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The oil turbulence

- Just few months ago, the big issue would have been high oil prices: whether they were sustainable, whether markets were functioning properly, and whether something should be done to regulate speculation

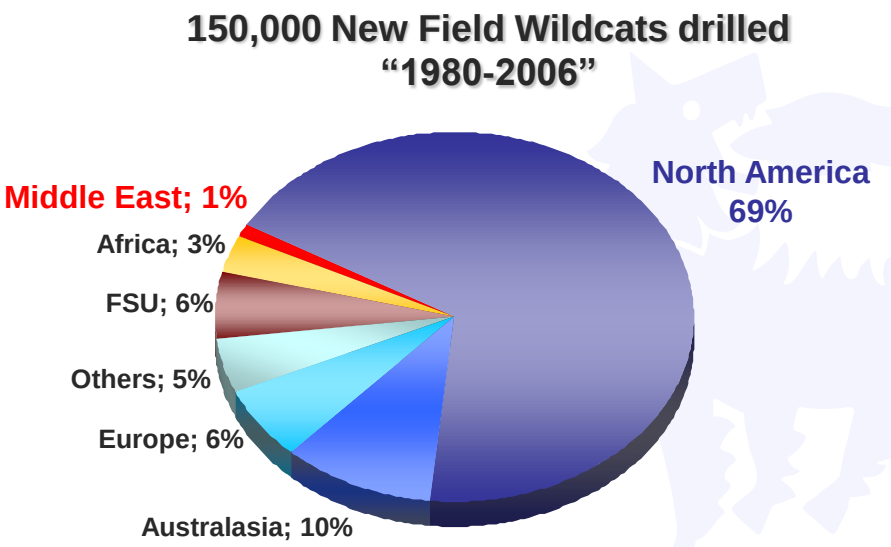
- These days, energy ministers and oil executives focus instead on the oil-price collapse: the pros and cons of further production cuts, the new outlook for oil and the impact this will have on the projects needed to secure supply in future

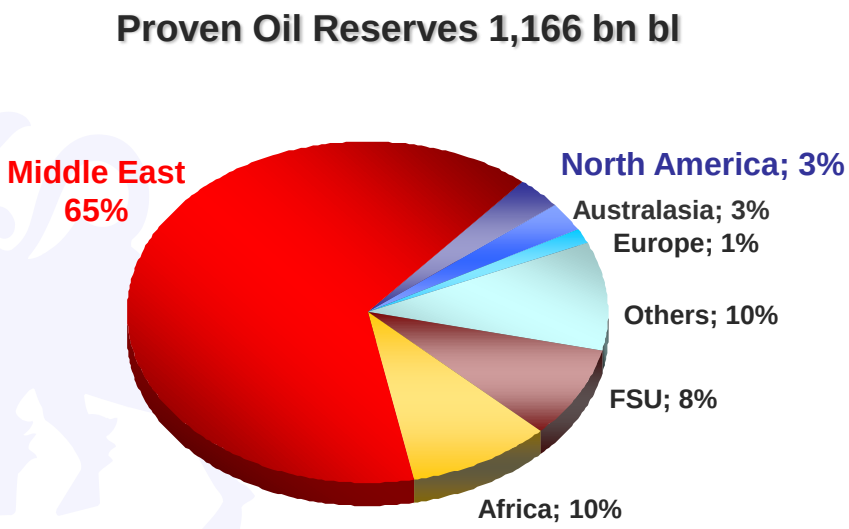
- Our sector is no stranger to cycles. But the turbulence we are currently experiencing - with oil doubling in the 9 months to July 2008 and then losing two thirds of its value in the following 6 months – is unprecedented

Oil price boom

- **15 years of low prices, and the consequent underinvestment in exploration and production. From the mid-1980s to the end of the 1990s, 70% of global exploration was carried out in the US and Canada, mature areas which hold only 3% of global reserves. By contrast, only 3% of exploration was carried out in the Middle East, which accounts for 70% of global reserves. Add in growing demand, driven by the economic expansion of China and India, and what you get is declining spare capacity, vulnerable markets, global uncertainty and rising prices.**

Little is known about the world's underground oil resources





Source: IHS PEPS, WO&GR 2008

Oil price fall

- **Oil price fall is driven by three main reasons**:

1. **falling demand,**
2. **uncertainty about economic prospects,**
3. **rising production capacity.**

Oil price fall

- When oil prices rise beyond a certain level, demand for oil products in the developed world suddenly becomes elastic. And given that the OECD still accounts for 60% of consumption, this has a big impact on global demand:
  - when the barrel rises above $110 -$120 dollars, even the most obstinate consumer just can't make his or her dollar stretch;
  - for example, between 2000 and 2008, per capita energy spending in the US almost tripled to $7000 dollars a year, around a fifth of the average per capita annual income;
  - as a result, US demand fell by almost a million barrels a day;
  - this trend was already starting to emerge elsewhere. In the last two years, consumption in France, Germany, the UK and Italy has declined by more than half a million barrels of oil a day, and by a quarter of a million barrels in Japan. And all over the developed world, high oil prices have sparked increased interest in energy saving measures, whether it be energy efficient city lighting schemes or new eco-friendly skyscrapers;
  - already, OPEC is predicting that in 2009 demand for its oil will be at least a million barrels a day lower than in 2008.

Oil price fall

- The extent to which the real economy will suffer in the aftermath of the financial crisis is still unclear but it could actually lead oil demand further south

- The rising oil prices stimulated investments in production capacity. Indeed, global investments in the upstream sector doubled between 2002 and 2007. As a result, production capacity has also started to increase, albeit at a slower rate than investments.

Three critical issues

- **Besides, in this particular phase, a sector like ours, where a 5-year view counts as short term, is even more plagued by the following three different issues**

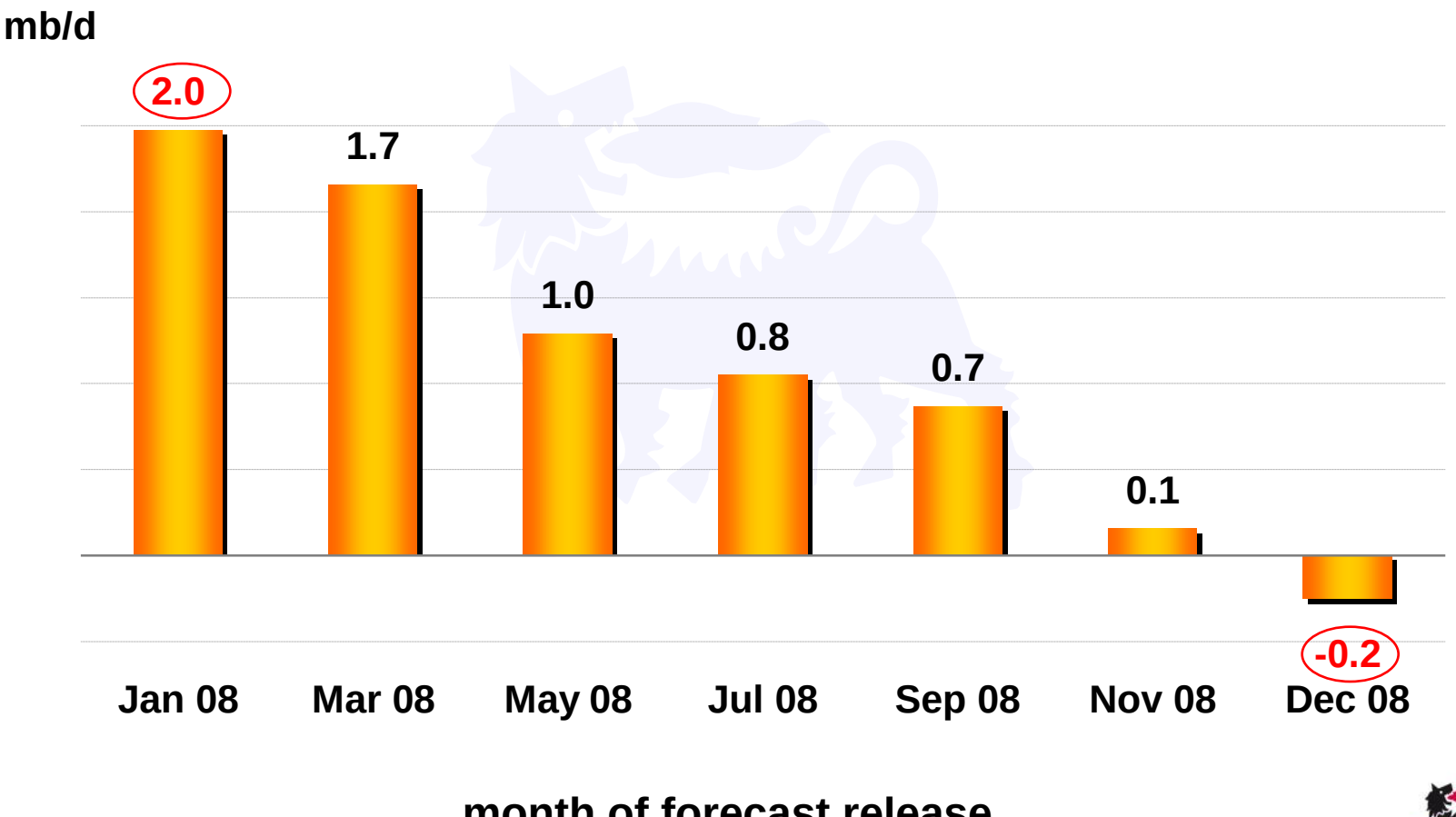
  1. **poor quality of oil data**
  2. **the recurrence of peak oil theories**
  3. **the financial speculation**

Poor quality of oil data

- China and many other developing nations have yet to implement a full reporting system, and even the consumption data for OECD countries is only available after a long time lag. On the production side, OPEC itself has to rely on secondary sources to gauge the production rate of its members
- Poor data quality fogs up crystal balls all over the world, not least at the IEA: the Agency has consistently overestimated demand since 2004. In January 2007 it asserted that in 2008 global demand would rise by 2 million barrels a day. From February onwards, the Agency gradually nibbled away at its own forecast until in December when it finally admitted that 2008 demand would actually fall, by 200,000 barrels a day
- It seems to have failed to spot that demand, rather than rocketing out of control, is actually on a rather moderate growth trend, with a meagre average increase of 1.4% a year since the turn of the century. The same rate we saw in the decade before, when demand growth was widely perceived to be sluggish
- By consistently forecasting that demand growth would outpace supply growth, the IEA led many market operators to predict an impending oil crisis and contributed to the spread of groundless anxieties in the market

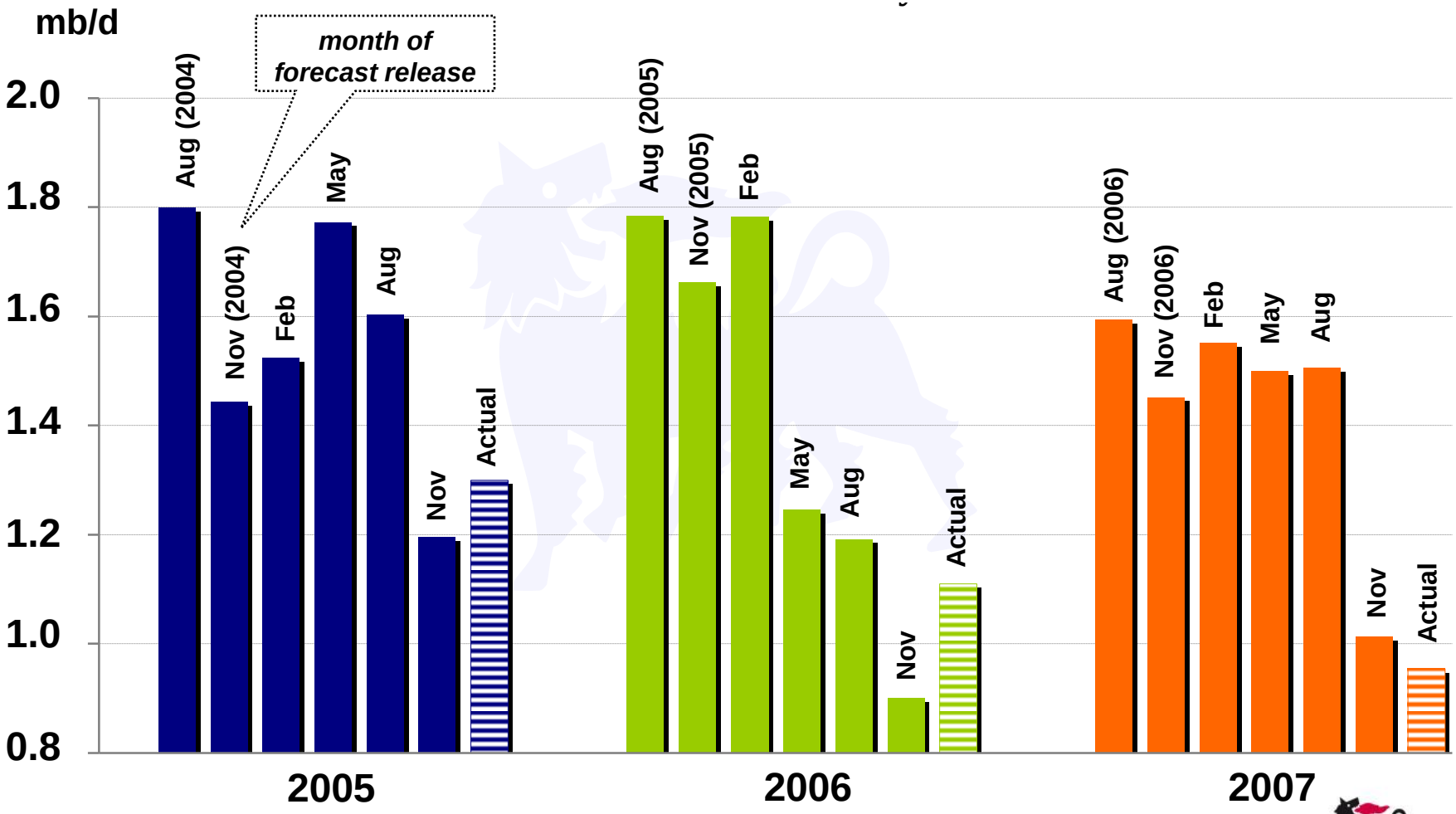
IEA forecasts: growth of world oil demand on yearly basis (2008 vs 2007)

From +2.0 mb/d (2.3%) estimated in January to a forecast of -0.2 at year end



IEA forecasts: growth of world oil demand on yearly basis

Downward revisions also throughout 2005, 2006 and 2007



The recurrence of peak oil theories

- Over the last few years, the imminent end of oil has been widely prophesised – by some influential figures inside the industry as well - for the fourth time since the beginning of the oil age.

- But rumours about oil's demise have been greatly exaggerated.

- Even if you just add up proved, conventional recoverable and unconventional resources, we can count on 130 more years of oil. And this figure fails to take into account the significant increase in recovery rates which we can achieve through technological advances.

Financial speculation

- As if poor data quality and fears about the end of oil weren't enough, the oil price is also buffeted by hoards of ill-informed speculators, who bought and sold 1.4 billion of paper barrels every day on average during the booming times, compared to daily global consumption of only 85 million. And the Brent and WTI prices that the speculators influence have little to do with the price of real oil on any given day

The impact of the price turmoil

- Spiking and plunging oil prices certainly make life complicated for oil companies, whether they be international or national, as they try to plan something in the region of $1.5 trillion of investments over the next 5 years and provide adequate returns to shareholders. Uncertainty about whether oil will rise to $200 a barrel or crash to $20 also impacts our human resource management, our R&D efforts, and doesn't make it easy to draw up fair and sensible production sharing agreements
- When oil prices are lower than expected, planned investments need to be delayed. And when prices rise too high, the surplus cash tends to cause asset-price bubbles, which are then pricked when oil prices come down again
- In the west, low oil prices encourage waste, and detract attention from the development of alternative energy sources
- high oil prices mean inflation and pinch consumer spending. Their impact is also regressive, hitting the poorest segments of the population disproportionately hard
- Oil-price spikes and falls have important geopolitical impacts, periodically shifting power between countries which have oil and countries which use oil

A way towards stability

- The time is ripe for the oil industry as a whole, producers and consumers, to move beyond short term power shifts and work together in the interest of mutually beneficial stability

- One idea would be to work towards a new contractual framework which ensures that producers can count on stable demand for their oil and stable revenues, perhaps taking a leaf out of the take-or-pay structures which are common in the gas market. This would give producers rational incentives to invest in exploration and production capacity

- it would also make sense to work out some sort of remuneration for spare capacity, along the lines of what happens in the electricity market. Spare capacity has enormous value for consumers, ensuring security of supply and limiting the uncertainty that feeds speculation. But for producers it currently constitutes an investment which doesn't provide a return

A way towards stability

- The exact shape and nature of a new model for the oil industry would need to be carefully discussed. But it is in everyone's interest to forsake their short-term interests and work towards a compromise

- Just as consumers need supply stability, producers need demand stability. And the whole world needs to ensure oil is used rationally and efficiently. In order to safeguard the environment, but also to buy scientists working on alternative energy the time they need to produce truly effective energy solutions