FISCAL IMPACT OF “LOWER FOR LONGER” PETROLEUM PRICES AND INVESTMENT OUTLOOK IN ESTABLISHED AND PROSPECTIVE PETROLEUM PRODUCERS

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by

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Introduction

Crude oil:

• supplies approximately 40% of the world’s energy needs;
• is one of the most geopolitically significant issues of the last 5 decades; and
• shortages or perceived shortages have caused political, economic and social panic, even for world superpowers.
Ghana’s Story with Upstream Petroleum

• Over 100 exploration wells were drilled in Ghana between 1898 and the late 1990s with no significant discovery
• Crude oil deposits found at the Saltpond Field in 1970
• First major discovery made in June 2007
• Others, including TEN, SGN, MTA and Hess discovered subsequently
Production Profile

Production Profile: Crude Oil (Bopd)

Production Profile: Gas (MMScf)
Output Trend: 2011-2017

<table>
<thead>
<tr>
<th>Year</th>
<th>Output (BOPD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>66,290</td>
</tr>
<tr>
<td>2012</td>
<td>71,997</td>
</tr>
<tr>
<td>2013</td>
<td>99,685</td>
</tr>
<tr>
<td>2014</td>
<td>101,976</td>
</tr>
<tr>
<td>2015</td>
<td>102,498</td>
</tr>
<tr>
<td>2016</td>
<td>88,245</td>
</tr>
<tr>
<td>2017</td>
<td>160,711</td>
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</tbody>
</table>

Key Events:
- SGN: First Oil
- TEN: Y2 output
- Jubilee: Prodn.
- Jubilee: FPSO shut-down
- TEN: First Oil
Crude Oil Price Setting: Demand and Supply Factors
Supply Factors

1. Declining reserves and production: U.S. in the 1970s
2. The OPEC effect: ≥25% production cut
4. September 11, 2001 terrorist attack in the US
5. Increased non-conventional production: 20K new shale wells in US
Demand Factors

1. Population growth
2. Global financial crisis and recovery
3. Economic activity: Euro Zone, China
Recently...

• OPEC’s Market share maintenance stance
• Shale resilience: price hedge, cost-cutting and increased productivity
• The Iran factor: nuclear deal
• China and Euro Zone slow-down

More Recently...

• Brexit
• OPEC and Russia commitment to production cuts
• Rallying oil prices kick-starts shale
Crude Oil Prices: 1861-2015

Brent Crude Price vs. Global Supply/Demand

Source: International Energy Agency, Bloomberg
Price Decline Implications for Ghana: Export Side
Petroleum Revenue: 2011-2016

US$ Million
Share of Petroleum Revenue in Domestic Revenue (%)
2015: Revenue Impact

- **Company Taxes on Oil**: GH₵1,652,205,048
  - **Budget**: GH₵1,652,205,048
  - **Revised Budget**: GH₵52,451,306
  - **Prov. Outturn**: GH₵44,852,396

- **Royalties from Oil**: GH₵629,774,733
  - **Budget**: GH₵445,864,552
  - **Revised Budget**: GH₵383,722,010
  - **Prov. Outturn**: GH₵629,774,733

- **Dividend/Interest from Oil**: GH₵1,630,647,852
  - **Budget**: GH₵1,630,647,852
  - **Revised Budget**: GH₵1,155,573,308
  - **Prov. Outturn**: GH₵994,514,838
2015: Expenditure Impact
2015: Savings Impact

Draw Down from GSF: GH₵562.76 million

- Total: GH₵627,101,390
- Stabilisation Fund: GH₵311,563,670
- Heritage Fund: GH₵315,537,720
- Draw Down from GSF: GH₵562,760,000
2016: Revenue Impact

- Company Taxes on Oil: 111,487,914
- Royalties from Oil: 446,873,209
- Dividend/Interest from Oil: 1,172,110,163

Bar chart showing revenue impact in GH₵:
- Budget:
  - Company Taxes on Oil: 111,487,914
  - Royalties from Oil: 306,281,017
  - Dividend/Interest from Oil: 1,048,444,090
- Revised Budget:
  - Company Taxes on Oil: 42,017,365
  - Royalties from Oil: 175,539,571
  - Dividend/Interest from Oil: 490,512,459
- Prov. Outturn:
2016: Expenditure Impact

Oil-Financed G&S Exp
- Budget: 302,703,316
- Revised Budget: 184,038,292
- Prov. Outturn: 57,004,267

Domestic-Financed Capex (All Oil)
- Budget: 1,783,212,516
- Revised Budget: 1,605,536,603
- Prov. Outturn: 2,048,531,384
2016: Savings Impact

<table>
<thead>
<tr>
<th>Category</th>
<th>GH₵</th>
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</thead>
<tbody>
<tr>
<td>Total</td>
<td>205,405,822</td>
</tr>
<tr>
<td>Stabilisation Fund</td>
<td>190,441,119</td>
</tr>
<tr>
<td>Heritage Fund</td>
<td>113,108,433</td>
</tr>
</tbody>
</table>

- **Budget**
  - Total: 205,405,822
  - Stabilisation Fund: 190,441,119

- **Revised Budget**
  - Total: 111,567,565
  - Stabilisation Fund: 75,675,829
  - Heritage Fund: 72,936,838

- **Prov. Outturn**
  - Total: 0
  - Stabilisation Fund: 40,171,595
  - Heritage Fund: 78,873,554
Share of Petroleum Exports in Total Exports (%)
Share of Petroleum Output in Industry (%)
Share of Petroleum Output in GDP (%)
Price Decline Implications for Ghana: Import Side
1. Declining petroleum import bill
2. Forex losses and under-recoveries
3. Exchange rate impact
4. Inflation impact
How we dealt with it

• Expenditure rationalization
• Withdrawals from the GSF
• Sinking Fund
Investment Outlook
Impact of Price Decline on Investment

• Planned investments went ahead: TEN and SGN
• The Ghana-Cote d’Ivoire case rather slowed investment
• Decreased cost of development: SGN

Outlook

• TEN drilling
• Hess
• Springfield
Thank you