



How Far Ethanol?

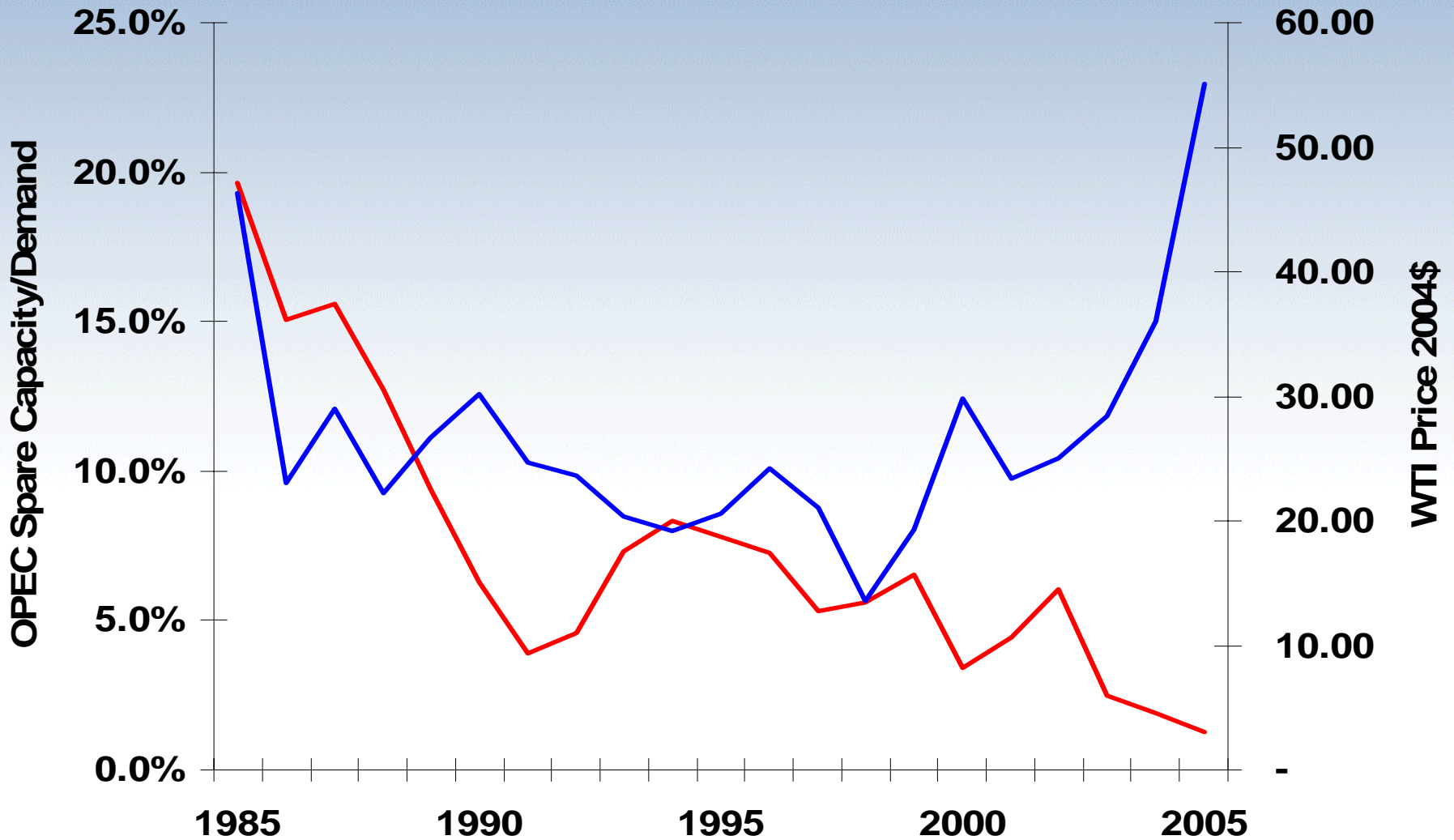
*Presentation to EIA Energy Outlook and Modeling
Conference*

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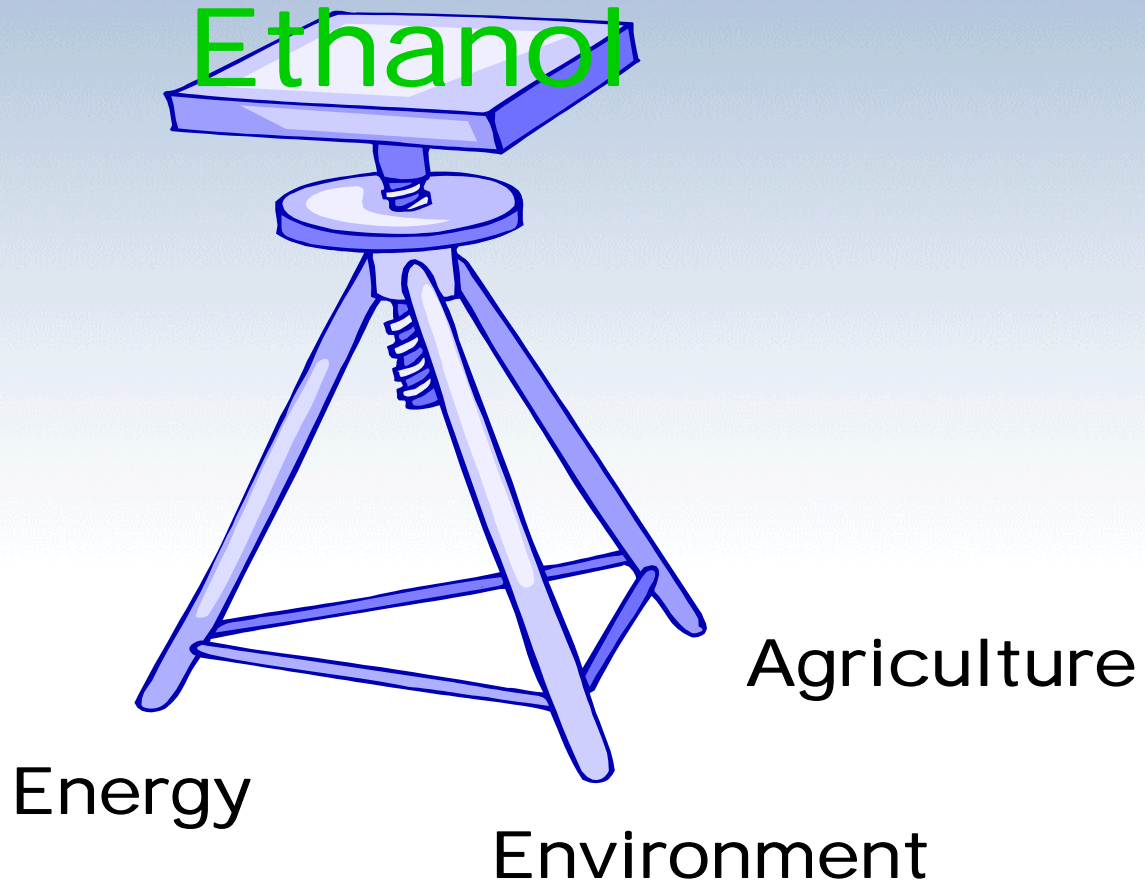


OPEC Spare Capacity and Price





Ethanol: The Stability of Three Policies





Three Major Policy Drivers

1. Energy Policies

- Energy Security
- Reduce dependency on petroleum-based energy sources
- Diversify energy sources

2. Environmental Policies

- Reduce criteria emissions at local, urban, metropolitan, and national levels
- Reduce greenhouse gas emissions

3. Agricultural Policies

- Create new markets for agricultural crops
- Reduce subsidies



Are the Ingredients for Critical Mass Coming Together?

- **High Risk/High Anxieties**
 - **Climate Change, Peak Oil, Politics of Oil**
- **Vehicle technology compatibility – current and future**
 - **HEV, PHEV, FFV**
- **Fuel Transparency for the Customer**
 - **Ethanol, biodiesel**
- **Will the cost of addressing these policies negatively impact the economy?**

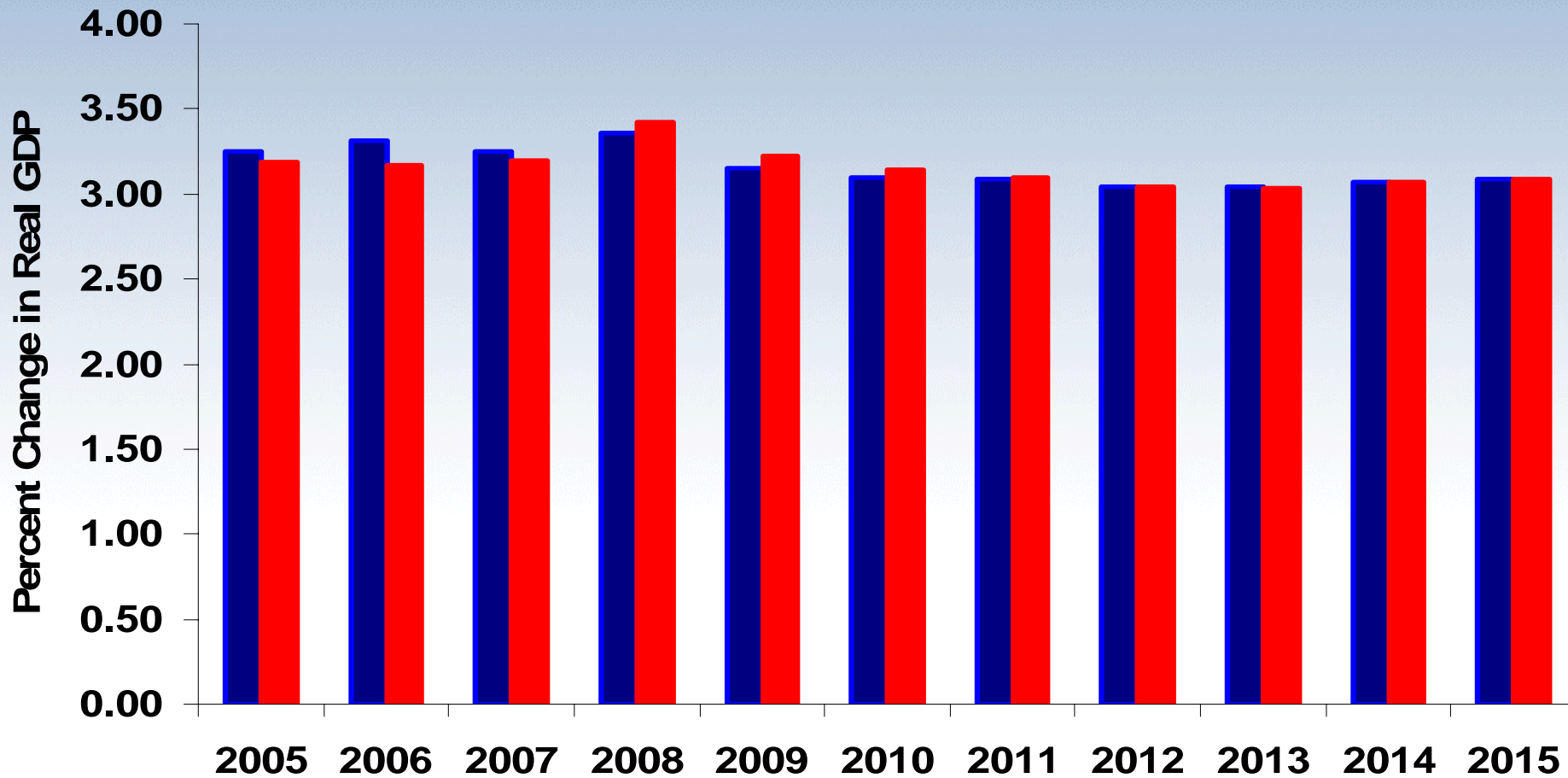


Demand Impact from High Oil/Energy Prices: What are the Implications for the Policy Drivers and Ethanol?

- **Price effect is smaller due to significant decline in fuel substitution capability**
- **Income effect is smaller due to continued decline in oil/gdp in nearly all countries.**
 - **Incremental oil demand/gdp nearly half the level of 10 years ago**
- **For many OECD consumers, the price of crude oil is a small fraction of their fuels costs**
- **In some major emerging markets, energy prices are subsidized and consumers do not 'see' higher prices**
- **Current high prices are – still – largely demand driven**
- **Petro dollars are being recycled more quickly through investments and financial flows**
- **There is an absence of inflationary pressures thanks to increased global and domestic competition**



Impact of \$100 Oil Shock on World Growth

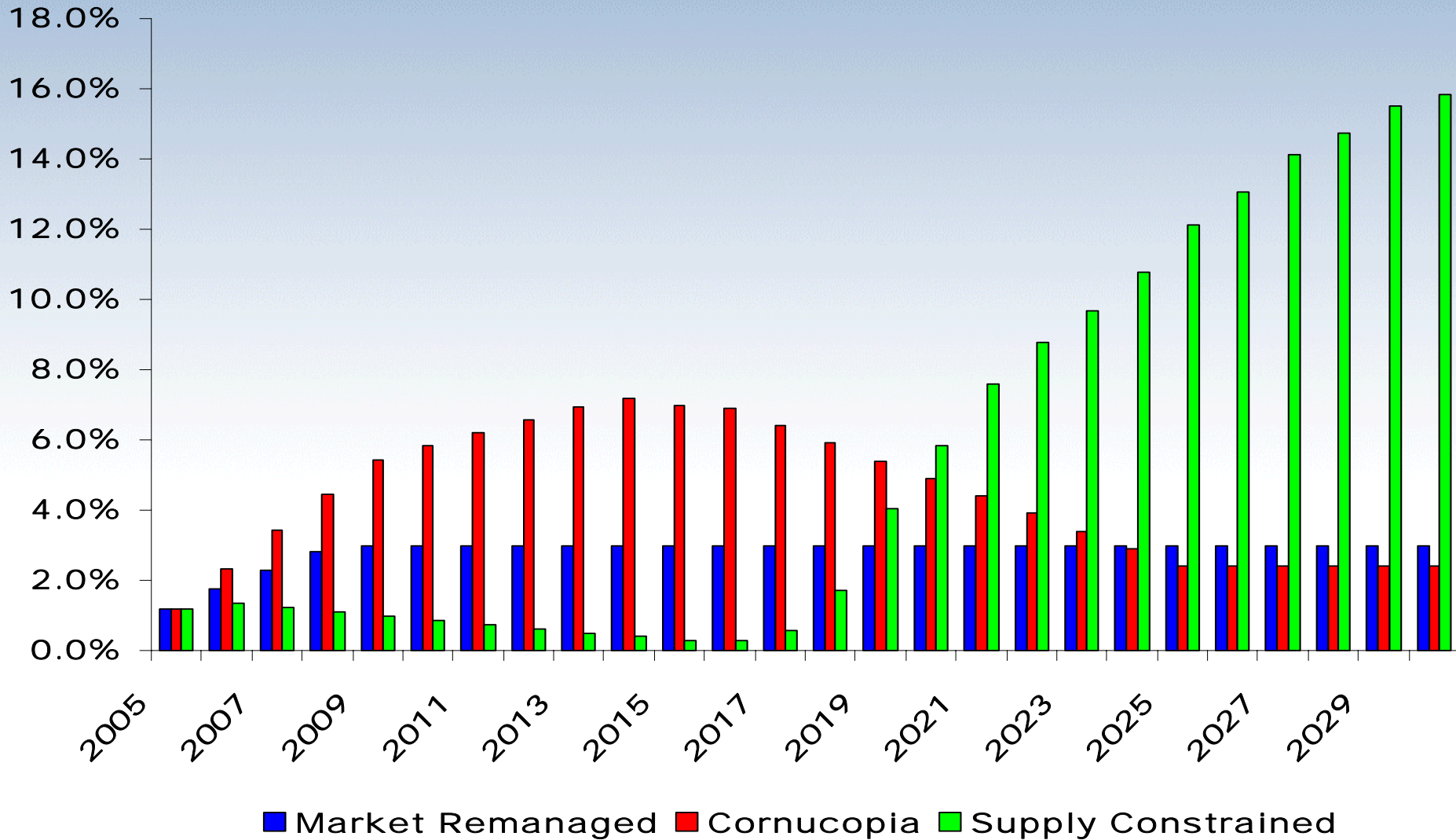


Source: Global Insight Scenario Model

■ Base Case ■ Oil Shock

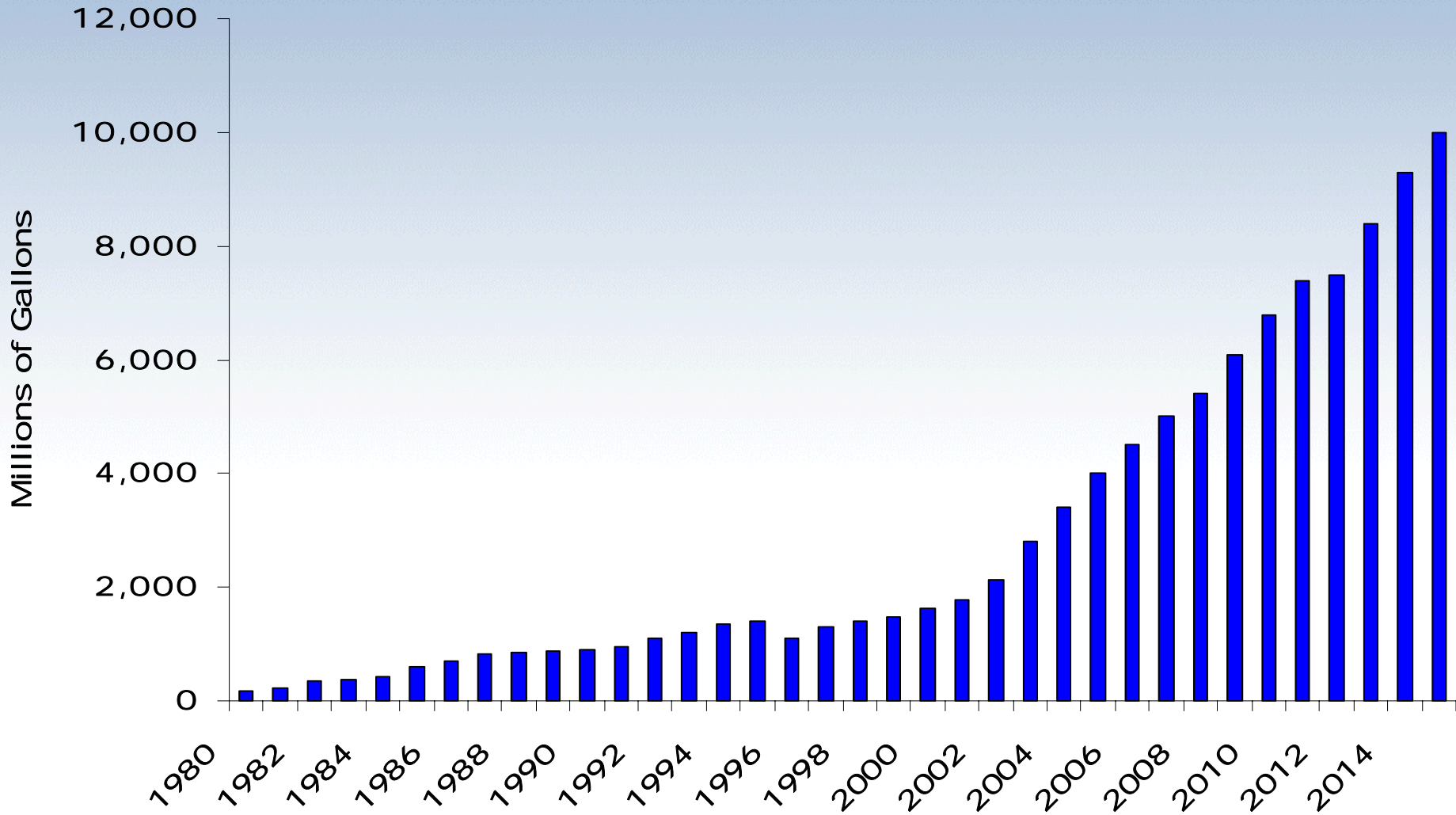


OPEC Spare Capacity Share of Global Demand



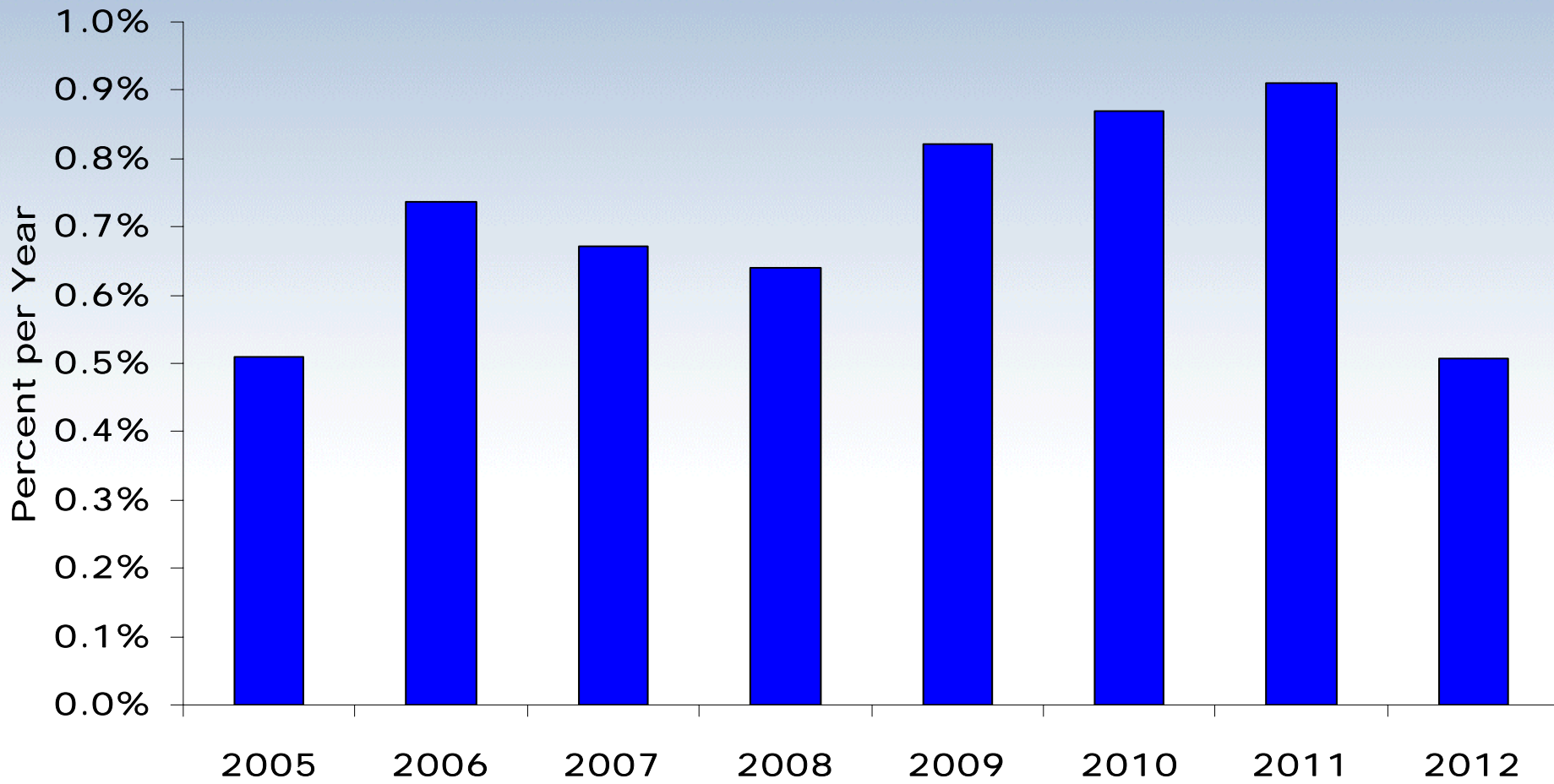


US Ethanol Production and Outlook





US Demand Growth Supported by EU and US Ethanol *



* Includes expected decline in EU gasoline demand

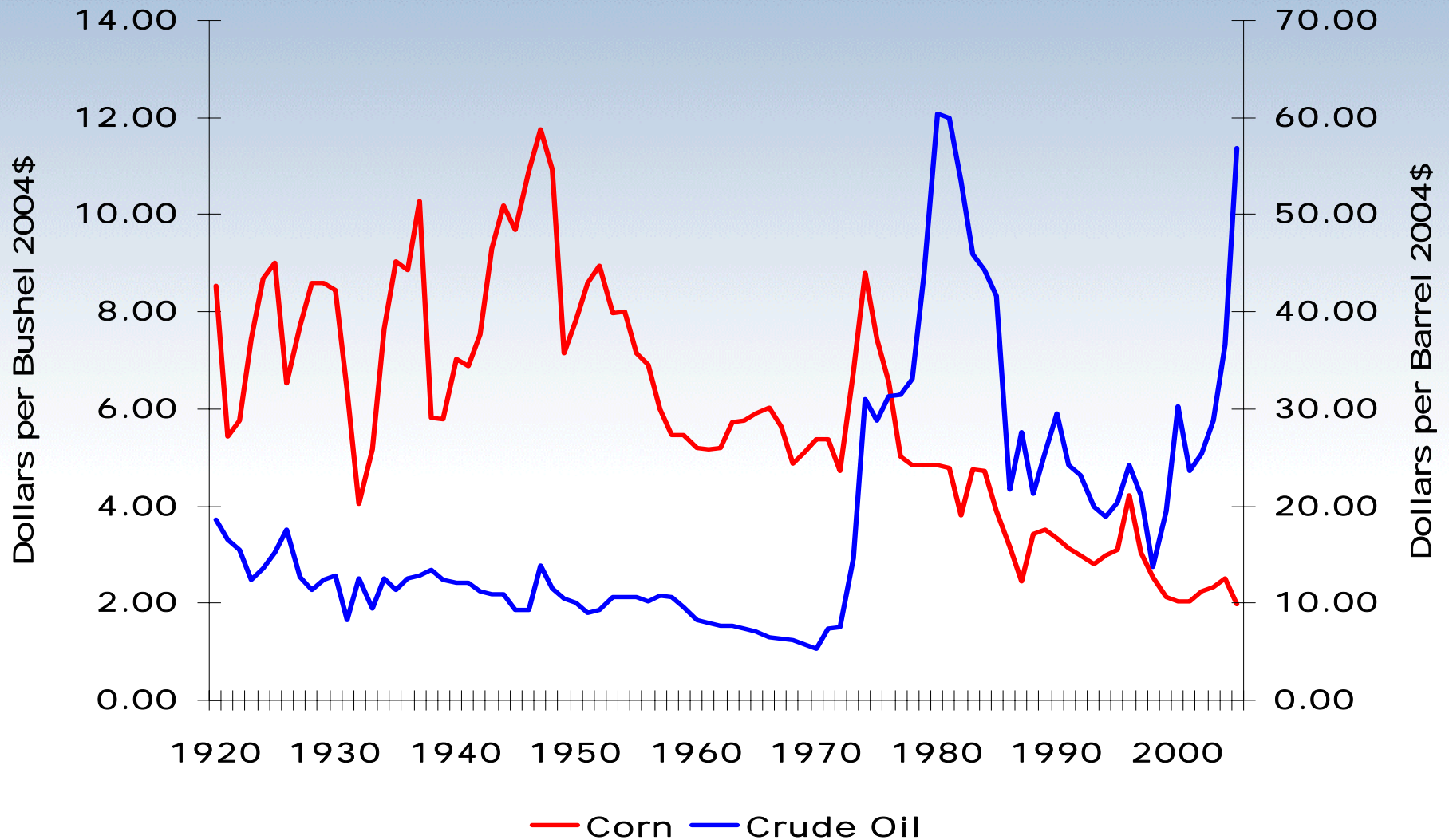


Risks and Uncertainties

- **How likely is it that all current risks dissipate?**
 - **And, if they do, does it make a difference to ethanol?**
- **Are the three policy drivers compatible?**
- **When will oil prices come back down?**
 - **And, what will drive them down?**
- **What happens to crop prices?**
- **Are assumptions about technology being applied equally?**
- **Will ethanol capacity overshoot RFS?**
- **What comes after RFS?**

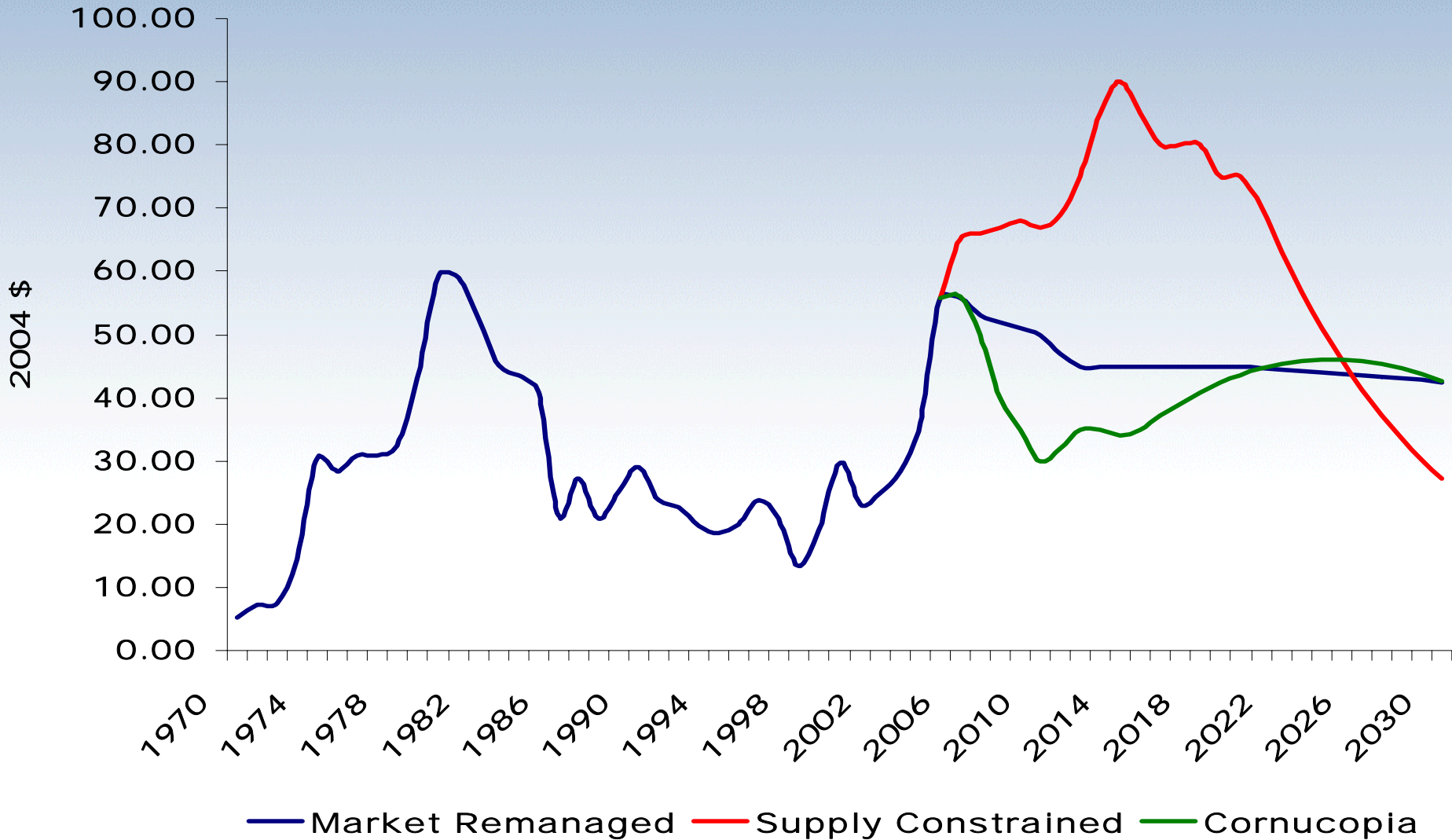


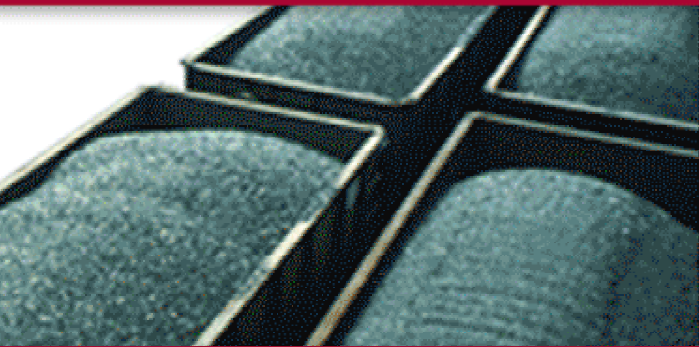
Crude Oil and Corn Prices: Can Commodities Increase in Price Over the Long-term?





Global Insight Oil Price Scenarios





Thank you

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