Dawn's Early Light:

What do we think we have learned about oil markets in the last half decade?

LCM RESEARCH

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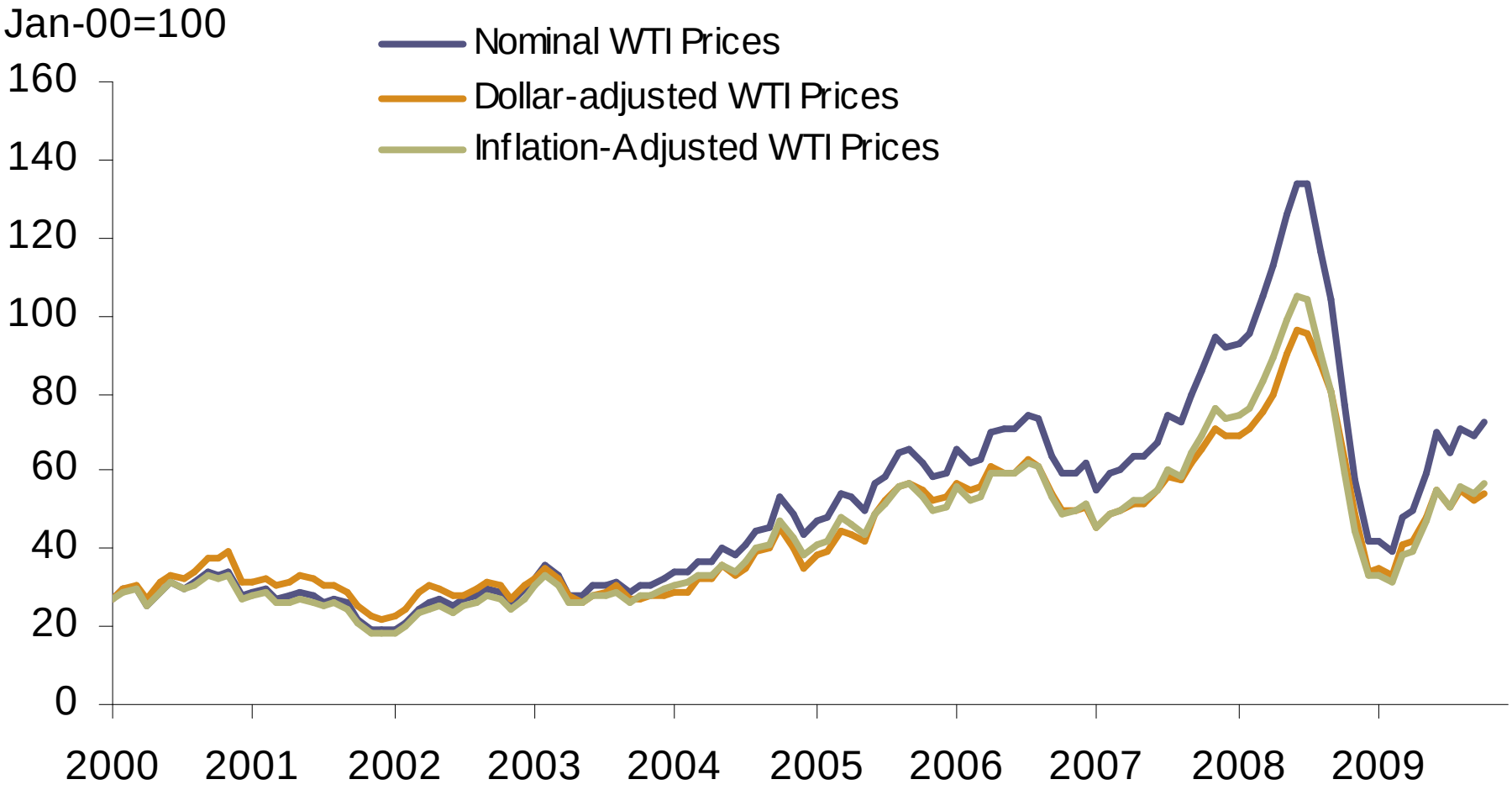
Oil prices peaked in July 2008, slid into winter, rebounded in Q2, stalled

WTI reached an all-time high of $147.27/bbl, but the price in real terms (2000$) topped out at $96.84. The 36% October '09 slide was the largest monthly drop ever. Prompt prices rebounded to half the 2008 peak. What's in store from now?

Real and nominal WTI (2000-09 monthly average)



Source: LCMC

There's no market consensus about conditions, directions

- September OPEC meeting held the line on output; inventories are stubbornly high at 62-63 days of forward demand cover, implying weakness, lower prices, but prices were consistently stable within $65-75 until recent breakout
- Oil prices cannot be explained by market fundamentals, but are being driven by expectations, financial flows – no one is in agreement on whether or how long this can last
- Natural gas prices are a fraction of their normal relationship to oil; should price convergence be anticipated? The market is split on whether convergence will occur and, if so, when.
- What drives market differences?
  - Views on depletion and, whether 2002-04 was a watershed period
  - Views on whether a recovery will be U of V shaped and implications for oil demand
  - Views on how to telescope the future
  - Inevitably, there are major difference of views on the past, the present, the future, and major drivers

Issue 1: Whose **history** foretells the future

- Two different historical views are in contention:
  1. 2003-05 was a turning point, the beginning of the end of the age of oil
     - Depletion has set in and will overtake all conventional new discoveries
     - Emerging market demand is relentless and will push against supply limits
     - Tensions between oil producers and consumers will intensify; the re-birth of resource nationalism has just begun
     - As soon as global economic recovery sets in, prices will start to escalate again
     - What's true of oil is true of most commodities

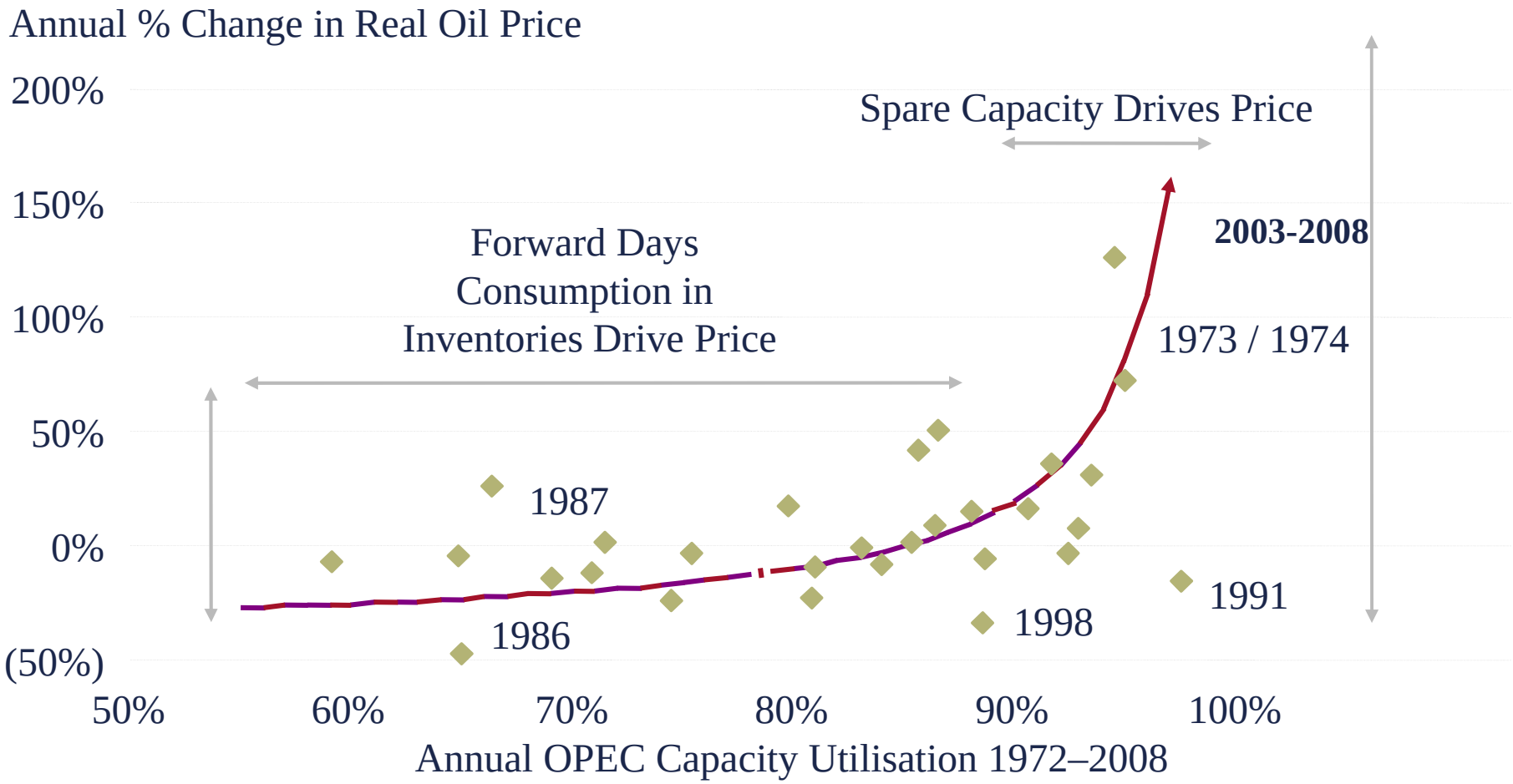
  2. 2003-08 demonstrated normal unfolding of oil as cyclical commodity, perhaps with difference that financial flows now play disproportionate role in prices
     - After 1981, due to overcapacities, a long period of under investment affected all aspects of the oil industry, from the well-head to the burner tip, highlighting capacity constraints
     - By happenstance, a similar cyclical stage set in for most other commodities
     - Higher prices, provoked by higher demand, capacity constraints, set off an investment boom that is only now beginning to have an impact in triggering new supplies

As with all historically-based arguments, it is hard to weigh which one is right

Everyone agrees that prices rose exponentially, triggering both a demand response and capex for new supply and new refining capacity

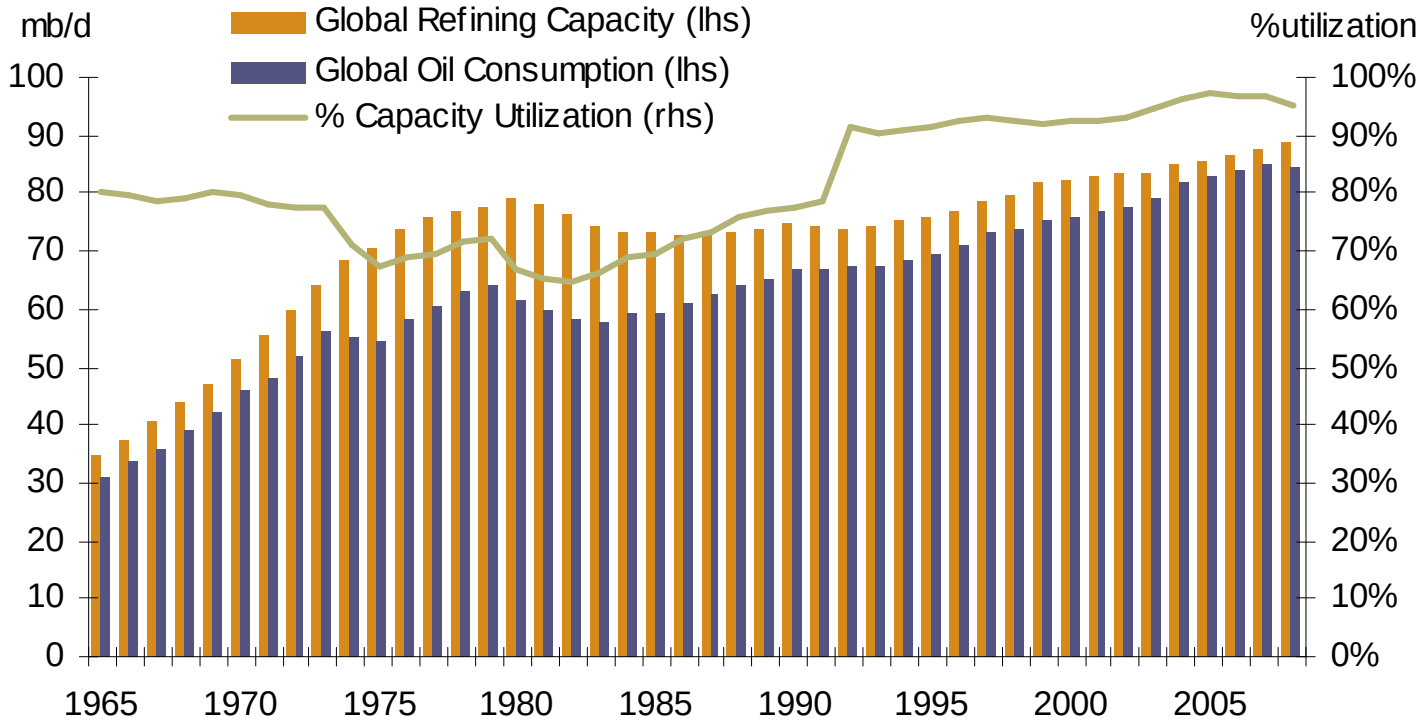
Higher prices also triggered resource nationalism, withdrawal of acreage for investors, even higher prices – the same story across commodities, and time spreads turned backwardated

In Soft Markets, Inventories Count; in Tight Markets, Capacity Counts



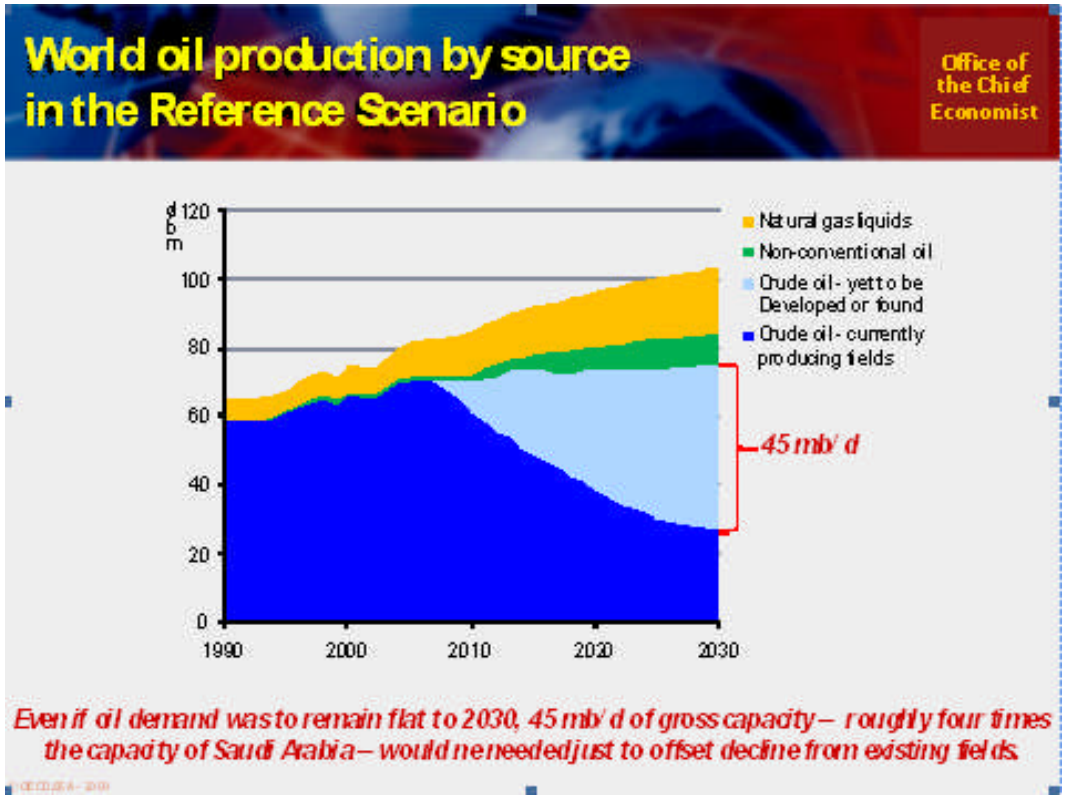
Source: U.S. DOE/EIA; LCMC Estimates.

The tightening was as important downstream as upstream



- Virtually no new refining capacity was built after 1980, when world consumption peaked at 60m b/d and world refining capacity peaked at 80m b/d
- By 2003, with world demand bumping against refining constraints, refining cracks exploded, triggering- with 5-year lead times- enough refining construction to meet foreseeable global demand through 2015
- Today's surplus refining capacity is about 7m b/d and is expected to continue to grow

But is this a permanent change? The IEA has become a major proponent of peak oil



- Depletion rates are accelerating, but does this reflect worsening geology or is it an artifact of reduced investment flows?
- A purely empirical review of data supports the IEA/peak oil argument – there have been no new giant fields discovered in a long time
- Charlie Maxwell: 1930: discovered 10 bil bbls, used 1.5 bil bbls; 1964: found 48 billion bbls, used 12 bil bbls; 1988: found 23 bil bbls, used 23 bil bbls; 2007: found 7 bil bbls, used 31 bil bbls

But the loss of OPEC capacity after 2002, not non-OPEC depletion, was the biggest surprise in the oil market

The main reason companies failed to raise upstream capex, whether EXXON or Aramco, was the expected rise in low cost OPEC production

- At the start of this decade, it was commonly believed that OPEC could balance the market indefinitely. The picture for 2008 from the vantage point of 1998:
  - Venezuela: installed infrastructure capacity of 3.6m b/d going to 5.2m b/d
  - Iraq: available capacity of 2.8m b/d, rising to 4m b/d
  - Iran: installed capacity of 3.8m b/d, rising to 5m b/d
  - Nigeria: installed capacity of 2.3m b/d, rising to 4m b/d
  - ***For these four countries, a rise in capacity of 5.7m b/d: Why should anyone, including Saudi Arabia, invest in more capacity with 6m b/d spare and shut in available?***

- The reality of 2008:
  - Venezuela's capacity of 2.2m b/d, 3m b/d under expectations
  - Iraq's capacity at 2.3m b/d, 1.7m b/d under expectations
  - Iran's capacity at 4m b/d, 1 m b/d under expectations
  - Nigeria's available capacity at 1.9, 2.1m b/d under expectations
  - ***Total loss of capacity vs. expectations of 7.8m b/d!***

And what did higher prices trigger?

Like all commodity cycles, an expansionary period creates the seeds of its own destruction

- Higher refinery margins sparked a wave of investments in sophisticated new plants in China, India, the Middle East, Russia and even the US;
  - Guarantees no price increases led by petroleum product shortages as in 2007-08
  - Refining moves from a highly profitable to a marginal investment sector for a while
- Tight markets led Saudi Arabia to massively invest in new production capacity for political and economic reasons, recreating a period of spare production capacity
- High prices led oil companies to spend money to develop frontier resources with long lead times:
  - Conventional resources in hard to reach places (e.g. Caspian)
  - Deep water
  - Oil sands
- Higher demand led to massive investments in tankers and midstream infrastructure (pipelines, ports, storage)
- Higher prices triggered investments in oil and gas field services and equipment, with massive spending creating higher finding and development costs, but they are now coming down, and technological transformations enabling rapid access to deepwater resource and shale gas
- High prices triggered government policies to reduce energy subsidies, to reduce consumption, but also encouraged significant and permanent investments in energy savings

No one doubts these – what is in question is how long-lasting they will be

Issue 2: What is keeping prices within a $65-805 range

- Two different views are in contention:
  1. Market forces have tightened supply vs. demand fundamentals
     - The OPEC cuts of 4.2m b/d are working, albeit slowly, causing total commercial stocks to decline slowly over 2009
     - Chinese and India and Middle East demand have not been damped all that much
     - Signs of a recovery in the US and elsewhere will accelerate the inventory drawdown by Q4 and 2010
     - Non-OPEC oil production will start declining rapidly on a global basis, following the lead of Mexico, Northwest Europe
  2. Only financial flows can explain prices above $40-50
     - The increase in oil prices is paralleled by an increase in commodity prices more generally, in equity prices, and with a decline in the US dollar
     - One of the main lessons of the last five years is the new role played by global liquidity and the search for higher returns
     - The physical oil market is showing an abundance of supply and even an oversupply of product and crude oil inventories, which should weigh heavily of prices; total commercial stocks are stabilizing with no sogn of drawing yet

Here the evidence is overwhelmingly with the second school of thought

Official balances point to persistent oversupply

Even with higher demand, OPEC production looks likely to be more than ample:

IEA	2008	1Q09	2Q09	3Q09	4Q09	2009	1Q10	2Q10	3Q10	4Q10	2010	2009 Growth	2010 Growth
Demand	**86.30**	**84.60**	**84.10**	**84.60**	***85.20***	***84.60***	***86.00***	***85.40***	***86.30***	***86.50***	***86.10***	***-1.70***	***1.50***
OECD Demand	47.60	46.60	44.40	44.70	*46.10*	*45.40*	*46.20*	*44.50*	*45.20*	*45.90*	*45.50*	*-2.20*	*0.10*
Non-OECD Demand	38.70	38.00	39.70	39.90	*39.10*	*39.20*	*39.80*	*40.90*	*41.00*	*40.60*	*40.60*	*0.50*	*1.40*
Supply	**86.50**	**84.70**	**84.30**										
*Non-OPEC Supply**	50.60	51.20	50.80	50.80	*51.20*	*51.00*	*51.80*	*51.40*	*51.10*	*52.00*	*51.60*	*0.40*	*0.60*
Non-OPEC Supply ex. FSU	37.80	38.30	37.70	37.60	*37.80*	*37.90*	*38.30*	*37.80*	*37.70*	*38.40*	*38.10*	*0.10*	*0.20*
FSU	12.80	12.90	13.10	13.20	*13.40*	*13.10*	*13.50*	*13.60*	*13.40*	*13.60*	*13.50*	*0.30*	*0.40*
OPEC NGL/Condensate	4.70	4.90	5.10	5.40	*5.60*	*5.20*	*5.70*	*6.00*	*6.20*	*6.40*	*6.10*	*0.50*	*0.90*
Call on OPEC Crude and Stocks	**31.00**	**28.50**	**28.20**	**28.40**	***28.40***	***28.40***	***28.50***	***28.00***	***29.00***	***28.10***	***28.40***	***-2.60***	***0.00***
*OPEC Crude**	31.20	28.50	28.50	28.80									
Stock Change	0.20	0.10	0.20										

OPEC	2008	1Q09	2Q09	3Q09	4Q09	2009	1Q10	2Q10	3Q10	4Q10	2010	2009 Growth	2010 Growth
Demand	**85.60**	**83.90**	**83.20**	**84.50**	***85.40***	***84.20***	***84.40***	***83.70***	***85.40***	***86.30***	***84.90***	***-1.40***	***0.70***
OECD Demand	47.60	46.60	44.60	45.40	*46.90*	*45.90*	*46.20*	*44.40*	*45.40*	*46.90*	*45.70*	*-1.70*	*-0.20*
Non-OECD Demand	38.00	37.30	38.60	39.10	*38.50*	*38.30*	*38.20*	*39.30*	*40.00*	*39.40*	*39.20*	*0.30*	*0.90*
Supply	**86.00**	**84.00**	**83.70**	**84.50**									
*Non-OPEC Supply**	50.40	50.90	50.60	50.80	*51.10*	*50.90*	*51.30*	*50.90*	*51.00*	*51.60*	*51.20*	*0.50*	*0.30*
Non-OPEC Supply ex. FSU	37.80	38.30	37.70	37.80	*38.10*	*38.00*	*38.20*	*37.80*	*37.90*	*38.40*	*38.10*	*0.20*	*0.10*
FSU	12.60	12.60	12.90	13.00	*13.00*	*12.90*	*13.10*	*13.10*	*13.10*	*13.20*	*13.10*	*0.30*	*0.20*
OPEC NGL/Condensate	4.30	4.60	4.60	4.90	*5.00*	*4.80*	*5.10*	*5.30*	*5.40*	*5.50*	*5.30*	*0.50*	*0.50*
Call on OPEC Crude and Stocks	**30.90**	**28.40**	**28.00**	**28.80**	***29.30***	***28.50***	***28.00***	***27.50***	***29.00***	***29.20***	***28.40***	***-2.40***	***-0.10***
*OPEC Crude**	31.20	28.40	28.50	28.80									
Stock Change	0.30	0.10	0.50	0.00									

A closer look through 2010 shows no erosion of commercial stocks

Even with higher demand, a very conservative view of OPEC production looks likely to be more than ample:

U.S. DOE	2008	1Q09	2Q09	3Q09	4Q09	2009	1Q10	2Q10	3Q10	4Q10	2010	2009 Growth	2010 Growth
Demand	**85.46**	**83.05**	**82.91**	**83.99**	***84.7***	***83.67***	***84.53***	***83.95***	***84.81***	***85.79***	***84.77***	***-1.79***	***1.10***
OECD Demand	47.58	46.41	44.37	45.04	*46.12*	*45.48*	*46.24*	*44.65*	*45.22*	*46.24*	*45.59*	*-2.10*	*0.11*
Non-OECD Demand	37.89	36.63	38.54	38.95	*38.58*	*38.18*	*38.28*	*39.3*	*39.59*	*39.56*	*39.19*	*0.29*	*1.01*
Supply	**85.39**	**83.36**	**83.65**	**84.17**	***84.61***	***83.95***	***84.63***	***84.99***	***85.13***	***85.47***	***85.06***	***-1.44***	***1.11***
*Non-OPEC Supply**	49.67	50.11	50.05	49.88	*50.12*	*50.04*	*50.46*	*50.43*	*49.99*	*50.17*	*50.26*	*0.37*	*0.22*
Non-OPEC Supply ex. FSU	37.15	37.51	37.18	37.15	*37.33*	*37.29*	*37.44*	*37.34*	*37.00*	*37.19*	*37.24*	*0.14*	*-0.05*
FSU	12.52	12.60	12.87	12.73	*12.79*	*12.75*	*13.02*	*13.09*	*12.99*	*12.98*	*13.02*	*0.23*	*0.27*
OPEC NGL/Condensate	4.46	4.53	4.82	5.03	*5.18*	*4.89*	*5.39*	*5.57*	*5.65*	*5.81*	*5.61*	*0.43*	*0.72*
Call on OPEC Crude and Stocks	**31.33**	**28.41**	**28.04**	**29.08**	***29.40***	***28.74***	***28.68***	***27.95***	***29.17***	***29.81***	***28.90***	***-2.59***	***0.16***
*OPEC Crude**	31.27	28.71	28.78	29.26	*29.31*	*29.02*	*28.79*	*28.99*	*29.49*	*29.49*	*29.19*	*-2.25*	*0.17*
Stock Change	-0.06	0.30	0.74	0.18	*-0.09*	*0.28*	*0.11*	*1.04*	*0.32*	*-0.32*	*0.29*		

Only the US EIA projects OPEC output, yet even they should modes growth for 2010, even though significant capacity growth will take place in Angola, Qatar and even as higher prices erode quota compliance

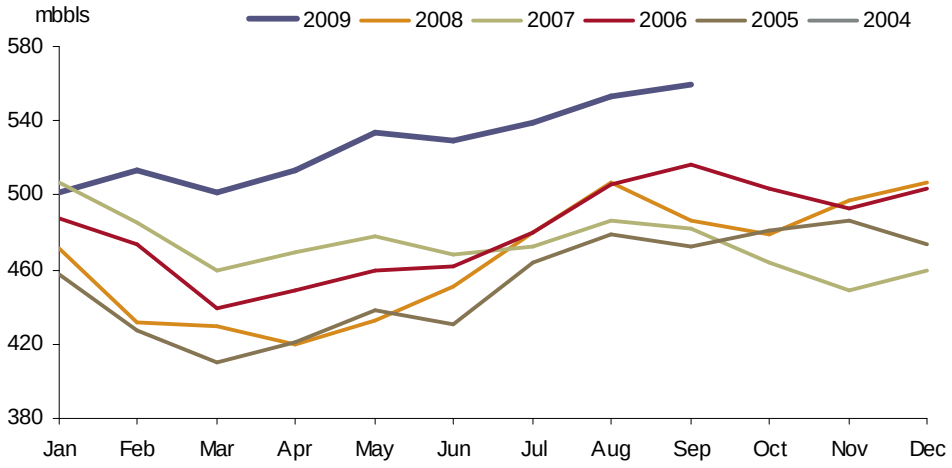
The main global issue is distillate – demand and inventories

Distillate demand has plummeted with the global recession, putting pressure on inventories

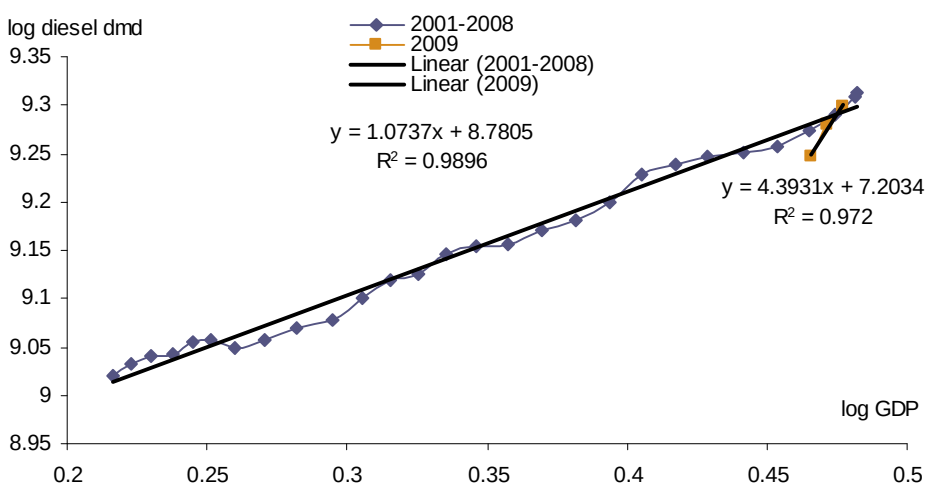
Distillate is the quintessential global product

- Global refining is geared to maximize distillate yields, the fastest growing petroleum product
- For every 1% increase in global GDP, there has been a 1.07% increase in distillate demand to move goods on trucks and trains
- In recent years distillate demand also responded to power generation shortages, especially in China, the Middle East
- Recession has caused both a drop in distillate demand and destocking on secondary and tertiary levels, weighing heavily on markets

Record observed distillate inventories still growing



Distillate demand strongly correlated with global GDP



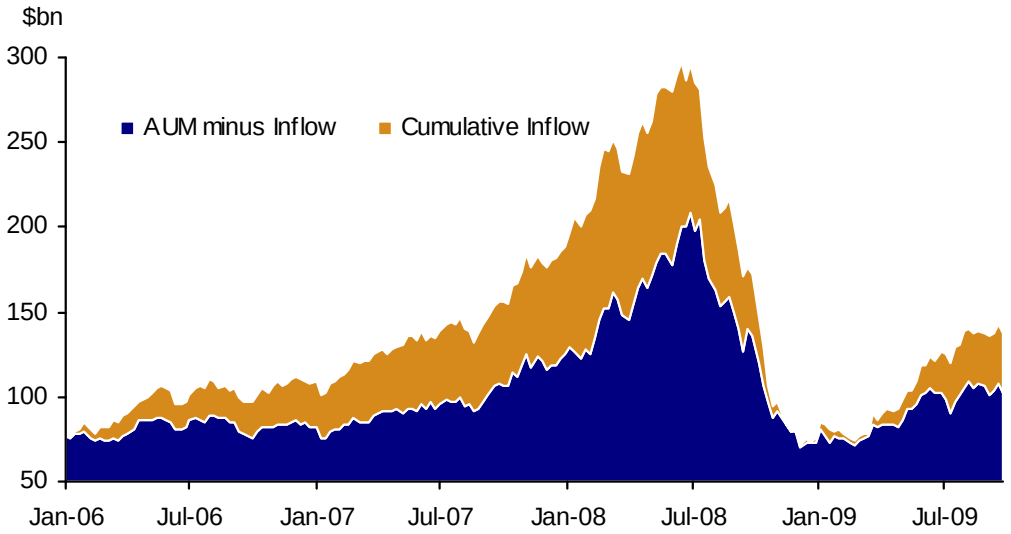
Inflation expectations, financial investment are again drivers

The large quantitative easing efforts by central banks have stimulated fears of medium-term inflation, causing financial flow and strength in commodity markets

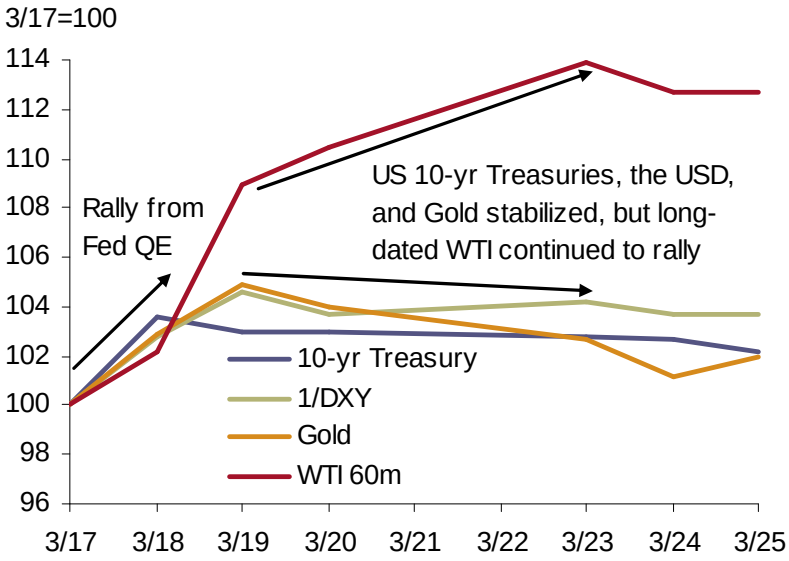
Commodities as a hedge against inflation

- After precipitous falls in passive index AUM due to outflows and a fall in underlying commodity prices, we have seen some $35bn rapidly growing in commodities, with AUM reaching roughly $140bn by Oct 2009.
- A popular justification is that the Federal Reserve's quantitative easing efforts will stimulate high inflation in the medium-term. Investors are recommended to invest in commodities as a hedge against nominal price inflation.
- Indeed, after the Fed QE announcement on 3/17/09 led the back end of the WTI crude oil curve to rallied strongly, like Treasuries
- But WTI showed continued strength and later in Q3 rallied along with other assets and perceptions that commodity demand will pick up

AUM and Cumulative Inflow since 2006



Response of assets to 3/17/09 QE announcement



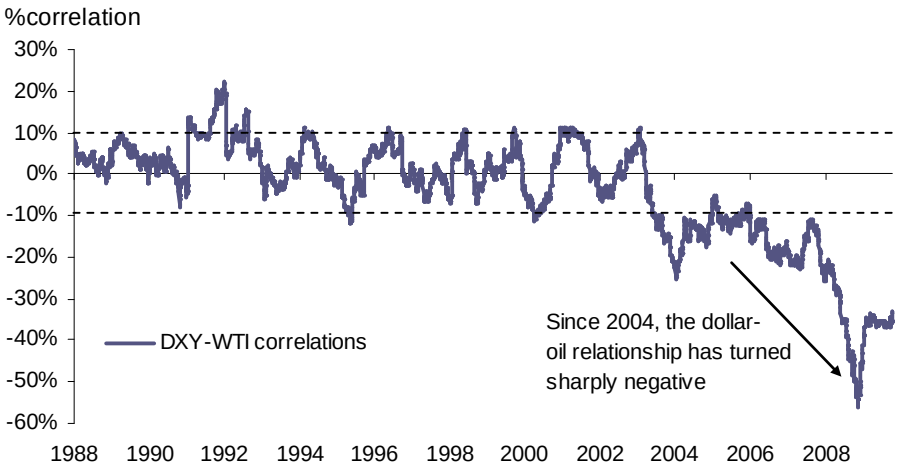
Oil, other commodities recently reflect correlations with US$ and S&P

The positive correlation with the S&P reflects growing global investor confidence; the negative correlation with the dollar reflects global macroeconomic expectations

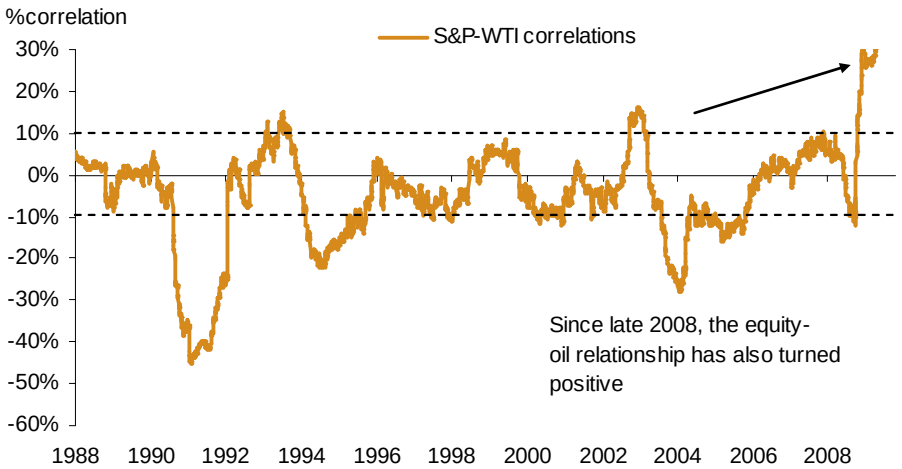
Rules of thumb on oil vs. the US$ and oil vs. equities

- For the US dollar, in recent years the rule of thumb was for every 1% decline in the US$ there would be a 1.2% increase in WTI prices; in recent months to negative relationship has widened so that for every 1% decline in the US$, there has been a 1.8% increase in WTI prices
- For the S&P the recent positive relationship with oil prices has been for every 1% rise in the S&P there has been a 0.7% rise in WTI prices
- There is no historical or theoretical reason to assume these relationships have become permanent

WTI prices and the US Dollar



WTI prices and equities



Issue 3: Where are prices heading in the next three years?

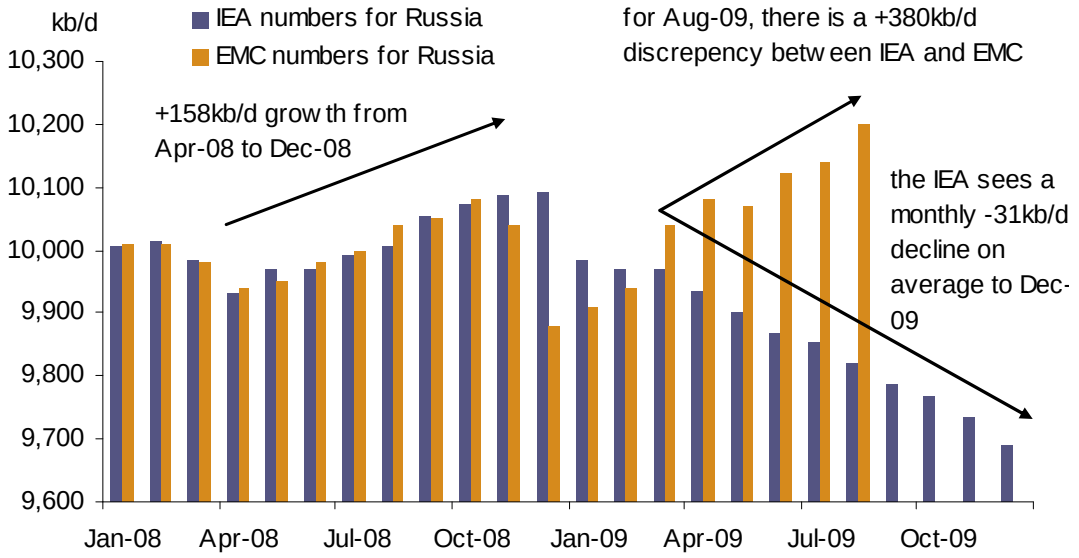
- Two dramatically different perspectives predominate:
  1. Prices will ratchet up annually until another supply crunch triggers another economic ricochet effect
     - Lack of capex will damp non-OPEC supply, even causing a sharp decline (the debate over Russia writ large – will Russian output continue to increase or start to follow the Mexican path?); global depletion rates will accelerate
     - Oil demand to show a V-shaped recovery even if non-OECD demand continues to decline as it has for the past 2+ years, because of the relentless increase in demand from China, India, the Middle East and other emerging markets
     - Deepwater, gas shale won't stem the tide
  2. Prices will be range bound for the indefinite future (3-5 years)
     - Spare capacities rule the market, upstream and downstream
     - Geopolitics have been transformed with Saudi Arabia holding 4+m b/d of shut-in production and a desire to keep prices between $40 and $75
     - Costs of finding and developing oil are falling rapidly and companies have postponed investments in order to obtain lower costs (Canadian oil sands)
     - Demand will never again rise at 1.8-2% annually as before 2007, but at a lower 1-1.2% annual rate (evidence from history and ongoing research on demand)
     - Even financial flows won't be able to trump fundamentals for long

Does reality lie with the second school of thought, or somewhere in between?

The major controversy is on the supply side, near- and medium-term

- Downturn in upstream capex is misleading – capex has fallen by 35%, but costs are down by 35% as well as capital
- In a cost deflationary environment, companies will postpone expenditures as long as possible to secure better prices for goods
- Companies also bargain with governments for better fiscal terms
- Canada's oil sands example: in June 2008 costs required $95 oil; as oil prices plunged new projects were postponed; renewed projects indicate all in costs are now $55-60/bbl
- Non-OPEC oil output, plus OPEC NGLs should grow not decline for the next few years

Russian outlook versus reality is a major test case



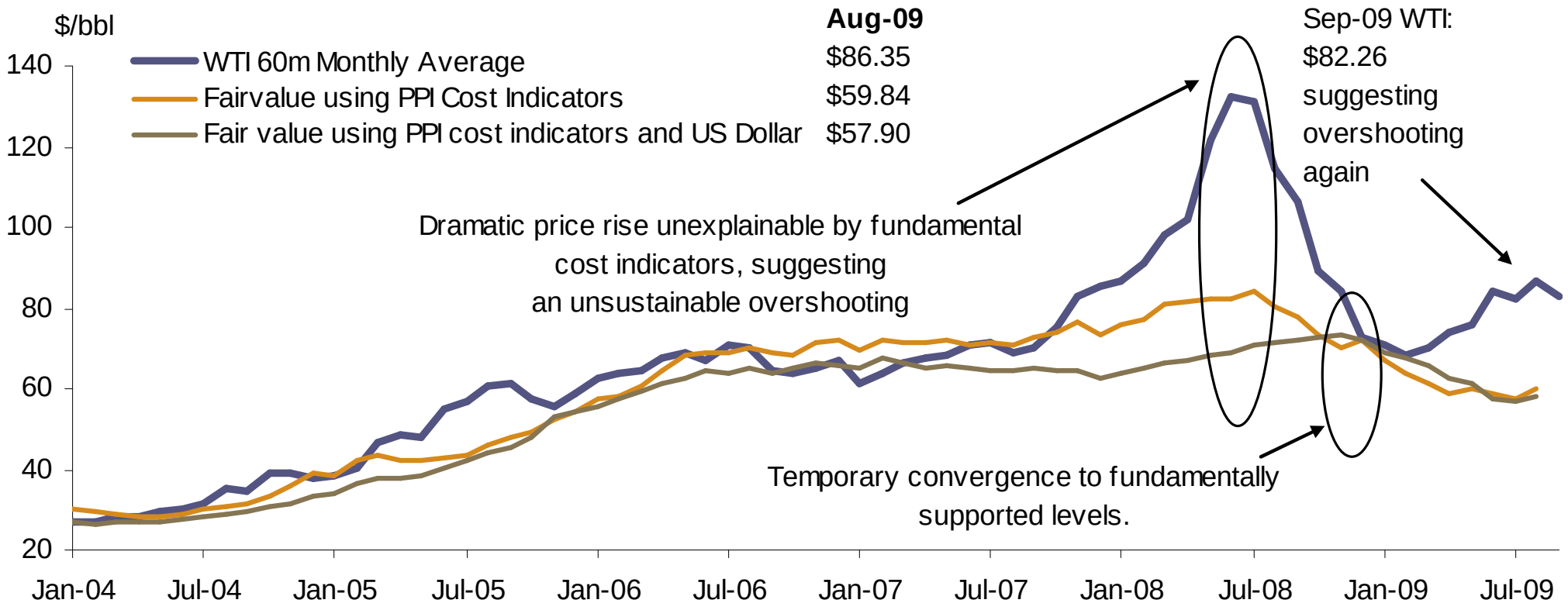
Source: IEA, EMCm LCM Research.

- At end 2008, consensus was output would fall between 2% and 7% in 2009 (up to 700k b/d)
- But company announcements of depletion reflected position in (1) domestic taxes and (2) costs of goods/services from suppliers
- Suppliers announced rapid decline in production without their services
- Now, as a result of successful bargaining, output is up and consensus is will rise again next year
- Already, the EMC estimates Russian production hit 10.2mb/d, while the IEA expected a decline to 9.8mb/d, a discrepancy of 400kb/d!

Cost indicators point to lower long-dated prices, higher capex

Financial flows are continuing to buoy long-dated prices, providing ample incentives for an increase in upstream capex going forward.

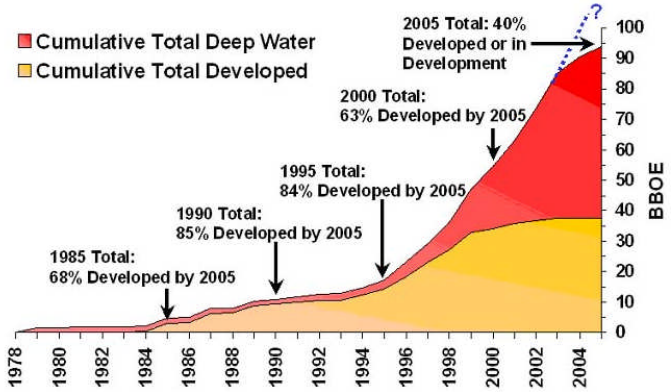
Average monthly 5-yr out WTI prices regressed on cost indicators



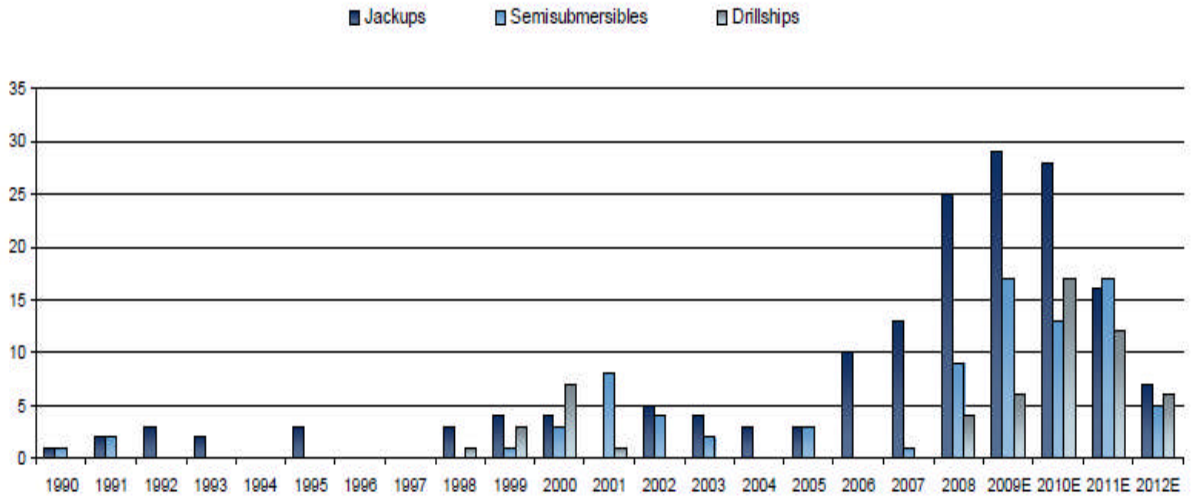
Deepwater's promise is only now unfolding

- The main constraint on deepwater exploitation has not been lack of acreage but lack of equipment
- Shipyards have been at capacity utilization since mid 2008
- Petrobras alone is now tendering for another 28 rigs
- The pace of deepwater development is bound to continue its extraordinary rise
- 2009 looks like to be the first year since 1988 in which net new discoveries outpace oil use

Cumulative Deepwater Discoveries/Output



Source: Noble Energy



Source: Barclays Capital

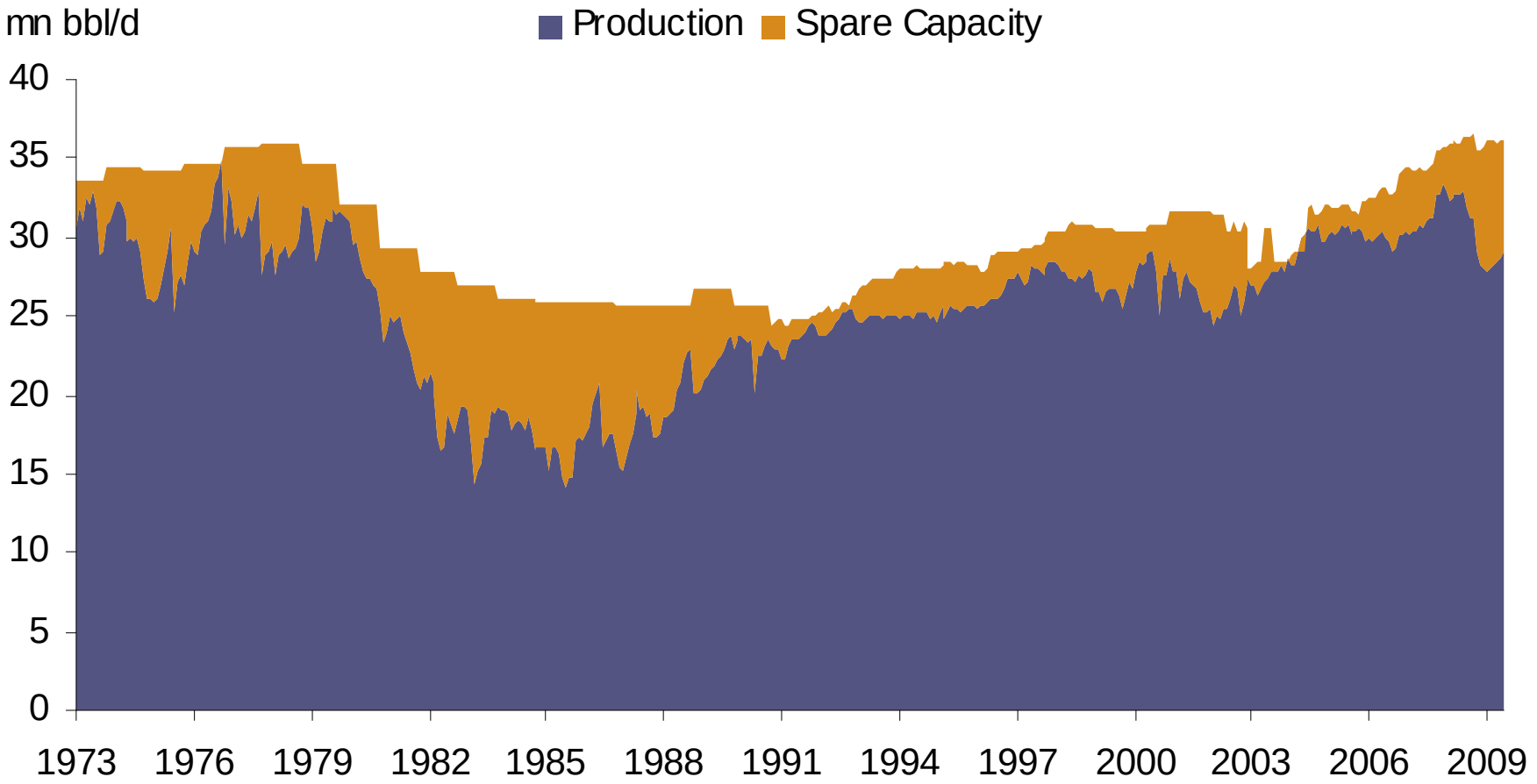
Drillships In Construction			
	2007	2008	2009
Jan	12	28	43
Feb	12	30	42
Mar	14	31	42
Apr	15	32	42
May	15	42	41
Jun	15	42	41
Jul	18	43	40
Aug	24	43	43
Sep	24	43	
Oct	25	43	
Nov	25	44	
Dec	25	43	

Source: Barclay's Capital

The increase in spare capacity should support a range-bound market through 2011 if not longer

The growth in spare capacity reflects not only a decline in demand but long term investments as well

There are good reasons to believe spare capacity will now grow



Source: U.S. DOE/EIA; LCMC Estimates.

OPEC output will inevitably rise further in 2009

Output cuts appear to have reached their peak in Feb/March 2009, with 3.1m b/d real reduction from Q3'08 peak of 31.6m b/d (versus 4.2m b/d of committed cuts).

- The major increments are coming from OPEC members with new significant output from international investors; but outside S. Arabia, OPEC has >1m b/d of new oil capacity growth
- Nigeria: Balancing higher disruptions are two new developments, Akpo and smaller NGL project which together are adding 220k b/d between Q2 and Q4
- Angola: saddled with a 1.517m b/d quota and rapidly growing field capacity, has increased output every month since March and will continue to do so. Production that had been in maintenance when quotas were assigned = 250k b/d. Gimboa (+50k b/d) and Mufumeira (+30k b/d) have already been tied in and now, in Aug and Sep '09 Tombua Landana is adding 130k b/d.
- Iran: S. Pars oil layer now added 50k b/d; coming are Jofeir (+25k b/d), Darkhovin (60k b/d)
- Iraq: since June is added a series of new production. Missan Oil/Weatherford started 30k b/d output rising to 160 by year-end; Addax started Taq Taq at 30k b/d in June, rising to 70k b/d by year-end; DNO's Tawke field adding 50k b/d, for a total of nearly 300k b/d '09 vs. '08, not including further debottlenecking, which could add another 200k b/d
- Qatar: Maersk and QP have $6billion invested in 325k b/d offshore expansion of the Al-Shaheen field scheduled for December. Unlikely to be kept wholly off market in country that has only 750k b/d of capacity to begin with and this aside from 200k b/d of new condensate flows

And Saudi Arabia keeps reaffirming its commitment to maintain a minimum of 2m b/d of capacity

- This year alone it is adding 1.55m b/d new capacity
  - Shaybah (+250k b/d) and Nuayyim (+100k b/d) in Q1
  - Khurais (+1.2m b/d in Q2)
- With production at 8.1m b/d, Saudi Arabia has 4.4 mb/d of spare capacity, with an ability to tie in the >1.2 mb/d Munifa field within a year of a decision
- Saudi Arabia, like the majors, was caught by surprise by the collapse in OPEC capacity in 2003 and after and embarked on a historically unprecedented campaign to deploy upstream capital to rapid development
- Spare capacity is critical for the kingdom's international power, influence within OPEC and the country's ability to keep prices moderate
- Saudis have announced they will protect price ceiling of $75, which is politically and economically convenient
- Assuming that substantial spare capacity is maintained for the next three years or longer, oil prices should be range bound

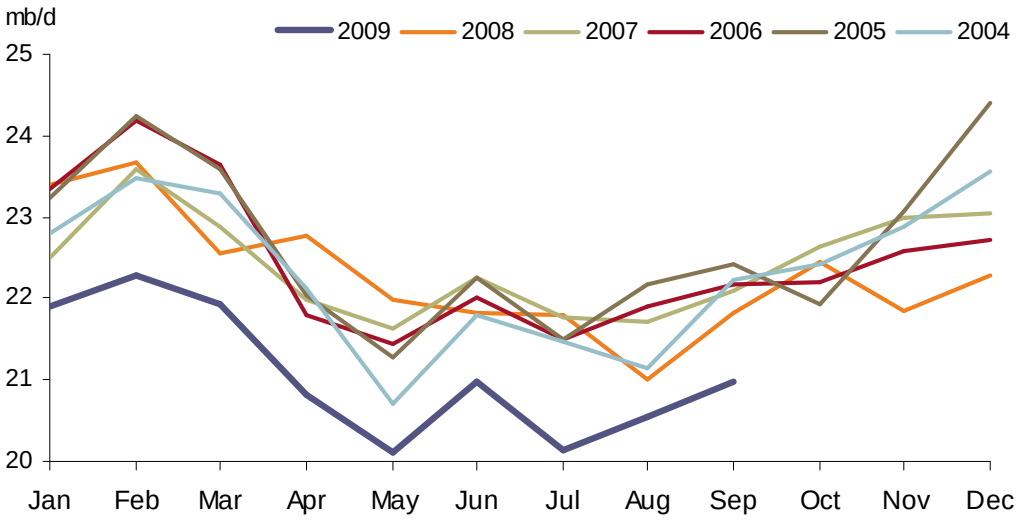
Main demand question through 2010 is what will be the recovery in distillate demand and how far will distillate inventories fall

We project exceptional growth in distillate demand through Q4 '10

Distillate should lead the market, but will that make the market strong?

- We project that for every 1% increment in global GDP, demand for diesel will growth by at least 1.25% , fading out through end 2010, as secondary/tertiary stocks are replenished
- Even so, demand for distillate in major reporting areas is still stalling out
- We project strong growth in Q4 and in 2010, with total distillate demand increasing as much as 1.4m b/d over 6 quarters

The fall in distillate demand has ended



Global growth should bring a strong rebound

Projected GDP Growth through 2010 of the US and global economy (in %).

	1Q09	2Q09	3Q09	4Q09	1Q10	2Q10	3Q10	4Q10
US	-6.4	-1.0	2.0	3.0	2.5	1.5	2.5	2.5
World	-7.3	2.0	4.0	2.0	-0.6	3.3	6.5	3.2

Source: IMF, LCM Research

Base case estimated global diesel, gasoil demand through 2010 (in m b/d)

	Q3'09	Q4'09	Q1'10	Q2'10	Q3'10	Q4'10
Total	23.590	24.240	24.340	24.900	25.380	26.120
q-o-q	0.290	0.650	0.100	-0.250	0.480	0.740
y-o-y	-0.880	-0.835	-0.380	0.755	1.015	1.030

Source: IEA, LCM Research Estimates

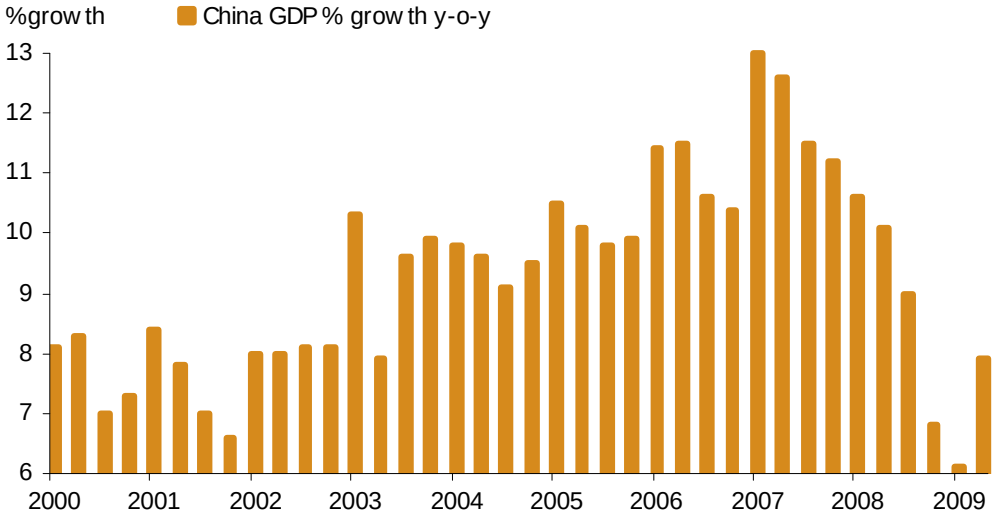
What about China?

The IEA's expected rebound in China's oil demand can't distinguish between stocks and consumption; even so, China alone cannot tighten global oil markets

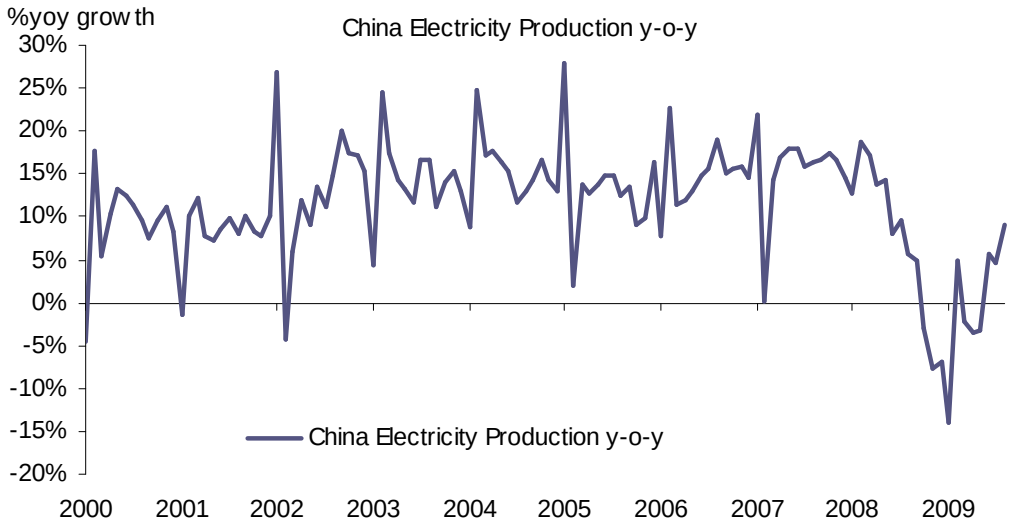
China: still a long-run story

- The IEA is projecting a decline of only -100kb/d from 2008 to 2009, followed by very strong +400kb/d of annual growth from 2010 to 2014. This is predicated on a robust rebound in the Chinese economy.
- GDP growth rebounded dramatically in 2009 – growth is the basis of the government's legitimacy and it has to deliver.
- The 4tn RMB fiscal stimulus package have contributed to output growth, but there are latent concerns about the efficacy of the package given shortfalls in governance standards in the rural areas which need investment most.
- Even so, strategic storage and logistics requirements should bolster Chinese crude oil demand
- But rising Chinese distillate and gasoline exports will weaken global product balances

China's GDP growth jumps again



Real electricity use has turned positive again



Middle East petroleum demand growth, one pillar of recent growth, is also slowing rapidly

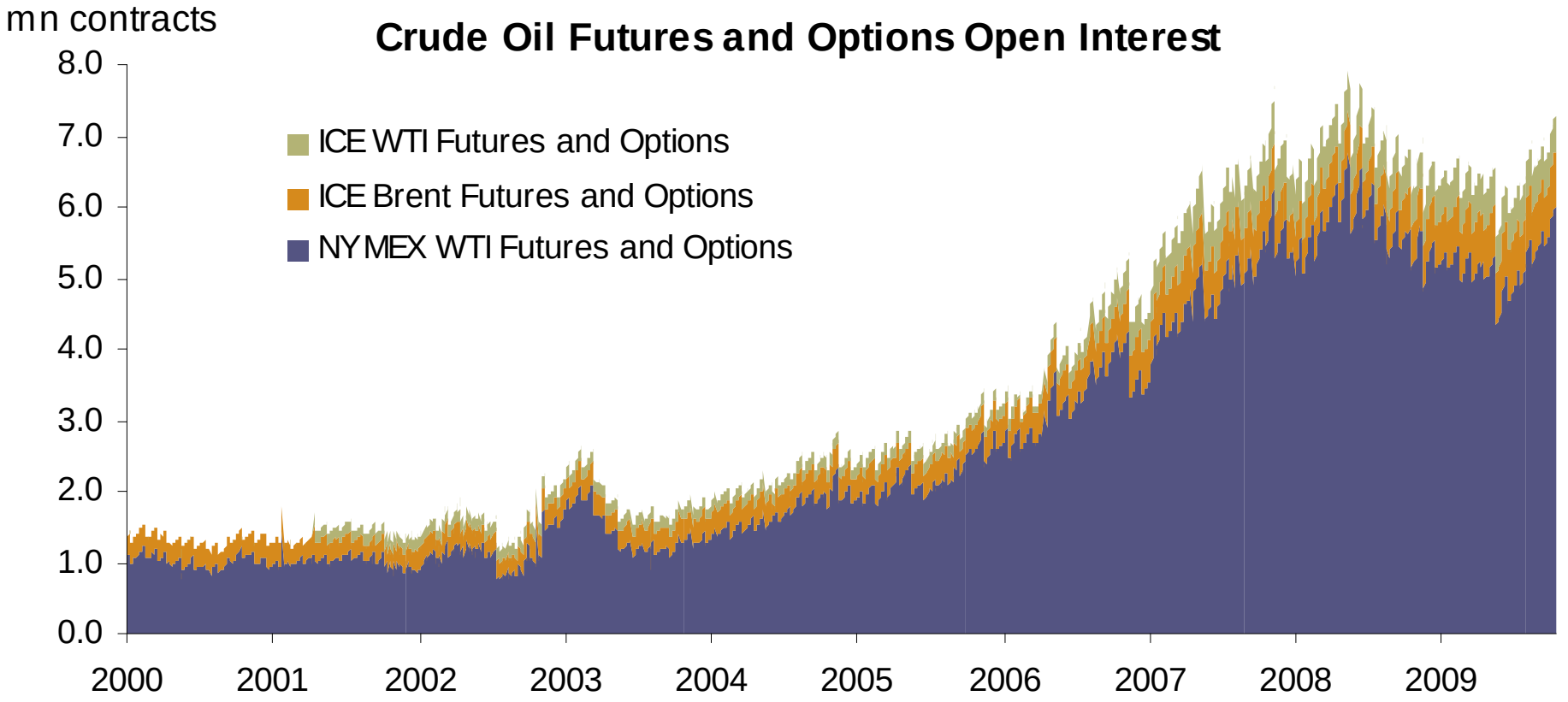
- Middle East had been second pillar of global demand growth, nearly equal to total Chinese demand growth from 2005 through 2008.
  - '08 demand growth was 600 kb/d (vs. 300 kb/d in China).
  - IEA projects Middle East's '09 demand growth at 100 kb/d and back to 400k b/d (9% in 2010.
  - In fact YTD 2009 demand growth has been -4.5%, with big hits in jet kero (-9.2%) and fuel oil (-15.8%) and increases in naphtha (10.4%) and gasoline (2%), and diesel down 1.8%
- But much of the region's recent 7.6% annual demand growth was due to one-off or transient factors
  - As much as 20% of 2007 product demand growth was for power generation because of lagging natural gas production or distribution problems, briefly transforming the region into a net fuel oil importer.
  - But as economies have slowed, so have construction and power generation requirements, recently returning the region to its status as a fuel oil exporter.
- Subsidies should continue to push growth in light product demand by 3.5% (+50k b/d) and slower growth should slow middle distillate demand to 4% (90k b/d).

- For 2009 we project incremental product demand growth of under 100 kb/d (in line with IEA) and 2010 growth at 175 kb/d

So the medium term outlook looks more balanced

- Refinery margins will remain low, encouraging product inventory draws
- Days of forward supply cover of inventory will likely remain higher than normal for another few years
- Demand's resumption will look very strong, but will not be sustainable as it will include growth in demand for logistics, inventories
- When longer-term demand growth resumes it resumes it will be at a much lower rate of 1-1.2% per annum rather than earlier 1.5-1.8% per annum (not the conventional wisdom)
- Total non-OPEC supply is likely not to fall at precipitous rates and to start growing again (not the conventional wisdom)
- OPEC (Saudi) spare production capacity is rising and will remain at high levels for political reasons, eliminating the risk premium in prices
- Saudi Arabia has opted for a lower price situation and has a better ability to put a lid on prices.
- A critical issue is financial flows, which pushed markets higher and led the decline in prices, and are now the subject of regulatory concern

A main question mark is growth in exchange traded liquidity and pending restrictions on trading



Crude oil liquidity grew from 1.3 billion bbls in 2000-2003 to nearly 8 billion bbls in 2007, then shrank a trough of 5.5 billion barrels. Currently, it has recovered again to 7.2 billion bbls and is still growing, as much OTC trading has migrated to exchanges. Current discussions in CFTC and Congress could have a major impact on liquidity going forward

•**Certification**

The views expressed in this report accurately reflect the personal views of Edward Morse, the primary individual responsible for this report, about the subject referred to herein, and no part of such compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed herein.

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