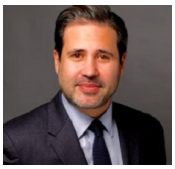
Goehring & Rozencwajg
Natural Resource Market Commentary

Managing Partners:
LEIGH R. GOEHRING
ADAM A. ROZENCWAJG



THE NEXT INFLATIONARY SURGE IS ABOUT TO BEGIN

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"Few challenges to the Federal Reserve independence have ever matched the drama of Dec. 5, 1965. Fed Chaiman William McChesney Martin Jr. had just convinced the Board of Governors to raise the discount rate amid signs that the economy was starting to overheat." The Federal Reserve Bank of Richmond—1965: The Year the Fed and LBJ Clashed.

"Summoned then-Fed Chairman William McChesney Martin to Johnson's Texas Ranch where Johnson shoved him against the wall. Physically assaulting the Fed chairman is probably a greater threat to Federal Reserve independence than questioning the Fed's policy on Twitter." "When LBJ Assaulted a Fed Chairman ", the Mises Wire 7/31/2018

"With fewer than 11 months until the election and four days until the next meeting of the Federal Open Market Committee, Burns and Nixon held a private telephone conversation. Burns states that: 'I wanted you to know that we lowered the discount rate; got it down to 4.5%.' 'Good, good, good,' replies Nixon." "How Richard Nixon

Pressured Arthur Burns: Evidence from the Nixon Tapes" February 2006

Those inclined to view President Trump's needling of Federal Reserve Chairman Jerome Powell as an unprecedented breach of decorum might wish to brush up on their monetary history. The truth is, tormenting the Fed chairman—whether through verbal assault, political manipulation, or, on at least one remarkable occasion, an actual shove—has long been part of the American political tradition. Over the past sixty years, this peculiar sport has produced no shortage of high drama and, more worryingly, some truly calamitous inflation.

The pressures now bearing down on Jerome Powell have an air of déjà vu about them—eerily so. If whispers from the Hill Country are to be believed, the last time a Fed Chairman found himself in similar crosshairs, it ended with a shove against the stone wall of a Texas ranch house, courtesy of President Lyndon B. Johnson himself. That chairman was William McChesney Martin. Not long after, another president—Richard Nixon—took a more insidious, if less physical, approach, orchestrating a sustained campaign of psychological siege against Arthur Burns between 1970 and 1972. In each case, the reason for the presidential ire was the same: interest rates were too high for political comfort. That same tension, dressed in the garments of a different era, now encircles Chairman Powell.

William McChesney Martin, with fifteen years at the helm of the Federal Reserve, had come to embody the very notion of postwar monetary statesmanship—a man who took central banking as seriously as a judge takes the law. Arthur Burns, for his part, was the very image of the learned economist: pipe in hand, gold standard in heart, and an unswerving belief that monetary policy should be both principled and apolitical. Yet when push came—quite literally, in Martin's case—and presidential will collided with economic orthodoxy, both men yielded. Each, under the weight of executive pressure, sanctioned sweeping and ill-timed expansions of monetary policy. Their concessions helped ignite the runaway inflation of the 1970s. Natural resource equities were one of the few places to protect your portfolio. And now, half a century later, the same winds appear to be gathering once again.

Just as Martin and Burns, despite their reputations and resolve, eventually bowed to the pressure from their respective Commanders-in-Chief, we believe Jerome Powell will—sooner or later—do the same. Whether by reluctantly guiding interest rates downward himself or by exiting stage left to make room for a more compliant successor, the outcome is likely to be identical. One way or another, monetary policy will loosen. We are confident that Trump's new appointee will arrive in his office; sleeves rolled up and rate cuts ready.

"ONE WAY OR ANOTHER, MONETARY POLICY WILL LOOSEN. WE ARE CONFIDENT THAT TRUMP'S NEW APPOINTEE WILL ARRIVE IN HIS OFFICE; SLEEVES ROLLED UP AND RATE CUTS READY."

In both 1966 and 1971, monetary policy took a conspicuous turn toward accommodation—not because the economic data demanded it, but because the men in the Oval Office did. Faced with mounting inflationary pressures, the Fed, under Martin and later Burns, relented. The result? Inflation took off like a shot. Equities struggled and natural resource stocks were one of the only bright spots in the market. It is our firm belief that Jerome Powell stands at the same fateful crossroads. And if history is any guide—as it so often is—the road ahead leads not to price stability, but to another inflationary surge, just as potent as those that came before.

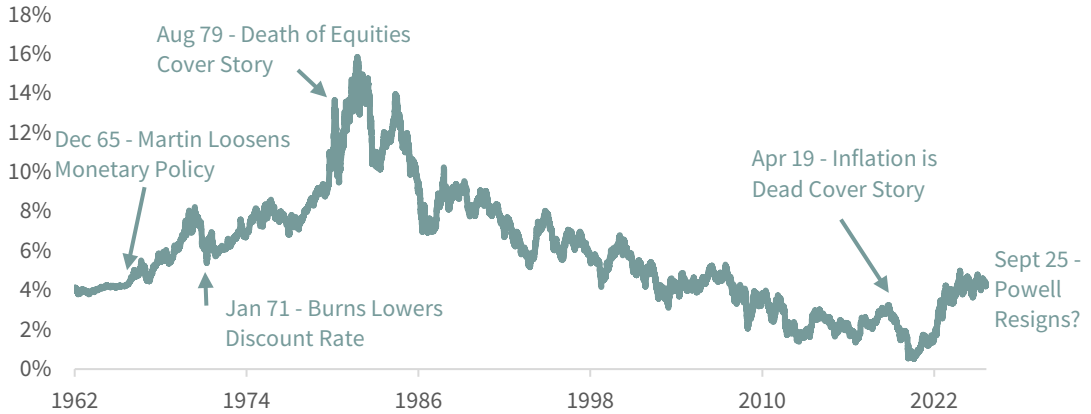
Since the close of the Second World War, the economic history of the United States can be read as a tale of two great arcs. First came the long, grinding rise of inflation—from the late 1940s through the early 1980s—a period in which prices climbed, yields soared, and policymakers seemed forever one step behind. Then, just as suddenly, came the great disinflation.

Beginning in the early 1980s, it carried on—relentless, reassuring—until 2020. A glance at the yield on the 10-year U.S. Treasury bond over those seventy years tells the story better than any textbook: the rise, the fall, the quiet before the next storm.

"WE ARE FIRMLY IN THE CAMP THAT BELIEVES THE GREAT DISINFLATIONARY ARC, WHICH BEGAN IN THE STERN DAYS OF PAUL VOLCKER'S FED, HAS RUN ITS COURSE. THE ERA OF FALLING YIELDS AND FADING PRICE PRESSURES IS OVER."

We are firmly in the camp that believes the great disinflationary arc, which began in the stern days of Paul Volcker's Fed, has run its course. The era of falling yields and fading price pressures is over. In its place, a new cycle has begun—an inflationary one, with the potential to stretch across decades. And if history is any indication, it will not pass quietly. It will bring with it the kind of problems that compound—politically, economically, and socially—until they can no longer be ignored.

CHART 1 Ten Year US Treasury Yields



Source: Bloomberg.

In the spring of 2019, we issued a quiet but pointed warning to our investors: prepare for the return of inflation. That same month, Bloomberg Businessweek proclaimed exactly the opposite. With triumphant finality, their April cover declared "Is Inflation Dead?"—a eulogy of sorts to the seventy-year war against rising prices. As if to underscore the verdict, they paired the headline with a fallen dinosaur, belly-up and extinct, as though inflation had gone the way of the brontosaurus. It was, in our view, a cover destined for the contrarian's scrapbook.

"AS FAR AS CONTRARIAN INDICATORS GO, MAGAZINE COVERS HAVE A WAY OF GETTING THE DIRECTION RIGHT—JUST NOT IN THE WAY THEIR EDITORS INTEND."

In response, we penned a piece of our own—"The Bell Has Been Rung: The Contrarian Power of Magazine Covers"—and made a rather unorthodox prediction. We suggested that Businessweek's dinosaur-clad proclamation would prove as clairvoyant in calling the return of inflation as its infamous August 1979 cover, "The Death of Equities," had been in heralding the greatest stock market boom in American history. As far as contrarian indicators go, magazine covers have a way of getting the direction right—just not in the way their editors intend.

That 1979 Businessweek cover, mournfully announcing "The Death of Equities," turned out to be less an obituary than a starting gun. To the attentive—and there were few—it signaled that inflation was near its apex, that equities were historically cheap, and that a secular bull market was preparing to stir. Most investors, of course, ignored the message entirely. Warren Buffett was not among them. The market didn't roar back overnight; in fact, it slumbered for three more years. But come August 1982, it awoke with a vengeance—and from that moment, the surging market has not looked back.

FIGURE 1 Contrarian Magazine Covers

Source: Bloomberg / BusinessWeek.

History, never one to pass up an encore, staged a familiar act. Nearly two years after Businessweek's "End of Inflation" pronouncement, the beast returned. By the summer of 2021, inflation—stoked by the chaos of pandemic-era supply chains—had clawed its way back to nearly 6%. A year later, it breached 9%, territory unseen since disco and stagflation shared the headlines. And just as the equity bull market that began in 1982 grew more speculative with age, we believe this inflationary cycle is likewise just getting warmed up. The 2021–2022 surge was the overture; the real crescendo, we fear, still lies ahead. We believe that just like in the 1970s, natural resource equities will become crucial to protect a portfolio's purchasing power.

Investors, ever eager to believe in happy endings, have largely declared the inflation scare of 2021 a closed chapter. The narrative now making the rounds is one of restored order—of price stability returning like an old friend, ready to stay a while. The exuberant rebound in long-duration assets, especially the ever-popular large-cap growth stocks, has only added fuel to this comforting belief. If the markets are a mood ring, they are glowing with complacency.

But markets, like parties, have a way of ending just when the dancing gets good. In our view, the crowd is misreading the signs. Beneath the surface calm lies something far more combustible. The renewed political pressure bearing down on the Federal Reserve—quiet to some, unmistakable to others—carries with it deeply unsettling implications. We believe inflation is not retreating, but merely pausing. And soon enough, it will accelerate again—swiftly, stubbornly, and disruptively.

William McChesney Martin, who presided over the Federal Reserve from 1951 to 1970, is best remembered for a metaphor that has aged better than most monetary theories: the job

of the Fed, he said, was to take away the punch bowl just as the party gets going. In December of 1965, Martin decided it was time to make good on that credo. With the U.S. economy running a fever—fueled by the twin furnaces of Vietnam War spending and the domestic ambitions of the Great Society—he nudged the discount rate up by 50 basis points. It was, in his view, time to signal last call.

President Lyndon B. Johnson, on the other hand, had little patience for teetotalers at his party. While Martin fussed with the punch bowl, Johnson wanted to keep it flowing—generously and without interruption. With an escalating war in Southeast Asia and an ambitious domestic agenda at home, the President needed low interest rates like a patient needs oxygen. Martin believed rates had to rise. Johnson insisted they must fall. In such moments, compromise tends to give way to confrontation.

So it was that Martin found himself summoned, like an unruly subordinate, to President Johnson's ranch in December 1965. What unfolded there now lives in central banking lore. According to those present, the encounter was less a meeting than a mauling. Johnson, never known for subtlety, let loose with a torrent of invective—waving his arms, crowding Martin's space, and, if accounts are to be believed, even shoving him against the wall. The message was unmistakable: the discount rate hike must be undone. Martin, to his credit, stood firm. This only further enraged Johnson, who saw Martin's resistance not merely as insubordination but as a constitutional affront. "You went ahead and did something that I disapprove of," the President barked. "It will affect my entire term here." Then came the line that echoed across history: "My boys are dying in Vietnam, and you won't print the money I need."

Though visibly rattled by his Lyndonland encounter, Martin did not give Johnson the immediate trophy he sought. The discount rate remained untouched—for a time. Yet in the months that followed, the Fed under Martin's stewardship began to soften its stance. Reserve requirements were eased. Open-market operations took a more generous turn. The money supply, like champagne at a state dinner, began to flow more freely. And then, in May of 1967—perhaps as a gesture to a still-undecided Johnson—Martin quietly trimmed the discount rate by 50 basis points, bringing it back to 4.0%. The principle may have remained, but the posture had changed.

In hindsight—a lens that spares no one—Martin's pivot toward easier money proved to be a grievous error. When he first stood his ground in late 1965, inflation hovered at a modest 2.4%. By the close of the decade, it had vaulted past 6%. While Arthur Burns would later inherit—and amplify—the inflationary mess, the seeds had already been sown. Today, many economists argue that the great inflation of the 1970s did not begin with Burns at all, but rather with Martin, whose reluctant concessions marked the true turning point. The blame, it seems, lies less with the man who poured the gasoline than with the one who struck the match.

The Federal Reserve Bank of Richmond, never one for drama, nonetheless titled its retrospective: "1965: The Year the Fed and LBJ Clashed." Within its pages lies a scholarly consensus that has grown only firmer with time—that the true origins of the 1970s inflationary spiral trace back to the 1960s. Economic historian Allan Meltzer called 1965 the pivotal year, the moment the dam began to crack. Robert Hetzel, chronicling the Fed's internal history, pointed squarely at Martin's role: any explanation of the Great Inflation, he wrote, must come to terms with Martin's responsibility. It was a judgment Martin himself appeared to

accept. At his 1970 retirement party, in a moment of rare candor for a central banker, he looked around the room and simply said, "I've failed."

Anyone hoping that the Martin–Johnson saga was a one-off—an unfortunate but isolated rupture in the normally decorous relationship between President and Fed—was soon disabused of the notion. The era of open confrontation between the White House and Constitution Avenue was only just beginning.

When Richard Nixon won the presidency in 1968, he did not wait long to settle old scores. By 1970, with William McChesney Martin stepping down, Nixon seized the opportunity to appoint a Federal Reserve Chairman of his own choosing—and of his own memory. The man he selected, Arthur Burns, was not only a respected economist but an old confidant from the Eisenhower years, during which Burns had chaired the Council of Economic Advisors and cultivated a close rapport with then–Vice President Nixon. It had been Burns, back in 1958 and 1959, who warned Nixon that interest rates were politically perilous—that if the Fed didn't lower them from 4% to 2%, the Republican Party would pay the price. Nixon believed him, and when he narrowly lost the 1960 election, he pinned the blame not on Kennedy's charisma but on Martin's monetary restraint. A decade later, Nixon wasn't about to let history repeat itself. Burns was the perfect candidate—not just for his résumé, but because he had once told Nixon exactly what Nixon had always wanted to hear.

And Nixon, true to form, was not about to let Arthur Burns forget the script. No sooner had Burns taken the chairmanship in 1970 than the pressure campaign began. The next election was still two years off, but Nixon was already pacing the map like a candidate in the final stretch. He wanted rates down—aggressively, visibly, unmistakably down. Burns, at least in public, resisted. He spoke of inflationary risks, of monetary discipline, of the Fed's independence. But the man in the Oval Office had other ideas, and he wasn't known for taking no as a final answer.

For the next eighteen months, Arthur Burns found himself in a slow, relentless squeeze. Nixon didn't apply the pressure directly—at least not always. Instead, he deployed his operatives: the famously hard-edged John Ehrlichman, the ever-watchful H.R. Haldeman, and eventually, the swaggering new Treasury Secretary, John Connally. Their message was unambiguous and unrelenting: the President wanted lower rates, and he had little patience for academic lectures on central bank autonomy. Burns, who took great pride in his independence, was told—point-blank—that it was time to let go of such illusions. The President didn't want a philosopher at the Fed. He wanted a team player.

For those with a taste for the darker corners of monetary history, Amity Shlaes's *Great Society: A New History* is essential reading. In it, she chronicles with unsettling detail the campaign of pressure—verging on psychological warfare—that Nixon's inner circle waged against Arthur Burns. The image is striking: Burns, the scholarly, pipe-smoking central banker, clinging to notions of independence, surrounded by a White House phalanx bent on submission. At the center of the final push stood Treasury Secretary John Connally—gruff, commanding, and politically shrewd—who delivered the kind of bare-knuckled persuasion Nixon prized. The campaign reached its bizarre crescendo in the summer of 1971, when *The Wall Street Journal* published a story claiming that Burns and Connally were discussing the outright absorption of the Federal Reserve into the Treasury, with Burns angling for a 50% pay raise in the process. None of it was true. The piece had been planted—by Connally, with

Nixon's blessing—for the sole purpose of humiliating Burns in public view. It was policy by ambush.

In the end, Arthur Burns capitulated. After months of siege from Pennsylvania Avenue, the Fed Chairman laid down his arms. The discount rate, once held at 6%, was trimmed to 4.5% by the summer of 1972. The results were as swift as they were dramatic. Between late 1970 and the end of 1972, the money supply ballooned—both M1 and M2 grew by 50%—and unemployment figures began to edge downward. Nixon, who had vowed there would be no repeat of 1960, got exactly what he wanted: a turbocharged economy and, come November, a landslide reelection. Burns had delivered—and history would judge the cost later.

Nixon, of course, was jubilant—this was before Watergate began its slow-motion detonation—but the U.S. economy was walking straight into a minefield. Easy money, so politically expedient in the short term, was about to collide with something far more destabilizing: the collapse of the postwar monetary order. In the summer of 1971, the U.S. officially severed the dollar's link to gold, dismantling the Bretton Woods framework. The result was swift and severe. The dollar, in terms of gold, plunged. Inflation, which had been hovering at a relatively tame 2.7%, surged past 7% within a year. And when the Arab Oil Embargo hit in September 1973, the inflation rate didn't just rise—it detonated, pushing well beyond 12%. The reckoning had arrived.

Looking back, it's clear that Arthur Burns's policies—however reluctantly enacted, and however much they strained against his own economic instincts—ended in calamity. The inflation that followed was not a byproduct of unforeseeable shocks, but the direct result of decisions made under pressure. As Burton Abrams observed in his forensic essay, *How Richard Nixon Pressured Arthur Burns: Evidence from the Nixon Tapes*, it's difficult to make sense of the Fed's 1972 monetary largesse without acknowledging the White House's hand. "It is hard to explain," Abrams writes, "how a man of Arthur Burns's experience, intellect and political know-how could be pressured into abandoning his better judgment." And yet he was. Whatever the mix of motives—fear, loyalty, political arithmetic—Burns's actions helped unleash one of the most punishing inflationary episodes in American economic history.

The strain now being applied to Jerome Powell bears an uncomfortable resemblance to the pressure once exerted on Martin and Burns. The tools may be more modern—press conferences and social media rather than ranch house shoving matches or planted newspaper stories—but the intention is unmistakably familiar. If history is any guide, Powell will be faced with the same grim choice: accommodate the president's wishes by cutting rates, or step aside in favor of someone more compliant. One way or another, the outcome looks poised to rhyme with the past.

In 1965, Lyndon Johnson needed cheap money to bankroll a two-front war—one in Vietnam, the other under the banner of the Great Society. In 1971, Richard Nixon needed an electoral landslide, and easier credit was the surest path to prosperity at the polls. Today, Donald Trump faces a different arithmetic: the staggering cost of servicing a national debt that dwarfs anything Johnson or Nixon ever contemplated. All three presidents had compelling reasons for wanting rates lower. Two succeeded—and the inflation that followed was swift, punishing, and historic. If Trump gets his way, as history strongly suggests he will, the inflationary fallout may once again be just as severe.

We believe the page has turned. A new, long inflationary cycle is now underway. Just as the

infamous 1979 *BusinessWeek* cover inadvertently signaled the end of rising prices—and the moment to buy long-duration financial assets with both hands—the 2019 cover did the opposite. Its declaration that inflation was dead marked, in our view, the beginning of its resurrection. Back in '79, few paid attention. It took three years before the true meaning of that cover became obvious—obvious, and immensely profitable. The 2019 warning has been similarly dismissed. Yet here we are: inflation is already back, and still the market clings to the fiction that it will quietly fade away.

Following the publication of that fateful 1979 *BusinessWeek* cover, inflation did indeed retreat—slowly at first, then with lasting force, for more than four decades. But cycles, like tides, return. We believe the inflationary era now beginning could match that disinflationary stretch in both length and consequence. And once again, the match may be struck at the Federal Reserve. Just as Martin and Burns—each under immense presidential pressure—reluctantly opened the monetary spigots, we suspect Jerome Powell will do the same. Whether by resignation or capitulation, the result will be familiar: a surge in inflation, swift and difficult to contain. The past, it seems, is not done with us yet.

A Peek Ahead

The financial world, like the social world, has its fashions. At cocktail parties there are seasons of martinis and seasons of Manhattans; in markets, there are seasons of growth stocks and seasons of commodities. We have been living in the season of the "carry trade."

Now, "carry trade" sounds obscure enough to frighten off the uninitiated, but in practice it is something far more human: the irresistible tendency to borrow cheap, bet on calm, and to lend long. As defined in The Rise of Carry—authored by Tim Lee, Jamie Lee, and Kevin Coldiron---it is essentially one vast, levered short-volatility position. When volatility falls, money flows toward assets that benefit from its decline. Those gains beget fresh flows, which in turn beget more gains. The cycle, like a good party, has no natural closing hour—except when someone turns on the bright lights at evening's end.

"THE FINANCIAL WORLD, LIKE THE SOCIAL WORLD, HAS ITS FASHIONS… NO WONDER RESOURCE INVESTORS TODAY, THROUGH NO FAULT OF THEIR OWN, HAVE SPENT THE LAST DECADE FEELING LIKE WALLFLOWERS."

In this climate, the anomalies pile up: big companies, rather than small ones, come out ahead. Growth trounces value. Technology blooms, while resources and commodities wither. The pattern is not new. Extend the tape back a century and a half and you will find the same sequence repeating itself with almost cruel precision. No wonder resource investors today, through no fault of their own, have spent the last decade feeling like wallflowers.

The difficulty is that once these cycles begin, they only end with a shock—something strong enough to break the self-reinforcing loop. And here, perhaps, we arrive at our first "teaser." In our next letter, we will set forth the argument that the Trump administration's trade and monetary policies—call them, if you like, the much-rumored "Mar-a-Lago accords"—will supply precisely that shock. The carry regime, for all its staying power, is not eternal. The rotation back into the real, the tangible, the resource-heavy could come with startling abruptness.

For now, we ask only this: imagine it. Imagine a world no longer entranced by technology and finance, but suddenly reacquainted with the dirty glamour of oil, copper, and coal.

To bring the thought to life, consider the Forbes 400-the compendium of the richest people

in America. When the magazine first published the list in 1982—at the tail end of the last cycle's "anti-carry" regime—the balance of power and distribution of wealth looked very different. Just 48 fortunes stemmed from technology or finance, the sectors most favored by today's carry environment. Energy, by contrast, accounted for 92 fortunes, fully a quarter of the list. Even more striking, energy fortunes were behind 6 of the top 10 people on the list.

Fast forward to the present, and the wheel of fortune has swung. At the apex of a carry bubble, only 24 fortunes remain tied to energy—a meager six percent. Technology now boasts 81 places, finance 97, and between them they command two-thirds of the group's total wealth.

Such is the rhythm of markets: what is unfashionable becomes indispensable, what is indispensable becomes passé. We suggest—again, only a teaser—that by the time the next commodity bull market exhausts itself in the late 2030s, at least a quarter of the Forbes 400 will once again be energy barons. Of today's 178 technology and finance grandees, perhaps fifty will remain.

The arc is long, but the turn may be sudden. The wheels of fate grind faster than most expect.

And so, we invite you to our next quarterly letter, where we will attempt the perilous task of prediction: the full outline of a world no longer ruled by carry, but by its opposite—the "anti-carry" regime.

2nd Q 2025 Natural Resource Market Commentary.

In the second quarter, the commodity complex split neatly into two camps. On one side: uranium, platinum group metals, and gold—stubbornly immune to the malaise that swept through nearly everything else. On the other: a broad swath of resources quietly losing altitude, their decline accelerated by President Trump's April 2nd Inauguration Day tariff announcements, which injected a level of uncertainty into global commodity markets not seen in years.

The numbers told the story in quick strokes. The energy-heavy Goldman Sachs Commodity Spot Index slid 4.5%; the Rogers International Commodity Index, with its heavier tilt toward metals and agriculture, fell 3.1%. Resource equities were a study in contrasts. In North America, the S&P Natural Resource Sector Index—weighted toward energy—dropped 2.1%. Globally, the S&P Natural Resource Index, buoyed by metals and agriculture, gained 3.3%.

Beyond the resource world, equity markets roared back from their first-quarter slump. Investors, emboldened or perhaps forgetful, poured back into last decade's anointed winners—the mega-cap technology names. The S&P 500 surged 11%. The NASDAQ 100, driven by its tech leviathans, soared an eye-catching 18%. In the process, the tech trade more than erased its early-year weakness and reclaimed center stage.

Yet amid the tariff-induced jitters, a few commodities refused to play along. Uranium, platinum group metals, gold, and silver all rose smartly, as if oblivious to Washington's noise. Their strength wasn't just a counterpoint to the general drift lower—it was a reminder that in commodity markets, the bigger story often runs on its own timetable.

Uranium

In our last letter, we suggested—quietly but with conviction—that uranium might be setting the stage for an old-fashioned short squeeze. The setup was there: hedge funds, brimming with certainty, had built large short positions in uranium equities. Their reasoning, we thought, was as shaky as a prospector's ladder. The Sprott Physical Uranium Trust, they argued, was about to run out of cash and would be forced to dump part of its uranium stockpile into the market—sending prices down in a tidy cascade.

It didn't happen.

Instead, in the second quarter, the Trust raised fresh cash with the ease of a seasoned hand passing the hat in a friendly crowd. The bearish script tore in the middle. Hedge funds, caught with the wrong end of the bet, scrambled to cover. The spot uranium price climbed 15%, but the real fireworks were in the equities: the URNM uranium ETF surged 45%, the best performance in the entire commodity complex.

"THE NUCLEAR POWER STORY IS NO LONGER ABOUT POSSIBILITY; IT'S ABOUT ARRIVAL."

This was not simply a short-term skirmish. The nuclear power story is no longer about possibility; it's about arrival. Announcements keep coming—new reactors, new fuel demand, new commitments—and each one tightens the long-term supply picture. In an op-ed we've written elsewhere, we make the case that the molten-salt reactor, once an engineer's daydream, could emerge as a real-world solution to the fiscal dilemmas of debt-heavy Western economies.

The first leg of this bull market in uranium is behind us. Prices have already risen nearly fivefold in four years. Now, with the air clearer and the bears scattered, we believe the second leg—stronger, faster, and more decisive—has begun.

Platinum Group Metals

Platinum and palladium, two metals accustomed to long stretches of market neglect, staged a sharp reversal this quarter. Platinum prices jumped 37%, palladium gained 12%, and the three major South African producers—long battered by a dismal market—rose an average of nearly 40%.

It is not a rally born of whim. For years, both metals have been grinding through deep bear markets, prices depressed by demand weakness and the slow bleed of above-ground stocks. In our last letter, we argued that those stocks were dwindling, the deficits were deeper than advertised, and the day would come when supply would no longer mask scarcity. When that happened, the price moves would be abrupt.

"THESE BEAR MARKETS HAVE BEEN LIVING ON BORROWED TIME, AND THE CLOCK HAS RUN OUT. A NEW BULL MARKET IN PLATINUM GROUP METALS IS UNDERWAY."

That day, we think, has arrived.

In the *PGM Section* of this letter, we lay out the second-quarter trends that strengthen our conviction: supply pipelines tightening, demand sources holding firm, and inventories drawing down with each passing month. These bear markets have been living on borrowed time, and the clock has run out. A new bull market in platinum group metals is underway.

Gold and Silver

Gold spent the quarter behaving like a market that couldn't quite decide whether it was in trouble or in charge. In the wake of President Trump's "Inauguration Day" tariff announce-

ment, prices dropped 5% almost overnight. Two weeks later, they had rallied 15%—a snapback fueled less by optimism than by the dawning realization that Trump's trade policy had injected a new strain into global finance. It was an unusual strain: both U.S. Treasury bonds and the dollar fell together, a pairing that almost always signals systemic stress.

From there, the metal made its move. Gold set three consecutive all-time highs in the quarter, topping out at $3,432 on June 13. It finished the quarter up 5%—a modest number that conceals the magnitude of the swings in between. Silver followed its own, quieter arc, ending the quarter ahead by just over 4%.

The equities told a more uniform story. The GDX gold stock ETF climbed 13.3%, and the SIL silver stock ETF rose 22%. Yet, for all this strength, the public has been conspicuously absent. In fact, gold and gold equities have been the best-performing asset class over the past eighteen months, and investor interest has *declined*.

Why that matters—and why it reminds us of the run-up to the 2011 peak in reverse—is a topic we explore in detail in the *Gold and Silver* section of this letter. If our reading is correct, this kind of broad disinterest, when set against strong prices, is not apathy at all. It is a bullish signal hiding in plain sight.

Oil

"BP Says Oil Supply Growth Outside OPEC to Stall Next Year" – Bloomberg News, August 8, 2025

In the second quarter, the energy complex led the commodity markets lower. Oil prices—WTI and Brent alike—reacted to President Trump's April 2nd tariff announcements with a sharp pullback, only to stage a spirited June rally that erased the losses, then give it all back again. The quarter ended with crude down 9%, and the mood in the oil pits distinctly sour.

The International Energy Agency did its part to deepen the gloom. Its June *Oil 2025* report offered a forecast so downbeat it bordered on funereal: oil demand, it claimed, would barely grow over the next five years, while world liquids capacity—oil and natural gas liquids together—would swell by nearly 7.5 million barrels per day, tipping the market into a structural surplus of historic proportions.

Investors took the cue. Energy's weighting in the S&P 500 slid back under 3%, a level last seen in the depths of the COVID panic. By another measure—the gold-to-oil ratio—oil now sits at one of the cheapest points in history. In April, an ounce of gold bought 58 barrels of crude, a reading matched only once before, in April 2020 at the height of lockdowns.

For anyone with a memory longer than a news cycle, the symmetry is striking. In the late 1990s and early 2000s, it was gold, not oil, that had been declared obsolete. European central banks raced to dump their reserves; gold bears pronounced the metal "demonetized." Between 1999 and 2005, the gold-to-oil ratio repeatedly fell below 10, touching lows of 6.8 in August 1999 and 7.3 in September 2000 when gold fetched $270 and oil $37. Investors willing to believe those prices were wrong found themselves buying the trade of a generation: from the summer of 2000 to the fall of 2011, gold rose sevenfold, gold stocks fifteenfold.

The message of today's ratio is just as clear—if you're willing to hear it. Oil, in gold terms, is as cheap as it has ever been. The bearish narrative behind that cheapness—that electric vehicles will hollow out oil demand, that non-OPEC supply will grow relentlessly—has the same hollow ring as the "gold is dead" chorus of 2000.

We believe both pillars of the IEA's outlook will fail. EV adoption, the linchpin of its demand pessimism, is already showing cracks. And its supply optimism leans heavily on a U.S. shale boom that has quietly plateaued and, by our analysis, is poised to decline—a reality the IEA has yet to factor in.

The last time the gold-to-oil ratio was this extreme, it marked the start of an eleven-year run in which the maligned asset – at that time gold -- trounced every other class. We think history is about to rhyme. Oil's turn is next. For the supporting data—on both the demand resilience and the looming supply constraints—see the *Oil* section that follows.

Natural Gas

"US Will Need to Ramp up LNG Output for Trade Deals" – Bloomberg Energy, August 5, 2025

Natural gas spent the second quarter in retreat, at home and abroad. In North America, Henry Hub prices slid 16%; Canadian gas collapsed by 60%. Overseas, the picture was mixed: in Asia, strong demand kept prices almost flat, down just 1.5%, while in Europe, a warm early spring sent prices tumbling more than 20%.

In the U.S., the story could be told in two acts, both weather-driven. Act one began last winter. As the withdrawal season opened, inventories sat roughly 340 billion cubic feet above their ten-year average—about 10% too high. Then January and February defied recent patterns, running 10% colder than normal. Demand spiked, furnaces roared, and in just two months the surplus vanished, replaced by a 70 bcf deficit. Prices responded with equal swiftness: by mid-March, Henry Hub had risen 25%.

Act two reversed the plot. March turned 8% warmer than normal, spring cooling demand lagged, and the summer cooling season was slow to start. May and June together delivered 8% fewer cooling degree days than average. By the end of June, inventories had swollen again—this time 350 bcf above normal—and prices gave back their gains, falling nearly 20% in the quarter.

Canada followed the same script, only more sharply. Its inventories swung just as violently, but the smaller market amplified every weather-driven move. The result was a second-quarter collapse far steeper than in the U.S.—a reminder that in natural gas, the line between shortage and glut is often just a few degrees on the thermometer.

For now, the market prefers to see the glass half empty. Inventories are back above seasonal norms, the speculative crowd has resumed its bearish stance, and the price boards in North America seem to confirm their pessimism. Yet the underlying fundamentals—stubborn, structural, and global—still point the other way.

Look overseas. In Asia, spot LNG trades at $11.50 per mmbtu. In Europe, it's above $10. Compare that to sub-$3 prices in the U.S. and an almost absurd $0.60 in Canada. Measured by the heat content alone, American gas sells at roughly a 70% discount to world prices; Canadian gas at a 90% discount. A BTU, it turns out, is not worth the same everywhere—at least not yet.

Production trends are not what the headline numbers suggest. The EIA's July 2025 Short-Term Energy Outlook shows shale gas output essentially flat since December 2023. But in its 914 report, which measures total U.S. dry gas production, the agency reports an increase of 1.7 bcf per day over that same stretch. The gap shows up in the "balancing item" —the

catch-all that reconciles the two series—and it raises a question we will explore in the Natural Gas section: is the EIA overstating total U.S. production?

Our own work points to supply losing steam. U.S. gas output, by our estimates, is decelerating rapidly. Against that, add 6 bcf per day of new LNG export capacity scheduled to come online within a year, and the balance tips sharply. Inventories that today feel comfortable could be drawn down faster than expected, and the yawning gap between North American and international prices could begin to close. If it does, it will not be in inches but in leaps.

Agriculture

Grain prices spent the second quarter sliding sideways to down, even as their upstream inputs told a very different story. Corn slipped nearly 5% on the back of near-perfect spring planting weather in the U.S. Midwest; soybeans stood still; wheat gave up 1%. Meanwhile, the raw materials that make those crops possible—fertilizers—moved in the opposite direction. Urea, the solid form of nitrogen, rose 13%; phosphates gained 17%; potash climbed 7%.

That divergence has now stretched across the year. Corn, wheat, and soybeans are all flat to down year-to-date. Fertilizers are not. Urea and phosphates are each up roughly 25%; potash has advanced more than 30%. This is not random noise. When the cost of growing food rises while the price of the food itself drifts, one of two things usually happens: either the farmers' margins collapse, or grain prices catch up.

Our view, laid out in past letters, is that last summer marked the bottom in agricultural markets. The next leg—quiet for now—has already begun. Fertilizer strength in the face of lackluster grain prices is not a contradiction; it is an early warning. The inputs are already in a bull market. The outputs will follow.

Base Metals

Base metals drifted in different directions through the second quarter. Copper went nowhere; aluminum managed a 2.6% rise; zinc and nickel slipped 3.4% and 4.4%. Equities told a different story: the COPX copper ETF surged 16%, while the XBM CN base metals ETF, a proxy for the S&P Global Base Metals Index, gained 7%.

Then, just after the quarter closed, copper took the stage for a performance in three acts.

Act One came on July 8, when President Trump announced a 50% tariff on all copper imports into the United States. COMEX futures in New York leapt almost 15% in days, pushing U.S. copper to an all-time high of $5.85 per pound. London Metal Exchange (LME) prices barely stirred, and the spread between the two markets blew out to $1.30 per pound as traders scrambled to get copper in before the July 30 deadline.

Act Two came without warning. On July 30—just one day before the tariffs were set to bite—the White House reversed course: the 50% levy would apply only to semi-finished copper, leaving refined metal untouched. The market did what markets do when the premise of a trade disappears—it collapsed. COMEX prices fell almost 30% in a matter of days.

Act Three is still playing out. Today, copper sits roughly 10% below where it began the quarter. The once-yawning gap between COMEX and LME prices has vanished, and for

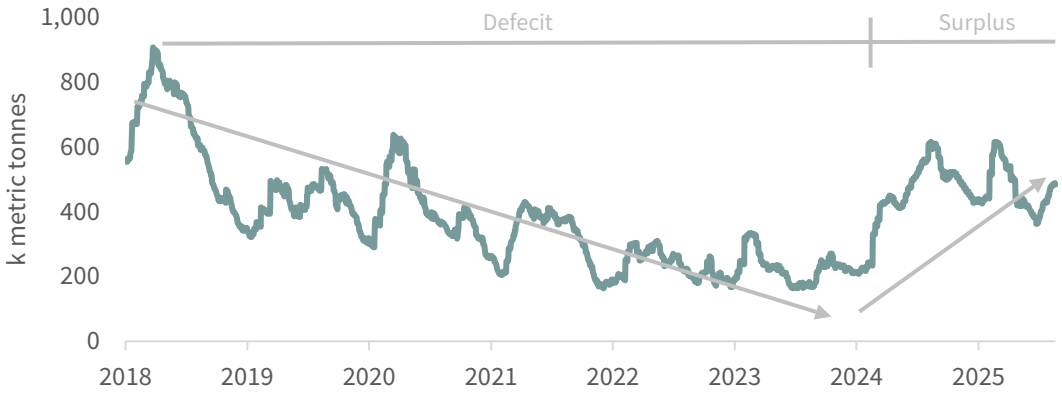
now, both markets have returned to something like normal. The long-term consequences of the tariff's narrower scope remain uncertain. For the moment, it feels less like a lasting shift in the copper trade than a particularly violent squall in a summer market.

In last quarter's letter, we noted an oddity in the copper market that had been gnawing at the numbers: the World Bureau of Metal Statistics (WBMS) had quietly redrawn the map of Chinese demand.

As recently as the third quarter of last year, WBMS still projected that China's 2024 copper consumption would grow 2.5% over 2023—a perfectly respectable figure, especially following the prior year's head-turning 13% surge. Then, somewhere between autumn and the first quarter of 2025, the weather changed. WBMS didn't just trim the estimate; they took an axe to it. That 2.5% growth forecast became a 10% contraction.

For us, the implications were immediate. Our own model of global copper consumption—which had pointed to a 2.5% rise for 2024—flipped into a 4% decline. More importantly, it offered a tidy explanation for one of the market's nagging puzzles: the sudden surge in exchange-held inventories. COMEX, LME, and Shanghai warehouses—all repositories of copper that can be mobilized at a moment's notice—had been filling since early 2024. The downward revision in Chinese demand turned what had looked like a mystery into something much simpler: the copper wasn't disappearing because it was scarce. It was piling up because a major buyer had quietly stepped back.

CHART 2 Exchange Traded Copper Inventories



Source: Bloomberg.

Since our last letter, the World Bureau of Metal Statistics has performed something rare in commodity data—a public rewrite of history. Just three months ago, WBMS figures showed China's 2023 copper consumption surging 12% over 2022. In their latest release, that growth has vanished. The revision—down by a staggering 1.7 million tonnes—leaves China's 2023 usage essentially flat, with no change to the 2022 baseline.

The global implications were immediate. Last year's world copper demand, which WBMS had pegged at 7% growth, is now whittled to almost nothing. On paper, the robust 2023 market deficit we calculated—one that helped explain the drawdown in exchange inventories—has been erased. The new numbers turn what we thought were deficits in both 2023 and 2024 into surpluses.

And yet, the warehouse floors tell a different story. While 2024's exchange inventories do

suggest a structural surplus, the inventory changes in 2023 don't fully square with the WBMS's revised history. That leaves the market in a peculiar position: if 2023 wasn't as strong as first reported, was it really as weak as now claimed? In our third-quarter letter, we will dig into current supply-and-demand balances—and how that already difficult question is being muddied further by President Trump's erratic copper tariff policies.

Coal

"A resurgence in construction of new coal-fired power plants in China is "undermining the country's clean-energy progress", says a new joint report by the Centre for Research on Energy, and the Global Energy Monitor." February 13, 2025

The second quarter itself was quieter. U.S. prices for Powder River Basin, Central Appalachia, and Illinois Basin coal each crept up about 1%. Overseas, the story was more lively. Seaborne thermal prices, still smarting from steep first-quarter losses, found footing in weather. A burst of hot-season demand from China lifted Newcastle thermal coal by 10% and Richards Bay by 5%. Metallurgical coal, however, faced the opposite pull—sliding 5% on fears of steelmaking capacity cuts in China.

The equity market noticed the shift in tone. Coal stocks, tracking the firmer seaborne trade, rebounded sharply: the Dow Jones Wilshire U.S. Coal Index gained 25% for the quarter. It was not a boom, but it was the kind of move that suggested traders were beginning to question whether the "post-coal" narrative was quite as close at hand as they had been told.

Global coal markets—and the handful of coal stocks still left on the public stage, trading at valuations so low they look like typos—are gripped by the same question that has animated energy debates for a decade: has the world already seen its last year of coal demand growth? The International Energy Agency thinks so, or close to it. In its *Coal Mid-Year Update 2025*, the agency suggested that 2024's 1.5% increase might prove to be the high-water mark. The forecast for 2025 and 2026: growth barely visible, with India adding about 2.5% but China—by far the largest consumer—flatlining.

The reasoning hinges on renewables. The IEA argues that China's massive wind and solar build-out has finally reached a "critical mass" able to bite into coal-fired generation in a durable way. For years, energy-transition consultants, market analysts, and idealistic investors have waited for exactly this moment: the day when China's renewable capacity became large enough to force coal into retreat.

The last six months seemed to feed that hope. Coal-fired electricity output in China dipped, and the drop was read—perhaps too eagerly—as a structural shift. But the newer data offer a less idealistic reading. The decline, it turns out, lines up neatly with a warm winter and a slowing economy, rather than any sweeping victory for wind and solar. And if there were still doubts about Beijing's intentions, recent policy has removed them. Far from capping coal capacity, China has been green-lighting new coal plants at a pace that makes its "transition" sound more like an addition.

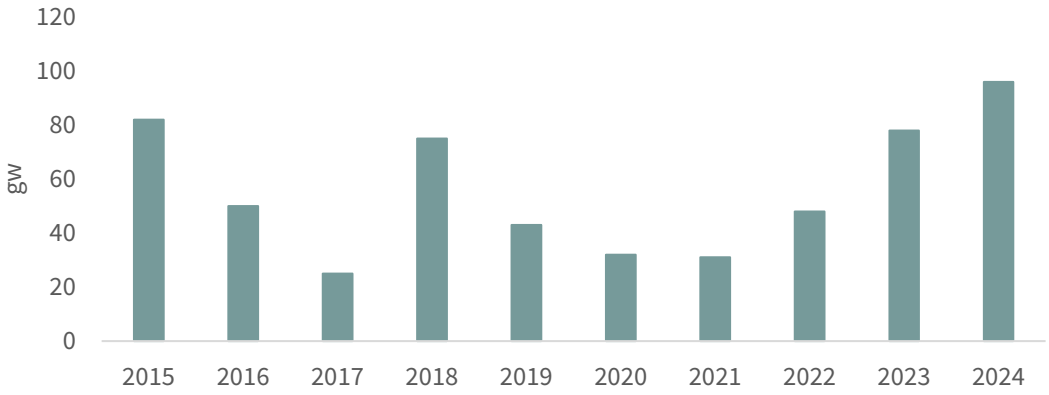
For readers who want a deeper look at coal's entrenchment in China's power sector, a short report from the Centre for Research on Energy and Clean Air (CREA), published in the first quarter of 2025, is worth the time. CREA's conclusion runs close to our own. Despite a record-breaking build-out of renewables, China's investment in coal-fired capacity continues

at full tilt. As the report puts it:

"This record-breaking expansion [of renewables] highlights China's leadership in clean energy. Yet instead of replacing coal, clean energy is being layered on top of an entrenched reliance on fossil fuels. This reality makes it increasingly difficult to achieve the principle of 'establish before breaking'—scaling up clean energy before gradually phasing down fossil fuels. Although renewables have been deployed at an unprecedented pace, coal power has remained firmly in place, often limiting renewables' integration and full utilization. As a result, China's energy strategy increasingly resembles 'energy addition' rather than a fundamental shift away from coal."

The numbers back it up. While 2024 permitting trends pointed modestly downward, the year still saw more coal-fired plant construction starts than any year since 2015. In CREA's telling, this is not a transition—it is an expansion with better branding.

CHART 3 Chinese New Coal Plant Construction



Source: China Coal Power Biannual H2 2024.

Permitting has slowed from the frenzy of 2023 but remains far from restraint. In 2024, approvals dipped from the prior year's highs — yet the pace still comfortably outstripped planned retirements. The first quarter of 2025 brought 11.3 gigawatts of new capacity onto the books, essentially matching 2024's clip. In other words, the conveyor belt is still moving, and it's loading more coal than it unloads.

And if there were any doubt about Beijing's intentions, Bloomberg dispelled it on July 28. In a report titled *"China's Coal Pipeline Risks Creating Glut, Blowing Climate Goals,"* the news service noted that every watt from China's new coal plants will be fed by coal from new mines. The proposal calls for 450 of them, scattered across the provinces, with a combined capacity of 1.35 billion tons a year — nearly a 30% boost to China's coal supply. If fully built, those mines alone would produce more coal than Indonesia and Australia combined. It is a blueprint for expansion, not contraction, and it tells you more about China's long-term energy strategy than any climate pledge could.

The IEA still clings to its vision of a Chinese coal peak — a moment when renewables finally eat into the country's vast coal appetite. But Beijing's own moves now stand as the strongest rebuttal. The permitting of new coal-fired generation continues at a pace that, while lower than last year, still dwarfs retirements. Layer on the July 28 Bloomberg revelation — 450 new coal mines, 1.35 billion tons of annual capacity — and the pattern becomes unmistak-

able: China is not preparing to have coal displaced by renewables; it is preparing to have more coal, and the supply chain to match.

CREA's blunt conclusion seems the only one that fits the facts: renewables will supplement China's coal-fired base, not supplant it. And with China accounting for 56% of the world's consumption, the global question of "peak coal" will be answered in Beijing, not Brussels. The latest surge in plant construction and production plans points to a clear answer: not this decade.

For investors, coal has been left to the bargain bin — the few remaining public names priced as if the industry's obituary were already written. But for those willing to be unfashionable, the fundamentals still whisper the same thing they did before the last great rally: there is value here, hiding in plain sight.

From Relic to Renaissance: The Coming Oil Repricing

The world has decided it does not like oil. One would be hard pressed to find another commodity so roundly scorned, so dismissed as a relic of another age. And yet, history suggests that such moments of universal disdain are precisely the moments when fortunes are made. We believe oil could well be the best-performing commodity of the next five years, perhaps of the decade.

The choreography of a bear market is familiar. Prices fall, an explanation takes hold, and the explanation hardens into doctrine. Each new downtick becomes evidence that the story was right all along. Investors huddle together in certainty, never noticing that the ground beneath them has begun to shift. The narrative, convincing at first blush, eventually blinds its believers. And when the fundamentals quietly reassert themselves, the crowd is left bewildered, caught on the wrong side of the trade.

Twenty-five years ago, the pariah of the financial world was not oil but gold. Nixon had slammed shut the Treasury's gold window in 1971, breaking the dollar's last tie to bullion and ushering in the age of pure paper money. Inflation raged through the decade, and no one knew whether the experiment would hold. Then came Paul Volcker, raising short-term rates to levels that nearly scorched the earth — 20 percent. Inflation broke, financial assets soared, and gold was left standing in the corner like an embarrassed guest at its own party.

Through the mid and late 1990s, central banks hurried to unload what now seemed to be useless yellow metal bricks, trading them for bonds that actually paid interest. Near panic selling gripped gold markets as central bankers rushed for the exits. Disorder escalated and in September 1999 the US Treasury ordered central bankers to convene in Washington, forcing them to sign the "Washington Agreement"— in retrospect, a gentleman's pact determining how much the of the "barbaric relic" could be sold without embarrassing one another. Andy Smith, in his widely-read "Precious Thoughts" column, explained with authority why gold was a relic of the past. And the market agreed: from 1980 to 1999, the price collapsed by 70%, finally bottoming at $252 an ounce, just before the British and Swiss made their last, humiliating disposals. An ounce of gold bought only seven barrels of oil multiple times between 2000 and 2003, the lowest ratio ever recorded. It was, in hindsight, absurdly cheap.

I was one of the few stubborn optimists left, telling Forbes in 2000 that gold would be the

best-performing asset of the decade. The irony, of course, is that not only was that prediction borne out, but gold has turned out to be the best performer of the last quarter-century. Central banks, once the great sellers, are now the great buyers — especially in the emerging world.

Today the unwanted house guest is oil. To most investors it is a museum piece, a sooty relic of the industrial age, bound to be replaced by the clean inevitability of electricity. The numbers tell the story of its disgrace: crude peaked at $145 a barrel in the summer of 2008, amid the frenzy of a short squeeze, and since has endured a grinding seventeen-year bear market. Including a first in commodity history: on April 2020, in the COVID inspired panic, a barrel of oil traded at minus $40 barrel on the NYMEX futures exchange. Oil prices today, still sit 60% below their 2008 peak. Energy's share of the S&P 500 has withered from 14 percent in 2011 to under 3 percent. This spring, a single ounce of gold bought fifty-seven barrels of oil — a record exchange, save for that surreal moment in 2020 when oil briefly went negative.

In 1999, it was gold that was mispriced, crushed by a narrative that proved incorrect. For the next 12 years gold—and let's not forget gold shares-- were by far the best performing asset class. In September 1999 an ounce of gold bought less 7 barrels of oil, that same gold ounce back in April bought 57 barrels—over 8 times more.

The mispricing of oil today is as extreme as gold's mispricing was back then. The bearish narrative gripping gold markets back in 1999 proved to be incorrect. The bearish narrative gripping global oil markets today will prove to be equally wrong. We have now come full circle: it's time for oil, and oil related equities to confound consensus opinion and become market leaders.

"THE MISPRICING OF OIL TODAY IS AS EXTREME AS GOLD'S MISPRICING WAS BACK THEN. THE BEARISH NARRATIVE GRIPPING GLOBAL OIL MARKETS TODAY WILL PROVE TO BE EQUALLY WRONG."

The most articulate spokesman for oil's funeral service is the International Energy Agency. According to the IEA, the world is awash in crude today and will be drowning in it tomorrow. The surplus, they insist, is not a passing squall but the beginning of a permanent glut, as electric vehicles grind demand to a halt while supply marches forward unhindered by the lack of demand.

In its latest Oil Market Report, the IEA declared that during the first six months of this year, supply outran demand by 1.2 million barrels a day — no small figure. Worse, the imbalance, they say, will nearly double in the back half, swelling to 2.3 million barrels a day. And next year, they promise, comes the coup de grâce: a 3.0 million barrel-a-day surplus, the largest ever recorded. For context, the pandemic year of 2020 — with airplanes grounded and cities locked down — produced only a supposed two million barrel daily surplus—a figure that most veterans of the trade still suspect to be over-estimated.

The IEA's longer view offers no reprieve. In its Oil 2025 report, the agency peers ahead to 2030 and sees only a deepening surplus. Between 2026 and 2030, global demand, it says, will inch up by barely a million barrels a day in total, while supply from non-OPEC producers and OPEC's own natural gas liquids will grow by 1.3 million. Unless OPEC+ performs a miracle of self-restraint, the world will be swimming in crude for years to come.

Small wonder, then, that investors have fled. Speculators on the NYMEX hold the smallest net long position in fifteen years. Equity investors have followed the script: shares outstanding in the big oil ETFs are down thirty percent in a single year. Yet in all this stampede to the

exits, very few pause to ask the question that matters most: what if conventional wisdom is wrong?

We have, in fact, seen this play before. Between 2003 and 2007, the IEA dutifully predicted each year that the market would be awash in surplus — about 1.3 million barrels a day, on average. At the time, the oil market was forty percent smaller than today, which made those projected surpluses every bit as menacing as the ones now being forecast.

Reality, however, declined to cooperate. Through 2006 the market held roughly in balance, and by 2007 it had slipped into outright deficit. Investors, having trusted the script, found themselves blindsided. In their rush to correct, they drove crude from $36 a barrel in 2004 to $100 by early 2008, and finally to $145 in a frenzy of short covering. The error was no mystery: too much faith in non-OPEC supply growth, too little allowance for demand. Our analysis suggests that history is about to repeat itself.

In what follows, we will examine the seven central misconceptions behind today's bearish outlook. The shales, being a story unto themselves, we reserve for a separate section.

Misconception #1: The market is currently in surplus

On paper, the first half of 2025 looked grim: the IEA reported that supply exceeded demand by 1.2 million barrels a day, a bearish starting point if ever there was one. Their calculation was tidy: the "call on OPEC" was 26.5 million barrels a day, actual OPEC output was 27.75, and therefore the world was oversupplied. Case closed.

Except the excess barrels refused to appear. A surplus of that size should have sent global inventories ballooning. Instead, they fell — drawing down by 10 million barrels since January. Faced with this awkward fact, the IEA consigned the discrepancy to a catch-all category labeled "miscellaneous to balance." Our readers will recognize this for what it usually is: not "miscellaneous" at all, but simply "missing barrels," a polite admission that demand was understated. In the past, such items have been the surest tell that revisions will come later — always upward.

Strip away the bookkeeping, and the picture looks different. Since September 2022, global inventories have hardly budged: commercial stockpiles down 10 million barrels, government reserves up nine. In other words, the market has been in balance for nearly three years — all while spot prices have dropped by almost 30 percent. The market is not in surplus – instead it has been nearly perfectly balanced.

Misconception #2: Demand growth is weak and slowing

The IEA's demand ledger for the first half of 2025 reads like a eulogy. Year-on-year growth, they say, was a meager 900,000 barrels a day. Worse, it is losing momentum: 1.2 million in the first quarter, halved to 600,000 in the second, and — if their projections hold — dwindling to just 200,000 by the final quarter. For the full year, they expect only 600,000 barrels of growth, the weakest performance since the 2008 financial crisis, save for the pandemic itself.

But the numbers, once again, refuse to behave. Adjust for the "missing barrels," and the picture flips: first-half demand growth was not 900,000 barrels but 2.1 million — two and a half times stronger. Nor is demand decelerating; it is speeding up. Growth accelerated from 1.4 million barrels in the first quarter to 2.7 million in the second, among the strongest readings ever recorded. Thus the irony: where the consensus sees weakness and fatigue,

the underlying data suggest vigor — demand not slowing, but accelerating.

Misconception #3: Demand "weakness" will continue

The IEA assures us that next year will be no better. Demand growth, they say, will limp along at six to seven hundred thousand barrels a day — the same anemic pace as this year, itself down from last year's nine hundred thousand. On the surface, the figures look reasonable, a neat extension of the slowdown they report for the first half of 2025.

Yet adjust for the missing barrels, and the neatness disappears. At face value, demand this year is expected to rise by only 600,000 barrels to 103.7 million a day, and next year by 700,000 to 104.4 million. But if the "missing barrel" demand adjustment for the first-half demand is carried forward, the average for 2025 is already closer to 104.8 million — an increase of 1.8 million barrels year-on-year, not six hundred thousand. By that measure, next year's "weak" growth looks far too low. Even if the pace slows to a modest 1 million barrels a day in 2026, true demand could reach nearly 106 million — a full 1.6 million barrels higher than consensus. In other words, the IEA's forecast of perpetual anemia rests on a set of books that do not balance.

Misconception #4: Non-OPEC supply outside the US will surge

A flotilla of new offshore projects is coming onstream in 2025 and 2026 — Guyana, Brazil, Suriname. The IEA assures us that these fields will swell non-OPEC output outside the United States by 750,000 barrels a day in each of those years.

The projects are real enough. But the net effect is another matter. We keep a catalogue of every major non-OPEC development, and the history is instructive. From 2017 through 2024, these projects added an average of 950,000 barrels a day of new gross production each year. Yet over that same period, non-OPEC supply outside the U.S. actually fell — down by 100,000 barrels. The culprit was base decline: existing fields losing roughly 1 million barrels a day annually, a natural erosion rate of about 2.2 percent.

For the next two years, the gross additions are expected to total 2.6 million barrels — about 1.3 million per year. To net out at the IEA's projected 750,000, base declines would have to slow by half, from 1 million barrels per day per year to just 525,000. That would mean the decline rate moderating from 2.2 percent to barely 1 percent, an outcome the rocks themselves have not shown any inclination to deliver.

We have seen this error before — analysts extrapolating gross additions and forgetting that old wells age and die. If history is a guide, net growth will come in far lower, perhaps half the consensus. And with scarcely any new major projects visible beyond 2026, the back half of the decade looks even thinner.

Misconception #5: EV growth will impair long-term demand

The standard projection runs like this: electric vehicle sales will soar through 2030, gasoline demand will collapse, and oil's long-term growth will wither away. The IEA, in its annual report, obligingly sketches the outcome: global demand growth averaging only 250,000 barrels a day between 2026 and 2030, nearly 80 percent below trend — all thanks to EV penetration. At first glance, the figures make it look as if this transformation has already begun. Adjust for the missing barrels, however, and the story dissolves.

We have long argued that EVs are unlikely to supplant the internal combustion engine on a grand scale, for a simple reason: they are energetically inferior. Once you account for the cost of manufacturing the battery and the inefficiencies of electricity generation — especially when sourced from renewables — the result is an automobile up to 40 percent less efficient than its gasoline-burning counterpart. Hybrids, by contrast, are markedly more efficient than either, and unlike EVs are primed for mass acceptance.

Consumers, quietly, appear to have figured this out. The headline numbers look dramatic: EV sales up 50 percent in the past two years, 220 percent since 2021. But the fine print tells a different story. First, China must be treated separately. As the world's largest oil importer, vulnerable to blockade in the Strait of Hormuz or Malacca, China has a strategic interest in pushing EVs that can run on its abundant domestic coal. That policy will continue, but it cannot be extrapolated to the rest of the world. Second, one must distinguish between plug-in hybrids and pure battery electrics.

On that score the contrast is striking. Outside China, sales of battery electrics have slowed to a crawl: from 50 percent annual growth between 2021 and 2023 to barely 5 percent since. Plug-in hybrids, meanwhile, continue to climb at nearly 40 percent a year. Consumers outside China appear to understand what the spreadsheets already show: the mass adoption of battery electrics has run into limits of economics and physics. Yet analysts remain entranced, confidently projecting BEV growth will somehow reaccelerate to 33 percent a year through 2035, even as hybrids slow. We would not be so sure. Disappointing EV sales are already testing consensus opinion.

Misconception #6: US shale production will still grow

We have devoted a separate section to shale, but its role in the broader balance sheet cannot be ignored. Only a year ago, the IEA and the U.S. Department of Energy were still projecting robust growth from the shales well into the 2030s. Today both quietly admit the peak is near: 2026, by their latest reckoning.

Our own models, built in 2019, pointed to a peak in 2025 or 2026, and geology has borne us out. The shales are vast, but they are not infinite, nor are they immune to depletion. Their era of relentless growth is ending.

Even now, however, official forecasts remain too generous. The IEA still imagines U.S. liquids rising by 200,000 barrels a day next year and then holding steady to 2030. We believe the opposite is likely: production will fall. The Permian, the last basin still showing year-on-year growth, probably made its high last October on a monthly basis. History gives a clear pattern: once a shale basin peaks, output declines sharply, typically by 30 to 50 percent in the first five years. If the Permian follows the path of the Eagle Ford, the Bakken, the Fayetteville, and the Barnett, U.S. production will not hold flat but fall by two to three hundred thousand barrels a day each year.

Taken together, the outlook is far from the dirge that investors have been humming. The oil market is not in surplus; it is balanced, and the risk runs toward tightening. The great wellspring of non-OPEC growth — the U.S. shales — is faltering, just as U.S. conventional fields did in 1971 and the North Sea and Cantarell did a generation later. Each time, investors believed in abundance right up to the moment scarcity arrived, and each time prices surged.

The present situation is no different. The barrels from new offshore projects will not flood the world; they will barely keep it steady. Inventories are lean, the vaunted surplus is a mirage, and the story of endless supply is about to meet the reality of geology.

We have seen this movie before. In 1999, the world wrote off gold as a relic; a decade later, it was the best-performing asset in the planet. Today, the same epitaph is being written for oil. Investors should take note. The next great bull market is preparing its entrance.

The Arithmetic of Depletion: Shale's Long Goodbye

The age of shale is drawing to a close.

"THE AGE OF SHALE IS DRAWING TO A CLOSE… THEIR PEAKING CARRIES A SIGNIFICANCE THAT CANNOT BE OVERSTATED."

For nearly two decades, the shales have been the great miracle of global energy markets—perhaps the most important development the energy business has ever known. Their ascent rewrote supply curves, humbled OPEC, and made prophets out of a handful of drillers and engineers. Now their peaking carries a significance that cannot be overstated. When George Mitchell and his team at Mitchell Energy first learned how to tease hydrocarbons from stubborn rock in the early 2000s, he unlocked a resource that would go on to meet nearly ninety percent of every new barrel of oil demand the world required. From 2010 through 2025, shale oil and natural gas liquids swelled by 13.5 million barrels per day—an average of 900,000 barrels each year. But by this coming October, the numbers suggest their growth, once inexorable, will have turned negative.

When the shales first burst onto the scene, we made it our business to study them as if our livelihood depended on it—which, in a way, it did. We were early in recognizing their importance and moved the portfolio accordingly. We were also among the first to glimpse certain geological snags that others preferred not to see. By 2019, a puzzle demanded answering: shale wells, on average, were producing more than twice what they had only three years earlier. The industry line was simple: technology had triumphed. Smarter drilling, increasing proppants, longer laterals, and tighter fracks were drilling wells that produced ever greater quantities of oil and gas. If that were true, it would have been bearish news for oil. A step-change in technique meant fields once written off as uneconomic were now becoming profitable; the number of economic drilling locations would grow ever large and larger. If such a scenario played out, the shale boom could run far longer and harder than anyone had guessed. Production could grow, and grow, and grow, as economic drilling inventories did nothing but increase.

To get at the truth, we turned to the new machinery of the age—complex models of the machine-learning variety—to sort signal from noise. What they told us was hardly the triumphant tale the industry liked to tell. Productivity had not doubled because rigs had suddenly grown more ingenious; rather it had doubled because operators had learned to hunt for the best drilling locations with remarkable precision. They were moving rigs from the fringes of their acreage to their choicest acreage in the middle. The mining industry has a great phrase for this technique: "high-grading." You mine the best parts of your ore body first. In shale, companies weren't enlarging the shale pie as everyone thought; they were simply mastering the art of eating the best tasting parts first.

In 2019, we set our conclusions down in print and, with some temerity, made two bold predictions. The first was that shale's year-on-year growth—which from 2015 to 2019 had

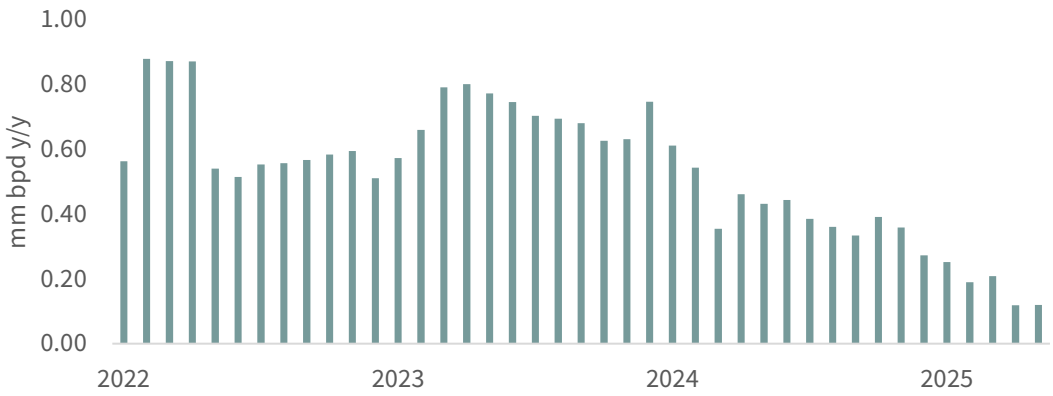
raced ahead from 4.5 to 8.2 million barrels a day—would soon crest and begin to slow. The second was starker still: the great engine of shale expansion, the Permian, would roll over entirely by the middle of the next decade, in 2025 or 2026. In later letters, as the evidence mounted, we edged our forecast forward to late 2024 or 2025.

Our conclusion, at first, was met with high levels of skepticism. Not a soul in the industry seemed prepared to agree with us. On multiple podcasts we outline our thesis, and as late as 2024 our view was still treated as heresy. The irony was lost on us. After all, every finite resource is destined to exhaust itself; that, at least, cannot be controversial. Moreover, year-on-year growth had in fact peaked in 2019—just as we said it would—but that small vindication did nothing to quiet the chorus of critics. Our models suggested growth would keep decelerating until, by 2025, it would finally tip into sequential decline. Yet between 2019 and 2023, each new monthly uptick was trotted out as proof we were wrong—even though we had never claimed the peak would come until a few years later.

In January of 2024, we found ourselves on stage opposite the analyst who goes by the name Doomberg. He made the case, with great confidence, that the shale resource was far larger than we allowed and that production would march onward for decades. Even if oil should stumble, he insisted, gas was a bottomless reservoir—practically limitless, he said—and would carry the mantle indefinitely. The argument stretched further still: from that gas would flow a steady stream of natural gas liquids, which could be stripped, blended, and refined into useful supply, more than enough to meet the world's energy liquids appetite for years to come.

With hindsight, the record is plain enough. Shale oil production crested in November 2024 at 9.19 million barrels a day and has since slipped by a modest 180,000 b/d. On a year-on-year basis, growth has slowed from 800,000 b/d as recently as late 2023 to 80,000 b/d in May 2025 and seems destined to turn negative by October. When we debated Doomberg, shale production was still rising briskly—by 800,000 barrels a day, year-on-year. Today, that figure has shrunk by ninety percent to barely 80,000 b/d. And yet, for all the numbers on the table, most believe the argument remains unsettled.

CHART 4 Shale Year-on-Year Oil Production (3m MVA)



Source: EIA.

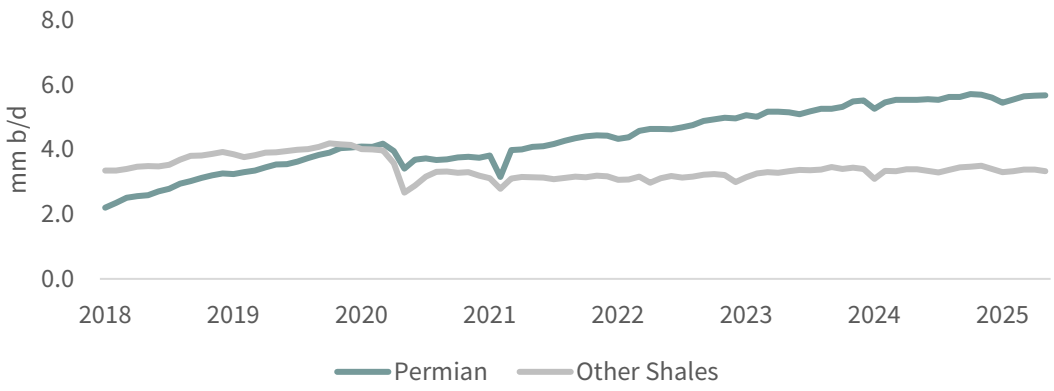
Not long ago, Doomberg renewed his critique, this time pointing to the stubborn resilience of shale gas as proof that our models were flawed. We see it differently. In our view, gas will trace the same arc as oil—first slowing, then rolling over—though the geology adds a few

wrinkles to the timing. To make sense of what lies ahead, it is necessary to look back and ask why shale oil faltered, why another burst of growth is unlikely, and why gas and the natural gas liquids that ride along with it are destined to follow the same path.

What Drove the Shale Oil Slowdown?

Since 2018, the tale of shale oil has really been the tale of the Permian basin. It was the third great shale to come of age, after the Bakken and the Eagle Ford, and its stacked layers of rock made it the most prolific by far. Even now, the Permian stands larger than all the other oil shales put together, and for the past seven years it has carried the entire burden of growth on its back. Oil production from the shales outside of Permian peaked back in October 2019 and have now declined by 860,000 b/d. But size alone does not confer immunity. The giant, too, can stumble.

CHART 5 Permian vs. Other Shale Production



Source: EIA.

In 2018, the Permian was adding nearly 100,000 barrels a day each month—an annualized pace of 1.1 million barrels, a figure that meant nearly one out of every two new barrels of global supply was bubbling up from a handful of dusty counties in West Texas. By 2023 however, its growth had noticeably slowed.

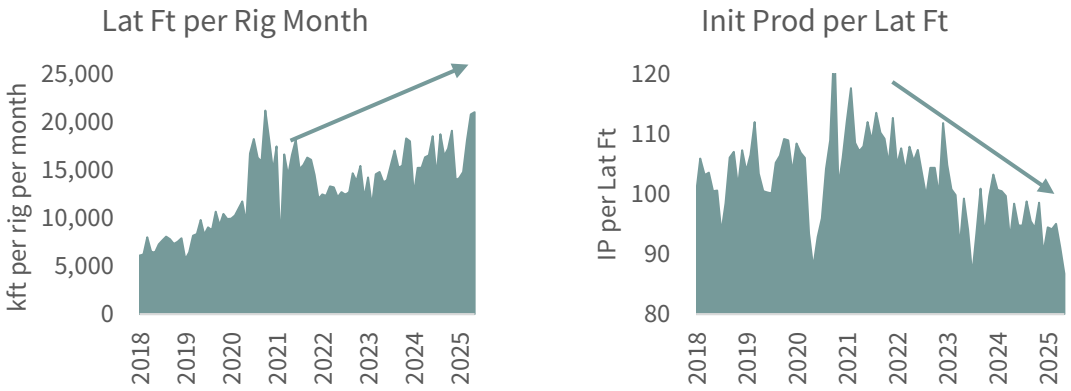
Sequential growth slowed to 45,000 barrels a day, or 550,000 on a yearly basis. Then came October 2024, the peak. Since then, the basin has been shrinking at an average clip of 35,000 barrels a day, 250,000 in total. The question is inescapable: what explains the slowdown between 2018 and 2023, and the decline that followed?

A natural place to begin is with the rig count. In 2018, the Permian averaged 465 rigs; by 2023, capital discipline had whittled that number down to 335, and since October 2024 it has averaged 298. On the surface, that would seem explanation enough. Yet the production story does not yield so easily. Over the same span, operators managed to double the number of wells drilled per rig-month, from 0.9 to 1.8. The paradox is plain: with nearly forty percent fewer rigs, companies were drilling thirty percent more wells each month. The wells themselves were almost a third longer than they had been, which meant that in aggregate, lateral footage drilled each month since October was seventy percent higher than in 2018. In short, the rigs had not grown lazy; if anything, they had become far too efficient to explain the slowdown.

The real culprit lies in falling productivity of the rock downhole. Between 2018 and 2023, new production per lateral foot slipped by five percent, and in the wells drilled since October 2024 it has fallen by another five. This, we think, is where much of the confusion among oil

analysts takes root. More than once we've been asked to explain why Permian productivity is *rising*. When we answer that it is not, they point to the neat correlation between gross new production and the rig count. As a rule of thumb it is tidy enough, but it misses the point. Rigs have grown more efficient at turning steel into wellbores, yes—but each additional foot of wellbore delivers less oil than before. If the bottleneck were rigs, these efficiencies would send production soaring. But when the bottleneck is the dwindling stock of high-quality rock, faster rigs only bring decline on more quickly.

CHART 6 Drilling Productivity vs. Geological Productivity

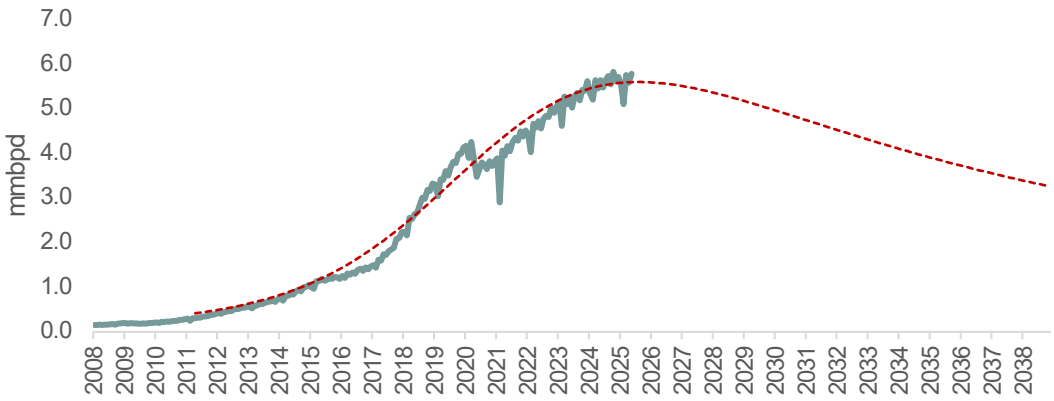


Source: NoviLabs and G&R models..

The largest force at work, however, has been the simple arithmetic of depletion. In 2018, the Permian averaged 2.7 million barrels a day. With base declines running near ten percent a month, that meant nearly 250,000 barrels had to be replaced every thirty days just to keep production flat. By 2023, output had doubled to 5.4 million, and the treadmill had quickened: 450,000 barrels lost each month to decline, the chief reason net growth slowed so sharply. Since October 2024, the basin has averaged 5.7 million barrels a day. The decline rate has not changed, but the burden has grown heavier—more than half a million barrels a month vanish before the first new well comes online, twice the toll of 2018. With each new lateral foot yielding less than the one before, the Permian could no longer run fast enough to escape the gravity of its own declines, and growth finally turned negative.

In our last letter we described what we called the "paradox of depletion," and the Permian now offers a perfect illustration. The rigs are still turning, the drilling inventory is still there, and yet total production cannot grow. The same dynamic was at work when King Hubbert, in 1955, first sketched his famous curve and predicted that U.S. conventional oil would roll over in 1971. Hubbert relied on his own "linearization" technique to reach that conclusion; we have amended his method slightly to account for the long, flat tail of a shale well and, using it last October, traced the Permian's future path. Thus far the basin has followed that amended curve with unnerving precision. If the model holds, shale production in the Permian will not merely flatten but decline—perhaps sharply—from here.

CHART 7 Permian Hubbert Projection

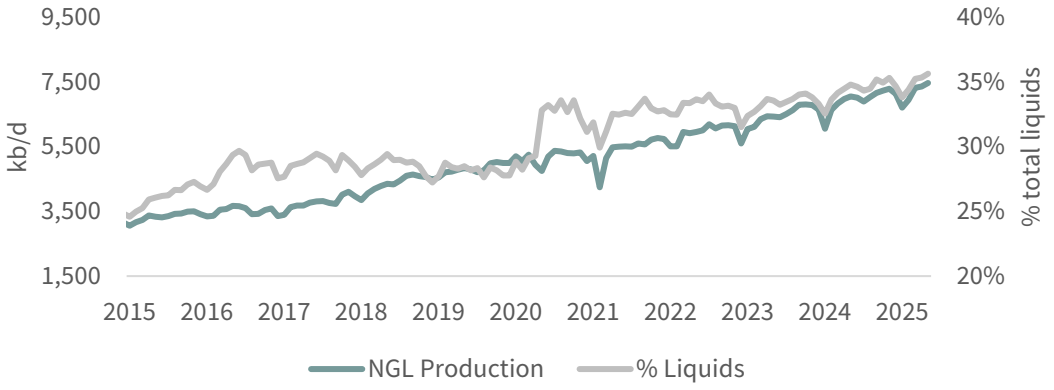


Source: EIA. and G&R Models.

What About Shale Gas?

Shale gas has been, in certain respects, the harder beast to model—though we think we now see why. Much of Doomberg's counterargument turns on the belief that even if shale oil falters, gas will not; that it will continue to climb, seemingly without limit. The point carries weight, for many gas wells also yield so-called natural gas liquids, or NGLs, which can be stripped out and blended into the crude stream. If gas keeps growing, then total U.S. liquids can keep growing too. Already, NGLs account for a third of all U.S. liquids production and nearly two-thirds of its year-on-year increase. And, of course, the dwindling prospect of continued shale gas growth sits at the center of our own bullish case for U.S. natural gas prices converging with the world price.

CHART 8 NGL Production and Percent of Total Liquids



Source: EIA.

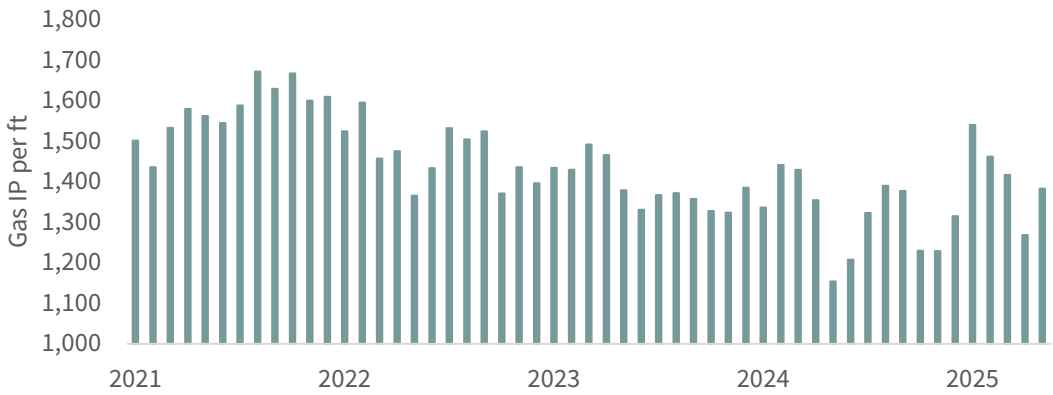
Unlike oil, shale gas is still climbing. After what looked like a sequential peak in December 2024, the latest data show production recovering, up by 2 billion cubic feet a day. But the pace is not what it was. From 2019 through 2023, dry gas output surged by 16 bcf a day—3.2 each year. Since then, the rate has slowed by nearly ninety percent, to barely 1.8 bcf a day in total, or 0.4 annually. And the gains that remain come almost entirely from two sources: Appalachia—the Marcellus and Utica—and the associated gas flowing out of oil wells in the Permian.

Through 2019, the Marcellus was a marvel—growing by 3.5 billion cubic feet a day, every

year, as if on autopilot. Then, as if a switch had been thrown, the growth stopped. Since late 2023, production has been flat. The standard explanation is familiar enough: takeaway constraints. Prices in the Northeast sag against Henry Hub, and critics argue the bottlenecks alone explain the stall. Perhaps they do, in part. But the evidence is harder to square. The Mountain Valley Pipeline came online recently, and with it 2.8 bcf a day of fresh capacity. Yet production barely budged. Contrast that with the years between 2015 and 2021, when nearly 15 bcf of capacity was added and production leapt almost in lockstep. In those days, new pipe was met almost instantly with new gas.

The other, less comfortable truth is that productivity per lateral foot in the Marcellus has begun to fade. Since 2023, new output per foot has fallen nearly six percent from the peak years of 2016 to 2020. If takeaway were the only choke point, companies would still be drilling their best wells and productivity would hold steady. Instead, it is slipping—just as it did in the Permian before that basin rolled over. We see little reason to believe Appalachia will prove the exception.

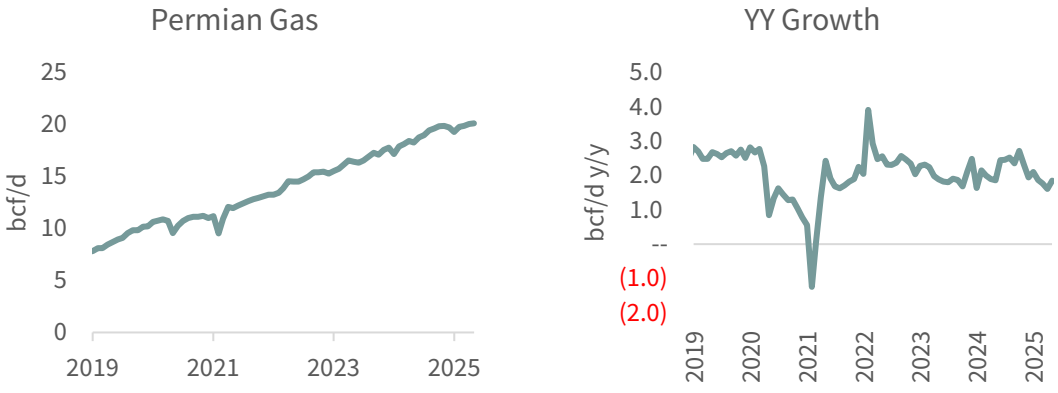
CHART 9 Marcellus Initial Production per Lateral Foot.



Source: NoviLabs and G&R models.

Gas from the Permian tells a livelier tale. Its growth has eased from the torrid pace of a few years ago, but it still looks vigorous by any standard. In 2018 and 2019, year-on-year output regularly swelled by 3 billion cubic feet a day. More recently, the pace has slackened, though even now the basin still manages between 2 and 3 billion cubic feet per day of annual growth. On the surface, at least, the Permian gas machine still hums.

CHART 10 Permian Gas Production and Growth

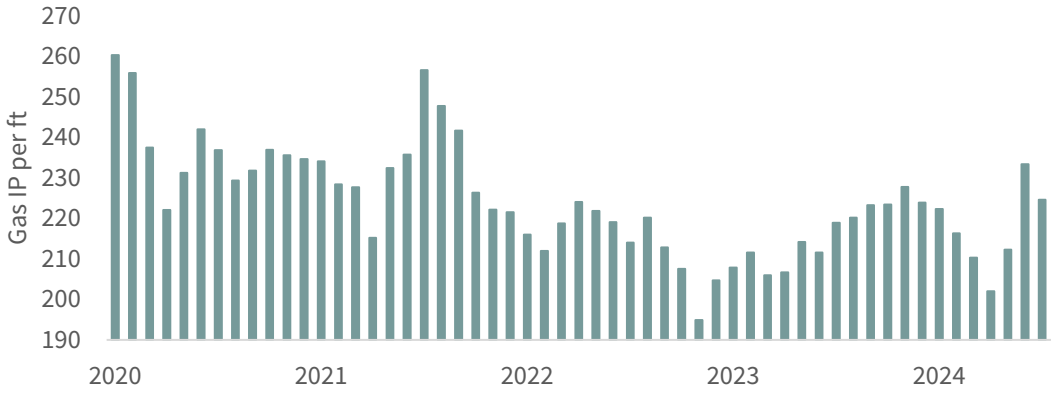


Source: EIA.

At first glance, the Permian looks built for endless growth. Look closer, and the picture changes. Gas productivity per lateral foot has been slipping, just as oil productivity has.

Why then has oil faltered while gas still looks strong? The answer lies in the peculiar geology of "mixed-medium" reservoirs. A Permian oil well begins life with roughly a quarter of its output in gas. As the reservoir pressure ebbs with age, the balance shifts—the gas separates from the liquid and makes its way more easily up the bore. Ten years on, the same well that started with a 25 percent gas cut may be producing nearly 60 percent. This shift is now happening basin-wide. The production-weighted average age of the Permian has risen from 12 months to 31, as the flush of new wells fades and older wells hold the line with thinner volumes. The mix has changed with it: less oil, more gas. What looks like robust gas growth is, in no small part, the simple arithmetic of wells growing older and gassier.

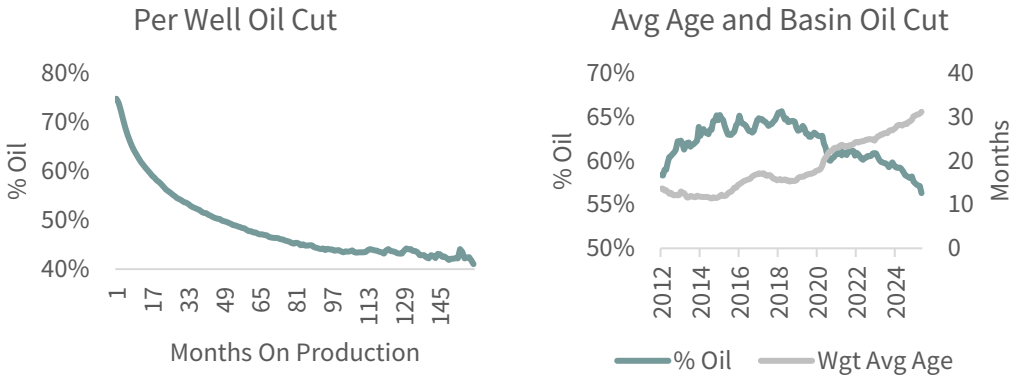
CHART 11 Permian Initial Gas Production per Lateral Foot



Source: NoviLabs and G&R models.

Permian natural gas liquids growth will slow too. In the Permian, NGL output rises in lockstep with gas: a barrel of liquids for every measure of gas pulled from the ground. That means the story is the same. If Permian gas rolls over, so too will its NGLs, and with them the last major source of growth in U.S. liquids supply. What has looked like a distinct pillar propping up total liquids production is, in reality, just another extension of the same geology. When the gas slows, the liquids slow, and the whole building, including its wings, will lean in the same direction.

CHART 12 Permian Gas Cuts



Source: NoviLabs and G&R models.

The question then – for both oil and gas markets -- is how long can gas production keep climbing if both well productivity and initial production are slipping? The starting mix between oil and gas in the Permian has been strikingly steady, and the shift towards producing greater percentages of gas as wells age follows a predictable arc. The math used to make these predictions is not exotic—simple differential equations work well—but the conclusion is unavoidable: if each well grows gassier over time while delivering less overall, then aggregate gas production must in time crest and roll over. The lag is only slight. Oil peaked in late 2024; by our estimates, gas will follow on a sequential basis in early 2026.

And so the evidence points where we long suspected it would. The Permian—and with it, total U.S. oil production—appears to have reached its peak at the close of last year. If our models hold, year-on-year output will tip negative by the end of 2025, just as we said back in 2019. Natural gas is more complicated—but only slightly and the signs there are no less telling. Growth will slow, before turning negative sometime late next year. The Marcellus and the Permian bear the watching, but if our reading is right, both gas and the natural-gas liquids that come with it will soon stop growing. The shale era, which began with such force, is giving way to its long decline. Oil, gas, and liquids all rose together, and together they will crest. The miracle that once rewrote the world's supply curves is now succumbing to its own arithmetic. The shale era is not ending with a bang but with the slow, grinding certainty of decline

Trump's Nuclear Revolution: The Policy That Could Redefine U.S. Power

President Trump's recent executive action targeting reform at the Nuclear Regulatory Commission (NRC) may well go down as the most consequential of his presidency.

At our semi-annual natural resource conference last October, one of our speakers asked over dinner what single policy change could meaningfully improve America's long-term prospects. The answer was simple: radically overhaul the NRC to unlock the development of Gen IV Small Modular Nuclear Reactors (SMRs). Trump's May 2025 executive orders do exactly that.

The directives compels the NRC to meet an 18-month deadline to evaluate license applications for the construction and operation of new reactors, including advanced SMR designs. Since the 2011 Japanese tsunami, the NRC has grown excessively risk-averse amid public anxiety over nuclear safety. In a bid to shed any appearance of regulatory coziness, the agency adopted a posture toward the nuclear industry that often verged on adversarial. In the years since, it has greenlit only one project—Vogtle Units 3 and 4—and rejected the only SMR application to date: Oklo's Aurora reactor in 2022.

The new order clears a path for the first generation of advanced reactor designs in decades. Among the most promising are molten-sodium cooled SMRs, championed by Bill Gates-backed TerraPower and Sam Altman's Oklo Inc. These designs are rooted in technologies developed as early as the 1940s. And the case for their adoption is strong.

Traditional pressurized-water reactors use water to cool the nuclear core, where fuel rod surfaces reach 350°C. Because water boils at 100°C, the system must operate at 155 times atmospheric pressure to prevent steam formation and the risk of core meltdown. This pressure

requires costly materials: thick steel, reinforced concrete, and high-spec valves and welds.

Molten-sodium cooled SMRs replace water with sodium, which boils at a far higher 883°C—well above the core's operating temperature. As a result, these systems are unpressurized. The benefits are twofold: dramatically improved safety and significant cost reductions. Lower pressure allows for up to 70% less steel and concrete per megawatt than conventional reactors. They also produce far less waste per unit of power.

But perhaps most importantly, molten-sodium SMRs deliver a quantum leap in energy efficiency. All energy systems must be judged not just by their output, but also by how much energy they consume in construction, fueling, and operation. We've spent years analyzing energy return on investment (EROI)—akin to return-on-investment in finance, but for net energy.

Human progress has been marked by four major energy transitions, each one yielding a higher EROI. The first came when we shifted from hunting and gathering to domesticated crops and livestock. This moved the EROI needle from 4:1 to 5:1 and enabled the first human settlements.

Agrarian systems persisted for millennia, but with meager surplus. It took 2,000 years for real GDP per capita to double—a mere 0.01% annual growth. The largest cities never topped a million people. In the 17th century, England, having taxed its forests to exhaustion, turned to coal. The EROI doubled again to 10:1.

That increase from subsistence-level energy unlocked a revolution. Economic activity boomed. The Industrial Revolution ushered in modern civilization. With oil and gas, EROI soared to 30:1. Populations exploded. Today, Tokyo hosts over 37 million people, and 37 cities exceed 10 million.

Renewables promised a new era of abundance, but their energy economics tell a harsher tale. Due to low energy density, wind and solar require massive inputs—steel, copper, and concrete—to function. When fully accounted for the battery systems needed to back them up, their EROIs fall below 10:1. That's not much above the 15th century. No wonder countries like Germany are rapidly deindustrializing.

Molten-sodium SMRs, by contrast, combine nuclear fission's inherent efficiency with a simplified, non-pressurized system. Our estimates put their EROI as high as 180:1. From an energy perspective, this is perhaps the most transformative development in human history. The carbon-free output is simply a bonus.

But the implications go beyond energy. SMRs could help solve America's most pressing macroeconomic threat: the national debt. In This Time is Different, Reinhart and Rogoff show that countries surpassing 100% debt-to-GDP often spiral toward crisis. In Ferguson's Law (2025), Niall Ferguson warns that a superpower in which debt service outpaces defense spending risks collapse. The U.S. now meets both criteria.

Fortunately, there is precedent for escape. After the Napoleonic Wars, Britain's debt-to-GDP peaked at 173% by 1822. By 1857, interest payments exceeded military outlays. Yet Britain flourished. Historians often credit industrial efficiency. But in truth, the adoption of coal—an energy source with an EROI of 10:1, double that of agrarian systems—fueled the turnaround.

The earliest steam engines were powered by wood but failed to scale because of wood's poor energy return. It was only when coal entered the equation that the industrial flywheel began to spin.

If Britain's doubling of EROI rescued it from its debt trap, imagine what increasing today's 30:1 grid—largely powered by natural gas—to 180:1 with molten-sodium SMRs could achieve. Short of AI or quantum computing, there is no innovation more likely to restore U.S. industrial competitiveness. Green steel produced through molten-oxide electrolysis, for instance, demands cheap, abundant electricity. SMRs could make the U.S. not only a leader in clean steel, but also a formidable exporter again.

Until now, the only thing standing in the way was the NRC's regulatory intransigence. That obstacle is now removed.

Uranium Wakes Up

For a year and a half, the uranium market had the look of a party after midnight — the music still playing, but the dancers drifting away. After the fireworks of 2022 and 2023, uranium stocks spent most of 2024 trailing behind the broader market. Hedge funds, which had been among the most enthusiastic guests, quietly reversed course, building large short positions on the theory that the Sprott Physical Uranium Trust — the market's most visible buyer — might simply run out of cash and be forced to sell down its hoard.

That theory died in the second quarter, and it did not die quietly. Sprott sidestepped the cash squeeze by issuing new shares, and the effect was instantaneous: uranium prices jumped 15%, uranium equities surged 45%, and the market, which had felt half-asleep, suddenly sat bolt upright. The quarter that followed was less a recovery than a revelation, a string of announcements that suggested the nuclear build-out was no longer a talking point. It had begun.

The most consequential news came from Washington. On May 23, President Trump signed four executive orders aimed squarely at dismantling the regulatory chokehold that has kept U.S. nuclear projects trapped on paper. For decades, the Nuclear Regulatory Commission's approval process has been so slow, uncertain, and costly that new plants rarely made it beyond the blueprint. Trump's orders attempt to break the logjam:

Licensing reform. The NRC must now create an expedited approval track for reactors already proven safe by the Department of Energy or Department of Defense, with an 18-month deadline for construction and operating licenses. The DOE is told to take a more active role in cutting regulatory risk and pushing projects forward.

Capacity expansion. The target is to quadruple U.S. nuclear capacity to 300 gigawatts by 2050 — with loans for restarts, financing to complete half-built plants, and ten large reactors under construction by 2030.

Accelerated technology deployment. Three pilot reactors, built outside national labs, are to reach first criticality by 2026. The DOE is ordered to rewrite its own rules to shorten reviews, waive or fast-track permits, and strip out procedural drag for advanced designs.

Strategic siting. The orders instruct the DOE and DOD to plan nuclear reactors for

domestic military installations and to study powering large-scale data infrastructure — including AI-focused facilities — with dedicated nuclear units.

The scope goes further still: renewed research into fuel recycling and reprocessing; incentives to boost domestic fuel production, including enrichment; a push to expand the nuclear workforce; and a directive for the U.S. to become a leading exporter of nuclear technology and services.

The policy shift wasn't confined to the U.S. On June 12, the World Bank quietly tore up a rule that had been in place for more than sixty years — its ban on financing nuclear power plants. It will now consider funding life extensions for existing reactors and backing small modular reactor projects in developing economies. The move aligns with last December's U.N. climate summit pledge to triple global nuclear capacity by 2050 and could matter most in countries with demand but no ready access to capital. For perspective: the World Bank's only prior nuclear loan was a $40 million credit in 1959 for Italy's first reactor.

North of the border, Ontario announced on May 8 that it would build four GE-Hitachi BWRX-300 small modular reactors at its Darlington site to meet electricity demand projected to rise 75% by mid-century. Licensing is already in place; construction begins this summer; first power is due in 2030.

Industry followed suit. On July 18, Westinghouse responded to Trump's call-to-action by laying out plans for ten new AP1000 reactors in the U.S., with construction starts by 2030. And in Japan — where nuclear politics have been frozen since Fukushima — Kansai Electric said it would resume surveys for a new reactor at its Mihama site, the most serious step toward new construction in over a decade.

Overlay these with a quieter but telling trend: several hyperscale tech firms have now committed to nuclear-powered data centers. Whether for AI or cloud, the attraction is the same — reliable, high-density power with zero CO_2 emissions. None of these projects, nor the AI-related demand we've flagged in past letters, are yet built into our uranium demand models. Even without them, the market is already in sustained deficit. Add these in, and the shortfall widens meaningfully beyond 2030.

If the demand story is now widely appreciated, the supply story is not — and that may be where the real leverage lies. Several of the world's key growth projects are wobbling. Saskatchewan's Arrow project may face delays. Paladin's flagship Namibian mine is producing below expectations. Australia's Honeymoon in-situ leach project has run into technical problems. In Kazakhstan, Kazatomprom is wrestling with development issues at its massive Budenovskoye 5 and 6 deposits. These are not fringe assets; they are the very projects meant to bridge the gap between today's supply and tomorrow's demand.

The market's setup is therefore tightening from both ends: a visible swell in long-term demand and a quiet erosion of expected supply. The last time uranium had this mix, in the mid-2000s, the spot price rose ten-fold. We are still early in this cycle, but the contours are in place. A bull market in uranium is underway — and the structural pressures beneath it are only getting stronger.

Platinum and Palladium: A Bull Market Years in the Making

"Platinum Breaking Out on Surging Demand From China" Bloomberg New, May 20, 2025

"Valterra Platinum Say Bigger Rally Needed to Drive More Supply" Bloomberg July 18, 2025.

"US used car prices surge as tariff drive market volatility" Reuters, July 8, 2025

The deficits dogging platinum and palladium today are not polite, passing shortfalls; they are structural, and they have the look of something that will widen yet again as 2026 rolls on. In our last letter, we noted a peculiar and rather inconvenient mix of forces: internal combustion car sales refusing to die on schedule, recycled metal supplies that never showed up, mines producing less than promised, and—in platinum's case—a sudden rekindling of investor ardor. Put together, these have opened yawning gaps in supply that are chewing through the world's above-ground stockpiles at a pace that would make even the most jaded commodity trader sit up.

Only a year ago, most PGM analysts were confident the pendulum was about to swing back. Auto-catalyst demand, they thought, would fade; recycled metal would return in greater volume; platinum's tepid demand would stay that way. Almost none of it happened. Instead, the deficits for 2025 have had to be revised sharply higher, and the outlook for 2026 now calls for more of the same—significant shortfalls, not surpluses.

To see how stubbornly tight these markets have become, it's worth lining up the forecasts of eighteen months ago against what's unfolding now. In mid-2023, the World Platinum Investment Council pictured deficits of 530,000 ounces in 2024, 620,000 in 2025, and 600,000 in 2026. Their latest report tells a different story: those gaps have swelled to 990,000, 970,000, and 713,000 ounces, respectively—a shift that says more about the intractability of supply and demand than any single headline could.

Palladium has followed a nearly identical script. In the fall of 2023, the WPIC foresaw a modest 2024 deficit of 106,000 ounces, followed by comfortable surpluses of 487,000 and 897,000 ounces in 2025 and 2026. That vision has not survived contact with reality. The latest figures put the 2024 shortfall at 624,000 ounces—more than half a million tighter than expected. The 2025 surplus has vanished entirely, replaced by a deficit of 120,000 ounces, and the once-robust 2026 surplus has been shaved down to 125,000. At this rate, it is hard to imagine that last number won't soon be revised into deficit territory as well.

Why have the deficit estimates for both platinum and palladium grown so sharply over the past two years, and what does that say about the next few? The answer matters. If the forces that widened these gaps remain in place—and there is little evidence they are going away—then the trajectory is set: prices for both metals will have to move much higher. Above-ground stocks are being drawn down by the day, and it will take far steeper prices to keep supply and demand from drifting further out of balance.

For platinum, the WPIC's biggest misstep in 2023 lay in its optimism about recycled scrap and South African mine output. South African production came in 130,000 ounces short in 2024, and is now expected to miss by 435,000 and 245,000 ounces in 2025 and 2026. Recycled supply proved just as disappointing: 2024 fell short by 340,000 ounces, and the WPIC has since cut its 2025 and 2026 estimates by 260,000 and 170,000 ounces, respec-

tively.

In our last letter, we noted that 85% of recycled platinum comes from scrapped auto catalysts, and that the economics of the used car market have everything to do with how much metal makes its way back. Over the past few years, rising used car prices have kept older vehicles on the road and out of the scrapyard, tightening the flow of recycled platinum. Since early 2025, those prices have jumped again—possibly spurred by Trump's tariff threats—adding further strain. The WPIC still expects recycled supply to grow by 170,000 ounces between 2024 and 2026. We think that is too generous, for two reasons.

First, higher used car prices will keep weighing on recycled supply. Second, there's a largely forgotten provision in the 2021 Infrastructure Investment and Jobs Act that requires all new vehicles sold after 2026 to include a system programed to detect any alcohol in the driver's blood. With the mandate set to take effect in just six months—unless Congress reverses it—we think many buyers will opt for used cars instead. That shift would only push used prices higher, keeping older vehicles on the road and further tightening the stream of recyclable platinum.

On the supply side, South Africa's mines remain under pressure. Years of low PGM prices have taken a toll, and reversing that trend will not be quick, even if prices climb. The CEO of Valterra—the new name for Anglo American Platinum, now spun out from its longtime parent—told Bloomberg recently that the rebound in PGM prices is still not enough to halt the decline. His forecast was blunt: South African mine output could fall by as much as one-fifth by 2030. Given that the country produces nearly three-quarters of the world's platinum, any sustained drop will only deepen the structural deficits already in place.

Another force swelling the platinum deficits in 2024, 2025, and 2026 has been the revival of jewelry and investment demand—both gathering speed over the past six months. Since 2023, the WPIC has lifted its estimates for these categories by 420,000 ounces for 2024, 500,000 for 2025, and 300,000 for 2026. Low prices appear to have spurred far more buying than anyone expected, and we believe even these higher projections still understate the strength of the trend ahead.

From 1985 to 2005, platinum typically commanded a $200-per-ounce premium over gold—a reflection of its scarcity and its appeal to investors. Then came the long bear market, and the premium shrank, then flipped, then kept widening in gold's favor. By April 2025, platinum was selling for an astonishing $2,500 per ounce less than gold—nearly a 75% discount to its old rival. That extreme gap has finally begun to draw investor interest, especially in China, and we expect the shift to continue, all the more so if, as we believe, gold prices move sharply higher from here.

The one place where the WPIC overestimated demand was in the automotive sector, where autocatalyst use came in about 500,000 ounces below the 2023 projections. We take a different view of the road ahead. With hybrid penetration set to climb sharply, emissions rules tightening in Europe, China, and India, and the growth rate of EV adoption slowing, we see autocatalyst demand beginning a steady rise. For a fuller look at the drivers behind this view, see our previous letter. Suffice it to say, the picture—contrary to the prevailing narrative—is decidedly bullish.

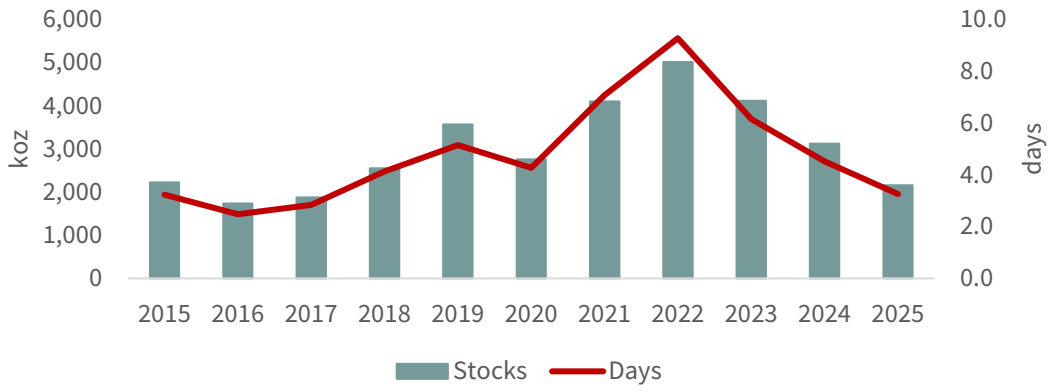
Over the past two years, platinum's deficits have swelled—fed by South African supply that

underdelivered, recycled material that shrank instead of grew, and jewelry and investment demand that burst past every forecast. We see no sign that any of these trends are about to turn. On the contrary, we believe the market has entered an up-cycle in autocatalyst demand, one that will bear down on a deficit already stubbornly lodged in place. The pressure, in other words, is building, not easing.

We have now logged two consecutive years—and are on the verge of a third—in which global platinum deficits have run close to one million ounces, roughly twelve percent of world supply. Those shortfalls have already eaten deeply into above-ground inventories. The question now is how much longer this can go on before stocks fall to perilously low levels and prices, inevitably, break hard to the upside.

According to the WPIC, the projected 2025 deficit of 970,000 ounces will pull above-ground stocks down to just 2.16 million ounces. That's enough to cover only three months of demand—a threshold in commodity markets that has historically triggered intense upward price pressure. With another large deficit forecast for 2026, inventories would shrink further to barely two months' cover. If our numbers are right, the odds are high that platinum will see multiple price spikes next year—as above-ground stocks come dangerously close to exhaustion.

CHART 13 Platinum Above Ground Stock and Days of Cover



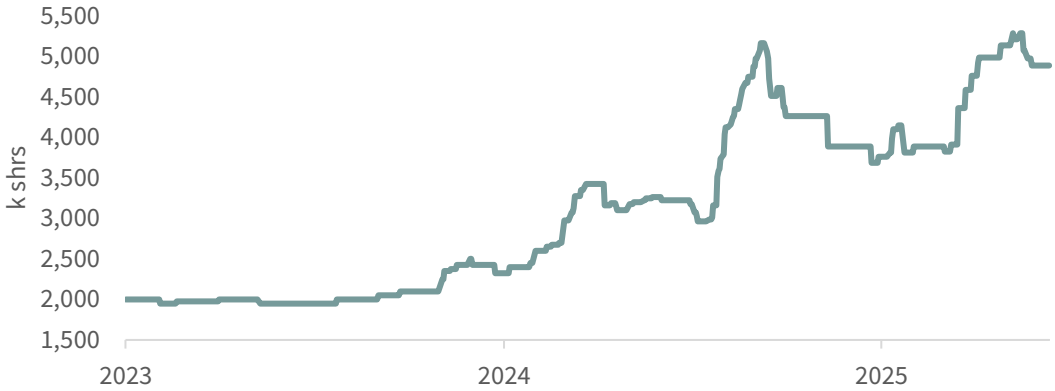
Source: World Platinum Investment Council.

In palladium, the pattern has been much the same. What began as a small 2024 deficit has swollen to nearly six percent of the market; a modest 2025 surplus has flipped to a sizeable shortfall; and the generous surpluses once forecast for 2026 have withered to something barely worth the name. The causes mirror those in platinum: South African mines delivering less than planned, recycled scrap falling short thanks to the relentless strength in used car prices, and auto-catalyst demand missing expectations. The twist is that industrial demand, instead of easing, has come in stronger than anyone had counted on.

Investors, it appears, are beginning to take an interest in palladium as well as platinum. In platinum, investment demand has long been a meaningful line in the ledger; in palladium, it was barely a rounding error. That may be changing. The WPIC's original 2024 forecast assumed almost no investment buying, yet it now seems investors accumulated close to 300,000 ounces—enough to make investment demand a major contributor to the year's 625,000-ounce deficit. For 2025, the WPIC is again penciling in near-zero investment demand, but with growing interest in the Aberdeen Physical Palladium Trust, analysts may once again be setting the bar too low.

Over the past two years, the WPIC has had to make a habit of revising its deficit estimates for both platinum and palladium sharply upward. We think the same forces behind those revisions will only intensify in the years ahead: South African mines will keep underperforming, recycled PGM supply will again fall short of projections, and investment demand for both metals will remain strong. On top of that, we believe we're at an inflection point in autocatalyst demand. The rapid rise of hybrids, tougher emissions standards now taking hold in China and India, and the growing reliance on turbocharging to meet those standards all point to meaningful growth in PGM use through at least 2030.

CHART 14 PALL Trust Shares Oustanding



Source: Bloomberg.

Over the last three years, deficit estimates for both markets have had to be lifted substantially as supply proved weaker and demand stronger than expected. We see no change in that pattern—only continuation—leaving both metals locked in multi-year deficits. In platinum's case, three years of heavy shortfalls have already drained above-ground stocks to critical levels. Further drawdowns will, in our view, exert severe upward pressure on prices as 2026 unfolds. The bull market in PGMs has begun, and it has the makings of one that will run for years.

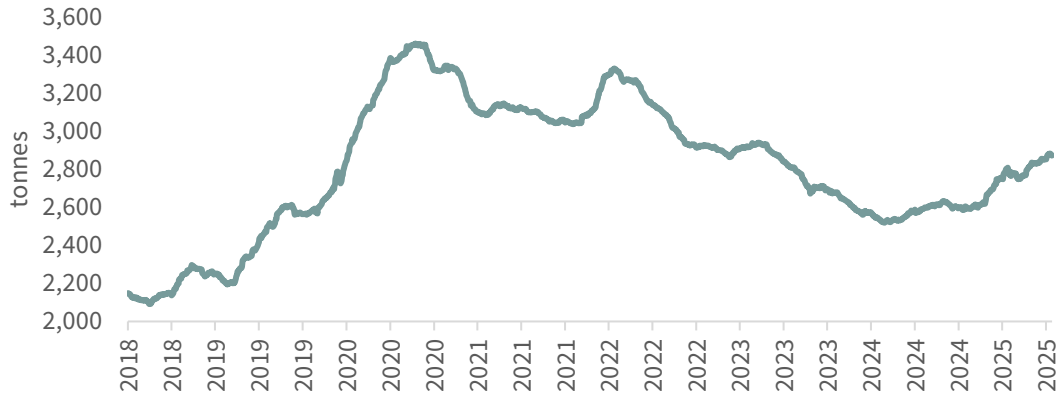
A Gold Rally Without Investors?

Demand for gold and silver remains firm, though the sprint has eased into a steady march. Central banks, still among the most dependable buyers, added 167 tonnes in the second quarter, bringing the year-to-date tally to 411 tonnes—off 21% from last year's second-quarter pace, but hardly a retreat. The most notable constant is China's central bank. The PBOC picked up another 6 tonnes in the quarter, 19 tonnes so far this year, and has now been adding to reserves for eight straight months. The run-up in gold prices may have slowed their appetite, but the forces that brought them to the table—trade wars that never quite end, geopolitical realignments that never quite settle, and the growing strain of rolling over mountains of U.S. government debt—are not fading. We see this quarter's dip in buying not as a turn, but as a pause.

Western investors, too, stayed in the market during the second quarter. It's a notable shift: from late 2020 until May 2024, they were steady sellers, unloading almost 1,000 tonnes through the 18 physical gold ETFs we track—a reaction to rising real interest rates. Since

May 2025, those same ETFs have moved quietly to the buy side, adding 150 tonnes in the first quarter and another 60 in the second. In total, since turning back to buying in mid-2024, they've added about 150 tonnes—hardly a stampede. For perspective, between early 2019 and the fall of 2020, Western investors amassed nearly 1,300 tonnes. The interest is back, but the conviction is muted—for now. When Western investor appetite returns in earnest, it will have the power to push gold much higher.

CHART 15 ETF Gold Holdings



Source: Bloomberg.

In the East, the story has been more decisive. Physical gold demand there remains strong, aided by the recent arrival of several physical gold ETFs that are rapidly finding their footing. The World Gold Council estimates these Eastern ETFs bought 70 tonnes in the second quarter—matching Western ETF purchases. China accounted for nearly 90% of that flow, but both India and Japan saw net inflows as well. ETFs make buying gold as simple as placing a stock trade, and in Eastern markets, the appeal of that simplicity seems to be catching on fast.

Taken together, the steady but modest buying in the West and the stronger flows in the East suggest that physical demand is healthy—but still far from the kind of global enthusiasm that marks a top.

Western investors have also made their way back into the physical silver market. The eight silver ETFs we track added 150 tonnes in the second quarter, marking a steady—if restrained—return that mirrors the pattern in gold. Since turning buyers again in the summer of 2024, these funds have taken in nearly 300 tonnes. But the scale is modest: in the last silver bull run, from early 2019 to the end of 2020, the same eight ETFs amassed close to 15,000 tonnes. Appetite for both metals is back, but for now, the portions are small compared to the last major upswing between 2018 and 2020.

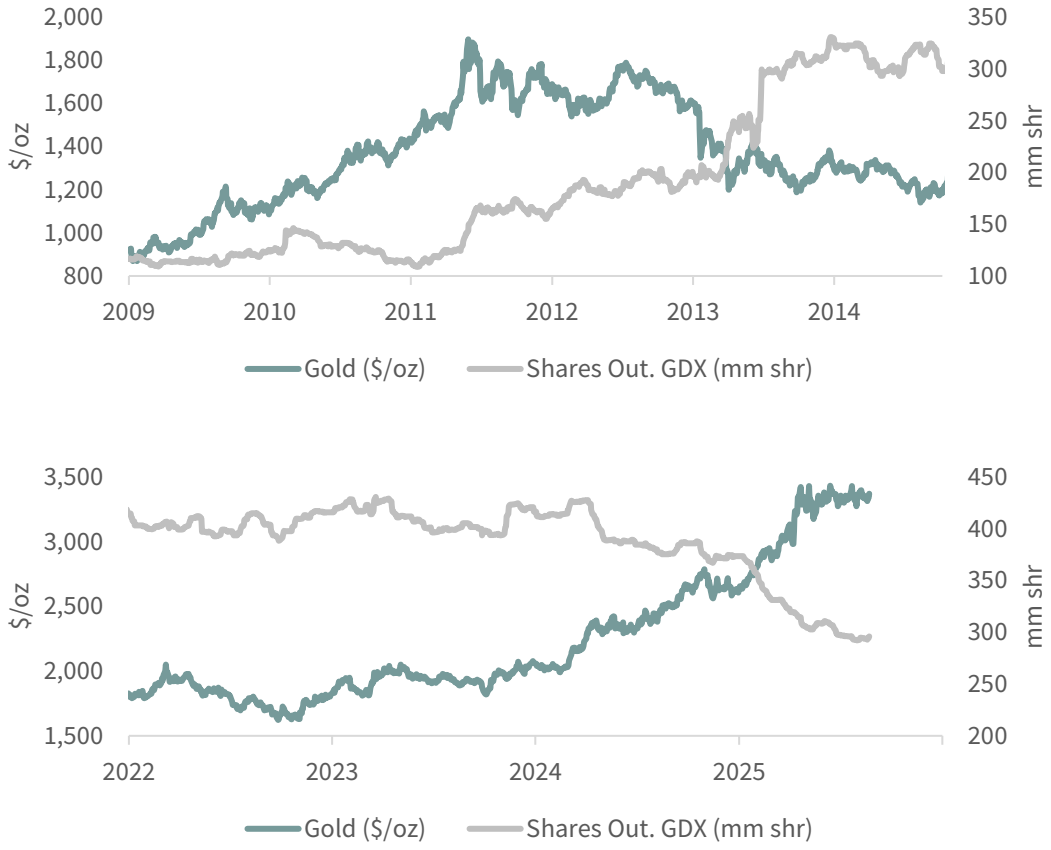
Despite both gold and silver entering bull markets and outperforming nearly every other asset class, investor interest remains muted—a fact we take as distinctly bullish. Money is still chasing other stories, particularly in technology and the current fixation with AI, while the metals bull market goes largely unacknowledged. That leaves a vast pool of potential buying power either on the sidelines or deployed elsewhere. When inflows into physical gold and silver ETFs swell into torrents, it will be time to grow cautious. For now, we're nowhere near that point.

If the ETF data shows indifference, the mining-equity data shows active avoidance. In the

second quarter, gold prices gained another 5% and the GDX—by far the most popular gold equity ETF—rose 13%. Yet the number of GDX shares outstanding fell another 7%. Since gold broke out in early 2024, GDX shares outstanding have dropped more than 30%. We believe this decline in open interest mirrors the steady outflows from mutual funds focused on gold stocks. Over the past 18 months, gold has climbed nearly 60% and gold shares nearly 70%, but investors have kept selling. Given the scale of liquidation in the face of rising prices, we suspect that the entire rally in gold equities since early 2024 has been driven not by fresh buying, but rather by short covering.

We see this absence of equity investors as a textbook contrarian signal. Recent history makes the case. The last great rush into gold shares came in 2011—just as the gold market was topping out. As the chart shows, investor interest kept climbing even as the rally was running on fumes, pouring money into a sector that was about to face a sharp correction. Today, the setup could not be more different.

CHART 16 Gold Price and GDX Shares Outstanding ('09-'14 and '22-'25)



Source: Bloomberg.

The cautionary tale comes from 2011, when gold peaked in August 2011 at $1,900 an ounce, then slid 35% over the next two years. Gold equities topped alongside the metal and fell far harder—down 70% in the same period. Yet, as the chart makes plain, investors kept buying all the way down. A decade-long, eightfold rise in gold prices had convinced them the trend was unbreakable, that gold shares—the best-performing asset class of the previous ten years—must be bought on weakness. Missing the next leg up, they thought, was a mistake they would not make again.

When gold peaked in August 2011, GDX shares outstanding totaled 127 million. As gold prices fell, interest in the ETF surged. By the fall of 2013, the share count had ballooned to nearly 300 million—an increase of more than 130%. It proved a costly mistake. Buyers were walking into a bear market that would see gold stocks fall almost 80% from peak to trough in just four years. Even after the strong rally of the past eighteen months, gold shares, as measured by the GDX, sit only slightly above their 2011 highs—despite gold itself now trading roughly 80% higher. In hindsight, it was a dreadful time to be buying.

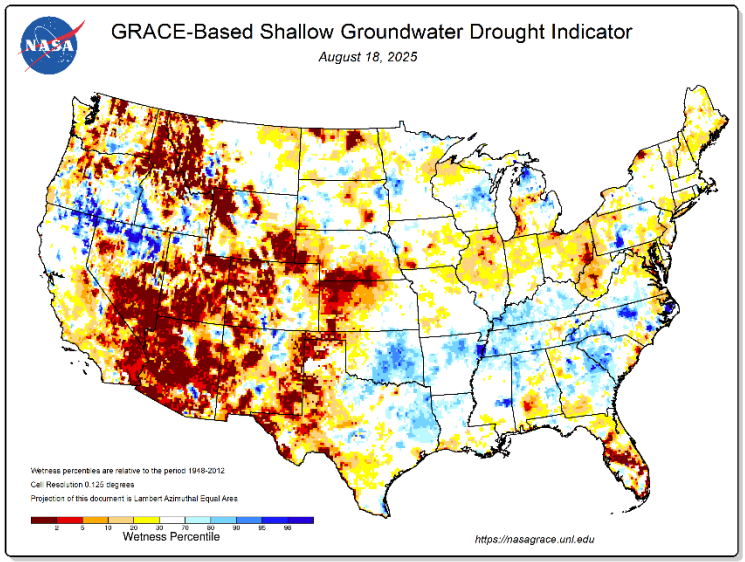
Today, the picture is reversed. Gold equity investors have been selling for more than six years straight, even as the metal itself has climbed. Far from easing, that liquidation has accelerated alongside the latest surge in prices. Since gold broke out in March 2024, GDX shares outstanding have dropped by more than 30%.

In 2011, a decade-long bull market in gold shares finally persuaded investors to buy—just in time for a crushing downturn. Those same investors today are selling into strength, a strategy we believe will prove no more rewarding. A bull market in gold shares is unfolding without them, which is precisely why we think the broader gold bull still has years to run.

Dry Fields and Short Bets

We find it interesting that fundamentals in North American grain market have swung from bearish to very bullish, yet grain prices refuse to reflect the huge improvements. And hovering behind those numbers, like a farmer watching a cloudless horizon, is the risk that weather could upend everything again. Despite the improved fundamentals, investor sentiment could not be more negative. In corn markets, traders have again established near record bearish positions—similar to what happened last summer.

CHART 17 US Drought Conditions



Source: NASA.

Last spring, the USDA's World Agricultural Supply and Demand Estimate report read like a lullaby for grain bulls. Record corn and soybean yields were penciled in, demand for both was set to drift lower, and ending stocks for 2024–2025 were projected near historic highs.

Traders took the hint. Prices for corn, soybeans, and wheat kept sliding into summer, ultimately bottoming with losses of 55%, 45%, and 60% from the peaks they had reached in the anxious weeks after Russia's February 2022 invasion of Ukraine.

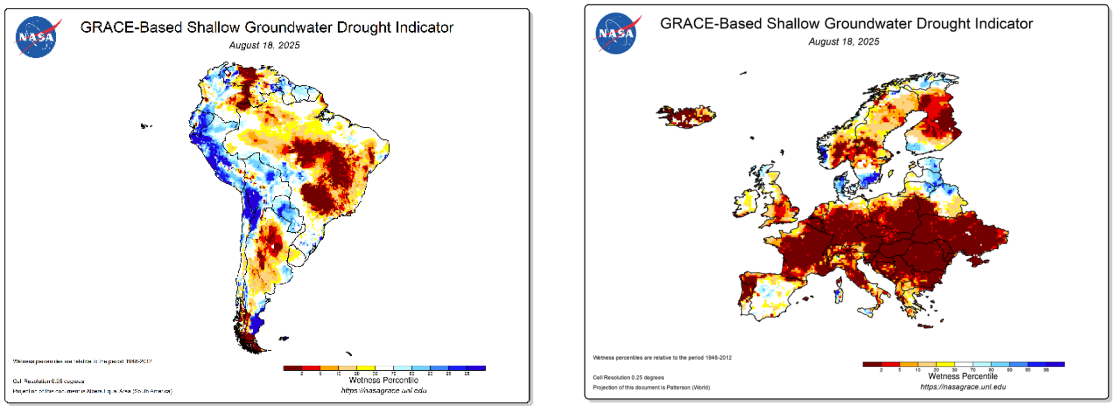
Last summer's grain market lows came with a familiar backdrop: record—or close to record—bearish sentiment. Speculative traders in corn and soybeans built short positions of historic size, while on the other side of the ledger, commercial traders—the "smart money" of the old Chicago pits, though sadly the pits themselves are long gone—took on record longs. That combination has often marked the final act of a bear market. Indeed, prices rallied hard into the fall. But the script has repeated itself: grains have pulled back, bearishness has returned in force, and corn, in particular, has seen speculative shorts climb back to near-record levels—met, once again, by near-record commercial longs.

Those trading stances made sense in the context of last year's decidedly bearish WASDE outlook. This year is different. The same heavy speculative shorts are being laid down not against a backdrop of burdensome supply, but in the face of a far more bullish set of USDA projections—projections that could turn sharply bullish if the extremely dry conditions now gripping large parts of the U.S. Midwest persist.

Last spring, WASDE saw record yields ahead: 183.6 bushels per acre for corn, 52.2 for soybeans. That translated into corn ending stocks of 2.1 billion bushels and soybeans at 455 million—levels touched only a handful of times in thirty-five years. But after harvest, those numbers looked less like a bumper crop and more like a mirage. Yields slipped to 179.3 for corn and 50.2 for soybeans, while demand—particularly exports—was revised sharply higher. The result: corn stocks were cut by more than a third, to 1.34 billion bushels, and soybeans by a similar margin, to 295 million. In just a few months, inventories had gone from historically heavy to uncomfortably light.

That is why weather looms so large this season. We enter the 2025–2026 growing cycle with ending stocks already pared back. The USDA, as it did last year, is assuming record yields; any shortfall will push inventories into dangerously low territory. Much of the Midwest is again dry—a near repeat of last year—and rainfall over the past month has been scant. If

CHART 18 South American and European Drought Conditions



Source: NASA.

yields take the kind of hit they did in 2024, the USDA could once more be caught understating the impact of parched soils, with consequences for grain prices that could be anything but modest.

One final note. In past letters, we've discussed the Gleissberg solar cycle and its potential to shape crop conditions. It returns roughly every eighty-eight years; the last time it did, in the 1930s, the U.S. Midwest endured the Dust Bowl—nearly a decade of drought and record heat. We still see the possibility of the cycle's reappearance, with all the damage it could do to North American growing conditions, before this decade is out. Given today's dryness at home, and the record-setting drought now gripping South America, Eastern Europe, and Western Russia's grain belts, we'll be watching the weather more closely than ever.