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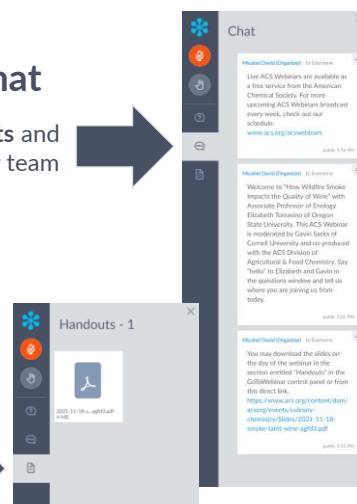
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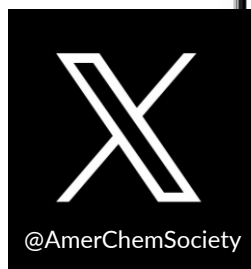


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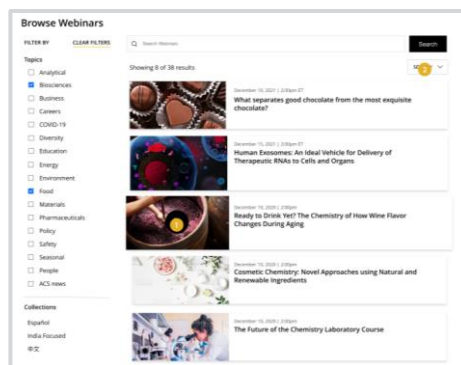
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Hanin Sarhan, Bridge Fellow at Indiana University

”



Group picture from 2022 CKS at ACS HQ in Washington, DC

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ACS Scholar Adunoluwa Obisesan

BS, Massachusetts Institute of Technology, June 2021
(Chemical-biological Engineering, Computer Science & Molecular Biology)



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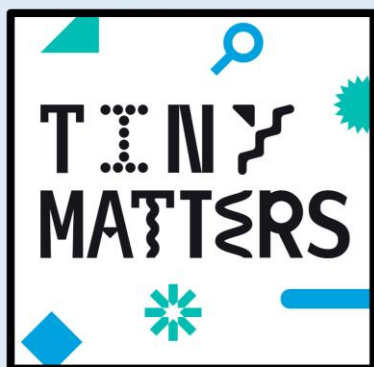
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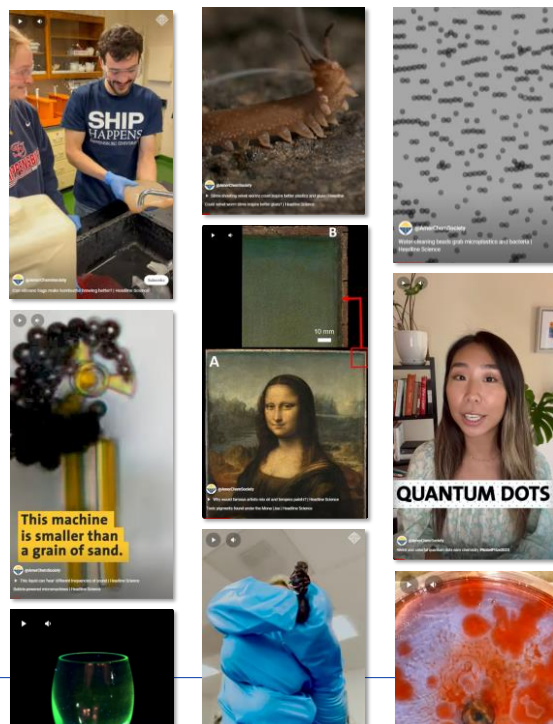
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Personal Career Consultations

Jim Tung
 Consulting
 Lacamas Laboratories
 S.S., Biochemistry, University of Oregon
 Ph.D., Organic Chemistry, University of Notre Dame

Jim Tung works at Lacamas Laboratories in Portland, OR, currently as a business development manager. He has been with Lacamas for 10 years, working on developing new chemical manufacturing projects. Before that, he was a senior research chemist at Oblet Research in Champaign, IL, performing kilo-scale organic chemistry.

An Oregon native, Jim got his B.S. in biochemistry from the University of Oregon, his Ph.D. in organic chemistry from the University of Notre Dame, with postdoctoral experience at Pfizer's laboratories in La Jolla, CA. He is past chair of the Portland Section of the American Chemical Society and was 2019 general co-chair of NORM 2019. He has interests in process chemistry, labor economics, social media outreach and encouraging career exploration and development for younger chemists.

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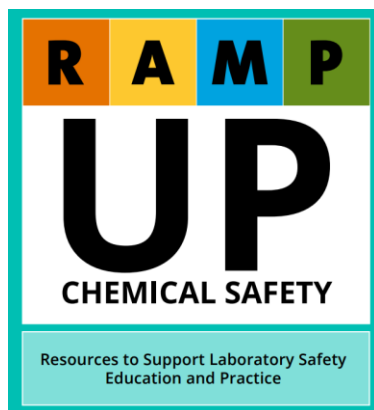
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**Adapted from definitions from the Ford Foundation Center for Social Justice:

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Inclusion**

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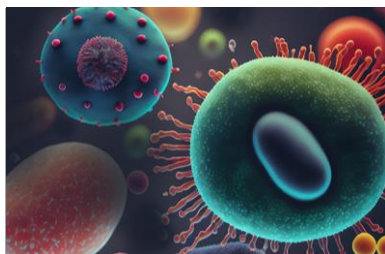
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Chemistry and the Economy:
One Door Closes as Another Opens



PAUL HODGES

Chairman,
New Normal Consulting



BILL CARROLL, PhD

Principal,
Carroll Applied Science

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Helping you navigate the New Normal

One door opens as another closes




13 June 2024

Paul Hodges, phodges@new-normal.com, +44 7785 354809



New Normal is a Swiss-based strategy consultancy advising Fortune 500 companies, investment banks and fund managers. **Paul Hodges** publishes *The pH Report*, and chairs the Advisory Board of Infinity Recycling. He is a Global Expert with the [World Economic Forum](#) and a regular speaker at international conferences

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What we said in December (1)

Risk management will be key to survival, and future success

- ❖ **Scenario planning**, based on a wide range of potential outcomes, will be key to success given today's levels of volatility.
- ❖ **Recession till 2025**. We need to be realistic as today's deep-seated problems are unlikely to be over by Christmas.
- ❖ **China is changing**. Its real estate bubble has been 'subprime on steroids' and its bursting will have far-reaching impacts.
- ❖ **Debt risks are rising**. Social unrest will continue to rise around the world as Deflation makes it very difficult to repay debt.
- ❖ **Invest for the future**. Russia's invasion is accelerating the transition to a Net Zero economy as fossil fuel demand reduces.



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What we said in December (2)

Unwinding ultra-loose monetary policy is a “serious challenge”

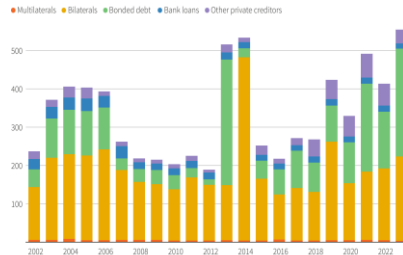
Kazuo Ueda, BOJ Governor, November 2023

Debt’s main function is to bring forward demand from the future

NE Asia is the epicentre of the crisis:

- ❖ *Japan & China have ageing and declining populations*
- ❖ *Japan’s currency has fallen 50% v US\$ in the past 2 years*
- ❖ *IIF calculate Japan debt at 266% of GDP, China debt at 282% of GDP*
- ❖ *Global debt was \$307tn in Q3, 333% of GDP*
- ❖ *\$554bn of sovereign debt is already in default*

Sovereign debt in default by creditor type



Note: Values in billions of U.S. dollars
Source: IIF/Bank of Canada, IIF

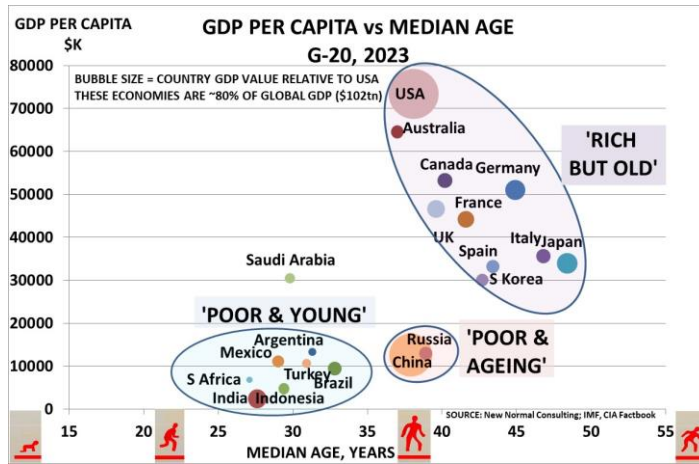


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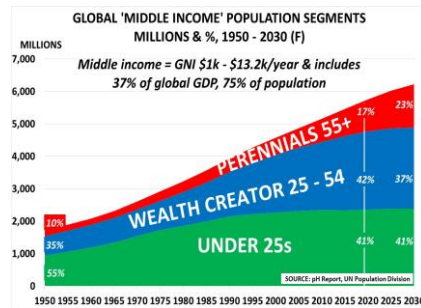
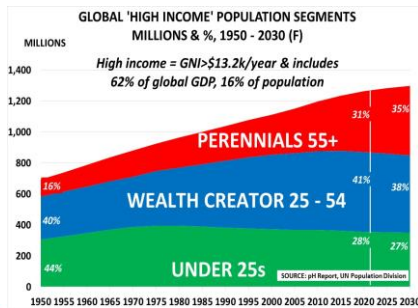
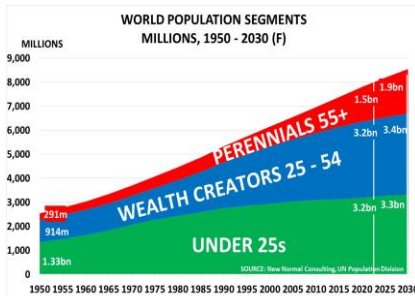
- ❖ *What the world’s ageing populations mean for demand growth*
- ❖ *Rising trade war and ‘hot war’ risks*
- ❖ *The need to focus on the wider landscape as markets risk major disruption*

The global economy divides into 'Rich but Old', Poor & Young', 'Poor & Ageing'



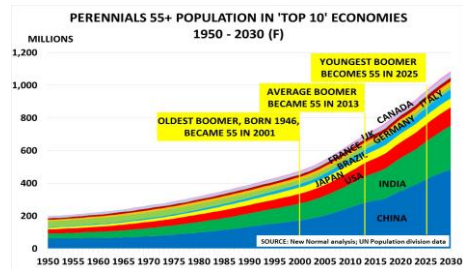
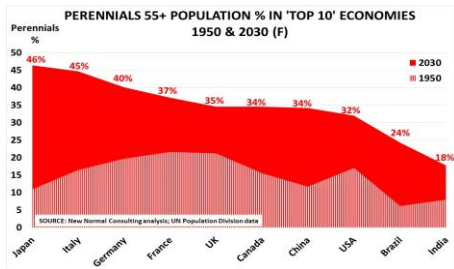
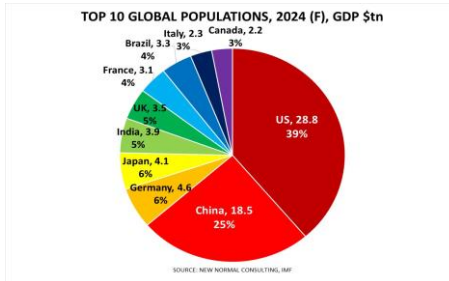
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The Perennials 55+ are now the main source of population growth



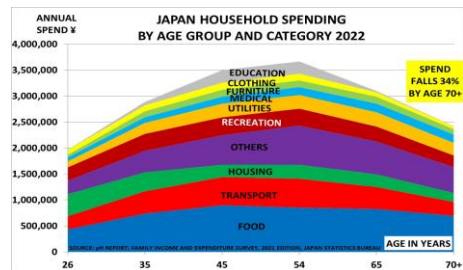
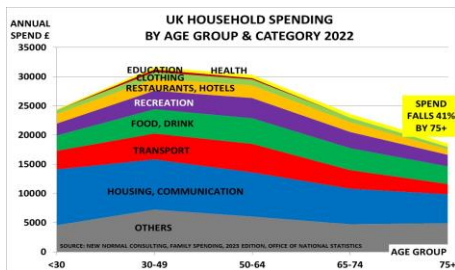
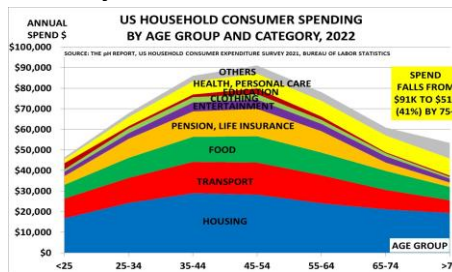
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The Top 10 economies are 75% of global GDP and confirm today's demographic deficit



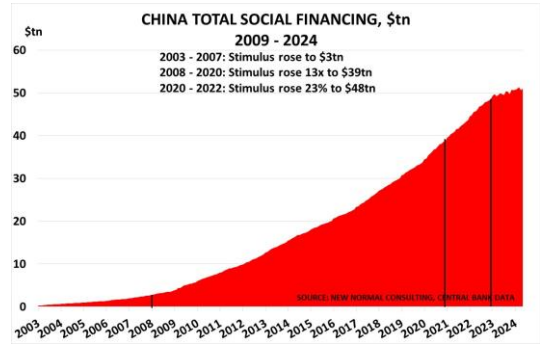
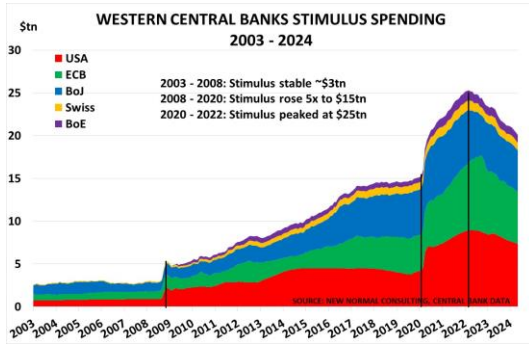
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The issue is simply that the Perennials already own most of what they need...
...and their incomes decline as they move into retirement



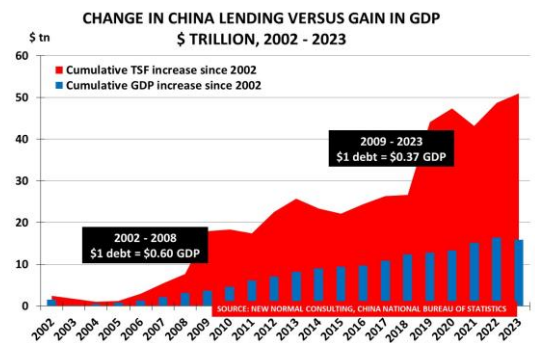
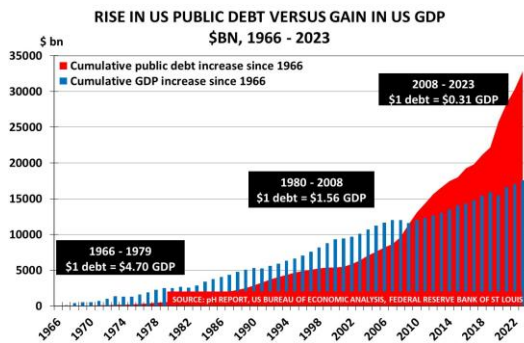
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**Central banks thought they could compensate via massive stimulus
Western central banks have done \$25tn since 2003; China has done \$50tn**



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In reality, however, the stimulus created debt – not GDP growth



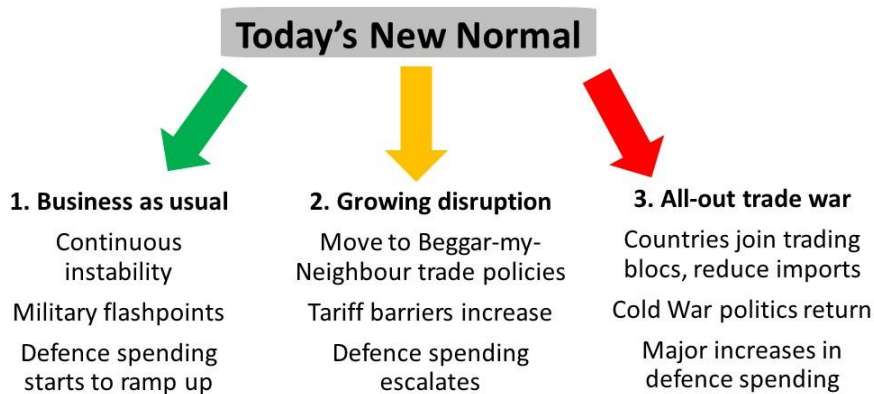
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One door opens as another closes



- ❖ *What the world's ageing populations mean for demand growth*
- ❖ *Rising trade war and 'hot war' risks*
- ❖ *The need to focus on the wider landscape as markets risk major disruption*

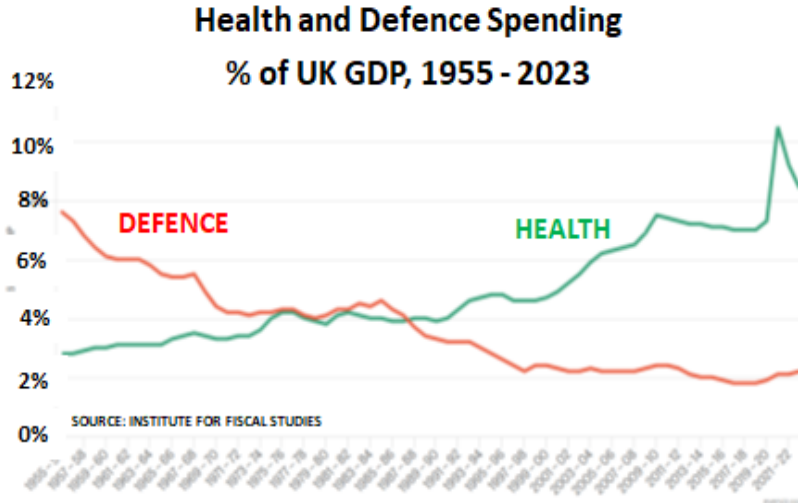
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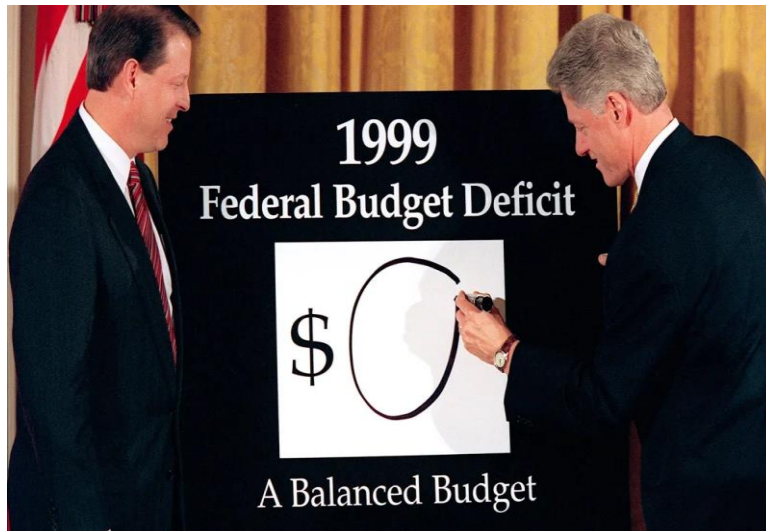
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The BabyBoomer SuperCycle created a “demographic dividend”
 The fall of the Berlin Wall in 1989 then created a “peace dividend”



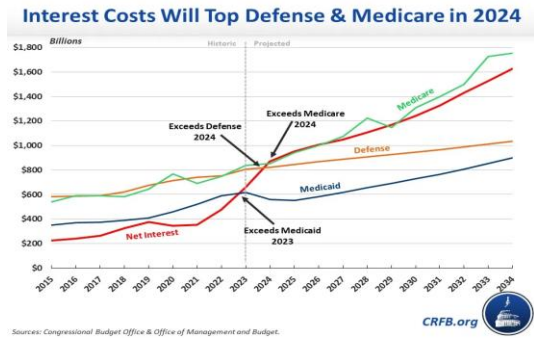
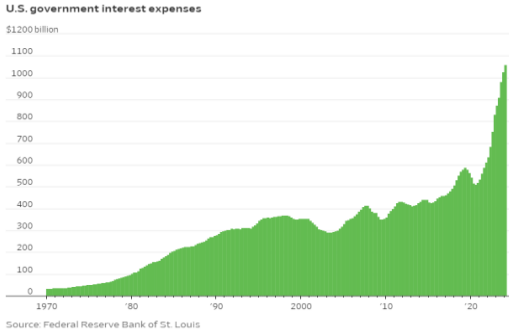
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The demographic and peace “dividends” meant President Clinton had balanced budgets in 1998 – 2001; the only years between 1970 - 2023



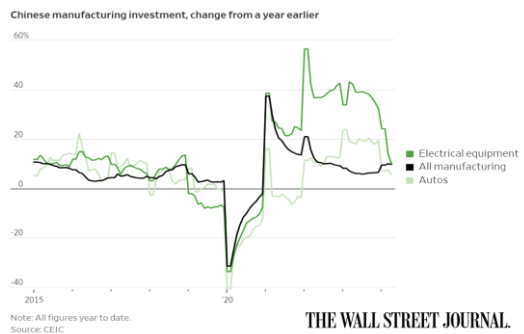
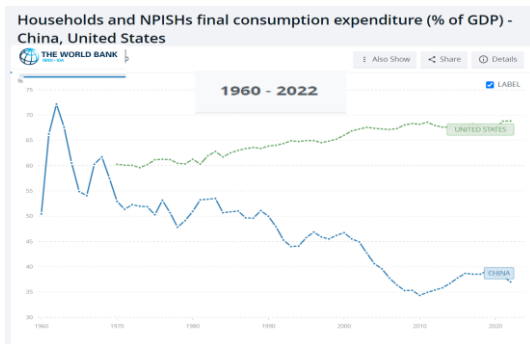
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Today's massive debt levels have reversed this position
Interest payments are crowding out other spend



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China's domestic consumption is half the US level, as % of GDP
Its property bubble has burst, and it is instead now focused boosting manufacturing exports



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This is now leading to trade barriers and protectionism
Western countries are realizing that manufacturing is essential for their economies



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Russia’s invasion continues in Ukraine; President Putin threatens ‘tactical’ nuclear strikes Foreign Minister Lavrov says the arriving “F-16 fighters will be destroyed”



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Risks are also rising in the South China Sea over Taiwan and Philippines



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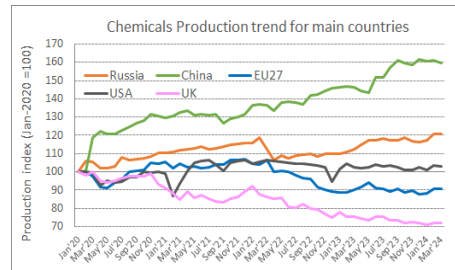
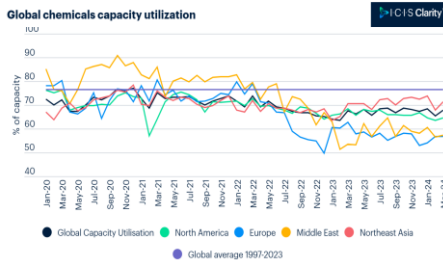
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- ❖ *What the world's ageing populations mean for demand growth*
- ❖ *Rising trade war and 'hot war' risks*
- ❖ *The need to focus on the wider landscape as markets risk major disruption*

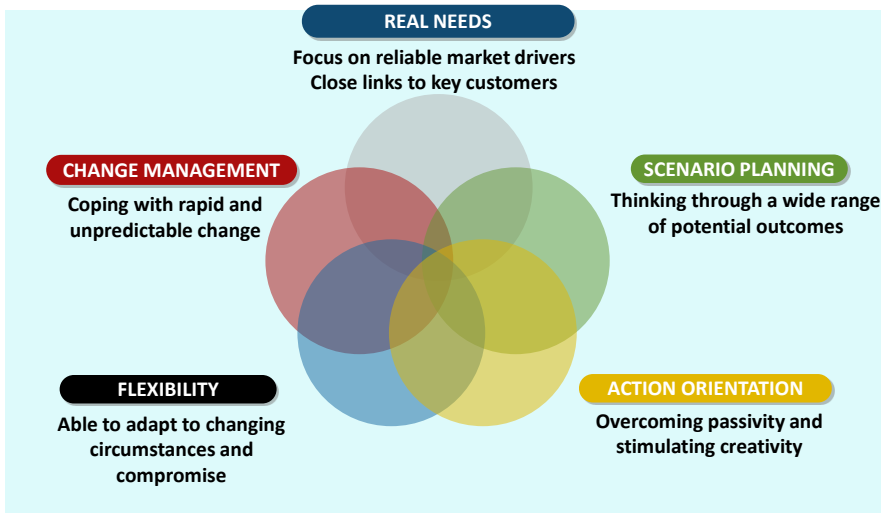
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**Stimulus led to over-estimation of underlying demand, and made new capacity cheap to build
Today, recession risks are rising – and chemicals confirm major over-capacity**



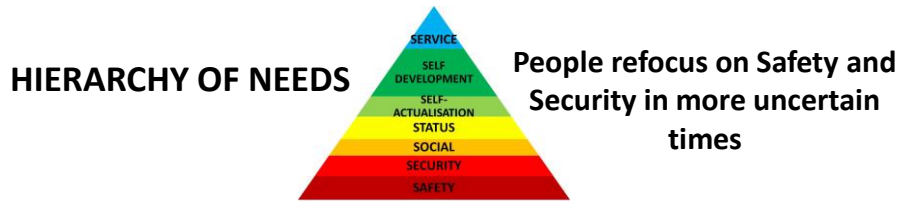
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There is a need to transition from Supply-driven strategies to being Demand-led Businesses in the New Normal will refocus on 'needs', not 'wants'



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Summary – Agility, Resilience and Sustainability are key



- ✓ Auto, consumer goods, electronics demand will focus on sustainability/durability
- ✓ Supply chains will be localised and reshoring accelerated, with pollution reduced
- ✓ Speed of response will be key, with inventory based on 'just-in-case' metrics
- ✓ Lower incomes/spending concerns will further encourage second-hand markets
- ✓ The bursting of financial/housing market bubbles will impact personal wealth
- ✓ The focus on security will encourage saving instead of borrowing
- ✓ We could see an extended period of civil instability in many countries
- ✓ People will focus on family, friends & the home, rather than luxuries and travel
- ✓ Mass international/internal travel opportunities will reduce

Helping you navigate the New Normal

One door opens as another closes



13 June 2024

Paul Hodges, phodges@new-normal.com, +44 7785 354809

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