



Kanos Capital Management
Quarterly Investor Letter
Second Quarter 2025

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Second Quarter 2025 Investor Letter

Second Quarter Market Review

The second quarter of 2025 was wildly volatile, starting with April's Liberation Day turmoil that drove down the price of most equity and commodity investments. However, the subsequent suspension of many of the tariffs, followed by substantial negotiations with a number of trading partners, and the quick resolution of the Israeli-Iranian conflict (with only limited US involvement) led to reduced uncertainty and market gains through the end of June. The bounceback in US equities led the charge, with US retail and international investors buying the dip in "Magnificent 7" and other large-cap tech stocks, as well as artificial intelligence (AI) suppliers, developers, and infrastructure companies. The S&P 500 gained 10.9% to 6,204.95, and up 6.2% year-to-date (ytd). International markets benefitted from projected improving growth prospects, led by Japan's Nikkei (+13.8% for the quarter) and the China-centric Emerging Markets Index (+12.2%). Another big story was the continued weakness of the US dollar, driven by the pending implementation of the US "Big Beautiful Bill" and the coming tsunami of additional Treasury debt. Precious metals and cryptocurrencies also gained during the quarter, while fixed income was up a touch. Crude oil and energy products were the losers, as oil traders judged supply to be more than adequate and figured in demand waning in the second half of the year.

Kanos' managed portfolios had another good quarter, adding to first quarter gains, powered by our precious metals, primarily, as well as our technology and industrial positions. Most portfolios performed well in both April and May, while they were relatively flat in June, with the average portfolio gaining around 5% for the quarter. The precious metals miners again led the way; our largest gold mining holding, Agnico Eagle Mines gained +10.0%, while some holdings with even higher growth prospects rose sharply, including Skeena Resources (+56.6%), Coeur Mining (+49.3%) and Wesdome Gold (+17.0%). Our technology stocks came alive with the sector, led by Microsoft, up a stunning +32.7% during the quarter. Other notable winners included Philip Morris International (+15.8%), Copper Miners ETF (+15.0%) and Cameco, the largest North American uranium miner (+80.2%). Major energy companies were weak, like Chevron and ExxonMobil, which fell -13.4% and -8.5%, respectively, for the quarter. Kanos' poorer performers also included Merck, one of our largest holdings, down -10.9% on regulatory and tariff fears, as well as some smaller metals and energy companies that missed growth estimates.

As of June 30, major averages recovered their early April losses, with many posting gains during one of the most volatile quarters in recent memory. The S&P 500 climbed 10.9% for the quarter, while the Dow Industrials rose 5.5%, with both moving to positive returns year-to-date of 5.6%. Most S&P sectors gained, led by the soaring Tech sector (+22.9%), Industrials (+12.9%), Communications (+12.8%), and Consumer Discretionary (+10.4%, although still down ytd). Only two sectors lost value during the quarter: Energy (-8.5% although still +0.7% ytd) and Healthcare (-7.2% and down 1.1% ytd) [all performance numbers reflect total returns]. US fixed income averages added to first quarter gains as growth concerns continued to push investors back to fixed income. The 10-year US Treasury note closed the quarter yielding 4.227%. Most notably, the US dollar continued to weaken during the quarter, falling 7.0% and is down 10.7% ytd, a performance not seen in more than 50 years. Gold rallied again, gaining +5.7%; other metals outperformed with platinum rising from the dead and

gaining 36.2% while silver tacked on another 5.9%. The loser was oil, with Brent falling -9.5% during the quarter, to end at \$67.61/bbl, despite an intra-June bump-up of 15+% after Israel attacked Iran. The ceasefire and apparent resolution of that conflict drove oil prices back down in late June.

Looking Forward

Introduction

Markets recovered as the realization that the “Liberation Day” tariff turmoil was probably mostly just a temporary position taken by the Trump Administration as they work with trade partners to forge new trade agreements. Most tariffs were postponed, and negotiations with all major trading partners progressed during the quarter. Like last quarter, lots of motion occurred during the quarter. Big trade agreements have just been announced, and the August 1st revised tariff deadline looms, with a number of agreements close to being finalized

So, what next? The Big Beautiful Bill has just passed and was signed by President Trump on July 4th, removing another uncertainty. The Israeli-Iranian flareup appears to be no longer volatile, putting on the back burner another uncertainty. The economy did not enter recession (yet), keeping investors interested in financial markets. And liquidity appears to be plentiful, while earnings estimates and increasing capital investments (headlined by AI but also in more and more reshoring industries) continue to grow.

Thus, we see markets continuing to advance, although there are hints of euphoria and possibly over-investment in some areas that could be concerning, although not seemingly to most market participants.

Thus, we will review, comment and opine on the attractiveness of the economy and various investment sectors in the pages ahead. We continue work to interpret current financial, economic and political indicators and events to try to weave together the way we think markets are headed, with a huge caveat being any new occurrences in geopolitical events that are harder to imagine, as we’ve just seen in the past month when Israel pre-emptively attacked Iran to neuter their budding nuclear capabilities.

Economy

We are seeing some positive economic forces that make us bullish on the near-term future of the US economy as follows:

- 1) The Trump Administration has continued to reshape parts of government to better incentivize the private sector to be more productive and develop more extraction, manufacturing and processing domestically after offshoring quite a bit of these industries over the past 50+ years.



- 2) And the economy continues to grow, although the first quarter GDP was skewed lower by an extreme amount of imports trying to beat the April tariff additions.
- 3) Employment has been steadily growing (June employment was thought to be weak, but the July 3rd report showed 147,000 new jobs and upward revisions on prior month employment numbers).
- 4) The monthly ISM/PMI industry surveys showed growth in both the manufacturing and services sectors in the US (which had both shown some weakness in prior month surveys).
- 5) Inflation, while not at or below the Federal Reserve's target rate of 2%, continued to be "well behaved" in the 2.5-2.8% range, depending on which measure is used.
- 6) The widespread messaging and beliefs that the new tariffs and the uncertainty around their formulation and implementation has so far been wrong, with the proponents of tariffs further claiming that any increase in prices would be "one offs," (a one-time price increase to accommodate the tariff but not be repeated raised month after month), like many in the financial press claim.
- 7) The Big Beautiful Bill has clarified more industrial, energy and fiscal policies and could result in less regulatory oversight and streamlined government procedures as well as favorable tax policy like expensing equipment, etc. formerly required to be amortized over years.

We do think there could be a slowdown in the economy as some of the extreme spending from the last year of the Biden Administration winds up and is not replaced, and we think markets are very highly valued, which could lead to a sell-off in the fall. But otherwise, less regulation, fewer restrictions and the implementation of investment and building incentives for reshoring more and more industry deemed critical or desirable should lead to more growth and improving economic conditions for the whole spectrum of businesses and workers.

European countries' economies have weathered some slowdowns and seem to be growing in more countries now, although much of that growth is debt-fueled, as a number of European NATO countries have increased their defense spending plans dramatically, leading to more orders, expanding manufacturing capacity and more hiring. While we think there are a number of attractive companies in which to invest in the Eurozone, we are still concerned about the economic conditions of many of the countries in Europe, mostly notably the big two, France and Germany, who face large and growing budget deficits and thus heavier and heavier debt loads, while Germany also faces uncertain energy capabilities for her industries and a bleak future until reliability is returned to her energy systems. As we go to press, the US and EU have just come to a new overarching trade agreement, which imposes a 15% tariff on most European goods in the US. This could hurt exports even more than current conditions; thus, we are not bullish on European economic prospects overall.

Japan's economy continues to grow, but they are experiencing some sustained inflation for the first time in a long while, driving up interest rates, meaning the Bank of Japan (BOJ) is trying to wind up its many years of quantitative easing. Their economy is benefitting from the tech robotic and AI boom, but the severe demographic bomb and the huge debt load of the government continue to pull at economic growth. The Japanese also reached a trade agreement with the US recently, imposing a 15% tariff on most goods in the US imported from Japan, which is expected to impact Japanese

economic growth going forward, dimming prospects somewhat. We own some Japanese stocks, but we are concerned about their economy longer-term.

China's economy continues to struggle, and we think that they are holding together things very carefully due to their ongoing slump in the real estate industry, which effectively bankrupts the banking system, which entered the real estate problems already over-levered. We have not owned Chinese investments in a while due to our concern about the US-China 'cold war' changing into something more direct and kinetic, causing political problems with owning Chinese stocks (like happened with Russian stocks in 2022).

There are some emerging market economies that are interesting, especially in Latin America and more specifically in Argentina, Brazil and Colombia. We own stocks in all three countries and believe they will continue to grow their economies, especially if the US dollar stays weak.

Bottom line: We are bullish the US economy although there could be another slowdown in the cards in later 2025 or early 2026. However, we feel like there are plenty of good opportunities to continue current investments or make new ones as attractive opportunities present themselves in our research. Some Asian countries and emerging countries, especially in Latin America, are attractive and will command some our attention going forward.

Equities

US equity markets have been on a roll lately. After the upset of the tariff tantrum in April, US indices have gone almost steadily up, led by investor-favorite tech stocks. Typically, the second half of June is not the best for performance, but the market has powered through it this year and set a new all-time high as mega-cap tech's prospects continue to be judge ascendent.

Our concern has increased as stocks have levitated on high liquidity, company stock buybacks, and the most bullish individual investor buying since the year 2000, far outpacing both the mid-2000s (pre-financial crisis) and 2021 (post-Covid lockdown recovery). While the prospects for tech have not dimmed, earnings upgrades and new project announcements have been less enthusiastic than in past quarters. But trader favorite stocks have outpaced even momentum stocks (as well as those with more attractive fundamentals like growing dividends) to vault higher as "trading begets trading." However, second quarter GDP is expected to have rebounded to approximately 2.5% growth, so analysts believe this renewed activity will be reflected in improving earnings estimates.

We are entering a typically more attractive time for US stock performance (July and first part of August), so we expect the market to keep rising over time, but we are wondering if fundamentals (better earnings, more value creating project announcements, new "killer apps," etc.) will help underpin the rally, or we feel the fall will bring a correction, which typically occur in September (historically the worst performance month for US stocks) or more famously in October (1929, 1987, 2008, and other more recent less severe examples). Worrisome speculation has ramped up recently in a new crop of "meme stocks," moving like GameStop and AMC Theaters did post Covid lockdowns. The newest stocks, Opendoor (a real estate website firm) and Kohl's (a retailer with poor prospects) have been pushed up in huge volumes of trading of both stock and options, squeezing shorts into 100% daily moves in their stock prices. Like in 2021, this trading behavior typically shows extreme confidence and could end in a 2022-style retrenchment, at least for highly-valued, over-owned stocks.

And then there is the obvious stumbling block of the looming tariff deadlines of August 1st. The tariff levels are almost certainly going up across the board from the current 10% “base” tariffs, as we’ve seen from the newly announced European Union trade agreement (15% tariff generally with some exceptions), the Japan trade deal (15% for most goods), the Vietnam trade deal (39%), the Indonesian deal (19%) and the Philippine deal (19%), the big deals announced so far in July. And, of course, there is always the threat of a change in the Russia-Ukraine War or a new flareup in the Middle East, but the markets seem to be sanguine about these events really impacting markets, so tariff news seems to be still front burner as impacting equity indices in the US (and frankly worldwide).

While those 50-100 mega-cap stocks are historically very highly valued, the US is full of more reasonably priced stocks of industrials, energy, materials, utilities, etc. With the signing of the Big Beautiful Bill on the Fourth of July, tax and investment frameworks have now been formed into new laws that can now guide more certain investment assumptions and thus better investment decisions, leading to better economic growth.

European indices were also strong in the second quarter, but were weaker than US indices in the second half of June, a more typical seasonal slump that has reversed upward in July. European economies are also expected to grow on the back of fiscal, debt-fueled stimulus plans headlined by increased defense spending. The expectations of this translating into improving European economies and thus earnings gains across the board led to European indices’ outperformances so far in 2025. We think those earnings are going to need to show up in the second quarter to keep any kind of strong rally going. With the early reporting companies mostly beating estimates, the US market has continued to move up into late July.

We are bullish on defense, some industrial and materials companies in the EU, but we’re unsure of the typical European’s ability to spend discretionarily since much of the fiscal activity is debt financed, and many Euro consumers have been stressed economically in the last couple of years. We will see if Eurozone economies’ recoveries are broad-based or more narrow as these new stimulus programs are implemented. Thus, we will be looking at European opportunities, but we will need to see more attractive opportunities than in the rest of the world to deploy more money into Europe.

Japan still seems attractive, but the rising long-term interest rates are a warning sign, especially for Japanese banks, which are still at the epicenter of finance in Japan and who must finance any economic expansions there. If banks start to falter, we think the Japanese economy may decelerate, so we will be watching it as closely as we can before deciding on any new investments there.

We are more bullish about non-Japan, non-China East Asian investments. The former “Asian Tigers” like Vietnam, Thailand, Indonesia and Malaysia (to name a few) have plenty of prospects. Vietnam has reached a trade agreement with the US, and the others are under pressure to do the same. Should they all reach agreements (we expect them to), we believe these countries could provide more of the trade previously provided by China, helping their economies grow even more robustly. We will be looking for opportunities in these countries as trade pacts are signed.

Like the Asian Tigers, we are interested in Latin American countries and to add to our small holdings in Latin American countries like Argentina, Brazil, Colombia and others, especially as more fiscally conservative governments are voted in (like happened in Argentina) or those countries reach new trade/tariff agreements with the US.

We continue to see China as uninvestible, not only due to their corporate structures, but due to the risk of delisting (ala Russian companies post the 2022 invasion of Ukraine) and the risk of them causing an international blowup (an attack on Taiwan or something less severe but still impacting). In addition, the continuing slump in their large real estate sector and the malaise of their economy make their current economic circumstances unattractive anyway; oftentimes, countries revert to military means to help boost their economies out of slumps, and China seems in a position where easier boosts have already been tried and have failed, increasingly pointing to more dire solutions to help revive China's prospects. No interest in investments there.

Bottom line: Equity indices have performed well in 2025 so far, and tariff angst seems to have a smaller and smaller impact on markets since April. We continue to be bullish and nearly fully invested in attractive situations and industries, concentrating in much more attractively valued materials, energy, industrial and utility stocks, along with very attractive situations in other sectors. Our strategy has worked well in 2025 so far (outpacing most indices while taking on less valuation risk), and we intend to tune portfolios going forward as prospects / opportunities adjust and change.

Bonds

US bonds had a good second quarter after a big dip during April's tariff tantrum. However, with the passage of the Big Beautiful Bill and the continued weakness of the US dollar in July, we don't think bond prospects look great for the future. Lower inflation has helped bond sentiment, but a lower dollar and climbing money supply, combined with the Treasury's plan to finance much of the future debt in T-bills (due to relatively high longer-term interest rates), will probably put more pressure on prices in the future, driving inflation slowly higher over time.

We also think foreign flows that weren't going into tech stocks were probably mostly going into Treasuries. Now with a lower (and seemingly continuing to fall) US dollar, coupled with smaller trade flows due to new trade agreements and higher US tariffs, foreign inflows will be smaller, meaning lower foreign demand for Treasuries, robbing the market of some of its traditional buyers. And if the Fed starts lowering interest rates (they are considered to be in an interest-rate cutting cycle), lower short-term rates, coupled with a falling dollar, may cause foreigners to sell current Treasury investments, especially since they have overweighted Treasuries in portfolios since Covid, due to the safety, attractiveness and liquidity of US markets over other markets during the 2020s.

Corporate bonds (both investment grade and high yield) have outperformed Treasuries since both plunged in April during the tariff tantrum. This is probably for two reasons: 1) corporate prospects are considered better than government finances due to the political angst felt by institutions and investors encountering the Trump Administration's new policies and different modus operandi, and 2) during the Covid lockdowns, the combined Treasury and Fed actions to backstop the financial markets included a corporate debt guarantee; now the market trades like corporate debt, especially high yield debt, will be backstopped by either the Fed or Treasury. How do we know that? With both the domestic economic upsets of 2025 and the geopolitical deterioration (escalations in the Middle East, the ongoing Russia-Ukraine war, and the uncertainties with China), high-yield spreads have fallen to multi-year lows (meaning the least amount of risk is being priced into high yield in years). In fact, high yield bonds have outperformed almost all financial assets in the past few years, months and weeks, even though they are the debt of usually high-levered and/or risky companies which usually

have a harder time raising capital, and generally trade at a big discount to more senior forms to debt. An implied government bailout seems to be the only reasonable rationale for this behavior/pricing.

Having said all that, there is still plenty of uncertainty about whether individual companies would be bailed out, and we believe ultimately long-term interest rates are headed higher along with inflation, so we are not at all interested in high-yield bonds, and only are interested in higher-rated corporate debt (A and higher ratings) and preferred stock for our customers who want income and want stability/lower volatility in their investments.

And while we are gloomy about the long-term prospects of the US dollar, we are not ready to risk client dollars on foreign governments' fiscal policies and potential uncertainties for the return that foreign bonds provide. There are a couple of notable situations that could influence longer-term interest rates worldwide. First is the 30-year Japanese Government Bond (JGB), which has just hit 30-year highs in yields, above 3.1%. It's recent 40-year bond auction, held a few days ago just after the ruling LDP party lost its upper house majority, hit rates not seen since 2011, a telling weakness for Japan's ultra-long bond maturity. Japan has served as the source of cheap money for decades, and rising interest rates there have a distinct probability of fanning out across global bond markets, as carry trades continue to be unwound due to rising cost of Japanese financing.

In addition, the United Kingdom has been trying to cut their large budget deficits by cutting some programs and raising some taxes lately; when one of the Chancellor of the Exchequer's (UK's equivalent of the Secretary of the Treasury) pet projects for deficit reduction was cut from Prime Minister Starmer's plan, rumors started to spread that the Chancellor would be replaced, which sent UK long Gilts (the UK's equivalent of 30-year Treasuries) plunging, pushing up interest rates sharply. The world's governments are facing these same types of problems all over, and the world's bond holders may end up taking financial losses as politicians have to fight, and many times lose, budget battles as budget deficits balloon all over. We are definitely trying to avoid these types of situations with our clients' capital!

Bottom line: Bonds have performed well in the last couple of months, but the falling dollar and prospects of large amounts of new Treasury debt coming into markets, along with lots of new supply expected from foreign governments implementing fiscal stimulus plans, make investments in bonds at this time mostly unattractive for most of our client portfolios. We will continue to follow the bond markets closely because they have such large effects on other markets and money flows.

Energy

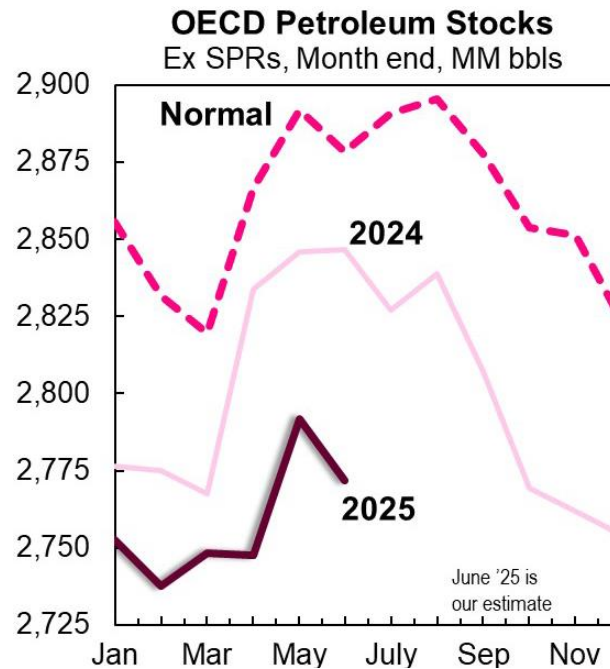
The world is awash in oil, or at least that is what everyone would like you to think, apparently. So many things point the other way fundamentally, but prices keep reverting to the perceived weakening supply/demand conditions forecast by the International Energy Agency (IEA) for the second half of 2025.

The problem with those forecasts, and the reason we continue to be bullish on energy commodity prices and energy companies, is that the fundamentals contradict the IEA's opinions. In addition, the IEA has a history of forecasting "consumer friendly" energy scenarios that point to lower prices, only to have to come back and revise upward past demand, thus producing a much tighter, and thus, risk-



laden, supply/demand situation than the fundamentals always showed were hopeful at best and downright misleading at worst. We summarize some of these attractive fundamental below.

Inventories – Worldwide inventories are on the low side, while US inventories are very low, with Cushing, Oklahoma storage currently at or near the lowest it can be and still supply West Texas Intermediate (WTI) futures market deliveries, of which Cushing is the only delivery point. The following chart, from Cornerstone Analytics July 11 Morning Energy Report, shows OECD inventories (a proxy for world inventories), and you can see that 2025 inventories are far lower than normal at this time last year.



The IEA has forecast that demand will fall in the second half of 2025, but with inventories so low already, we're very surprised markets aren't taking the "little room for error" argument into higher prices due to higher risk premium.

Demand – demand is currently high (meaning the supply/demand balance is at more risk of forcing higher prices to ration supplies), but again is forecast to fall, thus causing a supply/demand projection that ends up with too much supply. According to Cornerstone Analytics' early July analyses, demand for June looks as though it was the highest in history at 106+ millions of barrels per day (mbd), showing no signs of "peaking," as the IEA says should happen starting sometime soon.

Supply – This is the "other leg of the stool of worry", that there will be too much supply. This is being partially fed by OPEC's recent incremental increases in supply. The financial press sees these increases as OPEC angling for more market share at a time of opportunity, but there are other interpretations too: it seems OPEC also sees the high current demand and believes they can add supply without hurting prices because consumers are demanding record amounts of energy worldwide and more supply is needed to meet that demand. Again, the IEA has been suspect in the past at under-forecasting demand and then revising the number higher months later. Possibly that works in politics, but the IEA is relied on by many large countries to plan their energy usage, and if demand is forecast too low, prices could rise quickly as shortages of supply "come out of nowhere." We believe this is

the scenario that is most likely to occur later in the summer as the expected slump in demand never materializes.

Secondly, US production is near an all-time high currently, but it has been for a few months, meaning forecast growth has not materialized. US shales have provided virtually all the net new non-OPEC production over the past few years; if these key sources aren't growing production, worldwide supplies may not match demand growth currently occurring. In addition, the Baker Hughes North American rig count continues to be at or near multi-year lows, with oil services companies complaining that exploration companies, continuing to try to cut expenses, are unwilling to pay prices that will keep services companies in business. To us, this is another sign that prices are too low to incentivize any drilling except for the most attractive cases, meaning supplies are going to have a hard time staying at current levels with shale oil's fast depletion profiles making future deliverability hard to maintain. The rest of the world's production gains are essentially replacing natural depletion of older fields, thus not providing any incremental barrels to supply forecast worldwide demand growth.

Thus, we continue to be bullish crude oil and the companies that produce it, especially North American companies. Our customers own the supermajors, US independents, Canadian independents, pipeline companies and refiners. All have performed well (and poorly) at different times over the past few months, but most are ahead for 2025 and performing well currently.

As far as natural gas is concerned, record US oil production has produced a record amount of associated natural gas, meaning supplies are currently plentiful. However, US power demand is already starting to grow due to more and more data centers coming online in the US, and more LNG export facilities are up and running, shipping this plentiful supply overseas as price-competitive LNG at a record pace. Thus, we believe that while natgas is currently trading in a band of prices, demand looks to continue to grow at a torrid pace, which requires that supply keep up. We think the risks are toward a tighter supply/demand balance over time, meaning we think price risk is to the upside over time. Thus, we continue to invest in natural gas companies, both producers, pipelines (including midstream) and utilities, which we think will prosper over time as the natural gas ecosystem continues to grow larger and larger.

Coal has suffered over the last few months as a slumping Chinese economy has cut down on the amount of imports needed for its power needs. It has instead been relying on domestic supplies and smaller miners which are far less efficient but support employment. Coal prices dropped for much of the second half of 2024 and for the spring of 2025, but since April's tariff tantrum, coal prices have stabilized worldwide as temperatures in the northern hemisphere have been unseasonably warm early, and the Chinese power needs continue to grow as new power plants under construction are finished and need fuel, the majority of which are coal-fired in China, even in 2025.

But a new development just happened: the Chinese, at their sixth Central Financial and Economic Commission meeting in early July in which even Premier Xi Jinping was an attendee, realized Chinese "mom-and-pop" industries are causing low prices as near-bankrupt small firms charge low prices just to keep in business. On July 2nd, this commission declared they would be shutting down a number of inefficient small firms in a number of industries, allowing larger, stronger firms to charge prices that would support longer-term prospects. On this news, coal stocks worldwide shot up 10+%, assuming Chinese marginal producers will be put out of business, allowing strong industry players to supply Chinese companies at higher but sustainable prices not seen in many months. While this helps



US coal producers, we are going to watch and evaluate the situation to see if we have any interest in expanding our small metallurgical and thermal coal company holdings.

Bottom line: We have been frustrated with attractive industry fundamentals overshadowed by what seems to be a politically-motivated IEA skewing the narrative toward a supply glut when it may not develop at all. We would not doubt the IEA except that they've "played this game" before, but its consumers that will suffer if prices rise 'suddenly' and consuming countries are caught unaware. Our analysis of the current supply/demand situation looks more promising than generalist investors see, so we continue to be bullish and are invested in a number of companies in all aspects of the energy infrastructure supply chain. Good dividends paid by many of the companies make our longer-than-expected wait more palatable.

Currencies

The US dollar is still the key currency affecting world currencies. After its plunge on the uncertainty around April's "tariff tantrum," the dollar rallied into May, but it has lost value almost continually since then, currently sitting at its lowest value since early 2022.



While we think the selling has been relentless and the dollar is due for a bounce, the flows into dollar assets post-covid have been strong and in two big waves. In addition, anecdotal evidence points to these flows from foreign entities not being hedged for currencies, i.e. the foreign investment entities have kept US dollar exposure on top of the equity exposure (mostly technology stocks and especially the 'Magnificent 7' stocks, almost certainly) to enhance their returns. In the June 29, 2025 Bloomberg article titled "European Markets Are Becoming Increasingly Difficult to Ignore," author Mike Msika estimates foreign investors have invested \$1.6 trillion in total in US equity markets from mid-2020 through early 2025. This shows the amount of (over) investment and the very large amount of hedging that could occur.

However, now with the dollar moving lower due to tariffs, additional debt and the Fed entering an interest rate-lowering cycle (started during the Biden Administration and assumed to continue sometime soon), foreign entities are starting to hedge more and more of this dollar exposure (and many sold out of their “full allocation” positions earlier in the spring with US tech stock equity weakness). Thus, we think the weakness of the dollar has convinced investment boards worldwide to order more dollar-hedging of foreign positions, and any gains in the dollar will be short-lived as foreign investors use those better levels to hedge further. We are naturally long the US dollar being US citizens, but we want to minimize our exposure going forward to this dollar weakness, which is why we will keep minimal cash investments and continue to invest in assets we feel will hold their value better than cash and US-domiciled stocks.

The euro, being the largest component in the basket of currencies in the US Dollar Index, is the natural beneficiary of any dollar weakness, especially as many of the foreign pools of capital recently investing in US assets are invested from Europe. However, Europe’s problems are numerous, including demographics, slow growth/recessions, poor energy infrastructure, unending support for a currently-losing Ukraine in its war to fight off Russia, and of course, its lack of political union, in spite of its economic union. For all these reasons, we are not attracted to the euro and don’t think we will be interested for a while.

The Japanese yen had been very weak last year but has rallied twice to around the 140 yen/\$. Currently, Japan is trying to stave off recession, raise interest rates above zero, and negotiate a trade agreement with the United States that keeps US consumption feeding Japanese industry. But growth will continue to be moribund, and we have no appetite for a continual risk of a lower yen.

The Chinese and other Asian nations have seen their currencies appreciate against the weak dollar lately, but the closed capital account in China and other Asian nations’ reliance on trade with China steer us away from exposure to other Asian currencies.

Bottom line: The US dollar is weak, and all the ingredients are there to have it continue its weakness, despite the oversold nature of the dollar trading market. We will continue to minimize exposure to pure dollar plays, and we continue look for other attractive assets with less dollar exposure for the long-term.

Commodities

Commodities in general have benefitted from the weaker dollar, moving to the upper end of their multi-month trading range as the dollar weakened post the “tariff tumble” in April. However, the non-energy commodities have traded very differently, due to different situations. We will discuss the precious metals at the end of this section, so first we will focus on other commodities.

Industrial Metals – We continue to think the industrial metals are attractive due to their favorable worldwide supply/demand situations as well as their increased need in the industrial reshoring wave occurring in the US. Copper is currently considered to have a slight supply deficit worldwide, but demand is expected to outpace supply during the rest of the 2020s as reshoring needs outpace the ability to get new mines permitted, built and incorporated in worldwide supply chains in a timely

manner. We currently own an ETF of copper miners, and we believe this position will continue to perform as copper prices rise on future demand imbalances.

Other industrial metals, such as nickel, tin, etc. were victims of the tariff tantrum. They rallied when Russia invaded Ukraine, as traders expected Russian supplies of these metals to be restricted. However, the criticality of their use combined with Russia's large supply base, caused worldwide users to exempt Russian metals supplies from sanctions and embargoes, allowing continued supply to flow worldwide, putting a lid on prices after the initial price spike. Now, the continuation of the war, the re-armament impulse of Europe after Trump's NATO ultimatum of increased European spending, and the needs of reshoring in the US and North America are putting demand pressure on these metals like in the copper market. Metals markets have reversed their tariff tantrum plunge and are poised to continue higher, especially with the dollar having broken support. We are bullish on these metals but don't plan direct investments in them currently.

Agricultural commodities – Ags, which we've been bullish on in the past, are in bear markets for the most part. Continued adequate-to-good growing weather in enough regions worldwide has kept markets well-supplied, leaving prices to languish. Wheat, soybeans and especially corn are all at or near multi-month lows, an unattractive situation that continues to make us shy away from them currently.

Precious Metals – The stars of 2025 have been the precious metals. Gold has benefitted from being a reserve asset not subject to control by any one government (like the US dollar), and it has found more buyers as the West's freezing of Russian reserve assets in Western banks and US debt and dollar manipulations have made other reserve assets less attractive.

Gold hit its all-time high in April and consolidated in the \$3,200 - \$3,450/oz price range since, digesting the gains from earlier in the year, but not correcting too much, only around ~10% compared to past corrections of 20-25% in the last few years.

However, there is a difference in this environment and even from the recent past (pre-2022). Until the last couple of years, central bank buying has not been concentrated and ongoing. Today it is. After central banks have seen how their reserves could be inaccessible, prudence and risk management has been implemented worldwide, requiring more reserve assets in gold or other secure types of assets. And this is demonstrable: worldwide central bank gold purchases, which totaled 400-500 tonnes per year pre-2022, have totaled over 1000 tonnes per year in the last three years. In addition, the World Gold Council released its 2025 Central Bank Gold Reserves Survey in mid-June, and here are some of the conclusions. 1) 72 world central banks responded to the survey, 2) 31 of the 72 (43%) expected to increase their gold reserves in the next twelve months, 3) this is 55% higher than the 20 central banks in 2024 that indicated they'd be increasing their gold reserves, 4) 76% saw their gold reserves being higher in the next five years, and 5) 73% of respondents saw moderate or significantly lower US dollar holdings in their reserve mix over the next five years. Thus, there are a number of relatively price-insensitive buyers with plans to buy more in the near future, knowing that their brethren will also be buying. A very bullish situation.

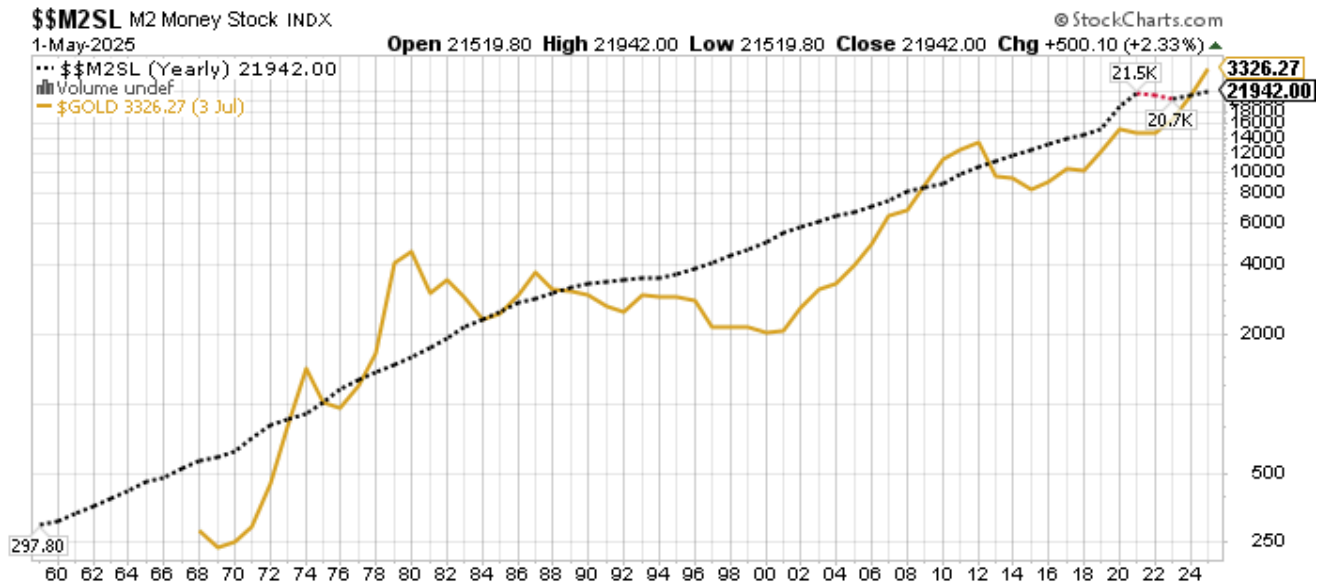
There are more bullish factors. In April, with markets being roiled by tariff announcements and the markets' extreme moves due to the uncertainties in the situation, Treasury Secretary Bessent commented that "the Treasury has a big toolkit" and "one of the things it could do is "up the Treasury buybacks" in an April 14th interview on Bloomberg TV. When long-term Treasuries rose in yield at



the beginning of June, threatening to move mortgage rates even higher, making mortgages even less affordable for US borrowers, the US Treasury implemented a Treasury Buyback, buying \$10 billion in Treasuries per its announcement on June 3, 2025. This is the largest Treasury Buyback in history and acts like quantitative easing (QE), boosting Treasury bond prices (and pushing down yields) and pushing out \$10 billion in extra liquidity into the banking/financial system. So, while the Fed has indicated it is “on hold” until the data tells the FOMC whether to loosen (if unemployment starts to rise sharply) or stay on hold (if tariffs cause inflation to flare up, which hasn’t happened yet), the Treasury has implemented its own version of QE, boosting liquidity but adding to dollar availability, putting downward pressure on the dollar, which also is gold-bullish.

In addition, Treasury Secretary Bessent has indicated that with the passage of the Big Beautiful Bill and longer-term bond yields being above their recent average, he would direct that a disproportionate share of Treasury debt issued in the next few months/years be short-term Treasury Bills until such time that longer-term yields drop further. Since the debt ceiling was almost breached last winter, the Treasury has been drawing down reserves all over the government’s financial system to make sure the government debt limit wasn’t exceeded; now that the debt limit has been raised, the Treasury will be accelerating debt sales as it not only funds the deficit and interest payments, but also replenishes the reserves drawn down over the past 7-8 months. This excessive debt issuance, skewed toward T-Bills, which are used like cash by many investors and institutions, will raise the liquidity in the US and the US dollar-centric financial markets, again herding investors, institutions and other savers towards stores of value, like gold, as more financial pressure is put on the US dollar by excessive Treasury issuance.

In another indication of how investors are moving more investments toward gold, the Treasury and Fed have continued to run the economy in the last few decades in a way that increased money supply, which is also gold-bullish. As you can see in the graph below, the dark dashed line is the ‘M2’ measure of US money supply, which is increased as the US economy grows. We have plotted the price of gold against the amount of money supply, going back to the early 1970s. When M2 increases more than investors consider justified for the concomitant economic growth, investors and traders are incentivized to protect their capital, and gold is a primary instrument used in the preservation of capital. Episodes of “too high” money growth in the 1970s drove investors/traders to bid up the gold price [indicated by the gold price above the money supply on the left side of the graph]. As US growth sped up and money supply slowed, in the 1980s-1990s, capital came out of gold and other stores of value and was invested in the economy, leading to weaker gold prices [indicated by gold under the money supply in the middle of the graph].



The easy money policies of the 2000s and the slowing of US growth, coupled with the financial crisis of 2008-2009, led investors to again invest in stores of value like gold, which rose steadily from 2001 to 2012 [middle right in the graph]. US growth recovered from 2013-2018, pushing down the need for gold and other stores. The Covid lockdowns led the Fed and US Government to flood the financial system with dollars boosting money supply strongly and driving more investors back to gold and other value stores. Finally, the freeze of Russian Central Bank assets in Western banks spooked world central banks, driving the continued diversification of assets into gold from dollars and other Western currencies, while money supply, interrupted during the 2022 economic slowdown and equity bear market, has resumed its climb. The combination of central bank buying, all-time high money supply, increasing US liquidity and thus dollar weakness all combine to keep a tailwind to the price of gold.

One last thought on gold by financial commentator and portfolio manager Jared Dillian, in his daily investment publication The Daily Dirtnap on 7/22/2025:

“People say to me, how can you not be involved in stocks? My answer is: how can you not be involved in gold? We have a president who is literally trying to fire the head of the central bank and lower rates to zero, and maybe do yield curve control [pegging Treasury yields at certain levels, creating new money to do so], and you’re not involved in gold? If gold were to go to \$5000, it would be about a 50% move from here, which amazingly, is not out of the question. Maybe not in 2025, but very possible in 2026. One thing someone mentioned to me earlier: you know how China has been buying gold hand-over-fist? They saw what happened with Russia, getting shut out of SWIFT [the worldwide banking network of payments – KS] and the global financial system, and they’re preparing for it....”

Silver has always been considered the “wild child” of the precious metals, moving up or down in hard-to-predict ways and uncertain timing. But when silver price moves happen, it is usually extreme. Silver production has been in deficit for the past four years (according to the Silver Institute), as silver has been incorporated in more electrical products (especially solar panels) due to its extreme conductivity. This increased industrial usage, coupled with stagnant supply, and now energizing investment demand, has put a fire under the silver price, which has broken out to 13-year highs during

July. We are excited about silver and continue to look for investments in silver to upgrade our current investments or to replace our recently bought-out silver miners.

Bottom line: Commodities continue to be attractive due to attractive supply/demand balances in many commodity products. In addition, the swooning US dollar, and the predictable future of much more US debt and probable above average growth in money supply and thus liquidity, points to the attractiveness of investing in metals and especially precious metals as stores of value. We think that investing in producing companies of commodities, if picked correctly and upgraded over time, will lead to higher returns than investments in the physical commodities themselves, acknowledging there is a wide range of quality of miners and picking the right companies for investment are the key to boosting returns. So far in this bull cycle, we believe we and our research partners have identified a number of companies, current investments and potential future investments, which will lead to attractive returns.

Kanos Quarterly Commentary

The American Pivot and Its Implications

For the last forty-five years, the world has been in an economic pattern in which developing countries have been given the ability to produce natural resources and increasingly complex manufactured goods to send to more developed North American, European, Middle Eastern and East Asian countries with high-end industries and consumers.

The bargain the developed world struck with these countries is that they recycle the dollars received for their resources and products was recycled into American financial assets, mostly Treasury and other US fixed income securities but also US equities and other assets like real estate.

When the Covid crisis hit, US response to the lockdowns, along with a number of US states' relatively quick exit from lockdowns, attracted world capital to US markets, further boosting US stock and bond assets, as well as the US dollar.

With both a current account deficit (paying out more funds than receiving in trade) as well as a government budget deficit (government spending more than it receives in taxes and fees), the US has built large debts, owed to both its own inhabitants as well as foreigners. It is now getting to the point where US officials and financial markets are getting concerned, especially with the sheer dollar amount of interest the US government must now pay on its debt.

This system was always unsustainable in the long run, but no Administration or Congress has been willing to tackle the problems until now as the problems become too big to ignore anymore. The Trump Administration 2.0 has started to tackle these issues in multiple ways: 1) trying to rebalance trade (at least partially) by enacting tariffs to disadvantage foreign products and incentivize more products to be made in America, thus reversing the offshoring of jobs, and rebalancing trade back toward a more balanced situation. 2) countering China's ambitions of being the supplier of all things to the rest of the world which China is using to favor her interests to the detriment of the West and the

United States. 3) Re-establishing offshored supply chains which supply critical materials but have been proven to be cut off in times of conflict, potentially severely compromising US and Western lifestyles and national security (think: rare earth minerals and their manufactured products, pharmaceuticals, semiconductors and other electronic components now used in all aspects of life. And finally, 4) Resecuring US national security through reforming the US military, securing borders and expelling illegal aliens, defending against threats, both military & cyber and pushing defense concerns of overseas allies back to a shared structure from US dominance (think: NATO). All these initiatives are ultimately to let Americans take advantage of our country's blessings to again realize the American dream of having a job, family and housing, which have been increasingly difficult to achieve due to the actions of prior administrations and congresses.

The nation's economy is in dire need of some rebalancing. The rich have gotten richer over the last few decades with low interest rates and the globalization of manufacturing and services in lower cost countries since trade and capital flows were open and advantageous. However, as stated above, these imbalances are unsustainable and have to be addressed. President Trump in his candidacy championed trying to rectify these, and his stances resonated with enough people to get him elected in order to address them.

These issues are well-documented and frequently discussed. However, less discussed are the implications of "breaking" this economic order. We will discuss some of them here and some predictions about how these Implications may affect economics and your investments going forward.

Issue #1 Literally tons of ink have been spilled speculating about the demise of the dollar. But the fact remains that there are really no alternatives to the dollar, full stop. The dollar is currently used in 56-60% of all measurable commercial trade worldwide, while probably more than 90% of illicit trade and money movement is accomplished in US dollars. It is universally known and almost universally accepted worldwide, and the US dollar is still backed by the most powerful military and the most stable constitutional government and rule of law in the world.

And there is no alternative. The next largest "competitor" is probably the euro, but it is administrated by a hodgepodge bureaucracy that duplicates national governments and has no real enforcement mechanism, like a central government, nor does it have any military capability, absent member countries' independent approval of action. Thus, if economic push comes to military or administrative shove, the Eurozone will have to try to bridge centuries-old nationalist feelings and trust issues to cobble together unique solutions to new problems, a job proven very difficult in peacetime and could be impossible in wartime or other crisis times. Thus, the euro lacks authority behind it, and can be used as a medium of exchange for goods and services, but it falls down as a store of value or a reserve asset for non-member state treasuries to hold as secure reserves.

The Chinese renminbi has almost exactly the opposite problems of the euro. It is under complete control of the Communist Chinese Party ruling China, who administrates it with an iron hand, setting exchange rates nightly, finetuning banking and trade regulations on a weekly or monthly basis, and makes it non-exchangeable by having a closed capital account for most, which is the denial of permission to exchange renminbi for foreign currencies, thus allowing capital to flow in and out. Thus, renminbi received for goods and services sold to China are subject to Chinese picking when and at what rate to exchange back into Western currencies.



The Japanese yen was in contention to be one component of international bank reserves in the 1980s-1990s, but after the Japanese bust of 1989 and the moribund financial performance and yen weakness of most of the 2000-2025 period, the yen is used for trade but less and less for reserves. The British pound, the reserve currency and worldwide unit of exchange before the US dollar, is in the “same boat” as the yen. Great Britain is now just a bit player in global trade and geopolitical significance. The pound is useful due to the legacy of the British Empire; it can be used in some countries throughout the world, but only as a means of exchange. The UK’s dire economic situation currently, high debt and facing budget deficits and a looming recession, make it less than optimal as a reserve asset.

Thus, the US dollar, while subject to fiscal issues in the US, is still used throughout the world and has no competent competition for the foreseeable future. While the US fiscal and debt situation may continue to put pressure on the dollar, most of its competitors face the same or worse fiscal and debt situations, making alternatives an even poorer choice than using the dollar.

Finally, the dollar is sub-optimal as a reserve asset, due to its ability to lose value over time. This value will be lost versus better stores of value such as gold or other tangible assets (real estate, jewelry and other collectibles, etc.) However, most central banks and other investors concerned with preserving value will keep at least some wealth in dollars due to its continued use as a means of exchange and the reserve currency by which other currencies are valued.

Implication: The dollar, while fluctuating in value (and downward over the foreseeable future), is the still the world’s most used, most accepted and best backed currency, with no real competition even on the horizon. There are better stores of value for reserve assets, but the dollar will be used for decades into the future and can be held as part of one’s wealth. Talk of the dollar being replaced for trade by other currencies should be mostly ignored.

Note: The Chinese continue to resent the use of the dollar almost universally and have been trying to gather the ingredients to form another system to challenge dollar use. We expect this to continue, with China trying to recruit others to transact and store value in non-dollar assets. The rapid buildup in gold by China’s central bank and other financial institutions is one illustration of this. China’s deal to buy Russian oil and natural gas using renminbi as the currency is another example. However, the need to exchange all that renminbi back into something usable for the Russian economy can be a problem if Russia’s and China’s timing of such exchanges don’t agree.

We expect China to continue to try to make the renminbi the next dollar, but the CCP’s fear of capital flight if the capital account is opened (a very valid fear – I think any and every Chinese citizen would try to diversify at least some of their wealth if this were to be allowed at scale [it currently is allowed at \$50,000/year with permission]) makes free exchange of capital using the renminbi unavailable for the foreseeable future.

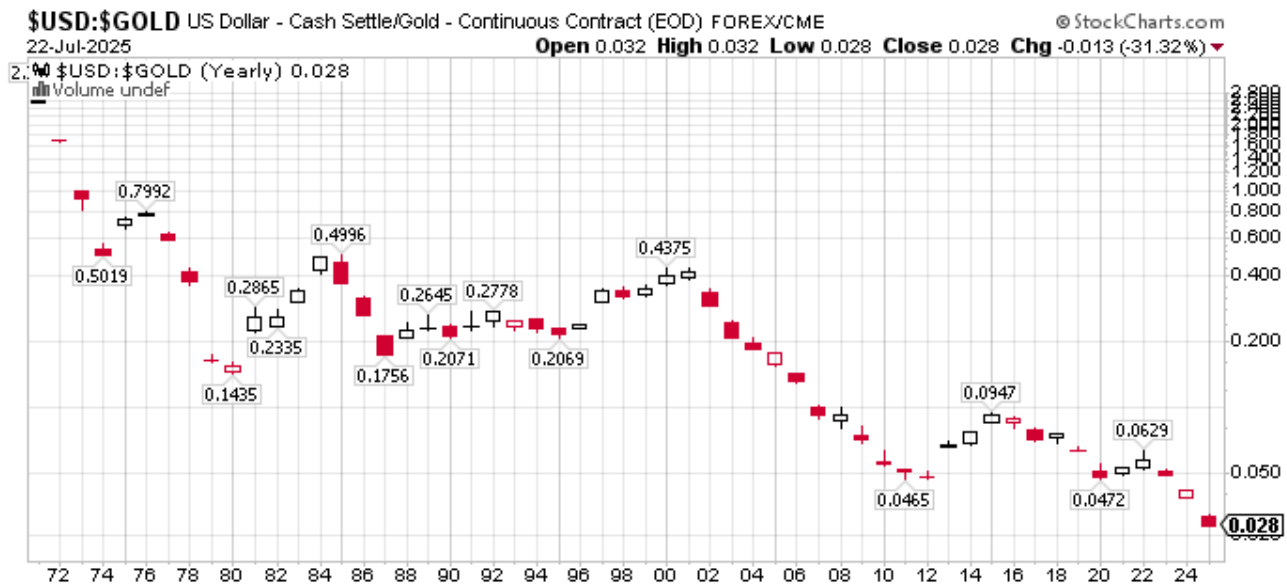
Issue #2 Central Bank Reserves are a corollary to our dollar discussion. In the post-World War II era, when the Bretton Woods money system was predicated on US dollars being exchangeable for gold at \$35/oz, central bank reserves were considered prudent with gold, US dollars and typically some currencies of important trading partners (like the German Deutschmark, Japanese yen and eventually the euro).

After the fall of the Soviet Union, US dollars became even more usable worldwide, convincing central bankers they could overweight dollars. However, as US government spending continued to ramp up in



the late 2010s-early 2020s, and especially after all the Covid stimulus, world central bankers started to reduce their US dollar overweighting in central bank reserves.

This has accelerated since 2022 when Western governments froze Russian overseas central bank reserves (\$600+ billion) and cut off Russian access to them. Central bankers have not added much in other currencies to reserves since, as most countries are practicing the same deficit financing as the US, meaning their currencies are equally (or more) vulnerable to shocks and crises. The big winner has been gold, which is not subject to the same influences as currencies. This can be seen in the graph below, which is the US Dollar Index divided by the price of gold (since the dollar was delinked from gold in 1971), or what's known as the "gold-adjusted value of the dollar."



The graph shows that the US dollar has fallen in value versus gold in times of inflation and recession (1970s and early 1980s), in times of loose monetary policy (2003-2012) or both (since 2021-present). The graph illustrates starkly the value of gold over the dollar over time.

Implication: Central bankers, having been overweight US dollars as central bank reserves since the 1980s, have started to convert US dollars to gold steadily over the years since 2022, cutting down US dollars in world central bank reserves to an average of 58%, still quite high, especially when compared to gold's shares of reserves at just 20%. We think this conversion could go further until gold reserves reach the 33-50% of reserves level, which could boost gold's price much further and put a constant offer into US dollar markets over time.

Issue #3 Bonds and other financial assets have been accumulated by central banks, investors and other institutions since the early 1980s, as US tax laws and monetary policy started to skew towards rewarding capital over labor. The consequences of these policies have been that wage earners continue to be disadvantaged, not allowing them to build up assets, due to low interest rates and higher taxes on labor. Meanwhile, governments, corporations and the rich have borrowed a staggering \$324 trillion of worldwide debt (2025 estimate by the Institution of International Finance in their May 6, 2025 report). Virtually all OECD countries of consequence have sovereign debt loads of greater than 100% of their respective GDPs, which is considered "problem territory." The US has one of the largest debt loads, and must continue to sell bonds to support not only the current debt (at over \$36 trillion) but also new

debt from each year's budget deficit. As enemies Russia (which hold no Treasury debt anymore) and China (which holds less than \$1 trillion in Treasuries now, which is falling year by year) divest themselves of Treasuries, the big buyers have become US domestic buyers, European investors and offshore investors, generally hedge funds, etc.

The difficulty of the US debt is that so much is coming due and must be rolled over, with additions from the current budget deficits, which could put pressure on long-term rates, slowing the US economy and limiting government expenditures. Issuing more short-term debt leaves more risk to climbing future rates, but should cut down on current interest expenses and since short-term T-bills are used like cash in financial markets, issuing a lot of T-bills provides short-term monetary simulation effects, which governments like.

Implication: The US Government must roll trillions of dollars in debt in addition to the new debt needed to fund the current budget deficit. Many natural international buyers are no longer in the market, putting pressure on bond sales, and thus interest rates. Keeping issuance to short-term manages some of those problems short-term, but leaves the government vulnerable to higher future interest rates. And these massive sales put pressure on the US dollar, making the bonds even less attractive to international investors. Thus, bonds seem like a poor risk/return investment, paying around cash rates but subject to value losses due to higher future interest rates as well as a falling dollar. We will be shying away from bonds in our portfolios for the foreseeable future. We are very concerned as other much larger investors come to the same conclusion, not buying future Treasury issues, or worse, selling their current bond holdings in addition to no longer attending bond auctions. If US bonds are judged to be less and less attractive to buyers, look to governments, including the US government, to mandate financial institutions and other financial entities own larger allocations of Treasuries by law, ensuring future Treasuries sales but swelling an already huge supply of US bonds pushed out into the markets.

Issue #4 Reshoring – President Trump campaigned on and bringing back industry to the US, especially in industries that are deemed national security priorities, which could be a long list, including materials used in defense and other high-tech manufacturing (like rare earth minerals), pharmaceuticals, ship building and fabrication, etc. These are industries that were formerly performed in the United States but were moved abroad due to cost, environmental or foreign policy reasons. Now, many more industrial processes must be reshored. The tariffs are helping shape this, making foreign-made goods more expensive versus their domestically-produced counterparts, and trade agreements are requiring foreign firms to make / manufacture / assemble parts and complete units here in the United States.

Implication: The implications are massive and widespread. New industries here will require investment, engineering, materials, labor and expertise, many of which have been lost or dispersed in the US. Thus, training and new designs on current methods and new processes and materials will also be key parts of this effort. First and foremost, it will need much more labor, which will put upward pressure on wages. Bidding expertise away from other industries will also increase inflationary pressure. Building new plants and factories, with their associated infrastructure and support facilities will put inflationary pressure on construction companies, materials, and engineering resources. However, using more efficient methods learned in the US and overseas will produce much more efficient plants and factories, especially when new technologies, robotics and artificial intelligence are woven into operations. Thus, a boom in building, materials, engineering, process technology/robotics/AI and labor will cause more inflationary pressures in the short-term, but more efficient manufacturing should allow products to be more competitive to world prices than many expect. We are already owners of many companies that

will benefit from these forces, but we expect to add more industrial & technology companies to Kanos portfolios as projects become more visible to the investment community.

Issue #5 Defense is another big piece of this American pivot. US defense of the world, and especially Europe, was the norm for decades. Now, with a smaller overall force with reduced capabilities, the US has signaled that it would not be the unipower it once was, and that allies needed to build up their own defense forces, especially NATO allies who have underspent their commitments for decades now. Meanwhile, US defense spending is not expected to drop as new technologies as well as far-overdue maintenance and replacement of outdated systems require more dollars, not less. In addition, the newly announced trade pact with the EU (and probably with Japan) include clauses in which countries will buy a minimum amount of US armaments, ensuring compliance and US exports.

Implication: The implications are essentially the same as the reshoring trend. New defense plants and technologies will have to be contracted, built and delivered to the US military (think: drones of all different types, maybe even robot soldiers soon, etc.) and European (and Asian?) countries. This will consume more engineering, labor, materials and expertise that the government/defense combination must compete with the private sector reshoring push for all types of resources, again driving inflationary forces while providing new and efficient companies and facilities to drive productivity and better cost management when up and running. But it also affects world defense and industrial manufacturers, which must gear up to start producing more defense equipment, weapons and ammunition, again competing with their own private sectors for labor, materials and expertise, which again is inflationary, as it ups competition for currently scarce resources.

Conclusions

The US is still the center of the world political, economic and policy spheres. However, the elements that contribute to US-centric movements in world policy, trade and economics are changing.

The US dollar, formerly “as good as gold,” will continue to be used for trade and commerce but less as a store of value, giving precious metals and other stores of value a leg up for reserve purposes. Foreign currencies are in the same boat (due to running the same fiscal, economic and monetary policies around the world), thus leaving them as poor alternatives to the dollar or precious metals.

Bonds, as obligations of all the abovementioned countries, are less and less attractive as fiscal and monetary policies put pressure on currencies and expand the need for more borrowed capital at a time when geopolitical forces are eroding trust among countries, a distinct headwind to selling more bonds to overseas investors and institutions. The US government must sell larger and larger amounts of bonds, but they are now in competition with more governments to do so. Thus, bonds should be underweighted or avoided. Reserve assets should move even more to precious metals.

Reshoring industries and defense buildups are the wave of the now and near future, which will create increasing competition for materials, labor and expertise, all of which are in relatively short supply from a historical basis, meaning inflationary forces from all elements will put pressure on prices and wages for the foreseeable future, until new sources of energy and materials are found and developed (which will take many years, due to permitting and regulation) and training and incentives are implemented to augment labor capabilities in the US and other OECD countries struggling to reshore and re-arm. Thus, intelligently investing in materials, industrial, defense and technology companies will continue to be a priority for Kanos portfolio management.

Interesting Articles on Artificial Intelligence

We occasionally find articles that make us think and help us look at topics from a different perspective. We encountered two of those in June and thought it was worth reading and thinking about.

Rickards: Superintelligence Will Never Arrive

July 3, 2025

TheDailyReckoning.com

James G. Rickards is the editor of a number of investment newsletters, as well as an American lawyer, economist, and investment banker with 40 years of experience working in capital markets on Wall Street. He was the principal negotiator of the rescue of Long-Term Capital Management L.P. (LTCM) by the U.S Federal Reserve in 1998.

Readers know at least two things about artificial intelligence (AI).

The first is that an AI frenzy has been driving the stock market higher for the past three years even with occasional drawdowns along the way.

The second is that AI is a revolutionary technology that will change the world and potentially eliminate numerous jobs, including jobs requiring training and technical skills.

Both points are correct with numerous caveats. AI has been driving the stock market to record highs, but the market has the look and feel of a super-bubble. The crash could come anytime and bring the market down by 50% or more.

That's not a reason to short the major stock indices today. The bubble can last longer than anyone expects. If you short the indices, you can lose a lot of money being wrong. But it is advisable to lighten up on equity allocations and increase your allocation to cash in order to avoid the worst damage when the crash does come.

On the second point, AI will make some jobs obsolete or easily replaceable. Of course, as with any new technology, it will create new jobs requiring different skills. Teachers will not become obsolete. They'll shift from teaching the basics of math and reading, which AI does quite well, to teaching critical thinking and reasoning, which computers do poorly or not at all. Changes will be pervasive, but they will still be changes and not chaos.

The Limitations

Artificial Intelligence is a powerful force, but there's much less there than meets the eye. **AI may be confronting material constraints in terms of processing power, training sets and electricity generation.** Semiconductor chips keep getting faster and new ones are on the way. But these chips consume enormous amounts of energy, especially when installed in huge arrays in new AI data centers. Advocates are turning to nuclear power plants, including small modular reactors



to supply the energy needs of AI. This demand is non-linear, which means that exponentially larger energy sources are needed to make small advances in processing output. AI is fast approaching practical limits on its ability to achieve greater performance.

This near insatiable demand for energy means that the AI race is really an energy race. This could make the U.S. and Russia the two dominant players (sound familiar?) as China depends on Russia for energy and Europe depends on the U.S. and Russia. Sanctions on Russian energy exports can actually help Russia in the AI race because natural gas can be stored and used in Russia to support AI and cryptocurrency mining. It's the law of unintended consequences applied to the short-sighted Europeans and the resource-poor Chinese.

AI Lacks Common Sense

Another limitation on AI, which is not well known, is the Law of Conservation of Information in Search. This law is backed up by rigorous mathematical proofs. **What it says is that AI cannot find any new information. It can find things faster and it can make connections that humans might find almost impossible to make. That's valuable. But AI cannot find anything new.** It can only seek out and find information that is already there for the taking. New knowledge comes from humans in the form of creativity, art, writing and original work. Computers cannot perform genuinely creative tasks. That should give humans some comfort that they will never be obsolete.

A further problem in AI is dilution and degradation of training sets as more training set content consists of AI output from prior processing. AI is prone to errors, hallucinations (better called confabulations) and inferences that have no basis in fact. That's bad enough. But when that output enters the training set (basically every page in the internet), the quality of the training set degrades, and future output degrades in sync. There's no good solution to this except careful curation. If you have to be a subject matter expert to curate training sets and then evaluate output, this greatly diminishes the value-added role of AI.

Computers also lack empathy, sympathy and common sense. They process but they do not really think like humans. In fact, AI does not think at all; it's just math. In one recent experiment, an AI computer was entered into a competition with a group of 3- to-7-year-olds. The challenge was to draw a circle with the tools at hand. Those tools were a ruler, a teapot and a third irrelevant object such as a stove. The computer reasoned that a ruler was a drafting instrument like a compass and tried to draw a circle with a ruler. It failed. The children saw that the bottom of a teapot was a circle and simply traced the teapot to draw perfect circles. The AI system used associative logic. The children used common sense. The children won. That result will not vary in future contests because common sense (technically abductive logic) cannot be programmed.

High-flying AI companies are quickly finding that their systems can be outperformed by newer systems that simply use big ticket AI output as a baseline training set. This is a shortcut to high performance at a small fraction of the cost. The establishment AI companies like Microsoft and Google call this theft of IP, but it's no worse than those giants using existing IP (including my books, by the way) without paying royalties. It may be a form of piracy, but it's easy to do and almost impossible to stop. This does not mean the end of AI. It means the end of sky-high profit projections for AI. The return on the hundreds of billions of dollars being spent by the AI giants may be meager.



Sam Altman: Innovator or Salesman?

The best-known figure in the world of AI is Sam Altman. He's the head of OpenAI, which launched the ChatGPT app a few years ago. AI began in the 1950s, seemed to hit a wall from a development perspective in the 1980s (a period known as the AI Winter), was largely dormant in the 1990s and early 2000s, then suddenly came alive again in the past ten years. ChatGPT was the most downloaded app in history over its first few months and has hundreds of millions of users today.

Altman was pushed out by the board of OpenAI last year because the company was intended as a non-profit entity that was developing AI for the good of mankind. Altman wanted to turn it into a for-profit entity as a prelude to a multi-hundred-billion-dollar IPO. When the top engineers threatened to quit and follow Altman to a new venture, the board quickly reversed course and brought Altman back into the company, although the exact legal structure remains under discussion.

Meanwhile, **Altman has charged full speed ahead with his claims about superintelligence** (also known as advanced general intelligence (AGI) with the key word being "general," which means the system can think like humans, only better). One way to understand superintelligence is the metaphor that humans will be to the computer as apes are to humans. We'll be considered smart, but not smarter than our machine masters. Altman said that "in some ways ChatGPT is already more powerful than any human who ever lived." He also said he expects AI machines "to do real cognitive work" by 2025 and will create "novel insights" by 2026.

This is all nonsense for several reasons. The first as noted above is that training sets (the materials studied by large language models) are becoming polluted with the output from prior AI models so that the machines are getting dumber not smarter. The second is the Law of Conservation of Information in Search I also described above. This law (supported by applied mathematics) says that computers may be able to find information faster than humans, but they cannot find any information that does not already exist. In other words, the machines are not really thinking and are not really creative. They just connect dots faster than we do.

A new paper from Apple concludes, "Through extensive experimentation across diverse puzzles, we show that frontier LRMs [Large Reasoning Models] face a complete accuracy collapse beyond certain complexities. Moreover, they exhibit a counter-intuitive scaling limit: their reasoning effort increases with problem complexity up to a point, then declines despite having an adequate token budget." This and other evidence point to AI reaching limits of logic that brute force computing power cannot overcome.

Finally, no developer has ever been able to code abductive logic; really common sense or gut instinct. That's one of the most powerful reasoning tools humans possess. In short, superintelligence will never arrive. More and more, Altman looks like just another Silicon Valley salesman pitching the next big thing with not much behind it.

Do AI Models Think?

AI can't solve a problem that hasn't been previously solved

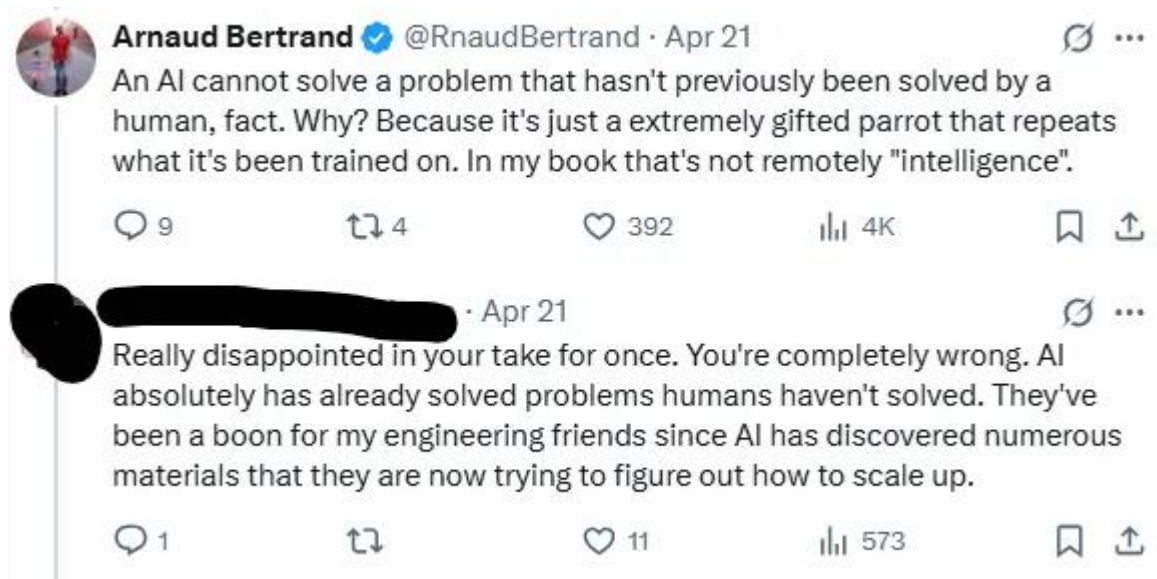
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“... AI doesn’t think. It does something else instead. For a full explanation, read on.

“[Tech writer] Arnaud Bertrand has the best explanation of what AI is at its core. It’s not a thinking machine, and its output’s not thought. It’s actually the opposite of thought — it’s what you get from a Freshman who hasn’t studied, but learned a few words instead and is using them to sound smart. If the student succeeds, you don’t call it thought, just a good emulation.

“From Arnaud Bertrand: About 2 months ago I was having an argument on Twitter with someone telling me they were “really disappointed with my take” and that I was “completely wrong” for saying that AI was “just a[n] extremely gifted parrot that repeats what it's been trained on” and that this wasn’t remotely intelligence.



“[This] argument is now authoritatively settled: [h]ow so? It was settled by none other than Apple, specifically their Machine Learning Research department, in a seminal research paper entitled “The Illusion of Thinking: Understanding the Strengths and Limitations of Reasoning Models via the Lens of Problem Complexity” that you can find here (<https://ml-site.cdn-apple.com/papers/the-illusion-of-thinking.pdf>).

“Can ‘reasoning’ models reason? Can they solve problems they haven’t been trained on? No.’

“What does the paper say? Exactly what [Bertrand] was arguing: AI models, even the most cutting-edge Large Reasoning Models (LRMs), are no more than a very gifted parrots with basically no actual reasoning capability.

“They’re not “intelligent” in the slightest, at least not if you understand intelligence as involving genuine problem-solving instead of simply parroting what you’ve been told before without comprehending it.

“That’s exactly what the Apple paper was trying to understand: can “reasoning” models actually reason? Can they solve problems that they haven’t been trained on but would normally be easily solvable with their “knowledge”? The answer, it turns out, is an unequivocal “no”.

“A particularly damning example from the paper was this river crossing puzzle: imagine 3 people and their 3 agents need to cross a river using a small boat that can only carry 2 people at a time. The catch? A person can never be left alone with someone else's agent, and the boat can't cross empty - someone always has to row it back.

“This is the kind of logic puzzle you might find in a children brain teaser book - figure out the right sequence of trips to get everyone across the river. The solution only requires 11 steps.

“Turns out this simple brain teaser was impossible for Claude 3.7 Sonnet, one of the most advanced “reasoning” AIs, to solve. It couldn't even get past the 4th move before making illegal moves and breaking the rules.

“Yet the exact same AI could flawlessly solve the Tower of Hanoi puzzle with 5 disks - a much more complex challenge requiring 31 perfect moves in sequence.

“Why the massive difference? The Apple researchers figured it out: Tower of Hanoi is a classic computer science puzzle that appears all over the internet, so the AI had memorized thousands of examples during training. But a river crossing puzzle with 3 people? Apparently too rare online for the AI to have memorized the patterns.

“This is all evidence that these models aren't reasoning at all. A truly reasoning system would recognize that both puzzles involve the same type of logical thinking (following rules and constraints), just with different scenarios. But since the AI never learned the river crossing pattern by heart, it was completely lost.

“This wasn’t a question of compute either: the researchers gave the AI models unlimited token budgets to work with. But the really bizarre part is that for puzzles or questions they couldn’t solve - like the river crossing puzzle - the models actually started thinking less, not more; they used fewer tokens and gave up faster.

“A human facing a tougher puzzle would typically spend more time thinking it through, but these ‘reasoning’ models did the opposite: they basically “understood” they had nothing to parrot so they just gave up - the opposite of what you'd expect from genuine reasoning.

“Conclusion: they’re indeed just gifted parrots, or incredibly sophisticated copy-paste machines, if you will.

“This has profound implications for the AI future we’re all sold. Some good, some more worrying.



“The first one being: no, AGI isn’t around the corner. This is all hype. In truth we’re still light-years away.

“The good news about that is that we don’t need to be worried about having "AI overlords" anytime soon. The bad news is that we might potentially have trillions in misallocated capital. [...]”

The Managers of Kanos Capital Management

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