Deutsche Bank
Markets Research

The multi-asset essay

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Why commodities will recover

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Yesterday Saudi Arabia and Russia agreed to freeze oil output if other big producers join in. The muted market reaction suggests no one is holding their breath. Also this week Moody's cut the credit rating of Anglo American to junk on the back of slumping metals prices. No wonder some multi-asset investors seem to have given up on commodities. That is a foolhardy call, in our view – prices will rebound. This essay explains why and concludes with some ideas on how to play the recovery.

First we ask how low could oil realistically go? We examine the marginal cost of production and explain why oil could hit this level but probably won't. There are many reasons for this but the main one is that it would likely result in so much capital expenditure being cut that production would slow in the very near term and result in a sharp V-shaped recovery.

Then we turn to the future for metals, which is more or less analogous to our view on oil. Given the plentiful supply in most metal markets, spot prices are about half the level at which miners can earn the 12-15 per cent return many have targeted. Deep cuts to capital expenditure since the 2012 peak and the natural resource depletion reduces supply even further. We conclude that 2016 could see a tipping point for prices although a price recovery for metals will take longer than for oil.

What are the implications for fixed income assets? Some corners of the market have suffered a torrid time during the commodity rout, particularly in America where energy and commodity companies comprise one-fifth of the high-yield market. But unlike in other industries, rising energy defaults more immediately lead to a recovery in prices thus capping default rates relatively quickly. We also show why – despite tighter spreads in Europe not necessarily implying continental firms are safer than their US counterparts – there may be pockets of value in European high yield.

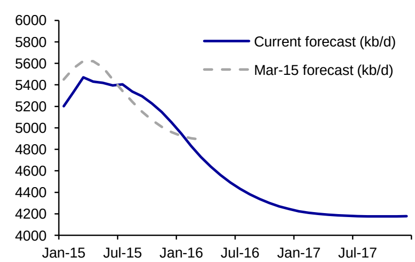
Meanwhile, we think about what a recovery in oil prices means for certain emerging markets. Referencing DB's vulnerability monitor we note that four out of the top five countries most sensitive to external economic shocks are heavily exposed to commodities. Most will remain vulnerable regardless, however one country stands as potentially attractive: Russia and by implication we are positive on the ruble too.

Finally, we look at our three favourite buy ideas for quality listed companies in the oil and commodities universe.

Let us begin with oil. In January prices touched a decade-low of $26 a barrel and have averaged in the low $30 so far this year. That means a significant volume of future oil projects identified two years ago, when oil was above $100, no longer make sense. In response, oil companies have shelved $380bn of capex, equivalent to 1.5m barrels a day of production that was meant to arrive on the market in 2021. Offshore projects account for 80 per cent of this deferred production; deepwater represents 58 per cent. Furthermore, the breakeven oil price for these postponed projects remains an average Brent price of $64 a barrel for deepwater projects, $55 for shallow water projects and $58 for onshore and oil sands projects. Way above today's prices, in other words.

So even as breakeven prices for US tight oil have fallen by 30 per cent since 2014, global breakevens have shown some degree of stickiness. That means when the market returns to a deficit, prices should rise towards the higher breakeven level. Furthermore the contraction in US production and the pace at which global demand growth chips away at excess supply mean that the surpluses we are now experiencing, however severe, should fade over the next few years (figure 1). US tight oil production, for instance, is already well below its mid-2015 peak of 5.5m barrels a day and will likely be down to 4.2m barrels by the end of this year. This bolsters our medium-term expectations for oil prices to rise towards US breakevens of $50-55 a barrel by next year.

Figure 1: US tight oil supply forecast



Source: US EIA, Deutsche Bank

None of this answers the most urgent question currently on everyone's mind: how low could oil prices go? Theory tells us the marginal cost of production should be the best guide to a price floor, as this defines the level at which production would cease. For reference sake, average marginal costs range from $7-17 a barrel in US onshore tight oil, against a global weighted average of $9. However, a certain proportion of these operating costs are likely to be on long contracts, which means that effective cash costs are even lower.

Hence if we were to target $9 a barrel as a trough, then a host of additional considerations must come in. Not least of these is the possibility that planned capex might be ratcheted so low as to engender a greater likelihood of a V-shaped recovery in prices over a three- to five-year horizon. In addition, this level of pricing must surely raise the probability of OPEC action, even taking into account very steadfast rhetoric from Saudi Arabia that insists upon non-OPEC involvement in any coordinated supply reduction. Finally, a severe degree of distress suffered by upstream oil companies, particularly high-yield issuers in the US, may negatively affect the industry's ability to respond to above-breakeven prices, thus raising the possibility of overshooting the equilibrium to the upside over a five-year horizon. The lower prices go, the greater the likelihood of a sharp and persistent rebound.

This may help to explain why oil market analysts are loathe to lower their quarterly price forecasts to the current low spot price of oil, let alone match the level of marginal costs. At the end of January, for example, the median forecast of 34 analysts for the average oil price in 2016 was $47 a barrel.

It is also worth responding to those who describe the market as besieged by a "flood of oil". We believe that a forecast 2016 average surplus of 600,000 barrels per day should be put in perspective against the 1.2m barrels per day of surplus suffered in 2015. Moreover, worries over the extent of inventory builds this year should be tempered by the knowledge that US crude oil storage is currently two-thirds full and likely to rise to three-quarters full by April if imports remains 7.7m barrels per day (itself a key uncertainty). Finally, a comparison with inventories in other markets would show that oil inventory, even at its current above-average levels, could still be regarded as reasonable. OECD commercial crude oil inventories of 1.2bn barrels together with global floating storage of 136m barrels represent 29 days of OECD demand. By comparison, current inventory in the US natural gas market represents 45 days of demand, while US coal-fired power plants hold 80 to 87 days of supply.

Therefore we argue against an overly negative view on oil prices, even though our forecasts are some tens of dollars above industry-average marginal costs. While picking a low will remain a hazardous exercise for the next 12 months, we believe that the challenges of meeting trend demand growth over the next three years will gradually come into clearer focus. That should move prices higher.

So that is oil. What about metals? The story here is analogous in parts, although despite the length of the slump we believe a recovery in prices is further out. Indeed, if prices continue in the same vein as they started 2016, this will be the sixth down year, with the Bloomberg spot base metal index down more than fifty percent since the recent peak in mid 2011. The slowdown in Chinese demand notwithstanding, the fall in metal prices is both symptomatic of the deflationary environment and a cause of deflation. It is no surprise that Chinese manufacturing purchasing prices have been in negative territory for nearly fifty months in succession. We forecast one last leg down in metals prices, but with an end of deflation finally in sight.

How do we arrive at this view? Metal markets have been either well supplied or over supplied for the past five years, a combination of slowing Chinese demand growth and a surge of mined output, as many of the long gestation projects finally started to deliver tonnes. In this environment prices should fall to the marginal cost (nominally the ninetieth percentile on the industry cost curve), forcing closures and ultimately balancing the market.

Supply has proven to be sticky, however, with miners balking at the costs and environmental liabilities of shutting an operation. Strong deflationary forces have given management teams the misconception they can beat the decline in metals prices by reducing costs, and in so doing maintain profitability. To a certain extent the miners have been victims of their own success; their ability to take out costs as a group has helped the fall in metals prices.

What have been the other deflationary forces in metals? One is the fall in energy prices, both oil and coal. In total, these inputs account for 30-40 per cent of direct and indirect costs. Another is the depreciation of currencies of commodity producing countries against the dollar with most miners having at least half of their costs in local currencies. Then there is the deflationary feedback loop, where lower prices also translate into lower input costs and royalties. The last and least understood area of deflation is the change in operational mode. In good times, mine strategies and planning are focused on revenue maximisation; in bad times, the approach changes to margin protection and cost cutting. Actually, miners have an additional lever to pull. They can mine higher grades, which equates to shifting less dirt for more metal. This is fine in the short-run, but compromises the architecture of a mine, making some reserves less economic to extract later.

Our call for a final leg down in metals prices is based on weaker-than-expected oil prices and the potential depreciation of the Chinese renminbi. Metals currently are factoring in oil at $40 a barrel – not today's prices of low $30s. Furthermore, a weaker Chinese currency is likely to drag down commodity currencies even further. But that is likely to be the end of this deflationary cycle. Management teams may be able to take out more costs, but we are at the point where these cuts would be unsustainable, ultimately leading to lower output in the future.

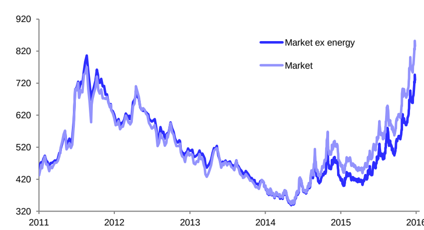
Why is that? Because current spot prices are 40 to 50 per cent below so-called incentive prices, which are the prices required to earn a 12-15 per cent rate of return on a project. As a result, capital spending on new capacity has simply dried up, with industry capex down over 60 per cent versus the peak in 2012. Ore bodies are depleting assets and current capex levels are not sufficient to sustain current output for more than two to three years. In copper, for example, the world needs two new large-scale mines every year just to offset the reserve depletion.

While oil prices are low, current spot prices for metals are well below the marginal cost of most producers. As an extreme example, nearly two-thirds of the nickel industry is under water. That has placed mining company balance sheets under intense pressure. We estimate the net debt of the largest companies will approach an uncomfortable 3.5 times ebitda by the end of the year. This could force an industry tipping point and, indeed, supply curtailments have already started to gather momentum. In aggregate, around five per cent of the industry's capacity is in the process of closing. We need at least ten per cent of the capacity to be shuttered to reach critical mass. Given the stresses in the industry, we think this will occur during 2016 and will stabilise prices. It may take a little longer for capital constraints to become apparent, but as they do, metal price deflation will quickly turn to inflation.

That concludes why we are positive about the future prices of oil and metals. Now to address some investment implications for multi-asset investors. Looking at fixed income first, US high-yield commercial and industrial loan standards have begun to tighten, particularly over the last two quarters, something that history shows almost always coincides with rising default rates. Concurrently, high-yield energy spreads have hit about 1,900 basis points. And as energy companies comprise about 16 per cent of the market for high-yield debt and commodities overall about 20 per cent, high-yield market spreads have been dragged up to almost 850 basis points, about double the level 12 months ago (figure 2).

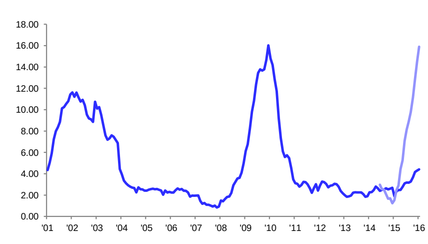
But unlike in other industries, rising energy defaults more immediately lead to a recovery in prices thus capping default rates relatively quickly. Higher prices boost profitability. Current oil prices have meant that the industry's net debt now approaches about 3.5 times ebitda with default rates at 15 per cent (figure 3). That compares with just one times ebita three to four years ago. Therefore the question is what our expected recovery in oil prices does to defaults. The last time oil was at $60 net debt to ebitda was about two times. That is still elevated relative to history but surely lenders would become calmer if the trend was downward. Likewise, any policy action to calm financial markets would also be taken positively. Of course, much depends on the external environment and the fickle politics of global oil. Bears on energy credit reckon the point of no return has been crossed and recall when telecoms companies were squeezed by the downturn in 2002-2003. Then default rates stayed above 15

Figure 2: US high-yield spreads



Source: Deutsche Bank, Bloomberg Finance LP

Figure 3: US high-yield default rates



Source: Deutsche Bank, Datastream, Bloomberg Finance LP per cent for two years and hit a peak of 35 per cent. But it is hard to see that happening to energy high yield if oil prices double from here, especially given the capacity already cut.

Meanwhile some credit investors worry about contagion spreading to Europe. But the latest European data shows a small net loosening in overall lending standards. Default rates on high-yield debt have ticked up but are still below the US. Another indicator is the dispersion of debt from the average. Take single-B rated issuers, for example. In Europe, one-third of this outstanding debt trades within 100 basis points of the average spread of 778 basis points. In the US, just 12 per cent trade in this range around an average of about 900 basis points. This relative bunching in Europe is due to the higher proportion of American debt that trades at spreads wider than 2,000 basis points.

Of course, this does not prove that European companies are in better shape than those in the US. Rather, it could be evidence of a lag in the high-yield default cycle. Assuming a duration of 12 months between the movement of lending standards and defaults, the US appears to be late in its tightening cycle. That implies it could be another 12 months until the peak in defaults. Europe, in turn, would follow behind that, the bears argue.

Perhaps – provided you believe US high yield is about to drop off a cliff. And even if they do, current European spreads still look attractive on a long-term basis. Indeed, they now imply five-year cumulative defaults in excess of the worst experiences through history even assuming recoveries of around 20 per cent. So whilst we accept that spreads will likely go materially wider if we are headed into a crisis European credit appears to have already priced in very elevated levels of default.

What would a recovery in oil prices mean for emerging market exposures? The high reliance on energy and commodities of many large developing economies has left government budgets in various states of disrepair. Falling currencies have been both a result and a cause of further pain. Capital is flowing out of the region at the fastest clip since the financial crisis (figure 4). Deutsche Bank analysts have created a vulnerability monitor to assess the susceptibility of emerging market countries to economic crises or a period of painful adjustment should external conditions worsen. Of the top five most vulnerable countries, four are either net energy exporters, or heavily reliant on energy: Venezuela, Colombia, Argentina, Brazil (Ukraine is the exception).

Figure 4: Emerging market capital flight

Source: Deutsche Bank, Datastream

Realistically, these countries would remain vulnerable regardless of a moderately higher oil price. To balance Venezuela's budget, for example, requires oil closer to $200 than $100. The reality is that the fate of most emerging markets over the next year is more dependent on the paths of the dollar and US interest rates than oil. One country that stands out however is Russia. Its books would balance this year at $66 a barrel and as the ruble moves almost in lockstep with crude, a bullish view on oil prices implies upside for the currency.

In fact, just a stabilisation in oil prices should be positive for the ruble as it would turn attention to improving fundamental factors. Among other positives, DB economists believe the central bank will cut interest rates by 200 basis points by year-end, compared with the broader view of a 250 basis point easing cycle. We also believe the market is too fixated on last year's four per cent contraction in economic output and expect the economy to move out of recession later in the year (thanks to Russia's lower breakeven oil price). Hence, we recommend a long ruble position against the euro rather than the dollar as dovish signals from the ECB give us greater confidence in the ruble's potential against a weakening euro.

Finally a few energy and mining stock ideas based on our call for firmer commodity prices. Of course, most companies would rally on a rapid rebound irrespective of fundamentals, especially the lower quality ones. But of the quality names in these sectors three stand out due to the scale of potential gains versus downside risks.

Our preferred stock in the European integrated space is Royal Dutch Shell (RDSa.L, 1642p, Buy). Following its acquisition of BG, Shell can drive growth from two main business lines, namely short duration deepwater oil and LNG. Synergies of about $3.5bn, with more we suspect likely, will also enhance earnings and cash flow. There is significant additional upside potential from Shell reshaping its legacy portfolio. Greater gearing to the commodity price does infer higher risk to cash flows than peers but equally greater leverage to any recovery. Our target price is 2,035p compared with the current level of 1,642p.

We also like Total (TOTF.PA, €39.35, Buy), which looks as well positioned as any of its peers to weather the current storm. Why is that? Production rolls on while capex has peaked. We expect an additional 700,000 barrels of oil a day of new production with capex falling from a 2014 peak of about $27bn to nearer $17bn by 2017. Add to this cost savings of $3bn and a new chief executive focusing on cash and performance. We have a target price of €49 versus the current level of €39.35.

In mining, the standout stock is Rio Tinto (RIO.L, 1892p, Buy). The company's assets sit in relatively low-risk countries and while capital expenditure has been reduced by one-fifth for 2016 we believe this will not impact production growth. Furthermore, the new dividend policy scraps progressive payouts for those based on earnings. That should promote management discipline during any future upswing while allowing flexibility in a downturn. Add to that a balance sheet that is conservatively geared at about 20 per cent. We calculate a price target of £33.00, well above the current market price of £18.92.

Valuation and risks

Royal Dutch Shell

We value Shell using a range of metrics, not least dividend yield, free cash yield, NAV and P/E. We believe that as confidence in the success of its offer for BG emerges and the strength of its duration cash flow comes through the shares will trade at a yield discount to the sector. We target 5.75% yield, in line with the sector average and suggestive of a 2220p PT. This is supported by our DCF model which assuming a WACC of 8.5% and 1% terminal growth in cash flow suggests fair valuation of 2245p and an asset model which targeting a 20% discount at $70/bbl real oil sees fair valuation at 2150p.

Risks to the downside include transaction risk around the recommended offer for BG Group, delay to project start-ups, not least Gorgon LNG and Kashagan oil and difficult M&A markets at a time when the company will be targeting material ($30bn) of divestments.

Total

Our Total target price assumes that the stock should trade in line with our objective for its slower growing but more financially solid peer, Royal Dutch Shell and an effective 10% premium to the yield objective at BP (5.5%). We target a 5.25% dividend yield (c5.75% on the basis of the scrip) the equivalent of a c20% discount to asset value at our $75/bbl long term oil ambition.

Risks include general industry risks such as oil and gas price volatility, weather, equipment failure and loss of assets and life in such failures. Total specific downside risks highlighted of late include Total's exposure to unrest in Nigeria (10% of production), fiscal risks (most notably in Venezuela) and project delays not least australian LNG and Canadian oil sands.

Rio Tinto

We value Rio Tinto using discounted cash flow analysis of each of its assets. Our target is in line with our valuation using life of mine cashflows (9.3% WACC, CoE 10.5%, CoD 3.6%, RFR 3.0%, ERP 6%, beta 1.25), as the rapidly improving balance sheet re-opens significant growth opportunities. Our target price is set at 1.12x our npv in line with sector performance.

Key risks to our view include movements in iron ore, copper, coal and aluminium prices away from those that we currently forecast. Earnings for the group are strongly biased to iron ore and copper (c. 75% of operating earnings) therefore production levels, prices for those commodities are an important consideration. Specifically, for the aluminium division risks include reduced Chinese demand for bauxite, alumina and aluminium, delays to expansion projects and weakness in prices.

Appendix 1

Important Disclosures

Additional information available upon request

Disclosure checklist

Company	Ticker	Recent price*	Disclosure
Royal Dutch Shell plc	RDSa.L	1,642.00 (GBp) 17 Feb 16	6,8,9
Rio Tinto	RIO.L	1,949.04 (GBp) 17 Feb 16	1,6,7,9,14,15
Total SA	TOTF.PA	39.34 (EUR) 17 Feb 16	1,6,7,9,14,15

*Prices are current as of the end of the previous trading session unless otherwise indicated and are sourced from local exchanges via Reuters, Bloomberg and other vendors . Other information is sourced from Deutsche Bank, subject companies, and other sources. For disclosures pertaining to recommendations or estimates made on securities other than the primary subject of this research, please see the most recently published company report or visit our global disclosure look-up page on our website at http://gm.db.com/ger/disclosure/DisclosureDirectory.eqsr.

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Disclosures marked with an asterisk may also be required by at least one jurisdiction in addition to the United States. See Important Disclosures Required by Non-US Regulators and Explanatory Notes.

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7. Deutsche Bank and/or its affiliate(s) has received compensation from this company for the provision of investment banking or financial advisory services within the past year.
8. Deutsche Bank and/or its affiliate(s) expects to receive, or intends to seek, compensation for investment banking services from this company in the next three months.
14. Deutsche Bank and/or its affiliate(s) has received non-investment banking related compensation from this company within the past year.
15. This company has been a client of Deutsche Bank Securities Inc. within the past year, during which time it received non-investment banking securities-related services.

Important Disclosures Required by Non-U.S. Regulators

Please also refer to disclosures in the Important Disclosures Required by US Regulators and the Explanatory Notes.

1. Within the past year, Deutsche Bank and/or its affiliate(s) has managed or co-managed a public or private offering for this company, for which it received fees.
6. Deutsche Bank and/or its affiliate(s) owns one percent or more of any class of common equity securities of this company calculated under computational methods required by US law.
7. Deutsche Bank and/or its affiliate(s) has received compensation from this company for the provision of investment banking or financial advisory services within the past year.
9. Deutsche Bank and/or its affiliate(s) owns one percent or more of any class of common equity securities of this company calculated under computational methods required by India law.

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Analyst Certification

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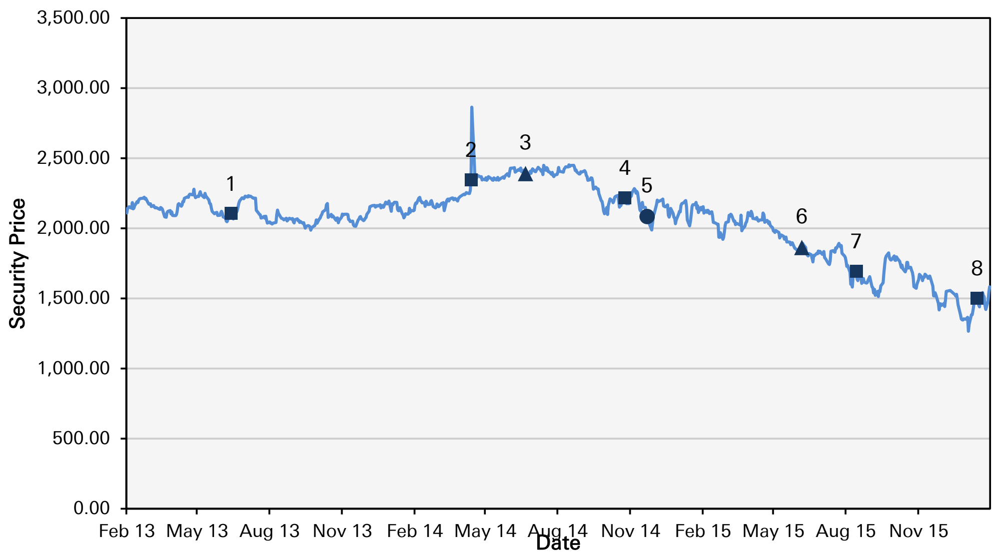
Historical recommendations and target price: Royal Dutch Shell plc (RDSa.L)
(as of 2/17/2016)



Previous Recommendations

Strong Buy
Buy
Market Perform
Underperform
Not Rated
Suspended Rating

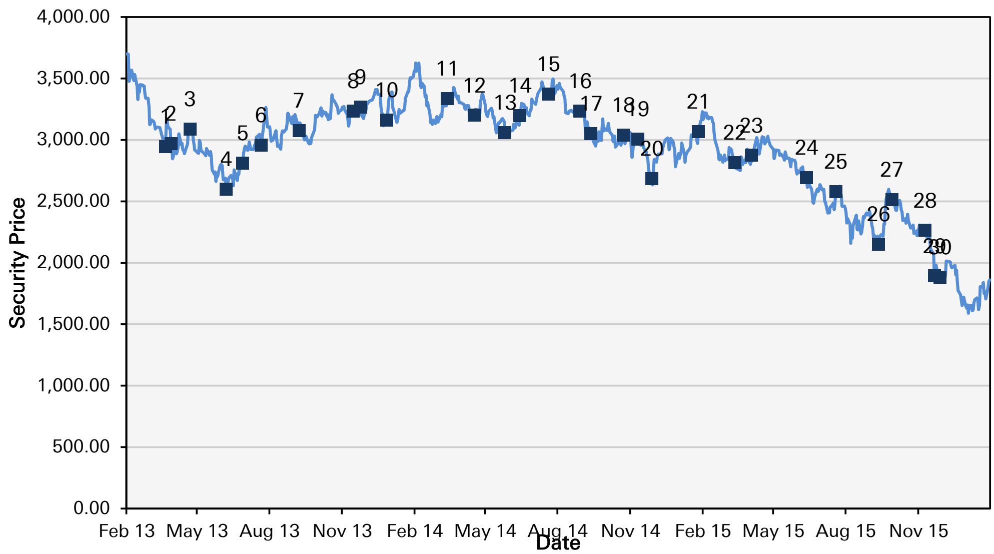
Current Recommendations

Buy
Hold
Sell
Not Rated
Suspended Rating

*New Recommendation Structure as of September 9,2002

1.	01/07/2013:	Hold, Target Price Change GBP2,400.00	5.	10/12/2014:	Downgrade to Hold, Target Price Change GBP2,425.00
2.	01/05/2014:	Hold, Target Price Change GBP2,550.00	6.	24/06/2015:	Upgrade to Buy, GBP2,425.00
3.	09/07/2014:	Upgrade to Buy, Target Price Change GBP2,850.00	7.	01/09/2015:	Buy, Target Price Change GBP2,200.00
4.	12/11/2014:	Buy, Target Price Change GBP2,600.00	8.	01/02/2016:	Buy, Target Price Change GBP2,035.00

Historical recommendations and target price: Rio Tinto (RIO.L)
(as of 2/17/2016)



Previous Recommendations

Strong Buy
Buy
Market Perform
Underperform
Not Rated
Suspended Rating

Current Recommendations

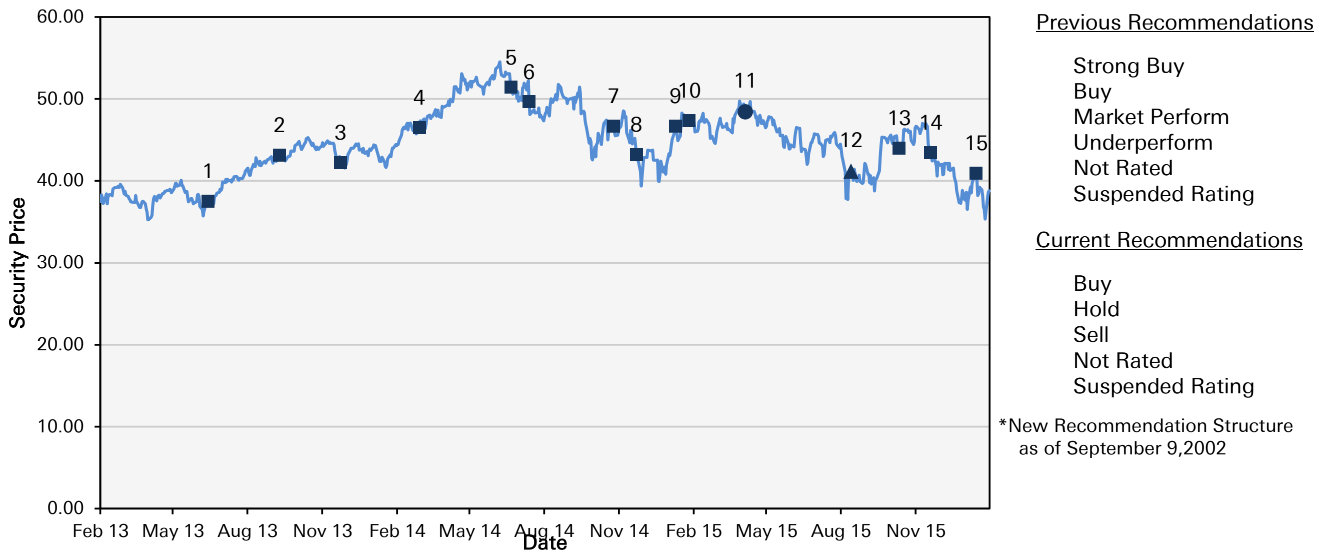
Buy
Hold
Sell
Not Rated
Suspended Rating

*New Recommendation Structure as of September 9,2002

1.	09/04/2013:	Buy, Target Price Change GBP4,521.00	16.	16/09/2014:	Buy, Target Price Change GBP4,680.00
2.	16/04/2013:	Buy, Target Price Change GBP4,489.00	17.	30/09/2014:	Buy, Target Price Change GBP4,640.00
3.	10/05/2013:	Buy, Target Price Change GBP4,467.00	18.	10/11/2014:	Buy, Target Price Change GBP4,658.00
4.	25/06/2013:	Buy, Target Price Change GBP4,490.00	19.	28/11/2014:	Buy, Target Price Change GBP4,660.00
5.	16/07/2013:	Buy, Target Price Change GBP4,280.00	20.	16/12/2014:	Buy, Target Price Change GBP4,333.00
6.	08/08/2013:	Buy, Target Price Change GBP4,300.00	21.	13/02/2015:	Buy, Target Price Change GBP4,400.00
7.	25/09/2013:	Buy, Target Price Change GBP4,570.00	22.	31/03/2015:	Buy, Target Price Change GBP4,250.00
8.	03/12/2013:	Buy, Target Price Change GBP4,645.00	23.	21/04/2015:	Buy, Target Price Change GBP4,200.00
9.	12/12/2013:	Buy, Target Price Change GBP4,685.00	24.	30/06/2015:	Buy, Target Price Change GBP3,600.00
10.	14/01/2014:	Buy, Target Price Change GBP4,641.00	25.	06/08/2015:	Buy, Target Price Change GBP3,800.00
11.	01/04/2014:	Buy, Target Price Change GBP4,640.00	26.	29/09/2015:	Buy, Target Price Change GBP3,358.00
12.	05/05/2014:	Buy, Target Price Change GBP4,690.00	27.	16/10/2015:	Buy, Target Price Change GBP3,400.00
13.	13/06/2014:	Buy, Target Price Change GBP4,580.00	28.	27/11/2015:	Buy, Target Price Change GBP3,450.00
14.	02/07/2014:	Buy, Target Price Change GBP4,550.00	29.	09/12/2015:	Buy, Target Price Change GBP3,500.00
15.	07/08/2014:	Buy, Target Price Change GBP4,650.00	30.	16/12/2015:	Buy, Target Price Change GBP3,300.00

Historical recommendations and target price: Total SA (TOTF.PA)

(as of 2/17/2016)



1. 01/07/2013: Buy, Target Price Change EUR42.00
2. 27/09/2013: Buy, Target Price Change EUR45.00
3. 11/12/2013: Buy, Target Price Change EUR48.00
4. 18/03/2014: Buy, Target Price Change EUR51.00
5. 09/07/2014: Buy, Target Price Change EUR57.00
6. 31/07/2014: Buy, Target Price Change EUR55.00
7. 12/11/2014: Buy, Target Price Change EUR50.00
8. 10/12/2014: Buy, Target Price Change EUR49.00
9. 27/01/2015: Buy, Target Price Change EUR47.00
10. 13/02/2015: Buy, Target Price Change EUR48.00
11. 23/04/2015: Downgrade to Hold, EUR48.00
12. 31/08/2015: Upgrade to Buy, Target Price Change EUR46.50
13. 29/10/2015: Buy, Target Price Change EUR47.00
14. 07/12/2015: Buy, Target Price Change EUR50.00
15. 01/02/2016: Buy, Target Price Change EUR49.00

Equity rating key

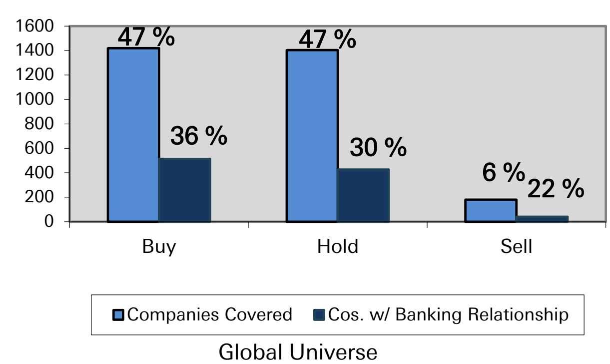
Buy: Based on a current 12- month view of total share-holder return (TSR = percentage change in share price from current price to projected target price plus pro-jected dividend yield) , we recommend that investors buy the stock.

Sell: Based on a current 12-month view of total share-holder return, we recommend that investors sell the stock

Hold: We take a neutral view on the stock 12-months out and, based on this time horizon, do not recommend either a Buy or Sell.

Newly issued research recommendations and target prices supersede previously published research.

Equity rating dispersion and banking relationships



Regulatory Disclosures

1.Important Additional Conflict Disclosures

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