An Industrial Firm Looks at Country Risk

Economic Forecasting Conference
Georgia State University

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WORLD MANUFACTURING OUTPUT
STRONGER GROWTH IN THE DEVELOPING WORLD

% CH VS YR AGO

-4 -2 0 2 4 6 8 10

CALENDAR YEAR


Forecast ->

- Manufacturing VA - 97$ (Volume Proxy)
- Developing World
DISTRIBUTION OF GLOBAL MANUFACTURING
DEVELOPING WORLD TAKES LARGER SHARE

PERCENT OF GLOBAL MANUFACTURING

Western Europe
NAFTA ex Mexico
Japan
Developing World

80 82 84 86 88 90 92 94 96 98 00 02 04 06 08 10 12 14
Country Risk

• Factors in a foreign country that produce risk (uncertainty) in a cross-border transaction
• Examined from the perspective of a firm’s headquarters location (home country)
Source of Risk: Different Institutions
(The Rules of the Game)

- Economic policy, structure, performance
- Political, regulatory, legal
- Social and cultural
- Geography or location
- Different currencies
Country Risk Assessment Issues for a Manufacturing Firm

• “Art” vs. science in risk measurement
  – No theoretical guide
  – Lack of repeatability of descriptive risk analyses
  – Inherent biases of quantitative risk systems

• Street light effect in traditional risk systems
  – Most systems rely on whatever data is available
  – But many long run risks not quantifiable

• Short term focus
  – Long run supply factors rarely covered
Traditional Risk Categories

- Sovereign Risk
  - Will the government renege on its foreign debt?

- Transfer Risk
  - Can the company repatriate profits and capital?

- Exchange Rate
  - Will the exchange rate devalue unexpectedly?

- Economic Risk
  - Will the economy perform as expected?

- Political Risk
  - Will the institutional setting change?

- Location (Neighborhood) Effects
# RISK IMPACT BY TRANSACTION TYPE

Different Transactions Have Different Risks

<table>
<thead>
<tr>
<th></th>
<th>DIRECT (PLANT)</th>
<th>EXPORT (PVT INVEST)</th>
<th>FINANCIAL (PVT INVEST)</th>
<th>GOVT LOAN (SHORT)</th>
<th>GOVT LOAN (LONG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOVEREIGN</td>
<td>LOW</td>
<td>LOW</td>
<td>LOW</td>
<td>HIGH</td>
<td>HIGH</td>
</tr>
<tr>
<td>TRANSFER</td>
<td>MODERATE</td>
<td>HIGH</td>
<td>HIGH</td>
<td>HIGH</td>
<td>MODERATE</td>
</tr>
<tr>
<td>EXCHANGE</td>
<td>HIGH</td>
<td>NONE TO MODERATE</td>
<td>NONE TO MODERATE</td>
<td>NONE TO MODERATE</td>
<td>HIGH</td>
</tr>
<tr>
<td>ECONOMIC</td>
<td>HIGH</td>
<td>LOW</td>
<td>LOW</td>
<td>LOW</td>
<td>LOW TO MODERATE</td>
</tr>
<tr>
<td>POLITICAL</td>
<td>HIGH</td>
<td>LOW</td>
<td>LOW</td>
<td>MODERATE</td>
<td>HIGH</td>
</tr>
</tbody>
</table>
Air Products’ Approach to the Outlook and Risk Assessment Problem

• Consensus Outlook
  • Assumes a certain policy outlook
  • Provides starting point for risk discussion
  • Balanced by economics group’s supply-side country forecasts
    – How achievable is the consensus given labor, capital, productivity growth, and the institutional setting/changes anticipated

• Risk System provides a warning
  • Determines risk to long-run factors that may alter profit outlook:
    • Insufficient growth in economy
    • Changes in profit environment
  • Determines potential for construction period problems:
    • Exchange devaluation risk
    • Primarily indicates CHANGE in relative risk for key countries
Economic Policy Risk Factors

- Wealth creation
  - Per capita income levels and growth
  - Inflation related factors
- Economic policy reversals
  - Transition from one economic system to another (CPE to Market)
  - Fundamental shift in policy direction (closed to open economy)
- Institutional arrangements
  - Tax burden, government involvement in economy, property rights, size of informal economy, etc.
- Social & political stability assessment
Economic Policy Risk

July 2004 | July 2003

<Lower Risk | Higher ->

U.S. | U.K. | Austria | Belgium | Denmark | France | Germany | Italy | Netherlands | Norway | Sweden | Switzerland | Japan | Finland | Greece | Ireland | Portugal | Spain | Turkey | Australia | New Zealand | South Africa | Argentina | Brazil | Chile | Colombia | Ecuador | Mexico | Peru | Uruguay | Venezuela | Israel | Egypt | Taiwan | Hong Kong | India | Indonesia | Korea | Malaysia | Pakistan | Philippines | Singapore | Thailand | Algeria | Morocco | Russia | China | Czech Republic | Hungary | Poland

Europe/Developed Countries | Latin America | Asia – Pacific
Economic Policy Risk Summary

• Europe:
  – Low
  – Up slightly from previous measures

• Asia-Pacific:
  – Higher than Europe
  – Down slightly from previous measures
    • Japan turning corner

• Latin America: Region with risk extremes
  – Generally higher than Asia-Pacific
  – Chile vs Venezuela

• Africa/Middle East: Highest risk region
Exchange Rate Risk Factors

• Traditional transfer risk factors
  – Debt service ratios, coverage ratios, debt/income levels, composition of capital flows (FDI% inflows), foreign currency reserves
  – Current account balance as % of GDP

• Deviation from long-run relative purchasing power parity

• Exchange regime
  – Float, currency board, controlled float, fixed, managed
Exchange Rate Risk Summary

• Europe:
  – Generally higher than Asia and Latin America
  – Rising (euro, pound sterling)
  – Central European countries entering EU highest risk

• Asia-Pacific:
  – Lowest of major regions
  – Relatively little change from previous measures

• Latin America:
  – Between Europe and Asia-Pacific
  – More mixed
# China VS. India Example

(Risk Factors Scaled 1 to 5)

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>China</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic policy risk</td>
<td>3.1 &gt;</td>
<td>2.9</td>
</tr>
<tr>
<td>Institutional</td>
<td>3.8 &gt;</td>
<td>3.5</td>
</tr>
<tr>
<td>Policy change</td>
<td>High &gt;</td>
<td>Moderate</td>
</tr>
<tr>
<td>Social &amp; political turmoil</td>
<td>Moderate/High</td>
<td>High/High</td>
</tr>
<tr>
<td>Wealth creation risk</td>
<td>2.1 &lt;</td>
<td>2.3</td>
</tr>
<tr>
<td>Growth expectation</td>
<td>Consensus 8%/yr</td>
<td>Consensus 7%/yr</td>
</tr>
<tr>
<td></td>
<td>&gt; Supply 7%/yr</td>
<td>&gt;&gt; Supply 5.5%/yr</td>
</tr>
<tr>
<td>Traditional transfer risk (ability to pay)</td>
<td>1.29 &lt;</td>
<td>1.47</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Improving)</td>
</tr>
<tr>
<td>Exchange rate (total)</td>
<td>1.47 =</td>
<td>1.47</td>
</tr>
</tbody>
</table>
## NABE POLICY SURVEY:
### Short Run Risks to the U. S. Economy

<table>
<thead>
<tr>
<th>% Respondents</th>
<th>Mar 03</th>
<th>Aug 03</th>
<th>Mar 04</th>
<th>Aug 04</th>
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</thead>
<tbody>
<tr>
<td>Terrorism/Middle East</td>
<td>41</td>
<td>13</td>
<td>19</td>
<td>40</td>
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<tr>
<td>Federal deficit</td>
<td>11</td>
<td>21</td>
<td>25</td>
<td>23</td>
</tr>
<tr>
<td>Inflation</td>
<td>-</td>
<td>1</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Unemployment/employment</td>
<td>-</td>
<td>16</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>Current Account Deficit</td>
<td>1</td>
<td>-</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Excessive HH and/or Corporate Debt</td>
<td>5</td>
<td>3</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Labor force skill, education issues</td>
<td>2</td>
<td>-</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Overcapacity</td>
<td>8</td>
<td>10</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>