Oil Market Update

- **Oil prices strengthened in July, reflecting heightened concerns over the security of supply with the violent unrest in Egypt, an uptick in Asian crude demand due to improved margins, as well as ramped up refinery runs and tight supply. More recently, the step-up in military action threat by the US on Syria on its alleged use of chemical weapons has provided further impetus to prices.**
- **The Brent-WTI differential narrowed significantly in July to an average of US$3/barrel, the lowest level since January 2011, as expanded takeaway capacity from Cushing and high refinery crude runs drove down inventory levels at a record rate in July.**
- **We remain relatively optimistic about the outlook for oil prices. The impact of stronger global demand on prices is expected to outweigh the effect of improving supply-side factors over 2013, even when taking into consideration the likelihood of tightened supply from the Middle East.**

Recent Oil Prices

Average oil prices rose sharply in July, driven by a combination of factors: heightened concerns over the security of supply with the violent unrest in Egypt, an uptick in Asian crude demand due to improved margins, as well as rising refinery runs and tight supply. Amid a market bull run, WTI trail-blazed its way to end 9% higher in monthly-average terms at US105/bbl, upsetting most market forecasts which for some time had considered the USD 100 per barrel mark to be the upper barrier of resistance. Average prices of Brent and Tapis rose by lesser amounts of around 4% and 5% respectively, to be currently at US$108/bbl and US$113/bbl. Driving WTI higher in the month had been the markets' perceptions that easing of the crude stockpile bottleneck in Cushing– the delivery point for the US benchmark – is likely to be sustainable. In addition, speculative activities played a big part fuelling the rise in prices in the month, with net length in managed money Nymex WTI futures reported to have reached 362,941 lots, the highest level since the US Commodity Futures Trading Commission (CFTC) started its weekly disaggregated reporting in September 2009. As a result of these relative shifts, the Brent-WTI spread has narrowed to its lowest levels since 2011, to around US$3/bbl.

Oil Prices

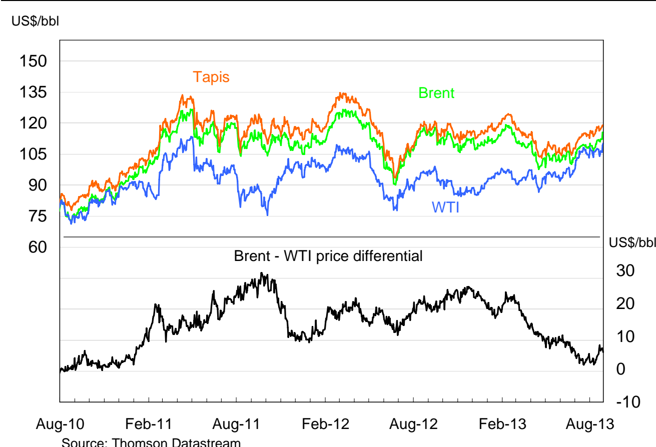
	Avg Price (US$/bbl) Jul-13	Monthly % change Jul-13	Jul-12 - Jul-13 % change
Brent	108	4.3	4.7
WTI	105	9.2	19.0
Tapis	113	5.3	7.2

Sources: NAB Economics; Thomson Datastream

Developments in the Brent-WTI spread

Since mid-February, the differential between Brent and WTI has narrowed steadily and gained further traction in July to be the lowest since January 2011 in monthly average terms and a hair's width away from effectively closing the gap. While we have always forecast for the two oil indices to converge eventually, the speed at which it happened over July caught us by surprise somewhat and had prompted us to revise our near-term forecasts. The WTI has risen significantly more rapidly in recent months as improved pipeline networks and the use of rail links have more effectively facilitated the movement of crude from inland storage to refiners on the coast, bypassing the congested storage hub of Cushing.

Daily Oil Prices



Source: Thomson Datastream

Traditionally, the relatively low costs and high capacity of pipelines have long been the preferred delivery method for US inland refineries, while coastal refineries have been predominantly served by tankers of waterborne imports or offshore production. However, some of this usage has been replaced by crude supplies carried via barge, rail and truck since 2011. As truck and rail are less cost-effective options for moving crude, they have typically accounted for a very small portion of refinery crude receipts, averaging just 1% of total receipts from 2000 to 2010, according to the Energy Information Administration (EIA). However, this changed in 2011 as the discount that WTI was trading to other global indices has provided sufficient profit margins to trade-off the higher costs associated with rail transportation with the flexibility of using existing infrastructure. By 2012, rail and truck volume represented 3% of refinery receipts.

At the same time, the US is also experiencing record high refinery crude runs, due to increased capacity and utilisation on the Gulf Coast and the startup of 250,000 bbl/s crude distillation unit at BP's refinery at Whiting, Indiana. Combined with maintenance at Canadian Syncrude processing facilities, this helped to push up the price of WTI relative to that of Brent in July, compressing the already converging indices further to the lowest in years.

Looking forward, we think that the current tightness in the Brent-WTI spread is likely to be short-lived and will widen again as offsetting demand and supply forces come into play. The high utilisation rates of refineries at present of around 93-94% are unlikely to be sustained as crude demand is likely to falter after the US summer season, while the US Gulf Coast becomes increasingly saturated with light sweet crude grades from continuous growth in production, thereby exerting downward

pressure on WTI prices. On the other hand, Brent is likely to enjoy further impetus from planned maintenance at the North Sea.

Market Conditions

In July, supply-side factors have dominated much of the volatility in the global oil markets. Escalated political tensions in the Middle East have caused disruptions in supply from the region, adding a geopolitical risk premium to Brent prices; meanwhile the unlocking of the reserve glut at Cushing has served to buoy WTI. According to the EIA, disruptions to global crude oil and liquid fuels production reached nearly 2.7 million barrels per day in July 2013, the highest level since at least January 2009. Disruptions to production in Iraq and Libya which took place over the course of summer have particularly affected the Mediterranean market, an important market for Brent-priced crude oils. In particular, Iraqi oil exports to Turkey suffered a major setback from persistent bomb attacks on the pipeline from Kirkuk to the Turkish port of Ceyhan, falling off dramatically, from 16.4 million barrels in June 2011 to 5.6 million barrels last month. As a result, total Iraqi production disruptions rose to about 290,000 bbl/d in July, up 60,000 bbl/d from June. In Libya, ongoing labour-related protests at several oil production facilities boosted outages, thereby reducing production to 1.0 mb/d in July, down from 1.5 mb/d in April. Additional deterioration in the security environment in Iraq or Libya could further reduce OPEC production in the short term. Adding to the uncertainty has been the intensification of the stand-off between Egyptian military and supporters of the ousted ex-President Mohammed Morsi. More recently, tensions in Syria have scaled new heights as the US and its allies are on the threshold to take military actions on the country for its alleged use of chemical weapons on its civilians. While Egypt and Syria are not major oil producers and so far have not contributed directly to the oil shortage, prolonged unrest has incited fears that there could be spillover effects onto other parts of the region that potentially disrupt transportation of oil via closures of country-crossing pipelines and the trade route of Suez Canal.

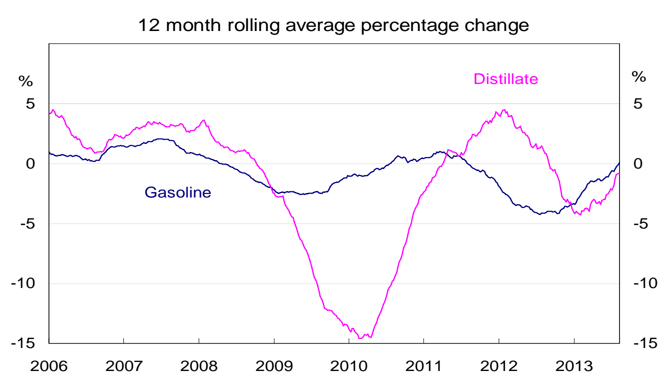
Meanwhile, global refinery crude oil runs reached their expected 2013 peak from an uptick in seasonal demand and an improved economic outlook in advanced economies more generally, with recent Chinese economic indicators consistently surprised on the upside. Recent business surveys and industrial data showed manufacturing activity in the United States and China rose to multi-month highs while growth in the euro zone was better than expected, which lends a favourable outlook to global oil consumption.

In its July Oil Market Report, the International Energy Agency (IEA) marginally revised down its expectations for global oil demand slightly for 2013 and 2014 to 90.8mbl/d and 92mb/day respectively from, reflecting the weaker macroeconomic forecasts released by the International Monetary Fund (IMF). In contrast, OPEC lifted their forecasts for global demand in 2013 and 2014 marginally in the month on an expected increase in transportation fuel demand and higher actual consumption outcomes emerging from North America in the first half of the year and the UK in June. However, at forecast usage of 89.7mb/d and 90.8mb/d for 2013 and 2014 respectively, they are still more conservative than that anticipated by the IEA. Looking forward, the likely shift in the growth contribution from emerging economies to advanced economies suggests that risks to the global oil demand outlook are largely balanced. Forward guidance issued by central banks in big advanced economies have signalled that interest rates are likely to remain very low for a long time to come, which will serve to buoy market confidence and support energy consumption.

Latest data show that demand conditions in the **US** crude oil market have picked up in recent months on the back of improving economic fundamentals. This is clearly illustrated by the rising demand for petroleum products closely associated with industrial activity such as gasoil and liquefied petroleum gas. In addition, the summer travel and crop growing season in the US have also introduced a seasonal uptick in demand for distillate and propane.

After prolonged periods of weakness, preliminary estimates of gasoline consumption (based on products supplied) by the EIA during July 2013 showed relatively strong growth of around 3% relative to the same time last year. Providing support to this is the recent softening in gasoline prices as a result of robust production from high refinery capacity utilisation. Improvements in a number of key economic indicators favouring household consumption, such as household wealth due to rising equity prices and a steadily improving housing market, more upbeat consumer confidence and fading impact of the tax increases early this year, could have also contributed to the recent rise in gasoline consumption.

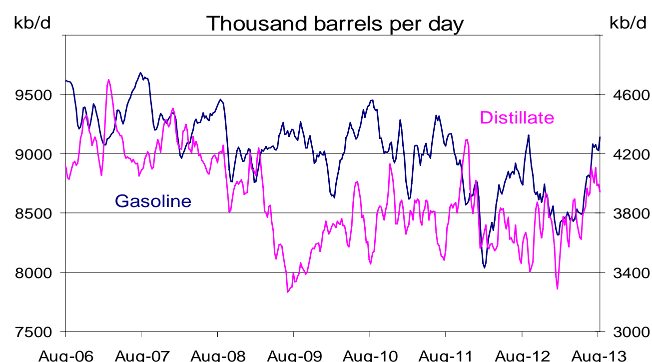
Weekly US product demand



Sources: US Energy Information Administation; NAB Group Economics

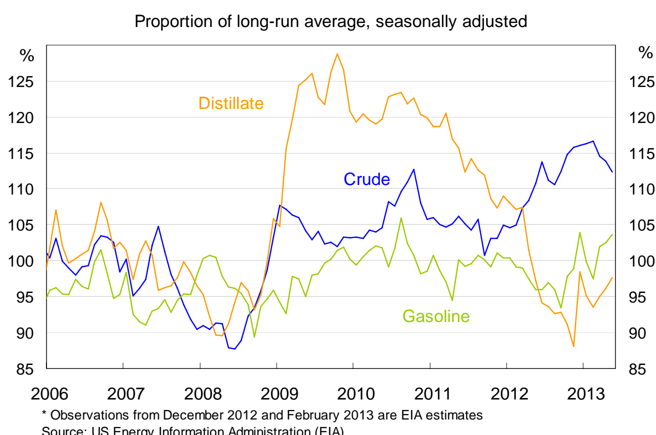
However, EIA is sceptical about the recent rise in demand being the herald of the beginning of a sustainable boost in demand in the coming months. According to them, 2013 year-to-date gasoline consumption is almost unchanged from last year even after taking into account the recent rise, and the estimated increase in gasoline demand is based on weekly product-supplied data that could change as more data, particularly on US exports, become available. Even as auto sales continue to climb, with light vehicle sales up by 11.2% over the year, new automotive stock tends to be far more fuel efficient than existing stock (due to increased sales of small-to-medium vehicles and mandates on fuel efficiency), consumption of gasoline per vehicle is declining. As such, EIA continues to expect flat to declining gasoline consumption in the next few years at around 8.7mb/day as improving fuel economy of new vehicles continues to outpace growth in highway travel.

US Apparent Gasoline and Distillate Demand



Changes in US crude oil and product inventories were mixed over July. Crude oil inventories, which had been above their five-year range all but one week since March 2012, fell by a record rate in July to be back within the five-year range, but still at a healthy level compared to historical average. The rapid reduction in inventories was driven by three factors: an increase in US refinery runs to be the highest since 2007; a decrease in crude oil imports; and an increase in backwardation on the WTI futures price curve due to strong speculative net long positions which encouraged disposal of inventories rather than buying them at current market prices. As a result of high refinery runs, gasoline inventories maintained at elevated levels above their five-year normal range while inventories for distillate rose by 4.7% in the month. With record crude production and historically high crude inventory levels, US crude oil imports in July fell to their lowest level in 17 years. The drop to 7.7 million barrels per day represented a 10.5% decline from July 2012. Imports of refined products decreased by 6.0% from July 2012 to an average of 2 mb/d.

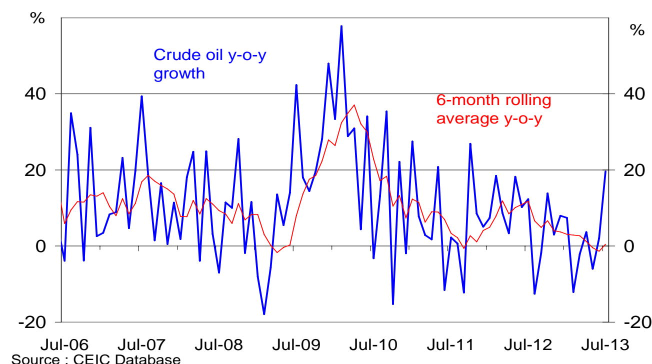
US Inventories*



* Observations from December 2012 and February 2013 are EIA estimates
Source: US Energy Information Administration (EIA)

Chinese data have generally disappointed relative to expectations in early 2013 and the highly anticipated rapid recovery in the first half of the year has largely failed to eventuate. However, more recent partial economic indicators, although still subdued, provided some signs that the economy may now be stabilising. Trade data came in somewhat above expectations, including much stronger import growth pointing to a pick-up in domestic demand. This was consistent with slight improvements in other partial indicators such as industrial production and business investment, although retail and auto sales growth eased. In particular, the resilience of Chinese steel production has surprised us, with support likely to have come from announced stimulus policies and infrastructure spending by the government.

Chinese Crude Oil Imports Growth



Source : CEIC Database

In line with more optimistic readings of industrial activity in recent months, growth in apparent crude oil demand lifted sharply in July relative to a year ago by 6.6% to an average 9.8mb/d, which is echoed in the crude oil imports data which showed a 20% y-o-y increase in the month to record levels. This is also likely to reflect some degree of crude stock replenishment by refineries as they ramped up capacity utilisation in June. Chinese crude stocks were significantly run down in June as apparent refined petroleum demand soared 10.3% from the same time a year ago (seasonally adjusted) to an average 10.0 mb/d – which was the highest growth rate since February 2011.

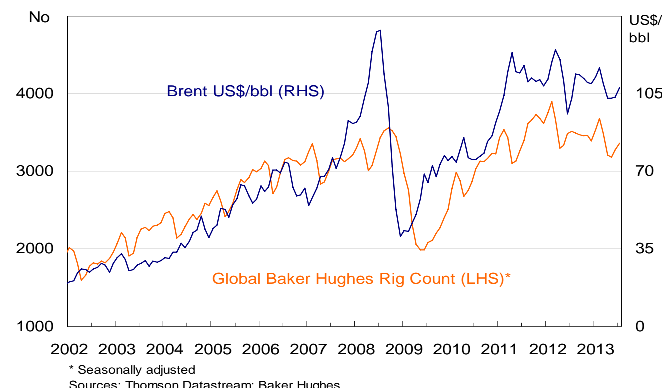
Looking ahead, with Chinese manufacturing activity returning to a mildly expansionary phase, exports and domestic demand improving, oil consumption growth is expected to remain relatively robust over 2013.

On the supply side, the escalation of geopolitical tensions in the Middle East and North Africa has resulted in an increase in production disruptions in the month, estimated by the EIA to have reached 2.7mb/d, which helped to support Brent above USD100 per barrel. OPEC producers account for 1.9mb/d of total volume of disruptions, the highest level since at least January 2009, and include disruptions in Iran, Iraq, Libya, and Nigeria. Libya's exports of crude oil fell drastically after armed security guards closed four ports for export at the end of July but one of these ports has since been reopened as of the beginning of this week. According to EIA, non-OPEC liquids production is expected to increase by 1.3 mb/d in 2013 and by 1.7 mb/d in 2014, with North America accounting for almost three-quarters of the projected growth over the next two years because of continued production growth from US tight oil formations and Canadian oil sands. EIA projects OPEC crude oil supply to decrease by 0.6mb/d in 2013, largely reflecting a pull back in production from Saudi Arabia in response to non-OPEC supply growth.

Exploration

After seasonal adjustment, the Baker Hughes global rig count was up by 2.6% in July, while over the year, the rig count was down by 4.4%. Exploration activity tends to follow prices with a lag of around six months, suggesting that prices having eased over the start of 2013 are contributing to the recent mild decline in the rig count, albeit at elevated levels. That said, recent rising and relatively stable oil prices are likely to be generally supportive of rig counts in the near-term.

Crude Oil Supply Response*



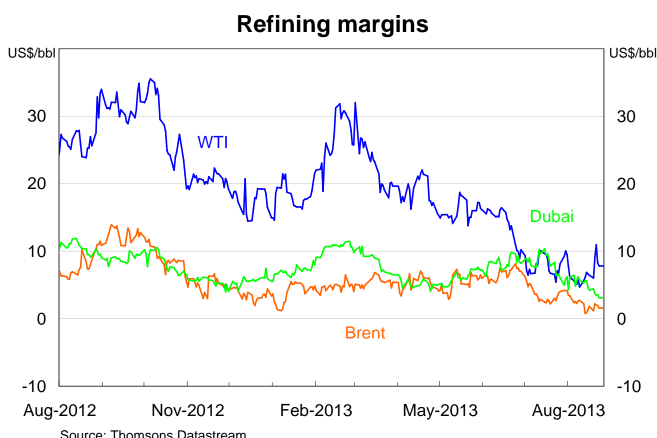
* Seasonally adjusted
Sources: Thomson Datastream; Baker Hughes

Product Markets

Product markets were mixed in July. Asian margins were relatively robust on the back strengthening cracking spreads for middle distillate and gas oil driven by strong seasonal demand. In

contrast, the sharp convergence of Brent and WTI has pressured the margins of North American refineries. In the US, gasoline cracks performed the best, with support stemming driving-season-induced demand and supply concerns as result of some outages in a number of production units towards the end of June. Meanwhile, the margin for WTI has fallen by US$2 in the month to average around US$9.4/b. In Europe, high fuel oil inventories combined with unseasonably weak demand in Europe and limited arbitrage has weighed on the margin for Brent crude, to fall by US$1 to average US$3/b in July. Middle distillates and gasoline cracks were relatively more resilient.

Refining Margins

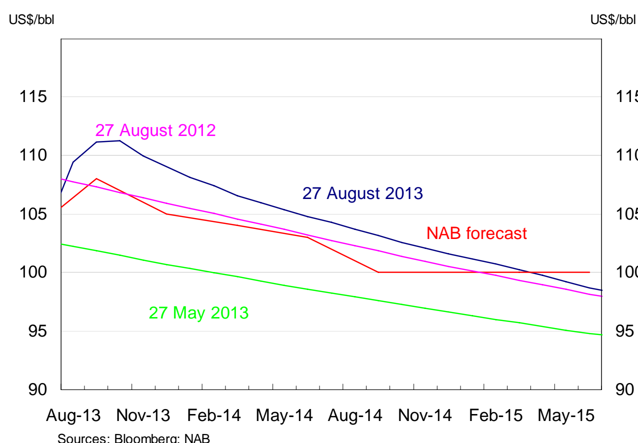


Source: Thomsons Datastream

Futures Prices

The movements in futures curves for Brent crude oil have been mixed over the past year or so, moving down at the beginning of this year as concerns about Chinese economic growth precipitated while global recovery remained sluggish. More recently, however, increasingly positive US economic data, coupled with a speedy easing of inventories build-up at Cushing, triggered a bull run in the futures market which was further fuelled by heightened concerns about near-term supply on the back of geo-political risks in the Middle East and North Africa. These two sources of mutually reinforcing forces drove net long positions held by managed money in July to a staggering number of 362,941 contracts in the month, the highest level on record since CTFC's weekly disaggregated reporting started in September 2009.

Brent Crude Oil Futures Curves

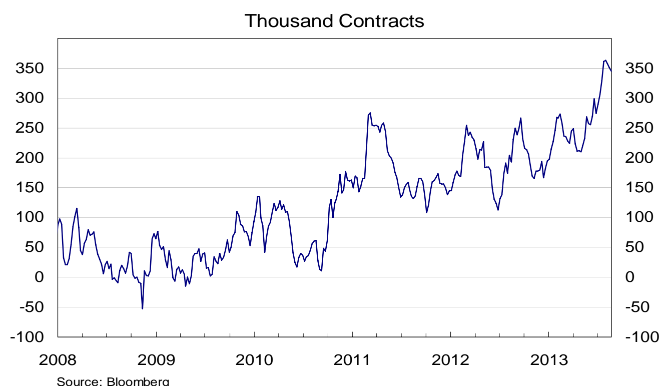


Sources: Bloomberg; NAB

The recent spiralling in spot prices has led to the futures market into a steeper backwardation, which encourages crude producers to offload inventories instead of buying them at current prices.

This suggests that near-term upside price pressures from the currently elevated levels may be somewhat limited, although some upside risks remain from the increasingly volatile situation in the Middle East, with the accusations that the Syrian government has deployed the use of chemical weapons likely to lead a military intervention by the US government.

Net long crude oil positions held by non-commercial participants

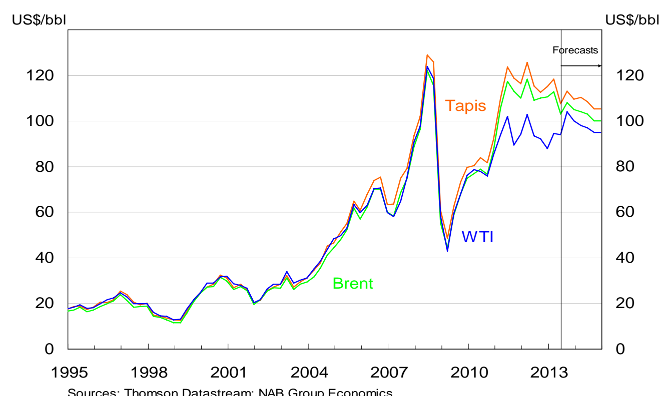


Source: Bloomberg

Oil Price Outlook

We remain relatively optimistic about the outlook for oil prices, with technical and economic indicators pointing to more robust global demand compared to early this year. In the short term, oil prices will remain elevated from the sustained supply disruptions from the progressively volatile situation in the Middle East, as it gravitates towards the possibility for the Syrian civil war to morph into a superpower military standoff between the US and Syria-backing Russia. Meanwhile, the rapid narrowing of the WTI-Brent gap has come at a speed and time which exceeded our previous forecasts, which then warrants us to revisit our forecasts of the relative positions between Brent and WTI in the forecast period. The broad tenor of the longer-term outlook remains largely unchanged; however, as we continue to expect that the unprecedented increase in production by non-OPEC countries will overcome short-term supply shocks to serve as a cap on upward prices pressures. As such, we have revised up our forecasts for Brent and WTI prices for the near-term to capture recent price developments. Meanwhile, we have also lifted our Brent forecasts relative to WTI in the out years (see forecast table in Appendix) to reflect our expectation that the Brent-WTI differential will widen from its current lows towards a more sustainable equilibrium, as US refinery utilisation rates decline from recent highs to lower post-summer seasonal levels and as crude oil production in North America continue to increase, outpacing takeaway capacity.

NAB Oil Price Forecasts



Sources: Thomson Datastream; NAB Group Economics

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Quarterly Price Profile

Oil Price Forecasts – Quarterly Average Terms

	Actual	Forecasts							
	Jun-13	*Sep 13*	*Dec 13*	*Mar 14*	*Jun 14*	*Sep 14*	*Dec 14*	*Mar 15*	*Jun 15*
Brent US$/bbl	103	108	105	104	103	100	100	100	100
WTI US$/bbl	94	104	100	98	97	95	95	95	95
Tapis US$/bbl	108	113	110	110	109	105	105	105	105
Petrol AUc/L	132	139	141	142	143	143	142	138	143

Sources: NAB Economics; RACQ; Thomson Datastream

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