Global | Commodities

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Commodities Weekly

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Commodities as An Asset Class: Commodity ETPs in both the US and Europe enjoyed a second consecutive month of inflows in March. However, these inflows were entirely concentrated in the precious metals sector and may therefore be difficult to sustain in the event that US real economy surprises to the upside.

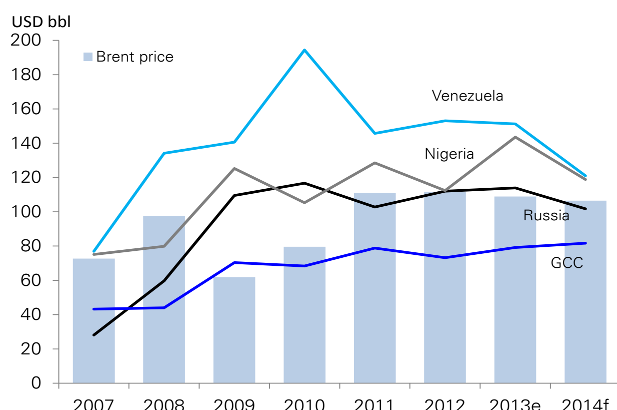
Energy: While promising signs are emerging from Libya we believe a meaningful recovery of supply may still take some time as most fields are still halted or producing at reduced levels and exports from the larger ports will remain restricted. Downside risks for oil are likely to be held in check by OPEC accommodation of new volume. In Europe, Ukraine's stoppage of its own gas imports from Russia heightens tensions as it seeks relief from sharply higher prices, although transit gas for Europe remains undisturbed thus far.

Precious Metals: Precious metals prices have proven resilient since the start of the quarter, aided by a weakening dollar and the release of FOMC minutes which indicated unease with overly hawkish market interpretations of the mid-March meeting. However, a recovery in Q2 outlook as the US economy emerges from weather-induced weakness could sustain headwinds for gold.

Industrial Metals: With market focus shifting to China's targeted stimulus, industrial metals moved higher on short covering rally. Nickel remains the outperformer in the complex as an Indonesian export ban continues to tighten physical fundamentals.

Agriculture: Soybean prices continue to be strong, supported by the USDA's lower forecast for the US 2013-14 carry over stock. For corn, rising feed and export demand are mitigating the increase in expected global corn production. However, while wheat prices have retreated on the back of the USDA's raised forecast for global stocks, weather trends will remain a dominating factor.

The evolution of budget breakeven oil prices



Source: Haver Analytics, JODI, Deutsche Bank

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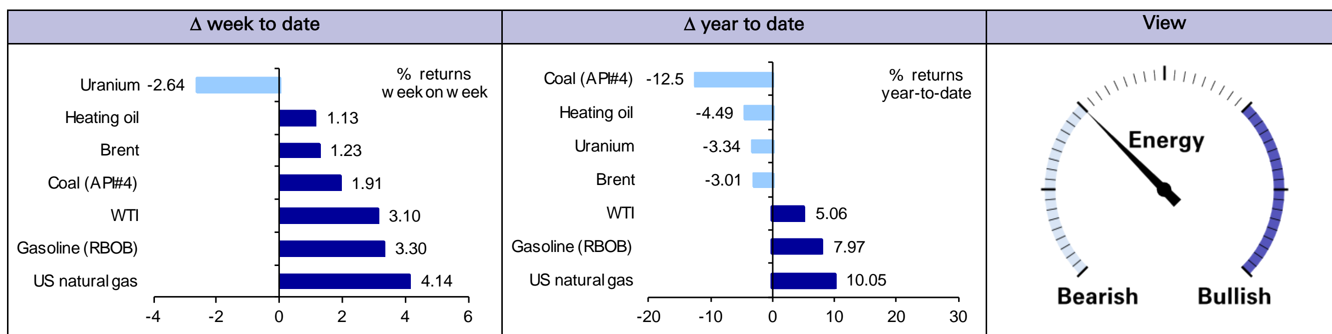
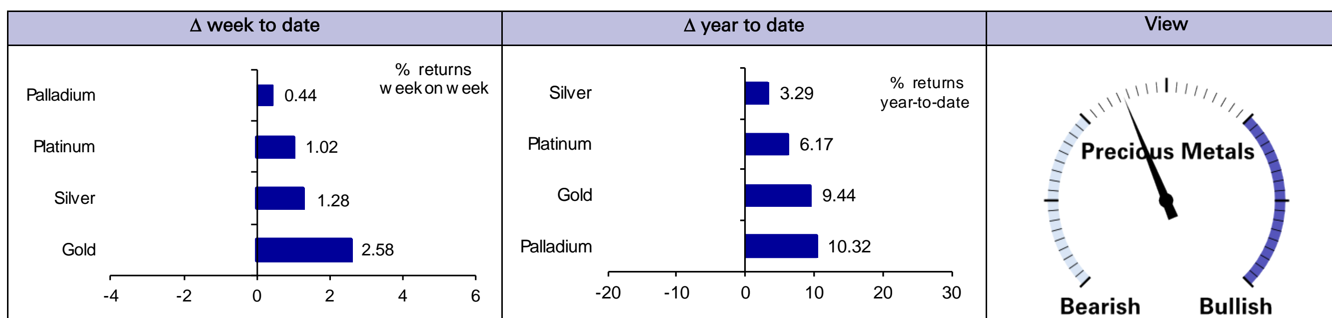
DISCLOSURES AND ANALYST CERTIFICATIONS ARE LOCATED IN APPENDIX 1. MICA(P) 054/04/2013.

Commodity Performance

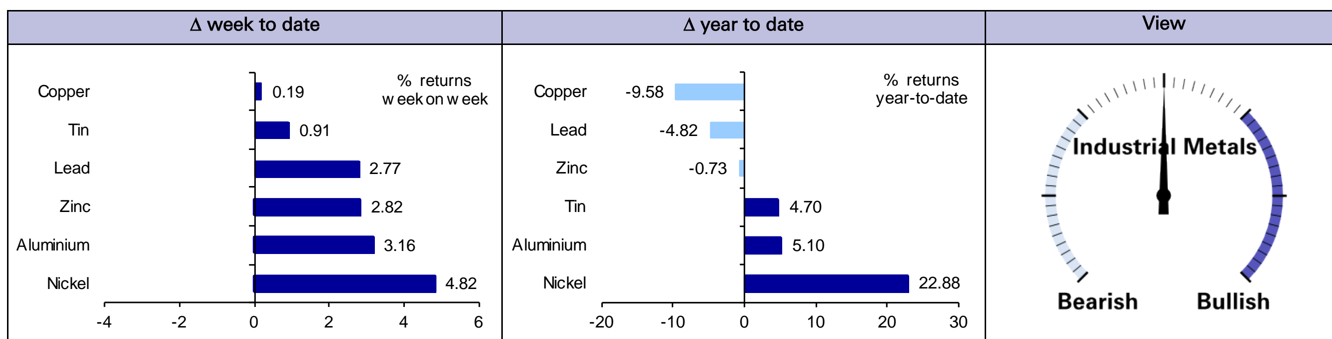
Energy



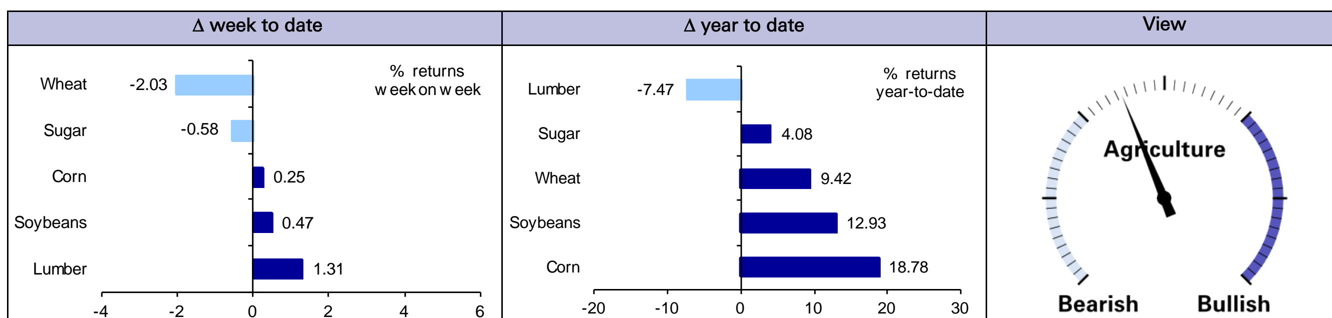
Precious Metals



Industrial Metals



Agriculture



Sources: Deutsche Bank, Bloomberg Finance LP (Prices as of close of business Thursday April 10, 2014)

Global Trends

Breakeven Oil Prices

- The price of oil needed to balance the government budgets of oil producing economies provides a useful measure of their vulnerability to movements in oil prices. We routinely track these breakeven prices for major EM oil producers, adding Venezuela to our assessment for the first time this year.

- While the crisis in Ukraine has led to a further deterioration in the economic outlook for Russia, the impact on the public finances is more than fully offset by the weaker rouble. As such, we think the budget breakeven price will fall from USD 114bbl last year to USD 102bbl this year. The balance of risks, however, is skewed towards a weaker fiscal outcome and higher breakeven price, especially in the (unlikely) event that the crisis results in a disruption to energy exports.

- In Nigeria, the budget breakeven price increased to USD 143bbl last year as oil production declined, the government's revenue take from oil production fell further, and oil savings were used to boost spending. Oil savings are now close to fully depleted, however, and this should help to enforce greater spending restraint this year. We think the budget breakeven price will accordingly drop to USD 119bbl.

- In Saudi Arabia, temporary cuts in oil production and continued real growth in public spending pushed the budget breakeven price up to USD 91bbl last year. While oil production has recovered, the breakeven price may edge up a little further this year as spending growth continues. With substantial accumulated oil savings, however, Saudi Arabia would be well able to weather even a sustained drop in oil prices without the need for sharp adjustment.

- Elsewhere in the Gulf, there has been some convergence in budget breakeven prices, which we expect to be clustered in the USD 70-75bbl range this year. Countries with greater headroom, such as Kuwait and Qatar, have pursued more expansionary fiscal policies, whereas those with higher starting breakeven prices, such as UAE and Oman, have consolidated. Bahrain is an exception in running a fiscal deficit, which has widened further.

- Populist policies in Venezuela have taken a toll on oil production while government spending has increased, pushing the budget breakeven price to around USD 150bbl in recent years. Proposed reforms to the exchange rate system should alleviate matters, bringing the breakeven price back to around USD 120bbl this year.

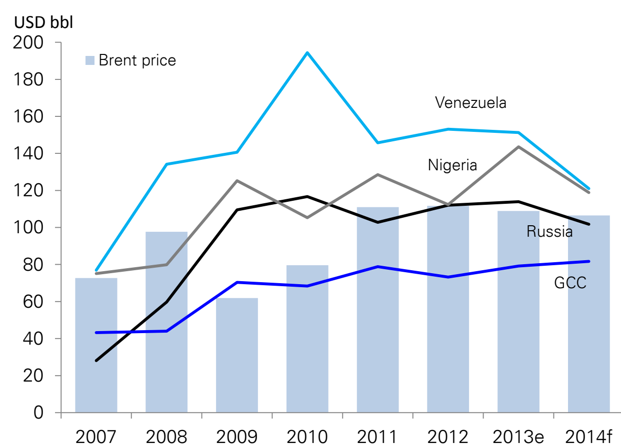
- We also report the oil prices that would balance external current accounts. These are typically lower than budget breakeven prices but have increased in some cases, including Russia where we estimate that the current account would swing into deficit if the price of oil fell below USD 95bbl.

The price of oil needed to ensure that a budget is in balance for a given level of government spending and nonoil revenue provides a useful measure of the vulnerability of fiscal positions to movements in oil prices. We therefore routinely track these budget breakeven prices across a range of major oil producers in the EMEA region. This year, we have also added Venezuela to our assessment.

We defined our approach to estimating breakeven prices in some detail two years ago.[1] We will not repeat the details here but the simplifying assumptions that we make are worth reiterating:

- Our calculations are based on a uniform oil price (Brent). In practice, variations between this and actual selling prices (e.g. Urals, Dubai Fateh) have been relatively small.
- While our breakeven price estimates are defined in terms of the price of a barrel of oil, we also include gas revenues in our assessment. For the forecast period, we assume that gas prices move in line with oil prices.
- The amount of revenue accruing to a government from each unit of oil and gas production can vary significantly from year to year. We hold these revenue shares constant at their latest observed levels over the forecast period.
- Finally, swings in oil prices can affect other revenues, either indirectly through their impact on nonoil activity, or directly through investment income on accumulated oil savings. Movements in oil prices can also affect the level of public spending through, for example, the cost of fuel subsidies. But we make no attempt to account for these effects, which we think are likely to be of second order importance

The evolution of budget breakeven oil prices



Source: Haver Analytics, JODI, Deutsche Bank

[1] See "Breakeven Oil Prices", EM Monthly, June 2012, for a technical discussion of how we define and calculate our breakeven oil prices.

Our commodities team anticipates that the price of Brent oil will remain within a relatively narrow range, averaging about USD 106bbl this year and USD 102bbl next year. Expectations of significantly lower oil prices on the back of stronger supply from the US and weaker demand from China have not materialized. This reflects ongoing disruptions to supply elsewhere, most notably in Libya, and stronger demand from the US (partly weather related) and Europe. Given the potential for Libyan and Iranian crude to recover from currently depressed levels and our view that the US dollar is likely to strengthen, the risks to this outlook are probably skewed to the downside.

In the rest of this note, we update our breakeven prices to reflect estimated budget outturns for last year and provide initial estimates for this year based on fiscal forecasts for the major oil producers. We also present some analysis of the sensitivity of these estimates to different assumptions for oil production and public spending. The countries covered in our assessment, Bahrain, Kuwait, Oman, Nigeria, Qatar, Russia, Saudi Arabia, United Arab Emirates, and Venezuela, account for 46 percent of world oil production. We have again paid particular attention to Russia in this update given the risks to the budget outlook following the crisis in Ukraine and further deterioration in the outlook for growth.

Breakeven estimates for 2013 and 2014

Breakeven oil prices among GCC countries fell in 2012 as the sharp increase in public spending following the Arab Spring was partially unwound while oil production increased. As we anticipated in last year's report, this dip proved to be temporary and breakeven prices have again begun to edge upwards. For the region as a whole, we estimate that the breakeven price increased by about USD 6bbl to USD 79bbl in 2013 as oil production stabilized but public spending continued to grow. We think that the breakeven price for the region will increase a little further this year to USD 81bbl with a moderate increase in oil production helping to offset the impact of further growth in government spending. But this masks some significant differences within the region, which we discuss in more detail below.

Outside the Gulf region, despite greater spending restraint following elections, the breakeven price in Russia edged up to USD 114bbl last year as non-oil revenues disappointed. The breakeven price should drop to USD 102bbl this year, however, as the weaker rouble boosts the local currency value of oil revenues.

Budget breakeven oil prices ($bbl)

	2007	2008	2009	2010	2011	2012	2013e	2014f
GCC	43.2	44.0	70.4	68.4	78.8	73.2	79.1	81.7
Bahrain	66.9	80.0	82.9	103.9	118.1	127.1	125.3	134.9
Kuwait	32.6	42.1	47.0	45.7	47.4	53.6	68.3	71.9
Oman	99.3	96.4	69.9	80.2	112.3	112.5	80.4	75.7
Qatar	41.8	49.1	27.2	61.7	80.1	62.8	59.6	71.0
S. Arabia	52.7	47.0	72.6	70.6	84.5	80.9	91.4	93.4
UAE	25.1	44.5	105.8	86.4	95.0	77.7	72.2	70.4
Nigeria	75.1	79.9	125.3	105.3	128.5	112.3	143.6	118.8
Russia	28.1	59.7	109.5	116.7	102.8	112.0	113.9	101.7
Venezuela	76.9	134.2	140.7	194.4	145.7	153.1	151.3	121.0
Brent price	72.7	97.7	61.9	79.6	111.0	111.7	108.9	106.5

Source: Haver Analytics, JODI, Deutsche Bank

Overall budget balances (% GDP)

	2007	2008	2009	2010	2011	2012	2013e	2014f
GCC	13.2	22.7	-3.6	4.4	10.7	13.1	9.8	7.9
Bahrain	1.6	4.3	-5.6	-5.8	-1.5	-3.2	-4.3	-5.7
Kuwait	26.6	32.5	11.4	23.3	33.1	31.5	21.0	17.8
Oman	-10.1	0.3	-3.7	-0.2	-0.4	-0.3	10.3	10.9
Qatar	9.8	9.2	12.9	4.6	6.3	10.7	11.0	7.4
S. Arabia	11.3	29.8	-5.4	4.4	11.6	13.6	7.4	5.4
UAE	16.0	16.9	-13.1	-1.9	4.1	8.5	9.4	9.0
Nigeria	-0.7	4.8	-13.0	-5.1	-3.7	-0.1	-5.2	-1.8
Russia	5.4	4.1	-5.9	-3.9	0.8	0.0	-0.5	-1.0
Venezuela	-0.8	-4.2	-8.6	-8.2	-4.1	-4.7	-5.6	-3.3

Note: figures for Nigeria do not take into account the recent rebasing of the national accounts, which has resulted in large upward revisions to GDP.

Source: Haver Analytics, JODI, Deutsche Bank

We think the breakeven price in Nigeria will drop significantly this year, partly on the back of higher oil production, but largely because the past depletion of oil savings will enforce greater spending restraint. The breakeven price will nevertheless remain one of the highest the highest among major oil producers at USD119bbl. It is exceeded only by Venezuela where, despite economic adjustment this year, the breakeven price is likely to be around USD 121bbl.

Russia. The political crisis unfolding in Ukraine will weigh on the outlook for the Russian economy. Therefore, since the start of the year, we have reduced our forecast for GDP growth in Russia this year to 0.6% from 2.4%. The impact of the crisis on the public finances is less clear. Slower economic growth will likely reduce non-oil revenues. Public spending could also come under pressure. Russian government officials, for example, have estimated that the budget deficit of Crimea and Sevastopol at around RUB 55bn. The government has also promised to develop local infrastructure. But these costs are likely to be relatively small relative to the size of the Russian economy. The bigger risks will come from domestic spending pressure in a low growth environment, especially given that budget plans involve further modest real compression of spending this year following a 3% reduction in real spending last year.

The local currency value of oil revenues on the other hand will be boosted by the depreciation of the rouble. We think the latter (USDRUB) will average 36.2 this year versus the exchange rate of 33.4 assumed in the budget plans for this year. Our oil price forecast of USD 106bbl is also a little higher than the USD 101bbl (Urals) price on which the budget was based. We estimate that these two factors combined will boost revenues by about RUB 925bn (1.3% of GDP) this year.

We have assumed that non-oil revenues are about 2% weaker than initially budgeted this year but that the government is able to stick to its nominal spending plans. This would result in a small budget surplus this year of 0.6% of GDP compared with a modest deficit of 0.5% of GDP last year. This brings the budget breakeven price of oil down from USD 114bbl last year to USD 102bbl this year.

Russia: Fiscal Outlook Boosted by Weaker Rouble

	2013	2014	
	Outturn	Budget	DB forecast
		(Rub bns)	
Revenues	13019	13571	14386
Oil	6533	6528	7453
Non-oil	6486	7043	6933
Spending	13330	13960	13960
Balance	-311	-389	426
Balance (% GDP)	-0.5	-0.5	0.6
Memo items:			
Nominal GDP	66689	73315	72546
USDRUB (avg.)	31.9	33.4	36.2
Oil price (Brent bbl)	109	102	106
Breakeven price (bbl)	114	108	102

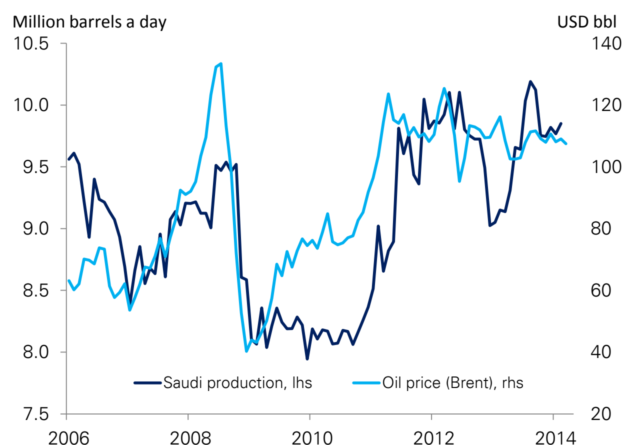
Source: Deutsche Bank

The balance of risks, however, is probably skewed towards a weaker outturn and a larger breakeven price. Non-oil revenues could well disappoint more than we are anticipating. Spending is more likely to exceed rather than fall short of budgeted amounts. We think the risk of disruptions to energy exports is low but this would of course have a major impact on fiscal outturns and the breakeven price.

The longer term evolution of the breakeven oil price for the budget will depend on the resolution of structural issues, in particular problems with the pension system. Throughout the past several year the rising deficit in the PAYG part of the system represented by the state Pension fund was financed by budgetary transfers, which are seen as increasing given the adverse demographics and the lack of development in the non-state fully funded pension system. Most recently the Finance Minister again highlighted the need to raise the pension age, but we see little chance of this taking place, which implies that longer term pressures on the budget system and the oil price that balances the budget are likely to persist.

Saudi Arabia. Despite a brief cut in oil production early in the year when oil prices threatened to dip below USD 100bbl, oil production averaged 9.6mbd last year, only a little below the record production of 9.8mbd in 2012. Production has remained broadly at these levels so far this year, notwithstanding the possibility of increased supply from elsewhere. We have assumed that the Kingdom continues to produce about 9.8mbd on average this year.

Saudi Arabia oil production has remained stable



Source: JODI, Haver Analytics, Deutsche Bank

While this provides a relatively favorable backdrop for the budget, we think the budget breakeven price nevertheless increased by USD 10bbl last year to USD 91bbl. The increase stems from: the small drop in oil production last year; moderate growth in real public spending of about 2%; and a drop in nonoil revenues.[2] Even if oil production remains at current levels, i.e. a little above the average for last year, we think the budget breakeven price will edge up a little further to USD 93bbl this year. This would allow for further positive real growth in public spending of about 1%. The breakeven price could be lower than this, however, if nonoil revenues rebound more strongly than we have assumed.

[2] This is based on preliminary data from the Saudi Ministry of Finance of total budget revenues last year less our own estimate of oil revenues.

This would bring the breakeven price to within USD 15bbl of the spot price, which would be the smallest margin since the collapse in oil prices in 2008-09 when the government ran a budget deficit. As we have noted before, however, gross government debt is negligible and the government has accumulated substantial assets in recent years as it has run large budget surpluses. The net foreign assets of the Saudi Monetary Authority (SAMA), for example, increased by a further USD 70bn last year to USD 727bn, or about 97% of GDP. Government deposits at SAMA are about 60% of GDP. This provides the Kingdom with substantial leeway to withstand even a sustained drop in oil prices. From a fiscal perspective, therefore, there is little to stop Saudi Arabia from continuing to play a stabilizing role in global oil markets, varying its production levels according to the ebbs and flows of global demand and supply elsewhere.

Other GCC. Oil and gas production in other GCC countries has been relatively stable in the last year or two and is likely to remain so. As such, the movements in our breakeven estimates for these countries are driven largely by public spending patterns. In the United Arab Emirates, for example, significant fiscal expansion (including support for government-regulated entities) following the global financial crisis pushed the breakeven price to USD 95bbl on average from 2009-11. This support is being unwound and the breakeven price has dropped accordingly: we think it will reach USD 70bbl this year. Fiscal consolidation is also bringing down the breakeven price in Oman following a spike in government spending in 2012. In Qatar, gas production has reached a near-term plateau while oil production from mature fields has fallen. The government is proceeding with efforts to diversify the economy, with a number of large capital projects, and this will push the breakeven price up to USD 68bbl this year. Fiscal expansion is also continuing in Kuwait and Bahrain, which will see breakeven prices increase, though from very different levels. Having been the lowest in the region for many years, the breakeven price in Kuwait will probably exceed USD 70bbl this year. Bahrain remains the outlier in the region in running an increasingly large overall budget deficit even at current oil price levels.

Nigeria.[3] Like Bahrain, Nigeria is also running a budget deficit at current oil prices. Oil production declined by about 7% to 2.2mbd last year and the government's revenue take from this production also fell a little further. Public spending nevertheless increased as the government ran down its oil savings, bringing the balance on its Excess Crude Account to USD 3bn by the end of last year. This pushed the overall budget position from close to balance in 2012 to a deficit of 5% of GDP. The budget breakeven price thus increased by a little over USD 30bbl to USD 144bbl last year, even higher than the USD 135bbl that we had anticipated in our assessment one year ago.

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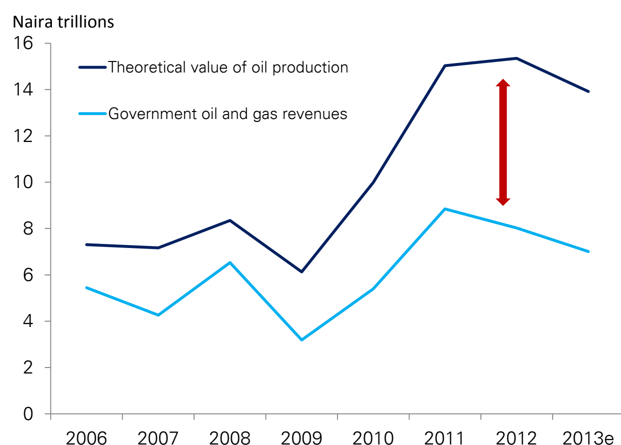
[3] We have not yet incorporated the recently revised GDP series for Nigeria into our analysis. Following a rebasing exercise, the preliminary GDP estimate for last year was revised upwards by 90%. The revisions for earlier years are smaller but still 60% for 2010, the earliest year for which new data are available. These upward revisions will affect the ratios of fiscal balances to GDP but do not affect our breakeven oil price estimates.

With oil savings now more or less fully depleted, this will at least limit the scope for further large spending increases this year. Indeed we think that if the balance on the Excess Crude Account remains more or less unchanged at USD 3-4bn this year, public spending would fall by about 5% in nominal terms. Oil production has also recovered a little and should reach 2.3mbd this year. This should see the breakeven price drop sharply to USD 119bbl this year. Presidential elections are just around the corner in February 2015, however, and there is a risk is that spending will be higher than this, though, in the absence of oil savings, this would mean increased borrowing.

As usual, the outlook will also depend on the amount of revenue that the government retains from each barrel of oil extracted. The government's revenue take has fallen from an average of over 70% of the value of production from 2006-08 to 50% last year. The government has typically based its budget plans on a revenue take of around 66%. To put this into context, the resulting cumulative shortfall in oil revenues, i.e. the gap between the planned take and the actual take from each barrel of oil, amounts to almost USD 50bn over the last five years.

Nigeria: oil and gas revenues disappoint



Source: Haver Analytics, Nigeria Federal Ministry of Finance, Deutsche Bank

Venezuela. The populist approach to economic affairs has taken a toll in the last two years with high fiscal deficits, expansive monetary policy, rampant inflation, scarcity, and exchange rate misalignment, worsening the outlook for 2014. The fiscal deficit of the central government has hovered around 5% of GDP in the last two years.

Oil production has also disappointed. Capital spending by PDVSA, the state oil company, has been constrained as it has been given the additional roles of executing social expenditure as well as subsidizing the exchange rate system for public and private imports by funding it at an artificially overvalued exchange rate. In 2014, we expect production to be around 2.5mbd, out of which exports will be around 73% in the coming years and transfers to the central government in royalties, taxes, and dividend payments will be around 43%.

As a result, the budget breakeven price has been running at around USD 150bbl over the last few years. The government is implementing economic adjustment this year, which should reduce the deficit and bring the breakeven price down to USD 123bbl. A key component of this adjustment is exchange rate reform, in which PDVSA and its major partners, just as the rest of the

private sector, will be allowed to sell dollars at a devalued exchange rate. This should alleviate the burden for PDVSA and allow it invest and boost production in the coming years.

For the current account the situation is not as stark given that the country has kept a current account surplus. However, the rapid deterioration in external accounts and the harsh quantitative measures to curb imports has seen the oil price needed to balance the current account increase to over USD 90bbl in the last couple of years.

Sensitivity analysis. Our breakeven estimates are based on a number of assumptions, which are subject to a good deal of uncertainty. We illustrate the sensitivity of our breakeven estimates to changes in our assumptions about oil and gas production and public spending in the table below. The increase in oil production that we are expecting in Nigeria, for example, reduced the budget breakeven price by USD 7bbl.

Sensitivity to production and spending assumptions

	Oil and gas production (mbd)		Impact on breakeven price	Real spending increase (%)		Impact on breakeven price
	2013	2014	($bbl)	2013	2014	($bbl)
Bahrain	0.5	0.5	-0.8	12.4	2.7	-13.9
Kuwait	3.2	3.3	-1.2	19.4	3.7	-12.4
Oman	1.6	1.6	-2.8	-21.9	-3.3	18.0
Qatar	2.6	2.6	3.5	9.7	3.8	-8.2
S. Arabia	11.5	11.8	-1.0	2.1	1.1	-0.8
UAE	4.1	4.2	-0.9	-0.9	-1.5	-0.6
Nigeria	2.2	2.3	-6.9	7.2	-11.4	-35.0
Russia	22.0	22.3	-1.3	-3.0	-1.0	4.4
Venezuela						

Source: Haver Analytics, JODI, Deutsche Bank

The unsustainable nature of last year's increases in spending in some countries is clear from this table. We saw double digit real increases in Bahrain, Kuwait, and Qatar, and a high single digit increase in Nigeria. If spending continued to increase at these rates, breakeven prices would be much higher than our estimates for this year. In Nigeria, for example, if real spending increased by another 7% this year, the breakeven price would be USD 35bbl higher than we are anticipating.

Current account breakeven prices. So far, our assessment has focused on the price of oil needed to balance the budget. Below, we also report the price of oil that would balance the external current account. The level of oil and gas production is a key determinant of the breakeven price in both cases. Whereas our budget breakeven prices are then determined by the government's revenue take for a given level of oil production, and the levels of government spending and nonoil government revenues, our current account breakeven prices depend on the level of imports, nonoil exports, and the share of oil exports that is exported. In Russia, for example, we estimate that the current account would swing into deficit this year if the price of oil fell below USD 95bbl.

Current account breakeven prices

	2007	2008	2009	2010	2011	2012	2013	2014
GCC	42.1	54.9	50.6	54.7	54.7	55.1	57.6	61.9
Bahrain	53.1	81.7	58.0	73.6	87.7	84.4	81.5	85.8
Kuwait	21.8	26.4	26.1	32.0	33.9	33.3	40.6	40.4
Oman	63.2	80.6	63.6	63.7	81.1	86.6	87.1	89.1
Qatar	51.1	53.9	52.3	49.0	51.8	56.5	55.4	57.7
S. Arabia	43.8	57.3	54.9	58.3	64.1	67.3	71.5	78.0
UAE	53.4	76.3	54.7	71.9	60.3	49.3	44.8	46.1
Nigeria **	64.9	83.4	95.7	72.0	102.4	93.0	117.4	114.1
Russia	46.8	65.0	45.8	57.3	78.8	88.3	98.5	94.8
Venezuela	46.4	44.9	58.6	65.1	72.2	96.9	91.5	93.0
Brent price	72.7	97.7	61.9	79.6	111.0	111.7	108.9	106.5

*** Adjusted to include Nigeria's large negative errors and omissions*

Source: Deutsche Bank

Current account balances (% GDP)

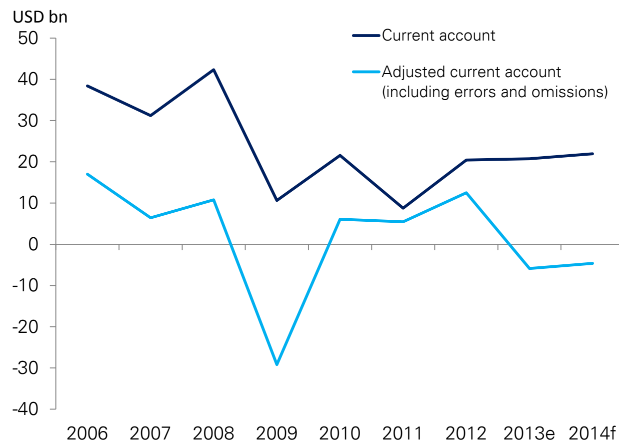
	2007	2008	2009	2010	2011	2012	2013e	2014f
GCC	18.4	21.0	6.6	12.3	23.5	24.0	21.2	17.9
Bahrain	13.4	8.8	2.4	3.0	11.2	13.7	13.9	10.0
Kuwait	36.0	40.9	26.7	30.8	41.8	43.2	37.1	35.6
Oman	5.8	8.2	-1.0	8.6	12.9	10.5	9.2	7.2
Qatar	14.4	23.1	6.5	19.0	30.3	32.4	30.9	26.6
S. Arabia	22.4	25.4	4.9	12.7	23.6	22.4	18.0	13.5
UAE	7.6	7.1	3.1	2.5	14.6	17.3	18.0	16.6
Nigeria **	3.9	5.2	-17.4	2.7	2.2	4.8	-2.2	-1.6
Russia	6.0	6.2	4.0	4.8	5.3	3.6	1.5	1.9
Venezuela	6.9	10.2	0.7	2.2	7.7	2.9	4.0	5.1

*** Adjusted to include Nigeria's large negative errors and omissions*

Source: Deutsche Bank

In most cases, the price of oil needed to balance the current account is significantly less than the budget breakeven price, though this gap has closed in some cases like Russia and Venezuela. This reflects the relatively high share of oil and gas production that is exported. Nigeria is the only country where this price is above the current spot price. This is because we have used an augmented measure of the current account balance, which includes large negative errors and omissions. Last year, for example, the officially recorded current account surplus was 8% of GDP but outflows under errors and omissions were 10% of GDP. We add these together, which gives us an adjusted current account deficit of 2% of GDP last year. The oil price would need to increase to USD 114bbl to clear this deficit.

Nigeria: current account and errors and omissions



Source: Deutsche Bank

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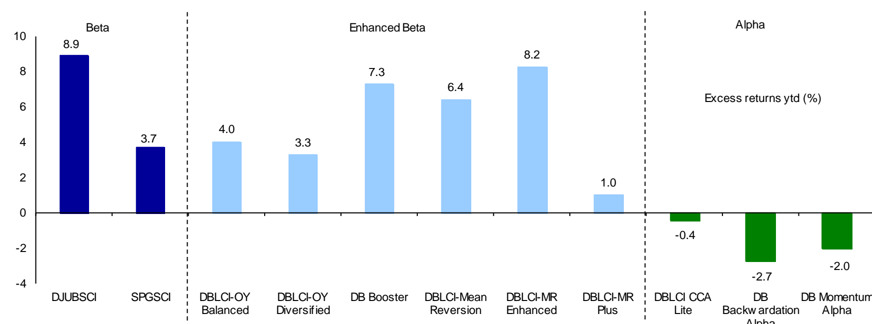
Asset Class Performance

- The DJUBSCI holds its place this week as the best performing commodity index in our sample of the marketplace so far this year with returns accelerating from 6.0% in late March to 8.9% currently. Among the DBLCI family, the DBLCI Mean Reversion Enhanced is the relative out-performer with returns up 8.2% since the end of last year.
- While gold returns have recovered over the past week, returns still remain down on the month. Even so, commodity ETPs enjoyed a second consecutive month of inflows during March. According to our estimates, US commodity ETPS experienced inflows of USD0.4bn last month with gold the primary recipient of these inflows. In contrast energy ETPs suffered outflows, to the tune of USD0.2bn. Like their US counterparts, European listed ETPs also witnessed inflows of EUR0.3bn in March.
- Agriculture registered another week of positive returns, building on strong year-to-date performance. Livestock returns turned negative as the impact of the PED virus may have been overdone, and the market shows signs of worry over the effect on demand of this year's strong price rise.
- Precious metals returns were aided by a weakening dollar and the release of FOMC minutes which indicated unease with overly hawkish market interpretations of the mid-March meeting. However, US economic performance showed a recovery in March and jobless claims moved lower, suggesting a positive outlook for Q2 as the economy emerges from weather-induced weakness, and therefore, downside risks for gold.
- The energy sector was boosted by signs of unrest in eastern Ukraine where protesters sought referendums on the political status of the region. Such gains have not been given up despite tentative signs of improvement in the 9-month standoff between the Libyan government and rebels seeking autonomy of the eastern region of Cyrenaica.
- Of the five broad commodity sectors, industrial metals continues to be the worst performing sector on an excess returns basis so far this year. We believe that an improvement in industrial metals returns over the past week has been a shift in market expectations that China's targeted stimulus could support industrial metals demand.

Figure 1: 2014 commodity index scorecard



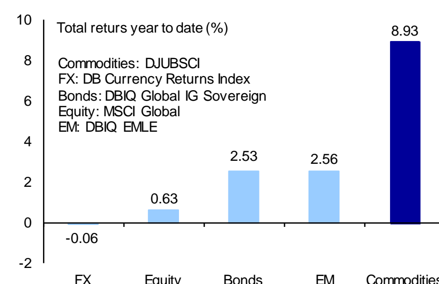
Sources: Deutsche Bank, Bloomberg Finance LP (Figures are cob April 10, 2014)

Figure 2: Excess returns in 2014

(USD terms)	Δ WTD	Δ MTD	Δ YTD	Sharpe
DBLCI-OY Balanced	1.45	1.11	4.03	-0.38
DBLCI-OY Diversified	1.59	1.10	3.27	-0.08
DB Booster	2.05	2.01	7.28	-0.10
DBLCI-Mean Reversion	1.51	1.64	6.41	0.08
DBLCI-MR Enhanced	2.11	2.37	8.23	-0.10
DBLCI-MR Plus	0.51	0.55	1.00	-0.71
DBLCI Backwardation Long	1.58	0.63	0.41	-0.45
Risk factors				
DB Commodity Curve Alpha Lite	-0.26	-0.31	-0.43	0.08
DBLCI Backwardation Alpha	-0.79	-1.89	-2.72	-0.61
DBLCI Momentum Alpha	0.07	-0.04	-2.00	-0.67
SPGSCI sector performance				
Energy	2.30	1.20	1.69	0.46
Industrial	1.89	2.87	-2.64	-0.51
Precious	2.63	2.72	8.97	-0.71
Agriculture	0.35	-1.11	14.62	0.00
Livestock	-1.57	-2.63	11.98	2.02
Performance of other benchmark indices				
SPGSCI	1.77	0.78	3.73	0.40
DJ-UBSCI	2.01	1.83	8.93	0.13

Sources: Deutsche Bank, Bloomberg Finance LP
(Figures are cob April 10, 2014. Sharpe ratios are calculated on a YoY basis)

Figure 3: 2014 asset class returns compared



Sources: Deutsche Bank, Bloomberg Finance LP (Figures are cob April 10, 2014)

Energy

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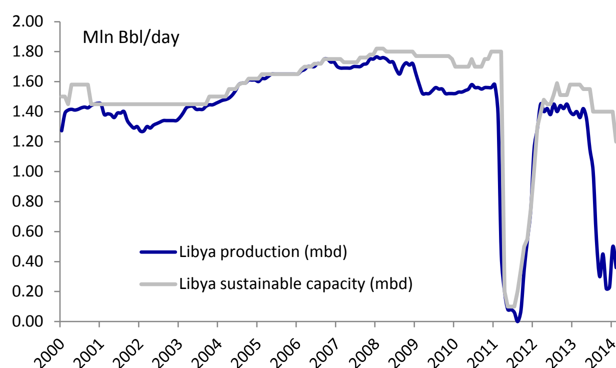
The conflict between Ukraine and Gazprom from the perspective of European gas imports is becoming more alarming rather than less so, as the shape of events begins to resemble previous episodes. The Ukrainian government regards the 81% rise in gas prices as untenable, and has therefore halted Ukraine's imports of Russian gas. The key question remains whether an escalation of the dispute could halt transit gas to Europe. A resolution will hinge on pricing as well as Ukrainian repayment of debt for already-delivered gas. Gazprom may feel slightly less pressure to achieve a resolution if a long-awaited sales contract with China is signed, as they indicated progress in these negotiations.

In Libya, rebels relinquished control of two oil terminals this week in the first signs of thawing of a conflict which has dramatically reduced the country's oil exports since June 2013. However, it would be premature to signal the "all-clear" as parliamentary approval of the agreement is pending, and because the east Libya rebels demand a share of oil revenue in exchange for the handover of the larger ports of Es Sider (340kbd) and Ras Lanuf (220kbd). In addition, major fields in the southwest of the country remain closed owing to worker protests. That said, Libya has a larger potential to raise production than Iran, where the IEA's estimate of sustainable capacity is only 0.12mbd above production. Libyan oil production was reportedly 243kbd in March, with exports of 85kbd and sustainable capacity of 1.2mbd. In the event of Libyan production rising, downside risks for oil may be limited as OPEC has stated that it will accommodate such volumes within its 30mbd quota.

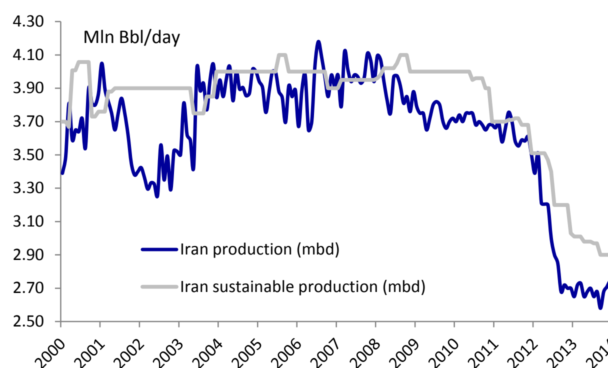
In US natural gas, injections of only 4 bcf in the week ending 4 April disappointed versus expectations of 15 bcf, despite production growth in the first 10 days of April averaging slightly higher at 2.6 bcf/d yoy. We believe that current injections are still consistent with our view that storage may reach only 3.5 tcf by November, sustaining upside risks to the winter.

Figure 1: Libya oil production and capacity (mbd)

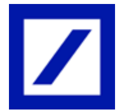


Sources: IEA, Bloomberg Finance LP

Figure 2: Iran oil production and capacity (mbd)



Sources: IEA, Bloomberg Finance LP



Precious Metals

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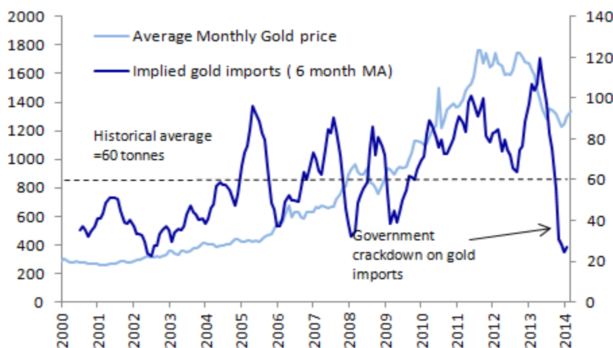
Gold prices have proven resilient since the start of the quarter, a function of a resumption of USD weakness, lingering geopolitical tension and strong physical demand from India in our view. One catalyst for the latest dollar sell-off was the most recent FOMC minutes. With rate hike expectation still far in sight, investors have returned to risky assets, weighing on USD. However, our FX team view recent pullback in the USD as temporary and expect the dollar uptrend to resume.

After the Reserve Bank of India's import restriction on gold came into force last year, India 's gold imports have fallen significantly, Figure 1. With expectations that the curbs might be relaxed, India's monthly gold imports could normalize to its long term average of around 60 tonnes, fuelling renewed physical demand interest.

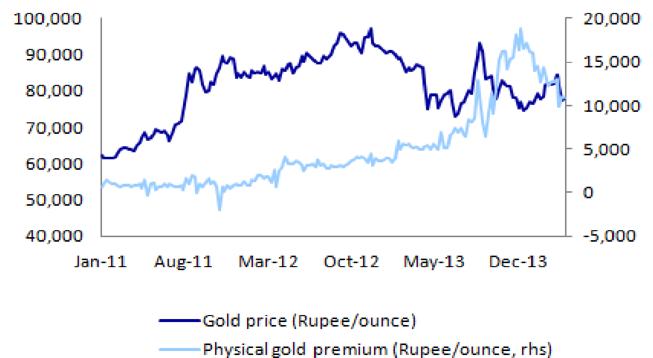
Gold cost saving has been an ongoing theme. Our equity metals and mining team pointed out that the gold mining equities are pricing in between 4% to 9% higher than spot gold prices. Cost savings are coming from headcount reductions, supply chain reviews and attempted renegotiation of key contract terms, reduction of sustaining capital costs, and trimming of exploration budgets. Miners have been awarded by cost cutting effort, resulting in an outperformance relative to gold prices. Although a secondary factor in driving gold prices, we believe that the move lower of global cost curve indicates declining support level for gold prices. Currently gold is still trading at 30% premium to C1 marginal cost or around 15% premium to total cash cost.

Figure 1: India gold imports (DB estimates)



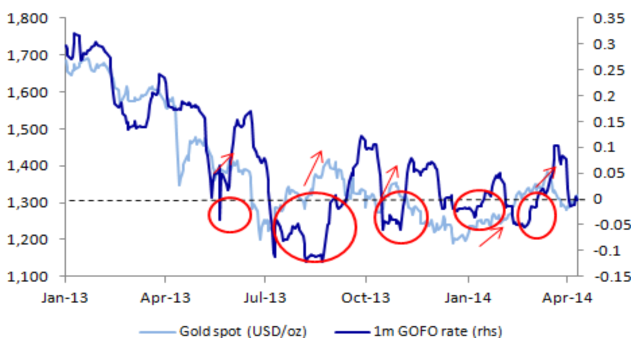
Sources: Deutsche Bank, Bloomberg Finance LP, Haver

Figure 2: India gold premium vs gold price in rupee



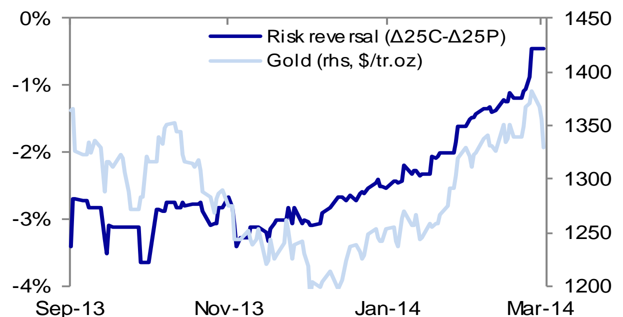
Sources: CFTC, Deutsche Bank, Bloomberg Finance LP

Figure 3: GOFO rate vs gold prices



Sources: Deutsche Bank, Bloomberg Finance LP

Figure 4: Gold risk reversal & price



Sources: Deutsche Bank, Bloomberg Finance LP

Industrial Metals

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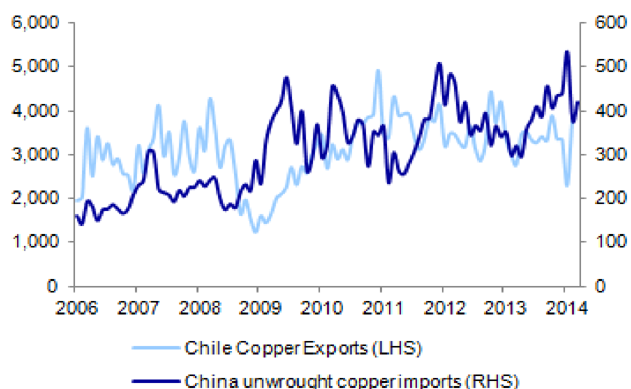
Despite weaker total import data, China's imports of copper and iron ore continued to surge in March. Copper shipments rose 31.4% on year to 420Kt. Iron ore imports rose 15% from a year earlier to 74 million metric tons. These trends are consistent with strong Chile copper export and Port Hedland iron ore shipment in March.

In copper, we note that SHFE copper inventory has declined for a third consecutive week, corresponding to an improvement in physical copper premium. Industry sources suggest some copper shipments in March are also related to term cargos. Meanwhile, we are likely to see an increase in copper export data (to be released later this month) after some Chinese smelters moved refined copper into bonded warehouses.

In iron ore, weather related disruptions in Australia have been limited, leading to record Port Hedland iron ore shipments. China's mini stimulus measures (railway investment) and a lift of 'emergency measures' in energy intensive sectors (due to lower demand for heating in spring) could be supportive. We note that iron ore port inventory and steel stocks have been falling but remain elevated.

Figure 1: Chile copper export vs China unwrought copper import (Kt)

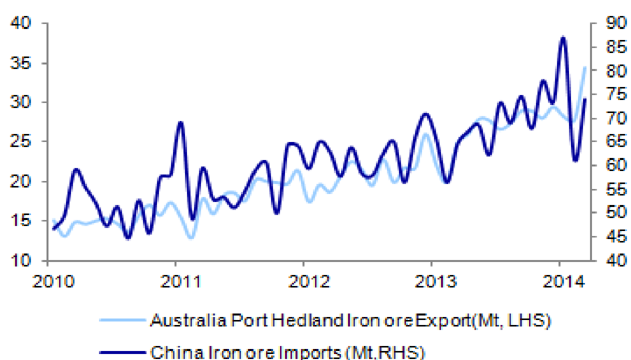


Sources: Deutsche Bank, Bloomberg Finance LP

Figure 2: Shanghai copper inventory (Kt)

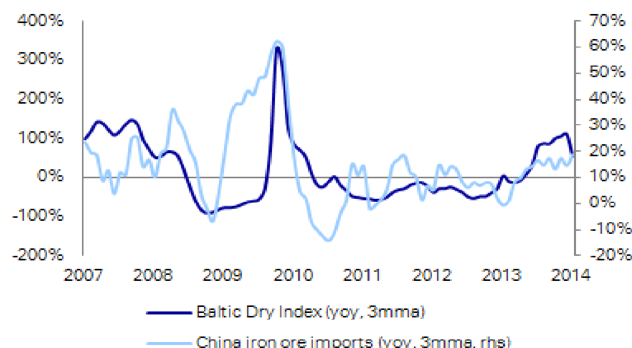
Sources: Deutsche Bank, Bloomberg Finance LP

Figure 3: Port Hedland iron ore export vs China iron ore import (Mt)



Sources: Deutsche Bank, Bloomberg Finance LP

Figure 4: China iron ore import yoy vs dry freight rate yoy



Sources: Deutsche Bank, Bloomberg Finance LP

Chartbook Overview

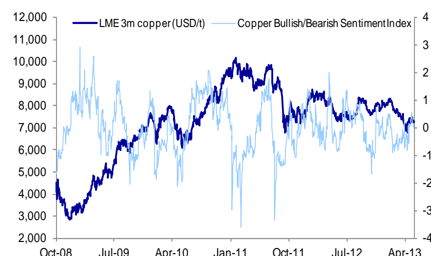
In the following sections, we examine various techniques to assess market positioning and sentiment across commodity markets and assess how these are affecting spot, forward curve and volatility trends across commodity markets.

Like FX, positioning and sentiment can prove to be important determinants of short term movements in commodity prices. For example, sentiment will tend to colour how the market interprets incoming information, while the positioning of traders and investors is important in determining how sensitive commodity prices will be to particular economic and financial developments.

For instance, a commodity price is far less likely to rally in response to positive fundamental news if market participants are already significant long the commodity. In addition, much of the apparent short-run 'randomness' in commodity prices, or those movements in prices that seemingly defy fundamental developments, can often be attributed to position adjustment. Positioning information also helps to shed light on whether movements in commodities have been driven by real money, speculative or commercial flows.

By combining sentiment indicators such as the forward curve time spread, risk reversals and the relative strength index we aim to gauge how bullish or bearish market sentiment is towards a particular commodity market. For each sub-indicator we take its 3-month rolling Z-score and then average the Z-scores to yield a combined sentiment indicator. In some sense the bullish-bearish sentiment indicator can be used as a short term indicator for possible turning points when commodities have moved into oversold or overbought territory. Figure 1 examines sentiment for the copper market.

Figure 1: The DB Bullish-Bearish Sentiment Indicator



Source: Deutsche Bank

Positioning & Sentiment Monitors

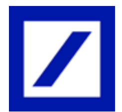
IMM Weekly CFTC Commitment of Traders report: To the extent that the activity of non-commercial payers (i.e. traders) on the IMM is consistent with broader speculative activity and positioning in the commodities markets, the weekly commitment report is a useful guide to short-term market positioning. We believe extremes of speculation positions should be regarded with caution as they can often be indicative of a commodity that has become overbought or oversold and that a turning point is near.

Relative Strength Index: The RSI measures the velocity of a security's price movement to identify overbought and oversold conditions. Typically when the RSI falls below a value of 30 it indicates an oversold position. A buy signal is usually triggered when the indicator crosses 30 from below. Similarly, an RSI value greater than 70 indicates an overbought condition. A sell signal is usually triggered when the indicator crosses 70 from above.

Open Interest: OI measures the total number of option and futures contracts that have not been closed, liquidated or delivered. As a result, open interest can provide important information about the liquidity of a particular market and the potential for gap risk is environments where liquidity is poor.

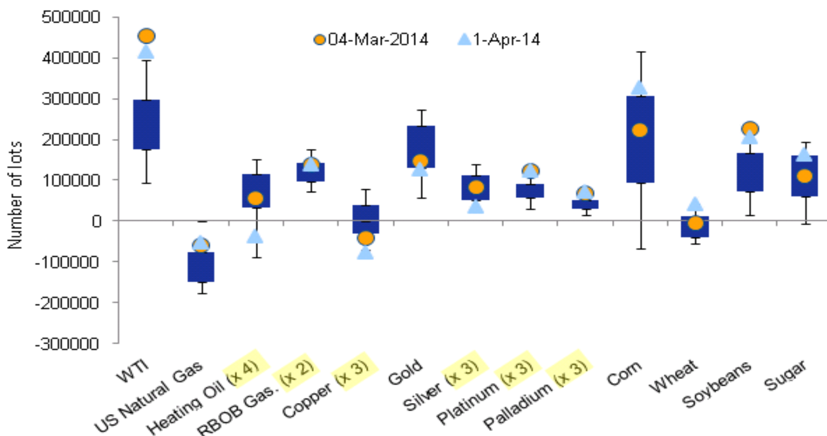
Commodity Spot, Forward Curve & Volatility Tracker

Like the positioning & sentiment monitor section, we also assess movements in spot, curve and volatility. Such movements, at least over the medium term, are typically driven by physical fundamentals and inventory to consumption levels. In markets where inventories are rising and market precariousness is falling, this tends to signal bearish price conditions, forward curves moving into contango and volatility subsiding. Conversely when market scarcity is rising, this typically triggers higher prices, backwardation and rising volatility.



Positioning, Sentiment & Liquidity Monitor

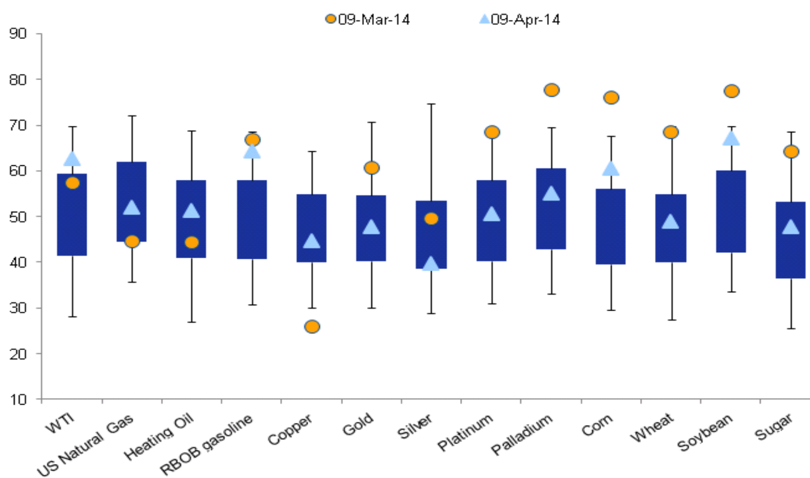
Figure 1: CFTC net non-commercial positioning



Sources: CFTC, Deutsche Bank (Data refers to the last 5 years)

CFTC positioning reveals that the speculative community has maintained net length in WTI at aggressive levels. Meanwhile, the net short position in copper is at extreme levels. The speculative community is rebuilding net length in parts of the precious metals and agriculture sectors.

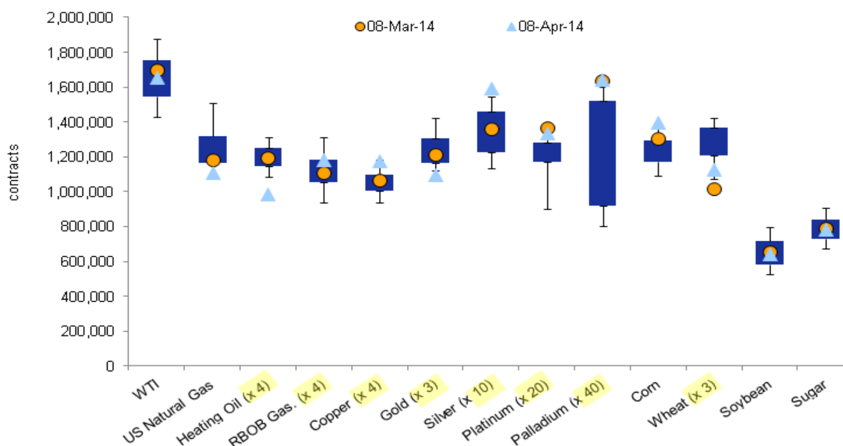
Figure 2: Relative strength index



Sources: Bloomberg Finance LP, Deutsche Bank (Data refers to the last 2 years)

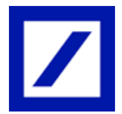
RSI readings for most of the commodities remains range bound in the current week as compared to the previous month. However, it is worth noting that RSI values for soybean and RBOB gasoline are moving towards overbought territory.

Figure 3: Aggregate open interest



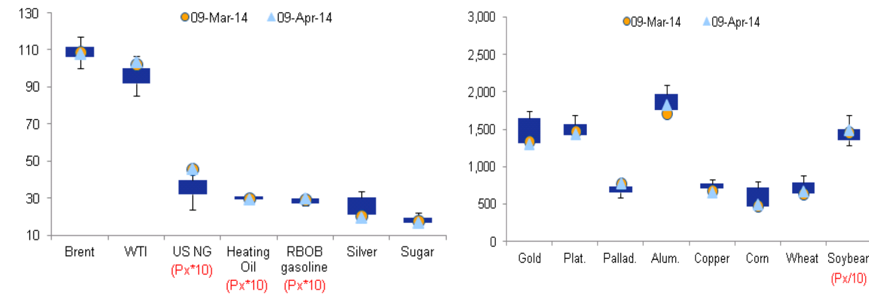
Sources: Bloomberg Finance LP, Deutsche Bank (Data refers to the last 2 years)

Aggregate open interest for silver, palladium, copper and corn is at its peak close to or above the 95th percentile level. Among the other commodities, aggregate open interest for US natural gas, heating oil, gold, wheat and sugar is below the median of the 2-year range. Aggregate OI for heating oil and gold is at extreme low levels below the 5th percentile level.



Commodity Spot, Forward Curve & Volatility

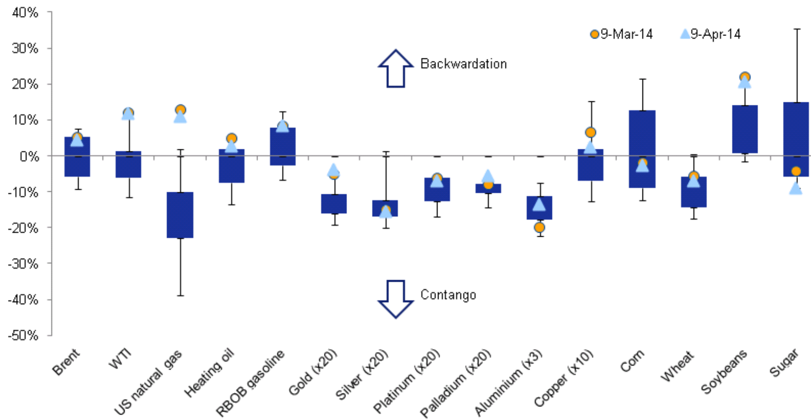
Figure 1: Spot



Sources: Bloomberg Finance LP, Deutsche Bank
Two-year historical range; body represents 25th to 75th percentiles, whiskers represent 5th and 95th percentiles. US NG, Heating Oil and RBOB gasoline prices have been multiplied by 10 and Soybean price divided by 10

The majority of commodities are trading below the median of the two year range. WTI, US natural gas, RBOB gasoline, palladium and soybeans are the only commodities trading above the median level. Among these, palladium is the best performing commodity trading above the 95th percentile level. Meanwhile, copper is the weakest performer trading below the 5th percentile level.

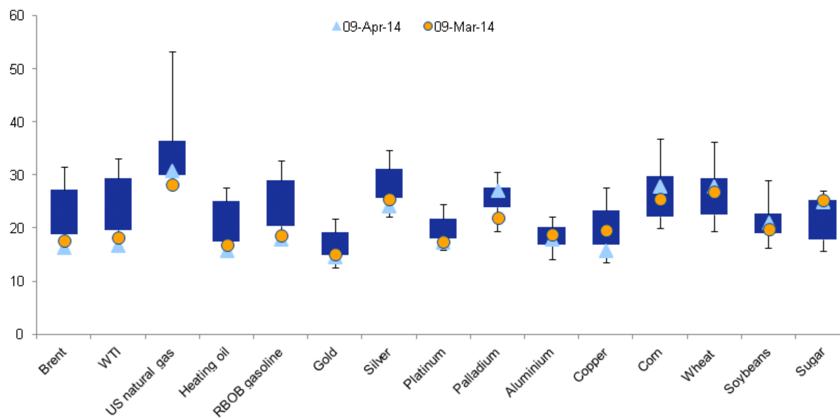
Figure 2: Forward curve (1st to 13th month)



Sources: Bloomberg Finance LP, Deutsche Bank
Five-year historical range; body represents 25th to 75th percentiles, whiskers represent 5th and 95th percentiles.

Backwardation in US natural gas, WTI and soybeans is at extreme levels above the 95th percentile level. Meanwhile, backwardation in the rest of the energy complex and copper has been surrendered to a large extent. Contango in gold and palladium is weak, whereas contango in sugar is at extreme levels, below the 5th percentile.

Figure 3: Volatility: 3M Implied



Sources: Bloomberg Finance LP, Deutsche Bank
Two-year historical range; body represents 25th to 75th percentiles, whiskers represent 5th and 95th percentiles.

Implied volatility levels in the agriculture sector and palladium are above the median of the two year historical period. Meanwhile, implied vol in the rest of the sector is below the median level. This is more evident in WTI, Brent and heating oil where implied vol is at low levels below the 5th percentile.

Commodity Price Forecasts

Energy Commodities Price Forecasts

USD	Q1 14	Q2 14	Q3 14	Q4 14	2014	Q1 15	Q2 15	Q3 15	Q4 15	2015	2016	2017
WTI (bbl)	98.57	98.00	96.00	94.00	96.64	92.00	90.00	88.00	87.00	89.25	85.00	95.00
% Change from previous forecast		*15.3%*	*12.9%*	*4.4%*	*8.9%*					*5.0%*	*6.3%*	*0.0%*
Brent (bbl)	107.87	107.00	106.00	105.00	106.47	104.00	103.00	101.00	100.00	102.00	98.00	105.00
% Change from previous forecast		*12.6%*	*11.6%*	*5.0%*	*9.2%*					*2.0%*	*3.2%*	*0.0%*
RBOB gasoline (g)	2.78	2.90	2.80	2.60	2.77	2.50	2.70	2.60	2.40	2.55	2.45	2.75
% Change from previous forecast		*16.0%*	*12.0%*	*0.0%*	*8.6%*					*-1.9%*	*-2.0%*	*0.0%*
Heating oil (g)	3.01	2.90	2.90	2.90	2.93	2.90	2.80	2.80	2.80	2.83	2.70	2.85
% Change from previous forecast		*13.7%*	*13.7%*	*7.4%*	*11.6%*					*4.6%*	*5.9%*	*0.0%*
IPE gasoil (t)	912.85	903.00	903.00	901.00	904.96	894.00	886.00	879.00	875.00	883.50	858.00	885.00
% Change from previous forecast		*14.3%*	*14.3%*	*7.9%*	*11.4%*					*4.6%*	*7.3%*	*0.0%*
Singapore Jet (bbl)	121.62	119.00	119.00	118.00	119.41	117.00	117.00	115.00	115.00	116.00	113.00	120.00
% Change from previous forecast		*13.3%*	*13.3%*	*7.3%*	*11.1%*					*0.9%*	*7.6%*	*0.0%*
US Natural Gas (mmBtu)	4.73	4.35	4.35	4.75	4.54	4.90	4.45	4.35	4.55	4.56	4.75	4.90
% Change from previous forecast		*4.8%*	*3.6%*	*9.2%*	*6.9%*					*1.4%*	*0.0%*	*3.2%*
Thermal Coal - Japanese Guide Price (JFY)	95.00	80.00	80.00	80.00	83.75	80.00	83.00	83.00	83.00	82.25	89.18	91.23
% Change from previous forecast		*-8.0%*	*-8.0%*	*-8.0%*	*-8.2%*					*-6.7%*	*-1.0%*	*-2.2%*
API4 (Richard's Bay) FOB (t)	76.62	78.00	78.00	80.00	78.16	80.00	78.00	79.00	80.00	79.25	82.00	84.98
% Chg from previous forecast		*-2.5%*	*-6.0%*	*-8.0%*	*-4.1%*					*-2.2%*	*-1.1%*	*-1.1%*
Newcastle FOB (t)	77.82	79.00	79.00	81.00	79.21	82.00	80.00	81.00	82.00	81.25	85.00	87.98
% Chg from previous forecast		*-6.0%*	*-9.2%*	*-11.0%*	*-7.4%*					*-4.4%*	*-2.2%*	*-2.2%*
Uranium (U3O8) (lb) [term]	50	52	55	55	53	57	57	57	57	57	59	61
% Change from previous forecast		*-5.5%*	*0.0%*	*0.0%*	*-1.4%*					*9.5%*	*9.1%*	*8.9%*

Source: Deutsche Bank, Figures are period averages

Precious Metals Price Forecasts

USD/oz	Q1 14	Q2 14	Q3 14	Q4 14	2014	Q1 15	Q2 15	Q3 15	Q4 15	2015	2016	2017
Gold	1292	1300	1250	1200	1261	1175	1175	1150	1150	1163	1150	1125
% Chg from previous forecast		*13.0%*	*11.1%*	*9.1%*	*10.5%*					*5.7%*	*7.0%*	*7.1%*
Silver	20	21	20	19	20	19	19	19	19	19	19	19
% Chg from previous forecast		*7.9%*	*6.4%*	*3.8%*	*5.5%*					*1.6%*	*3.3%*	*3.9%*
Platinum	1429	1525	1480	1520	1489	1550	1600	1600	1650	1600	1650	1750
% Chg from previous forecast		*5.2%*	*0.0%*	*0.0%*	*0.1%*					*0.0%*	*0.0%*	*0.0%*
Palladium	745	780	760	770	764	795	805	840	855	824	900	1000
% Chg from previous forecast		*4.0%*	*0.0%*	*0.0%*	*0.0%*					*-3.1%*	*0.0%*	*0.0%*
Rhodium	1069	1085	1000	1050	1051	1100	1200	1300	1400	1250	1400	1600
% Chg from previous forecast		*14.2%*	*0.0%*	*0.0%*	*5.1%*					*-10.7%*	*0.0%*	*0.0%*

Source: Deutsche Bank, Figures are period averages

Industrial Metals Price Forecasts

Cash price	Q1 14	Q2 14	Q3 14	Q4 14	2014	Q1 15	Q2 15	Q3 15	Q4 15	2015	2016	2017
Aluminium												
USc/lb	79.5	79.4	81.7	83.9	81.1	0.0	0.0	0.0	0.0	86.2	99.8	108.9
USD/t	1753	1750	1800	1850	1788	1850	1900	1900	1950	1900	2200	2400
% Chg from previous forecast		*-2.8%*	*0.0%*	*-2.6%*	*-1.3%*					*-2.6%*	*0.0%*	*0.0%*
Copper												
USc/lb	317.9	299.5	308.5	304.0	307.5	0.0	0.0	0.0	0.0	301.7	294.9	326.7
USD/t	7007	6600	6800	6700	6777	6650	6750	6650	6550	6650	6500	7200
% Chg from previous forecast		*-7.0%*	*-2.9%*	*-1.5%*	*-4.2%*					*-2.2%*	*-3.0%*	*0.0%*
Lead												
USc/lb	96.4	90.7	95.3	102.1	96.1	0.0	0.0	0.0	0.0	104.4	105.5	106.6
USD/t	2125	2000	2100	2250	2119	2300	2300	2250	2350	2300	2325	2350
% Chg from previous forecast		*-4.8%*	*-4.5%*	*0.0%*	*-3.1%*					*0.0%*	*0.0%*	*0.0%*
Nickel												
USc/lb	666.2	680.6	703.3	726.0	694.0	0.0	0.0	0.0	0.0	771.3	726.0	748.6
USD/t	14684	15000	15500	16000	15296	16500	17000	17000	17500	17000	16000	16500
% Chg from previous forecast		*0.0%*	*6.9%*	*6.7%*	*2.0%*					*11.5%*	*0.0%*	*0.0%*
Tin												
USc/lb	1025.2	1043.6	1043.6	1066.2	1044.6	0.0	0.0	0.0	0.0	1057.2	994.8	932.4
USD/t	22596	23000	23000	23500	23024	23300	23300	23300	23300	23300	21925	20550
% Chg from previous forecast		*4.5%*	*4.5%*	*6.8%*	*3.5%*					*0.0%*	*0.0%*	*0.0%*
Zinc												
USc/lb	91.9	90.7	93.0	95.3	92.7	0.0	0.0	0.0	0.0	105.3	108.4	111.6
USD/t	2026	2000	2050	2100	2044	2220	2290	2370	2400	2320	2390	2460
% Chg from previous forecast		*0.0%*	*0.0%*	*0.0%*	*-0.3%*					*0.0%*	*0.0%*	*0.0%*

Source: Deutsche Bank, Figures are period averages

Bulk Commodities Price Forecasts

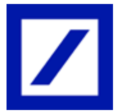
USD	Q1 14	Q2 14	Q3 14	Q4 14	2014	Q1 15	Q2 15	Q3 15	Q4 15	2015	2016	2017
Iron Ore Spot Landed Fines Price in China CIF (t)	118.24	115.00	110.00	105.00	112.06	110.00	105.00	95.00	105.00	103.75	102.00	100.00
% Chg from previous forecast		*-4.2%*	*0.0%*	*0.0%*	*-3.6%*					*-1.2%*	*0.0%*	*0.0%*
Hard Coking Coal JFY (t)	143.00	120.00	130.00	145.00	134.50	150.00	145.00	145.00	160.00	150.00	165.00	170.00
% Chg from previous forecast		*-20.0%*	*-10.3%*	*-6.5%*	*-9.3%*					*-9.1%*	*0.0%*	*0.0%*
Low-volatile PCI JFY (t)	118.00	95.00	105.00	120.00	109.50	125.00	120.00	120.00	135.00	125.00	135.00	140.00
% Chg from previous forecast		*-25.3%*	*-18.2%*	*-7.3%*	*-13.4%*					*-5.5%*	*-0.9%*	*0.6%*

Source: DB Global Markets Research

Minor Metals Price Forecasts

USD	Q1 14	Q2 14	Q3 14	Q4 14	2014	Q1 15	Q2 15	Q3 15	Q4 15	2015	2016	2017
Molybdenum (lb)	10.16	9.20	9.70	10.00	9.77	0.00	0.00	0.00	0.00	10.50	12.03	13.55
% Chg from previous forecast		*0.0%*	*0.0%*	*0.0%*	*1.2%*					*0.0%*	*0.0%*	*0.0%*

Source: Deutsche Bank, Figures are period averages



Appendix 1

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