CARLYLE

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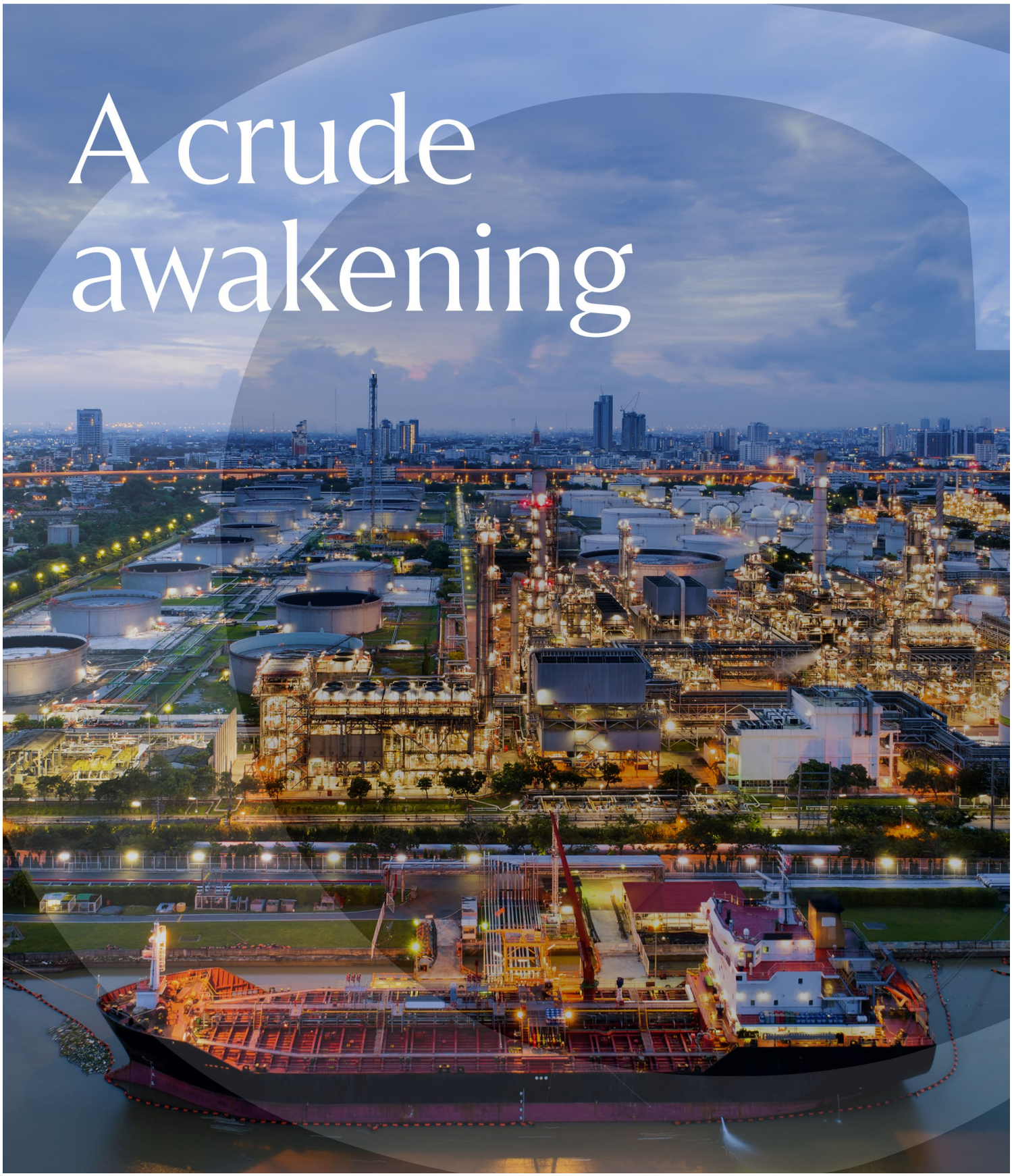
A crude awakening



THE PHYSICAL CLOSURE IS WITHOUT PRECEDENT. Polymarket puts the probability that the Strait of Hormuz is still closed on March 31st at 85%. Thirty-one days at net 18.5 million barrels per day (b/d) is 575 million barrels of stopped flows — 1.4 times the entire US Strategic Petroleum Reserve. But this is not just an oil crisis. The strait carries gas, fertilizers, and metals. The system simply cannot accommodate that kind of disruption. Either Polymarket is wrong, or financial markets are wildly optimistic. In our view, policy options are unlikely to break crude's ascent while Hormuz remains blocked.

THE NEW JOULE ORDER DEMANDS SECURITY FIRST. WE ARE NOWHERE CLOSE. The hierarchy of energy needs is security, affordability, and sustainability — in that order. The energy transition was born out of the 1973 embargo, not environmentalism. More than fifty years later, the world is mid-transition: dismantling the old hydrocarbon system before the new one can bear the load. This increases vulnerability and in the interim, rising energy insecurity does what it always does — it triggers hoarding, which exacerbates the inability to substitute.

OIL IS THE RARE EARTH OF THE MACRO SYSTEM. Fifty years of efficiency gains have made oil cheaper per unit of GDP — but more irreplaceable in function. The remaining barrels are the ones for which no substitute exists: petrochemical feedstocks, aviation fuel, grid balancing, fertilizers. Remove them and you do not get demand destruction — you get production shutdowns. We believe the world is more vulnerable to an oil shock today than it was in 1973, not less.

THE SECURITY PREMIUM IS THE HOARDING PREMIUM. In 1979, a 4–5% physical shortfall triggered precautionary hoarding that doubled the effective demand impact. The same dynamic is now operating at a far greater scale. China has suspended petroleum product exports. Every major importer is securing supply simultaneously. We estimate that precautionary demand could be 2-3 million b/d over the next 3-6 months. The physical disruption is the trigger; the behavioral response is the multiplier.

THE CREDIT CHANNEL HAS BEEN REVERSED. In the 1970s, OPEC surpluses were recycled through Western banks, expanding global credit, in a process whose mechanics resembled quantitative easing. Today, the transmission runs in reverse. MENA invests domestically and de-dollarizes. Federal debt stands at 120% of GDP, versus 32% in 1974. Inflation-indexed transfer payments automatically widen the deficit. Government borrowing displaces private sector credit creation far more aggressively than it did fifty years ago.

CONSIDER COMMODITIES AND HALO (HEAVY ASSET LOW OBSOLESCENCE) ASSETS. Every major geopolitical inflection point of the past fifty years has triggered a rotation from asset-light to asset-heavy. Energy has compressed to 3% of the S&P, while technology has expanded to 53%. In the 1970s, energy at 25% provided a natural portfolio hedge. At 3%, that hedge has vanished. The market priced energy as a declining asset and technology as a perpetual compounder. Hormuz is testing both assumptions simultaneously. Old economy and asset-heavy companies, or HALO, are well-positioned to ride out the storm of anticipated and unanticipated inflation.

A crude awakening

The energy security premium has taken hold, with oil prices now above $90/bbl. But the real crisis is developing far from the Strait of Hormuz as markets realize that oil is the rare earth of the macro system.

In our view, recent developments in the Strait of Hormuz represent a material inflection point for global energy markets. While outcomes remain uncertain, we believe the current environment warrants a reassessment of energy security, commodity pricing, and portfolio positioning.

The second-order effects are already cascading. China has suspended petroleum product exports and is accelerating strategic reserve fills. Russia has curtailed westbound liquefied natural gas (LNG). India is debating whether to commit to CIPS payment architecture to maintain access to sanctioned crude. Across the commodity complex, the pattern is identical: hoard first, trade second. This is the largest simultaneous shock to global commodity supply chains on record — not because of the volume of barrels lost, but because every major importing nation is acting simultaneously to secure its own supply, amplifying the physical disruption with a policy-driven demand surge.

The first-order physical closure is unprecedented. Polymarket puts the probability that the strait is still closed on March 31st at 85%. Thirty-one days at a net 18.5 million barrels per day is 575 million barrels of stopped oil flows — 1.4 times the entire US Strategic Petroleum Reserve, which has a maximum rated drawdown of 4.4 million b/d, barely covering a fifth of the disruption. But this is not just an oil crisis. The same passage carries roughly 9 billion cubic meters of LNG per month — 20% of global trade — plus 3.5 million tonnes of fertilizer, a quarter of the world's traded nitrogen, and over 200,000 tonnes of aluminium. In our view, the system cannot accommodate that kind of disruption. Either Polymarket is wrong, or the financial markets — including the oil price — are wildly optimistic about the duration and severity of what is unfolding.

In our view, no policy options, including a coordinated Strategic Petroleum Reserve (SPR) release, can break crude's ascent while Hormuz remains blocked. Hoarding will likely have absorbed what remains of any "oil glut" excess barrels. Physical shortages in Asia have already driven Singapore jet fuel to $231/bbl. Even if the strait reopened tomorrow, it would take months to restore normal flows — damaged infrastructure, scattered fleets, repriced insurance, and renegotiated contracts do not snap back. Should the strait be mined, the outage could last two to three months. Time is of the essence.

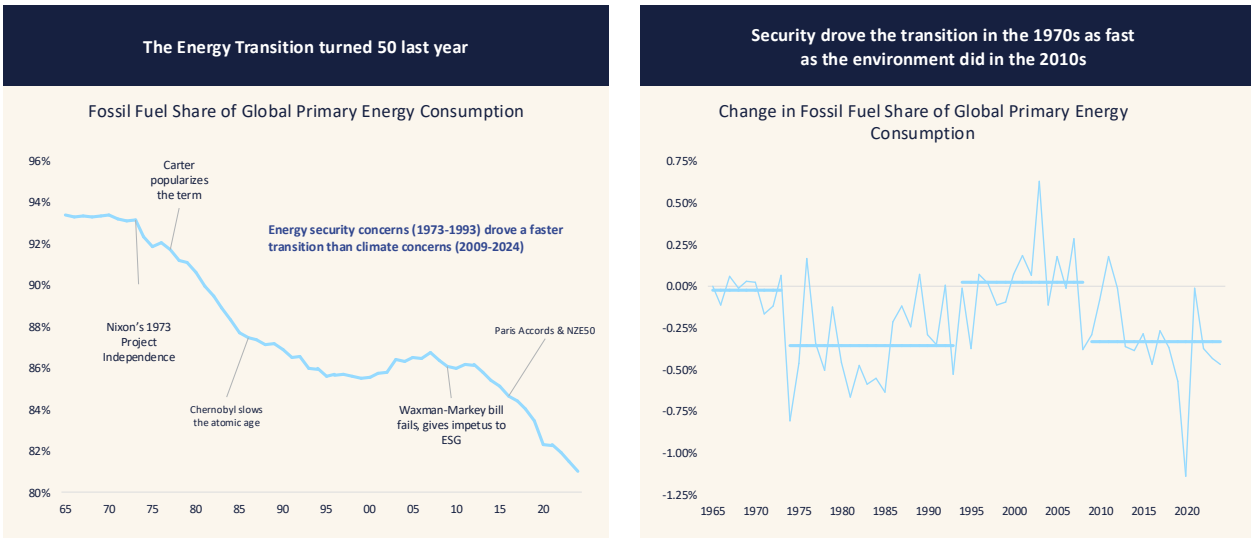
Counting disrupted barrels and metric tonnes — as well as counting missiles — misses how the damage actually transmits. Much of the market commentary has emphasised that the world is less dependent on oil than in the 1970s. That is true but it is precisely the wrong way to read the data. Oil's share of the global economy has fallen steadily for fifty years. That decline has made it less expensive per unit of GDP but more irreplaceable in function — oil is the rare earth of the macro system.

LOW IN COST SHARE, IRREPLACEABLE IN FUNCTION

The energy transition was born out of the first Arab oil embargo (Figure 1, page 4). It was never about environmentalism — it was about creating a secure energy base in the Maslow sense. The wide-scale adoption of nuclear power and the birth of the modern renewables industry were security responses, not environmental ones.

The New Joule Order is about getting the hierarchy of energy needs in the correct order: security, affordability, and sustainability. Like Maslow's original insight, the sequence matters — you cannot optimise for the higher needs until the foundation is secure. In practice, this means more electrification, more localisation, and more diversification in energy production. But the world has not arrived there yet. And in the interim, rising energy insecurity does what it always does — it triggers hoarding, which exacerbates the inability to substitute.

Figure 1. Security has driven the transition faster than environment



China understands this extremely well: its race to dominate solar, batteries, and nuclear is not climate policy — it is the construction of a domestic energy foundation that will be critical in the AI race, where the marginal joule of compute power must be secure, abundant, and cheap. The world is mid-transition to what we have called The New Joule Order, but it is nowhere near a secure base. Because we are mid-transition — because we have substituted away from oil everywhere we can — the remaining hydrocarbon uses are precisely the ones that cannot be replaced.

Oil and gas produce the petrochemicals that become the plastics in everything we buy. They keep almost all the planes in the air. They move most of the cars we drive. They provide the balancing power that keeps the lights on in grids increasingly based on renewables. It is not just the joules in the natural gas — it is that those joules balance the grid when the sun is not shining and the wind is not blowing. It is not just the joules in the hydrocarbons — it is that those become the plastics that surround us and the fertilizers that feed us. The world may be moving toward The New Joule Order. The problem is it has not arrived.

OIL VULNERABILITY IS HIGHER, NOT LOWER TODAY

In 1973, the American economy consumed 0.6 barrels of oil per $1,000 of GDP. Europe today consumes 0.2 barrels — a third of that level. That is the efficiency gain everyone cites. Fifty years of conservation have captured the easy margins. In 1973, you could take the train, turn down the thermostat. Those substitutions already happened and were taken to the limit in 2022. The remaining barrels are ones for which no substitute exists: petrochemical feedstocks, aviation fuel, marine bunkers, and agricultural inputs. Remove them and you do not get "demand destruction" — you get production shutdowns.

This is the rare-earth logic at macro scale. When China restricted rare earth exports, the threat was not the cost of neodymium — it was that without it, certain products could not be manufactured at any price. Oil and gas now occupy the same structural position across a far broader surface area of the economy. They sit at chokepoints in petrochemicals, aviation, shipping, grid balancing, and fertilizer production that cannot be routed around. The pricing consequence is not a gradual pass-

FIGURE 1 Source: Carlyle Analysis; Energy Institute. There is no guarantee that any projections will be achieved or that any historical trends will continue. Certain statements made on this slide are opinions and beliefs of Carlyle and should not be relied upon as a promise or representation as to past or future performance.

through but spiky, volatile moves that we believe will be structurally higher on average — because the market must compensate for both physical scarcity and the irreplaceability premium.

And this shock is categorically different from the models. Every macroeconomic model of oil price shocks — from Hamilton to Blanchard-Galí — assumes that supply remains available at a higher price. The 1970s disruptions removed 5–9% of global supply for weeks or months. This disruption removes over 20% of global oil consumption and simultaneously eliminates gas, fertilizer, petrochemicals, and industrial metals from the same passage. There is no price at which you can buy a barrel of crude physically trapped behind a closed chokepoint. The models price scarcity. They cannot price absence.

PEAK OIL TRADE MAY ONLY ACCELERATE FROM HERE

The postwar global order was built on a simple bargain: the United States would police the sea lanes and underwrite the security architecture that made global trade possible. Oil was at the centre of that bargain. As we wrote in The New Martial Plan, when the Cold War ended, markets boomed, trade globalised, and supply chains stretched across the globe — often with former adversaries. The world's most strategically important commodity was woven into that architecture, routed through contested chokepoints on the assumption that the sea lanes would always be open, and the hegemon would always guarantee passage.

That assumption is now being tested. As the United States retreats, trade routes are attacked, supply chains are weaponised, and wars of conquest are becoming closer to home. How governments spend their money is a proxy for fear, greed, and compassion — and America no longer sees hegemony as providing either security or profit. The world routed 21 million barrels a day through a 21-mile-wide passage and assumed someone would always guarantee safe passage. No one is guaranteeing it now.

THE SECURITY PREMIUM IS THE HOARDING PREMIUM

When the world feels insecure, it hoards. The 1979 Iranian Revolution proved the pattern. The physical shortfall was 1.5–2 million b/d net of Saudi offsets, roughly 4–5% of global supply. But precautionary hoarding doubled the effective demand impact to 3–4 million b/d at the peak of the panic (Kilian, 2009). Prices rose from $13/bbl in mid-1979 to $34/bbl by mid-1980, a response wildly disproportionate to the physical loss.

Zhou (2020), building on Kilian and Murphy (2014), estimates that precautionary storage demand raised the real price of oil by at least 20% between May and December 1979 — after Iranian production had already recovered. Applying a short-run demand elasticity of −0.1 to the 63 million b/d market of 1979 implies roughly 1–1.5 million b/d of hoarding demand. Scaled to today's 103 million b/d market, a comparable response would be 2–3 million b/d. One could argue the response should be larger still: in The New Joule Order, geopolitical anxiety around crude flows is structurally higher, and the United States is no longer as incentivised to defend the global oil trade as it once was.

The security premium is not about physical barrels — it is about the precautionary demand that activates when participants cannot hedge geopolitical tail risk. The distinction between "real" and "behavioral" shortages is false. The security premium is the hoarding premium.

Today the behavioral response is compounding the physical disruption at larger scale. Hoarding is not irrational — it is the rational action of any actor facing uncertain supply duration. China is stockpiling because secure supply at any cost is the correct strategy when the alternative is industrial shutdown. The physical shortfall is the trigger; the security-driven behavioral response is the multiplier.

Hormuz magnifies all of this because it is not merely an oil chokepoint — it is a commodity system chokepoint. Oil, gas, refined products, fertilizer, industrial metals, and petrochemicals all flow through the same passage.

QatarEnergy has declared force majeure on LNG. Iranian ammonia capacity is offline. Urea prices have surged $130 per tonne. The cascades are physical: oil feeds gas, gas feeds ammonia, ammonia feeds urea, naphtha feeds crackers, crackers feed polymers. Shut Hormuz and you lose the nitrogen that grows food, the aluminium that builds aircraft, and the gas that keeps the lights on from Seoul to Stuttgart.

THE CREDIT TRANSMISSION RUNS IN REVERSE

In the 1970s, the oil shocks expanded global credit. OPEC surpluses were recycled through Western banks, essentially resulting in a form of quantitative easing as oil prices rose. In turn, by easing credit conditions and lowering interest rates, it created a negative feedback loop that allowed for further increases in oil prices as the dollars got recycled back into the system. Today the transmission runs in reverse. As the world deglobalizes, de-dollarizes, hoards physical stockpiles of commodities and pursues energy independence, the flow of petrodollars into Western credit markets is shrinking, not growing.

At the same time, the fiscal starting point is incomparably worse. Federal debt stands at 120% of GDP versus 32% in 1974. Transfer payments exceed 9% of GDP and are indexed to inflation — every percentage point increase in CPI automatically expands the deficit, forcing additional Treasury issuance precisely when the market demands higher yields. Government borrowing crowds out credit creation in the private sector far more aggressively than it did fifty years ago. The income shock may be smaller than the 1970s. The credit shock is likely larger.

THE ASSET ROTATION TOWARDS THE OLD ECONOMY IS ACCELERATING

The incomplete transition to The New Joule Order is not only reflected in the physical economy. It is mirrored in the financial architecture. Energy has compressed to 3% of US equity market capitalisation, while technology and services have expanded to 53%. By de-rating energy and concentrating wealth in energy-short sectors, the market has paradoxically increased portfolio vulnerability even as the United States has become a net exporter.

In the 1970s, energy equities at 25% of the S&P provided a natural portfolio hedge — as oil rose, energy stocks rose with it, partially insulating diversified investors. At 3%, that internal offset has all but vanished. The market priced energy as a declining asset and technology as a perpetual compounder. Hormuz is testing both assumptions simultaneously.

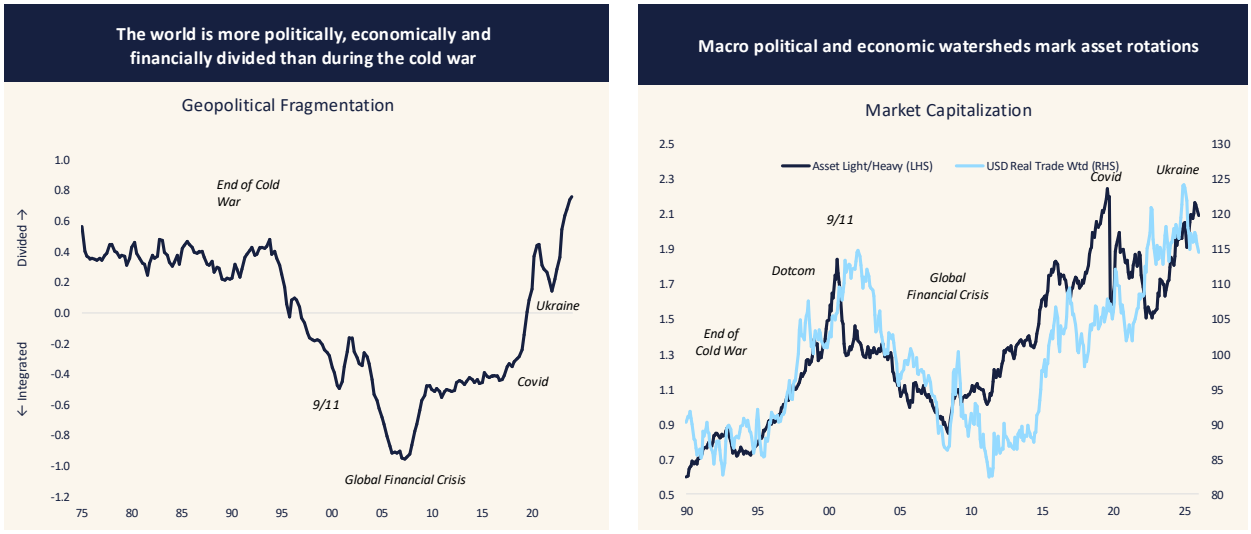
Every major geopolitical inflection point of the past fifty years — the end of the Cold War, 9/11, the global financial crisis, Ukraine — has triggered a rotation in capital allocation between asset-light and asset-heavy sectors. As we showed in The New Martial Plan, these rotations track the dollar and move on structural macro shifts (Figure 2, page 7). As we argued in The Old Economy Takes Its Revenge, the current rotation back toward physical assets is not a trade — it is a regime change.

FINDING A NEW EQUILIBRIUM IN THE NEW JOULE ORDER

When the dust settles and the ships sail, the price may likely retrace — today we have market prices for energy, not the administered prices of the 1970s. But the security premium means it may not return to the status quo ante bellum. It may not be as large as the 1970s structural repricing, but we believe it will be enough to divert consumer spending from AI to petrol and power, and enough to impact the economics of compute. Less demand and higher costs for technology at a 36x forward multiple versus energy at half that point to a convergence in valuations.

A commodity super cycle is characterised by price spikes and volatility with higher highs and higher lows. We do not want to speculate on how high prices will go this time — no one knows. What we can do is reiterate our view: old economy and asset-heavy companies, or HALO, are well-positioned to ride out the storm of anticipated and unanticipated inflation.

Figure 2. Global fragmentation drives asset rotations



WATCH US POLITICS

US energy dominance can hedge supply availability but not price impacts without export bans or price controls. At $130 oil, domestic producers capture roughly $400 billion in additional revenue. Net of the $450 billion gross cost to consumers, the direct income effect is $60–90 billion, or 0.2–0.3% of GDP. The production hedge works at the cash flow level. This is what the optimists are modeling. They are looking at the wrong pressure point.

The distribution matters. The winners are concentrated corporate balance sheets in the Permian; the losers are 130 million households paying more at the pump. Consumers have more votes than producers. This is why markets underestimate the disruption — they assume America will resolve it quickly to avoid testing those politics.

JUST-IN-CASE IS THE NEW NORMAL

Even if a diplomatic resolution materialises within weeks, the physical recovery timeline is measured in months. Damaged infrastructure at Kharg Island and Ras Tanura cannot be repaired under fire. Fleets have scattered to safe harbours. War-risk insurance premiums will likely remain elevated long after the last missile is fired.

And the behavioral response — hoarding, contract renegotiations, the scramble for alternative suppliers — permanently reprices the supply chain. The shift from just-in-time to just-in-case after 2022 was supposed to be temporary. It was not. This disruption could likely deepen it irreversibly. Every commodity that must transit a chokepoint will likely carry a security premium. The world is moving toward The New Joule Order — toward electrification, localisation, and diversification. But the transition is incomplete. And until it arrives, the old vulnerabilities remain, and we believe the premium for security will be priced into every barrel, every molecule, and every joule that must cross a contested passage.

FIGURE 2 Source: Carlyle Analysis; Jesús Fernández-Villaverde, Tomohide Mineyama, Dongho Song, 2024; Goldman Sachs. There is no guarantee that any projections will be achieved or that any historical trends will continue. Certain statements made on this slide are opinions and beliefs of Carlyle and should not be relied upon as a promise or representation as to past or future performance.

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Mr. Currie is the former Global Head of Commodities Research at Goldman Sachs, where he helped to build their commodities business. During his nearly three decades at the firm, he became one of the leading commodity market strategists on Wall Street, known for advising clients through the commodity "super cycle" of the 2000s, the shale supply shock of the 2010s, and most recently the twin shocks of the pandemic and the Russia-Ukraine war.

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