Chemicals face paradigm shift

Major changes are impacting demand patterns in key markets such as automotive and packaging which mean "business as usual" will no longer work as a strategy

PAUL HODGES INTERNATIONAL ECHEM

Electric vehicles are about to disrupt the global auto market

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Over the past 25 years, the budget process has tended to assume that the external environment will be relatively stable. 2008 was a shock at the time, of course, but many have now forgotten the near-collapse that occurred. Yet if we look around us, we can see that a number of major paradigm shifts are starting to occur in our core markets – autos, plastics and others – which mean that 'business as usual' is highly unlikely to continue.

In turn, this means we can no longer operate a budget planning cycle on the assumption that demand will be a multiple of IMF GDP forecasts. Our business models will have to change in response to today's changing demand patterns. Of course, change on this scale is always uncomfortable, but it will also create some major new opportunities. And chemical companies are clearly best placed to develop the new products and services that will be needed in a world where sustainability and affordability have become the key drivers for market success.

The transition periods created by paradigm shifts are never easy, however, due to the level of risk they create. The table on p27 gives my version of the key risks – you may well have your own list:

- Global auto markets are already in decline, down 5% in January-August versus 2018, whilst the authoritative CPB World Trade Monitor showed trade down 0.7% in Q2 after a 0.3% fall in Q1
- Liquidity is clearly declining in financial markets as China's slowdown spreads, and Western political debate is ever-more polarised
- The US$ has been rising due to increased uncertainty, creating currency risk for those who have borrowed in dollars; geopolitical risks are becoming more obvious

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- Some of the main "bubble stocks" such as WeWork, Uber and Netflix have seen sharp falls in their valuations, leading some investors to worry about "return of capital"
- Chemical industry capacity utilisation, the best leading indicator for the global economy, has been in decline since December 2017, suggesting recession is close, and that bankruptcies among over-leveraged firms will inevitably increase

AUTOS PARADIGM SHIFT

The paradigm shift now underway in the global auto industry typifies the scale of the potential threat to sales and profits. Hundreds of thousands of jobs will likely be lost over the next 5-10 years in auto manufacturing and its supply chains as consumers transition to electric vehicles (EVs). The issue is that EVs have relatively few parts . And because there is much less to go wrong, many servicing jobs will also disappear.

The auto industry itself was the product of such a paradigm shift in the early 19th century, when the horse-drawn industry mostly went out of business. Now it is seeing its own shift, as battery costs start to reach the critical $100/kWh levels at which EVs become cheaper to own and operate than an internal combustion engine (ICE) on a total cost of ownership basis.

China currently accounts for two-thirds of global EV sales and sold nearly 1.3m EVs in 2018 (up 62% versus 2017). They may well take 50% of the Chinese market by 2025, as the government is now focused on accelerating the transition via the rollout of a national charging network. Importantly, though, it seems that Europe is likely to emerge as the main challenger to China in the global EV market.

One key driver is manufacturers' ability to use EV sales to gain "super-credits" in respect of the new mandatory CO_2 emission levels. These are now very valuable given the loss of emission credits due to the collapse of diesel sales. Every gramme of CO_2 emissions above 95g/km will incur a fine of €95/car sold as the new rules are phased in from next year. And as Ford's CEO has noted: "There's only going to be a few winners who create the platforms for the future."

VW is likely to be one of the winners in the new market. It plans to spend €80bn to produce 70 EV models based on standardised motors, batteries and other components. This will enable it to cut costs and accelerate the roll-out:

- Its new flagship ID.3 model will go on sale next year at a mid-market price of €30k ($33k)
- Having disrupted that market segment, it will then expand into cheaper models
- And it expects a quarter of its European sales to run on battery power by 2025

The key issue, of course, is battery cost. VW claims to have achieved the $100/kWh tipping point for the ID.3 model. Once this becomes clearly established, EV sales will enter a virtuous circle, as buyers realise that the resale value of ICE models is likely to fall quite sharply. Diesel cars have already seen this process in action as a result of the "dieselgate" scandal, and have collapsed to just 31% of European sales in Q2, versus 52% in 2015 .

The risk for chemical company suppliers to the auto industry is that the disruption caused creates a new playing field. Those who delay making the investments required are almost certain to become losers. The reason is simple - if today's decline in auto sales accelerates, as seems likely, the investment needed for EVs will become unaffordable for many companies.

MAJOR CHANGE IN POLYMERS

Of course, the auto industry is only one area where a major paradigm shift is now underway. Another is in plastics, where single-use polymers are likely to start being replaced by recycled polymers over the next few years. This is obviously not good news for oil companies, many of whom are still nursing the fantasy that demand into petrochemicals can somehow replace lost volume in the transport sector.

But that is not a concern for chemical companies, who in principle have the freedom to switch from virgin to recycled feedstock in line with market needs. History reminds us, after all, that there was a similar turning point in the 1960s, when the European industry implemented the far-sighted decision to switch from coal to oil-based feedstocks. As a result, it transformed itself into a world-leading source of the products that have now become embedded in our daily lives.

AGEING POPULATION OPPORTUNITIES

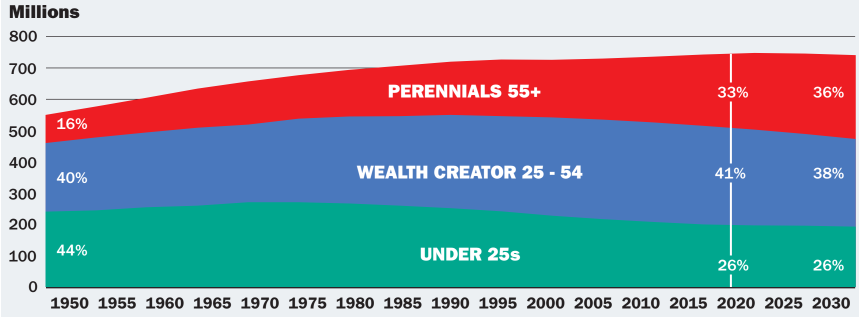
Alongside these paradigm shifts is the opportunity created by the marvel of longer life expectancy. The Perennials, aged 55+, will soon be one in five of the global population, double the percentage in 1950. And in the richest regions of the world they are an even higher percentage. In Europe, as the chart above shows, they are already a third of the population, double the 1950 percentage, when most people still died around pension age.

The issue is that the Perennials are essentially a replacement economy. They already own most of what they need, and their incomes decline as they move into retirement. But excitingly, they represent an almost untapped market from our perspective, as people do not stop having needs just because they reach the age of 55. The issue is simply that we will need to develop more service-based offerings if we want to get their business.

Nothing lasts forever. 'Business as usual' was a great strategy for its time. But it is clear that future winners will be those who recognise that the disruptive paradigm shifts now underway require new thinking and new business models. Companies who successfully transition to focus on sustainability and affordability will be the great winners of the future. ■

Paul Hodges publishes The pH Report (www.thephreport.com) and is chairman of chemicals consultancy International eChem. He writes the ICIS Chemicals and the Economy blog

EUROPE POPULATION SEGMENTS, 1950-2030 (F)



SOURCE: pH Report, UN Population Division

KEY RISKS

ECONOMY

- CONSUMER – auto,housing sales decline
- LIQUIDITY – China slowdown spreads to West
- CURRENCY – US$ strenghens, as €, £ weaken
- MARKETS – stock markets decline
- GDP – major recession begins

BUSINESS

- TRADE – world trade goes negative
- POLITICS – consensus replaced by division
- GEOPOLITICS – volatility increases
- FINANCE – 'return of capital' prioritised
- COMPANIES – bankruptcies increase

POLYMERS PAUL HODGES

POLYETHYLENE MARKETS HIGHLIGHT THE PARADIGM SHIFTS UNDERWAY

THE WORLD'S largest polymer market is a good example of the paradigm shifts underway. As I have argued since March 2014 when the US projects were first being developed (ICB 24-30 March 2014), "US ethylene producers need to work out where all the new ethylene production is going to be sold before embarking on the planned frenzy of cracker construction". Instead, unfortunately, producers continued to operate on the 'business as usual' model. As a result, as the ICIS price chart for PE sales confirms, a major price war is now beginning, as the impact of over-capacity begins to impact global markets at a time when demand for virgin PE product is already starting to reduce in the single use segment. ■

GLOBAL PE PRICES FALL TO MULTI-YEAR LOWS