



International Chem

THE GREAT RECKONING BEGINS

9 November 2016



The pH Report

About leC: International eChem (leC) is a London-based strategy consultancy advising Fortune 500 and FTSE 100 companies, investment banks and fund managers.



Paul Hodges

is a trusted adviser to major companies and the investment community, and has a proven track record of accurately identifying key trends in global marketplaces. He writes regularly for the Financial Times, and was widely recognised for forewarning of the 2008 global financial crisis.

He also writes the ICIS 'Chemicals & the Economy' blog, and is co-author of the influential Study 'Demand – the New Direction for Profit'. Its analysis of the key role of demographics in driving the global economy is now becoming accepted by senior policymakers and executives.

Paul is Chairman of leC and non-executive Chairman of NiTech Solutions Ltd. Prior to launching leC in 1995, Paul spent 17 years with Imperial Chemical Industries (ICI), both in England and the USA, where he held senior executive positions in petrochemicals and chloralkali, and was Executive Director of a \$1 billion ICI business.

Paul serves as a Global Expert with the World Economic Forum, and is a Member of the Energy Institute and a Freeman of the City of London. He is a graduate of the University of York, and subsequently studied with the IMD business school in Switzerland

THE SUCCESSFUL SUPPLY-DRIVEN BUSINESS MODEL OF THE ECONOMIC SUPERCYCLE NO LONGER WORKS



The “demographic cliff” caused by ageing populations is creating a “demand cliff”

- ❖ A paradigm shift is underway in the global economy, and petchem markets
- ❖ China’s New Normal economy no longer needs ever-increasing import volumes
- ❖ Oil prices have returned to historical levels, and are close to parity with natural gas
- ❖ Stimulus hangover means many markets now have supply gluts and will lose pricing power

AGENDA

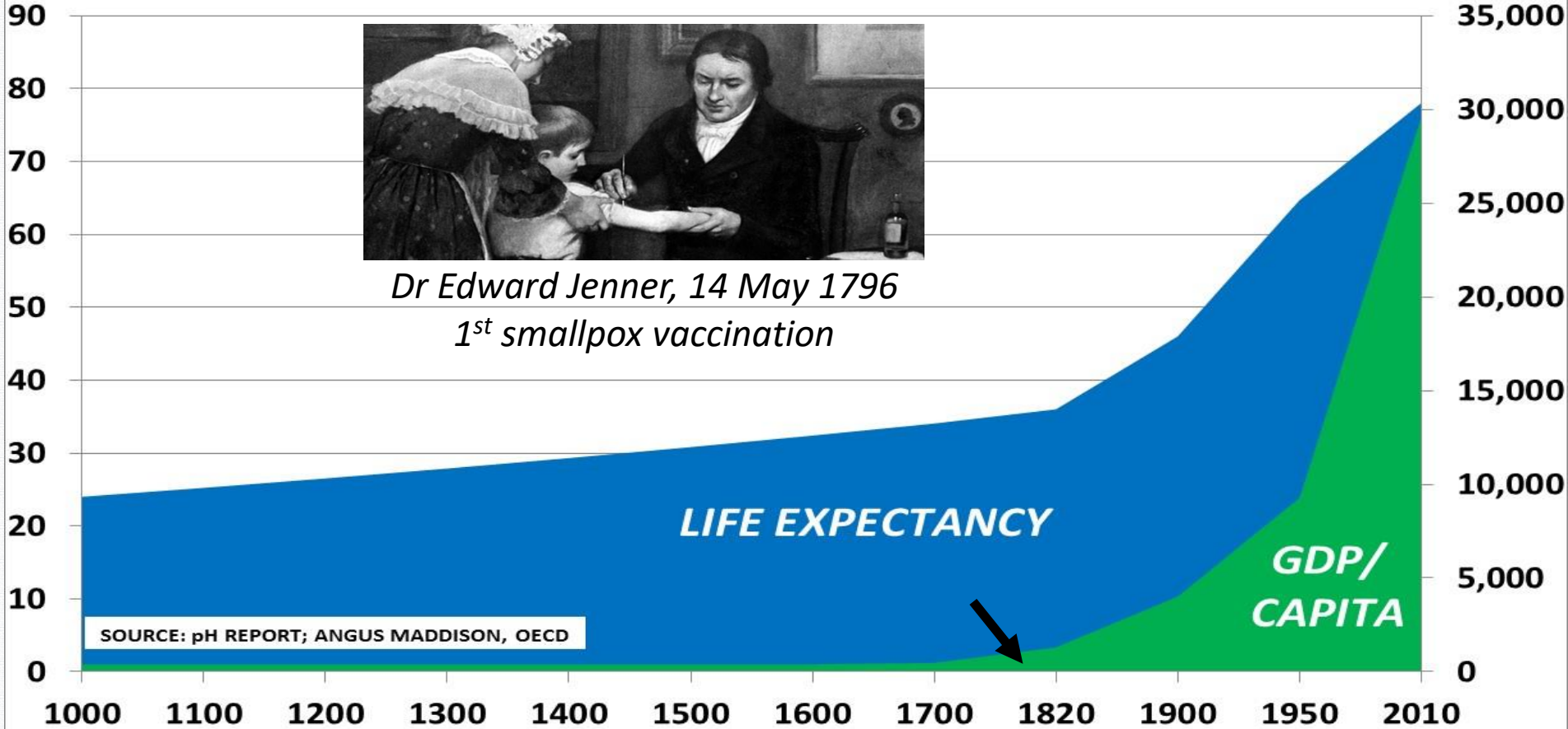
- ❖ *The impact of ageing populations*
- ❖ *China's slowdown and the oil price collapse*
- ❖ *The Great Reckoning begins*
- ❖ *Implications for insurers*

VACCINATION, DISINFECTION, PHARMA AND NOW HEALTHIER LIFESTYLES HAVE CHANGED OUR LIVES

WESTERN LIFE EXPECTANCY v GDP/CAPITA 1000 - 2010

GDP/CAPITA
1990 INT GK\$

LIFE EXPECTANCY



NEW YORK INSURERS REFUSED CLAIMS TILL THE 1930s FOR ECONOMICALLY "USELESS", BUT EMOTIONALLY "PRICELESS" CHILDREN

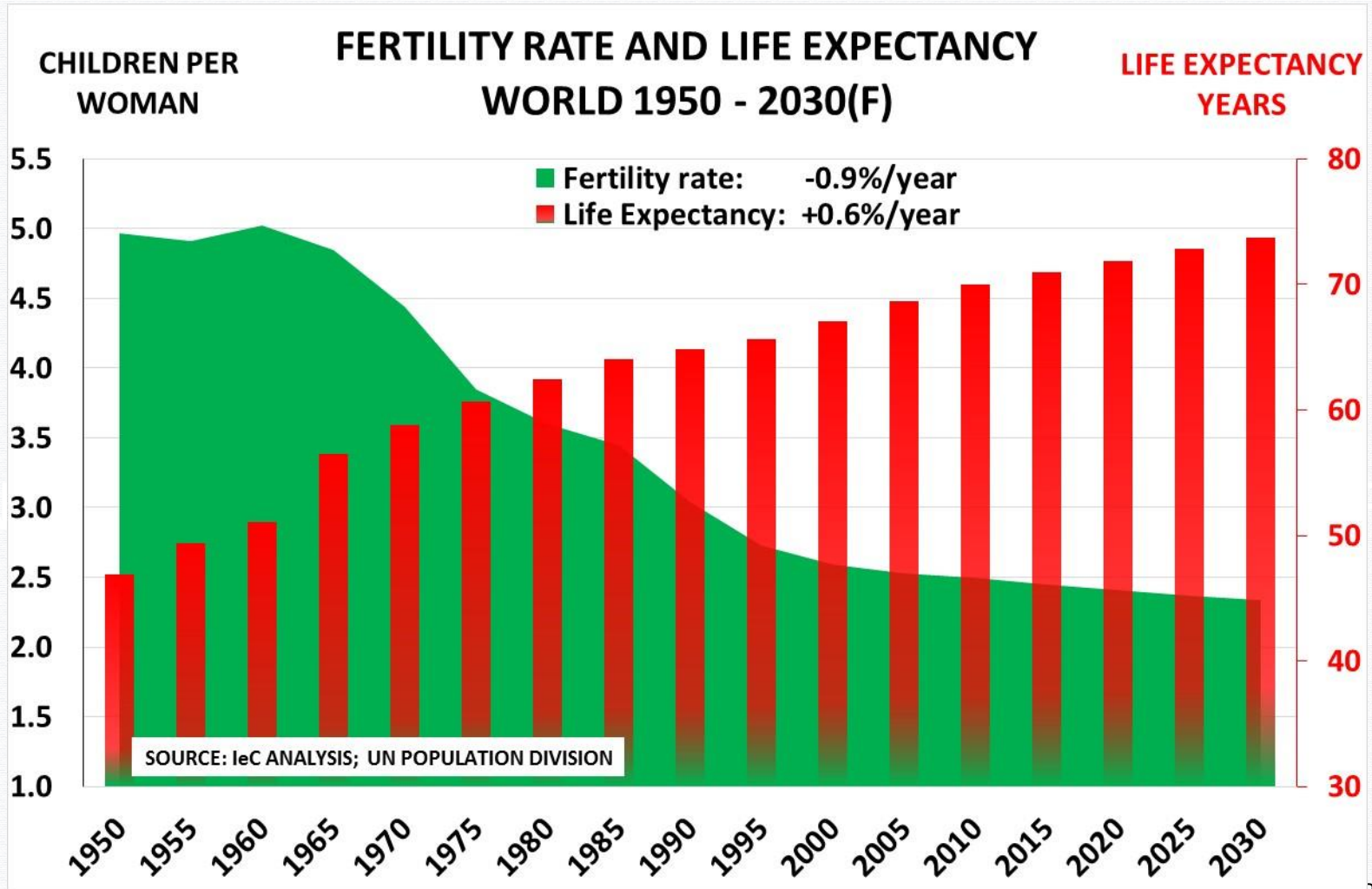
10 small boys and girls in a workforce of 40. Catawba Cotton Mill, 1908

U.S. National Archives

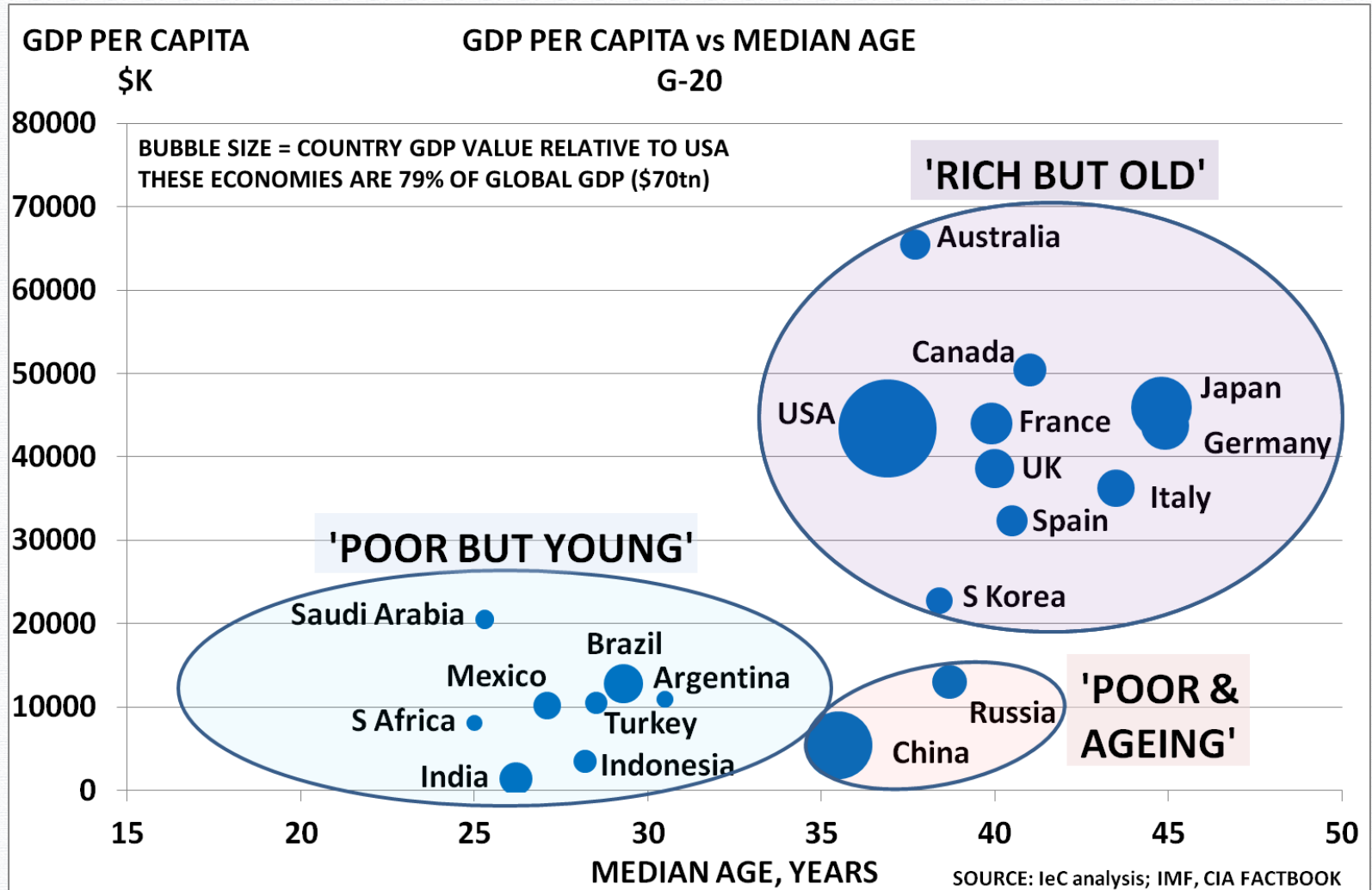


GLOBAL FERTILITY RATES HAVE HALVED SINCE 1950, WHILST LIFE EXPECTANCY HAS RISEN BY 50%

Average life expectancy at age 65 is now 15 – 20 years

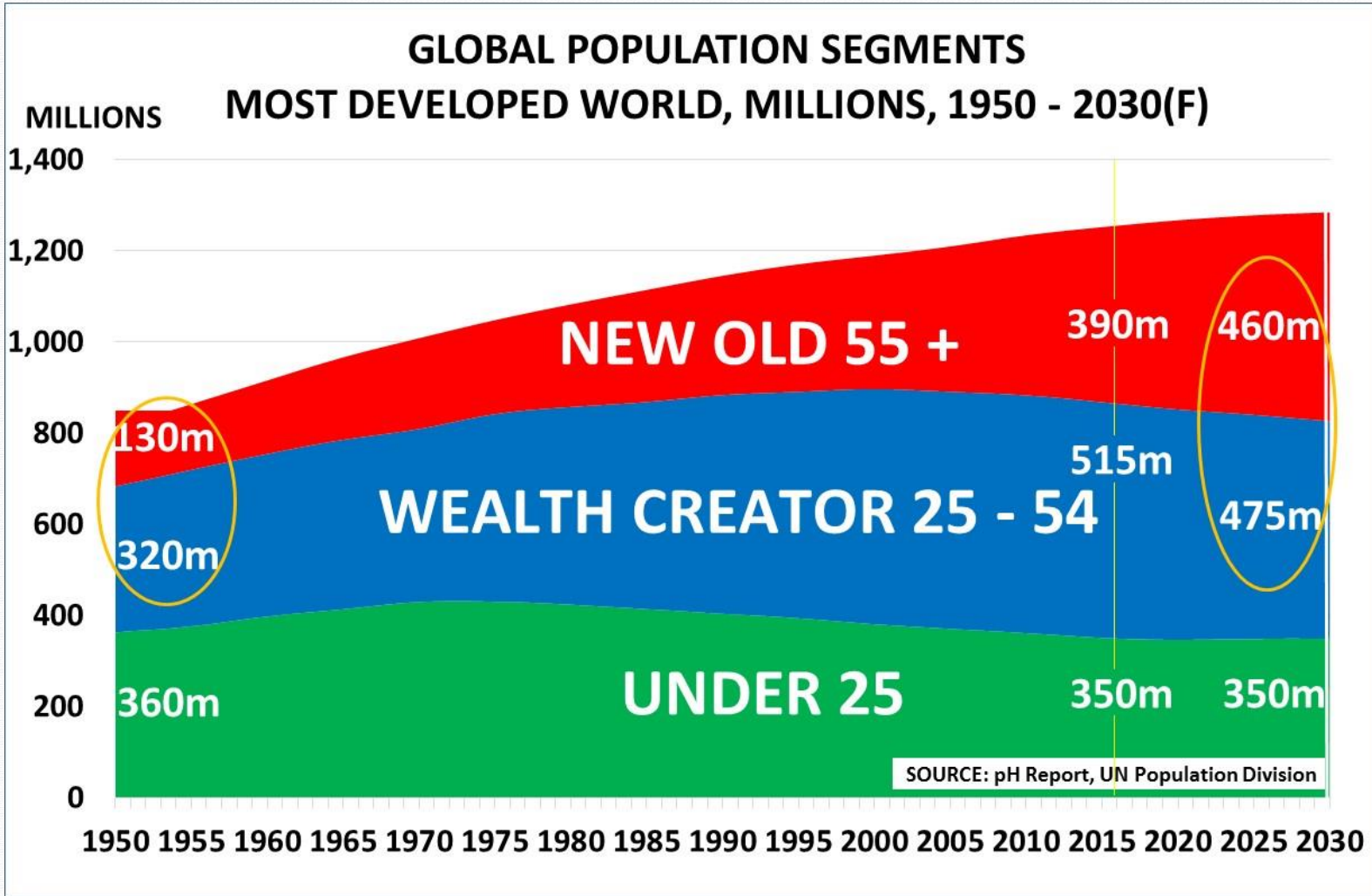


THE G-20 CONTAINS 'RICH BUT OLD' GROUPS IN THE WEST: 'POOR BUT YOUNG' AND 'POOR AND AGEING' ELSEWHERE



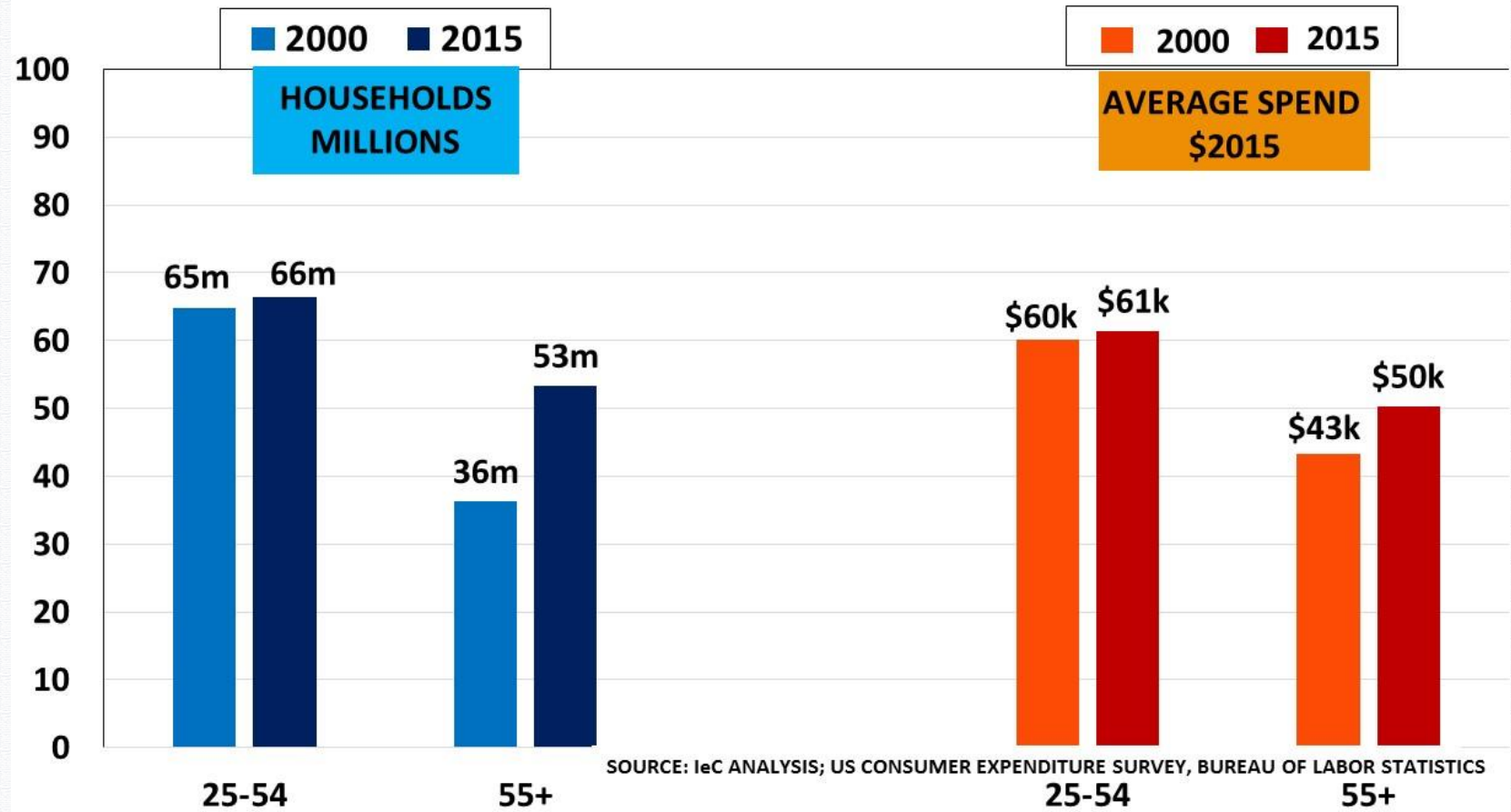
DRAMATIC CHANGE IS UNDERWAY IN THE COUNTRIES OF THE MOST DEVELOPED WORLD

N America, Europe, Japan and Australia/New Zealand are 57% of global GDP



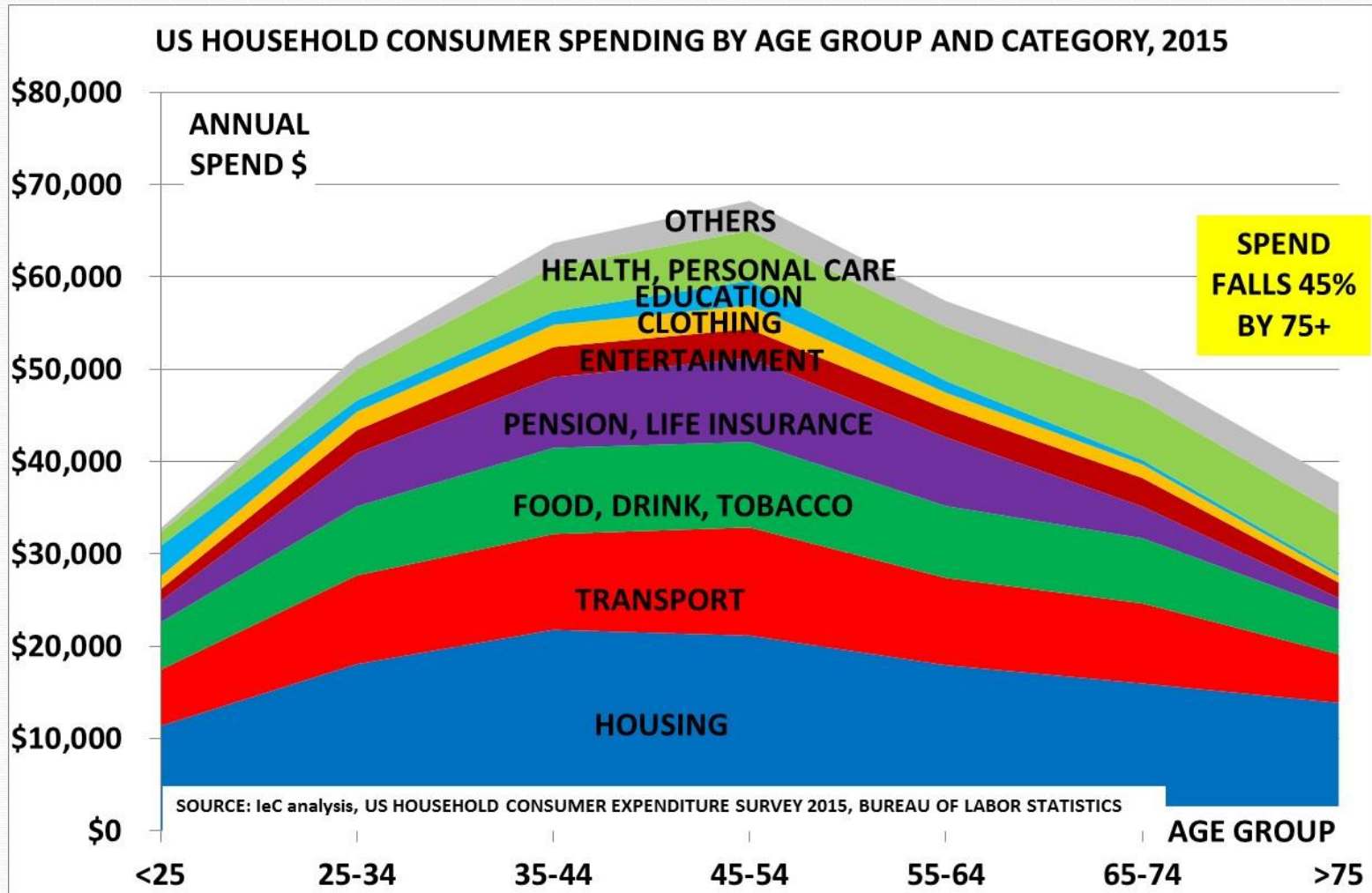
“REALITY FOR THE AVERAGE AMERICAN FAMILY IS THAT ITS HOUSEHOLD INCOME IS \$4K LESS THAN WHEN BILL CLINTON LEFT OFFICE”
PRESIDENT OBAMA, 1 MAY 2016

**US HOUSEHOLD SPENDING 2000 v 2015
 BY AGE OF HOUSEHOLD HEAD, \$2015**



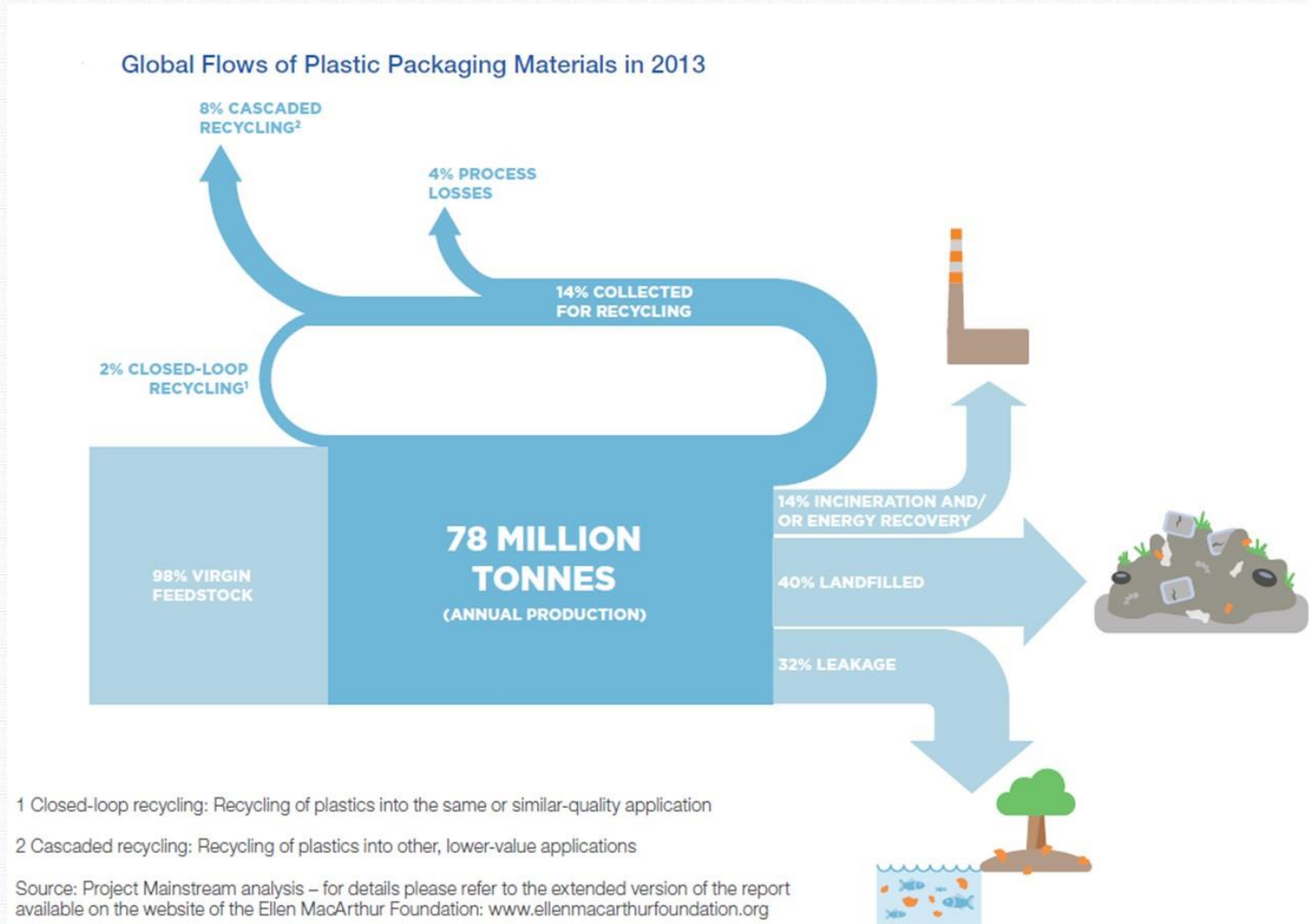
SOURCE: IeC ANALYSIS; US CONSUMER EXPENDITURE SURVEY, BUREAU OF LABOR STATISTICS

US HOUSEHOLD SPENDING DECLINES AFTER AGE 55



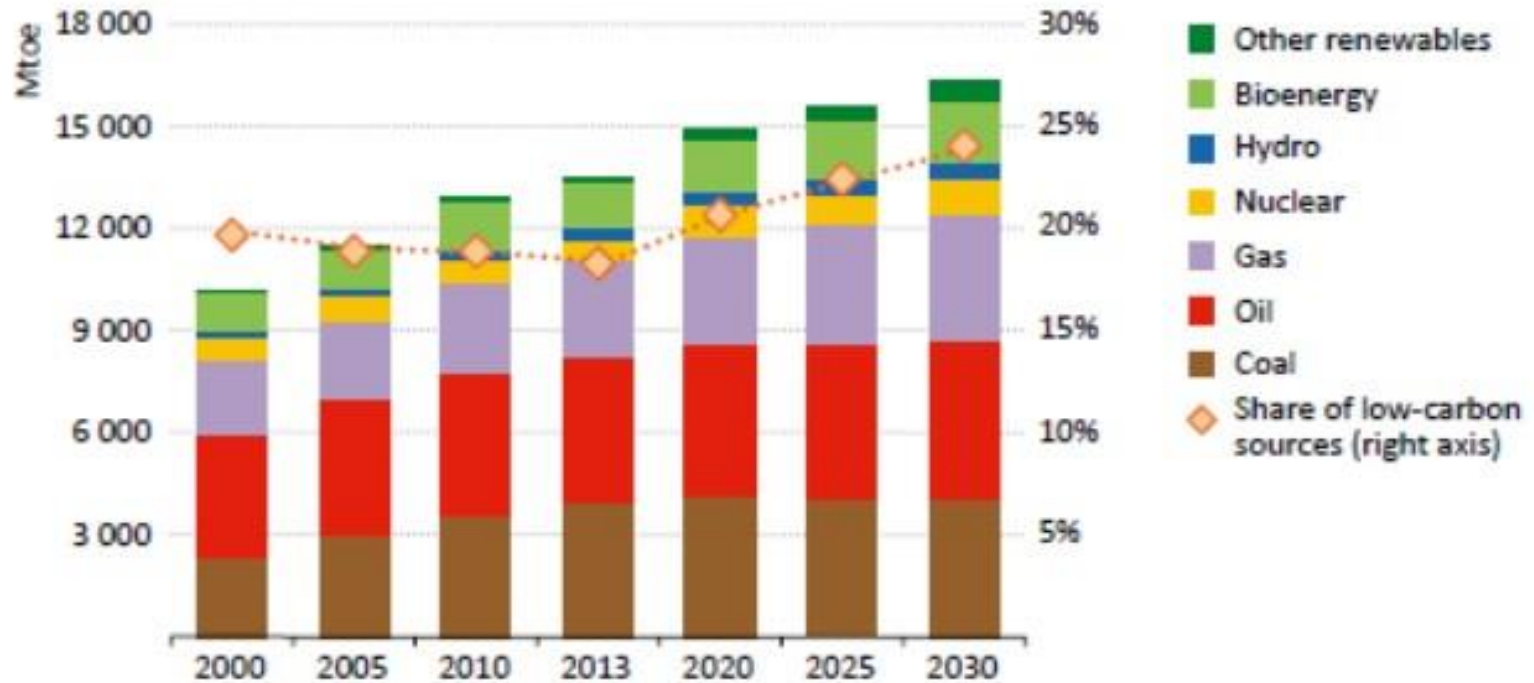
SUSTAINABILITY IS REPLACING GLOBALISATION AS A KEY DRIVER FOR THE ECONOMY

Only 5% of plastic packaging is retained for future use – the oceans contain 150Mt of plastics



IEA SAYS GLOBAL OIL DEMAND GROWS JUST 9% BY 2030 UNDER INITIAL COP21 COMMITMENTS

Figure 2.2 ▶ Global primary energy demand by type in the INDC Scenario



Note: "Other renewables" includes wind, solar (photovoltaic and concentrating solar power), geothermal, and marine.

INDC = Individual Nationally Determined Contributions

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“THE CONCEPT OF A “NEW NORMAL” FOR THE WORLD’S 2ND LARGEST ECONOMY IS NOW PREVAILING AT HOME AND ABROAD”

Xinhua, September 2014

PRESIDENT XI JINPING, opening the 3rd Plenum,
November 2013

“The good meat is all gone; all that is left are hard bones to chew.”

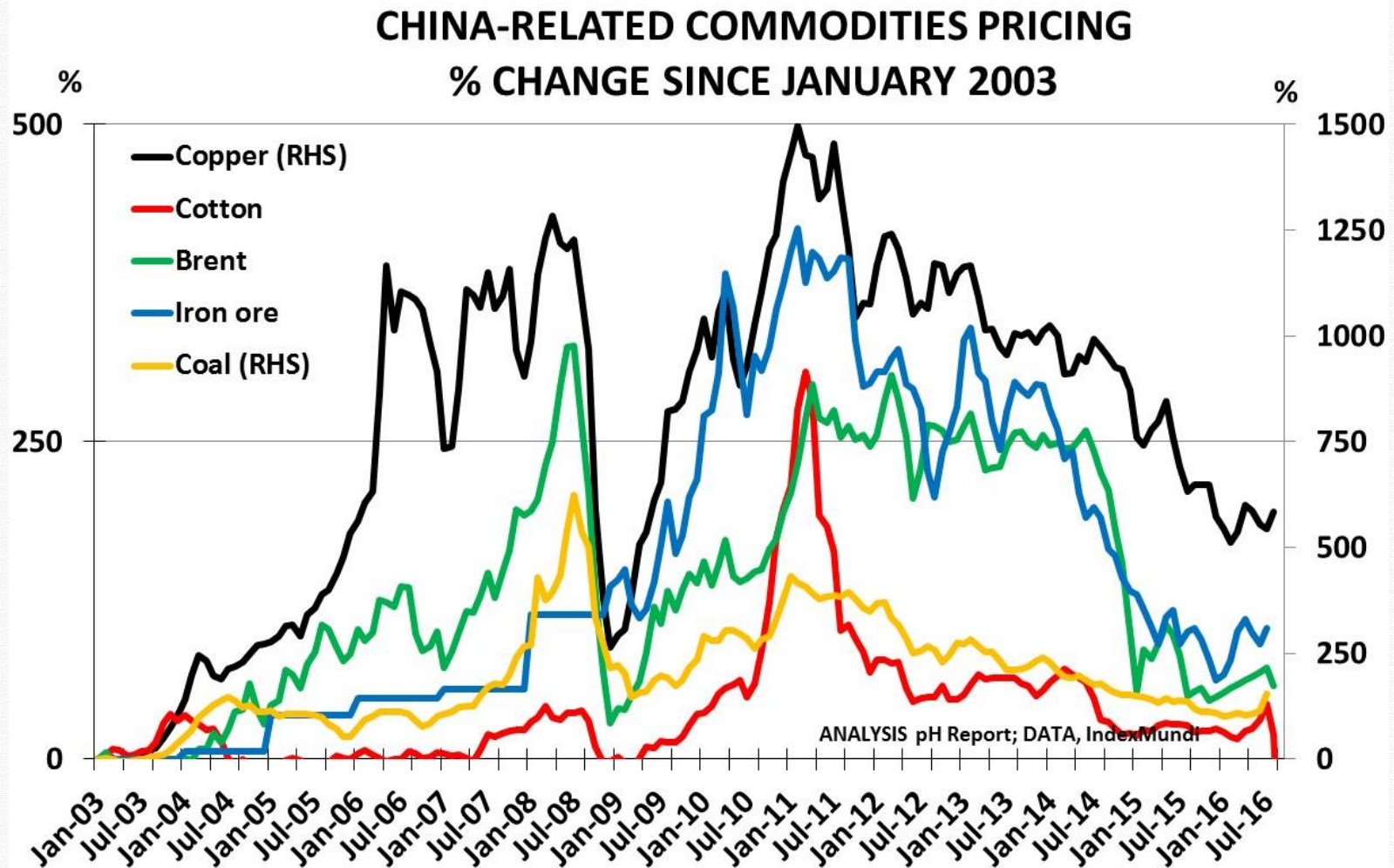


PREMIER LI KEQIANG, in his Work Report to the National
People’s Congress, March 2016

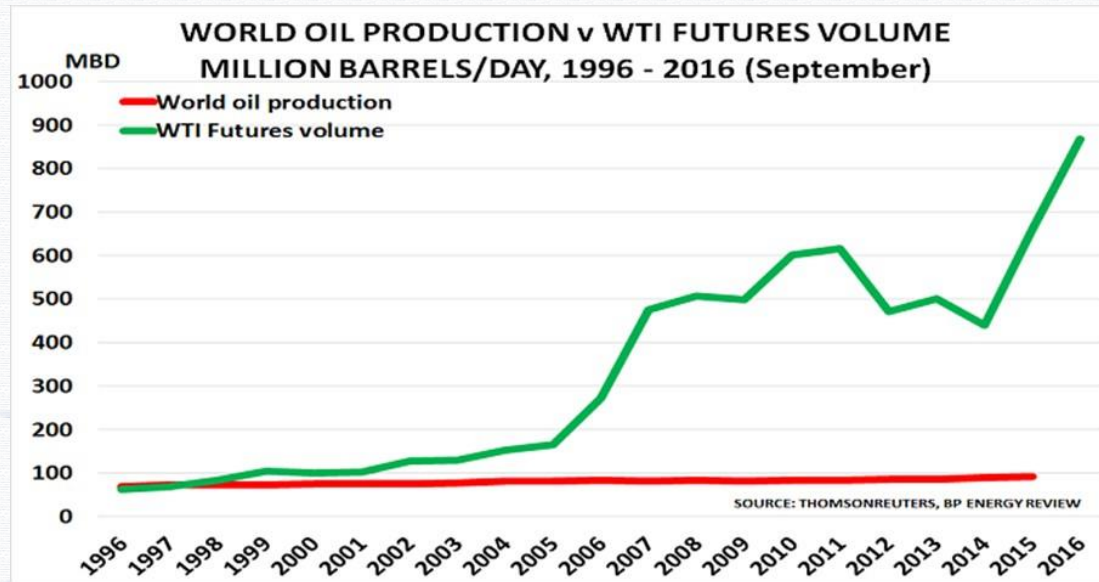
“This is the crucial period in which China currently finds itself, and during which we must build up powerful new drivers in order to accelerate the development of the new economy”



THE CHINA-INSPIRED COMMODITY SUPER-BUBBLE IS COMING TO AN END

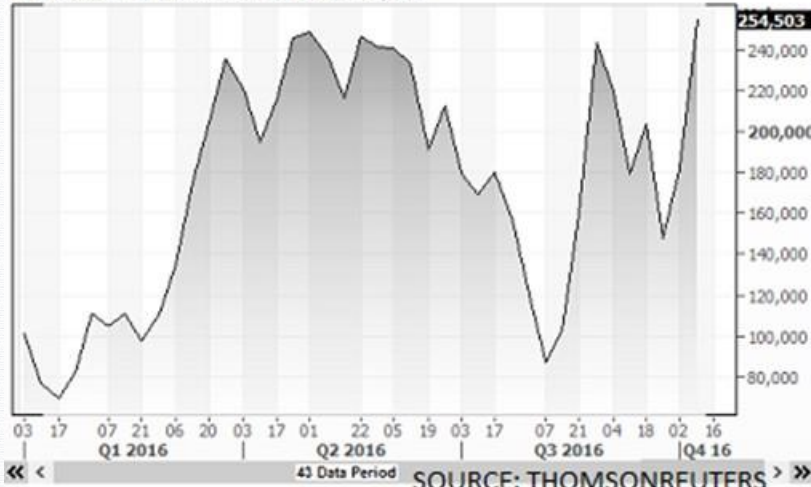


OIL FUTURES MARKETS HAVE BEEN ALLOWED TO DOMINATE FUNDAMENTAL SUPPLY/DEMAND

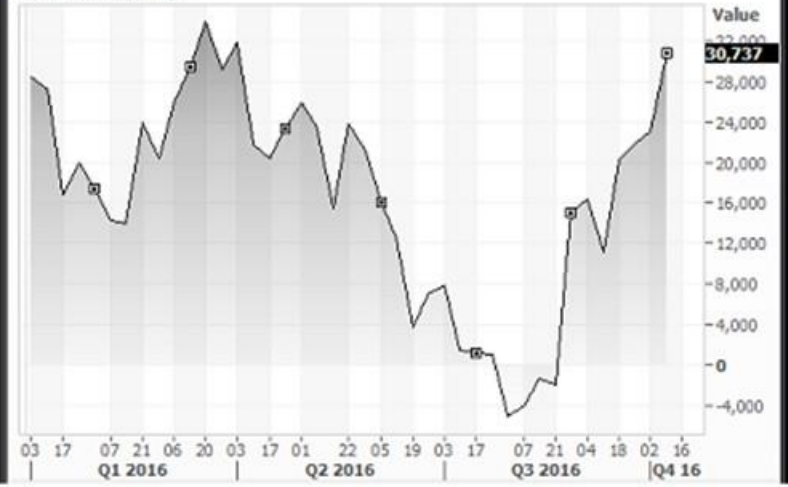


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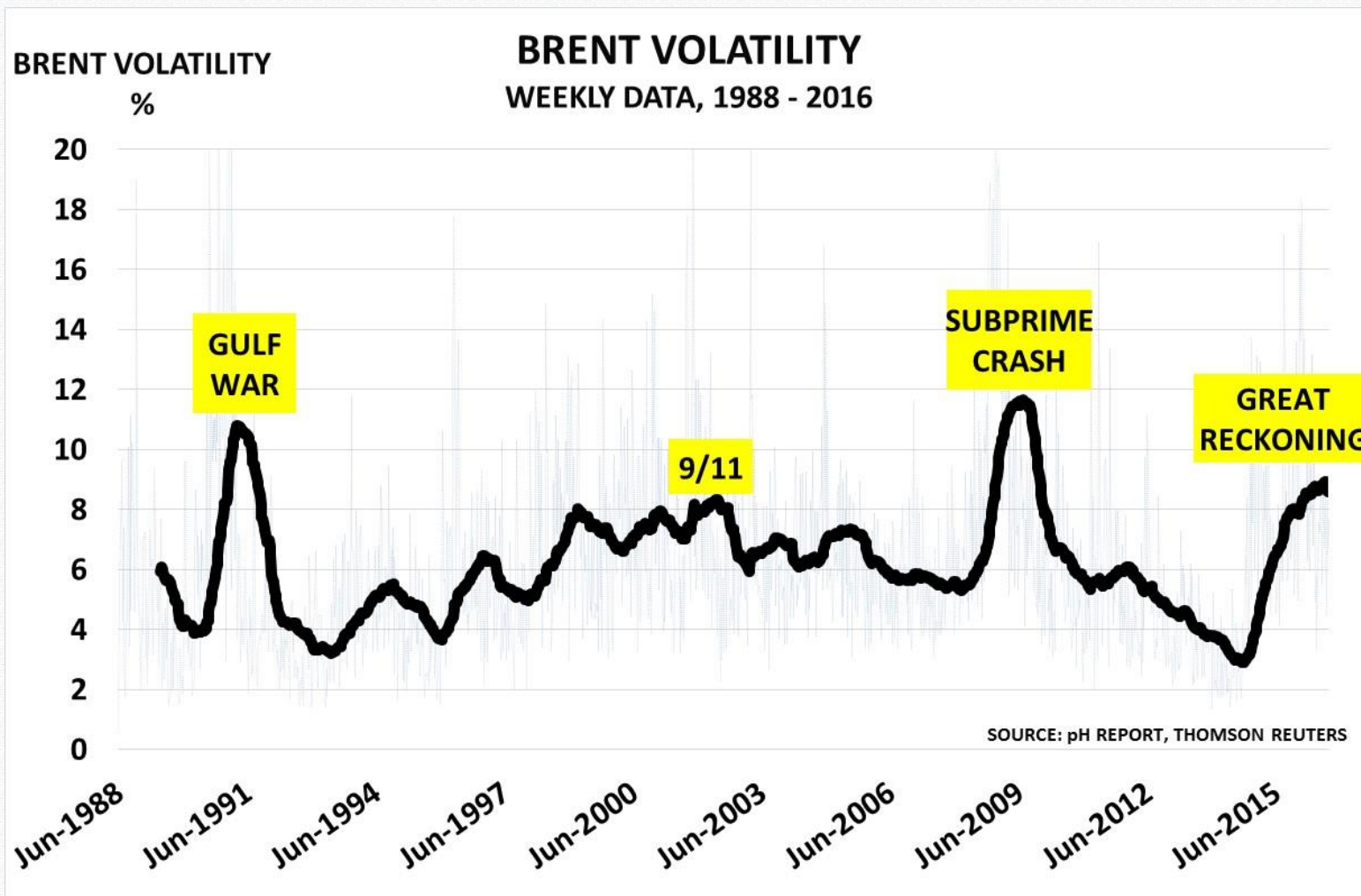
WTI trader net - Commitment of Traders report



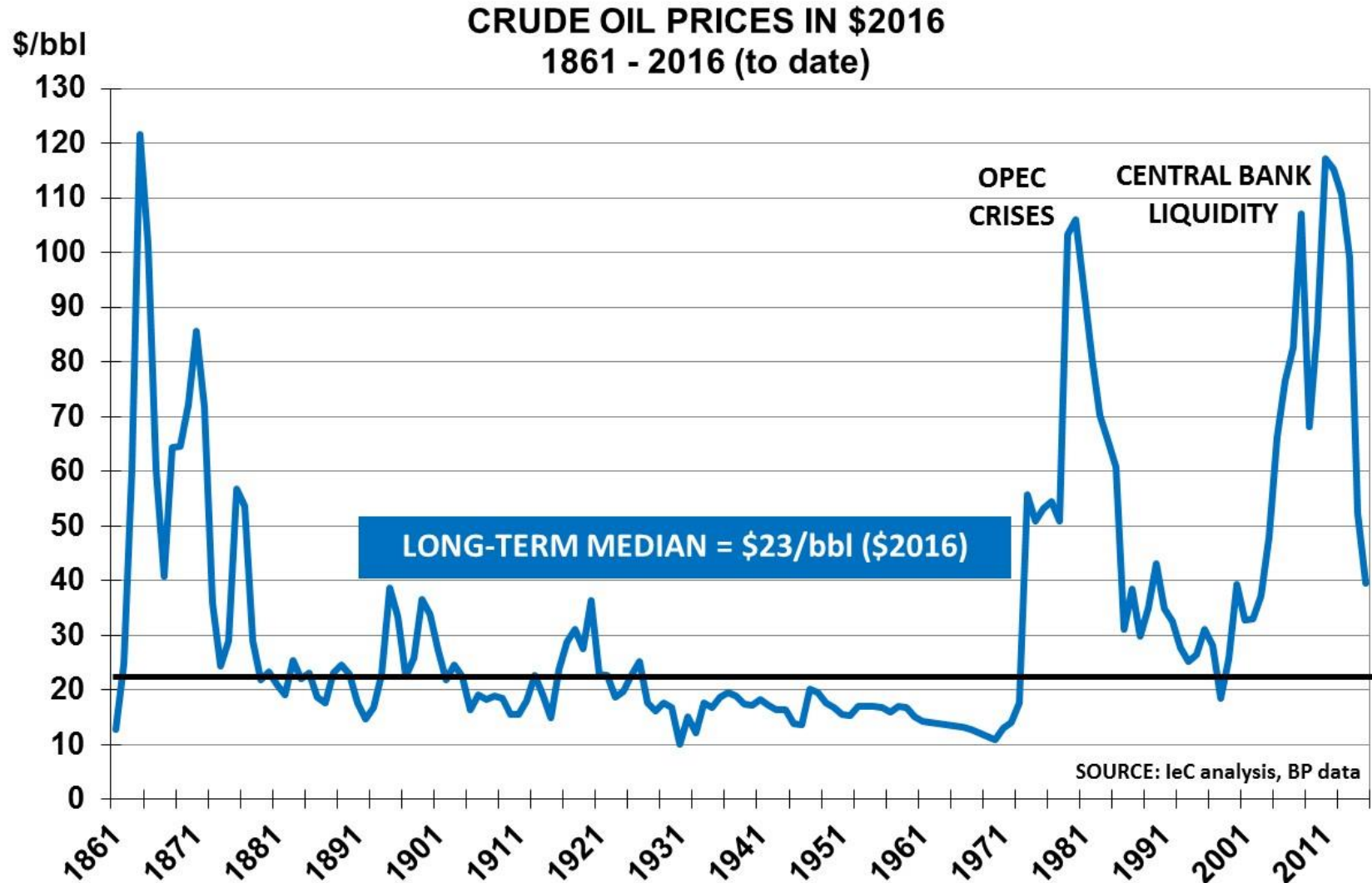
Gasoline trader net



OIL MARKET VOLATILITY IS AT NEAR-RECORD LEVELS



THE MEDIAN OIL PRICE HAS BEEN \$23/BBL SINCE 1861



“THERE IS NO SENSE IN WASTING OUR TIME SEEKING PRODUCTION CUTS, THEY WILL NOT HAPPEN.”

ALI AL-NAIMI, FEBRUARY 2016

“If prices continue to be low, we will be able to withstand it for a long, long time.

Obviously, we don't hope for that, but are prepared for it.”

KHALID AL-FALIH,
JANUARY 2016



DEMAND-LED SCENARIOS CHALLENGE SUPPLY-DRIVEN 'COMFORTABLE MIDDLE' VIEW

\$25/bbl oil = Collapsing demand

Emerging markets submerge, and developed markets slow dramatically as stimulus-created debt has to be repaid

\$50/bbl oil = Comfortable middle

Stimulus policies prove to have worked, demand recovers, project cancellations and revived growth prospects create a balanced market

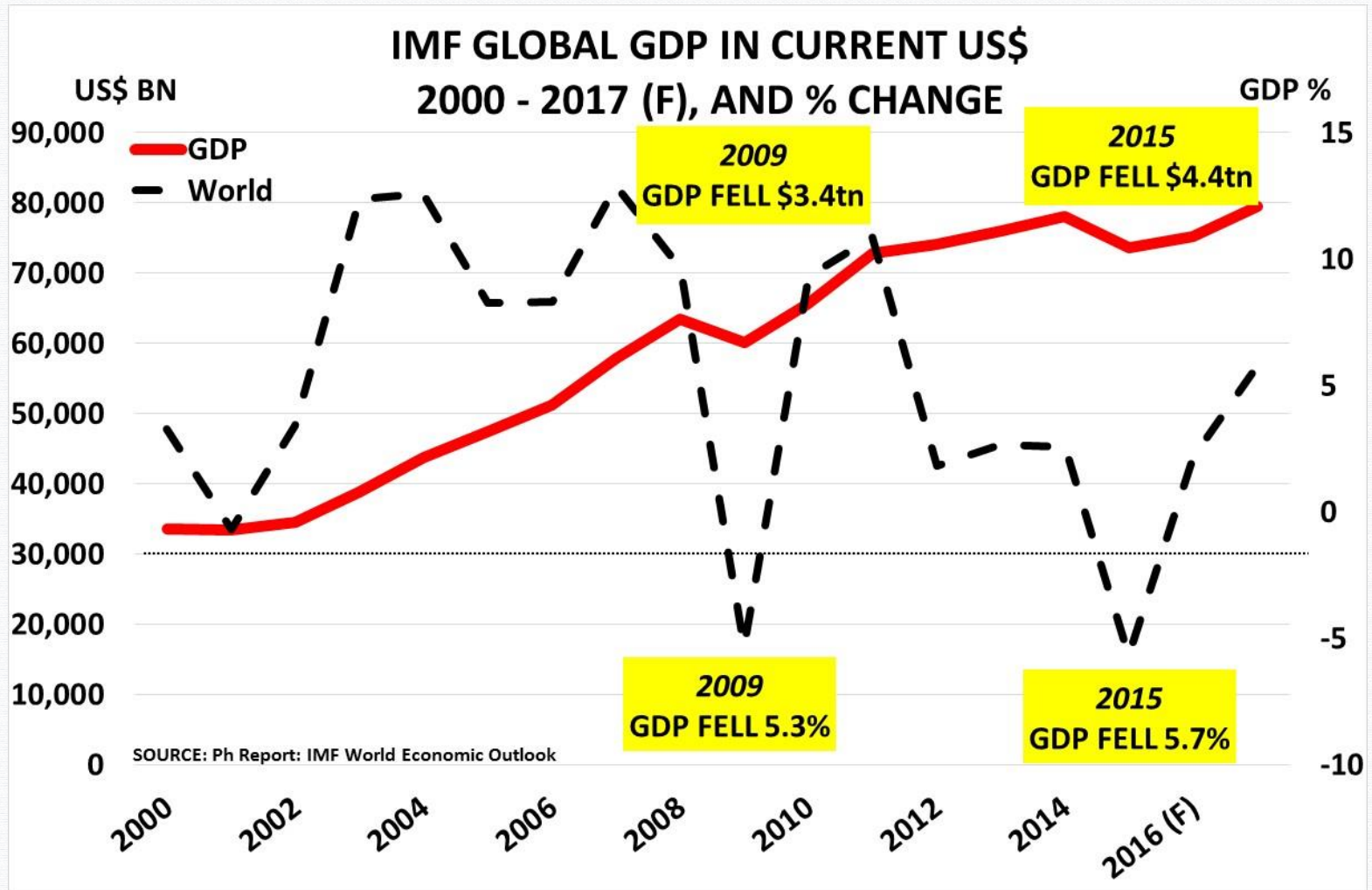
\$100/bbl oil = Continuing tension

Economic recovery stalls as geopolitical risk rises along with the potential for supply disruptions

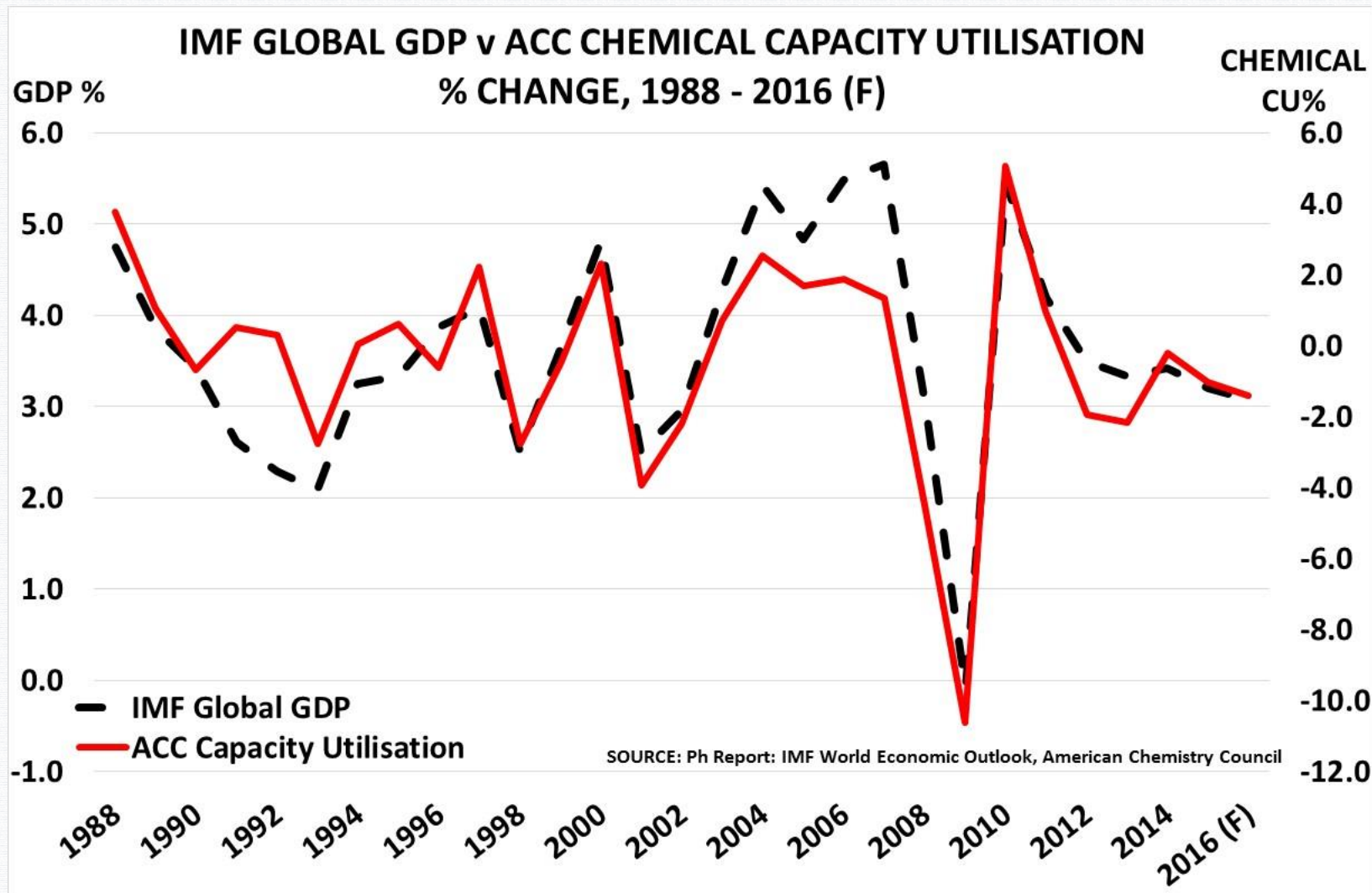
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GLOBAL GDP FELL RECORD \$4.4tn IN 2015, WORLD TRADE FELL 13.8%

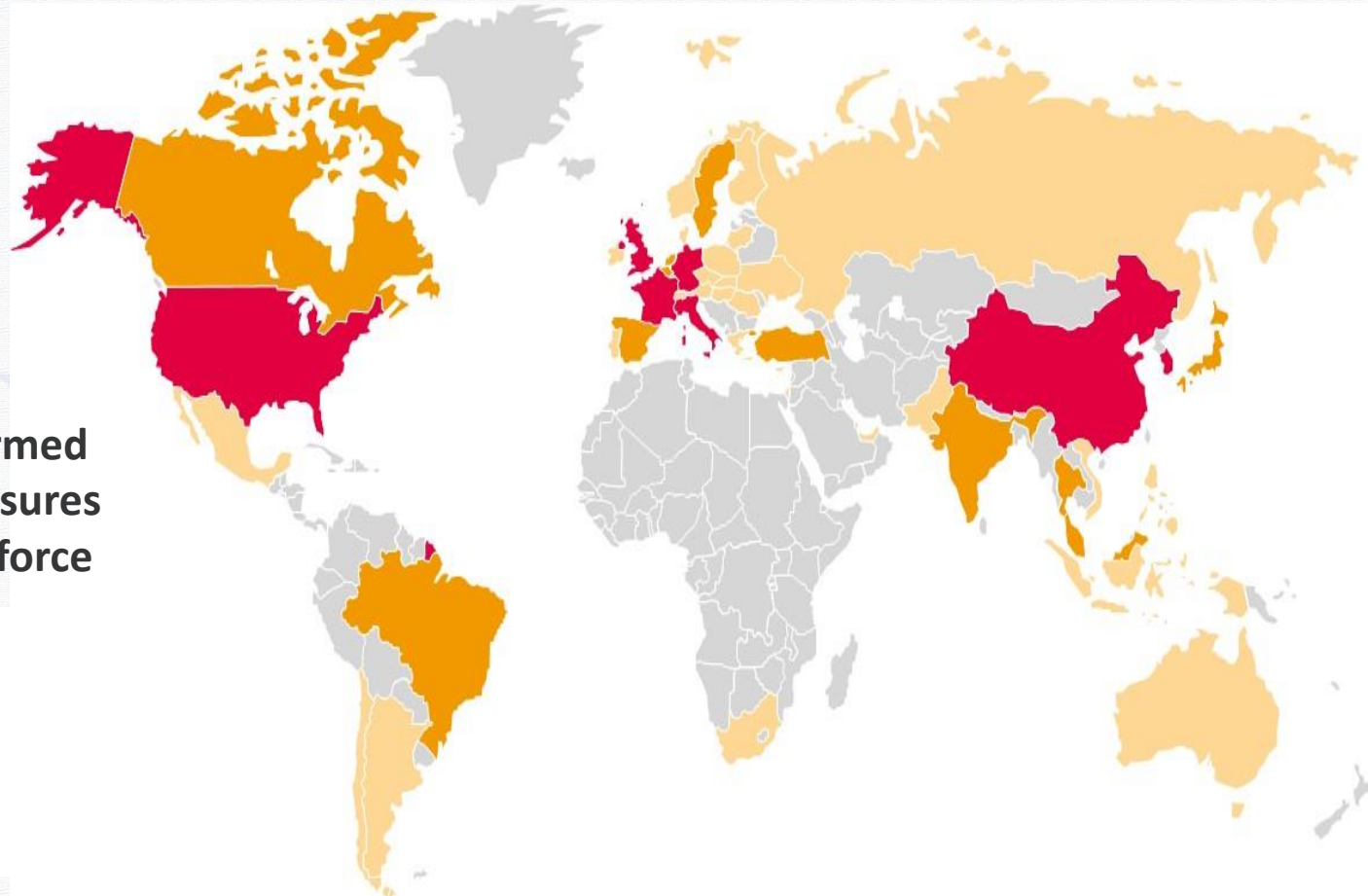


ACC's CAPACITY UTILISATION INDEX IS THE BEST LEADING INDICATOR FOR THE GLOBAL ECONOMY



PROTECTIONISM IS RISING AROUND THE WORLD

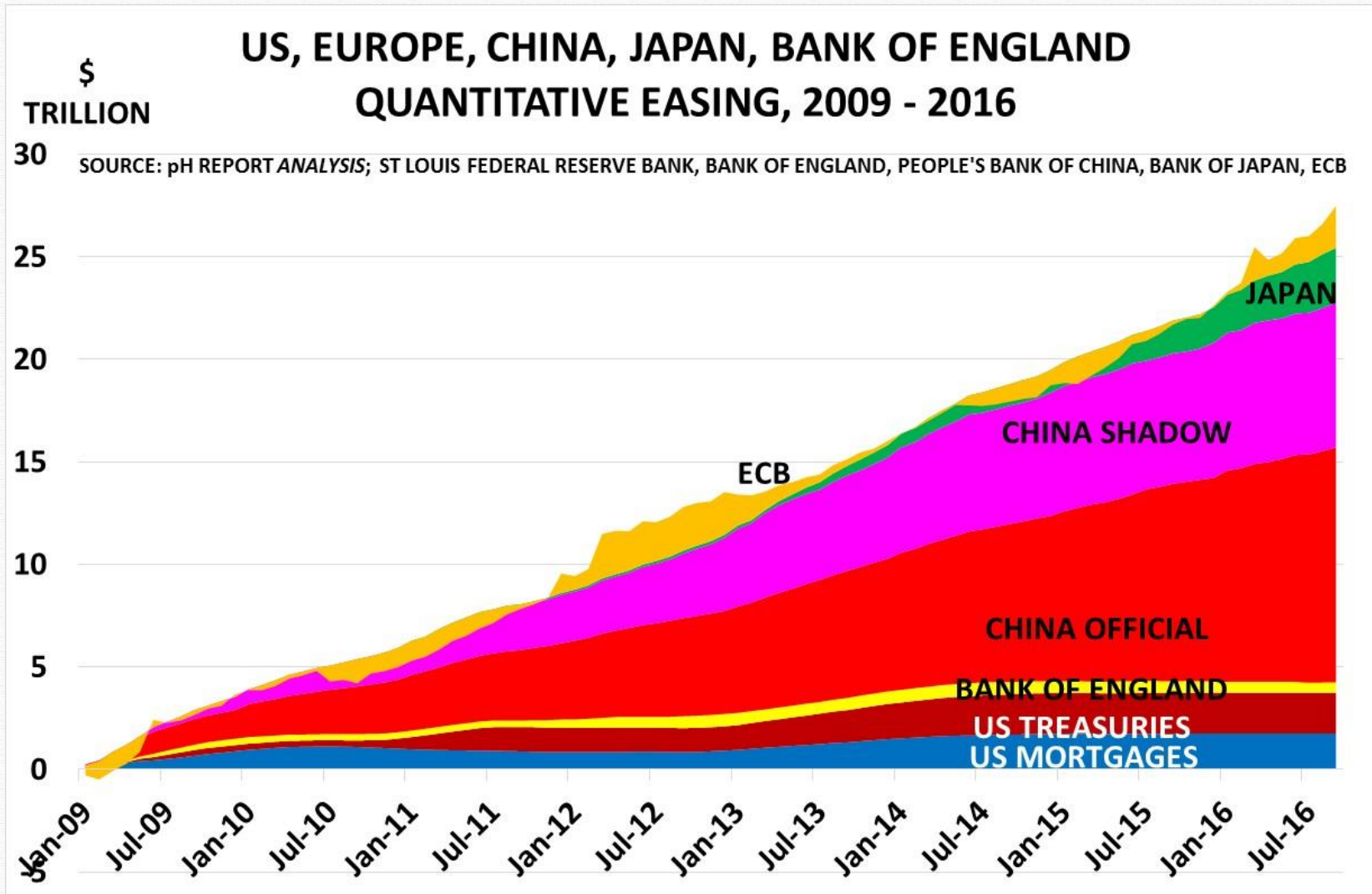
“When the middle class are anxious about their economic realities in their future, its easy to get trapped in demagoguery and protectionism.” Justin Trudeau, Canadian premier



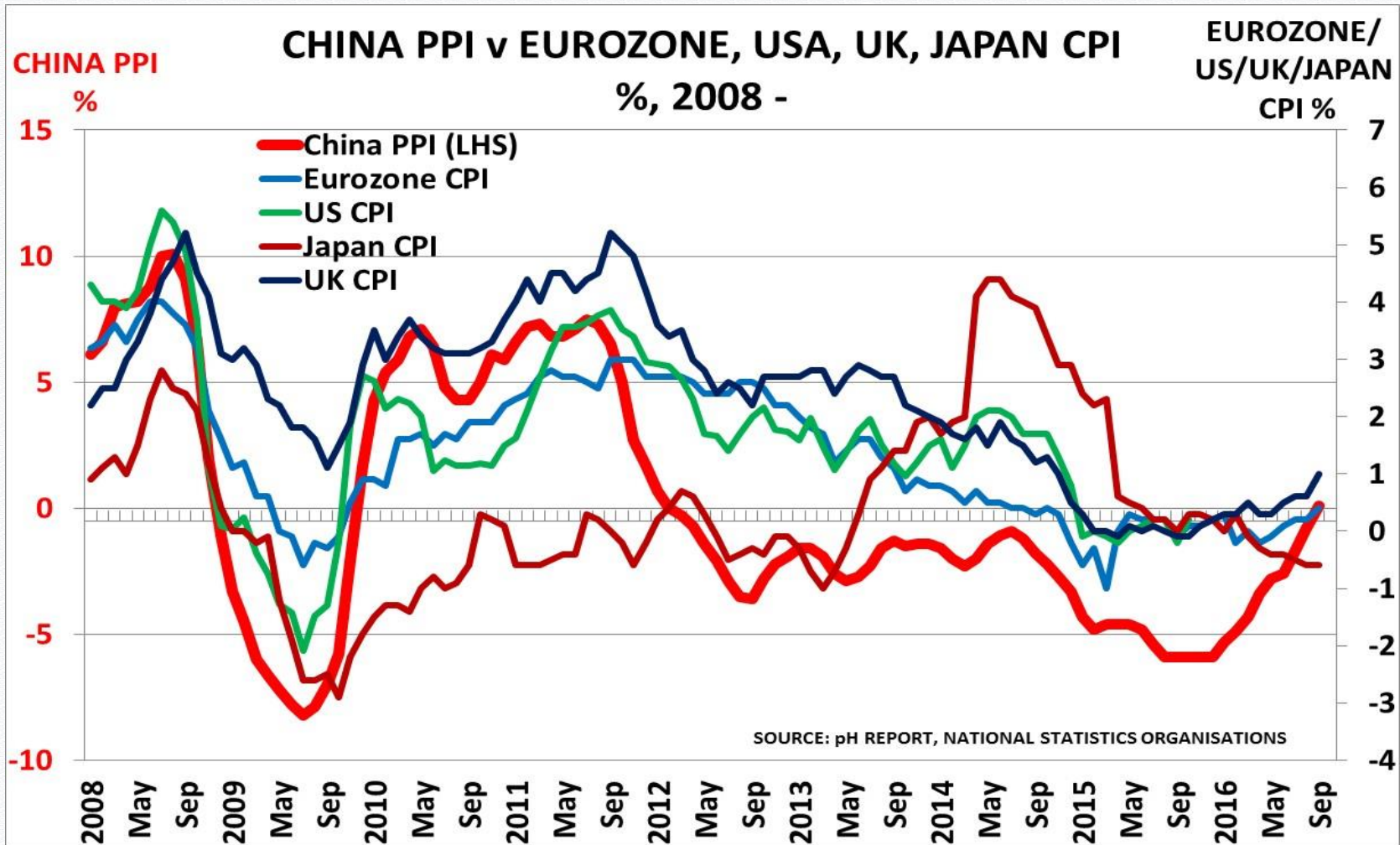
Number of times harmed by protectionist measures that are currently in force

- 1-349
- 350-699
- 700-1,049
- 1,050 or more

CENTRAL BANKS HAVE SPENT \$27tn SINCE 2009 ON STIMULUS



THE PROMISED INFLATION HAS STILL TO APPEAR

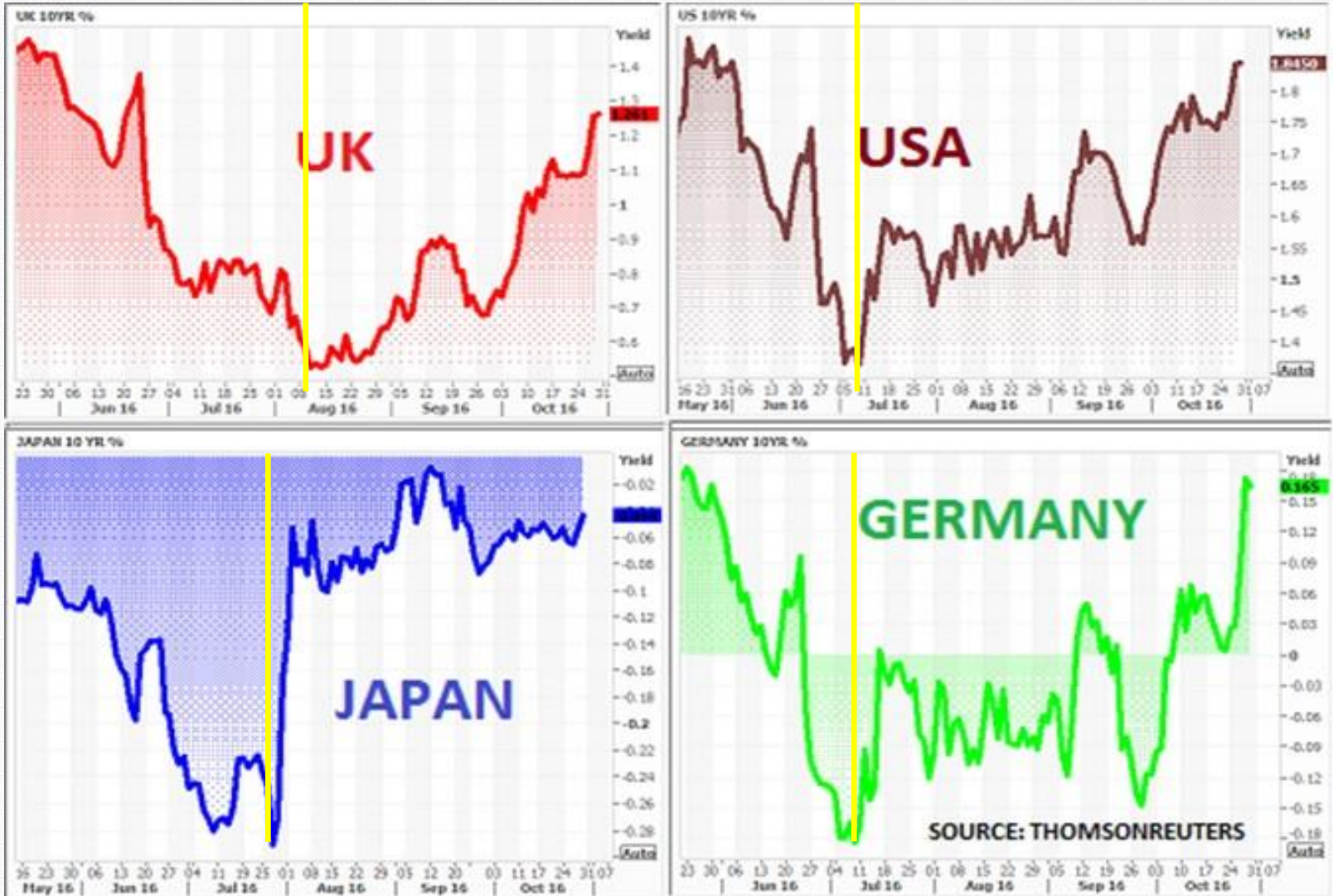


THE UK BREXIT VOTE WAS THE 'BEAR STEARNS' MOMENT FOR STIMULUS POLICIES

Co-products produced with
recycling of ethylene



10 YEAR INTEREST RATE MOVES SUGGEST BREXIT VOTE HAS BEGUN THE 'GREAT RECKONING'



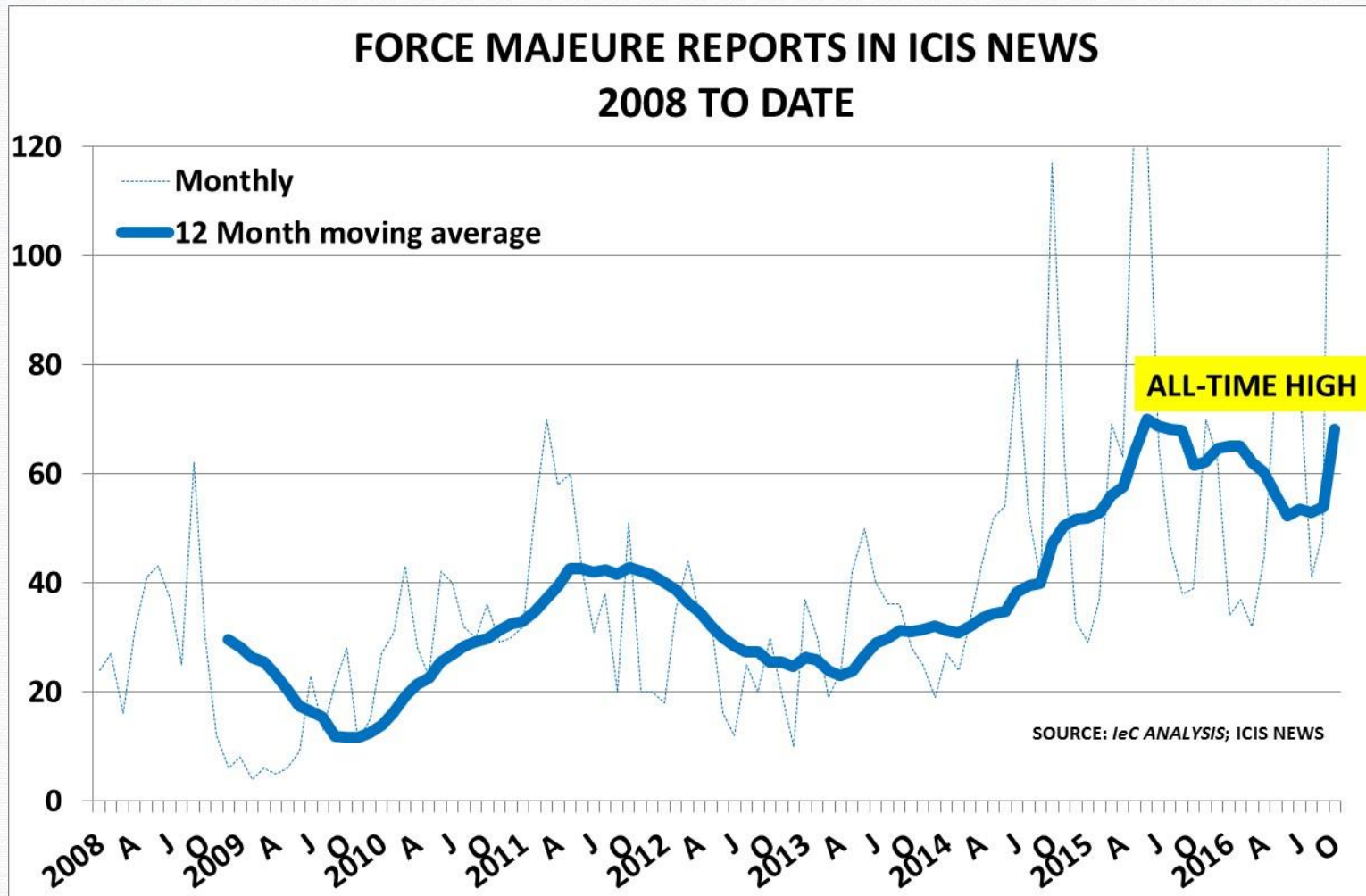
THE NEW NORMAL WORLD HAS A WIDE RANGE OF NEW OPPORTUNITIES



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PTECHEM FORCE MAJEURES HAVE BEEN AT RECORD LEVELS SINCE Q4 2014



IMPLICATIONS FOR KEY ACCOUNTS

ME/ASIA

- ❖ Both regions have over-expanded, and will face increasing difficulties in placing their product
- ❖ ME companies will become more market-share driven, to create jobs for their young populations
- ❖ They will likely retain the 'strategic corridor' with China, based on the 'energy for markets' paradigm
- ❖ SEA will retain close links with China due to the Asean Free Trade Agreement, but will lack markets
- ❖ NEA faces major challenges: Japan may finally close plants, Taiwan will build China links, S Korea will resist till the end

IMPLICATIONS FOR KEY ACCOUNTS

EUROPE

- ❖ Business models will need to change
- ❖ Restructuring will become inevitable based around key hubs eg ARA, N Germany, Med
 - ❖ Decline in oil prices/oil product demand creates opportunity to add value to surplus refinery streams
 - ❖ Europe's ageing population means new product offerings are needed, with greater service content
- ❖ Political/social risk will rise as a result of inability to repay increased debt levels created by stimulus

IMPLICATIONS FOR KEY ACCOUNTS

AMERICAS

- ❖ Business models will need to change
- ❖ Hard decisions will need to be taken regarding current 45% increase in US ethylene capacity
- ❖ Ageing US Baby Boomers means new product offerings are needed, with greater service content
- ❖ LatAm countries face 'lost decade' due to failure to drive through economic reform during the boom
- ❖ Political/social risk will rise as a result of inability to repay increased debt levels created by stimulus

Disclaimer

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