KANOS
CAPITAL MANAGEMENT, LLC

Fourth Quarter 2021 Investor Letter

Portfolio Comments

The fourth quarter was a rollercoaster, as economic growth assessments fluctuated, the Fed started getting serious about lowering monetary stimulus and Covid's Delta variant faded while Omicron emerged. Around the world, further opening conditions gradually gave way to new restrictions as Omicron quickly spread from South Africa to the rest of the world. Meanwhile, manufacturing worldwide continued to boom, while supply and transportation constraints continued to lead to long delivery times and delays across most industries. Markets mostly advanced during October, retreated somewhat in November (as monetary stimulus declines were announced in the US), and after a December Santa Claus rally, ended weakly. Measured inflation continued at multi-decade highs, seemingly changing public perceptions and plans, causing central banks in many countries to start tightening.

Kanos portfolios were up an average of 7.7% for the fourth quarter. Rising holdings included the oil majors, Chevron (+17%) and Exxon (+5.5%), technology stocks like Microsoft (+19.5%) and Alphabet/Google (+9.1%) and pharma stocks like Johnson & Johnson (+6.8%) and Merck (+3.0%). Our overweighted position in precious metals was up on average +8.0%, led by Newmont Mining (+15.2%) and Royal Gold (+10.5%) but had some laggards like SPDR Gold Trust (+4.1%), Pan American Silver (+7.6%), Agnico Eagle (+3.1%) and Kirkland Lake (+1.2%). Our more speculative smaller stocks were generally weaker. Other commodity stocks contributed too, like Global X Copper Miners (+7.5%), Rare Earth Minerals ETF (+14.6%) and the S&P Materials Sector ETF (+15.1%). Losers were our gene therapy stocks: Intellia (-11.9%) and Crispr (-32.2%). Bitcoin was on a rollercoaster but ended up with a +1.2% gain for the quarter.

In markets as a whole, the S&P 500 gained 11.03% during the fourth quarter and ended at 4,766.17, while the Dow Jones Industrial Average rallied 7.87% to 36,338.30 (all reflect quarterly total returns). Stocks rose in October reflecting the US economy picking up from the third quarter (Delta variant-induced) slowdown, while November markets were weaker after the US Federal Reserve signaled that tapering and interest rate raises were ahead. December was stronger as the Fed calmed markets with less hawkish rhetoric while world economies further emerged from Covid slowdowns. Reflecting this, quarterly winners included Technology (+16.6%), Consumer Discretionary (+14.0%), Materials (+15.2%) and Healthcare (+11.2%). "Safer" stocks also did well, reflecting appetite for value: Real Estate (+17.5%), Utilities (+12.9%) and Consumers Staples (+12.8%). Laggards included Communications (-2.8%) and Financials (+4.5%) [all performance amounts reflect total returns]. Attractive yields and the US economy's continuing strength pushed up the US dollar again while the yen and euro were weaker. US bonds ended the quarter virtually unchanged, with the 10-year Treasury note ending the quarter at 1.51%. Commodities were more muted during the quarter (most around unchanged), although energy dropped: natgas was down around -40% while WTI and Brent

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crudes ended slightly weaker. Gold and silver recovered their end of September swoon while cryptocurrencies fell almost 20% during the quarter.

Introduction

The US Federal Reserve (Fed), having kept interest rates at emergency-type zero interest rates and quantitative easing (QE) going at a historically high level, has finally reacted to higher prices/continued above-trend growth in the economy and signaled higher rates/tapering in 2022, with as many as four/five rate hikes projected (probably starting in March). Thus, the "game" has changed: the Fed is accepting inflation represents more of a concern than the US economy, thus moving to reduce the monetary stimulus that restarted in the fall of 2019 and ramped up to warp speed after Covid hit in mid-March 2020. The Fed began their tapering of Treasury and mortgage bond purchases in December, just before the Omicron Covid variant started to spread worldwide (which may slow world economic growth once again before a spring 2022 recovery).

The strength of the US economy and other economies worldwide, bolstered by the last two years' stimulus and reopening plans, has continued to propel economic growth throughout most of the world, although it is now being tempered by the quick spread of Omicron, hindering recovery from supply shortages and supply chain constraints. We will examine how the elements mentioned above, combined with geopolitical events, will affect our views and analysis of your investments and potential future opportunities.

Economy

The US economy continues to grow, with 4Q 2021 GDP (just reported) reaccelerating to 6.9% as a more-fully reopened US economy with fewer Covid restrictions, more travel, rebuilding inventories and Christmas buying reaccelerates after the third quarter Delta-induced slowdown.

2022 is predicted to be more challenging, as supply & labor constraints, lack of any further fiscal stimulus, and the bite of inflation combine to moderate the fast growth seen through most of 2020 and 2021. Having said that, however, growth is still predicted to be in the 3.5 – 4.5% real GDP range, as more steady-state US economic conditions combine with inventory restocking to keep the economy humming, albeit with the notable drag of higher prices and rising interest rates.

The bond market has definitely signaled its recognition of continued higher growth, pricing in the rate hikes before the Fed showed its plan after the December FOMC meeting. Reduced/Stopping QE and higher short-term interest rates should result in higher borrowing costs and some "braking" being applied to the economy, which could slow the US economy back toward its pre-Covid pace of 1-2%. Higher interest rates are expected to help squelch inflation, along with unsnarled supply chains and a cooling off of 'too-hot' demand for goods seen since mid-2020.

Inventory restocking is expected to last into 2023, underpinning economic growth. One example of inventory restocking, recently referenced in a Bloomberg article on the US economy in late December, is in the automotive industry, where US inventories are usually 3.5 million cars and currently are only estimated to be one million. With an estimated rate of 14.5 million cars sold in 2021 and pre-Covid car sales averaging 16-17 million per year, pent up demand and continued supply constraints should push the auto industry to continue to produce at max capacity for months to come, at least. So, parts of the economy will continue to produce flat out (the energy industry also comes to mind as one industry running at capacity), while others will be slowing, like the online businesses that thrived during the lockdowns of 2020 and 2021. Once inventories are restocked, we can expect to see a slowing of demand, maybe starting in later in 2022 or in 2023.

With the Omicron variant of Covid in "full swing," slowing of economic activity expected in late December/early January appears to have been overestimated. With its extremely low hospitalization rate (and even lower mortality rate – pretty much zero), Omicron is considered by the markets to be an annoyance that has interrupted services as workers were forced to test and quarantine if exposed/infected. Its rapid onset and apparent rapid recovery in people continue to point to its fading away in the first quarter relatively quickly.

All-in-all, the economy continues to grow, albeit at a slower pace than the openings after lockdowns, but with impediments and delays offset by pent-up demand for delayed goods and inventory restocking from historically low levels. Inflation/high prices have caused some softness in big ticket items (housing, for example) but employment is strong, and wages are rising, although at a slower current rate than inflation. We will see how rising materials and employment costs affect companies' bottom lines going forward in earnings reports due in the next few weeks.

International economies have been affected in different ways, depending on how governments reacted to the Covid variants. In Europe and Great Britain, continued constraints have limited reopening growth somewhat, with economic activity trailing the US rate of growth. We expect that to continue, as governments are slow to lift Covid limitations as case numbers reach new heights (again, with much lower hospitalization rates and virtually no deaths). Energy prices in Europe will have an impact on economic growth as early cold weather for the second year in a row has combined with underproducing renewable energy to send European energy prices to historic new highs during December, causing the cost of living and running businesses to skyrocket. We will discuss this more in the Energy section below.

Asian growth seems to hinge on China, which appears to have finally hit a limit on the expansion of its real estate. A cooling of residential real estate has led to overleveraged developers, most notably Evergrande but many others also, to miss interest or principal repayments on their public debt, leading to restructurings (and losses to equity holders, lenders and the Chinese populace who have used condos as a primary savings vehicle for years). An extreme slowing of residential construction and losses for lenders and the public has crimped domestic economic activity in China during 2021, and this process has probably just started, as real estate downturns and their accompanying bankruptcies and restructurings typically take 5-10 years to wash through the system. China is desperate to keep its economy growing, and manufacturing could assume at least part of the slack of reduced construction,

but capacity constraints, supply constraints and higher prices of raw materials have limited the amount of extra activity China can generate, meaning China is growing at its slowest pace in at least 13 years. This slowing in China affects Japan, Australia and the "Asian Tigers" of Thailand, Malaysia and Vietnam: Japan due to the slowing demand of high tech/high quality exports to China, Australia due to the reduced amount of raw materials needed in the rest of Asia, especially China, and the Asian Tigers, who manufacture much of the semi-finished goods sent to China for final assembly. Continued demand from the US and, to a lesser extent, Europe, will continue to underpin Asian economies, but a slowing China from its almost 20-year breakneck economic growth pace leaves a hole in demand that the rest of the world can only fill over time.

Equities

US equities have been skewed toward growth stocks for the last few years and especially during the 2020 stoppage of many economies for Covid, causing an extreme reopening growth binge that, combined with historically large fiscal and monetary stimulus, propelled growth stocks to stratospheric heights. However, the just-initiated tapering of QE/imminent rise in interest rates, combined with the slowdown of post-Covid growth to more historical levels, leaves large growth stocks vulnerable to a re-rating to more sustainable valuations, meaning many of these stocks will move down in price. We will look at these stocks again when prices/valuations once again are more attractive.

At the same time, investors seem to be embracing value stocks: those cyclical, lower valuation stocks that have been left in the dust in recent years. This rotation from growth to value has started in 2022, and many experts expect it to continue as supply-constrained industries and companies that have not seen historical levels of capital investment in recent years attract more investors for their pricing power and future expansion opportunities. We believe our investments in many value stocks will continue to gain in value as world economies demand new supplies of raw and manufactured materials (we have picked companies we believe have capacity growth within their portfolios of assets). Many industries (energy, base metals, etc.) are currently capacity constrained and will require new mines, wells, factories, etc. over the next few years; we have invested in companies with attractive current operations and growth opportunities at reasonable development costs, which we think are competitive advantages.

We continue to identify, analyze and direct new/more investments into materials, energy, real estate, food/commodities/staples, industrials, select finance, pharmaceuticals and other health companies, while monitoring technology, communications and some discretionaries for possible future investment.

The dominance of US demand for goods imported from around the world in recent years, combined with the Fed being more vigilant than the ECB and BOJ, has caused the US dollar to be relatively strong for the past few years. This dollar strength has meant that international investing, on balance, has not been anywhere near as lucrative for US investors as keeping investments domestic. The Fed's tightening through tapering and then raising short-term interest rates may continue to strengthen the dollar, although those forces will be offset by continued large Treasury issuance by the US Government as Biden pushes more and more spending as his Administration throws money at problems, as evidenced by the recent announcement of "trying to bring down inflation by having the government spend more

money to raise supply availability" and other dubious government plans. For now, non-US investments remain unattractive until a sustained turn in the US dollar is in evidence.

With all of this in mind, we have trimmed our exposure to large cap growth stocks, ready to redeploy cash into more attractive near-term and long-term opportunities. We think energy and other commodity-oriented companies and situations will continue to be attractive, and we look forward to diversifying into attractive new positions that help fortify our portfolios to take advantage of inflationary and supply-constrained situations while identifying enough growth opportunities in the portfolios to help realize appreciation through enhanced profitability as well as multiple expansion, just like growth stocks benefitted from in recent years.

Bonds

Bonds ended December roughly unchanged for the fourth quarter, but with the Fed slowing QE and both markets and the Fed indicating short-term interest rates will climb in 2022, bonds are less attractive to us for long-term holding. There are a number of investors who are afraid that higher equity values and now-high inflation will lead to a rapid slowing of the US and world economies, causing a "growth recession" (or worse); these investors have piled into bonds, believing that they will make capital gains in their bond positions and then sell them when economic growth picks up again.

We don't believe bonds will present much of a safe haven, except maybe against high-valuation stocks, which investors could bail on if any sustained weakness occurs, with stock sellers putting their sales proceeds into bonds for safety and some yield. If this works for them, it will only be a short-term "lily pad," due to constant pressure for higher rates. How? The US Government and a large number of corporate borrowers need to issue debt to refinance maturing bonds issued in the last few years at lower interest rates. Meanwhile, increased US Treasury issuance is needed to fund continued large budget deficits and the growing interest on the now $30 trillion of outstanding Treasury debt. Investors are also counting on the Fed to keep interest rates low, possibly reinstituting QE on any sustained large losses on US stocks, restoring the Fed to its role of underpinning Treasury prices. However, conditions are different than in recent years: <u>the reinstitution of large-scale QE on any equity weakness will take its toll on the value of the US dollar and cause higher and further sustained inflation, which will erode Treasuries attractiveness versus alternative investment choices.</u> We don't think most investors will be nimble enough to stay in equities until the top is reached, then selling near the highs and buying Treasuries, then buying back into stocks or other attractive assets quickly enough to avoid losses. Investors trying to hide from high stock valuations in Treasuries will find these holdings unattractive fairly quickly.

Interestingly, as January starts to unfold, and the Fed has "shown its hand" after release of December FOMC minutes, the Fed and the market seem to be agreeing that their will be at least three or four short-term interest rate hikes in 2022 (almost certainly starting at the March FOMC meeting). However, both parties also "agree" that the hiking cycle will only reach approximately 2.5% (the "terminal rate" after all hikes) – pretty low for currently visible inflation (and supply chains that don't look like they are 'unsnarling' very quickly). In addition, the market is indicating that 10-year rates aren't expected to peak

at much above 2.0-2.5% by late 2023-2024; this indicates the market thinks that the Fed will "walk the tightrope of gradual rate hikes (and some amount of Fed Balance Sheet reductions, or 'run-off' as they call it), having to start a new easing cycle in 2024. To us, this scenario gives the Fed too much credit (they missed the inflation persistence completely) and implies inflation will fade away (interest rates only reach as high as 2.5-3.0% with current inflation at 7%). While we think inflation will moderate (strong fiscal and monetary stimulus has ended, after all), we believe that the large amount of stimulus still "hanging around" in the economy, the persistent supply / logistics issues that will continue to put pricing and/or availability pressures on products and the now-entrenched inflationary mindset will keep prices high, upsetting this rosy interest rate scenario sketched out above, meaning higher rates will 'rear their ugly heads' and cause more havoc in markets and the economy than what the market currently thinks.

Thus, we anticipate being at a very low allocation to bonds, both ST and LT, because we think we will go back to seeing higher interest rates, and thus lower bond prices, while seeing still high inflation.

Currencies

As we've said in many recent quarterly letters, currencies don't have much investment appeal as virtually all countries have negative real interest rates (some even continue to have negative nominal short-term rates too, like many European countries. In addition, with many developed world central banks continuing to conduct quantitative easing, most currencies continue to lose value as money supply builds from still-continuing central bank monetary creation.

China's yuan has positive rates and is higher this year, but they eschew the rule of law, managing national resources for its inhabitants, increasingly at the expense of foreign investors and are in a slowdown so severe that it is almost recessionary. China is now interested in a stable or even weaker yuan, so there is less reason to concentrate on the yuan. The other big Asian currency, the Japanese yen, has been extremely weak as the BOJ prioritizes continued easy money conditions over any threat of rising inflation in Japan. We have shorted the yen in the past successfully, but we feel that the BOJ will be forced to address inflation in the near future, most probably forcing massive short-covering in a large number of perennial yen shorts, making a short position less attractive for investment.

The US dollar has continued to rally back from near-breakdown levels as the Fed becomes the first of the 'big three' central banks (Fed, ECB and BOJ) to decelerate quantitative easing and indicate interest rate hikes in the near future. This setup has strengthened the dollar, but we believe that continuation along this path of hawkishness will prove much harder to accomplish politically as markets, used to the easiest of monetary conditions, react badly to tightening liquidity and higher interest rates, leading the Fed to let up and a reaction downward in the dollar.

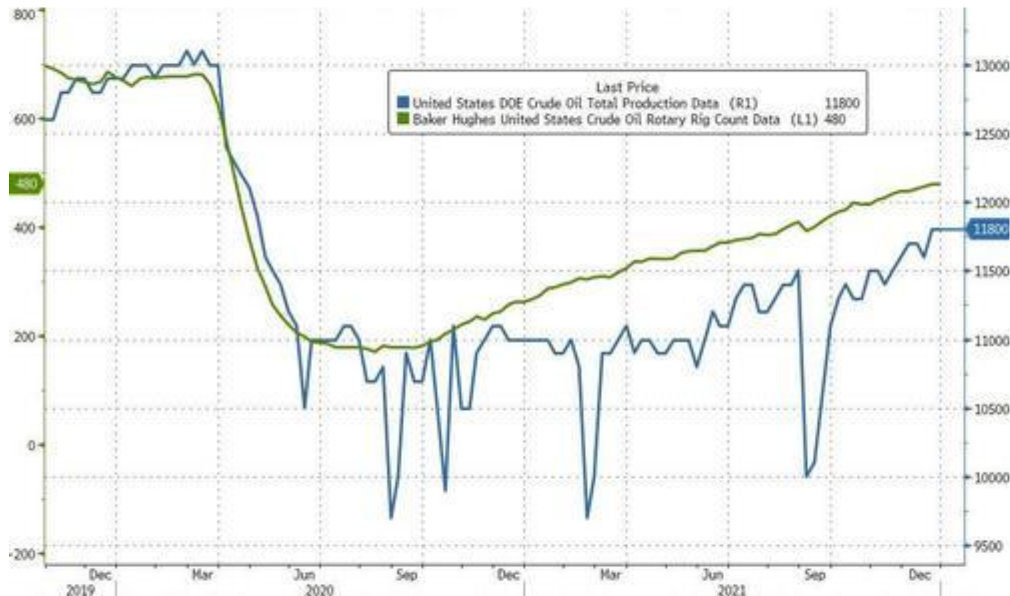
Energy

A number of issues are impacting oil, gas, coal and other energy markets recently/currently, so we feel we must highlight these issues and their investment implications.

1. Oil production vs. current demand

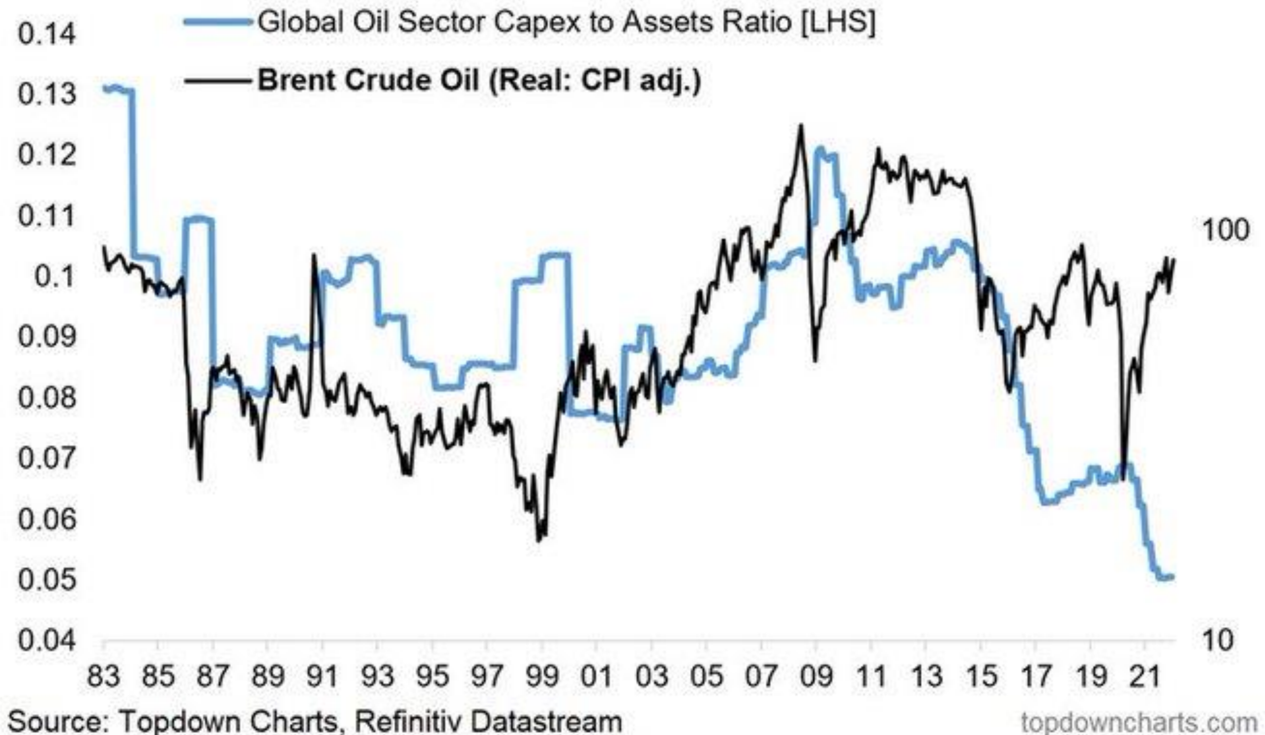
First and foremost, the world continues to open up post-Covid, despite a hiccup from Omicron currently (but, again, not expected to be virulent or long-lasting). Oil demand has continued to grow through the end of December, giving support to oil prices once again, and the Opec+ cartel has agreed to add an additional 400,000 bbls/day each month going forward to help meet demand. However, prices have risen to the mid-$80s/bbl as supplies seem to trail continued demand increases. Why? Opec+ producers are having trouble with production (according to recent Bloomberg articles): Saudi Arabia is producing over 10.2 million bbls/day (a rate they have rarely been able to maintain), Russia is at 9.9 million bbls/day (less than the 10.5 million bbls/day it produced in April 2020 and below its 10.2 quota), Nigeria is producing approximately 1,200,000 bbls/day, below its quota due to production and loading problems), and Libya, is producing only 800,000 bbls/day, far below last year's maximum rate of 1.3 million bbls/day. Even Saudi Arabia, Iraq and the UAE were reported to have had lower production in December from prior months in 2021 due to production issues.

How about the US? As seen in the graph below from Bloomberg via Zero Hedge's 1/5/2022 article, "WTI Slides Back Below $78…," the US produced around 13 million bbls/day pre-Covid, but the government-ordered lockdowns of 2020 and the knock-on effects on usage, the uncertainty of future lockdowns and the antipathy of the Biden Administration toward fossil fuels has led to limited investment and reduced output. Currently, the US is producing 11.8 million bbls/day (the blue line below), although the domestic rig count (the green line) has been rising steadily since 2020 lows, which usually points to increases in future production.



However, the rest of the world is experiencing the same issues: reduced oil & gas investment throughout the world, further continued lockdowns (China, Australia), the uncertainty of new variant arrivals (first Delta, now Omicron, what next?) and the opposition to further investment by governments (USA,

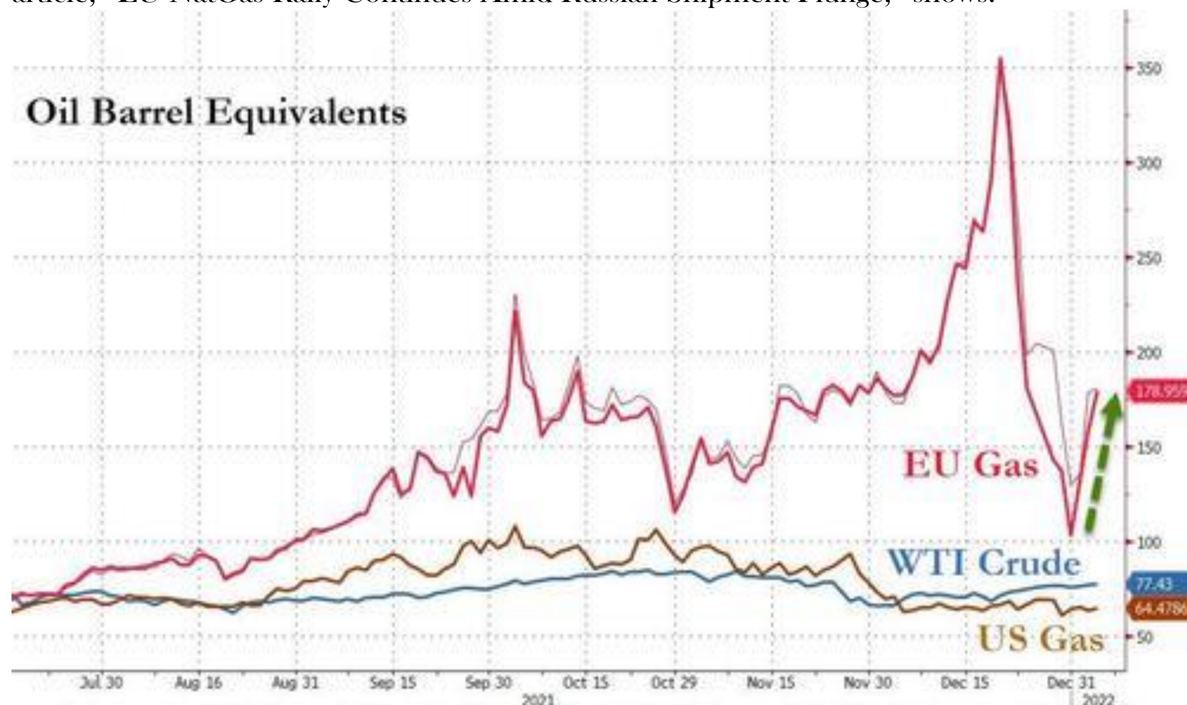
Germany, many others) / activist groups (worldwide). This lack of investment for future production means maintaining even current production levels into the future is at risk. These conditions make more bullish on energy producers. To illustrate the long-term and dire nature of the world's underinvestment, the following interesting chart is from topdowncharts.com via Jesse Felder's Twitter feed. It shows the relationship between global oil sector capital expenditures and the price of Brent crude oil. Spending usually follows price, except for two notable exceptions: 1) continued high spending in the 1990s, in the face of weaker prices, led to a decade long slump in prices, and 2) higher prices after the slump of 2014-2016 have not only not reignited spending, aggregate spending is plummeting, almost certainly from governmental/environmental pressure on companies/countries to reduce greenhouse gases by reducing petroleum usage. To add to the point, 2021 discoveries of 4.7 million barrels were the least discovered in 75 years (since 1946), according to energy analysis company Rystad Energy. Most importantly, demand for petroleum products has not dropped (except the extreme drop during lockdowns); it has been rising for the past few years (before Covid), even with renewables adding energy supply to the world's supply/demand mix, and 2021 is estimated to have been only 3% below 2019 peak levels, according to the US Energy Information Administration (EIA). Seemingly, absent large demand destruction, prices seem to be headed upward on supply shortages.



2. European energy crisis – this winter

Has anyone in the US heard about energy problems in Europe this winter? Going to USAToday.com recently and searching "Europe energy" yields headlines: "Gas[oline] over $7/gallon in parts of Europe" "New sustainable energy systems help consumers beat issues" "Stock market ends higher…" "Biden looks to ease tensions with Europe…" "Here's how businesses and consumers are adapting to inflation" "Germany's Angela Merkel bows out after 16 years" "F1 title contenders mellow headed into concluding race" "Wind turbine blades can be recycled but rarely are" …, etc., etc. The media is not reporting in the US on the energy crisis impacting Europe, which is similar to the mid-February 2021 freeze that hit the central US/Texas – prices are multiples higher than in past years and pundits are afraid of the possibility of inadequate supply during a cold snap that will lead to deaths and economic upset/damage.

What is CURRENTLY happening is this: high demand for natural gas through all of 2021 (beginning during the 2020/2021 winter) has led to decades-low levels of natural gas in storage for Europe going into the coldest part. The completion of the Nordstream 2 pipeline from Russia under the Baltic Sea directly into Germany occurred late in 2021, but the EU has not certified it for use, so a large, expected supply of more gas is not available to Northern Europe currently. Meanwhile, winter conditions have limited solar generation during the winter and wind generation has not met expectations as there was less wind in the North Sea than expected. Finally, Germany retired three of its remaining six nuclear reactors on 12/31/2021 (3 GW of power) due to its prior agreements with green politicians/activists, with the other three due to be retired on 12/31/2022. Germany, and many other European countries, find themselves short of energy, and utilities have had to bid up prices of natural gas, electricity <u>and even coal</u> to satisfy winter demand. And the results are ugly, as the following table from the 1/5/2022 Zero Hedge article, "EU NatGas Rally Continues Amid Russian Shipment Plunge," shows:



The US crude oil price (blue), US natural gas price (brownish) and the EU natural gas price (red) are all plotted on the same graph and converted to $/bbl of crude oil. With US crude oil at $77.43/bbl in early January, US Gas is currently the equivalent of $64.47/bbl while EU Gas is currently **the equivalent of $180/bbl! And looking at the chart above, EU Gas in mid-December traded up as high as $360/bbl equivalent!** This extreme price led to a "flotilla" of liquified natural gas (LNG) tankers being diverted from destinations around the world to Europe to take advantage of insane prices, driving prices down more than 70% from their peak. But winter conditions have just begun in Europe, and most LNG for the winter is already spoken for, typically headed to Asia. So, this crisis is far from over, and that prices are approaching the equivalent of $200/bbl is extremely concerning. Energy-intensive industries like fertilizer plants, smelters and others have been idled at times due to high energy prices. These conditions further contribute to our bullishness toward energy. And the fuel that is getting a big bump in market share worldwide is COAL; the Chinese are importing coal from all over the world, and the Europeans are running all their old coal plants to try to meet winter peaking demands.

3. Emergence of resource nationalism

We haven't seen this term much during the time of globalization, but resource nationalism is when countries declare they are either taking over natural resources in their country or they are limiting their usage to benefit the host country. This has not been embraced in recent decades as most countries were willing to export their resources in exchange for high tech goods and other valuable imports. However, inflation, scarcity and rising prices have cast a pall over world trade. And as many commodity prices have risen, politicians have begun to fear scarcities or the possibilities of scarcities. Now, some countries are moving to secure supplies to make sure they have enough.

In the past few weeks, we have actually seen resource nationalism re-emerge. As natural disasters and Covid-related delays combined with high demand for coal in China this year, China has upped its imports of coal from around the world to make sure demand was met. Its biggest overseas supplier, Indonesia, declared on New Year's Eve that it was banning all coal exports for the time being to make sure there were adequate supplies for their winter's domestic use. In one fell swoop, it appears China lost its #1 source of coal imports. Two days before, Mexico announced that it would be suspending crude exports in 2023, with 2022 exports to be half of the level of 2021, in order to better supply domestic needs and lessen its dependence on imported fuels. Also, both Peru and Chile elected leftist/socialist presidents this fall, both of whom ran on platforms that included keeping domestic resources (in this case, base and precious metals) for domestic usage by the countries' citizens (although these policies may still not be put in place).

No doubt Chinese officials' declarations earlier this year that Chinese companies and provinces needed to secure energy and other raw materials needs "at all costs" is a contributing factor to these decisions – if Chinese entities lock up all the surplus production of energy, domestic producers may not have extra capacity for unexpected needs. Even the US is not immune to this, as Ron Klain, President Biden's White House Chief of Staff floated the notion of re-instituting an export ban for US petroleum as prices of gasoline rose this summer/fall helping drive inflation statistics to 40+ year highs.

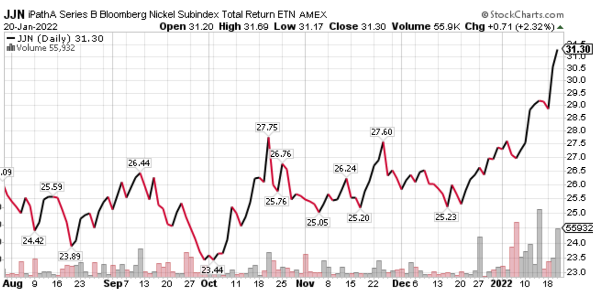
Thus, the emergence of resource nationalism is another bullish factor for owning energy companies, whether they be production companies, transportation companies or downstream companies, like refiners (and even chemical companies, if they have pricing power). We continue to hold our supermajors and infrastructure/midstream/MLP companies, and we have added some petroleum exploration & production company stocks to portfolios. We will continue to look at other attractive opportunities, including other forms of energy (possibly coal) and international energy companies.

Commodities/Precious Metals

While commodities fluctuated in value during the fourth quarter, prices for many commodities have advanced in 2022 as supplies are becoming more of a concern and demand continues to be strong.

Base metals prices and mining company equity have reestablished bull markets that had paused earlier in the summer when the Delta variant had cooled worldwide economic growth this past summer. But base metals prices have recovered, and we continue to find base metal dynamics attractive. More traditional metals like nickel and tin have rallied starting in December (see charts below):

Nickel



Tin

Other, less traditional metals used in renewable energy vehicles, batteries and other facilities are also showing attractive supply/demand fundamentals. UBS has projected growing lithium deficits in supply (see chart below, supplied by Twitter user @chigrl), and we have invested in lithium mining companies in a number of Kanos accounts:

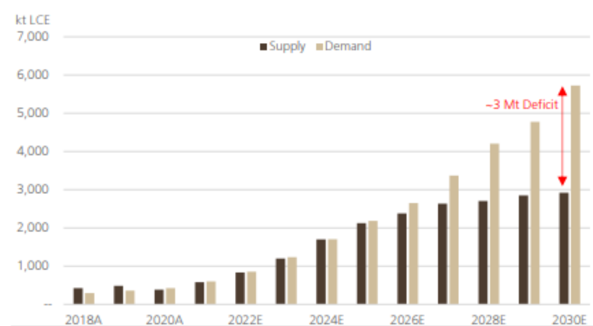


Figure 6: ...but supply is expected to lag...

Source: UBSe.

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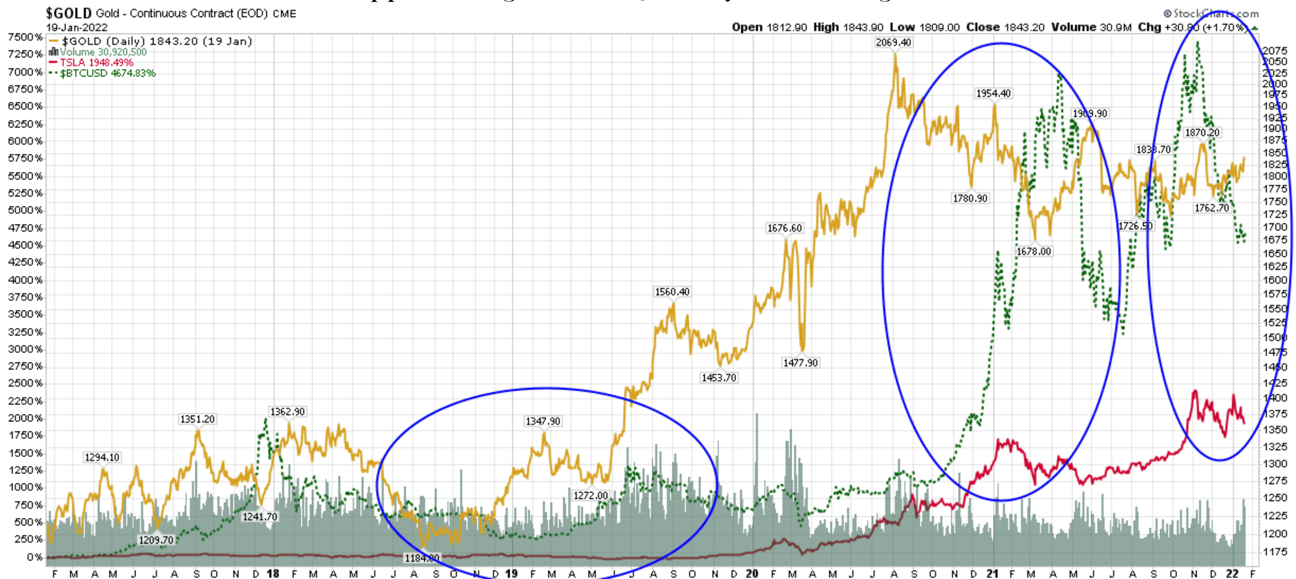
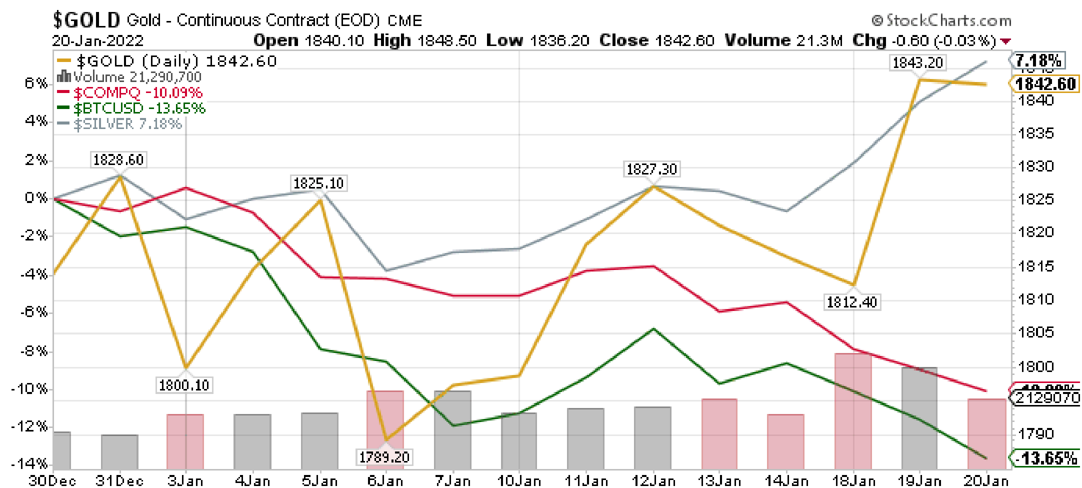
Precious metals have all the elements are in place to go back to 2020 highs, but prices have been vulnerable to bear raids as they continue to consolidate their big 2020 gains. Gold suffers from a perceived competition with Treasury debt as a safe haven. As yields have moved up recently (and their real yields, while still very negative due to high current inflation, are moving higher due to higher nominal yields and perceived falling inflation), gold has suffered in alleged competition. We don't think Treasuries are surrogates for gold, especially as QE winds down, interest rates head up and possible Fed Balance Sheet reduction makes Treasuries more plentiful (and thus less attractive). Add in that the US Government will need to continue to fund its large and continuing budget deficit (and any further stimulus that can be passed, including a possible watered-down Build Back Better stimulus), and the supply of so many new Treasuries should dim their attraction and push down the dollar's value in tandem, making gold more attractive than before. The continued unattractiveness of international currencies as stores of value, especially the yen and euro, both very unattractive macroeconomically, and gold and silver should be adopted by more institutions as stores of value.

It has been suggested that cryptocurrencies are competition for precious metals, but further analysis points to this not being so. In the following chart, we have plotted the gold price (for the last five years) versus the price of bitcoin and the price of Tesla stock (a proxy for high-flying US Nasdaq stocks). We have highlighted three instances of gold and bitcoin diverging in the blue ellipses on the chart below. The first, from late 2018 to late 2019, shows gold moving up from below $1,200/oz to highs above $1,400/oz while bitcoin fell during the timeframe. The second, from mid-2020 to mid-2021, shows bitcoin climbing strongly, then correcting some of the move, while gold moves from its mid-2020 all-time high downward, only recovering during the time bitcoin was correcting. And the third ellipse, from late 2021 to present, shows gold fluctuating in a small range while bitcoin sets new all-time highs, and then corrects from there. To our eyes, bitcoin moves along with Tesla in 2020 and 2021, first rising strongly (in the middle ellipse) when Tesla is rising strongly too, and in late 2021, when Tesla sets its all-time high just before bitcoin does, and then settles back somewhat around the same time bitcoin corrects. To us, this shows bitcoin is driven more by speculative traders (and "investors"), following momentum flows like those moving into Tesla and other Nasdaq highfliers. Early 2022 swoons in bitcoin and Tesla have been opposite to gold's mid-January 2022 strength.



As we go to press, gold has moved up more than 2% during 2022, while the Nasdaq is down nearly 10% and bitcoin is down nearly 20% from its end of 2021 price. We believe precious metals are reacting to the reality of Fed tightening, mounting geopolitical tensions around Ukraine/Russia and the apparent overt weaponization of the dollar by the Biden Administration as a geopolitical tool, dimming the dollar's appeal and boosting the appeal of precious metals. The chart below shows the January rise in gold and silver prices alongside the slide in Nasdaq (red line) and bitcoin (green line) prices.



In Kanos portfolios, we continue to own base metals mining companies, especially those that produce copper, zinc, nickel, tin and others – these are used not only in traditional buildings and infrastructure, but they are also key components to the buildout of bigger, better electrical grids and for electric vehicle infrastructure. We also own ETFs of companies in the lithium and rare-earth metals businesses, key raw materials for high tech products (and obviously for EVs too). And we also own agricultural companies and ETFs that reflect physical grain prices, attractive due to supply chain problems in many areas and lower crop yields seen in many areas in the last couple of years.

We continue to overweight precious metals companies due to their attractive economics: metals can be produced with predictable costs in the companies we own, while the industry as a whole has continued to limit exploration expenses. Investors' insistence on companies' maximizing cash flow and boosting returns has led to a dearth of exploration. We have tried to pick companies for Kanos portfolios that have attractive (mostly North American) mines with the ability to expand reserves around current mines and develop the few large attractive development projects they kept in their portfolios from prior cycles. More speculative possible mine locations are mostly uneconomic at current materials prices and gold/silver/byproduct metal prices, making most "greenfield" mines unfinanceable and thus unavailable for at least the 10+ year lead-times typically needed to get such mines online.

Summary

Our portfolios are well positioned for the anticipated conditions we see occurring in the first quarter of 2022 and potentially beyond. The US economy is growing, with both high employment and high inflation. The Fed is now concerned about inflation/higher prices, and it has started tapering bond purchases with rate hikes on the way, most probably starting in March 2022.

Equity investors have taken to heart Fed moves and their effects on future company profits and economic conditions. Formerly high-flying growth stocks are seeing a rerating while beaten down value stocks, especially energy and commodity producers, should continue to enjoy a rotation of investment funds into these lower valuation, cyclical companies. High and persistent inflation makes bond and other fixed income investments much less attractive than in the past, and the uncertainty of central bank actions and geopolitical developments makes international investing still less attractive than US and US-centric investments.

Energy and precious metals are more attractive areas of current investment, and our overweight of these sectors in our portfolios should be beneficial during 2022 and going forward. The lack of capital investment in the energy, materials and industrial sectors should continue to make companies we own with plentiful reserves in these sectors attractive at recent valuations. Their underperformance in recent years also makes them less "crowded" investments, increasing their appeal. We believe they will hold their value admirably at a time when tightening financial conditions due to central bank hawkishness could cause multiple compression on highfliers from the last few years.

Kanos Quarterly Commentary

Doomberg: Food Crisis Dead Ahead

We read a lot of different perspectives at Kanos, trying to stay on top of issues that affect our portfolios. There are many articles that strike us and qualify for inclusion in our Quarterly Letters. But recently, we've come along one or two per quarter that shove everything else out of the way – we think they are that important.

We read one of those in December about our impending food crisis worldwide. It was written by an anonymous financial markets analyst/pundit who publishes articles under the sobriquet 'Doomberg.' I have heard him interviewed, and he said he publishes anonymously (and tweets frequently as Doomberg) so he can take any stance he wants, without having to conform to a certain political, economic or societal perspective. Thus, he believes his points of view are easier to read than those coming from 'this side' or 'that side.' We agree.

Doomberg authored a provocative article on food in October called "Starvation Diet." It struck us as too important to not include, so here goes:

KANOS
CAPITAL MANAGEMENT, LLC

Starvation Diet

Doomberg

Oct 10

"*It's important to recognize that net zero* ***demands*** *a transformation of the entire economy.*" – Larry Fink (emphasis added)

We are on the cusp of a significant mass starvation event of our own making. Soon, tens of millions of the world's most impoverished people will die from an inability to feed themselves, while many of those comfortably getting by now – especially in the Western World – are in for a shock.

The leaders who put us in this position are doubling down on their misguided energy policies and will continue to do so until they are overthrown. I doubt they will go peacefully. Between now and then, they will use all manner of surveillance tools to spread Orwellian propaganda, misdirect blame, and crush dissent. Leading technology companies will greedily facilitate this modern incarnation of the Great Leap Forward, imaginary utopian ends justifying all manner of grotesque means.

Other than that, things are great.

For the latest evidence that society is hurtling into an immovable wall at top speed, we turn once again to the fertilizer market and connect a few dots for our readers. Monumental news broke at the end of September, and yet almost no mainstream outlet is covering it. We expect that to change shortly. For now, we turn to *Progressive Farmer* for a summary:

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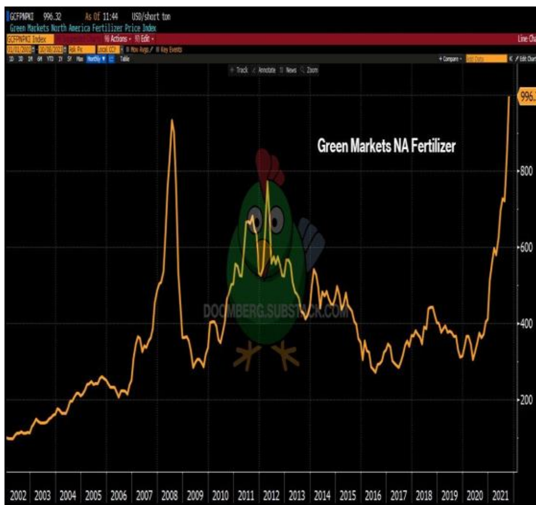
"*The move by China earlier this week to ban phosphate exports until at least June of next year puts even more pressure on global phosphate trade. The U.S. doesn't buy much phosphate from China, but the country represents about 30% of world trade. Now China's traditional buyers will be looking elsewhere.*"

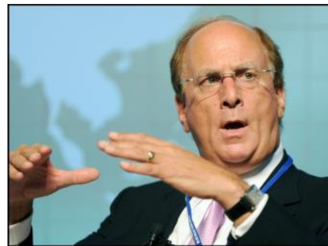
We've written extensively about how the market for energy in Europe broke and how the ripple effects will snap through our delicate supply chains like a whip. When the supply of critical goods goes short, countries implement protectionist policies in a futile attempt to minimize the impact at home. A cascading series of retaliatory moves usually follows, leading to economic vapor lock. We are seeing that pattern play out now in agriculture.

To keep the chemistry lesson as simple as possible, you need natural gas to produce ammonia and energy from fossil fuels to mine for phosphate. You need ammonia and phosphate to make fertilizer. You need fertilizer to grow food at scale. You need food to keep the peace.

As you might expect, the price of fertilizer – already under pressure from gyrations in the natural gas sector globally – skyrocketed higher on the news that China is halting all phosphate exports. Farmers will either raise prices dramatically or go broke. Inevitably, we'll see an unhealthy mix of both.



> Inflation in the food sector, already running hot, is set to go vertical. The combination of higher costs, lack of supply, labor shortages, and broken logistics has set in motion a crisis which can no longer be avoided. Prepare accordingly.
>
> The opening quote of this piece comes from the 2021 edition of Larry Fink's annual letter to CEOs. As CEO and Chair of BlackRock, Fink is one of the richest and most powerful people on earth (that's him below, choking off the supply of fossil fuels). Through a perversion of financial engineering and scientific illiteracy, we've delegated the fate of humanity to a man whose claim on this power derives from his ability to vacuum up pension fund allocations. The caviar, Kobe beef, and white Alba truffles at Fink's cocktail parties will undoubtedly continue to flow, but he would be wise to keep a keen eye on the wait staff. Somehow, I doubt he is a good tipper.



The article is pretty biting, but I believe the author is upset about the situation and it comes out in his writing on it. I thought the two key passages were:

> 1) "To keep the chemistry lesson as simple as possible, you need natural gas to produce ammonia and energy from fossil fuels to mine for phosphate. You need ammonia and phosphate to make fertilizer. You need fertilizer to grow food at scale. <u>You need food to keep the peace.</u>"
>
> and
>
> 2) "Inflation in the food sector, already running hot, is set to go vertical. The combination of higher costs, lack of supply, labor shortages, and broken logistics has set in motion a crisis which can no longer be avoided. Prepare accordingly."

We have read many accounts of how food is going up in price and is harder to get to market in quantity and close to historical costs, but we don't see much that talks about the possibility of ongoing food

shortages. Food shortages are always thought of as temporary and 'should be' fixed as soon as Covid ends and transportation "gets back to normal."

But one thing seems to be missing from the climate change/supply chain problems/just get through Covid discussions: Food production depends on affordable, reliable energy at each step in order to get food to consumers. There is no room for gaps in transition from one energy delivery system to another, i.e., it doesn't matter if tractors are diesel powered or electric, they must be able to work around the clock when needed – and cannot rely on periodic delivery of energy. Thus, energy reliability, currently only delivered in bulk by petroleum products, is a must; the Biden Administration's limiting of fossil fuel industry development, coupled with the world's green advocacy and leaders aiming for quick abolition of fossil fuels, is going to lead to a food supply disaster. An energy transition from petroleum to renewable energy supplies can only happen when the former system is FULLY replaceable by the new system, otherwise our food (and transportation) deliveries will not work.

We have not heard these views even discussed in our readings of finance, economics, macroeconomic planning and general news. **We need to get the word out. Food needs cheap, reliable energy; not enough energy means not enough food. Not enough food = riots, violence and societal breakdown.** The Arab Spring in 2011 led to the downfall of a number of governments and lot of violence; why? Lack of food in Tunisia caused rioting and violence; it quickly spread to Egypt and other countries, and it took many lives while luckily fading away relatively quickly. What will happen this time if more countries around the world experience food shortages?

Kanos Quarterly Commentary 2

Bubble Mentality and Cognitive Dissonance

Below is a second commentary which we felt was also important to share.

On December 15, 2021, the Federal Open Market Committee (FOMC) of the Fed announced the results of their most recent meeting. After adding a historically huge amount of monetary stimulus to the US (and thus world) economy to counter the effects of the early 2020 Covid shutdown, the Fed was not only starting to withdraw this stimulus (as announced in November), but the level of now non-transitory inflation meant that the taper would occur much faster than originally thought and that subsequent rate hikes would occur earlier and more quickly.

What was the reaction in the markets? Stocks and bonds, after bouncing around for a short while, started trending upward again: stocks rallied strongly, bonds weakened slightly but not very much, and the US dollar fell in value. Wait….what? When buying of something lessens (like tapering the Treasury and mortgage bond purchases by the Fed), the price should go down as less buying pressure is in the market (i.e., bonds should drop). In addition, a lower rate of QE means less liquidity being injected into the financial system, which means (on balance), pressure on interest rates to go higher. Couple that

with the Fed's financial projections (presented at the meeting) that showed interest rates being raised sooner and more quickly, and this should cause higher financing costs, and a higher discounting rate, which should impact future profitability and asset values, respectively, for equities and drive down their value. Finally, higher interest rates for Treasuries, mortgage bonds and other US fixed income securities should make them more attractive to foreign buyers, causing more to need dollars to buy these now more attractively yielding securities, pushing up the value of the US dollar. But in this case, none of these happened. Stocks were up, bonds were basically flat, and the dollar was down – more of the same from the 2021 script.

Why? Financial theory would say that participants must have already priced in the Fed's "news" and that the reactions were to what participants believed would occur from future financial decisions by investors and monetary authorities. But is that really true in this case? Typically, Fed decisions have had possibilities discussed beforehand, so while decisions aren't usually out-and-out surprises, changes in policy (a faster taper and earlier interest rate increases), when made official, cause anticipated and usually well-understood reactions in the market.

There is another explanation of why these reactions occurred: a Bubble Mentality that was formed in investors' minds over the past few years, and the Fed's inability to counter it.

There is also some cognitive dissonance by the Fed in its announcement that day. While the Fed said it was "getting tough" by tapering faster and raising rates earlier, in reality, **the Fed is continuing to supply nearly historically high amounts of monetary stimulus to the US economy until the taper is complete. In addition, the Fed left undetermined whether they would maintain the size of its balance sheet. If it did, the Fed would have to reinvest up to an estimated $60 billion per month just to maintain it, which turns out to be almost half the peak amount of monetary stimulus, after the "taper" is supposedly complete!** Thus, the reaction isn't completely off-base, it's the rhetoric of the Fed and financial press that shows that the Fed has a problem: it continues to supply bubble-like stimulus to the financial markets and is finding it difficult to stop. Thus, it is showing cognitive dissonance: they think they are "getting tough" and "fighting inflation" but are so used to delivering easy money policies that they continue to build the Bubble Mentality in financial market participants.

This Bubble Mentality is everywhere in financial markets now, thanks in large part to the Fed's continued easy money policies. Anecdotes include:

1) A friend in a leadership group to which I belong wanted to talk about stocks recently after a meeting. He wanted to talk about his holding of GameStop (GME) and his son's holding of AMC Theaters (AMC). He asked me about their prospects, after both had dropped a substantial percentage from their earlier all-time highs. When I commented that they were still extremely expensive from an earnings standpoint and that they could fall much further to reach the valuation levels of peer companies, he laughed and said, "yes, I agree." When I then asked if he thought either he or his son would sell their GME or AMC, he laughed and said: "No – they might go right back up again!" This is certainly an example of the prevailing Bubble Mentality, but it also shows cognitive dissonance – he agrees that the stocks are extremely expensive and could fall precipitously, but he wants to hold his

because it was once much higher. [Note: both stocks are down about 50% from when we had the conversation.]

2) A financially sophisticated friend related a story to me about her 24-year-old son. He was given $250 by his grandparents in 2015-16, and this enterprising young man bought some bitcoin with the money. Since then, the bitcoin price has run up and he has made a sizeable profit; his mother (and grandparents) have recently asked him if he would take some of his profit and turn it back into "real money" now that it's worth a lot more. He refuses because he believes it could go much higher in price. Again, this young man is caught up in the Bubble Mentality – he believes that things have gone up, so they must go up more going forward.

3) The third example is regarding Cathie Wood, the chief investment officer of Ark Invest and its flagship fund, the Ark Innovation Fund. The Innovation Fund is famous for riding its overweighted position in Tesla to a couple of years of extreme outperformance, attracting billions of dollars in new investments. She is best known for investing in companies with large future upside potential that exhibit large sales growth (or in some cases, potential sales growth) but are generally currently unprofitable. However, in 2021, the fund was down 27%. She was interviewed in mid-December, and she claimed that her holdings should be considered "deep value" (i.e., very underpriced compared to their inherent value) and that since the portfolio companies are such 'disruptive technologies': "…the opportunity in our strategy is huge right now. We expect a compound annual rate of return of roughly 40% over the next five years," said Wood in the interview. Not only are fund managers/executives not supposed to predict future returns without very accurate information, but the claim is outrageous for the size of the claim and the naivete of making it. The S&P 500 has only returned more than 40% five times since 1926 (when statistics started being kept): 1928 (at the height of the 1920s boom right before the crash of 1929), 1933 and 1935 recovering from the greater than 90% crash of the 1929-1932 period, and 1954 and 1958 when the USA was the unrivaled powerhouse of industry for the world post-World War II. Not after the dot com crash of 2000, not after the 2008-2009 financial crisis, not after the Covid drop in March 2020.

To achieve "40% compound annual returns for five straight years," would be monstrous. As of July 2021, Ark Invest had about $53 billion in assets under management. If we discount that by redemptions and underperformance to mid-December, we will estimate that assets are down to $40 billion. $40 billion, if it were to gain 40% a year, would be $\$40\text{ billion} * (1+40\%)^{5}$, which calculates to $215 billion, far too much money to continue to find such amazing opportunities which could return 40% year-after-year. But here, too, alleged consummate professional Cathie Wood, the most famous fund manager in the US currently, has also succumbed to the same Bubble Mentality. It is somewhat understandable that no one had heard of her eight years ago, she raised money and did the equivalent of "betting it all on Green 00" and it hit on Tesla going from a split-adjusted $40-60/share in 2014-2016 to a stratospheric $1,000/share today. A veteran of the investment business who started her financial career in 1977, co-founded a hedge fund in 1998, and ended up as the chief investment officer of thematic strategies at investment giant AllianceBernstein for 12 years should understand better how investment opportunities and returns work. It goes to show that even a finance insider who's literally been inside the business for the whole financial revolution starting in the early 1980s cannot resist the Bubble Mentality when it hits her.

These three examples show how professional businesspeople, young amateurs just entering business/ investing and consummate finance professionals have all been sucked into the Bubble Mentality. The Fed has been the main culprit by continuing to provide oceans of liquidity at arguably too-low interest rates and eased monetary policy at each financial upset since the late 1980s. No wonder so many people think markets only go up, and if they don't, the Fed comes in and rescues banks, investors and other market participants with easy money and a ready fire hose of liquidity.

However – it's different this time. The US hadn't experienced any protracted episodes of inflation since the 1970s-early 1980s until now, and low interest rates and easy money have made it even worse. The Fed is now "in a box;" they are being forced by financial circumstances, political flack and the start of professional ridicule by the financial industry for not fighting inflation during 2021, which is one of its two explicit mandates (the other being "full employment"). So, to fight inflation, the Fed is tapering its QE bond purchases and will be raising interest rates, almost certainly starting in March 2022. This highly leveraged, markets-always-go-up (or are rescued by the Fed's easy money) market mentality is about to be challenged with higher rates, lower liquidity and less attractive investment opportunities going forward. We understand these conditions and have your portfolios ready to face these changing conditions. We will be able to analyze and react to these new and changing conditions because we have not been captured by the Bubble Mentality and the cognitive dissonance it often causes in market participants' minds. Stay tuned.

The Managers of Kanos Capital Management
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