever! The impact on demand is most visible and pronounced in the first year after the price drops as existing car owners start to drive more. Yet the cumulative effect spreads out over the medium term as car ownership increases in response to sustained lower prices.



Oil demand growth drivers for EM and DM differ – but both are helped by low prices

When oil prices come off, in EMs people buy more cars, while in DMs people buy larger and less fuel efficient cars. Car sales are the key driver of oil demand in EMs because car penetration rates are still very low, 14% on average in EMs versus 54% in the DMs. Still, EM car sales were soft in 2015, contracting for the first time in over a decade due to depressed economic growth in oil producer nations (Brazil, Russia, and M-E). EM car sales are expected to rebound strongly in 2016-17 and beyond as oil producers stabilize and low oil prices boost car sales in EM consumer nations, especially in China and other EM Asia.

Car penetration in China is just 11%, i.e. there are about 145 million cars on the road in China. At a rate of 25 million cars sold in 2015, car population will grow at over 17% p.a. and this will drive fuel demand. Also, Chinese consumers are increasingly buying larger cars. Sales of SUVs are up 60% YoY in the last three months of 2015, while overall passenger vehicle sales grew at 22%. SUVs now comprise 33% of new cars sold in China.

China's crude demand was up 4.8% in 2015 and crude imports surged nearly 9% as it looked to fill government and commercial reserves. While China's GDP continues to slow, its consumption indicators such as growing automobile sales remain relatively positive.

Turning to DMs, the high car penetration here means that oil demand on average declines every year. Almost every new car sold replaces an older and less efficient vehicle. Yet OECD demand bucked that trend in 2015 and posted positive demand growth in a year of little cyclical improvement in the economy. Both the US and Europe showed positive growth for the first time since demand structurally began to decline in 2006. This unusually strong and positive demand

growth is mainly a price effect. In DMs, the initial demand response to lower prices is strong, as almost every consumer is already a driver and can take advantage of low prices today by driving more. Still, the miles driven effect is a one time effect and mainly adds to growth only in the first year after the price drop.

The spike in oil demand in the U.S. and DMs through a combination of higher car sales, shift to less efficient and larger SUVs and higher miles driven may begin to slow post 2017 as efficiencies of new cars may be high enough to negate these upsides.

In the 2011-14 period when oil prices averaged $108/bbl, oil demand growth averaged just 1 mbd. However BAML contend that between 2015 and 2020 if oil prices average $70/bbl, then average oil demand could be 1.2 mbd. On the other hand if prices were to average just $40 over the next five years which is close to the current forward curve, demand would grow by 1.5 mbd. At $20, oil demand would grow explosively by 1.7 mbd per year on average, two times the average demand that existed when oil prices averaged $100.

Oil producing countries like Brazil, Russia and the Middle East themselves account for a fair amount of demand, which has declined so far as these economies suffer from the oil price contraction. However once this comes into the base, which could be somewhere in 2016, we would expect that their normative consumption pattern would begin to see their demand rise post 2017.

The Supply Story – Potential source of positive surprise

The primary reason for the current weak oil price is supply. But most of the factors that have caused this over supply have been well flagged and we believe have been priced in by the market. These are factors such as lack of supply cuts by oil producers (especially OPEC), the re-entry of Iranian oil on the market, strong supply growth in the US because of shale deposits and the consequent record high inventories of crude oil that could take a long time to work away.

There are a few points which lead us to believe that we are at the beginning of supply rationalisation in the oil space.

Shale production is dropping off: To delve a bit into the supply side, we see from the table on the next page, that the primary source of supply ramping up has been the US's shale production. Given that oil prices have sharply come off, shale production has begun dropping rapidly as the cost of shale production now outstrips current prices of crude oil. Coupled with that, shale producers are sitting on a pile of debt that is in excess of US$150bn and counting.

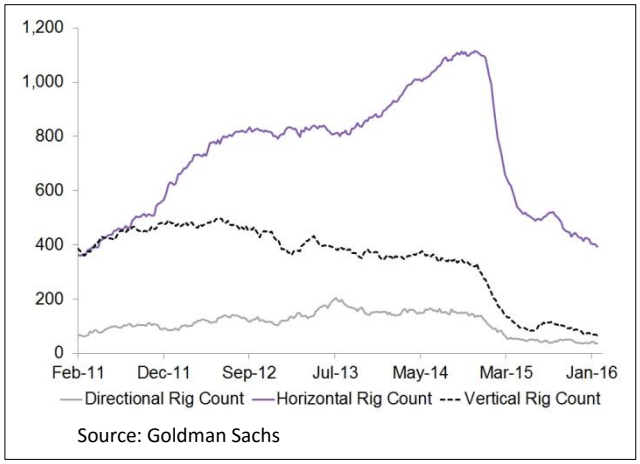
Global Oil Supply (mb/d)	2014	2015E	2016E	2017E		Increase in supply		
						15 vs 14	16 vs 15	17 vs 16
OECD Americas	**19.03**	**19.67**	**19.11**	**19.07**		0.64	(0.56)	(0.03)
United States	11.94	12.72	12.17	12.21		0.78	(0.55)	0.04
Others	7.09	6.94	6.94	6.86		(0.15)	(0.01)	(0.07)
OECD Asia Oceania	**0.51**	**0.45**	**0.47**	**0.48**		(0.05)	0.01	0.02
OECD Europe	**3.32**	**3.41**	**3.36**	**3.20**		0.09	(0.05)	(0.16)
Non-OECD Europe	**0.14**	**0.14**	**0.13**	**0.13**		(0.00)	(0.00)	(0.01)
Former Soviet Union incl Russia	**13.87**	**13.96**	**13.91**	**13.65**		0.09	(0.05)	(0.26)
Non-OPEC Africa	**2.30**	**2.28**	**2.24**	**2.34**		(0.02)	(0.04)	0.10
Non-OPEC Asia	**7.71**	**7.88**	**7.68**	**7.56**		0.17	(0.20)	(0.12)
India	0.88	0.86	0.79	0.73		(0.02)	(0.07)	(0.06)
China	4.22	4.33	4.25	4.20		0.11	(0.09)	(0.04)
Non-OPEC LatAm	**4.39**	**4.56**	**4.64**	**4.60**		0.16	0.08	(0.04)
Non-OPEC Middle-East	**1.31**	**1.24**	**1.22**	**1.20**		(0.07)	(0.02)	(0.01)
Non-OPEC	**52.59**	**53.59**	**52.75**	**52.24**		1.00	(0.83)	(0.52)
Processing gains and biofuels	**4.40**	**4.53**	**4.62**	**4.70**		0.13	0.08	0.08
Total Non-OPEC	**56.99**	**58.12**	**57.37**	56.94		1.13	(0.75)	(0.44)
Total OPEC	**36.64**	**37.85**	**38.75**	**38.95**		1.21	0.90	0.20
						-	-	-
Total World Supply	**93.63**	**95.97**	**96.12**	**95.89**		**2.34**	**0.15**	**(0.24)**

Global Oil Demand (mb/d)	2014	2015E	2016E	2017E		Increase in demand		
						15 vs 14	16 vs 15	17 vs 16
OECD Americas	24.134	24.426	24.56	24.596		0.29	0.13	0.04
United States	19.41	19.772	19.916	19.936		0.36	0.14	0.02
Others	4.724	4.654	4.644	4.66		-0.07	-0.01	0.016
OECD Europe	13.375	13.674	13.615	13.5		0.30	(0.06)	(0.12)
OECD Pacific	8.162	8.149	8.138	8.066		(0.01)	(0.01)	(0.07)
Total OECD Demand	**45.671**	**46.249**	**46.313**	**46.162**		0.58	0.06	(0.15)
OECD Stock changes	0.388	0.743	0.188	0		0.36	(0.56)	(0.19)
OECD Stocks (mn bbl)	4.317	4.584	4.651	0		0.27	0.07	(4.65)
China	10.62	11.189	11.586	11.81		0.57	0.40	0.22
India	3.76	4.01	4.188	4.43		0.25	0.18	0.24
Other Asia	8.24	8.516	8.78	9.086		0.28	0.26	0.31
Middle East	8.056	8.136	8.31	8.49		0.08	0.17	0.18
LatAm	6.84	6.848	6.892	7.1		0.01	0.04	0.21
FSU	4.922	4.865	4.842	4.836		(0.06)	(0.02)	(0.01)
Africa	**3.955**	**4.048**	**4.188**	**4.378**		0.09	0.14	0.19
Non-OECD Europe	**0.675**	**0.702**	**0.711**	**0.719**		0.03	0.01	0.01
Total Non-OECD Demand	**47.072**	**48.315**	**49.494**	**50.855**		1.24	1.18	1.36
Total Demand	**92.743**	**94.564**	**95.807**	**97.017**		**1.82**	**1.24**	**1.21**
Surplus/(Deficit)	**0.89**	**1.41**	**0.32**	**(1.13)**		**0.52**	**(1.09)**	**(1.45)**

Source: IEA, BAML Research

Access to funding for shale oil firms is vanishing: In 2015 alone, forty two oil companies filed bankruptcy proceedings according to international corporate law firm Haynes and Boone. Total secured and unsecured energy sector debt moved into bankruptcy stood at a whopping $13.1 billion. According to Standard and Poor's Rating Services, 50% of these oil and gas debts are considered distressed. The total debt of the US oil and gas companies, excluding Chevron and ExxonMobil, is expected to increase to more than $200 billion when all the 2015 financials come out. That is a 55% increase since 2010—all fuelled by higher oil prices in the 2010-2013 period.

Dropping rig counts helps: Current estimates based on declining rig counts put US production dropping by 600-700,000 bpd by the end of 2016 as compared to ~300,000 bpd drop so far. This is an important source of future supply reduction.



Source: Goldman Sachs

Capex globally is being slashed: Most oil majors from the west, Middle East or Asia have initiated large capex cuts. Industry capex could be down 20-30% over two years. This is a source of lower supply in the future. Add to that the continuous slide of Russian and North Sea output and we have a dropping supply scenario in the next 12-18 months. The only thing that can prevent this is a sharp rise in oil prices.

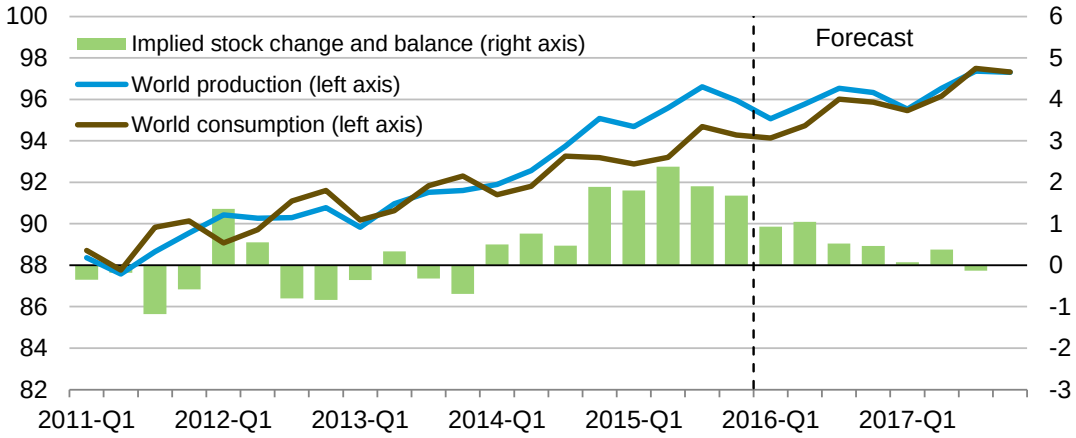
Iran's crude will come back but some of it was already there in the black market: Iran's crude oil production is forecast to grow by about 0.3 mbd in 2016 and by 0.5 mbd in 2017. The forecast growth of Iran's crude oil production also depends on internal factors including Iran's ability to mitigate production decline rates and meet technical challenges and on its willingness to discount oil.

Conclusion: We would go long crude on a two year basis

When the above facts are pieced together, we reckon that the demand side of the equation looks rather stable to even healthy. The supply side of the equation looks bad now, but the forward outlook looks much better. We are perhaps at the point where the supply gap over demand is perhaps at its widest. Therefore as we navigate through the year, the market will likely begin to notice the declining supply gap. If the data and projection were indeed proved right, give or take a few months, then the oil market could be regaining its balance somewhere in the second half of 2016 or early 2017.

World Liquid Fuels Production and Consumption Balance

million barrels per day (MMb/d)



Source: Short-Term Energy Outlook, January 2016.

U.S. Energy Information Administration (EIA)