BOTTOMFEEDING

- Scavenging
- How a Wall Street Investment Banker Described the Current State of the U.S. Industry
A Consulting Project Example

NIGERIA FARM-IN

r = 28%

What are you doing? Where did this come from?
Political Uncertainty in Project Economics – A Case Study: ConocoPhillips in Venezuela

DeAnn Craig
Goal: A THOUGHT PROCESS

Left Brain
- TECHNICAL
- FINANCIAL

$S_w = NB^{o_i} = (N-N_p)B^{o}$

Right Brain
- POLITICAL
- RIOTS
- STRIKES
- WAR
- KIDNAPPING

Oil and Gas Price
GOAL – Convince the Project Evaluator

• Political events can be accounted for in Project Economic Evaluation just like Technical or Financial issues.
  – Changes in production volumes
  – Changes in net revenue
  – Increases in cost

• Accounting for political uncertainties in the discount factor will distort the analysis.
DEFINITIONS

• **POLITICAL** : relating to stakeholders

• This includes
  – populations of home and host countries directly or indirectly affected by the project
  – governments that represent them
  – shareholders of the corporation
DEFINITIONS

UNCERTAINTY

KNOWN

Assign Probability

risk

UNKNOWN

up
donw

???
Political Uncertainty Matrix

Potential Outcomes

**Macro (nearly all firms)**
- Unwanted
- Transfer risk (inconvertibility)
- Negative government actions
  - (operations risk)
- Regulatory Changes
- Trade Sanctions
- Economic instability
- Civil War/Revolution Damages
- Border conflicts
  - (ownership in question)
- Riots Damage
- Expropriation/Nationalization
  - (all foreign entities)

**Legal**
- Regulatory changes
  - (including environmental)
- Contract terms altered
  - (creeping expropriation)
- Expropriation/Nationalization
  - (selected industries)

**Extra-legal**
- Terrorism/Sabotage
- Contract repudiation
- Process deterioration
  - (strikes, bribery, corruption, pipeline theft)
- Personnel safety
  - (kidnapping)

**Micro (selected industries or firms)**
CASE STUDY: ConocoPhillips-Venezuelan Strike
An Example of Process Deterioration
The Orinoco Oil Belt

<table>
<thead>
<tr>
<th>Project Name (New Name)</th>
<th>Petrozuata (Junin)</th>
<th>Cerro Negro (Carabobo)</th>
<th>Sincor (Boyaca)</th>
<th>Hamaca (Ayacucho)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Partners (percent)</strong></td>
<td>PdVSA (49.9), ConocoPhillips (50.1)</td>
<td>PdVSA (41.67), ExxonMobil (41.67), BP</td>
<td>PdVSA (38), Total (47), Statoil (15)</td>
<td>PdVSA (30), ConocoPhillips (40), Chevron (30)</td>
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<td><strong>Startup Date</strong></td>
<td>October 1998</td>
<td>November 1999</td>
<td>December 2000</td>
<td>October 2001</td>
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<tr>
<td><strong>Extra-Heavy Crude Production (bpd; API)</strong></td>
<td>120,000; 9.3°</td>
<td>120,000; 8.5°</td>
<td>200,000; 8-8.5°</td>
<td>190,000; 8.7°</td>
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<tr>
<td><strong>Syncrude Production (bpd; API)</strong></td>
<td>104,000; 19-25°</td>
<td>105,000; 16°</td>
<td>180,000; 32°</td>
<td>180,000; 26°</td>
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</table>

TIMELINE including VENEZUELAN NATIONAL STRIKE

Date

$/share

WTI COP
## Estimated, Actual Cost of Shut-in Production

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Petrozuata</strong></td>
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<tr>
<td>Syncrude Net, Daily Production, mbopd</td>
<td>58</td>
<td>58</td>
<td>58</td>
<td>58</td>
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<tr>
<td>Estimated Days Shut-in</td>
<td>25</td>
<td>31</td>
<td>28</td>
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<td>Estimated monthly shut-in cost ($mm/month)</td>
<td>29.1</td>
<td>39.4</td>
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<td>Estimated total cost of shut-in ($mm)</td>
<td>$126</td>
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<td>Estimated per share cost of shut-in ($/share)</td>
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<td>Estimated average, daily cost of shut-in production ($000 per day)</td>
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<td>$1,272</td>
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<td><strong>Hamaca</strong></td>
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<td>Net, Daily Production, mbopd</td>
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<td>Estimated Days Shut-in</td>
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<td>Estimated monthly shut-in cost ($m/month)</td>
<td>311</td>
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<td>Estimated total cost of shut-in ($mm)</td>
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<td><strong>TOTAL</strong></td>
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<td>Estimated total cost of shut-in ($mm)</td>
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<td>Estimated per share cost of shut-in ($/share)</td>
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<td>Estimated average, daily cost of shut-in production ($000 per day)</td>
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<td>$1,620</td>
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</tbody>
</table>
Market Model

\[ C(\text{COP/WTI})_t = \left\{ \frac{(\text{COP/WTI})_t - (\text{COP/WTI})_{t-1}}{(\text{COP/WTI})_{t-1}} \right\} \]

\[ C(\text{INDEX/WTI})_t = \left\{ \frac{(\text{INDEX/WTI})_t - (\text{INDEX/WTI})_{t-1}}{(\text{INDEX/WTI})_{t-1}} \right\} \]

\[ C(\text{COP/WTI})_t = b_0 + b_1 \times C(\text{INDEX/WTI})_t + \varepsilon_t \]
REGRESSION RESULTS

- $b_0 = 0.000457$, $b_1 = 0.910049$
- \text{adjusted-}$R^2 = 0.88$
- No autocorrelation, heteroskedasticity, multicollinearity.
- Residuals stationary and normally distributed.
Figure 1: Actual vs. Fitted and Residuals
SUMMARY

• Actual Cost
  – Small in relation to parent corporation
  – About 1/4 – 1/3 of region (country’s) profits

• Market Model
  – No distorting spike
  – Not ‘fine’ enough
  – Day-to-day share price changes > Actual per share cost
ConocoPhillips -Venezuela Political Uncertainty Matrix

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Micro (selected industries or firms)
GOAL: A Thought Process

Left Brain
- TECHNICAL
- POLITICAL
- FINANCIAL
  - Internally financed
    - Corporate funds
    - Funds generated in-country
  - Externally financed

Right Brain
- Micro-credit
- Schools
- Jobs
- Health & Medical

Development Scenarios
Production Interruption