

*An International Seminar*  
**‘Energy and Shipping’**

*The EU Iranian Oil Embargo and Implications for the  
International Oil Market*

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**INSTITUTE OF ENERGY**  
**FOR SOUTH EAST EUROPE**

## Presentation Outline

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1. Why oil matters
2. Global oil demand
3. Global oil supply: OPEC and non OPEC production
4. Iranian production and exports
5. EU Iran oil ban implications
6. Oil prices in perspective
7. Oil price formation: Upward and downward pressures
8. Factoring in the geopolitical threat
9. Oil price scenarios



## Why Oil Matters

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- i. Oil will continue to be a prime fuel over next 30-40 years
- ii. Oil will continue to be a key economic parameter which affects global economic developments
- iii. Oil prices affect cost of natural gas, petrochemicals, food (through fertilizers and pesticides) the automotive industry and transportation in general



## Why Oil Matters

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- iv. Oil prices today affect a lot less certain important economic parameters such as inflation and wage indexation
- v. Oil prices are part of mechanism for the massive transfer of funds from consumer to producing countries and hence to global financial imbalances.



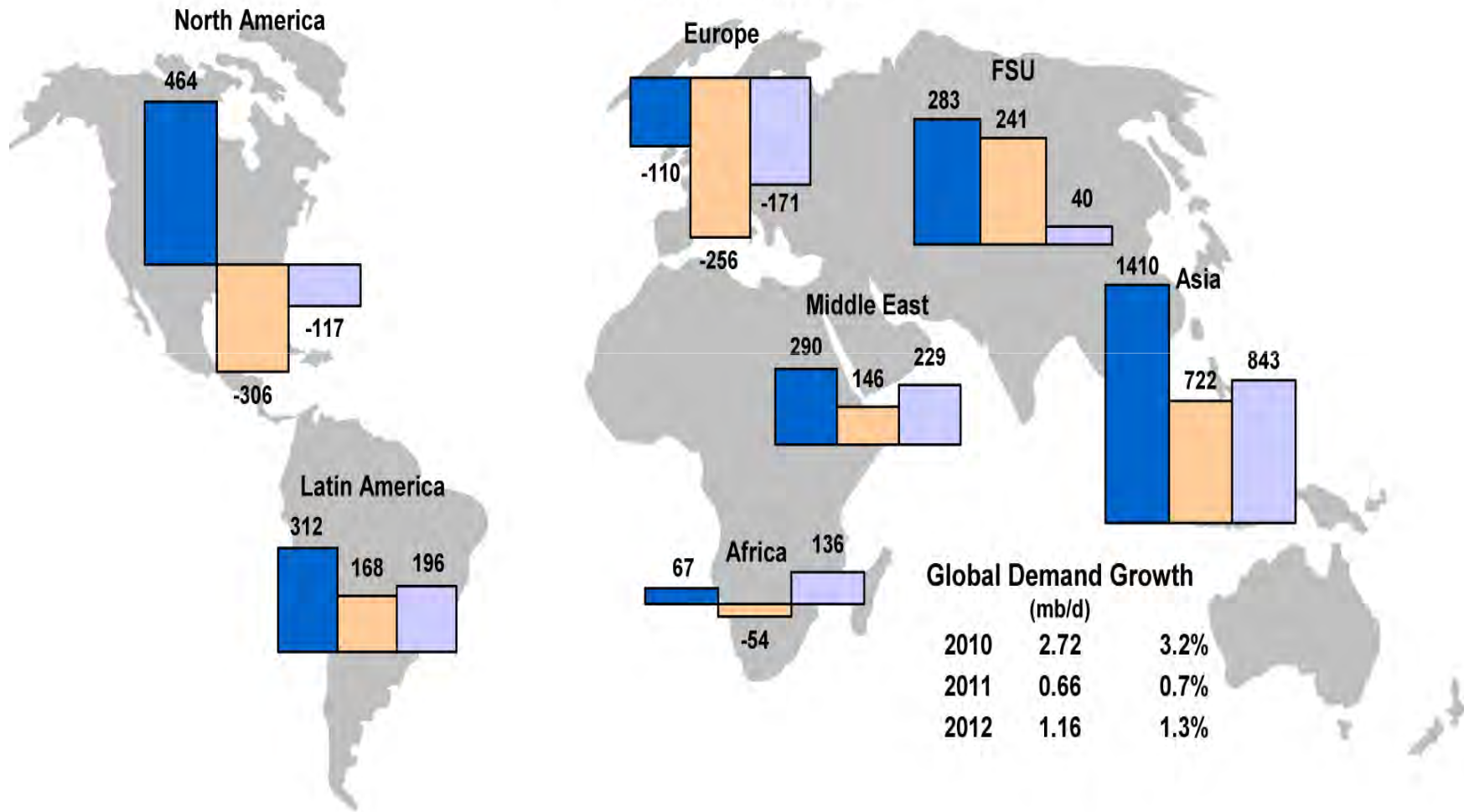
## Global Oil Demand (2010 – 2012)

*(million barrels per day)*

	2009	2010	2011	2012
Africa	3.3	3.4	3.32	3.5
Americas	29.5	30.1	29.9	30.0
Asia/Pacific	27.2	27.3	28.0	28.8
Europe	15.0	15.3	15.0	14.8
FSU	4.4	4.5	4.7	4.7
Middle East	7.4	7.8	8.0	8.3
<b>World</b>	<b>86.8</b>	<b>88.3</b>	<b>89.0</b>	<b>90.0</b>
Annual Chg (%)	2.6	3.2	0.8	1.2
Annual Chg (mb/d)	2.2	2.7	0.7	1.1
Changes from last OMR (mb/d)	0.01	0.01	-0.03	-0.22

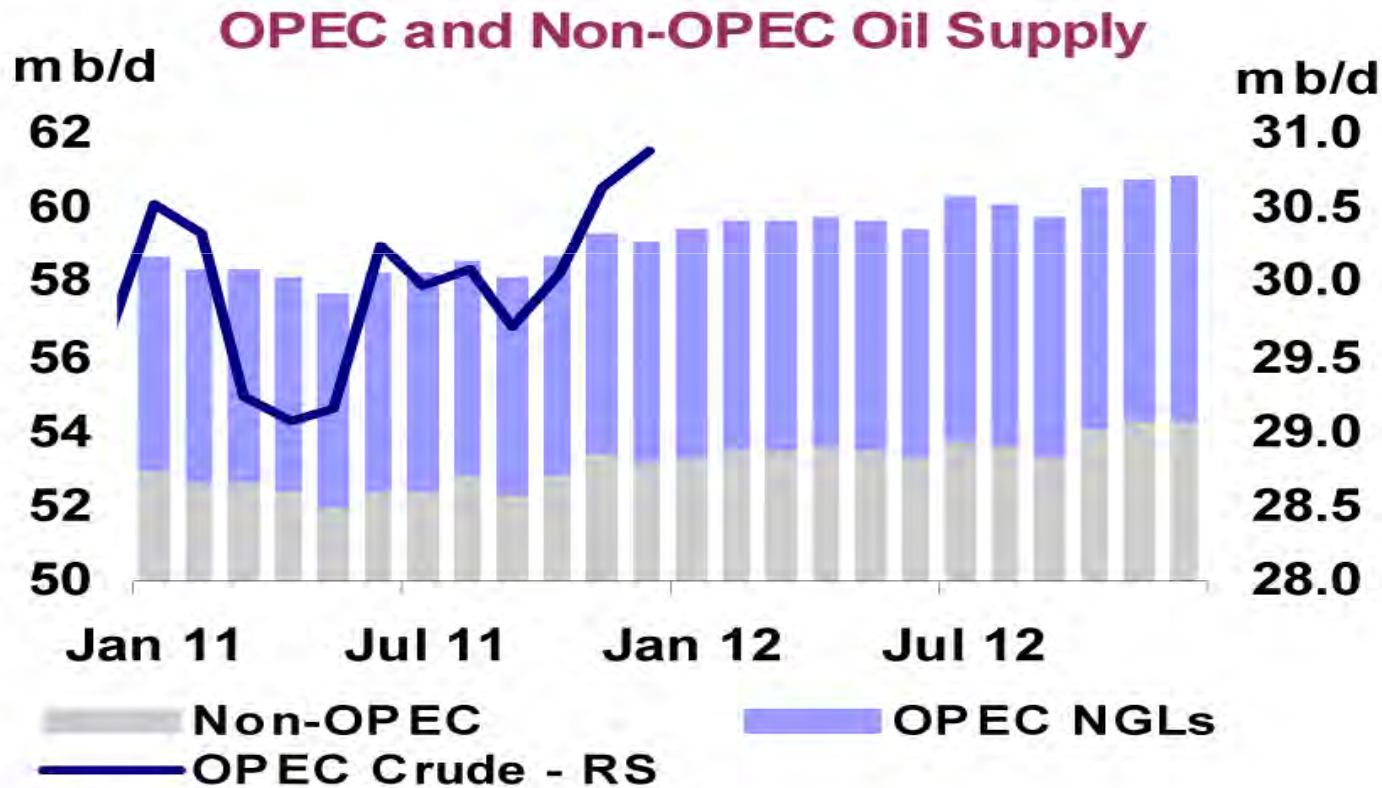
## Global Oil Demand Growth 2010/2011/2012

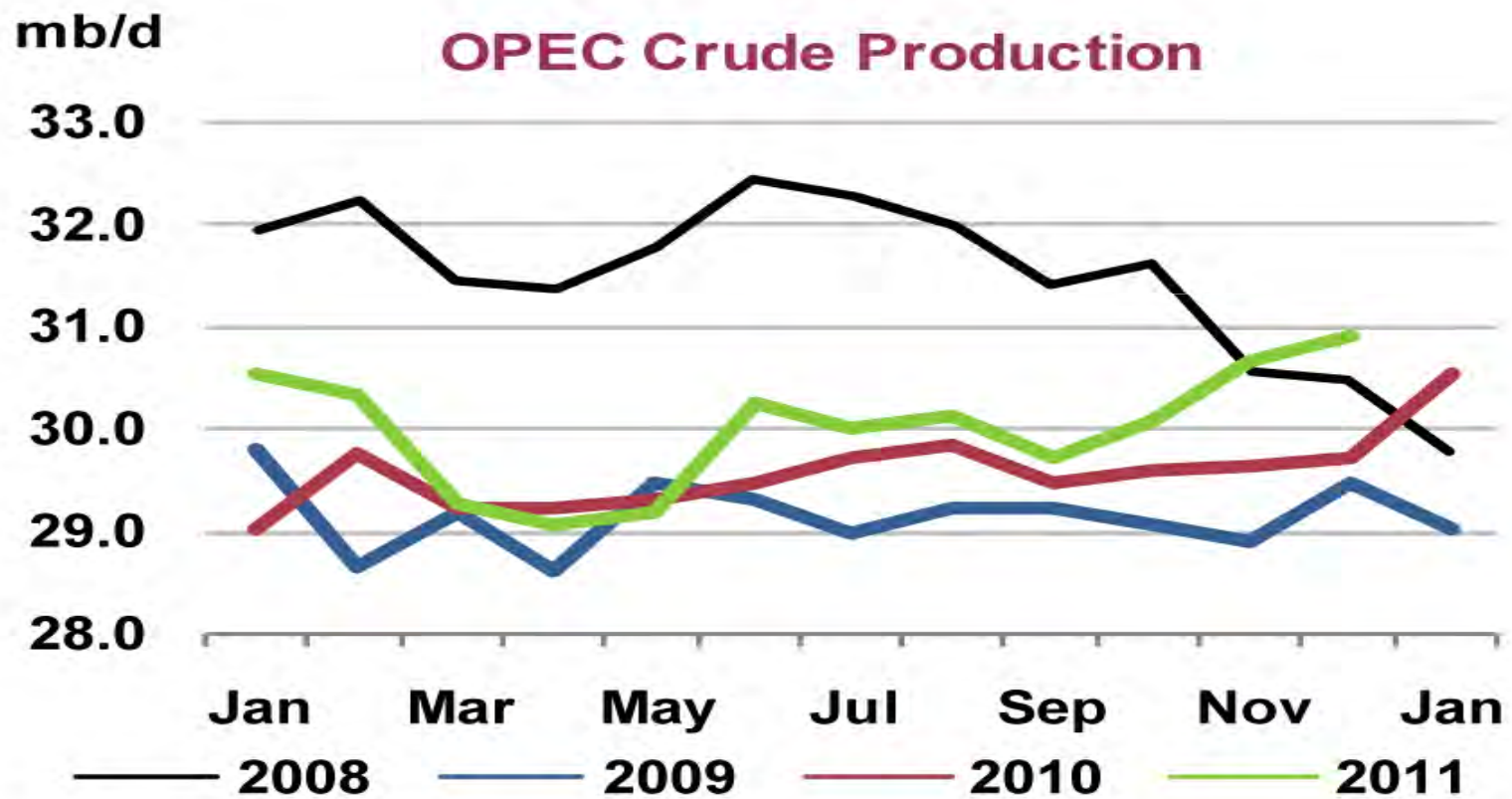
thousand barrels per day



### Global Demand Growth

	(mb/d)	%
2010	2.72	3.2%
2011	0.66	0.7%
2012	1.16	1.3%









# OPEC Crude Production

*(million barreld per day)*

	Dec 2011 Supply	Sustainable Production Capacity <sup>1</sup>	Spare Capacity Vs Dec 2011 Supply	2011 Annual Average	Vol Chg 2011 Vs 2010
Algeria	1.29	1.30	0.01	1.28	0.02
Angola	1.75	1.90	0.15	1.64	(0.09)
Ecuador	0.48	0.51	0.03	0.50	0.03
Iran	3.45	3.51	0.06	3.58	(0.13)
Kuwait <sup>2</sup>	2.62	2.84	0.22	2.50	0.21
Libya	0.80	0.75	(0.05)	0.46	(1.09)
Nigeria <sup>3</sup>	2.06	2.48	0.42	2.18	0.10
Qatar	0.82	0.90	0.08	0.80	0.02
Saudi Arabia <sup>2</sup>	9.85	12.00	2.15	9.34	0.95
UAE	2.58	2.74	0.16	2.50	0.19
Venezuela <sup>4</sup>	2.50	2.55	0.05	2.52	(0.01)
<b>OPEC-11</b>	<b>28.20</b>	<b>31.47</b>	<b>3.27</b>	<b>27.30</b>	<b>0.20</b>
Iraq	2.69	3.21	0.53	2.67	0.31
<b>Total OPEC</b>	<b>30.89</b>	<b>34.68</b>	<b>3.80</b>	<b>29.98</b>	<b>0.51</b>
<i>(excluding Iraq, Nigeria and Libya)</i>			2.85		

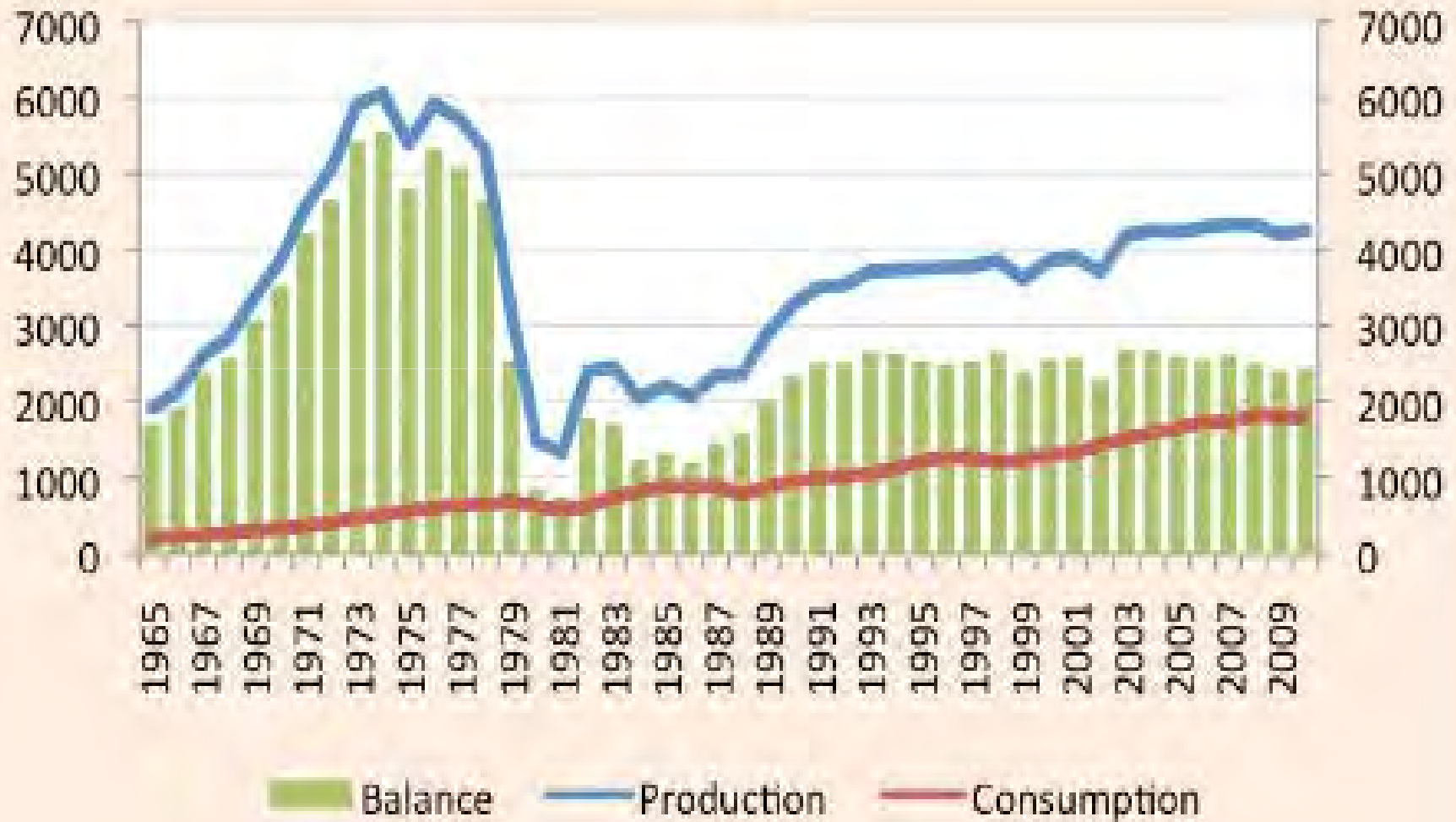
1 Capacity levels can be reached within 30 days and sustained for 90 days

2 Includes half of Neutral Zone production

3 Nigeria's current capacity estimate excludes some 200 kb/d of shut-in capacity

4 Includes upgraded Orinoco extra – heavy oil assumed at 430 kb/d in December

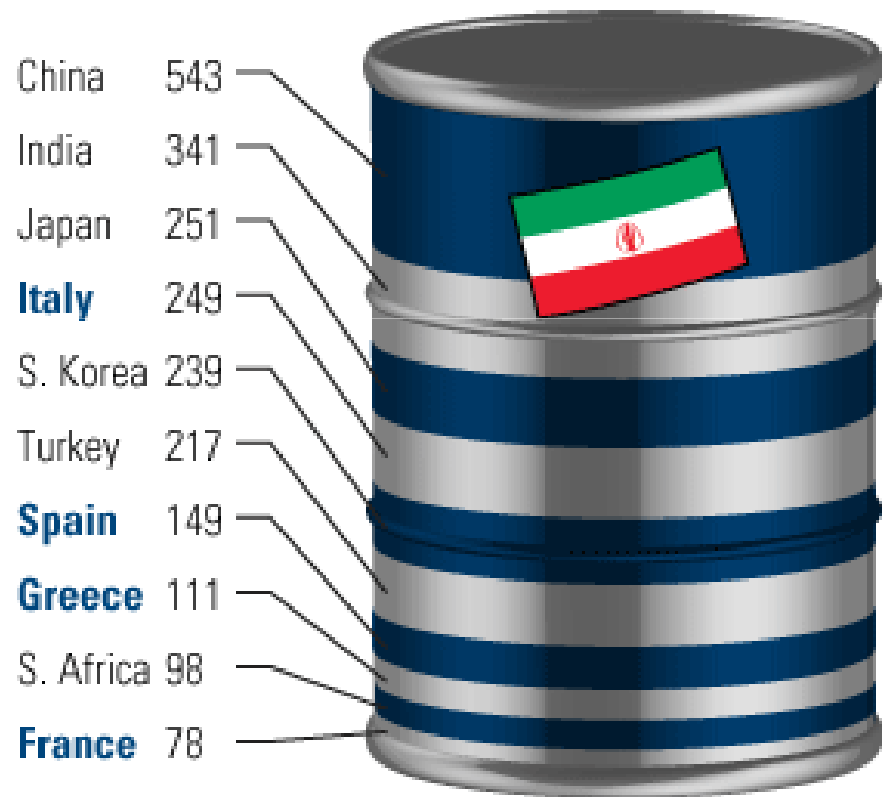
# Iran



# Iran Oil Exports

## Top 10 Iranian Oil Importers

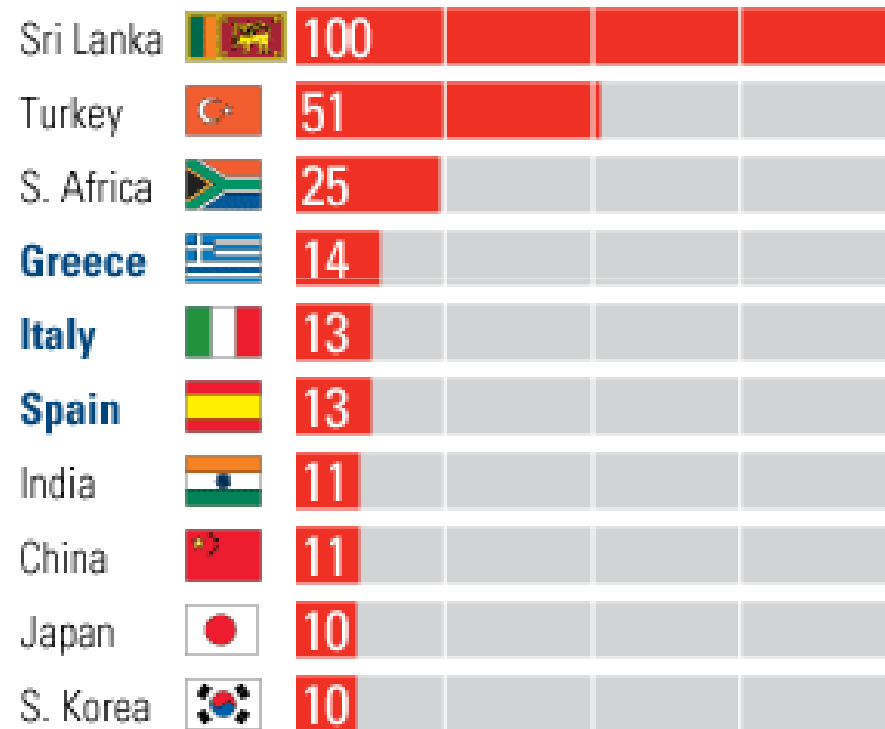
(Thousand barrels/day, Q2 '11 Data)



\*E.U. Member States

## Iran as a Percentage of Total Crude Imported

(January-June 2011)



Source: Reuters, U.S. EIA, IEA

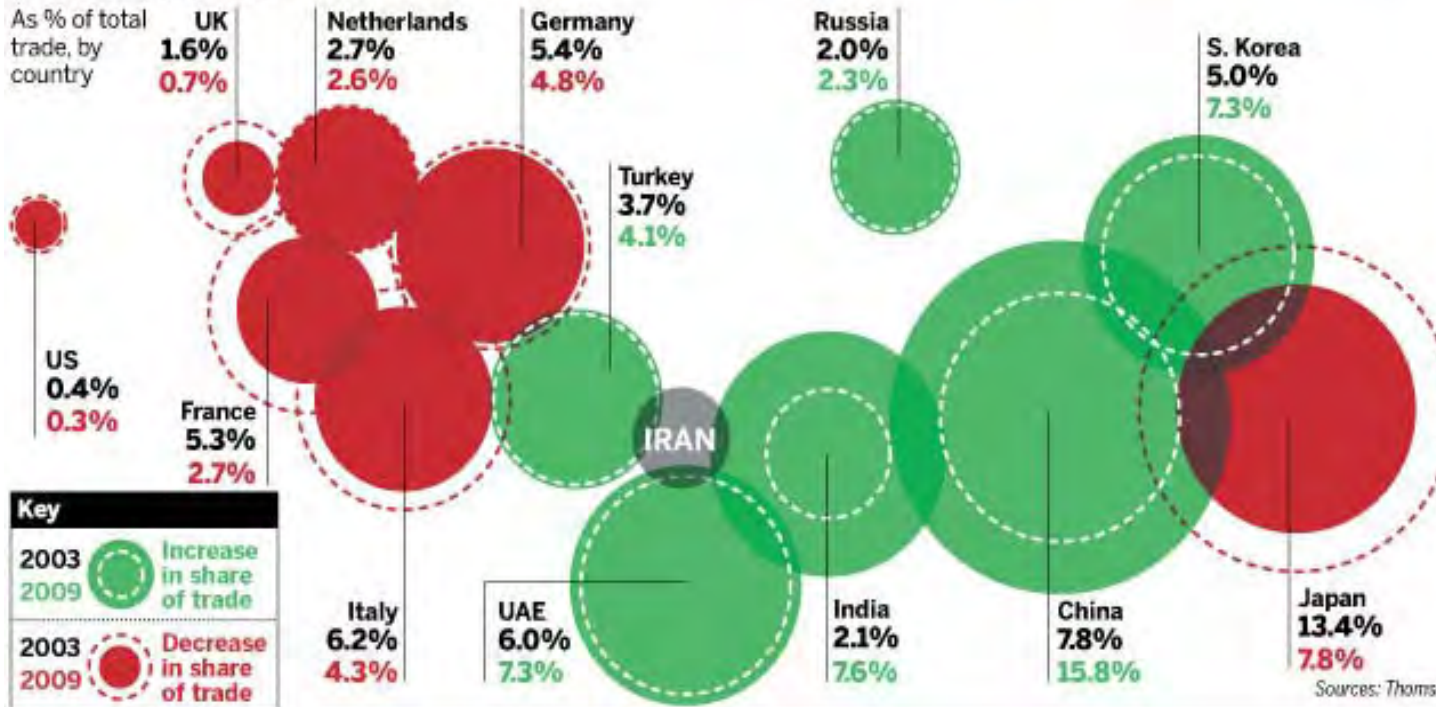
# The cost of sanctions



Photo: AP

## Iran's trading partners

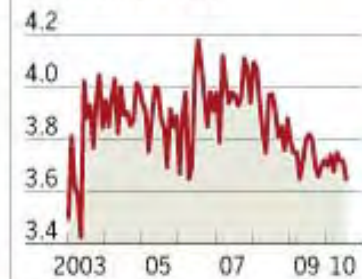
As % of total trade, by country



Key	
2003	Increase in share of trade
2009	Decrease in share of trade

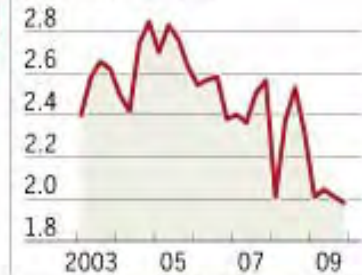
## Iran crude oil production

Barrels per day (m)



## Iran oil exports

Barrels per day (m)



Sources: Thomson Reuters Datastream; OECD/IEA; Haver Analytics



## EU Iran Oil Ban Implications

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- i. Iran pre empts EU decision and ceases exports to European destinations
- ii. 600.000 oil barrels destined to European refineries are taken off the market by end of February 2012
- iii. European refineries, especially Greek and Italian, scramble to find suitable oil
- iv. Iran scrambles to find substitute clients in Asian and African markets
- v. Iran increases oil exports to Turkey, China and India
- vi. New midterm and long term supply deals close as well as spot cargoes, albeit at higher prices
- vii. OPEC crude basket oil price rises well above present range of \$110 - \$112

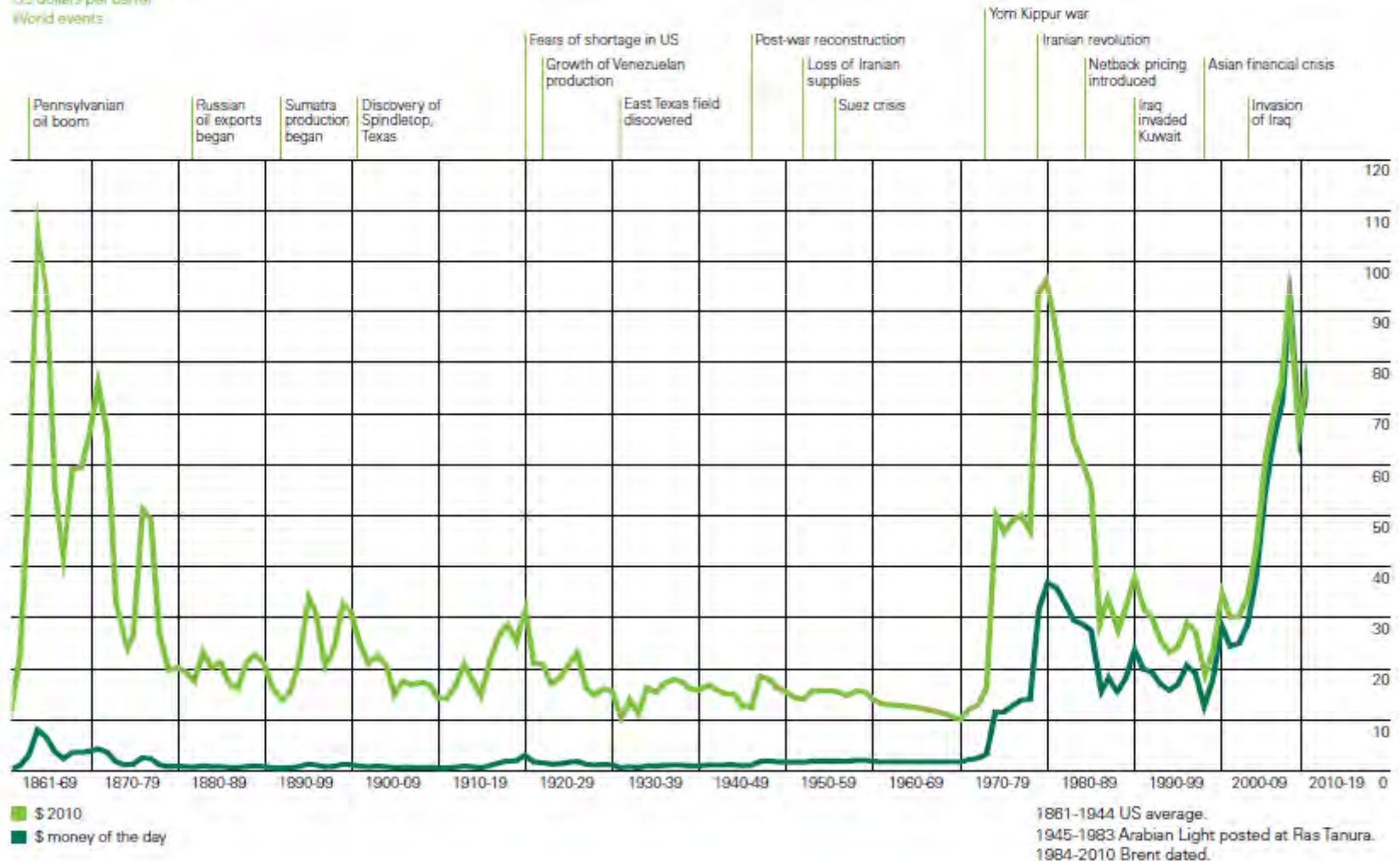




# Historical Variation of Crude Oil Prices

## Crude oil prices 1861-2010

US dollars per barrel  
World events:





# Oil Price Formation

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- Over the last 12 months international oil prices appear resilient to adverse market pressures and are moving comfortably above the \$100 per barrel region.
- 2011 is the first year in history that such high average yearly oil prices will have been recorded.
- OPEC reference basket yearly average price for 2011 reached \$107.46

## **Main upward pressures**

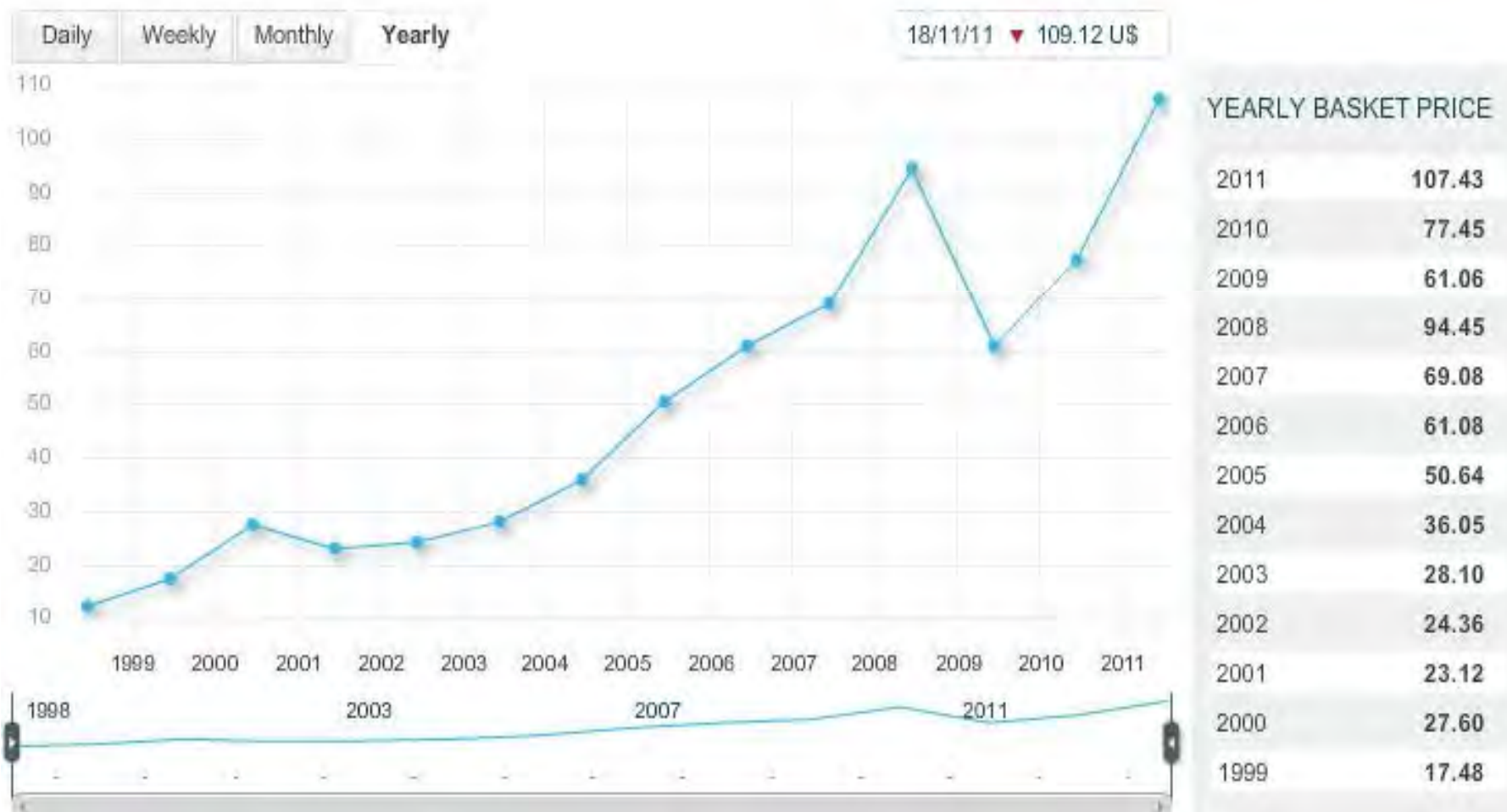
- High demand outside the OECD area, low international stocks, occasional disruptions in supply (i.e. Libya, Syria, Yemen, Nigeria)
- Emerging geopolitical uncertainty due to Iran's advancing nuclear programme and now the EU ban
- Need of certain OPEC members to maintain high oil prices in order to fund extensive welfare programmes

## **Main downward pressures**

- Great uncertainty in the financial markets, due to the eurozone crisis, which acts as a destabilizer thus helping maintain strong price volatility
- Dollar/ Euro parity favours dollar linked oil transactions
- Outlook for slower global economic growth for 2012 (i.e. 3,25%)



# OPEC Basket Price (1999-2011)







## ICE Brent Crude Futures - Intraday





## ICE Brent Crude Futures – 3 months





## ICE Brent Crude Futures – 1 Year





# Short Term Price Pressures (1Q2012)

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## Downward

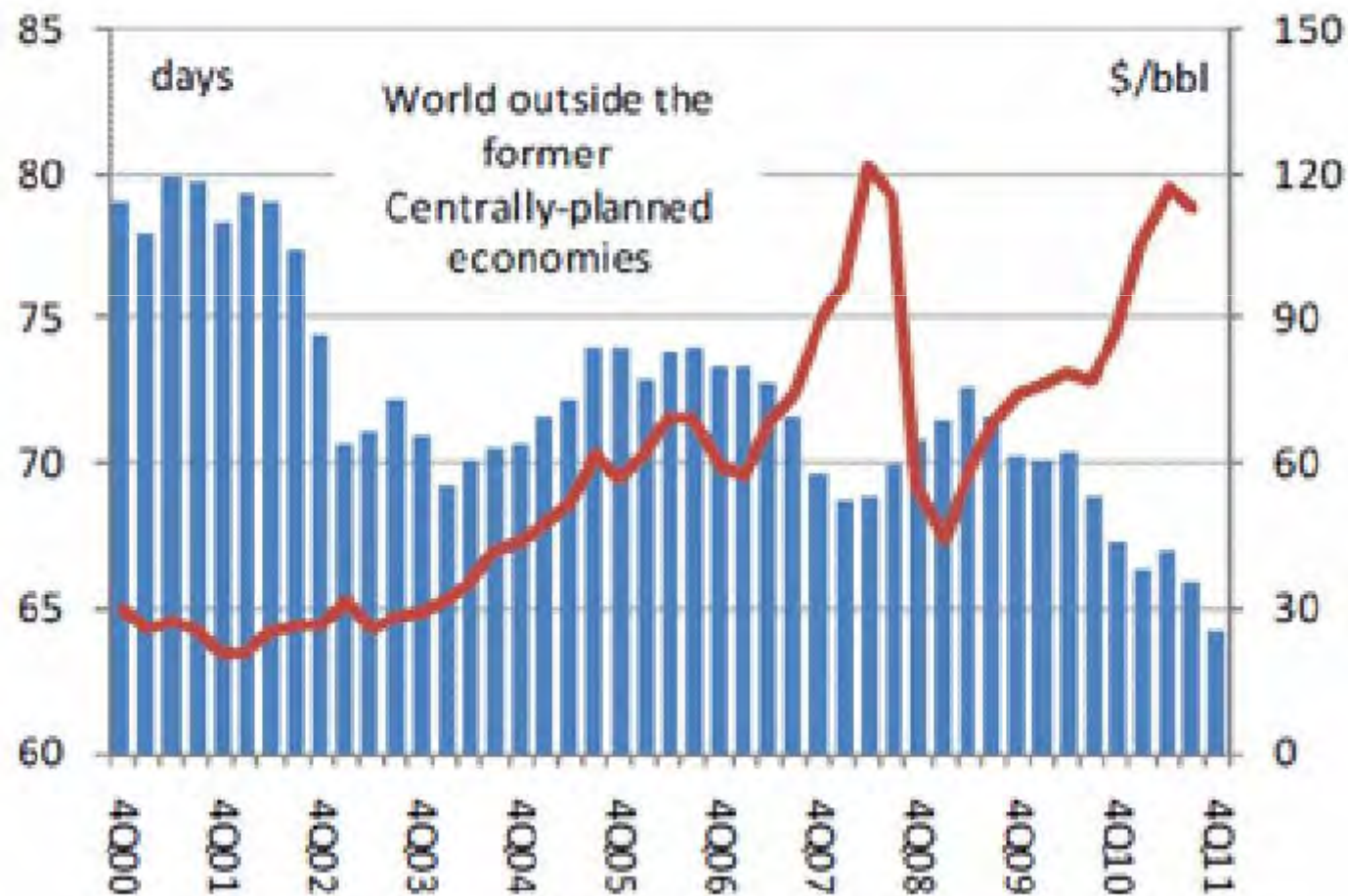
- Eurozone crisis- rising yields on Italian and Spanish 10 year bonds
- Greek default fears could lead into full scale systemic crisis
- Weak eurozone consumer confidence figures published on November 22nd
- Disappointing German GDP figures for 3Q11, released on November 15th
- Reduced estimates on YoY global oil demand growth for both 2011 and 2012
- Libyan production outpaces forecast
- Increased North Dakota oil production and drilling

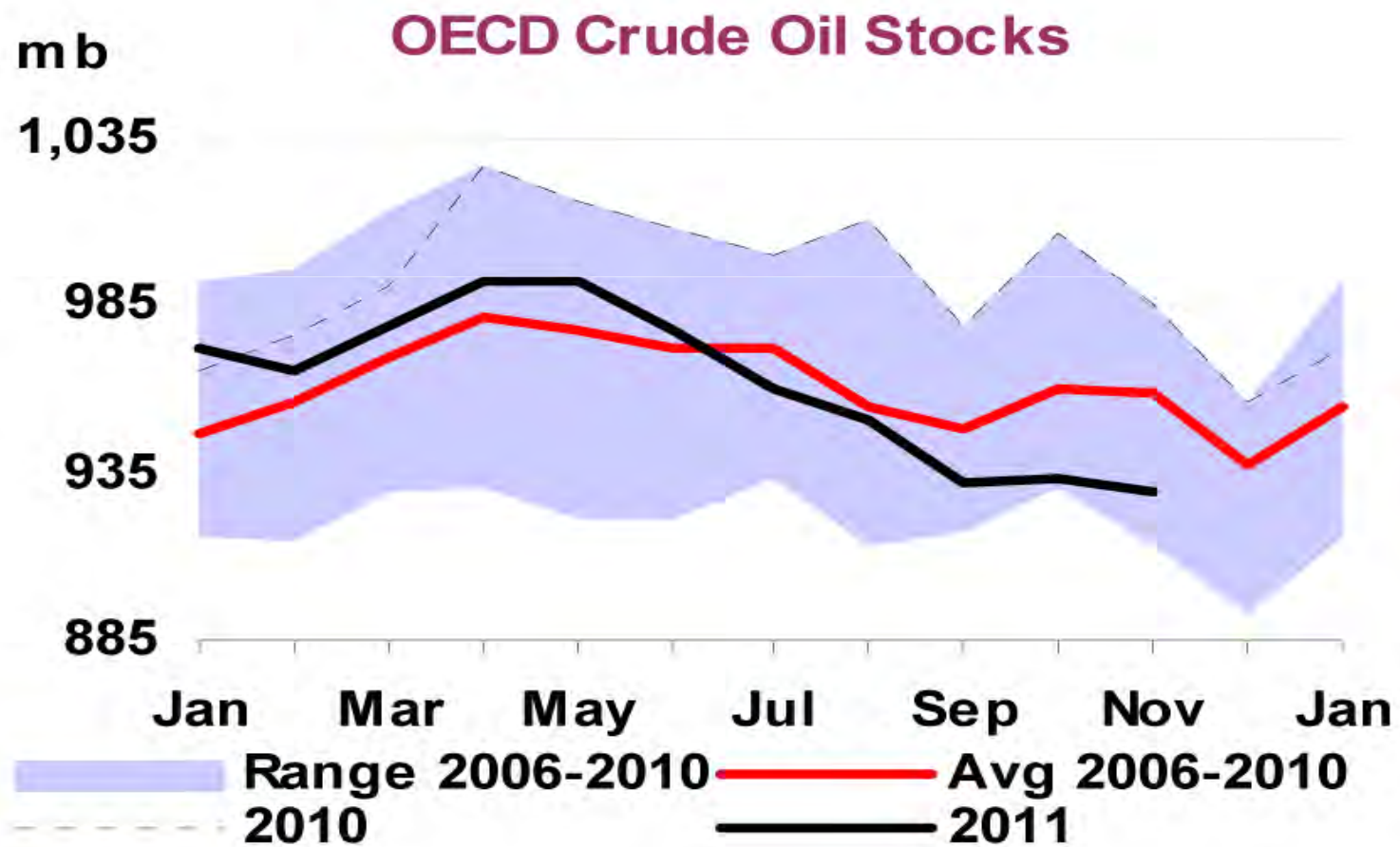
## Upward

- Increase in Chinese diesel imports could lead to tightening market
- Improving US industrial production
- Increasing middle distillate demand in the US
- Further declines in US crude and oil product inventories
- Slight reduction in OPEC oil supply
- Continuing decrease of FSU net exports of crude and petroleum products
- Terrorist attacks on oil installations in Nigeria
- Persisting Syria unrest
- Mounting fears of Israeli strike against Iranian nuclear facilities



# Oil Prices and Global Stock Cover











## Factoring in the Geopolitical Threat- *Scenario A*

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- Military and naval built up continues from USA, UK, French and Iranian side.
- Tensions rise as Iran test fires new missiles
- Tensions rise as Iran continues uranium enrichment inspite of efforts to engage IAEA in discussions
- USA increases pressure on Japan and S. Korea to suspend Iran oil imports
- Iranian oil exports volume decreases temporarily by 0.3 – 0.5 million barrels per day
- International oil prices head for \$120 -130 region



# Key Petroleum Sector Facilities





## Factoring in the Geopolitical Threat- *Scenario B*

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- Responding to bigger than anticipated drop in oil exports Iran decides to restrict and slow ships passage through the Strait of Hormuz
- Iran enforces periodic onboard checks on incoming and outgoing vessels with the excuse of anti terrorist prevention measures
- Oil cargo traffic through the Strait of Hormuz slows down and oil prices increase further (possibly above \$130) on fears of actual confrontation with US 5<sup>th</sup> Fleet
- Gulf oil supply restrictions start to affect EU and Far East refineries
- Strong Russian – Chinese pressure for USA – EU to ease sanctions
- China – India increase oil imports from Iran and pressure Tehran to normalize oil movement through the Straits of Hormuz
- Oil prices drop back to \$105 - \$115 range



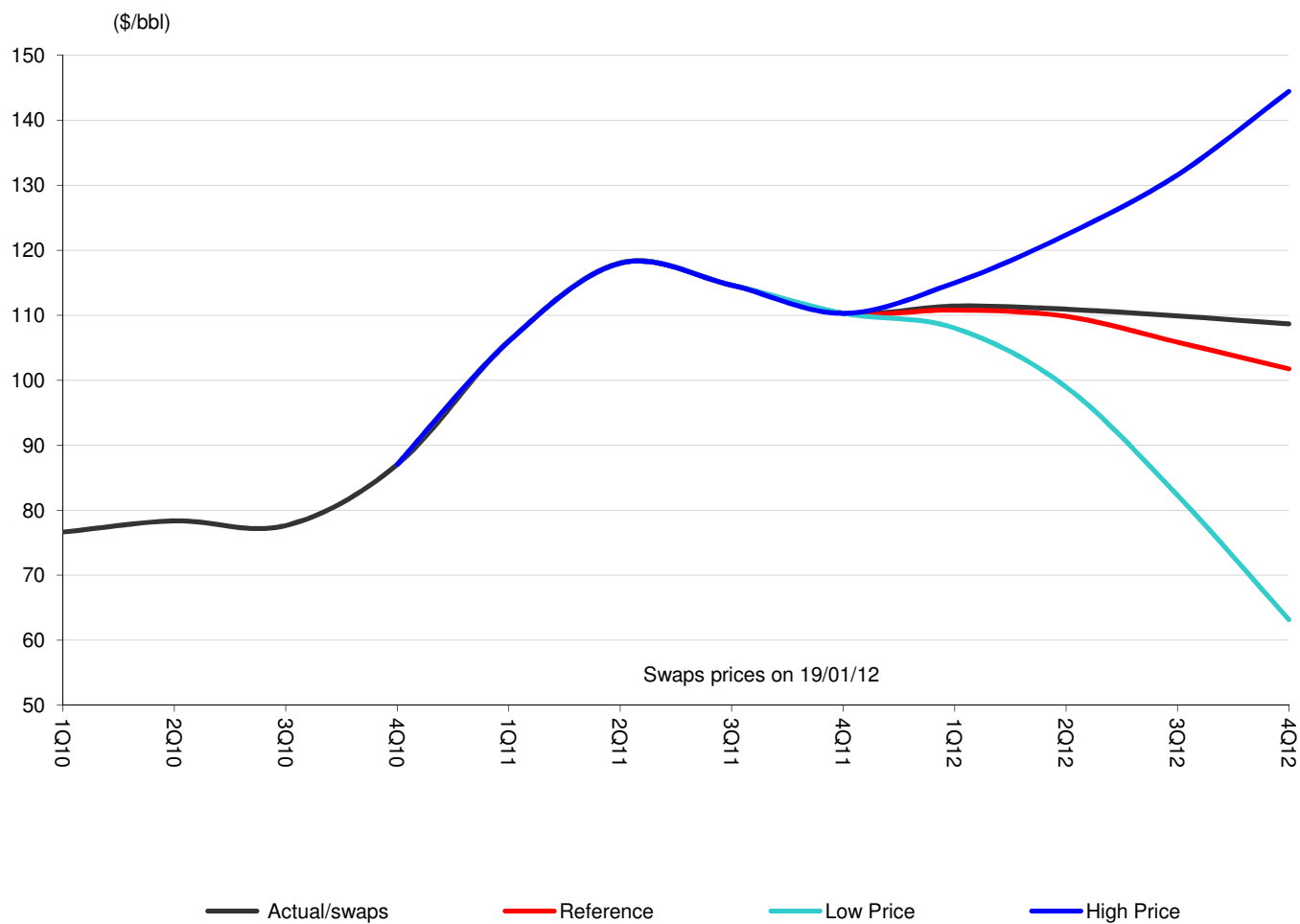
## Factoring in the Geopolitical Factor - *Scenario C*

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- In response to Iranian imposed traffic restrictions through Hormuz Straits USA – Allies offer naval protection by escorting tankers to prevent boarding of ships by Iranian RSGS
- Skirmishes between USA – Allies and Iranian naval patrol boats
- Iran mines Hormuz Straits
- Tanker flow seriously restricted but not altogether stopped, while USA – Allies and Iranian navy engage in open warfare
- Oil price rises to US 150 per barrel and possibly higher
- USA – Allied naval supremacy manage to keep Hormuz Straits open
- Israel takes advantage of the situation and decides to carry out surgical bombing of Iranian nuclear targets assisted (secretly) by US 5<sup>th</sup> Fleet
- Iranian retaliatory capability seriously impaired
- Oil price rises shortly for few days above US 180 per barrel only to drop back to normal levels after 2 weeks on account of successful air strikes against Iranian targets



# CGES – Oil Price Scenarios





**THANK FOR YOUR  
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