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Major Oils: A broken business model? A short lesson from the E&Ps

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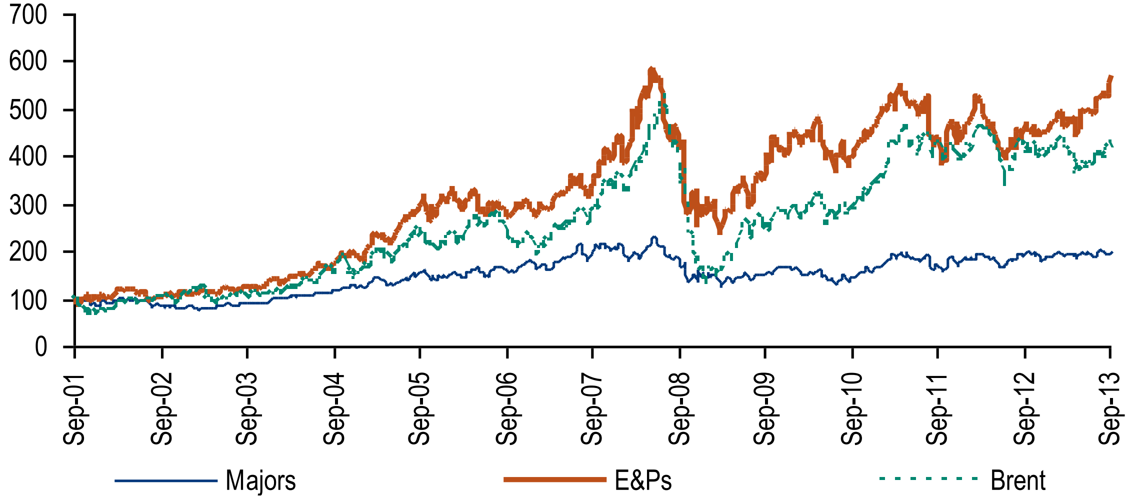
Global Majors vs. Global E&Ps share prices and Brent oil prices



Source: BofA Merrill Lynch estimates

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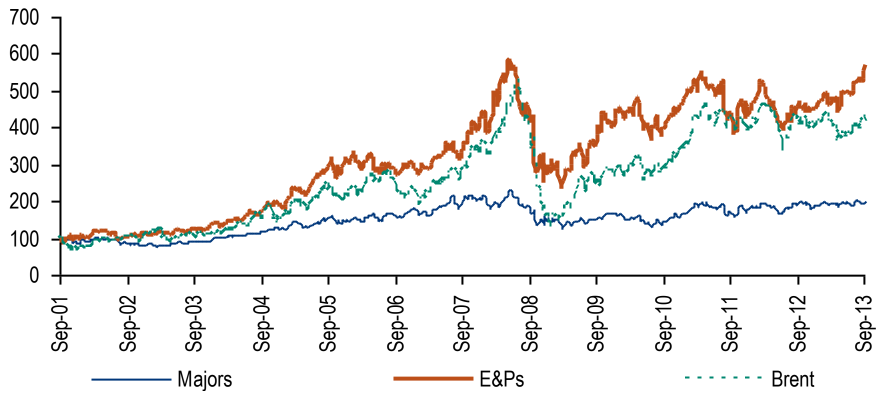
Refer to important disclosures on page 18-28. Price Objective Basis/Risk on page 16. Analyst Certification on page 17.

Key messages

- Since 2002, oil majors up 2x against 4x increase in oil price. E&P's up 5x
- Major oils obsession with growth has arguably led to value destruction and suboptimal decision making
- Rising decline rates, more testing resource access, emboldened national oil companies and rise of service companies has forced them up the cost curve….
- Free cash Flow and returns have thus suffered, leading to a derating of the sector since 2003
- Irreparably broken or are there solutions? Lessons from the E&P's
  - **Greater focus on Exploration**
  - **Divestments: shrinking to grow strategy proven to work in the USA**
  - **Capital discipline - Focusing on creating value rather than growing cash flow**
  - **Management pay - Aligning incentives with shareholders**

Since 2002, oil majors up 2x against 4x increase in oil price. E&P's up 5x

Global Majors vs. Global E&Ps and Brent oil prices



Source: BofA-ML estimates

- Majors have been unable to translate higher prices in to higher shareholder value as effectively as E&PS
- Numerous reasons for this:
  - Too big to grow
  - Exploration no longer as impactful
  - Rising costs, falling returns and FCF generation
  - Weaker resource access
  - Migration to more gassy portfolios
  - Lack of Exploration

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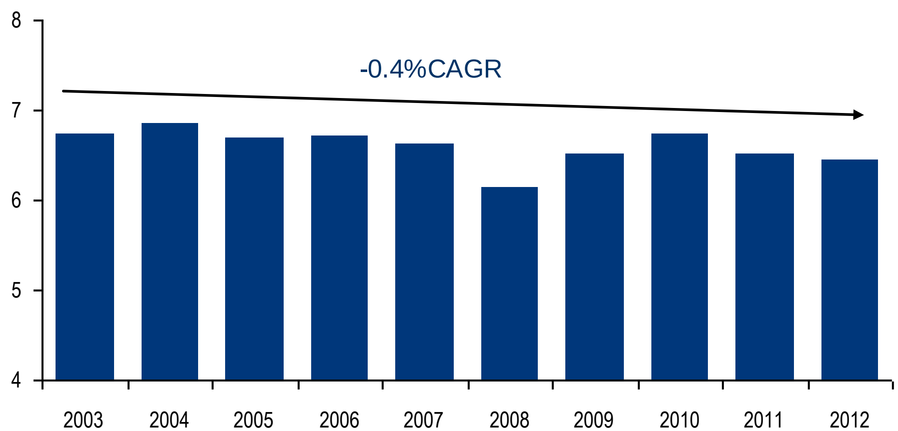
Too big to grow: Impacting ability to generate shareholder value

Global Majors Oil & Gas production (Bn bbl/yr)



Source: Company Data

- Majors production has fallen 0.4% annually since 2003 (CAGR)
- Production targets consistently missed…..
- ….which if met, collective production would now be c.20% higher
- Size has visibly prohibited growth:
  - Majors need to find 1mn bbl/d just to keep production steady (decline rates)
  - Fiscal terms (PSC)
  - Resource access makes achieving growth harder

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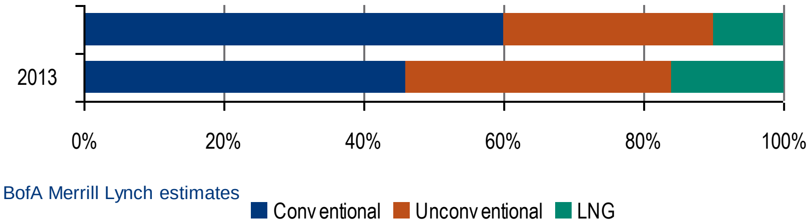
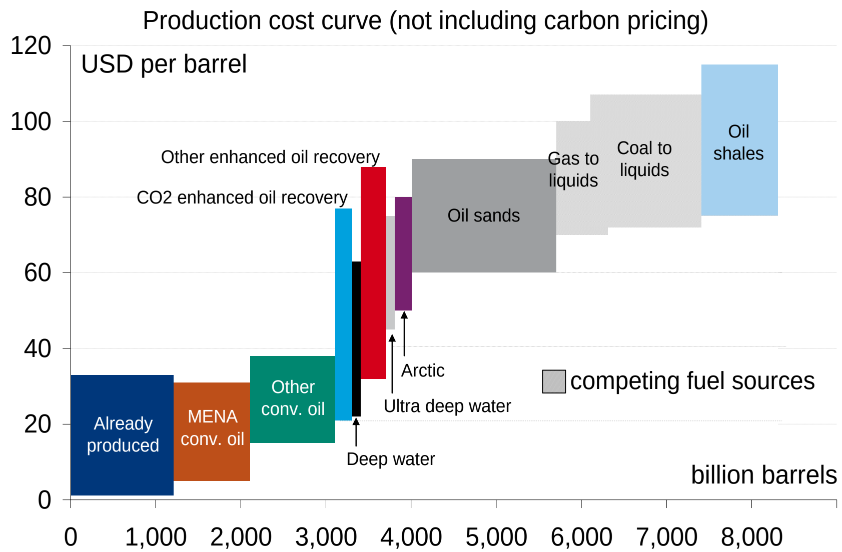
Majors have been forced up the cost curve in to more unconventionals

Global Majors Reserves by type



Source: BofA Merrill Lynch estimates

Oil Cost curve



Source: BofA Merrill Lynch estimates

- Unconventional play types have become an increasing portion of reserves (2P)
- Majors forced to look to less profitable crude oil sources to meet resource needs
- Unconventionals such as Shale oil, Oil sands and Oil shales are more capital intensive than conventional
- Operating costs tend to be significantly higher as well
- Resultantly, oil majors spending more on both Capex and Opex

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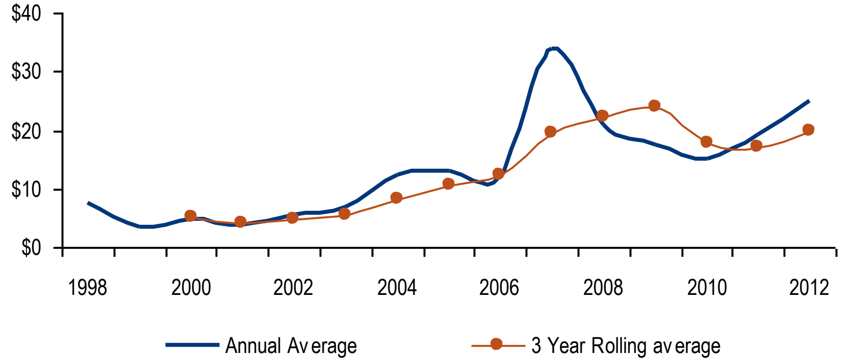
Driving higher F&D costs and higher production costs……

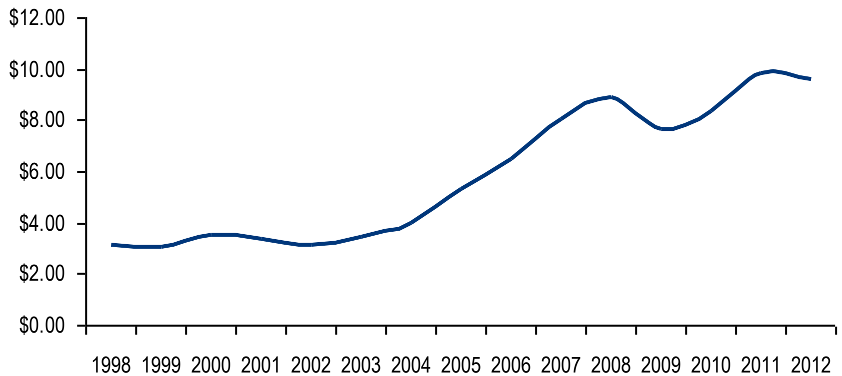
Global majors F&D costs (US$/bbl)



Source: BofA Merrill Lynch estimates

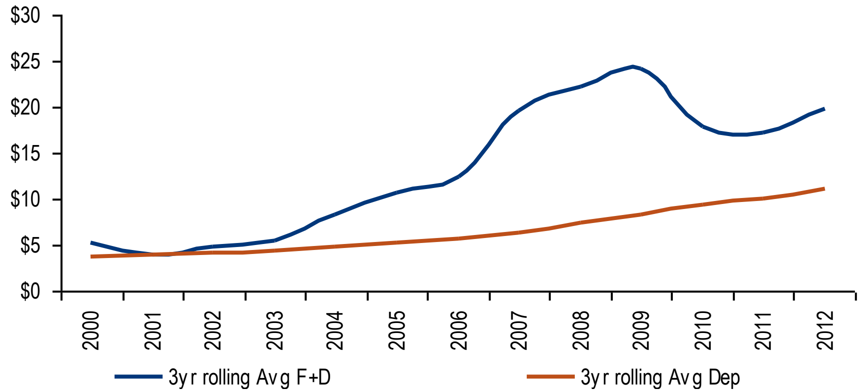
- F&D costs have trebled since the beginning of the decade
- F&D to DD&A ratio is now 2x
- Production costs have also trebled since the beginning of the decade
- Majors are quite visibly facing margin pressures

Global majors production costs (US$/bbl)



Source: BofA Merrill Lynch estimates

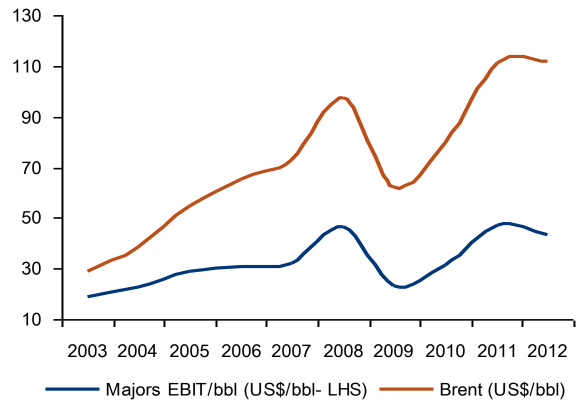
F&D costs Vs Deprecation (US$/bbl)



Source: BofA Merrill Lynch estimates

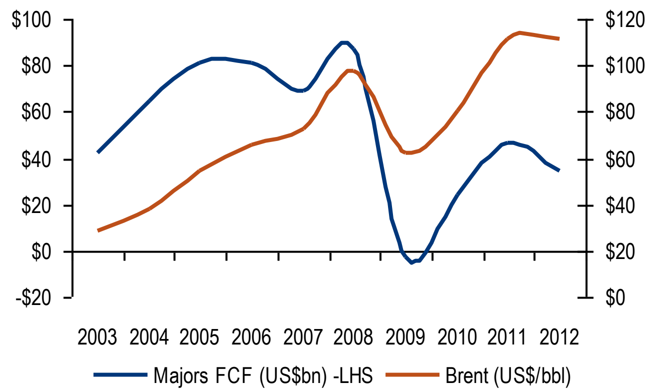
Returns and FCF have suffered as a result

Global Majors EBIT/bbl vs Brent oil price (US$/bbl)

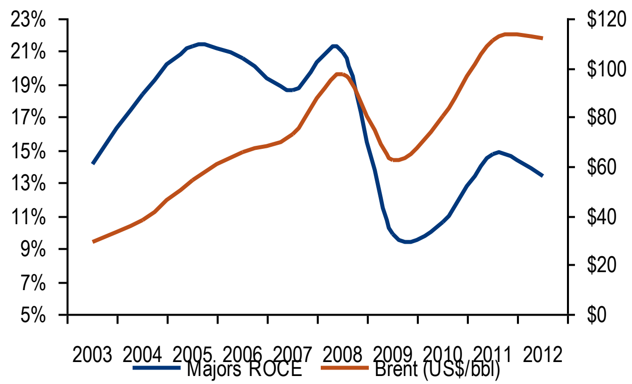


- Returns approximatley 10 pecentage points below 2005 peak, despite oil being at high levels
- Rising costs have seen free cash flow (FCF) falling despite oil prices moving higher
- FCF is now barely covering dividend needs

Global Majors FCF vs Brent oil price (US$/bbl)



Global Majors Average ROCE vs Brent oil price (US$/bbl)



Source: BofA Merrill Lynch estimates

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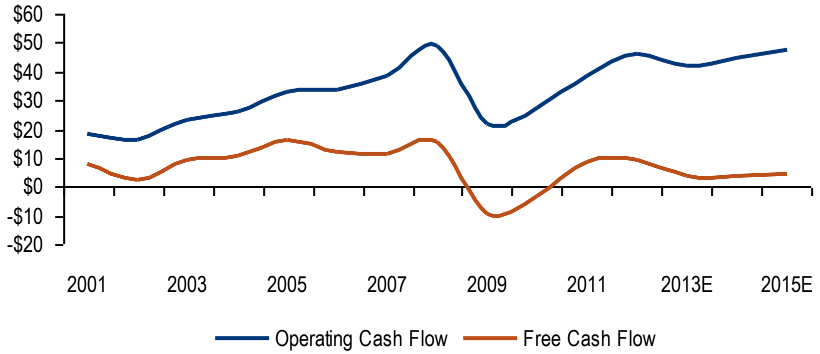
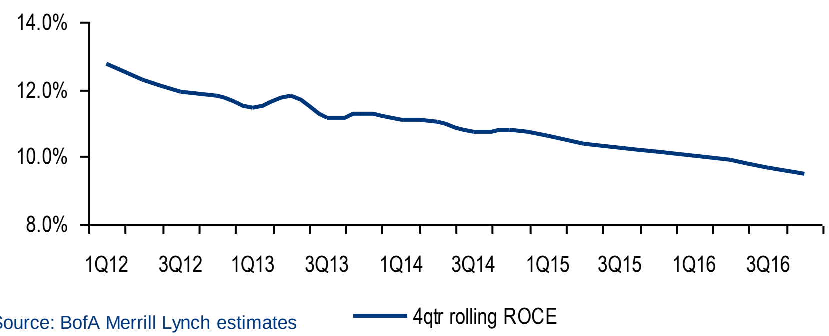
Case Study: Royal Dutch Shell

RD Shell Operating Cash Flow vs. Free Cash Flow



Source: BofA Merrill Lynch estimates

RD Shell ROCE continuing to fall

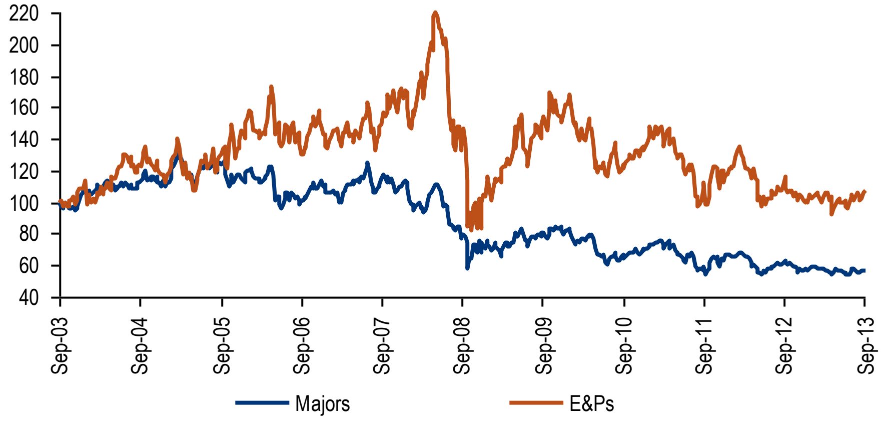


Source: BofA Merrill Lynch estimates

- 4mn b/d of production in 2020 implies 2.6% CAGR. BUT what about earnings or cash flow ?
- How does the profitability of new barrels compare to existing production? Sector capex ~2x depreciation
- Returns have fallen and thus shares have de-rated significantly (from 11x to 8x P/E over last 10 years).
- Move in to unconventionals and other non-profitable sources the key driver…Rely on GTL, LNG and other capital intensive tech?
- Projects often unprofitable, thereby driving company to accumulate significant none performing capital (>US$25bn in North America alone)
- Obsession with Cash flow growth has led to little share holder value creation…..
- …..Shares only c.10% higher than 2Q 2001

So what’s the solution? E&P sector gives clues

E&P sector has held value (Price / book) more robustly than Majors

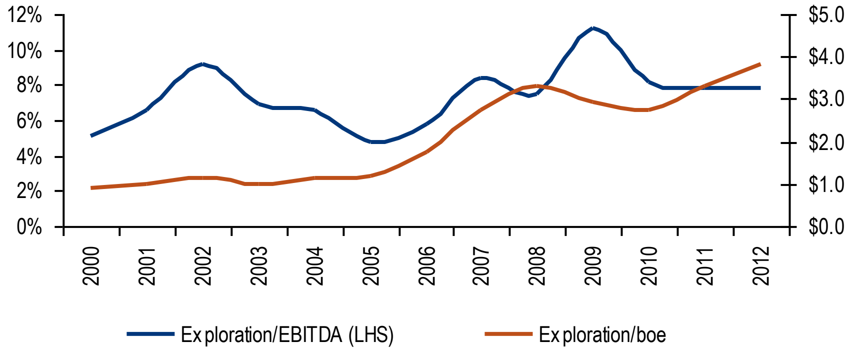


Source: BofA Merrill Lynch estimates

- Majors can look to E&P sector for solutions in creating shareholder value
- E&P sector performance has been significantly stronger than majors as management arguably been more shareholder friendly
- Such factors include:
  - Higher emphasis on exploration
  - More nimble; able to make difficult decisions
  - Higher growth rates (from a lower base)
  - M&A potential and portfolio optimisation
  - Higher focus on cost reduction
  - Greater emphasis on return cash to shareholders via dividends AND buybacks
- We examine some of these in slides in following

Solution 1: Focusing more on high impact Exploration

Exploration has been moving up, but still only 8% of EBITDA spent on exploration



Source: BofA Merrill Lynch estimates

- E&Ps have created significant value from the Drill bit
- Majors have increased exploration spend, but still only 8% of EBITDA (i.e. not increasing exploration risk taking)
- Willingness to take higher risks in frontier regions have seen E&P's being key beneficiaries of new gigantic resource discoveries….Faster to move in to new regions
- Majors have lagged in opening up new frontiers. Examples include:
  - **Brazil (Santos Basin):** BG, Galp, Repsol, Karoon
  - **Mozambique:** Anadarko, Cove (acquired)
  - **Tanzania:** Ophir Energy
  - **Indonesia:** Salamander, Niko resources
  - **Kurdistan:** Gulf Keystone, DNO, Genel, Afren
- Majors end up having to back in to resource plays via acquisitions, thereby

Companies Mentioned

Companies Mentioned

Name	Ticker	Curr.	Price	ADR	QRQ
BP plc	BPAQF	GBP	443.3	BP	C-1-7
RD Shell Shs A	RYDAF	GBP	2066.0	RDSA	A-3-7
Royal Dutch Shell	RYDBF	GBP	2166.5	RDSB	A-3-7
Tullow Oil	TUWLF	GBP	1071.0		B-1-7

Source: BofAML Global Research

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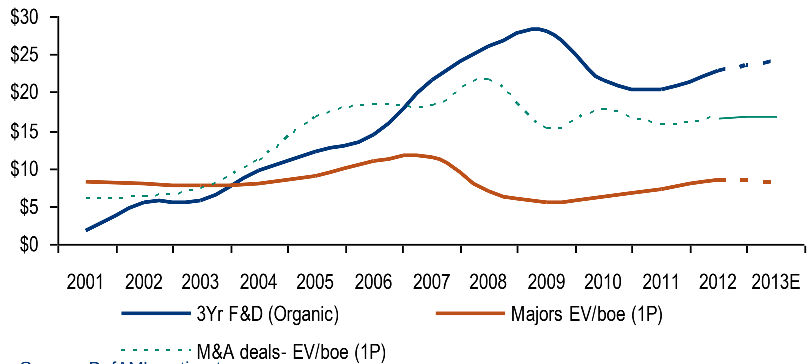
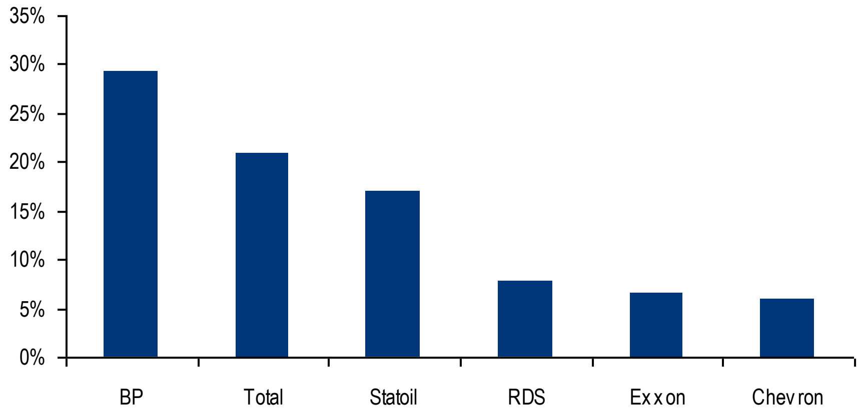
Solution 2: Shrinking the asset base for growth

F&D costs now well above M&A transaction prices and equity market valuations (of majors)



Source: BofAML estimates

BP and Total have led the way in disposals (Disposals as %age of market cap since 2010)



Source: BofA Merrill Lynch estimates

- M&A transactions done at 2x the value of equity market valuations….
- F&D costs are 30% higher than M&A costs…..its cheaper to buy it than find it!
- Majors share prices trade at a 40% discount to Net Asset Value. Asset disposals would allow management to crystallise value at attractive levels
- Proceeds can be used to “buy growth” or Buyback shares to shrink the company commensurately with lost earnings
- Majors, whilst active in disposing of assets, have been sloth vs. E&Ps
- Selling non-performing/underperforming capital (gas assets, refining)would further escalate returns and leave higher growth companies
- Examples of success: Conoco, Marathon, Hess, Occidental, Anadarko, Tullow oil

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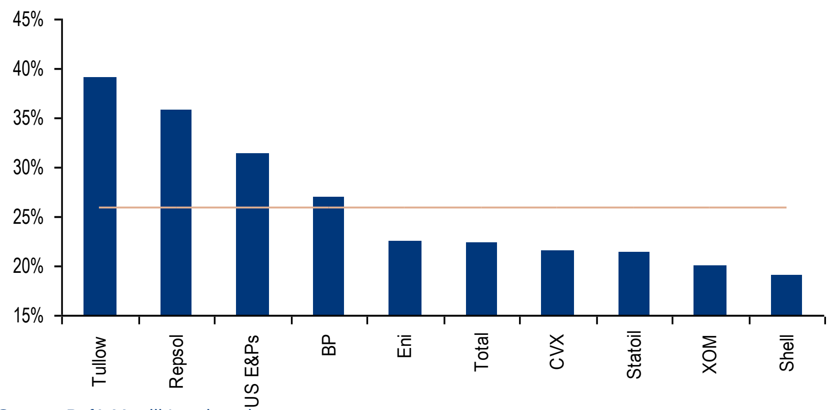
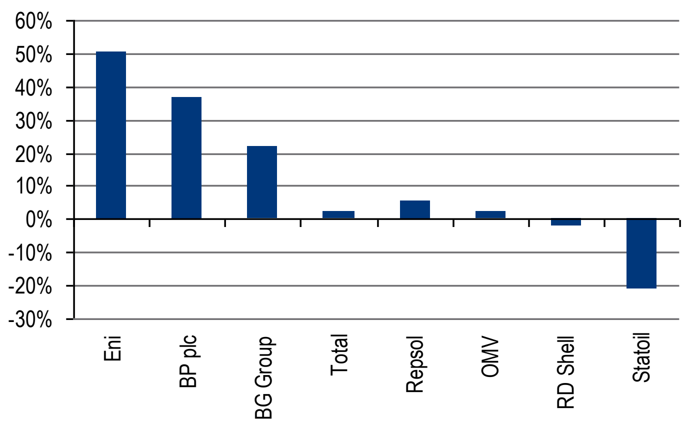
Solution 3:Capital Rationing…moving away from growth for growth sake?

IRR's on Growth projects 2012-16



Source: BofA Merrill Lynch estimates

Despite having the lowest Volumes growth rate, BP is set to deliver top quartile FCF growth



Source: BofA Merrill Lynch estimates

- Returns have suffered sharply as majors have moved to higher cost barrels
- IRR's of new projects have been falling sharply since 2000 despite higher oil prices
- Cutting capex and returning capital to shareholders (via Buy Backs) often more value creative than pursuing developments
- Amongst the Majors, BP has been most active in pursuing higher margin growth. Whilst Volumes growth is likely to be bottom quartile, FCF growth is amongst highest in sector……
- **….you don't need to grow volumes to grow cashflow!!**

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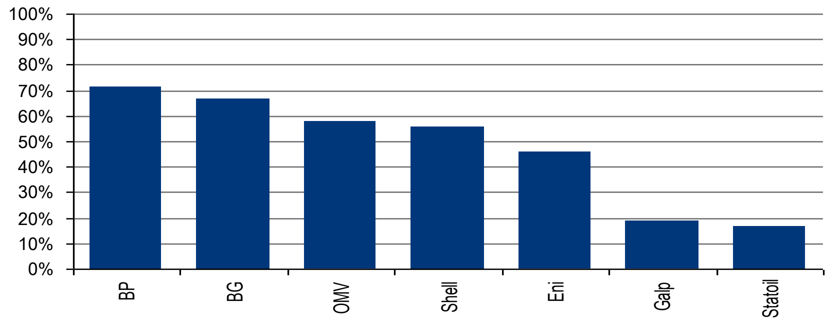
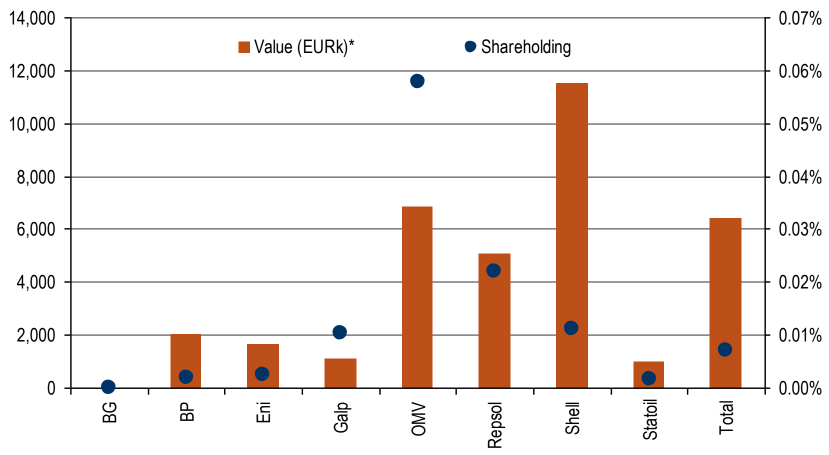
Solution 4: Management incentive structures need to change

% deferred of total CEO remuneration (assuming max payout)



Source: BofA Merrill Lynch estimates

Value (EUR'000s) and shareholding (% market cap) of the CEO's stake



- Are companies run for shareholders or stakeholders (employees, suppliers, government…) ?
- Lack of share buybacks throughout the sector – prefer to reinvest in projects….but this is not optimal given lower returns
- Management incentive structures need to change to reward:
  - (1) improvement in Returns
  - (2) FCF growth
  - (3) Exploration success
- Deferred pay an important consideration
- Stock options and shareholding important
- US companies have most shareholder friendly incentive structures
- BP most value creative structure amongst European Majors

Source: BofA Merrill Lynch estimates

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Price Objective Basis and Risk

BP plc (BPAQF)

We set a price objective of 530p/share (US$49/ADR). Our price objective is based on a 2014E P/E target multiple of c.8.5x which is approximately the global integrated oils sector average multiple. Our P/E target multiple methodology reflects the changing situation of the company. We view this target as appropriate until the Gulf of Mexico spill is solved and the actual costs known.

Risks (upward and downward) to our PO are sharp moves in oil and gas prices and the USD. Downside risks are unanticipated government intervention and regulation, expropriation risk, project execution/oil spill/environmental risk, bankruptcy risk, litigation risk, M&A risk and the general risk of increased taxes and tariffs.

Royal Dutch Shell PLC Shs A (RYDAF) Royal Dutch Shell (RYDBF)

We have a price objective of 2,100p/share (US$68/ADR), representing a target multiple of c.5x 2014e EV/DACF, in line with the target European Integrated Oils sector average multiple. We believe that an in-line multiple is justified given Shell's lack of differentiated growth, rising capex risks and falling returns, partly offset by its solid balance sheet and robust dividend outlook.

Upside risks are: rising oil & gas prices should the global economy strengthen more acutely than expected, falling industry inflation risks and signficant exploration success (e.g. in Alaska).

Downside risks are: significant economic slowdown that could negatively impact oil and gas prices and refining margins, adverse currency moves for the US dollar, risk of government intervention and regulation, project execution risk, general risk of changes in taxes and tariffs and rising capex costs

Tullow Oil (TUWLF)

Our 1,650p/share price objective is in line with our base-case total NAV (at US$100/bbl long-term crude oil price scenario). Key assumptions in the construction of our base case NAV are GBPUSD of 1.6.

We continue to set our European E&P Price Objectives around NAV, as we believe (1) this is the only valuation framework that accurately captures the underlying cash flow and earnings-generating ability of the underlying asset bases over time and (2) that, as such, the shares should trade at or at a discount to this metric, depending upon such factors as management quality/delivery track record, the strength of the macro environment, near/medium-term news flow potential, prevailing levels of M&A activity in the sector, the likelihood of management delivering value-accretive asset deals that this framework specifically precludes, funding requirements and political risk issues.

Analyst Certification

I, Hootan Yazhari, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

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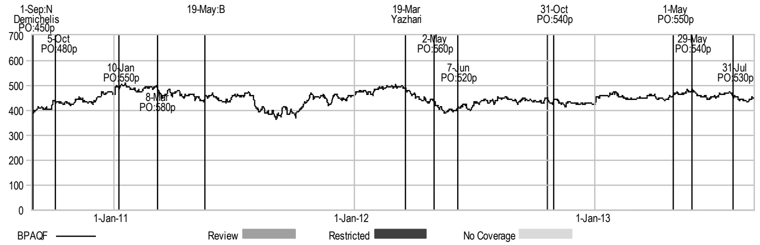
BPAQF Price Chart



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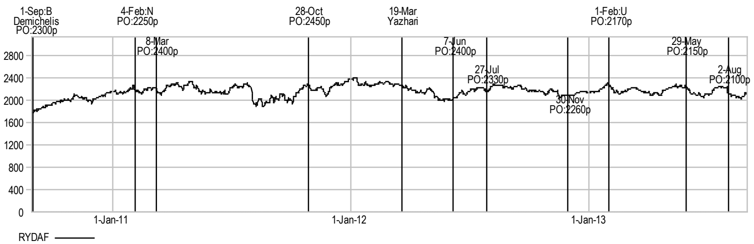
RYDAF Price Chart



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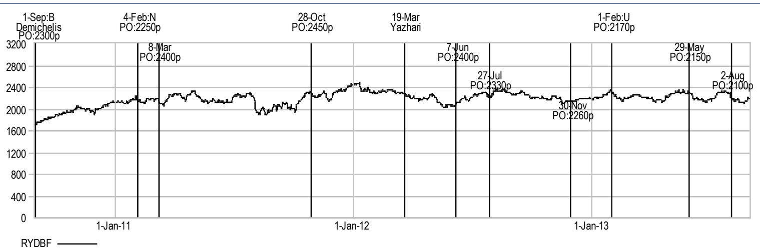
RYDBF Price Chart



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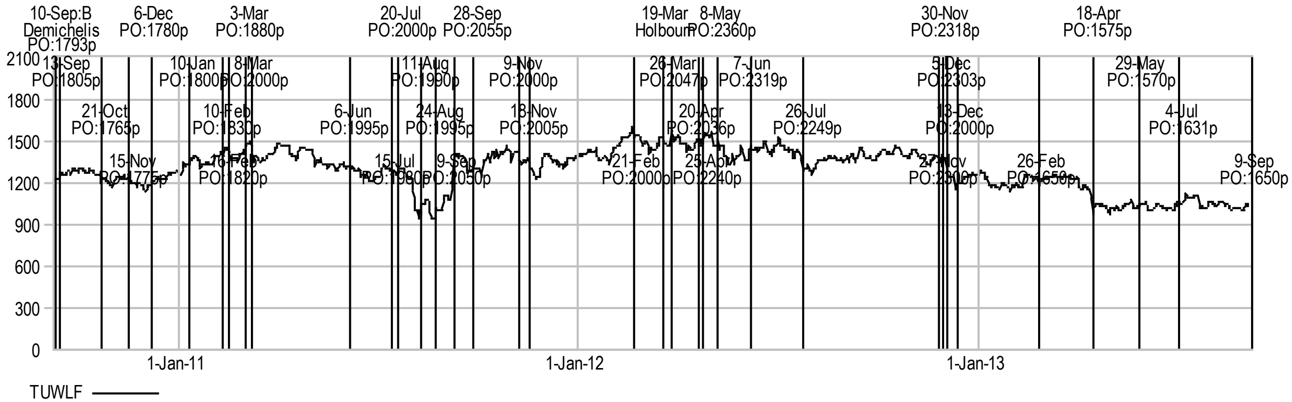
TUWLF Price Chart



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Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	143	53.56%	Buy	123	86.01%
Neutral	67	25.09%	Neutral	56	83.58%
Sell	57	21.35%	Sell	42	73.68%

Investment Rating Distribution: Global Group (as of 05 Aug 2013)

Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	1660	48.55%	Buy	1244	74.94%
Neutral	868	25.39%	Neutral	641	73.85%
Sell	891	26.06%	Sell	590	66.22%

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster*
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

* Ratings dispersions may vary from time to time where BofAML Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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