Commodities Update and Outlook

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What We All Want...

Energy
The world will continue to consume energy...

Figure 12. World energy consumption, 1990-2035 (quadrillion Btu)
Energy – Electricity
Coal and Coke
Monthly Indicator for Internal U.S. Waterways

* Increase in coal volume due to the flood condition on the Ohio River had an effect on river traffic
U.S. Coal Production

(million short tons)

(year over year change, million short tons)

2011 2012 2013 2014

Total production (left axis)
Production forecast (left axis)
Western region (right axis)
Appalachian region (right axis)
Interior region (right axis)

Source: Short-Term Energy Outlook, March 2013
Map of Coal Production, 2009 (EIA)
Domestic production grows rapidly over projection period, particularly natural gas and renewables, and liquids in the near term.

Source: EIA, Annual Energy Outlook 2013 Early Release
Exports of Coal, Top Partners
Coal Exports by Port District, 2005-2012
Coal is King in Kentucky

US Exports of Coal, $billion

- Intrastate Coal
- Inbound Coal
- Outbound Coal
- All other Cargos
Other top commodities

Sand, Gravel, Aggregate
- Intrastate
- Inbound
- Outbound

All Other Cargos

Petroleum Products
- Intrastate
- Inbound
- Outbound

Other Cargos
Energy - Mobile
Petroleum and Chemicals
Monthly Indicator for Internal U.S. Waterways
Miles Driven (12 Months Average)
Price of Fuel and Distribution

$200/ barrel
Natural Gas versus WTI

1 barrel of Crude Oil contains 5.8 million btu.
The current price (January 2013) of 1 barrel of Crude Oil is $94.74 per barrel.
Cost per million btu in the form of Crude Oil = $94.74/5.8 = $16.33.
Cost per million btu in the form of Natural Gas = $3.34.
Fleet Options

- Natural Gas Fleets
- Hybrid technologies
- Transit
- Electricity
- Subsidies and fueling stations
Grains
Farm and Food Products
Monthly Indicator for Internal U.S. Waterways

*decrease in farm and food products volume due to drought condition had an effect on river traffic
U.S. corn: Feed and residual use, ethanol, and exports

Billion bushels

- Feed and residual use
- Ethanol
- Exports

Years: 1990 to 2020
The “Blend Wall”

Source: Energy Information Administration and Renewable Fuels Association

* Estimated
Soybean Exports Through Maritime Port Districts, 2008-2013
Summary of USDA agricultural trade long-term projections (billion dollars)

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2021</th>
<th>2021 vs 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock, poultry, and dairy</td>
<td>21.5</td>
<td>38.7</td>
<td>180%</td>
</tr>
<tr>
<td>Grain and feeds</td>
<td>27.2</td>
<td>41.5</td>
<td>153%</td>
</tr>
<tr>
<td>Soybeans/Oilseeds and products</td>
<td>25.3</td>
<td>28.6</td>
<td>113%</td>
</tr>
<tr>
<td>Horticultural products</td>
<td>22.6</td>
<td>38.7</td>
<td>171%</td>
</tr>
<tr>
<td>Other exports</td>
<td>7</td>
<td>12</td>
<td>171%</td>
</tr>
<tr>
<td><strong>Total agricultural exports</strong></td>
<td>108.6</td>
<td>166.6</td>
<td>153%</td>
</tr>
<tr>
<td>Bulk commodity exports</td>
<td>40.8</td>
<td>55</td>
<td>135%</td>
</tr>
<tr>
<td>High-value product exports</td>
<td>67.7</td>
<td>111.5</td>
<td>165%</td>
</tr>
<tr>
<td>High-value product share</td>
<td>62.40%</td>
<td>67.00%</td>
<td></td>
</tr>
</tbody>
</table>
Global Thoughts
Total US Trade Continues to Increase
U.S. Share of World GDP, 1980-2012

Source: International Monetary Fund, 2012.
US Dollar Index, Jan 1970-2013
GDP Growth Rates For Various Regions

- United States
- Europe*
  - of which: Euro Area
- Japan
- Other Advanced **
- All Advanced Economies
- China
- India
- Other Developing Asia
- Latin America
- Middle East
- Africa
- Russia, Central Asia and Southeast Europe ***
- All Emerging and Developing Economies
- World Total

GDP growth

2019 - 2025
2014 - 2018
2013
LATIN AMERICA AND THE CARIBBEAN: SHARE OF SELECTED PARTNERS IN TOTAL TRADE, 2000-2020 A. (PERCENTAGES)

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the United Nations COMTRADE Database and national sources.

A/ Projections from 2011 to 2020 are based on GDP growth rates for the years 2000-2010 in Asia-Pacific, China, the European Union, Latin America and the Caribbean, the United States and the rest of the world. The growth rate of trade is expected to converge with the economies’ long-term growth rate.
# The Developed World: A Shrinking Share of Global Population

## 12 Largest Countries Ranked by Population

<table>
<thead>
<tr>
<th>Ranking</th>
<th>1950</th>
<th>2010</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>China</td>
<td>China</td>
<td>India</td>
</tr>
<tr>
<td>2</td>
<td>India</td>
<td>India</td>
<td>China</td>
</tr>
<tr>
<td>3</td>
<td>US</td>
<td>US</td>
<td>US</td>
</tr>
<tr>
<td>4</td>
<td>Russian Federation</td>
<td>Indonesia</td>
<td>Pakistan</td>
</tr>
<tr>
<td>5</td>
<td>Japan</td>
<td>Brazil</td>
<td>Nigeria</td>
</tr>
<tr>
<td>6</td>
<td>Indonesia</td>
<td>Pakistan</td>
<td>Indonesia</td>
</tr>
<tr>
<td>7</td>
<td>Germany</td>
<td>Bangladesh</td>
<td>Bangladesh</td>
</tr>
<tr>
<td>8</td>
<td>Brazil</td>
<td>Nigeria</td>
<td>Brazil</td>
</tr>
<tr>
<td>9</td>
<td>UK</td>
<td>Russian Federation</td>
<td>Ethiopia</td>
</tr>
<tr>
<td>10</td>
<td>Italy</td>
<td>Japan</td>
<td>Philippines</td>
</tr>
<tr>
<td>11</td>
<td>Bangladesh</td>
<td>Mexico</td>
<td>Dem. Rep. Congo</td>
</tr>
<tr>
<td>12</td>
<td>France</td>
<td>Philippines</td>
<td>Egypt</td>
</tr>
</tbody>
</table>

**Source:** UN (2009)

Note: Rankings for developed countries that have fallen below 12 are in parentheses.
Changes in Global Markets

- China – “Insourcing”
- Near Sourcing to Latin America
- Future of dollar for exports
- Port development issues
- Panama Canal expansion
- Free Trade negotiations
- Security risks and asymmetric disruptions
- Price of fuel – “Greening”
What Does This Mean for Me?
Louisiana Exports as Share of Total State GDP 1997 - 2011
Mississippi River and Its Relationship to State Exports (2011)

% represents share of Total State exports through the Miss River Corridor (maritime tonnage)

Shading Indicates Ranking of MS River Traffic based on Share of Export Tonnage
Where is the Priority?

- Logistics – 9% of US Economy
- Disruptions-costs affect all users
What Does Waterways mean

“old message”
- We’re here
- We’re larger, greener, safer
- We need money

“new message”
- We are doing business now
- We represent a modern, innovative partner
- We support modern logistics
- We can grow with linkages to other markets and modes
Summary

- Everyone wants energy for food, electricity or transport
- We want to export to “them”, people outside the U.S. to supplement US activities
- Waterways remain critical to the shipment of energy