Summary

Oil prices are on a slippery slope. The pain of lower prices is acute and concentrated among oil-exporting nations and energy companies. The gains are widely dispersed and will likely be felt for a long time by oil importers and global consumers.

The massive wealth transfer is set to boost developed economies to varying degrees. And it is sure to amplify economic and market divergences in the emerging world. We debated the prospects for the oil price, winners and losers, and risks and opportunities in asset markets. Our main conclusions:

- The crude crash is dramatic – but not unprecedented. Falls of similar magnitude in the past stimulated consumer spending, helping to reinvigorate global economic growth. We think crude prices are bottoming and see them modestly higher next year.
- It would only take a moderate shift in demand to restore balance to the oil market. Spare production capacity amounts to just 4% of total demand, versus around 18% in the mid-1980s, Energy Information Administration (EIA) data show.
- Soft demand and a strong US dollar have helped bring down the oil price, but ample supply is the root cause of the decline. New technologies such as hydraulic fracking unearthed plentiful supplies of US shale oil while the Middle East kept up production despite conflicts ravaging the region.
- Supply is here to stay: key producer Saudi Arabia looks determined to keep pumping oil under new leadership. Overall US supply is set to rise this year due to a backlog of wells and price hedges sheltering producers from the downturn. Declining capital spending (capex) and fewer drilling rigs in operation point to a slowdown in production growth in the second half of 2015 and beyond.
- Cheap energy is a game changer for monetary policy in oil-importing nations, especially in emerging market (EM) economies. It reduces inflation, giving some central banks room to ease – and others leeway to raise rates more gently. Low oil prices also reduce the costs of energy and food subsidies, providing fiscal relief.
- Low oil prices add to growing divergences in the developed world. The eurozone and Japan are set to keep rates near zero and have rolled out bond-buying programmes to halt disinflation. The US Federal Reserve, by contrast, is likely to look beyond oil’s disinflationary effect and start hiking interest rates in mid-2015.
- Winners in this climate should be global consumers, oil importers such as India and Japan, and the transport and retailing industries. Oil-exporting nations and companies with limited cash buffers and poor access to debt markets (think Venezuela or overleveraged US shale plays) look to be the biggest losers.
- The oil price slump is bludgeoning US high yield energy issuers. Many have been outspending their cash flow and now face a crunch as financing dries up. They are in survival mode, resorting first to capex and job cuts. Most should be able to ride it out. Yet the longer lower prices hold, the greater the financial stress.
- Valuations of global energy stocks have fallen, but selectivity is important. We favour the ‘super majors’ because of their strong balance sheets, high dividends and integrated business models. We would avoid most oil services firms for now.
Supply and demand

The crude crash affects asset prices and economies around the world. Energy generally has a modest weight in benchmark indices, yet there are standouts. Energy issuers account for around 15% of the US high yield market. See the chart below.

The economic impact is broad but not always immediately visible. Energy accounts for just 1.2% of US employment, for example, but energy booms stimulate growth in local economies such as Texas or the Canadian province of Alberta.

The size of the recent oil price slump is unusual — but not unprecedented. Similar sharp falls in the mid-1980s and during the 2008-2009 financial crisis were followed by swift rebounds, both in the oil price and in real (inflation-adjusted) global economic growth per capita. See the chart on the right.

On the demand side, cheaper oil helps consumers and businesses by lowering fuel costs. Indeed, our research suggests a consumer-led demand recovery could come to the rescue (see page 10). On the supply side, low oil prices force producers to cut output, setting the stage for a price recovery.

WEIGHING OIL’S IMPORTANCE
Energy share of markets, GDP and employment, 2015

Sources: BlackRock Investment Institute, Barclays Capital, Thomson Reuters, US Bureau of Economic Analysis and US Bureau of Labor Statistics, January 2015. Notes: the US economy share is based on GDP value-added for oil and gas extraction, mining support activities and petroleum and coal manufacturing as a share of total private GDP. The US employment share is based on oil and gas extraction, mining support services, petroleum and coal production and petrol station employment as a share of total non-farm employment. Other energy includes integrated oil companies, pipelines and others in benchmark indices.

SLUMPS AND REBOUNDS
Real and nominal brent crude price, 1975–2015


BALANCING ACT

It would take only small changes to supply or demand to restore balance to the oil market (and support prices) we believe.

Sure, the market is currently oversupplied (see page 4). Yet spare capacity (wells that can produce but sit idle) today amounts to just 4% of total global oil demand, versus around 18% of demand in the oil price downturns of 1983 and 1986, EIA data show.
Softening demand – particularly from slowing EM economies – has played a role in the oil price crash. We see this evidenced by earlier, across-the-board declines in metals and other commodities prices (see page 12). This suggests the oil price collapse is a catch-up, rather than a sign of further deterioration in the global economic outlook.

Unexpected declines in demand accounted for around 35% to 40% of the fall in oil prices between June and December 2014, the International Monetary Fund (IMF) estimates. Demand for oil may recover as lower prices encourage more consumption; US petrol sales hovered near 19-month highs in November, the most recent EIA data show.

Yet a jump in supply is the bigger factor behind today’s oil market imbalance. Advances in hydraulic fracking uncorked a plentiful supply of US shale oil and gas. Increased US production more than offset declines in Iran and Libya. (Note: marginal producers such as Libya swing in and out of the market and affect prices accordingly.) See the chart on the right.

The US accounted for 13.7% of global production in 2013, up from 9.8% in 2006. That helped it overtake Saudi Arabia as the world’s top producer of petroleum liquids (including natural gas), according to the International Energy Agency (IEA). The US production increase in 2014 was the fourth-largest by any country since 1965, according to BP and IEA data.

Result: oversupply stands at around 2% of global oil demand – the highest level since the Asia crisis of the late 1990s. See the chart above.

**SAUDI SWITCH**

Will oil producers cut supply to support prices? Saudi Arabia, the senior partner of the Organisation of the Petroleum Exporting Countries (OPEC), has often played a ‘swing role’ in stabilising prices. The country slashed production in 2009 but has kept it steady this time around. Saudi Arabia appears fine with low oil prices for now. We do not see Riyadh changing course any time soon under new leadership.

- Saudi Arabia wants to protect its market share in the face of rising global production – and is wary of acting alone. The country has painful memories of losing market share when other nations did not match production cuts.
- This strategy forces high-cost producers (think shale, oil sands and deep water) to cut supply.
- The country is the world’s largest low-cost producer – and has a $736 billion war chest of foreign exchange reserves to cushion the impact on its budget.
- Low prices keep rival Iran under pressure. The Saudis view this as a nice knock-on effect, we think.

Lower oil prices will gradually turn the screws on higher-cost producers. Their likely response? Cut capital spending, jobs and costs. US shale operators are particularly susceptible because they have relatively little capital invested and their wells run dry fast. This will eventually lead to falling production – although we think 2015 will be more about declining rates of growth than an absolute contraction.

**THE NEW SWING PRODUCERS**

Selected countries’ change in oil production since 2011

Sources: BlackRock Investment Institute and US Energy Information Administration, January 2015. Note: the bars show the change in average daily oil production based on monthly data.
A MATTER OF COST
Estimated cost base and output of oil-producing areas, 2020

Sources: BlackRock Investment Institute and Rystad Energy, January 2015. Notes: the boxes represent different oil sources. The width of each box shows the level of potential production in 2020; the height shows the breakeven range for 75% of the production from that source. Dots show the average breakeven prices. The breakeven price is the oil price that gives a zero net present value using a 10% discount rate. Numbers are based on an average of currently producing, under development and not-yet-sanctioned projects.

COST-BENEFIT ANALYSIS
North American shale operators have become the world’s new marginal producers because they are able to quickly scale up – and down. The breakeven costs of the average shale well are around $60 per barrel – way above the current spot price. This compares with just $26 per barrel for onshore Middle East oil. See the chart above. Note: averages mask a lot of differences. For example, costs for North American shale producers range from around $40 to more than $70 per barrel, according to research firm Rystad Energy.

High-cost producers should feel the pinch soon if prices stay low. Yet production of established US shale assets may take longer to slow than many expect. Consider:

- US shale producers that tapped high yield debt markets have hedged as much as half of their 2015 output: the higher the risk of the field, the greater the hedge.
- Newer horizontal wells are more productive than older vertical ones.
- Shale producers are loath to give up cash flows. Once they have spent the money on upfront costs, the marginal cost of drilling extra holes is low.

We expect US supply to increase in the near term. Yet production growth should start to taper off in the second half.

Oil bulls point to a 24% drop in the number of US oil drilling rigs from a record peak in October. See the chart below. The EIA forecasts additional declines this year but argues these are unlikely to result in a big fall in production. A backlog of wells after years of heavy drilling – three to seven months’ worth at major US shale areas – will keep oil pumping.

WELLING OVER
Number of US rigs drilling for oil, 1987–2015

Sources: BlackRock Investment Institute and Baker Hughes, January 2015.

“US shale added a spectacular amount of oil in a very short time. It was not just big; it was bigger than anybody thought.”

– Robin Batchelor
Portfolio Manager, BlackRock Natural Resources Team
HOW LOW CAN IT GO?
Oil futures have slumped since OPEC members decided in late November to keep production steady despite falling prices. Markets currently are pricing in a gentle recovery in prices to $70 per barrel by 2017 – but no return to the heady days of over $100 per barrel. See the chart on the right. Options markets suggest prices should end 2015 anywhere between $28 to $112, according to the EIA. Once markets narrow this range of outcomes, energy assets should start to reprice.

Futures markets are in ‘contango,’ meaning forward prices are higher than spot prices. This is encouraging a buildup in inventories as well as a topping up of strategic reserves in countries such as China. US crude inventories hit highs for the month of January, according to EIA. Crude stored in supertankers reached about half of the global capacity as estimated by investment bank Macquarie. Storage demand is mitigating the oil price fall for now but should cap any rebound because stored crude is bound to come back to the market.

How low could oil go? The oil price could fall below current levels of around $45, but we believe we are close to a bottom – based on past peak-to-trough declines. We expect a modest recovery next year, but think a return to $100-plus prices is far-fetched due to advances in drilling technology (barring temporary spikes caused by supply disruptions).

INNOVATION IMPACT
Hydraulic fracking has proved to be a disruptive force that puts downward pressure on product prices, much like mechanisation and computerisation brought down food and consumer prices. And fracking has only just started: adoption outside the US could have a similar impact on global oil supply.

Technological advances also have the potential to shrink oil demand. Examples are hybrid cars and lightweight aluminium trucks. These are part of a broad-based trend, as shown by a decline in energy intensity of the global economy. It took the equivalent of 1 barrel of oil to generate $1,000 of GDP growth in 2011, versus 1.3 in 1990, the latest World Bank data show.

Energy efficiency and its impact differ across the globe. Increasing urbanisation and car use should support oil demand in EM economies. China’s economy is still relatively energy intensive, requiring the equivalent of 1.4 barrels of oil per $1,000 of GDP in 2011. This suggests a recovery in Chinese growth could deliver an outsized boost to global oil demand.

“"A US-Iran deal would be a historic event after 35 years of basically hostility. But it would take some time to implement the agreement – and for Iran to ramp up production."”

– Tom Donilon
Senior Director,
BlackRock Investment Institute

GEOPOLITICAL GYRATIONS
Geopolitical risks could disturb oil markets. Consider:

› Iran and the international community aim to reach a comprehensive deal by June that would see Tehran give up its nuclear ambitions in return for a phased lifting of sanctions. We would assess the chance of a full deal at less than 50% due to opposition by hardliners in Iran. US Congress is promising more sanctions if no progress is made by March. Any deal, however, would likely put downward pressure on oil prices – even if actual Iranian production increases would take time.

› We expect Libyan oil production to be volatile as a civil war rages on, with periods of supply disruptions – and surges.

› We do not see Islamic State as a near-term threat to oil production in Iraq’s south, but cheap oil could hurt Iraq’s budget and reduce its ability to fight the militant group. Similar dynamics are at work in Nigeria.

› Russia faces ongoing economic sanctions due to its involvement in the escalating Ukraine conflict. We expect Europe to maintain current sanctions. Yet we see it stopping short of additional measures that would directly target Russia’s energy exports because these could further weaken the eurozone’s economy.
Winners and losers

The slump in oil is a story of concentrated pain (net oil-exporting nations and energy companies) – and widely dispersed gain (global consumers and oil-importing nations).

The price plunge effectively is a massive wealth transfer from producers to consumers. A back-of-the-envelope calculation shows this is a big gift. The world was expected to consume $3.4 trillion of oil in 2015 assuming a $100 oil price, according to EIA. Ergo, the 50%-plus price plunge should result in a benefit of some $1.7 trillion to global consumers and oil-importing nations.

Oil exporters have savings rates 25% higher than importers, according to research firm Evercore ISI. This means the redistribution of wealth to oil importers should result in a net rise in global consumption and economic activity – even as exporting nations suffer.

The map below outlines the economic impact of a $50 decline in the oil price on individual countries. Gains (green) are dispersed across developed nations and most of the Asia-Pacific region. Losses (purple) are concentrated in oil-producing nations in the Middle East, Africa and elsewhere.

Lower oil prices enable countries to cut or end subsidies for energy and food prices, easing budget pressures. Oil-producing nations are among the most generous, but oil importers such as Indonesia and India also used to spend big on keeping a lid on prices. See the chart above. Subsidy cuts would partly erode the benefits of cheaper oil for EM consumers.

Sources: BlackRock Investment Institute, IEA and IMF, January 2015. Note: data show oil subsidies for 2013 as a share of estimated 2014 GDP.
LOSERS AND CUSHIONS

Oil-producing countries are in for a rough time. This unfortunate bunch can be divided into three groups:

1. Countries that have accumulated large amounts of foreign assets: Saudi Arabia, United Arab Emirates and Norway. They can afford to fund budget shortfalls from these piggy banks in the short run. Energy makes up 87% of Saudi Arabia’s goods exports. Yet foreign reserves and investment income cushion the budgetary impact of cheaper oil for now. See the table below.

2. Oil producers with smaller fiscal cushions such as Mexico, Malaysia, Bahrain, Oman and Colombia. They may have to resort to combinations of fiscal austerity and increased borrowing. Many countries appear to be assuming oil prices higher than $60 to $70 per barrel in their revenue projections (they are loath to disclose details) – heralding financial stress. Most, however, can easily tap capital markets because they have low external debt positions.

3. Countries with little cash and poor access to international debt markets. They are most vulnerable to sudden reversals in capital flows and currency depreciations. Venezuela and Nigeria are prime examples. Energy makes up 97% of Venezuela’s goods exports, yet its foreign reserves are a paltry 2% of GDP. Venezuela is ranked second to last and Nigeria 41st of the 50 countries tracked by our BlackRock Sovereign Risk Index.

Many are middle- or low-income countries running expansionary budgets – often to meet social or political goals. The oil price decline throws their budget plans and funding options upside down. Forecast surpluses are swiftly turning into huge deficits. Even many of the world’s low-cost producers in the Middle East were banking on oil prices of $100-plus per barrel to balance their fiscal budgets. See the chart above.

ENERGY DEPENDENTS

Key statistics of selected energy exporters, 2015

<table>
<thead>
<tr>
<th>Country</th>
<th>Energy share of goods exports</th>
<th>External debt share of GDP</th>
<th>Reserves share of GDP</th>
<th>Short-term external debt share of GDP</th>
<th>BlackRock Sovereign Risk Index rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iraq</td>
<td>99%</td>
<td>2.9%</td>
<td>−</td>
<td>0.1%</td>
<td>−</td>
</tr>
<tr>
<td>Algeria</td>
<td>97%</td>
<td>0%</td>
<td>−</td>
<td>0%</td>
<td>−</td>
</tr>
<tr>
<td>Venezuela</td>
<td>97%</td>
<td>14.3%</td>
<td>2%</td>
<td>2.1%</td>
<td>49</td>
</tr>
<tr>
<td>Kuwait</td>
<td>94%</td>
<td>2.2%</td>
<td>20%</td>
<td>0%</td>
<td>−</td>
</tr>
<tr>
<td>Nigeria</td>
<td>88%</td>
<td>1.7%</td>
<td>6%</td>
<td>0%</td>
<td>41</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>87%</td>
<td>0%</td>
<td>102%</td>
<td>0%</td>
<td>−</td>
</tr>
<tr>
<td>Oman</td>
<td>83%</td>
<td>3%</td>
<td>21%</td>
<td>0%</td>
<td>−</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>76%</td>
<td>3.5%</td>
<td>27%</td>
<td>0.1%</td>
<td>−</td>
</tr>
<tr>
<td>Russia</td>
<td>71%</td>
<td>3.4%</td>
<td>20%</td>
<td>0.8%</td>
<td>22</td>
</tr>
<tr>
<td>Colombia</td>
<td>69%</td>
<td>10.7%</td>
<td>12%</td>
<td>0.8%</td>
<td>27</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>65%</td>
<td>4.7%</td>
<td>8%</td>
<td>0.8%</td>
<td>−</td>
</tr>
</tbody>
</table>

Sources: BlackRock Investment Institute, World Bank, Fitch, Moody’s and Bloomberg, January 2015. Notes: energy exports are exports of oil, gas, coal and other energy sources. External debt figures are gross. External debt and reserves data are based on a composite of sources. Short-term debt is less than two years. Not all countries are tracked by the BlackRock Sovereign Risk Index.
WINNERS AND DISINFLATION

Most countries will likely see lower inflation, especially net oil importers in the emerging world. Consumer price index (CPI) inflation in EM oil importers has plummeted to US levels over the past three years, tracking the growth rate in oil prices. And falling oil prices have dragged the eurozone back to the brink of deflation. See the chart on the right.

Falling oil prices are a game changer for oil-importing EM countries such as India. They drag inflation lower, allowing central banks to ease monetary conditions and stimulate their economies. China, the world’s No. 2 oil importer, is another beneficiary. Cheaper oil could boost the country’s GDP by between 0.4% and 0.7% in 2015, the IMF estimates.

Lower energy prices may trigger additional declines in agriculture and food prices. Food production is energy intensive due to the use of fertilisers. The double gain to consumers from declines in energy and food is a big positive for low-income countries with a high dependency on imports.

Countries with a high energy weight in their CPI baskets should be big winners. Poland, Hungary and Indonesia top this list at more than 15%, according to OECD and IMF data, with India and Malaysia not far behind. Turkey, South Africa and South Korea should also benefit. Yields in all these countries look attractive in a near-zero-rate world. Even emerging Europe appears a bargain for income-starved eurozone investors.

We see commodity exporters such as Venezuela, Colombia, Argentina, Russia, Kazakhstan and Malaysia on the losers’ board.

EM MANOEUVRING ROOM

The impact of cheaper oil on EM currency and credit markets is a tug of war. The current account balances of commodity importers will likely improve – a positive for local currency bonds. Yet likely interest rate hikes by the US Federal Reserve risk eroding the yield advantage of these countries, putting downward pressure on their currencies. Higher US rates drain global liquidity because they boost the value of the world’s premier funding currency, the US dollar.

Conclusion: cheaper energy hands EM countries manoeuvring room to ease monetary policy or tighten it more slowly, softening the impact of Fed rate rises on their economies. See Dealing With Divergence of December 2014 for details.

“US consumers and much of emerging Asia will be stronger six months from now thanks to the lower oil price. There are more winners than losers.”
— Russ Koesterich
Chief Investment Strategist,
BlackRock Investment Institute

POLICY DIVERGENCE

Cheaper oil should add to EM policy divergences and increase dispersion in investment outcomes. Some oil exporters will likely be forced to tighten monetary policies to stem capital outflows and currency depreciations.

The impact on monetary policy in developed economies is more subtle. Cheaper energy is exacerbating already falling inflation expectations. This makes it even harder for central banks in Japan and the eurozone to hit their inflation targets. Both have launched massive bond-buying programmes to avoid outright deflation, boosting asset prices.

The Fed is a different story. We expect the US central bank to stick to its guns on raising rates in 2015, but see it going slowly and ending at a historically low level. Bottom line: falling oil adds to an already divergent trend in monetary policies.
**US CONSUMER WINDFALL**


GALLONS

<table>
<thead>
<tr>
<th>Year</th>
<th>Usage (Gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>5</td>
</tr>
<tr>
<td>1995</td>
<td>10</td>
</tr>
<tr>
<td>1999</td>
<td>15</td>
</tr>
<tr>
<td>2003</td>
<td>10</td>
</tr>
<tr>
<td>2007</td>
<td>15</td>
</tr>
<tr>
<td>2011</td>
<td>5.7</td>
</tr>
<tr>
<td>2015</td>
<td>10.1</td>
</tr>
</tbody>
</table>


**PRIMING THE PUMP**

Lower oil prices represent a large tax cut for consumers in the developed world, particularly in the United States. The average hourly US wage bought about 10 gallons of petrol in January, up from 5.7 gallons in mid-2014. See the chart above. The response should be swift: any petrol price decline that is part of an extreme fall (over 15% in a quarter) tends to generate a bump in consumption in the next quarter that is four times as large as the effect of milder price falls, we find.

Another reason to expect outsized US consumption gains: US drivers burn up far more petrol than motorists elsewhere. Japan, Europe and many emerging markets stand to benefit less. Their consumers use less fuel and pay more at the pump due to higher taxes. See the chart to the right.

US dollar strength also reduces petrol savings for consumers in countries with weakening currencies. Oil is traded in US dollars, mitigating the effect of any decline in local currency terms. Yet the oil price crash has been so large that it swamps the currency effect in many nations. Oil has fallen 49% in euro terms and 51% in yen since mid-2014, compared with a 57% decline in US dollars. Bottom line: cheaper oil delivers a big consumption stimulus globally.

**START YOUR ENGINES!**

Petrol use and prices in selected countries, 2011–2015

<table>
<thead>
<tr>
<th>Country</th>
<th>Usage (Litres per Person per Year)</th>
<th>Price per Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>2,000</td>
<td>$2</td>
</tr>
<tr>
<td>Canada</td>
<td>1,500</td>
<td></td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Sources: BlackRock Investment Institute, World Bank, globalpetrolprices.com and EIA, January 2015. Note: usage data are based on motor vehicle petrol consumption for 2011 and 2012 (China and Saudi Arabia). Bubbles are sized by overall consumption. Petrol prices are retail prices as of January 2015.

**US HOUSING AND GOODIES**


- Housing: home sales surged during previous oil price crashes. The reason? Rising consumer confidence and cash flows – and a drop in mortgage rates driven by falling inflation.
- Durable goods: purchases of big-ticket items surged on the two previous occasions. A sharp drop in the cost of consumer financing was a key driver.

Caveat: interest rates had much more room to fall during past oil price crashes. And consumers are more leveraged these days. Households debt stands at 76% of GDP, versus 48% in 1985. Yet there are signs the US consumer is perking up. Confidence in January rose to its highest level since 2007, according to The Conference Board.

Capital spending could also support growth this time around. Cheaper energy will likely boost productivity in energy-intensive sectors such as chemicals – encouraging players in these industries to raise capex (offsetting cuts by energy producers).

“**The relationship between energy prices and risk sentiment is not linear. Many oil exporters will see their foreign reserves decline, but the impact on their appetite for risk assets will be muted.**”

– Terrence Keeley
Global Head of BlackRock Official Institutions Group
EVALUATING EQUITIES

How to capitalise on the seismic shifts caused by the crude crash?

Cheaper oil often improves the trade balances of energy-importing nations. Equities in those countries tend to outperform, our research shows. We would focus on exporters within this space, or companies that derive more than 50% of their revenues from outside their home market (we use lower percentages for EM companies due to the paucity of listed exporters). This investment idea should have legs: valuations of exporters are slow to reflect improving terms of trade, as opposed to rapid gains after currency declines, we find.

It also makes sense to favour:

- Industries benefiting from lower operating costs, especially those that have not hedged their oil purchases. Transport (airlines, trucking and logistics) is a prime beneficiary. The sector accounts for 64% of global oil use. See the chart on the right.
- Sectors profiting from consumers having more disposable income (retailers, restaurants and other consumer discretionary stocks).

These stocks have rallied, yet we believe there is more to come as analysts upgrade their earnings expectations.

RESERVES RESHUFFLE

The commodities price implosion is reverberating through the world of foreign exchange (FX) reserves held at central banks and sovereign wealth funds.

We expect global reserves to edge up 2% to reach a total of $11.7 trillion by year end. This average masks a lot of differences. (Looking at Chicago’s average annual temperature of 10 degrees Celsius, you would never know you need a winter coat.) Oil exporters will dig into their reserves while energy importers will add to their FX piles. See the chart to the right. China will benefit from lower oil imports, but slowing activity is likely to nudge down its reserve growth rate.

How will the shift in reserves play out in financial markets? We expect isolated sales of risk assets as oil exporters plug budget holes and defend currencies. Yet the overall impact should be minimal for now. More than half of global reserves are in cash or cash equivalents — enough to preclude fire sales of less liquid assets. Plus, these institutions tend to premi se their investment decisions on opportunities, not on the price of crude.

GAS GUZZLERS

World oil consumption by sector, 2012

Caution: when we crunched the numbers on the overall effect of oil price changes on industry sector valuations in the past 25 years, we found few differences beyond the simple fact that energy and materials shares outperform when oil prices rise.

Conclusion: this is very much a stock picker’s territory.

WINNERS AND LOSERS [11]
Energy assets

The oil price plunge and subsequent downturn in energy-related assets have been dramatic. Yet they are part of a larger downward move in commodities prices. Agriculture, metals and currencies of commodities exporters already were in decline before oil started its descent in July 2014. These non-yielding assets suffered due to a strengthening US dollar and over-supply caused by years of buoyant prices.

Energy assets were the last dominos to fall – but fell the hardest. They had rallied in the previous three years and only recently imploded. See the chart to the right.

Before the crash, yield-hungry investors happily funded the burgeoning energy sector as oil prices held firm. Revolving bank debt and high yield bonds became the instruments of choice for the ambitious US shale explorer.

Many North American shale players became addicted to the easy money. They made a habit of spending more than their cash flow to expand reserves, increase production and make acquisitions, relying on Wall Street funding to close the gap.

North American small caps, in particular, rode the wave in the past decade. Cash flow from operations fell far short of spending. See the left chart below. They sucked in capital to the detriment of companies focusing on exploration outside North America. Large caps largely balanced their books in this period, and were unwilling (or unable) to add much debt. See the right chart below.

The falling oil price shattered this cosy arrangement and heralds a cash crunch for some companies. Borrowing costs have risen and access to capital has shrunk as a result of lower and more volatile oil prices. Access to cash is arguably more important than marginal costs or access to reserves in this climate. We expect cash flows and capital expenditures to fall significantly this year. Both dropped sharply in the 2008-2009 financial crisis, as the charts below show.

Sources: BlackRock Investment Institute and Bernstein Research, January 2015. Note: the analysis is based on 55 North American exploration and production companies. The values show the total cash flow, capex, and money spent on acquisitions for each group divided by their total production in barrels of oil equivalent.
HIGH YIELD: SURVIVAL MODE

High yield energy issuers are either small, risky companies or large ones with weak balance sheets. US shale producers have, on average, hedged around half of their oil production for 2015, but very little beyond.

High yield valuations largely reflect differences in asset quality, hedging levels and access to credit between companies. Bond prices of refiners and pipelines have held up well, while those of oil services and explorers have slid. See the table below. Yields of individual bonds are similarly dispersed.

If oil stays at low levels, some borrowers may default. The longer low prices persist, the greater the pain. We do not see a wave of US defaults in the next year, however. Shut off from new funding, companies will go into survival mode. They first slash capex, negotiate lower servicing costs and prioritise the most profitable wells.

Revolving credit lines, the source of day-to-day funding for capex, appear to be safe for now. Commercial banks are using long-term oil price assumptions, rather than spot prices, when determining the size of these revolvers. Their generosity is likely to wane if lower prices persist, while rating downgrades will make raising long-term debt tough. Bottom line: most producers should be able to ride out the storm — as long as signs of a decline in crude supply show up by early 2016.

Defaults elsewhere could come earlier. Moody’s expects a 6% default rate among Latin American corporates this year because of the commodities price downdraft, more than double its forecast 2.7% global default rate for speculative paper.

The good news: the sector’s maturity wall — when loans need to be repaid or refinanced — only hits in earnest in 2017. See the chart above right. Stronger companies will have no trouble tapping the market, but financing will be dearer: 7.5% to 8% versus less than 5% before oil prices slumped.

DELAYED DEALS

Mergers and acquisitions (M&A) in the energy sector has been on a boil in recent years, driven by large US exploration companies selling non-core assets to reduce debt and streamline portfolios. Private equity investors have raised almost $70 billion in energy funds since the start of 2012, according to research firm Preqin, and will be in prime position to pick up the pieces. For now, they appear to be sticking to quality assets only — and are holding out for bargain prices.

M&A should dry up initially. Sellers are unwilling to dispose of assets at what they currently see as fire-sale prices, preferring to wait for a rebound in oil prices. Activity could start to pick up in the second half of 2015 as some companies face a cash crunch and production hedges expire (only a handful of companies has production hedged into 2016).
RENEWABLES REVIEW

Do lower oil prices spell the end of the boom in renewable energy? Not really, in our view. Renewables such as wind and solar power have essentially decoupled from lower oil prices. Oil generated just 5% of world electricity in 2012, down from 25% in 1973, according to the IEA. Coal (at 40% in 2012) and gas (22.5%) are much more important. And renewables make up a big chunk of new power generation in many countries. Wind and solar power accounted for 46% of new US power capacity in 2014 versus 51% for gas, according to research firm SNL Financial.

Second, renewables have become much more cost competitive. The cost of solar power has fallen 78% in the five years ending in 2014, while the price tag of wind has declined 58%, according to Lazard research. Large-scale wind and solar installations now beat most other sources of power generation on costs—even before subsidies meant to enhance environmental sustainability, according to Lazard.

The trouble spot? Transport alternatives that compete directly with oil. Think vehicles running on biofuels, batteries or natural gas. A prolonged period of low oil prices could set back development of alternative fuels.

IG INTERNAL BLEEDING

US investment grade energy sector overview, 2015

<table>
<thead>
<tr>
<th></th>
<th>Number of issues</th>
<th>Outstanding amount (billions)</th>
<th>Share of IG total</th>
<th>Share of energy total</th>
<th>Current yield</th>
<th>Six-month change (basis points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>US INVESTMENT GRADE</td>
<td>6,028</td>
<td>$4,760</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENERGY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent energy</td>
<td>136</td>
<td>$102</td>
<td>2%</td>
<td>25%</td>
<td>3.7%</td>
<td>49</td>
</tr>
<tr>
<td>Integrated energy</td>
<td>98</td>
<td>$94</td>
<td>2%</td>
<td>23%</td>
<td>2.6%</td>
<td>11</td>
</tr>
<tr>
<td>Oil services</td>
<td>87</td>
<td>$52</td>
<td>1%</td>
<td>13%</td>
<td>5.3%</td>
<td>197</td>
</tr>
<tr>
<td>Refining</td>
<td>18</td>
<td>$18</td>
<td>0%</td>
<td>4%</td>
<td>3.8%</td>
<td>44</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>269</td>
<td>$146</td>
<td>3%</td>
<td>36%</td>
<td>3.9%</td>
<td>35</td>
</tr>
</tbody>
</table>

Sources: BlackRock and Barclays, January 2015. Notes: data are based on the Barclays US Credit Index. Current yields are no guarantee of future levels.

“This is a long-term opportunity to make money in selected US exploration and production companies, especially given how bearish the crowd has become.”

– Jessica Wirth Strine
Portfolio Manager,
BlackRock Global Opportunities Team
EQUITIES: DISCOUNTING DISCOUNTS

We could see a slow-moving equity rally as news of idled capacity filters down. A small rise in the oil price could entice contrarians undeterred by cuts to earnings forecasts.

Valuations of energy stocks generally look attractive across the globe. Price-to-book values were less than 70% of the MSCI World Index average in January. The discount is greater than during the 1998-1999 Asia crisis, when Brent oil prices slipped below $10 per barrel. See the chart on the right. The risk? Analysts may be overestimating future profits or the degree of any oil price snapback. And the global energy sector looks less cheap on a price-to-earnings basis, trading right in line with its 20-year average.

US energy valuations look even better on some metrics, as detailed in The Oil Plunge of January 2015. The energy discount, however, hides a lot of variation. Integrated oil and gas companies, or ‘energy majors,’ trade at steep discounts – versus their own history, most other energy subsectors and world equities. Energy infrastructure trades at a premium. See the table below.

We prefer quality and avoid outfits that could run into funding troubles. Our favourites: the super majors. Valuations are low, the integrated model provides a buffer against oil price declines and management teams appear focused on shareholder returns rather than adding reserves or increasing production. The segment has a 4.5% dividend yield – well above sectors that investors have been chasing for yield such as US utilities.

We would underweight oil services, especially those most exposed to US production and those with outdated equipment. They may appear cheap, but we believe a lot more pain is to come. Oil explorers are shifting into survival mode, cutting capex and negotiating lower servicing rates.

It makes sense to bottom-fish for selected exploration companies in the expectation that oil markets should start rebalancing in six to 12 months. Taking the plunge at this time requires high conviction, so we would look for companies with the following attributes:

1. Improving recovery of reserves and return on investment per well in top-tier areas such as the US Permian Basin.
2. Expanding profit margins through the application of technologies such as horizontal drilling.
3. Healthy balance sheets that are on their way to delivering positive free cash flows within one to three years.

<table>
<thead>
<tr>
<th>EQUITIES: DISCOUNTING DISCOUNTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global energy equities overview, January 2015</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Energy Discount</th>
<th>World equity weight</th>
<th>Oil and gas sector weight</th>
<th>Six-month total return</th>
<th>Price-to-book (PB) ratio</th>
<th>PB ratio vs. 20-year average</th>
<th>12-month forward P/E</th>
<th>P/E vs. 20-year average</th>
<th>Dividend yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORLD EQUITIES</td>
<td></td>
<td></td>
<td>-4%</td>
<td>2.1</td>
<td>1</td>
<td>14</td>
<td>0.9</td>
<td>2.5%</td>
</tr>
<tr>
<td>OIL &amp; GAS</td>
<td>7.5%</td>
<td></td>
<td>-26%</td>
<td>1.4</td>
<td>0.7</td>
<td>13</td>
<td>1</td>
<td>3.9%</td>
</tr>
<tr>
<td>Integrated oil</td>
<td>3.6%</td>
<td>49%</td>
<td>-26%</td>
<td>1.2</td>
<td>0.6</td>
<td>10</td>
<td>0.8</td>
<td>4.5%</td>
</tr>
<tr>
<td>Exploration</td>
<td>2.1%</td>
<td>28%</td>
<td>-29%</td>
<td>1.5</td>
<td>0.8</td>
<td>15</td>
<td>1.2</td>
<td>2.9%</td>
</tr>
<tr>
<td>Services</td>
<td>0.7%</td>
<td>9%</td>
<td>-38%</td>
<td>1.6</td>
<td>0.6</td>
<td>12</td>
<td>0.7</td>
<td>3.3%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>1%</td>
<td>13%</td>
<td>-6%</td>
<td>3.2</td>
<td>1.6</td>
<td>24</td>
<td>1.4</td>
<td>4.3%</td>
</tr>
</tbody>
</table>

Sources: BlackRock Investment Institute and Thomson Reuters, January 2015. Notes: data are based on the Thomson Reuters Datastream World Index. Current performance is no guarantee of future results.
BlackRock helps millions of people, as well as the world’s largest institutions and governments, pursue their investing goals. We offer:

- A comprehensive set of innovative solutions, including mutual funds, separately managed accounts, alternatives and iShares® ETFs
- Global market and investment insights
- Sophisticated risk and portfolio analytics

**BLACKROCK INVESTMENT INSTITUTE**

The BlackRock Investment Institute leverages the firm’s expertise across asset classes, client groups and regions. The Institute’s goal is to produce information that makes BlackRock’s portfolio managers better investors and helps deliver positive investment results for clients.

**EXECUTIVE DIRECTOR**
Lee Kempler

**GLOBAL CHIEF INVESTMENT STRATEGISTS**
Ewen Cameron Watt and Russ Koesterich

**EXECUTIVE EDITOR**
Jack Reerink

---

Unless indicated otherwise, all publications mentioned are issued by BlackRock Investment Institute and can be found on its [website](http://blackrock.com).

This is part of a series prepared by the BlackRock Investment Institute and is not intended to be relied upon as a forecast, research or investment advice, and is not a recommendation, offer or solicitation to buy or sell any securities or to adopt any investment strategy. The opinions expressed as of February 2015 and may change as subsequent conditions vary.

The information and opinions contained in this paper are derived from proprietary and nonproprietary sources deemed by BlackRock to be reliable, are not necessarily all-inclusive and are not guaranteed as to accuracy. As such, no warranty of accuracy or reliability is given and no responsibility arising in any other way for errors and omissions (including responsibility to any person by reason of negligence) is accepted by BlackRock, its officers, employees or agents.