Outline

• Introduction
• Volatility and Structural Change
• Fuel by Fuel
• Conclusion
The Economy

Growth in global GDP and trade

- GDP growth (lhs)
- World trade growth (rhs)

US real policy rates and GDP growth

Source: Includes data from IMF World Economic Outlook and Oxford Economics

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Energy Prices

Source: Includes data from Platts and McCloskey

Index: Jan-07=100

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GDP and Primary Energy Growth

OECD

Growth

2004 2005 2006 2007 2008

Non-OECD

Growth

2004 2005 2006 2007 2008

Source: Includes data from Oxford Economics

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Crude Prices: What Happened?

$/bbl

Dated Brent

Annual averages

Source: Includes data from Platts

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Oil Consumption Growth

Source: Includes data from IEA

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Oil Consumption Growth in 2008

Oil exporters and importers

Mb/d

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Tax and subsidy regimes

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OPEC Adjusts to Falling Consumption

OPEC-12 crude oil production

Global consumption and production

Source: Includes data from US DOE

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Main Oil Production Changes

Mb/d

Decrease

Increase

-0.4 -0.3 -0.2 -0.1 0.0 0.1 0.2 0.3 0.4

Non-OPEC
FSU
OPEC

Mexico
Angola
Kuwait
Kazakhstan
Brazil
Canada
Russia
UK
Norway
US
Nigeria

Saudi Arabia
Iraq
Qatar
Angola
Kuwait
Brazil
Canada
Russia
Norway
UK
US
Nigeria
Angola
Kuwait
Brazil
Canada
Russia
Norway
UK
US
Nigeria

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Changes in Production and Inventories

Global oil production changes

Mb/d  2007  2008

OPEC
-12 crude

OPEC

Non-OPEC

OECD commercial inventories

Million barrels

2003-2007 range

2008

2009

Source: Includes data from IEA
Reserves-to-Production Ratios

R/P (years)

Note: Showing R/P ratios of over 20 years and reserves over 2 billion barrels.
Global Oil Reserves

Bn bbls

- OPEC
- FSU
- OECD
- Other
- Other Oil Sands


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Refining Margins and Spare Capacity

Source: Includes data from Parpinelli and Energy Security Analysis Inc.
Natural Gas Market

Gas prices

$/mmBtu

Jan-07  Jul-07  Jan-08  Jul-08  Jan-09

Japan LNG  EU contract  UK NBP  US Henry Hub

Growth in 2008

Bcm

Production  Consumption

Non-OECD  OECD

Source: Includes data from Platts

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US Gas Production

Sources: Includes data from US DOE and Baker Hughes

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Atlantic Basin LNG*

By importer

- Americas
- Asia
- Europe

2007 2008

Switching between markets

y-o-y change, Bcm

Asia US

1Q08 2Q08 3Q08 4Q08 1Q09

Sources: Includes annual data from Cedigaz and quarterly figures from Waterborne LNG

* LNG from Algeria, Belgium, Egypt, Nigeria, Norway, Trinidad and Equatorial Guinea
Coal Prices and Consumption Growth

### Prices

- **NWE CIF**
- **US CAAP**
- **Japan Steam coal**
- **Qinhuangdao spot**

### Consumption growth

- **China**: 92.7 Mtoe
- **India**: 18.5%
- **Russia**: 7.8%
- **South Korea**: 6.4%
- **South Africa**: 5.1%
- **UK**: -2.8%
- **Australia**: -4.5%
- **Germany**: -4.8%
- **Spain**: -5.6%
- **US**: -8.3%

Sources: Includes data from McCloskey and Platts

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Coal in the European Union

Gas and coal consumption growth

Changes in EU coal imports by source

Sources: Includes data from Eurostat

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Renewable Energy

Wind capacity

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<th>Year</th>
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Solar PV capacity

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Sources: Includes data from BTM Consult, IEA, EPIA and EurObserver
Conclusion

- 2008: Rapid market adjustment
- Non-OECD: The future is here
- Volatility: Unavoidable in our industry?
Volatility and Structural Change

Q & A

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