NOC Perspectives

Comparative Performance Metrics
Objective

IDENTIFY ANY OPERATING & FINANCIAL DIFFERENCES BETWEEN IOCS AND NOCS

1. The characteristics that distinguish the two types of entity

2. Focus on any areas of distinct advantage or disadvantage
Data Set

KEY COMPARATIVE METRICS

▪ Absolute Size
  – Reserves
  – Oil and Gas Production
  – Refining Capacity
  – Employees
  – Total Assets
  – Revenues
  – EBITDA
  – Net Income

▪ Operating Characteristics
  – Liquids Reserves
  – Gas Reserves
  – Percent Liquids Reserves
  – Percent Liquids Production
  – Liquids Reserve Life
  – Gas Reserve Life
  – Refinery Integration

▪ Operating Performance
  – Total EBITDA per barrel
  – Segment EBITDA per barrel
  – Segment ROA
  – R&M EBITDA/TOTAL EBITDA
  – Lifting Costs per bbl
  – Reserve Replacement Costs per bbl
  – Reserve Replacement Rate
  – Employee Profitability

▪ Financial Performance
  – Turnover
  – Gross Margin
  – EBITDA ROCE
  – EBIT ROCE
  – Return on Equity
  – Cash Flow Reinvestment
  – Leverage Ratio

▪ Stock Market Performance
  – Market Capitalization
  – Firm Value
  – Reserve Market Valuation
  – Dividend Yield
  – P/E RATIO
    • Price to 2004 Estimated Earnings
    • Price to 2005 Estimated Earnings
  – One Year Shareholder Return

Note: **Bold blue** indicates key measure of efficiency/competitiveness
Analytical Focus

- **Operating Performance**
  - Standard set of financial measures of operating efficiency
  - Heuristics that are widely used by energy analysts
  - Certain measures with revenue or assets in the equations are subject to distortions
  - Most important measures are those that avoid some of the comparability pitfalls: EBITDA per barrel, reserve replacement costs, lifting costs, etc.

- **Financial Performance**
  - Standard measures familiar to and utilized by CFOs and financial executives
  - Again, particularly in relation to national oil companies, certain measures with revenue or assets in the equations are subject to distortions or comparability issues
  - Best measures focus on return
## Universe of Companies

- **Companies were categorized among three groups**
  - **Super Major**: Global oil companies distinguished by their size
  - **Integrated Major**: International integrated oil companies
  - **Privatizing**: Integrated oils with continued state participation

- **Some privatizing national oil companies were not included in the analysis**
  - Smaller European companies with significant downstream operations - examples MOL, OMV

- **For reference purposes, Aegis calculated the metrics for two state-owned oil companies: PDVSA and PEMEX**
  - Due to reporting, accounting standard, engineering analysis, regulatory and other differences with the super major, integrated major and privatizing companies, the utility and comparability of the state-owned oil companies may be limited.

### Companies Categorized by Type

<table>
<thead>
<tr>
<th>Super Major</th>
<th>Integrated Major</th>
<th>Privatizing</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP</td>
<td>ChevronTexaco</td>
<td>Eni</td>
</tr>
<tr>
<td>ExxonMobil</td>
<td>ConocoPhillips</td>
<td>Petrobras</td>
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<tr>
<td>Royal Dutch Shell</td>
<td>Repsol-YPF</td>
<td>PetroChina</td>
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<td></td>
<td>TotalFinaElf</td>
<td>Sinopec</td>
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<td>Statoil</td>
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<td>CNOOC</td>
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<td></td>
<td></td>
<td>Lukoil</td>
</tr>
</tbody>
</table>
E&P Segment Performance

- E&P Segment EBITDA / Total Production (BOE) ($/bbl)

PEMEX at the top of the range; PDVSA at the bottom
R&M Segment Performance

- R&M Segment EBITDA / 95% of Refining Capacity (annualized) ($/bbl)

PEMEX toward the top of the range; PDVSA at the bottom

<table>
<thead>
<tr>
<th>Company</th>
<th>2004 Results</th>
<th>2003 Results</th>
<th>Average (2004)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RD Shell</td>
<td>$8.59</td>
<td>$7.19</td>
<td>$7.55</td>
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<tr>
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<td>ChevronTexaco</td>
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<td>Repsol</td>
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<td>Conoco Phillips</td>
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<tr>
<td>TotalFinaElf</td>
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<td>Lukoil</td>
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<tr>
<td>Statoil</td>
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<td>ENI</td>
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<tr>
<td>PEMEX</td>
<td>$7.88</td>
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<tr>
<td>PDVSA 2002</td>
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</table>

Year 2004 Results  Year 2003 Results  Group Average (2004)
LIFTING COSTS

- Production Costs (including royalties) / BOE (Barrel of Oil Equivalent) Annual Production ($/bbl)

PEMEX and PDVSA both at the top of the range
RESERVE REPLACEMENT COSTS

- Total E&P Costs (including acquisitions) / (Revisions + Purchases + Extensions & Discoveries + Improved Recovery) ($/bbl)

EXPLANATION:

1. PEMEX at the top of the range; PDVSA at the bottom.
RESERVE REPLACEMENT RATE

(Revisions + Extensions & Discoveries + Improved Recovery) / Oil & Gas Production

- PEMEX and PDVSA both at the bottom of the range
**Employee Profitability**

- **EBITDA (Earnings Before Interest, Taxes & Depreciation) / Company Employee ($ thousands)**

PEMEX in the middle of the range; PDVSA at the bottom

Year 2004 Results  Year 2003 Results  Group Average (2004)
CASH FLOW REINVESTMENT

- Capital Expenditures / EBITDA (Earnings Before Interest, Taxes & Depreciation)

PEMEX at the bottom of the range; PDVSA in the middle

BP 33% 20%
RD Shell 28% 40%
ExxonMobil 26% 60%
Repsol 50% 80%
Conoco Phillips 49% 100%
TotalFinaElf 43% 120%
ChevronTexaco 24% 140%
PetroChina 85% 0%
Sinopec 81% 20%
CNOOC 64% 40%
Petrobras 61% 60%
PetroChina 58% 80%
PetroChina 47% 100%
ENI 42% 120%
Statoil 34% 140%
Pemex 45% 120%
PDVSA 2002
EBITDA COMPONENTS

- Privatizing Companies’ net incomes relative to EBITDA generally in-line with the comparable companies
  - Notable exceptions: Lukoil (high), Statoil and CNOOC (low)
Conclusions

- NOCs perform differently from IOCs in many respects
- Comparisons not always favorable
- Many aspects of NOC ownership and operation of energy related businesses may be inefficient or suboptimal when compared with IOCs
- Presents both challenges and opportunities to NOC/IOC cooperation