



Chemistry and the Economy

Secrets to finding hidden opportunities

22 October 2009

AGENDA

- ❖ The outlook for the global economy
 - V shaped recovery became the consensus view
 - But sadly, worst is probably yet to come in chemicals
- ❖ Update on markets and companies:
 - Impact of oil and currency markets
 - Outlook comments from the major companies
- ❖ Potential impact of the “new normal”
 - Key Issues
 - Conclusions

FUNDAMENTALS & SENTIMENT

THE BEN GRAHAM* INSIGHT



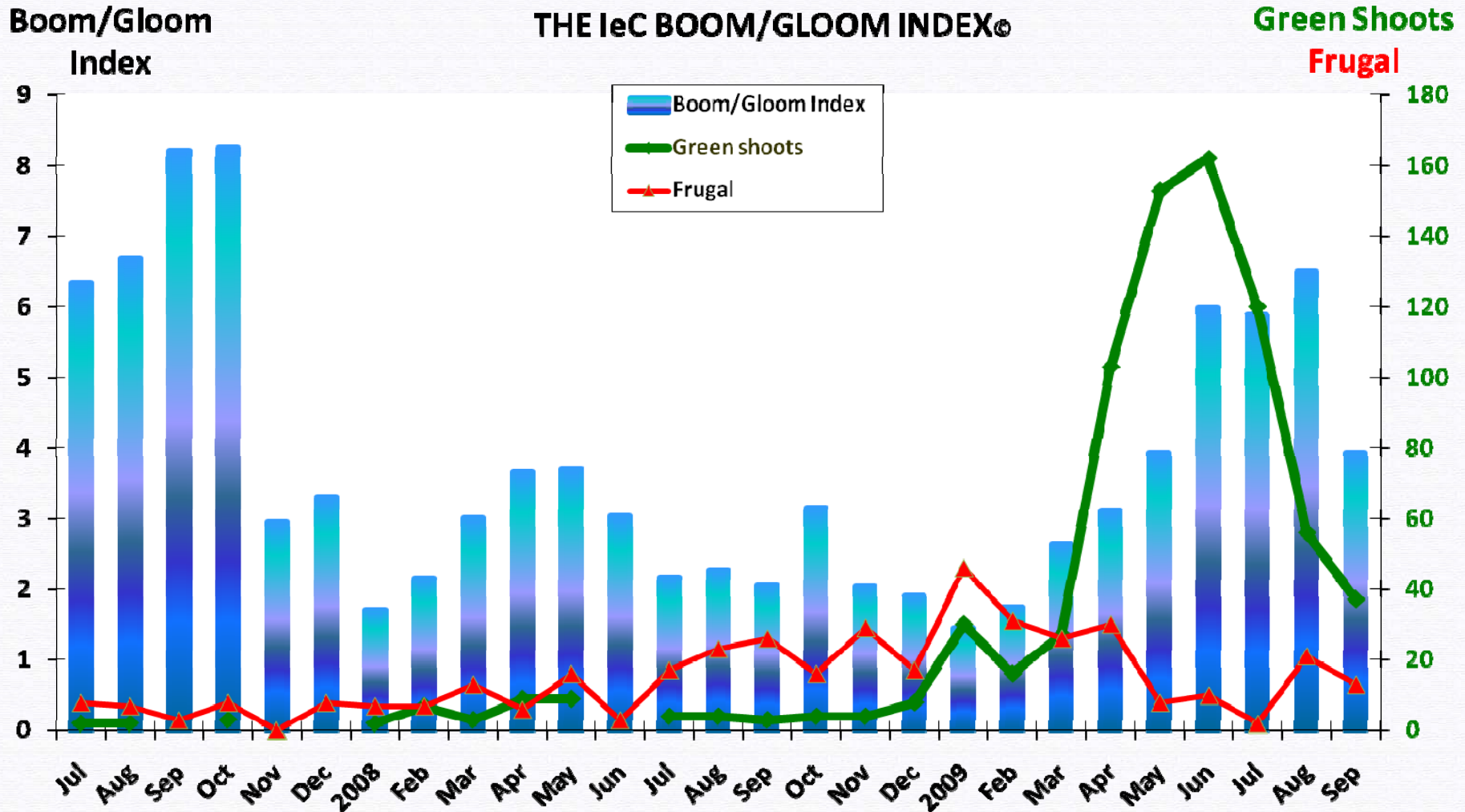
IN THE LONG TERM, THE MARKET IS
A WEIGHING MACHING



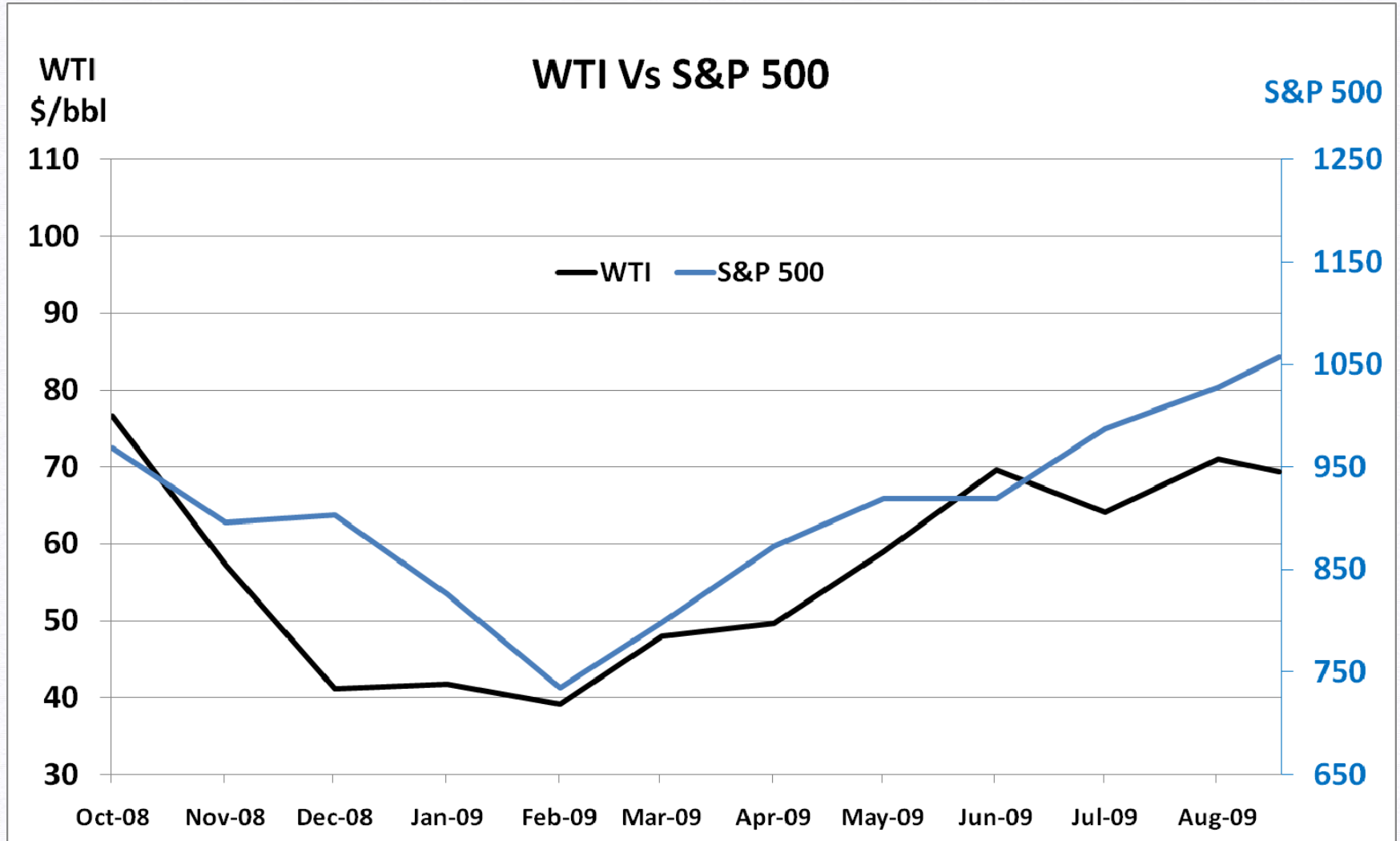
IN THE SHORT TERM, THE MARKET IS
A VOTING MACHING

* BEN GRAHAM WAS THE MENTOR OF WARREN BUFFETT

NEW IeC BOOM/GLOOM INDEX SUGGESTS "GREEN SHOOTS" WANING

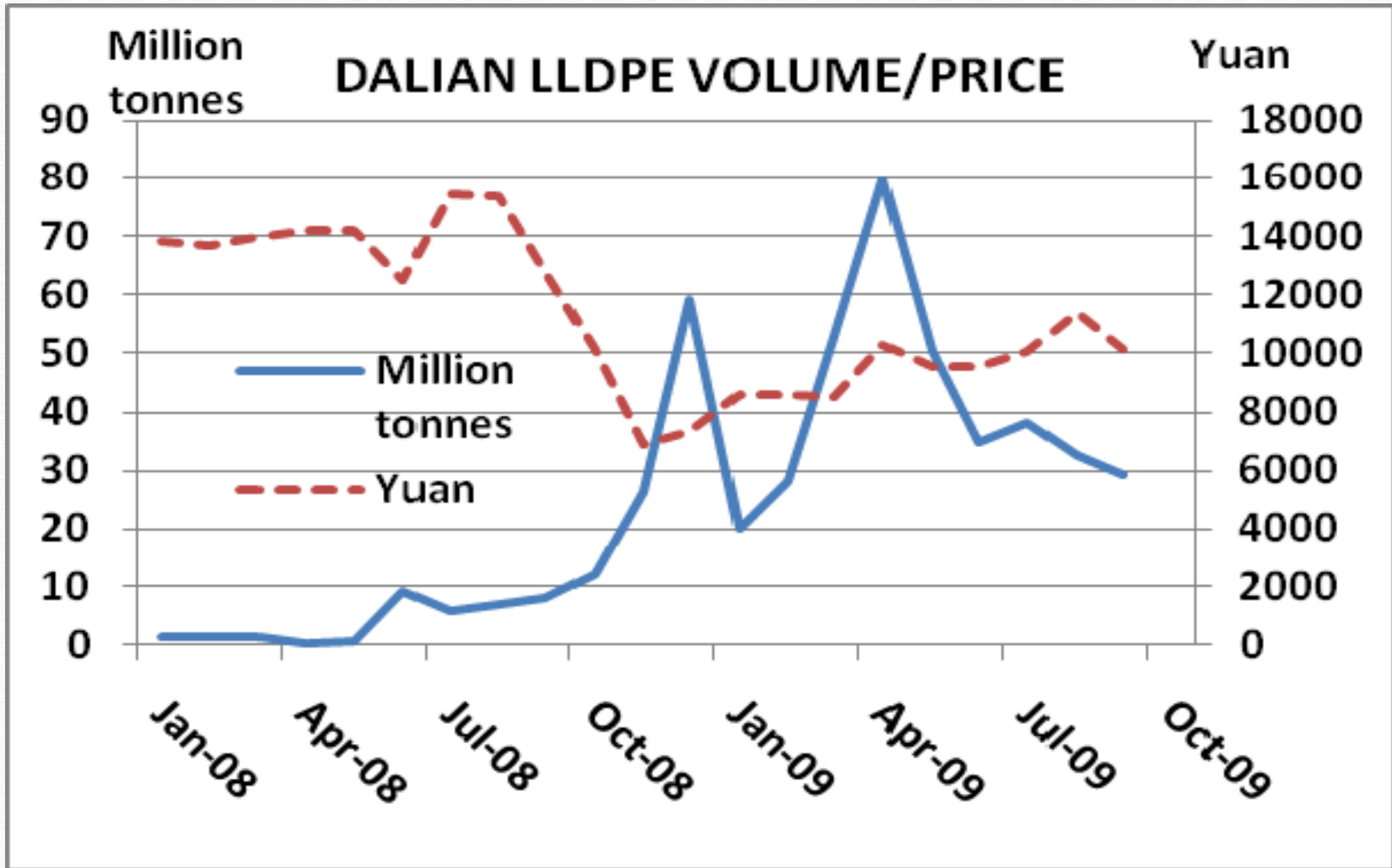


RECOVERY IN FINANCIAL MARKETS HAS MIRRORED OIL PRICE MOVES



CHINA'S DALIAN FUTURES SHOW SPECULATIVE IMPACT

80 million tonnes LLDPE traded at April peak (global mkt 2MT/yr)



MAJOR BANKING LOSSES STILL TO COME, IN IMF VIEW

IMF thinks total global losses in the banking system will be \$2.8trn.

\$1.5trn of these losses are still to be recognised over the next 18 months.

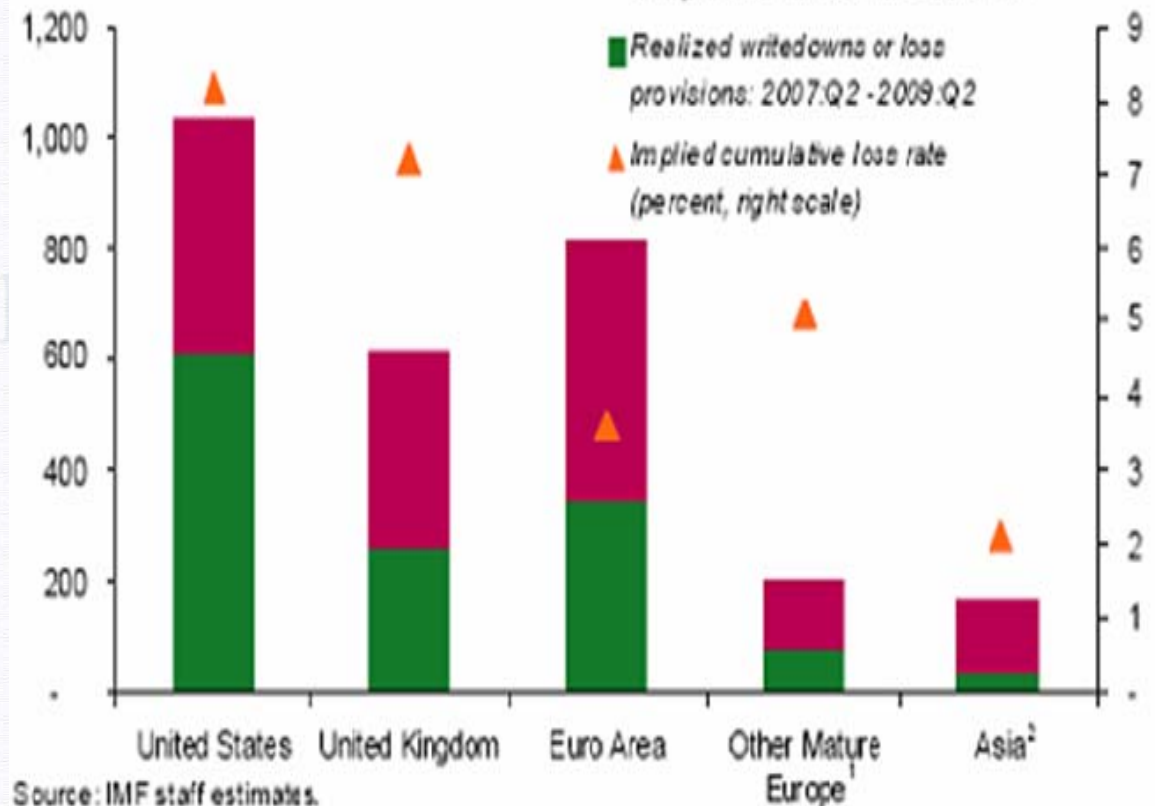
This will require banks to raise a further \$310bn of capital.

US banks have recognised c60% of their losses.

EU banks still have c60% of their losses to recognise.

Figure 1.9. Realized and Expected Writedowns or Loss Provisions for Banks by Region

(In billions of U.S. dollars unless shown)



GLOBAL CHEMICAL PRODUCTION BACK AT 2006 LEVELS

NA WORST HIT: ME HAS FEEDSTOCK: CHINA DID MAJOR STIMULUS

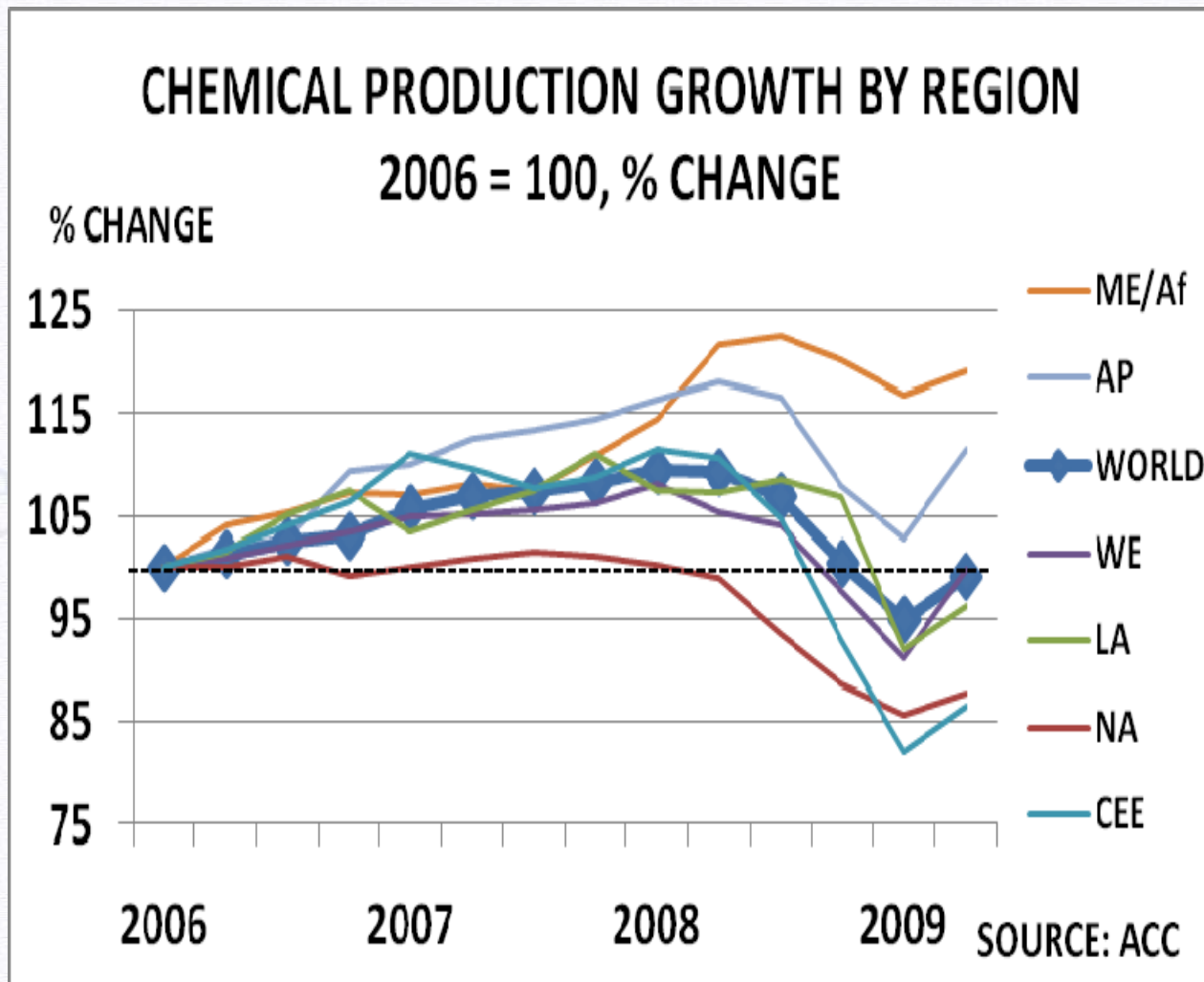
Global. Volume in Q2 was back at Q1 2006 levels.

Middle East/Africa. Volume up 19% vs 2006, due to advantaged feedstock.

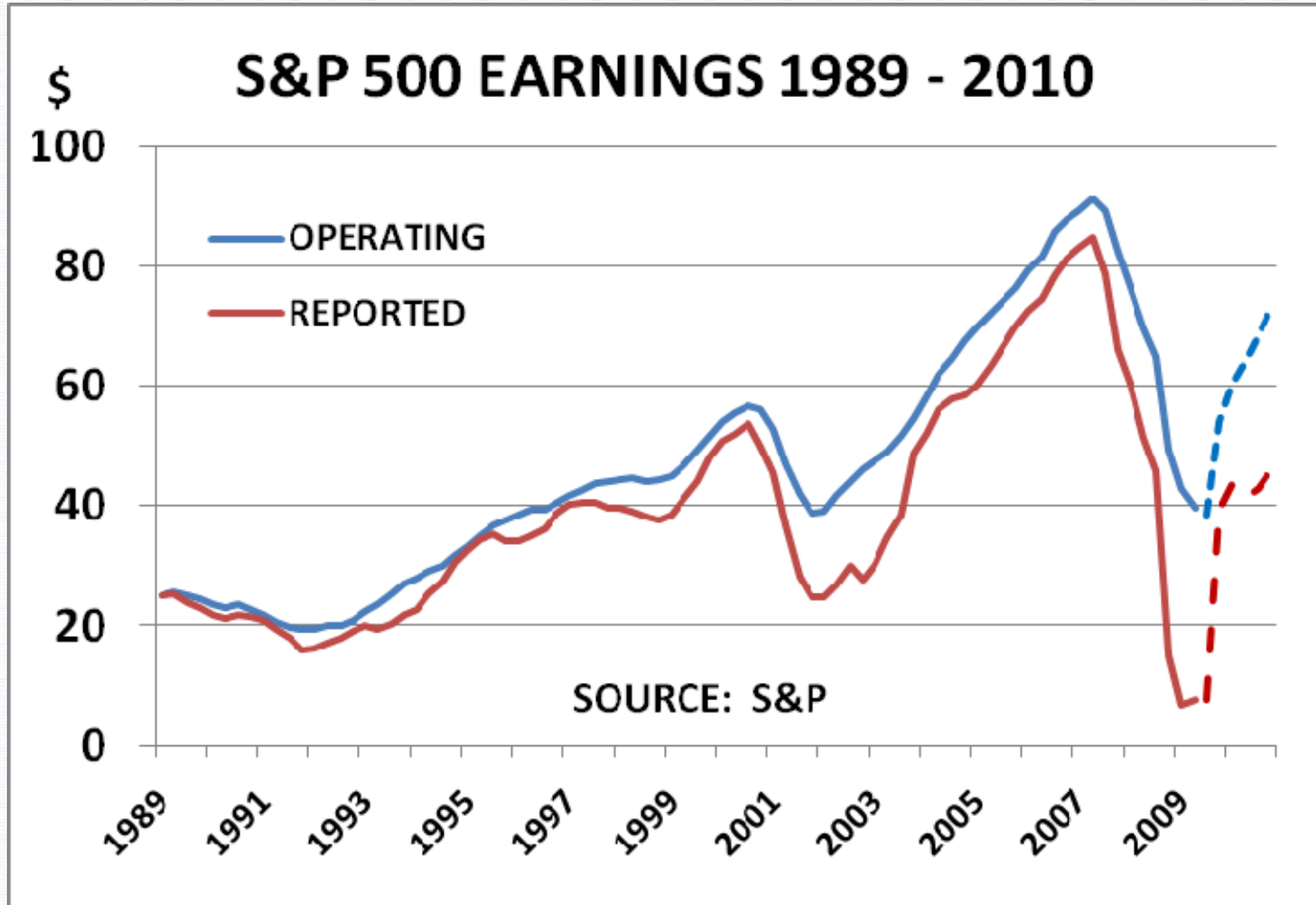
Asia Pacific. Volume up 11% due to China's lending/stimulus programmes

N America. Volume down 12% vs 2006. Q2 up only 2%

W Europe. Volume at 2006 levels, due to stimulus programmes.

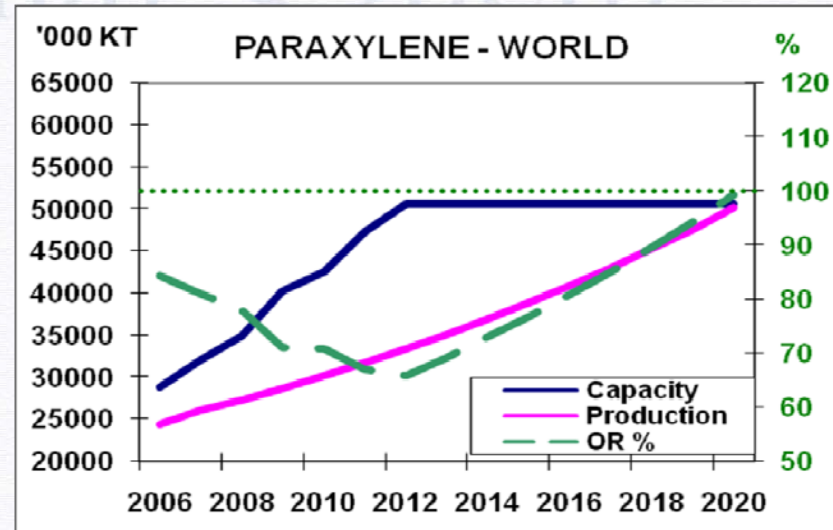
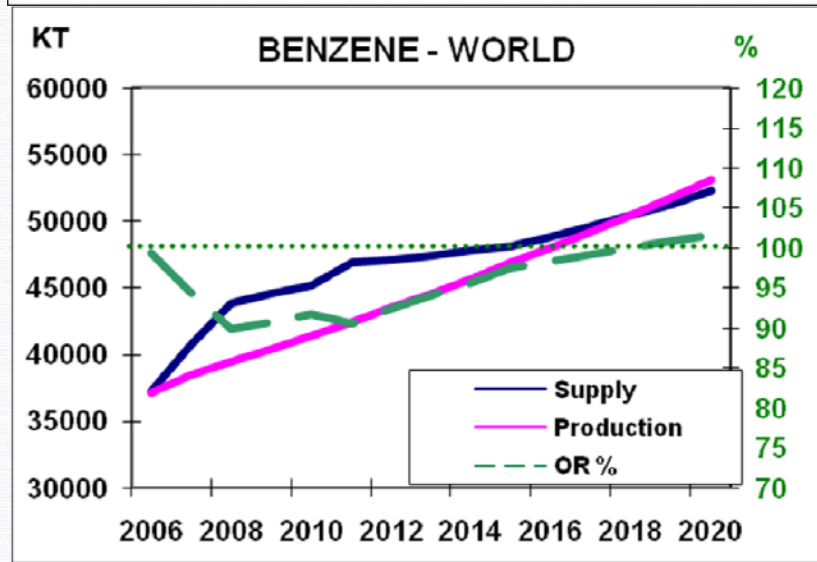
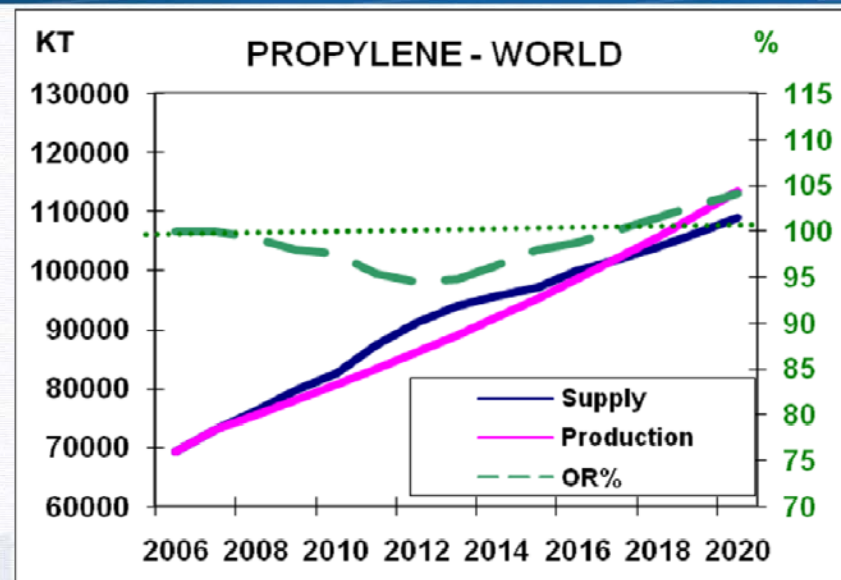
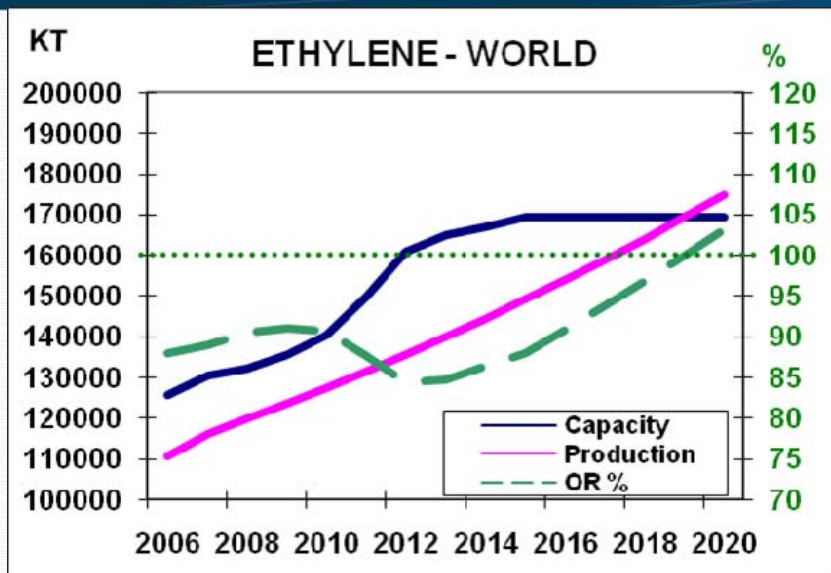


OPTIMISM OVER “OPERATING EARNINGS” DISGUISES DOWNBEAT FORECASTS FOR “REPORTED EARNINGS”



Over capacity still to impact many major products products

World – Ethylene, propylene, benzene, paraxylene supply/demand



OR% = Operating Rate

CREATIVE ENERGY FOR IMPORTANT ISSUES

CHEMICAL MARKETS



**RECORD LEVELS OF GOVERNMENT/CONSUMER DEBT
MAJOR NEW CAPACITY DUE 2010 13**

**MARKETS BELIEVE IN THE BERNANKE 'PUT'
(THE FED WILL ALWAYS CUT INTEREST RATES,
AND BE ABLE TO RESCUE THE ECONOMY)**



**BUT, THE DOW HAS JUST PASSED THE 10,000 LEVEL
FOR THE 25TH TIME SINCE 29 MARCH 1999 AND, AS THE
NEW YORK TIMES NOTED, "THERE ARE NO CHAMPAGNE
CORKS BEING POPPED ON MAIN STREET"**

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CRUDE OIL MARKETS



**SUPPLY/DEMAND CLOSE TO BALANCE
SMALL CHANGES CAUSE MAJOR VOLATILITY**

International Chem



**FUTURES: PHYSICALS RATIO NOW 13:1
FINANCIAL PLAYERS BUY CRUDE WHEN SELLING US\$**

PROFITABILITY MOVES UPSTREAM WHEN OIL AND FEEDSTOCK PRICES ARE HIGH

Importance of

Feedstock Price

Energy cost

Capital employed

HIGH OIL PRICES SQUEEZE DOWNSTREAM MARGINS

CRUDE OIL

REFINERY

PETCHEM
PRODUCTION

POLYMER
PRODUCER

POLYMER
PROCESSOR

MANU
FACTURER

LOW OIL PRICES MAXIMISE DOWNSTREAM MARGINS

Importance of

End consumer needs

Supply/demand balance

Competitive dynamics

OIL AND CURRENCY VOLATILITY MAKES PLANNING DIFFICULT

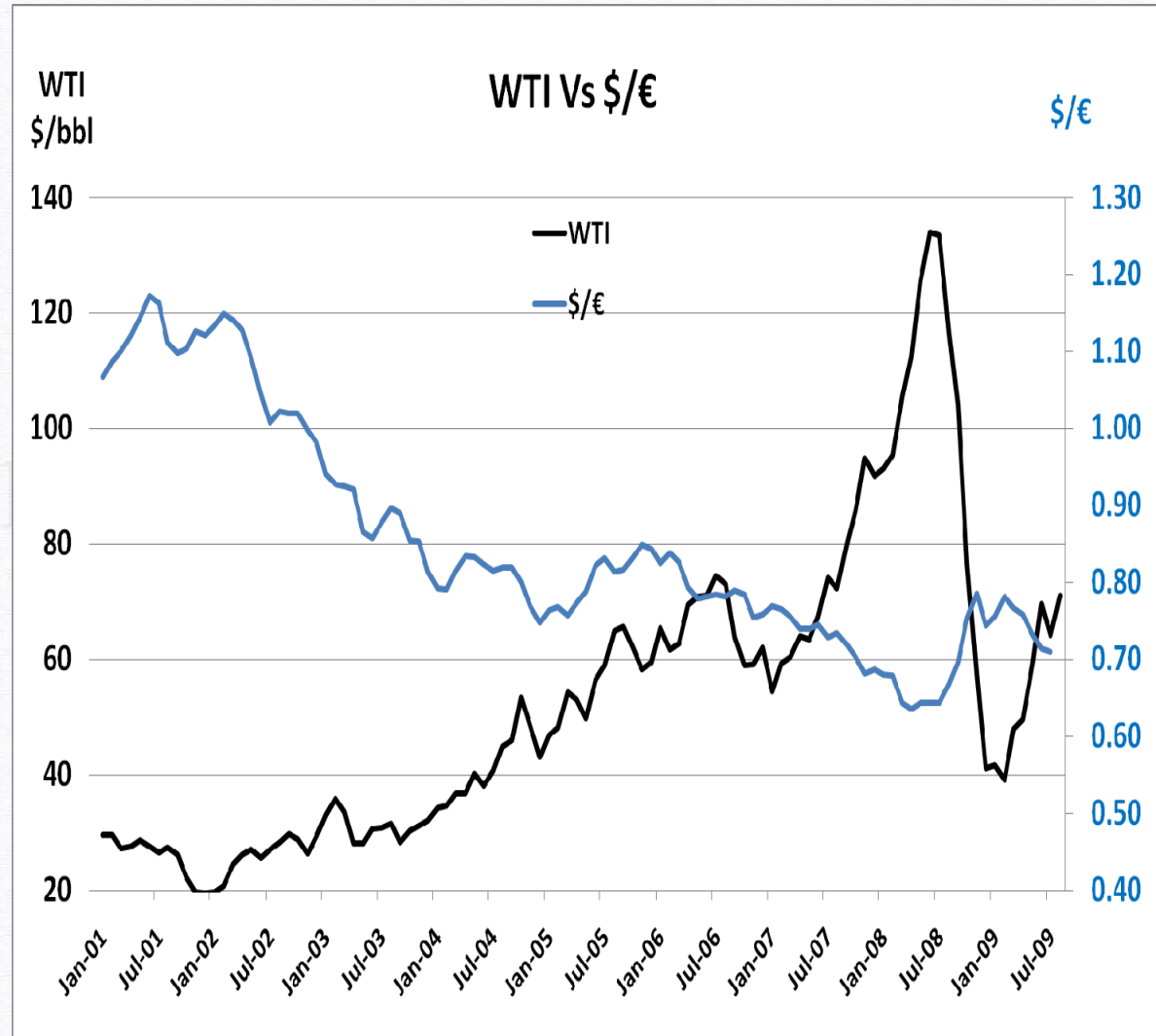
Movements in WTI oil price and US\$ are 82% inversely correlated since 2001.

Rationale is that tight oil supply/demand balances lead to higher oil prices.

US oil imports cost \$331bn in 2008, and were 47% of the trade deficit.

Since July 2008, oil prices fell from \$147/bbl to \$32/bbl, then recovered to \$75/bbl.

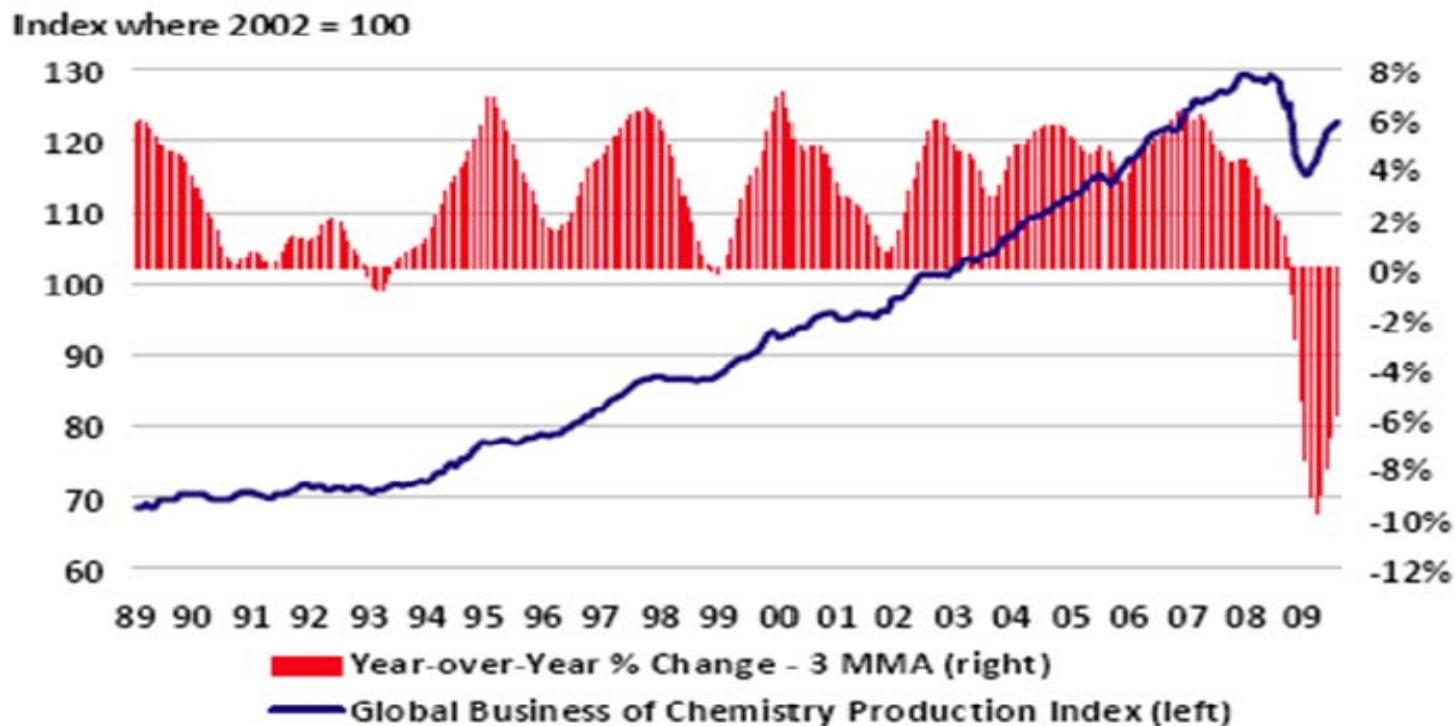
The \$ rose from €0.63 to €0.80, now back to €0.69.



CHEMICALS IN UNCHARTED TERRITORY IN THIS DOWNTURN

1990's downturn merely flatlined growth, now it has fallen

Global Business of Chemistry Production Index

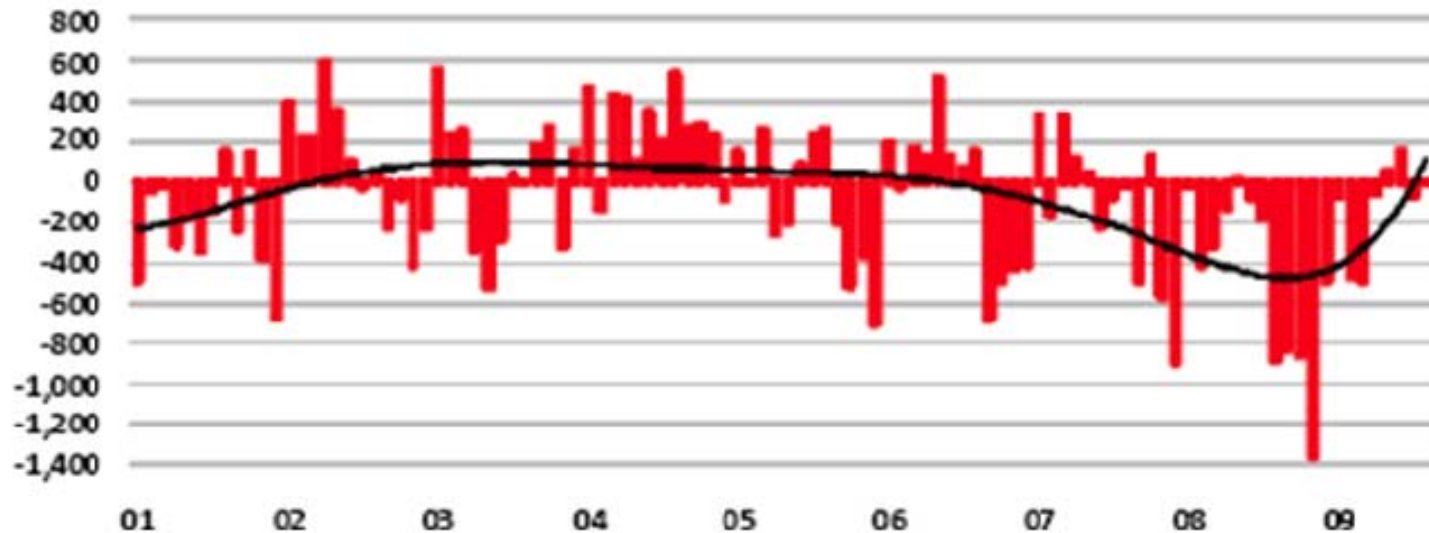


Source: ACC

THE BOOST FROM RESTOCKING IS NOW COMPLETED

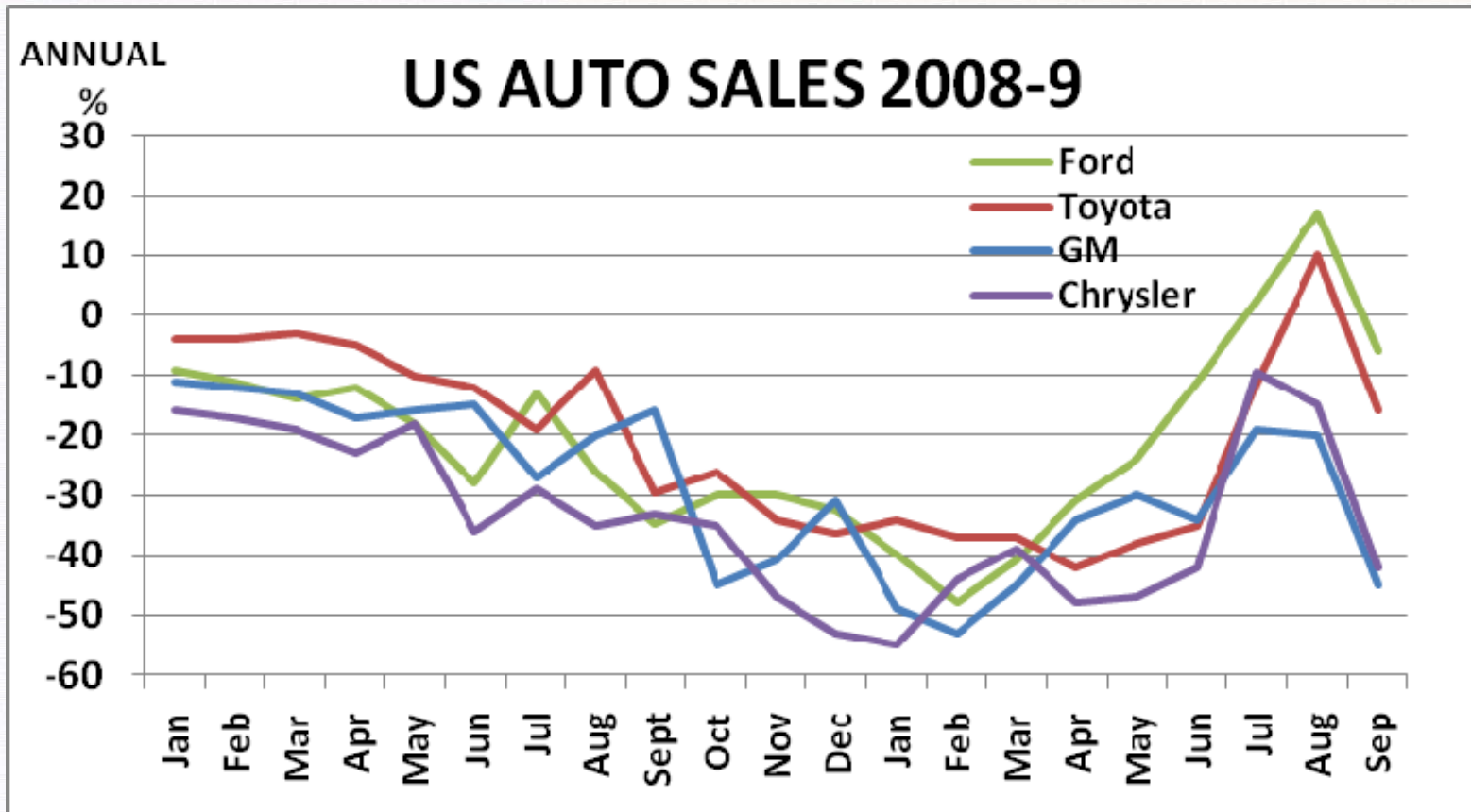
Underlying Demand less Actual Thermoplastics Resin Consumption

Millions of Pounds



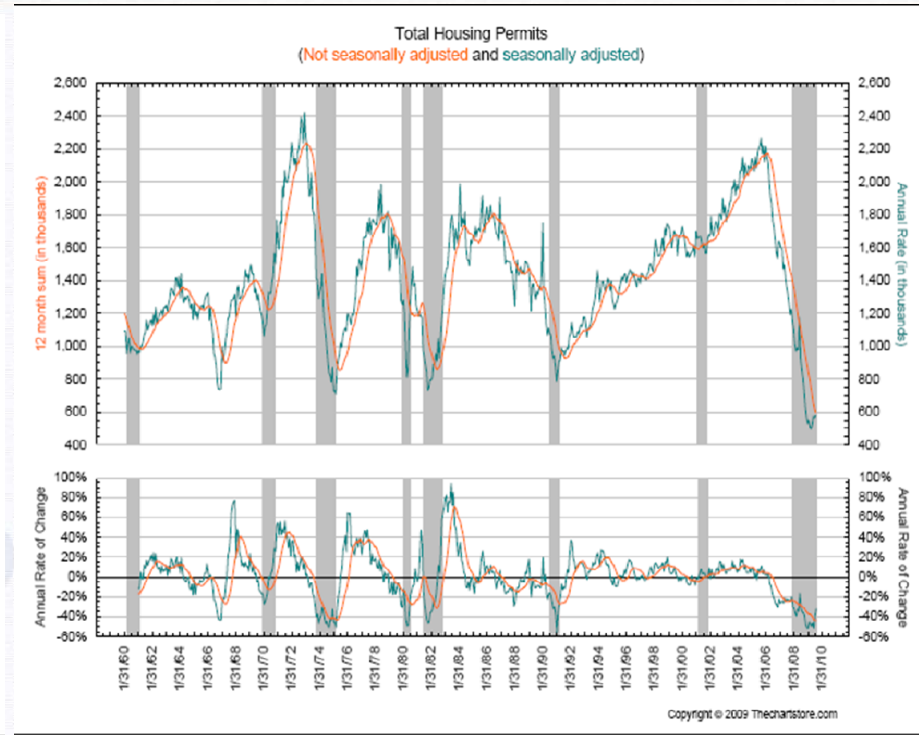
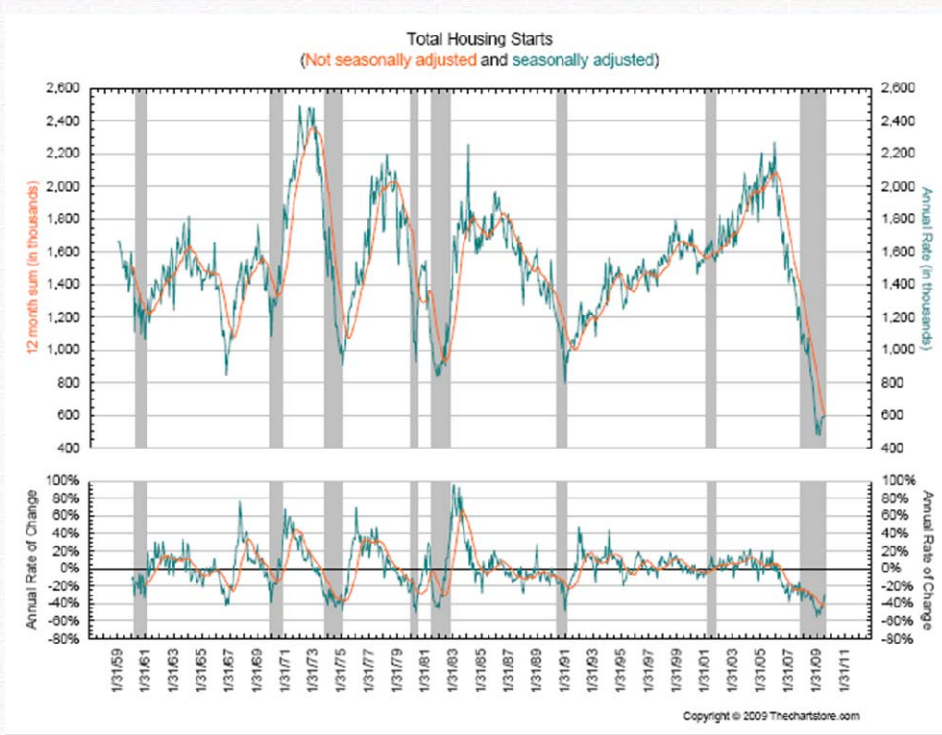
Source: ACC

US AUTO SALES REMAIN DEPRESSED VERSUS LAST DECADE 'CASH FOR CLUNKERS' JUST TOOK SALES FROM FUTURE



- Each new auto consumes \$2.7k of chemicals, according to the ACC.
 - US auto sales averaged 15m - 17m from 1995 – 2007
 - They were worth \$41-46bn of chemical sales.
 - Today they are running at a 11m rate, worth only \$30bn.

ANY RECOVERY IN US HOUSING COMES FROM LOW BASE



- Each new home consumes \$16k of chemicals, according to the ACC.
- In 2006, starts were running at a peak rate of 2.2m, worth \$35bn of chemical sales.
- Today they are running at a 600k rate, worth just \$10bn.
- Even in 1975, 1981 and 1991, starts only fell to 800k

AN A-Z OF COMPANY COMMENTS ON THE CURRENT OUTLOOK

AKZO NOBEL EXXONMOBIL

[Akzo Nobel](#), "With the exception of some emerging markets, we see little significant recovery of growth," CEO Hans Wijers.

[BASF](#), "Capacity utilisation rose from below 60% in the first quarter to slightly above 60% in the second there was no reason why the second half would show an improvement on the first, and could possibly be worse", CFO Kurt Bock

[Bayer](#), "The bottom of the cycle has been reached, but there is still no sign of a sustained recovery in demand," CEO Werner Wenning.

[BP Chemicals](#), "The outlook continues to be challenging"

[Celanese](#), "We're not seeing signs of a widespread strong recovery," CEO David Weidman

[Dow](#), "Second quarter operating rate was c75%, with overall demand still below last year and excess capacity remaining", CEO Andrew Liveris.

[Dow Corning](#), "global economic recession continues to dampen demand", CFO J Donald Sheets.

[DuPont](#), "My concern is the true demand recovery. Are we going to be bumping along the bottom," CEO Ellen Kullman

[ExxonMobil Chemicals](#), "Q2 prime product chemical sales fell 6.7% versus 2008."

AN A-Z OF COMPANY COMMENTS ON THE CURRENT OUTLOOK

MITSUBISHI WACKER

[Mitsubishi](#), "Ethylene production in the quarter fell 13% year on year"

[Olin](#), "Precipitous decline in caustic soda pricing and the continuation of weak demand," CEO Joseph Rupp

[Reliance](#), "Attributed its rising margins to the fact the industry was operating on a low level of inventory, and the depreciation of rupee against the dollar".

[Rhodia](#), "Demand in emerging countries returned to 2008 levels and customer de stocking in Europe and North America was essentially completed," CEO Jean Pierre Clamadieu.

[Shell Chemicals](#), "Reduced global demand for chemical products significantly impacted the chemicals manufacturing plant utilisation rate, which dropped to 68% from 84% in Q2 2008"

[Siam Cement](#), Thailand, "It remains to be seen what path the recovery process takes and over what period."

[Sherwin Williams](#), The "past three years have erased a decade of growth in the coatings market", CEO Chris Connor.

[Sinopec](#), "Mainstream ethylene plants were running at full capacity from January to June 2009. We haven't seen signs of demand falls and will keep high production".

[Wacker](#), "Customers are still cautious about placing orders. They are ordering smaller quantities or concluding contracts with shorter durations"



SCENARIOS

❖ Back to the Boom

Quick V shaped recovery

Growth returns H2 2009, complete catch up by 2011

❖ The Stimulus Economy

Slow U or W shaped recovery

Governments support key sectors, 3 – 5 year downturn

❖ A New Reality

An L shaped recovery

A more frugal consumer, prioritising 'needs' vs 'wants'



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THE LANDSCAPE IS CHANGING AS COMPANIES COMPETE BY BEING LOW COST VOLUME PRODUCERS, OR R&D LED 'SOLUTION PROVIDERS'

FORMERLY

Basic Chemicals

Intermediates

Specialities

Service

NOW

Margin has been squeezed out of former specialties & intermediates

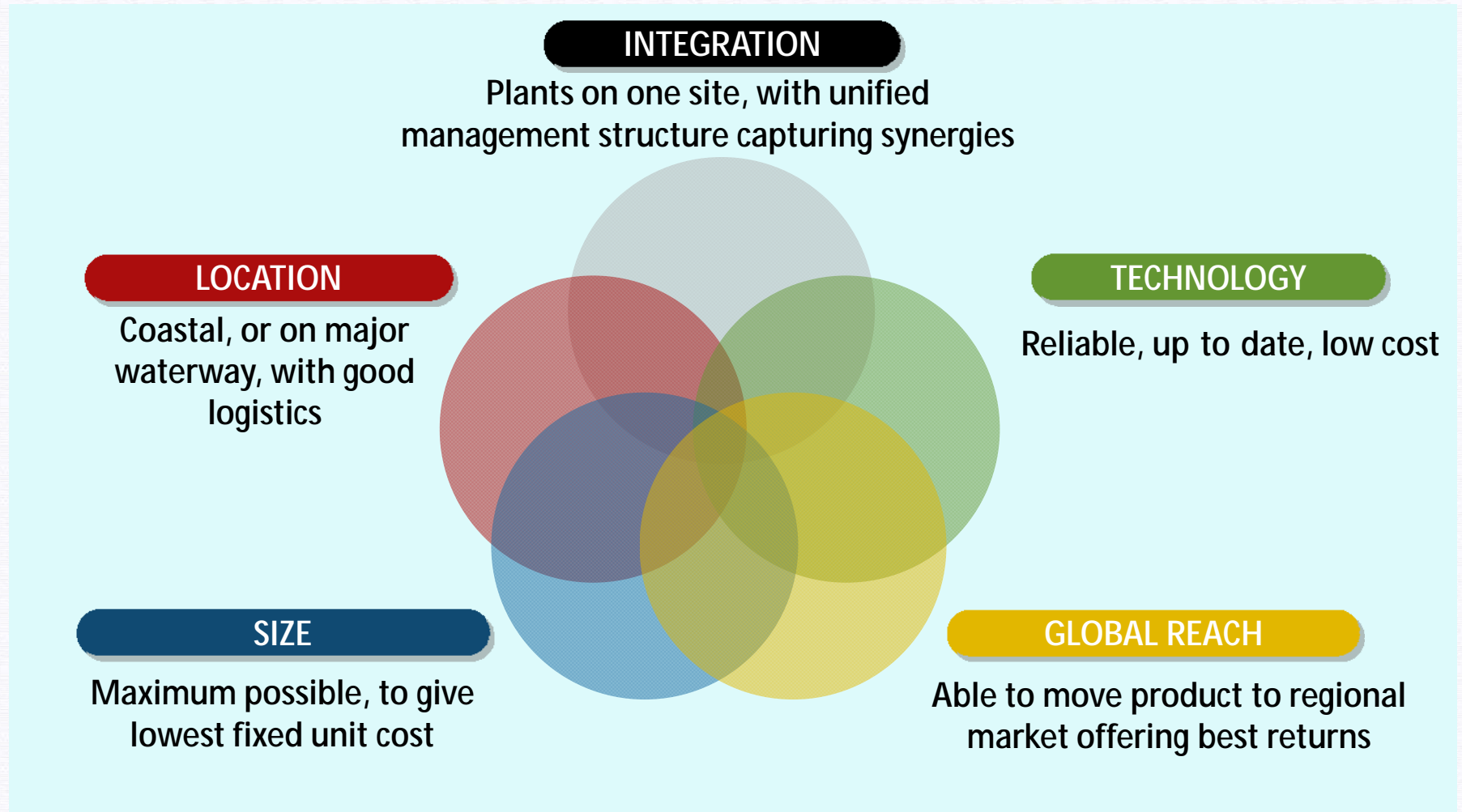
ROCE driven companies

Innovation driven companies

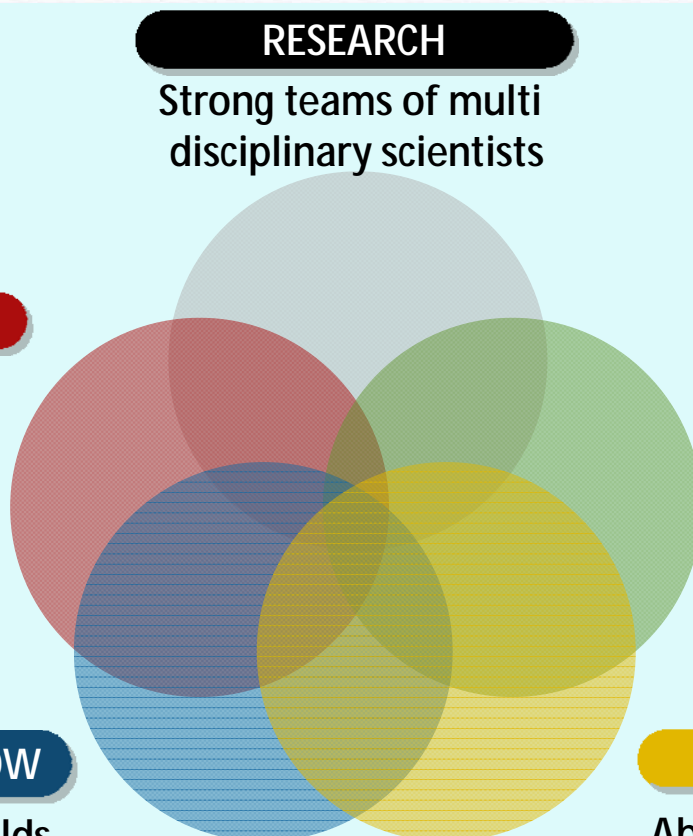
Lowest Cost Suppliers

Solution Providers

CRITICAL SUCCESS FACTORS FOR 'LOWEST COST SUPPLIERS' FOCUS ON COST, MARKET KNOWLEDGE & INTEGRATION *"SELL WHAT YOU CAN MAKE MOST EFFICIENTLY"*



CRITICAL SUCCESS FACTORS FOR 'SOLUTION PROVIDERS' FOCUS ON MEETING FUTURE MARKET NEEDS "MAKE WHAT YOU CAN SELL MOST COST-EFFECTIVELY"



RESEARCH

Strong teams of multi disciplinary scientists

TIMESCALE

5 10 year development cycle

TECHNOLOGY

Leading edge, patent protected

APPLICATIONS KNOW HOW

World leader in chosen fields
Close links to key customers

GLOBAL PERSPECTIVE

Able to access opportunities across industries/geographies

KEY ISSUES FOR COMPANY BOARDS

2009

- ❖ Companies have cut costs in order to survive
- ❖ Plants are running in stop/start mode due to lack of orders
- ❖ Job cuts have slowed (64k worldwide vs 50k in April)
- ❖ Staff morale is still adversely affected

2010

- ❖ Global economy unlikely to return to 2003 7 Boom
- ❖ Pimco (www.pimco.com) suggest we face a 'new normal'
- ❖ US consumers key – represented *16% of global GDP in 2008*
- ❖ Probable transition ahead to lower growth, higher savings

CONCLUSIONS

- ❖ The “new normal” will reduce growth rates for many products
- ❖ The financial system will remain on life support for years to come

- ❖ Life will remain tough for:
 - ❖ Highly-leveraged companies
 - ❖ Those dependent on discretionary purchases (houses, autos, PCs)
 - ❖ Those where over-capacity is developing (eg refining, petchems, LNG)
 - ❖ Those dependent on government support (NEA, SEA)
 - ❖ “Environmental” businesses (solar, biofuels) requiring subsidies

- ❖ Those less at risk will be:
 - ❖ Businesses with a strong and committed parent
 - ❖ Businesses which have gone through the pain already (eg agrochems)
 - ❖ Upstream oil, where supply/demand is better balanced
 - ❖ Innovative businesses focused on providing strong Value Propositions
 - ❖ Businesses able to cut production costs and gain market share

- ❖ Scientists need to keep a close eye on economic developments



SCENARIOS 2010

CONSENSUS

\$70/BBL OIL, V SHAPED RECOVERY,
EARNINGS MAINTAINED VIA JOB/COST CUTS

STIMULUS ECONOMY

- U SHAPED RECESSION

RECESSION BOTTOMS 2010/11, THEN SLOW
RECOVERY: GOVERNMENT STIMULI CREATE
TEMPORARY DEMAND IN FAVOURED SECTORS

- W SHAPED RECESSION

TODAY'S RESTOCKING LEADS TO AN APPARENT
RECOVERY, BUT DEMAND THEN SLOWS AGAIN

L SHAPED RECESSION

WORST CASE. AGEING POPULATION LEADS TO
AGEING ECONOMY AND DEFLATION cf JAPAN 1990's

THE 'JOKERS'



*GEO-POLITICS, DEBT MARKETS,
US \$: €, PROTECTIONISM,
EUROZONE PRESSURES,
CHINA DEVALUATION*



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Chemicals and the Economy blog:

**[http://www.icis.com/blogs/chemicals and the
economy](http://www.icis.com/blogs/chemicals_and_the_economy)**

Have Financial or Business Questions? Need Expert Advice?



Here at ACS Network "Dear Adviser" forum, you can read posts from other industry professionals facing financial and business questions just like you.

Paul Hodges, a renowned adviser to the chemical industry and its financial community, will answer your questions on financial strategies for business (and maybe some of your personal questions as well), how to navigate the downturn, opportunities in emerging markets, career advancements, etc..



Join our next Live Discussion!

Wednesday, Nov 4, 2009 at 2:00-3:00pm ET

Post your questions anytime at: <http://www.acs.org/network/dear-adviser>

No matter what your question is, feel free to ask it. We cannot guarantee a personal answer depending on the volume received, but we do endeavor to answer as many questions as possible. Browse through the posts and see if you can offer any help.

Thank you for joining us.
We hope to see you at future events.



November 19, 2009:

ACS Small & Medium Business Webinar Series presents
***“Navigating the IP landscape: Legal issues entrepreneurs and small
business owners need to know ”***

*A half-hour presentation followed by Q&A with speaker Gianna Arnold,
Principal at Miles & Stockbridge P.C, and President of Women in Bio.*

To register: <https://www2.gotomeeting.com/register/404780747>

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