KANOS
CAPITAL MANAGEMENT, LLC

First Quarter 2022 Investor Letter

Portfolio Comments

The first quarter was extremely turbulent, with due to Russia's war with Ukraine, rising inflation, rising interest rates and early-quarter stock market weakness. Even though Covid receded in much of the US, the economy started to slow as continuing supply woes and rising inflation put a crimp in economic growth, while worldwide growth struggled with new outbreaks of Covid in China and to a lesser extent in other parts of Asia and Europe. The main event of the quarter was the attack on Ukraine by Russia in late February, which put further pressure on commodity prices, supply chains and delivery times for products of many types.

We were pleased with the performance of Kanos portfolios, which were up an average of 8.6% in the first quarter. The quarter was characterized by a weak January, a strong February and more gains in March, in most portfolios. Leaders to the upside were the oil majors, Chevron (+39%) and Exxon (+36%), defense stocks like Lockheed Martin (+25%), base metal/commodity stocks like Freeport McMoran (+20%) and the Copper Mining ETF (+25%) and pharma stocks like Merck (+8.1%). Our overweighted position in precious metals was up on average +16%, led by Newmont Mining (+29%), Agnico Eagle Mines (+15%) and Royal Gold (+35%). Technology stocks and more speculative smaller stocks were generally weaker, like Microsoft (-8%), Alphabet/Google (-3.4%) and gene therapy stocks like Intellia (-39%) and Crispr (-17%) Fixed income investments were weak as well, validating our underweighting bonds. Bitcoin was on a rollercoaster but ended down with the Grayscale Bitcoin Trust down -11% for the quarter.

More broadly, the S&P 500 lost 4.60% during the first quarter, ending at 4,530.41, while the Dow Jones Industrial Average fell 4.10% (all performances reflect total returns). As stated above, the big quarterly winner was the Energy sector (+39.08%), the best performance of the sector in history. The only other positive sector for the quarter was Utilities (+4.77%). Consumer Staples (-1.26%) and Materials (-2.37%) performed relatively well. Quarterly laggards included Communications (-11.25%, second quarter in a row it was the worst performer), Consumer Discretionary (-9.35%) and Technology (-8.51%) [all performance amounts reflect total returns]. The US dollar was strong as a safe haven, with the US Dollar Index gaining 1.80% for the quarter. In spite of the dollar strength, bonds had their worst performance in more than 40 years, with the Bloomberg US Aggregate Bond Index (mostly Treasuries, investment grade corporates and mortgage bonds) losing -5.9% for the quarter, with the 10-year US Treasury ending the quarter at 2.324% (up from 1.496% at 12/31/21). Commodities were the big winner again this quarter, with the S&P GSCI (energy-heavy) commodity benchmark rising 29%, the biggest quarterly gain since 1990. Nymex diesel (+58.41%), US Natgas (+51.26%) and Nymex WTI crude (+33.30%) show the extent of energy's gains. However, other commodities also posted big gains: wheat (+30.50%), corn (+26.21%) and cotton (+20.51%) rose the most. Precious metals also performed well, with gold up +6.67% and silver +7.69%. Crypto-currencies had a seesaw quarter, with Bitcoin losing -1.4% for the quarter while Ethereum dropped -8.7%, never recovering from its January losses.

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Introduction

Wow – the world has really changed since we last wrote to you. Inflation has increased significantly, the Fed has gone from a slow gradual interest rate rising cycle to a plan for an abrupt, punitive combination of large rate hikes and quantitative tightening, and, of course, Russia attacked Ukraine, and the Western world responded with sanctions. The investment implications of these events don't really change our point of view, instead, they speed up the progression and thus the consequences of the world's previous economic moves. We have a lot to say in this letter, so we will get right to it.

Economy

The economy in 2022 seems to be more challenging, as predicted, due to supply & labor constraints, lack of any further fiscal stimulus, and rising inflation that have combined to moderate the fast growth seen through most of 2020-21. The Atlanta Fed's GDPNow indicator has the US economy slowing from its 6.9% 4Q growth rate to just a 0.9% rate for 1Q 2022.

However, this weakness appears to reflect the still slow nature of January-February when some of the nation was still encumbered by Covid restrictions. Since early March, most of the nation is operating more normally, and employment has been picking up, with economic activity increasing in manufacturing, entertainment, travel and restaurants/bars. Monthly employment gains have continued to show strength and wages for workers have been climbing steadily.

One fly in the ointment is the recent weakness in sentiment/consumer confidence. The monthly University of Michigan sentiment survey, widely followed on Wall Street as the independent sentiment indicator, dropped to 11-year lows, with both the Current Conditions and Expectations components also hitting multi-year lows. The survey results, which also showed decreased confidence during the initial Covid lockdowns, recovered during 2020/21 but now has dropped to new lows, reflecting Americans' using up their savings and pessimistic about the high (and growing) cost of living, driven by the rapid inflationary price increases of the past twelve-plus months. The reason we bring up the sentiment indicator is its extreme reading and its pointing to a consumer near the "end-of-his/her-rope." We think that bodes poorly for economic growth in 2022 and beyond. In confirmation of a further slowdown, the US Treasury yield curve inverted in mid-April, where short term interest rates (the 2-year notes) yield more than the longer-term Treasury, in this case the 10-year bonds. The inversion of the yield curve points to a recession in the next 6-24 months. [The reasoning is that as the Fed raises short-term interest rates to slow either an overheating economy or too-hot inflation, and the market recognizes that higher interest rates will affect the economy (and markets) enough that they buy longer-term Treasuries as a safe haven to park assets as the economy slows, thus driving down long-term rates through increased buying.]

Another brake on economic activity is, of course, the rising inflation we are seeing, made worse by continuing supply chain problems. While supply chain problems were initially due to Covid lockdowns, geopolitical events have added to the mix to make <u>supply chain problems worse today than earlier in 2021/2022:</u> recent PMI (Purchasing Managers Index) surveys show the majority of US industrial managers continue to see delivery times getting worse. Most do not see any improvement, and the hostilities of Russia-Ukraine with the accompanying sanctions, along with economic export bans,

continue to "gum up" the works of world trade. Higher prices and longer delivery times (or even delivery uncertainty) is evident across the spectrum, still affecting semiconductors for autos worldwide, fuels/chemicals/fertilizer/crops worldwide and metals sourced from various different geographies, including the war area.

We respect the signals of the markets and the various economic and sentiment statistics and surveys, so we accept that the US economy can slow, eventually into recessionary territory. But we also see that a number of industries are doing well and have promising futures, meaning that some of the economy may suffer more than other parts. We continue to believe that the underinvestment and growing demand for materials from the extractive industries has further growth in store, and we also believe that reshoring and establishment of regional/national supply chains to replace broken/untenable supply chains formerly allowed by unfettered globalization will lead to a building / infrastructure renaissance for parts of the US for years to come. Thus, we believe our investments, many of which are in these industries, will continue to do well currently and in the future.

One more word about the US economy: a foreign war in which we have only an indirect influence is probably good, on balance, for the US economy. Our country will provide food, weapons and lots of new government spending not only for aid to Ukraine but also for aid and deployment of troops to the NATO countries of Eastern Europe and for care of the millions of refugees caused by the war. While this will further contribute to the US debt problem, in the short-term, it will boost a number of industries providing products and support to countries in Europe affected by the conflict.

World economies obviously have very different dynamics and thus, uneven prospects going forward. We will quickly run through them and our investment opinions.

In Europe, the inflation that has caused energy prices to skyrocket (even before the war) is a definite detriment for European economies, with no real relief in sight. Even if the war were to end tomorrow, sanctions against Russia will almost certainly continue for months or probably years after hostilities end. In addition, raw materials which in the past have been sourced from Russia are, for many, subject to economic sanctions, so they will have to be sourced from other places, causing delays and costing more, both of which hurt economic activity and profitability. In addition, lots of food is sourced from the Ukraine and Russia, so the availability of food from either of these countries is certainly reduced, which means food prices will be rising too. Finally, Ukraine has been a region of primary manufacturing, so parts and subassemblies from the war region will no longer be available as many factories have ceased operation and some have been damaged or destroyed. These factors all point toward rising costs and longer supply times for all of Europe, reducing economic output and threatening recession sooner than in the US.

China had already been slowing, and the events of late 2021/early 2022 have only contributed to further slowing. China's industry thrives on cheap, plentiful labor and energy, both of which are now at risk. Energy, obviously, is a big issue since oil prices have doubled and LNG has gotten more and more expensive due to world competition. China relies on coal for a large part of its energy needs, but China has had to import more and more coal due to too much rain in its coal producing regions, which lowered production and blocked transportation due to flooding and flood damage. As far as employment, labor costs have been rising for years and now food costs are rising worldwide, making feeding their populace a priority that takes more funds and resources. With the government's

mishandling of Covid (zero-Covid policies don't work), cracks are appearing in Xi's grip of power, economic problems aren't getting as much attention as in past years. But the Bank of China and the Chinese government have already loosened monetary policy and fiscal policy, respectively, in April, so China is stimulating its economy now.

In other major Asian nations, India seems to be weathering higher energy prices so far, but Japan is susceptible, like China, to high raw material and energy prices.

Equities

The initial swoon in US equities during January and February were mostly caused by lower corporate profit expectations by investors due to continuing Covid restrictions (in big cities, especially) and slowing worldwide economic growth, and obviously the price shocks caused by the onset of the Ukrainian war in late February. Lower stock prices and hints of some resolution to the conflict provided the conditions for the March rebound, which took the S&P 500 back within 5% of its all-time highs made last November. April has seen the markets move down near March lows as earnings reports have shown many disappointments (Netflix dropped 40% in a day) and no progress on resolving the war.

On one hand, the US equity market indices have been resilient, due in large part to buying based on the US status as a safe-haven for capital, its industrial/military might (to supply Europe and especially Ukraine with more and more arms, now and in the future), and the promise of at least some growth in the economy due to heretofore easy monetary conditions. Frankly, investing in most industries in the US looks more attractive than similar situations in Europe and China.

On the other hand, US equity markets also face some major headwinds, the most obvious being a Fed determined to tighten policy to fight "high and going higher" inflation. One thing in the markets' favor has been the Fed's slow speed in implementing policy – we have seen only one hike in March and 50 basis points in May, with QT starting in June but not reaching its full $100 billion rate until September. However, the Fed is talking tough, projecting raising rates 2-3% during 2022 alone, in which there will probably be 50 or possibly even 75 basis point hikes (twice/three times as much as 'usual' hikes of 25 basis points), which are supposed to act as jolts to the economy, braking speculation and leading to slower growth (and thus, lower inflation) through higher 'cost' of money.

Our concern is that the Fed reverses its new tightening policy or continues to 'slow walk' it as a result of public pressure, which will result in little slowing of inflation. Continued inflation will continue to put pressure on corporate profits as costs of inputs remain high. Industries without pricing power may not be able to pass on higher costs while those with pricing power may also face headwinds as higher prices could pressure revenue growth. If stock market participants perceive further slowing of corporate profits, the stock market could face even more negative impacts. In addition, higher long-term interest rates tend to make growth stock trade at lower multiples, as investors factor higher financing costs into their investing decisions; this will probably further depress growth stock profit expectations and lower multiples, making value stocks better relative values than they've been in the recent past.

Many think the swoon of January-early March was the "pause that refreshes," meaning the market can head higher from here. But the late March rally showed almost no signs of capitulation, like large down-days with high volatility (VIX) readings, commentators on TV commenting that it's a bear market and

pundits calling for the 'next Great Depression.' While recent April downside stock market action has shown some of these characteristics, most stocks fell in orderly fashion, without any panic evident, just like they did in the first quarter downturn. Short sellers covered many of their shorts in the initial run-up in late February, so they are not a source of continued buying. Who will be new buyers is not obvious in this environment, pointing to a question of where the fuel for new buying will come.

Lastly, bonds have been showing increasing weakness (bond prices down and bond yields up). Most in the financial markets consider bond market participants to be more market savvy, and if they continue to sell (probably due to Fed raising rates and accelerating inflation), stock market participants also often sell, as bonds become more attractive and less risky than stocks in an uncertain environment. As we will cover in the fixed income section below, US interest rates have just recently shown inversion of the yield curve, where long-term rates are lower than shorter-term rates – a situation that has successfully predicted ALL recessions in the past few decades. Recessions are bad for credit (where many bond holders move to safer government bonds, like Treasuries) due to rising default possibility of corporate bonds and, recessionary economies cause equity stock market weakness.

With all that said, we believe there are still some attractive possibilities in the equities of raw materials, healthcare, consumer staples, materials, defense and utilities. Growth worries and possible recession will cause a reduction in demand for lots of products, but raw materials with supply concerns, inelastic demand for consumer staples and healthcare and the continuing replacement of / upgrades to infrastructure should cause materials companies and utility companies to continue to show attractive future prospects. The current geopolitical turmoil should give defense stocks growing markets for many years. Almost all of these sectors have above average dividend yields, providing an even more attractive investment proposition. Covid concerns in China have led to recent weakness in many of the abovementioned stocks, but we feel this weakness is short-term and will bounce (think: reopening in China echoing the market reaction when the US reopened post-big Covid outbreak) in contrast to the forecast for growth stocks discussed above.

Foreign markets show fewer interesting prospects, outside of extractive industries. China's equity markets have shown weakness for months as the government cracked down on security concerns around Chinese companies listed internationally, while the torrid growth of the past couple of decades in China has been constrained by more limited growth prospects due to large and growing outbreaks of Covid, government crackdown on "too powerful" industries (education, big tech, retail), transportation and supply chain shifts that point toward reshoring in the US and other developed markets.

Japan's equity markets could be attractive as they use a dropping yen and their technical expertise (and extensive use of industrial robotics) to stay very competitive in exports of value-added products. However, their need for importation of raw materials, especially energy, makes their competitiveness also come into question. We continue to look for opportunities in Japanese stocks but have only found their trading houses to be attractive currently.

Europe is a basket case, with their high cost of energy, their poor demographics and the new needs to spend much more on (non-productive) defense equipment. The lowest interest rates in the world (competitive with Japan) do not save them from higher input and labor costs, meaning Europe is getting even less competitive in products, leaving them searching for sources of growth. Stocks in Europe are

cheap but, again, outside of commodity industries, we don't like the risk/reward, especially due to the war.

Latin America looks to be a possible interesting area for future investment (Brazil in particular), where extractive industries are efficient and competitive worldwide due to plentiful energy and cheap labor, relatively speaking. Covid concerns in China have knocked down these stock markets too recently, but like above, we think these markets are pretty attractive, and we will look for opportunities as China reopens from its Covid slowdown.

Canada and Australia (and to a lesser extent New Zealand) are attractive for many of the same reasons, having plentiful energy and foodstuff production, meaning inflation should not hurt their economies as much and they can pass on increased costs, meaning corporate profits margins should be able to maintained at healthy levels. Same concerns and action plan as above vis-à-vis China's reopening as Covid recedes.

We are invested in and continue to look for new attractive opportunities in the abovementioned sectors and geographies for investment of your capital.

Bonds

Bonds had their worst quarter in more than 40 years, as the Fed signaled their imminent tightening campaign, and bond markets built higher and higher rates into yield curves across the world. We were right to avoid the fixed income arena in the past few quarters, especially in light of the high and growing inflation problem.

The situation is virtually the same around the world: inflation is high and bond rates are still low, at least in the developed world.

In addition, the US Treasury yield curve inverted from the 2-year maturity out to the 30-year during mid-April although rates have reverted since to a more traditional yield structure. Investors are heeding the Fed's statements that they will raise rates in big jumps (50+ basis points at multiple meetings in 2022) <u>and</u> let their massive balance sheet run off at possibly as high as $100 million per month. Bond investors already were anticipating slowing growth in the US and world economies in the next couple of years; that is now exacerbated by a Fed bent on tightening policy quickly and sharply while doing QT also.

We still don't believe bonds will prove to be a safe haven, except maybe if investors bail from high-valuation stocks during some sustained weakness, putting their sales proceeds into bonds for safety and some yield. As mentioned above, there continues to be a bid in longer-term bonds as many large investors rely on their "muscle memory" to park money in bonds as they see the recession approaching, while insurance companies and pensions still have to match long-term (20+ year) liabilities with investments of corresponding maturities. However, with very high energy prices and high input costs in general recently, we believe we will continue to see high inflation in future quarters, thus hurting the rationale for being long bonds. Also, with the fed no longer buying bonds, who will be the natural buyers (in size) for the large amounts of debt the Treasury will be issuing in the next few years?

Currencies

In past letters, we've said currencies don't have much investment appeal as virtually all countries have negative real interest rates, and some places continue to have negative nominal short-term rates, even today. But finally things are getting more interesting as central bank policies start to make currency movements diverge.

The US dollar has rallied all year, acting both as a safe haven for foreign capital and a 'parking place' for investment dollars liquidated from falling US stock markets during the quarter. We think it will continue to act strongly as long as the Fed continues to talk and act tough. If (and it is probably 'when') the Fed starts to show any weakness about imposing higher interest rates and QT, we think that the US dollar could break lower. Why would the Fed show weakness? It would only be in reaction to: 1) another market 'breaking,' like the US stock market going down 25%+, for example, or 2) political pressure from the Biden Administration / Congress if recessionary conditions occur sooner rather than later and lead to a large increase in unemployment and widespread business downturns/failures (similar to the March 2020 conditions). Absent a big fall in the US stock market or early-onset recessionary conditions, the Fed is on a course for higher interest rates and the US dollar should continue to rise.

With a rising dollar, other currencies have weakened, and with many commodities priced in US dollars, inflationary pressures are building faster internationally. Some smaller central banks (Hungary and Poland, for example) have raised rates to try to defend their currencies, but many central banks have not done so.

The Bank of Japan (BOJ) is one of those that hasn't raised rates, and in fact, doubled down on their Yield Curve Control (YCC) program in which they buy Japanese Government Bonds (JGBs – sorry for all the acronyms!) to keep the yields below the ceiling of 0.25% for 10-year JGBs. This has further raised the money supply in Japan, and thus severely depressed the yen, making it the most competitive (i.e. cheap) major currency but causing even higher inflation pressures and prices in Japan.

The ECB is also one that is far behind the inflation curve, so much so that the German 10-year Bund yield is still below 1%. The ECB has said they would end their quantitative easing this summer, but doesn't see raising rates much during 2022, which keeps the euro very weak compared to all major currencies besides the yen. The energy situation in Europe also is a detriment to the euro – energy is so expensive that much of euro currency flows will have to go toward energy costs in 2022 (and beyond).

The Canadian and Australian dollars have been strong along with the US dollar as central banks raise rates in both countries, and they are buoyed by being large exporters of commodities, thus helping their economies moderate the big price increases hitting net importers of raw materials.

Last, but certainly not least, the Chinese renminbi (the yuan), has been relatively strong as China still has the highest interest rates of any large country, but its sputtering economy and its loss of some industrial competitiveness to Japan due to the weakness of the yen means that financial market participants are starting to think China may weaken their currency, as was done the last time the yen was especially weak during the mid-2000s. The yuan has recently dropped as Chinese authorities enacted more monetary easing, but a weaker yuan will 'goose' inflation in China, so we don't think China dares weaken the yuan

too much and threaten further food inflation – food inflation was a prime cause of the 1989 Tiananmen Square riots.

We don't see much attractiveness in any foreign currency, especially since we see possible sea changes in Chinese, US (if the Fed backtracks) and possibly Japanese central bank policies (if they have to defend the yen overtly). Any of these would lead to abrupt reversals of current trends; therefore, we don't anticipate very attractive risk/reward opportunities.

Energy

In our last letter, we enumerated why we thought that energy prices would continue to rise, due to 1) higher current demand (and lagging ability to build supply), 2) European winter energy price pressures, especially in natural gas and coal and 3) emerging resource nationalism. The Russia-Ukraine war has obviously exacerbated all of these trends: further limiting supply, making European gas (and thus coal) prices even higher and causing countries to restrict supplies of some key commodities.

Even worse for oil supplies, Russia supplies as much as 5 million barrels per day of exports to the world (roughly 5% of total daily world usage), and with US/European sanctions overhanging the situation and the buying strike by many Western/developed world energy companies, Russia is having a hard time selling all of their production internationally, meaning barrels are backing up and being stored. In addition, Russian production can roughly be divided into Eastern and Western. Eastern, or Siberian, production can be exported from Vladivostok-area pipelines overland to China or to tankers that can take production to East Asian and South Asian buyers. Western Russian production, which is in and around the Ural mountains, generally travels West to be exported by pipelines to the Black Sea area, very near where war is raging. Lack of insurance coverage and lack of desire by ships to traverse and load tankers (due to war danger in the area) has led to a large reduction of exports from Western production. And this leads to the real problem (hat tip to Peter Ziehan and his vast knowledge of geopolitics and the troubles surrounding Russia): Russian oil fields are old and must be maintained expensively and meticulously to keep producing. The trouble is two-fold: 1) the only entities with the technological and operating knowledge to keep these Russian fields operating are Western oil field service giants Schlumberger, Halliburton and Baker Hughes. These companies are in the process of shutting down their Russian activity (under political pressure), meaning when things in the Western Russia oil fields break, caretaker Russian crews may not be able to restore production levels, and 2) if production gets shut down, due either to lack of buyers or production problems, these wells must be redrilled and recompleted to produce again, which could take months or years. In addition, if the pipelines stop flowing significant volumes, they will also have to be inspected and repaired before they can be reloaded. And finally, without Western oil field services, Russia will not have the parts and equipment needed to continue to maintain their oil wells for long. All in all, it means that the world will almost certainly lose at least 2 million barrels per day of supply as Russian barrels fail and are no longer available even to countries friendly to Russia. This also means that the world will gradually need more and more new sources of incremental production just to backfill losses from Russia.

This need to find more barrels is one main reason the Biden Administration has announced that the US would provide 1 million barrels per day out of the Strategic Petroleum Reserve (SPR) for the next 180 days (and obviously, they are also doing so to try to drive down the price of gasoline before the

November midterm elections). Driving down oil, and thus gasoline prices, seems to also be the main rationale for the Administration to be engaged in reconciliation talks with both Iran and Venezuela, both of which are avowed enemies of the US but would welcome US reproachment to get rid of some of the sanctions that have severely limited their oil production in the past few years. However, and curiously, the Administration will not seek any kind of peace with US domestic oil and gas producers, seeing them as a political enemy which must be browbeaten and not given any additional incentives to grow production, while still limiting expansion of US production through continued suspension of US auctions of energy leases and increasing regulatory reviews and scopes to any new pipelines in the US.

But the results of trying to phase out all fossil fuels are already coming home to roost throughout the western world. One example is diesel fuel in the United States. Environmental, regulatory and political constraints on refineries on the US East Coast have led to half of East Coast refining capacity being closed over the last decade, leaving the East vulnerable to shortages of diesel fuel. The Russia-Ukraine war has exacerbated the situation since pre-war Russian diesel exports are no longer available due to political pressure not to buy Russian energy products. East Coast distillate (diesel) inventories are at their lowest level in decades, and prices along the US East Coast are priced around $6 per gallon (or higher), while prices equivalent to $7-8 per gallon in Europe are attracting supplies from US Gulf Coast refiners, redirecting supplies typically sent to East Coast markets. Diesel power is used all over the world for trucking, farming, mining and power generation in areas lacking large power plant infrastructure. The lack of supplies and inventories will not get better quickly, so high prices look here to stay.

As far as Kanos investments are concerned, we have invested in supermajor producers/refiners, in US domestic exploration and production companies and in pipeline/midstream companies. We continue to think that these will be attractive investment holdings, and we may add/switch to other energy investments along the value chain, meaning international assets that we think are attractive, relatively safe politically and could be extremely valuable, in light of the Biden Administration's ongoing war against the US energy industry. Only after a lot of pushback from moderate Democrats has the Administration bowed to a federal judge's order to lift the leasing ban and scheduled new federal land auctions. However, royalty rates have been raised and only parts of the prior leasing areas are even being offered, limiting the attractiveness of the first sale.

European reliance on Russian natural gas and renewables, that recently failed to generate the energy needed to heat/power a cold winter in Europe, is marching toward some kind of confrontation. We don't think Russia can keep supplying large amounts of natgas to Europe in the climate of total economic war that exists and appears to have no easy resolution. Construction of new LNG supply trains to send additional LNG to planned additional European LNG receiving facilities will take months or probably years, and it will also take time to produce enough LNG supplies to replace current Russian supplies. Thus, we believe LNG will be in demand around the world as the most environmentally friendly fossil fuel that provides the most heat content for consumers and industry. Therefore, we think various investments along the LNG chain could be attractive for investment, and we are looking for attractive opportunities/entry points.

Commodities/Precious Metals

Our commodity investments (along with our energy investments) have paid off so far in 2022, and we believe there is more performance in front of us. Commodities had their biggest quarterly rally since 1990. But we think there will be attractive investment opportunities that will last for years.

Why? First, as mentioned above, re-shoring industry to the US is now a force that should last many years. In addition, the inevitable move toward more and more electric vehicles means that US electric infrastructure will need to be updated and expanded. These two multi-year (and probably decade-long) initiatives will need large amounts of industrial metals, which we believe will have to be sourced in more friendly locales, meaning the Americas and Australia/Oceanic Pacific. We believe our investments in large metals/raw materials firms will continue to be attractive investments for the future.

We believe that world inflation has been ongoing since central banks started adding large amounts to their money supplies, starting in 2009 but obviously increasing immensely in 2020. However, we also think that the success of growth investing coupled with the increasing environmental activism starved capital for reinvestment by raw materials producers across the commodity spectrum, limiting reinvestment in/rebuilding of their reserves/resources, so now the world find itself short of most of the metals that the world took for granted for the last couple of decades. Reinvestment during China's buildout during the mid-2000s did build some reserves, but the Financial Crisis of 2008-2009 cut financial wherewithal as did the European economic crisis of 2010-12. This adds up to this result: the world has been depleting proven reserves of a number of metals, and these extractive industries will be able to sell their current inventories for higher prices than in the past while they look for new reserves. We believe current and future demand will require even higher prices as industries like electric vehicles will require large new supplies that will be costly to find and develop.

The following graph from Optuma shows the Bloomberg Commodity Index compared to the S&P 500 Index over the past 50 years. Stocks have far outperformed commodities until recently, and reversion to the mean could mean higher commodity prices for years to come.

In other commodities like fertilizer, while there are lots of costs and logistical problems around the fertilizer industry since so much capacity is in Russia/Belarus, we still think that owning and possibly augmenting our exposure to the industry will continue to be attractive for both capital appreciation and income. Fertilizer is the driver for higher crop yields, and as the world realizes that geopolitical and weather upsets have limited supplies for the last couple of years, restoring fertilizer use will be essential to get back to producing enough food to feed the world's people at sustainable costs.

Other metals like uranium seem to be in a multi-year bull market. We think the move higher in oil and gas prices will help reinvigorate the nuclear industry, both domestically and worldwide. We continue to look for attractive investments in uranium and nuclear development.

The precious metals, along with energy, were premium performers in the first quarter, and we think that they will continue to perform due to inflation and central banks activity. Not only do we see inflation staying at very high levels, causing more and more people to buy precious metals for investment for inflation protection of their capital, but we also think that central bank monetary reserves, for decades considered the most secure money, is no longer secure, since the US seized Russia's central bank reserve overseas deposits in the early days of the Russia-Ukraine war. The economic sanctions levied on Russia, expressed by someone on Twitter lately as "more than all the other economic sanctions levied on all other countries in history" are so extreme, only holding something of value out of reach of US sanctions can be considered "safe" by countries/bank in the future. Obviously, gold has functioned as that store of value for centuries, and we see countries returning to metals/commodities, and gold in particular, for safety, especially in light of how central banks have manipulated the amounts and thus values of their money supplies and currencies, respectively, in recent years.

Thus, we believe international banks and central banks will continue to increase their gold holdings going forward, and we see investment pools, pension funds and sovereign wealth funds returning to an allocation to precious metals that they owned in the past, especially after the 1970s when precious metals provided a lot of protection for investment portfolios, as gold went from $35 in 1971 to as high as $800 in 1980, and mining companies in some cases returned hundreds of percent of investment gains.

Summary

Our portfolios are set up for the turbulent market times we see ahead of us. Our portfolio holdings of essential industries like energy, defense, pharmaceuticals and some technology, along with our overweight in commodity companies in the precious and base metals, fertilizer, and agriculturals have performed well during 2022, and we continue to believe there is "more runway" for them during this year and in the near future. Short-term interest rates are headed higher, and we believe growth stocks like technology, communications and consumer discretionary companies will struggle with slower (or no) growth and decreasing profitability, along with shrinking multiples as long rates follow short-term interest rates higher. Bonds will be no more attractive as central banks pull back on purchases and inflation proves difficult to uproot due to supply issues, even as demand growth eases due to high prices. We think our portfolio holdings will protect your capital and benefit from this inflationary environment as other investors start to protect their capital in a similar fashion, sustaining the bull market in commodities.

KANOS
CAPITAL MANAGEMENT, LLC

Kanos Quarterly Commentary 1

The World Has Changed

The Covid-19 pandemic hit the world during 2020, causing major sickness around the world and causing political leaders to impose lockdowns, causing major economic disruptions and prompting central banks and countries around the world to stimulate both monetarily and fiscally.

As the world has emerged from the pandemic, the massive stimuli combined with human nature encouraged people across the developed world to spend money for second homes, recreation and travel. Supply disruptions occurred as a result of 1) lockdowns, 2) transportation issues and 3) lack of raw materials contributing to growing inflation in prices worldwide.

But the general widespread thought was that "things would revert to normal" as supply chains were restored, materials were available again and people went back to work, alleviating supply and labor cost pressures built up since early 2020 and allowing world economies to resume growth with inflation dropping and normality returning.

February 24th changed all of that, radically. Not only did Vladimir Putin's Russian forces attack its neighbor Ukraine, but the Western world, led by the United States and virtually all of Western Europe, declared a new cold war on Russia, significantly changing the political and economic landscape of Eastern Europe for a long time.

While Russia's attack on Ukraine is an abomination and millions are suffering in Ukraine and Eastern Europe because of it, the attack and resulting cold war of sanctions and isolation imposed on Russia by the US and Western European nations has changed the economic landscape for a very long time. Let us detail the changes we see.

Sanctions

The US and Western Europeans cut off all financial dealings with almost all Russian financial institutions, cutting them off the Swift system of bank communication and freezing all Russian sovereign and central bank assets in Europe and the US. It is said that these sanctions on the whole are more than the sum of all Western sanctions levied in the Middle East over the past few decades. A notable exception to the sanctions was that Russian natural gas (and oil) was not sanctioned, meaning Western Europe has kept using and paying for Russian natgas through Gazprombank. The EU has proposed prohibiting Russian oil purchases by member nations (the US did this in March), but there is disagreement among nations since so many rely almost exclusively on Russia as their oil supplier.

Energy – European natural gas and LNG

As a result of these sanctions, energy has become further disrupted from its already fragile supply-demand balance. For much of Europe, Russian natural gas is both a major source for winter heating and for powering industry. While Russian gas has not been cut off, the low levels of gas delivery and the lack of energy from other sources caused European natural gas prices to rise from their already very

high levels, as late winter heating needs emptied European natural gas storage. Prices have recently fallen back some as winter heating needs have dropped significantly, but the problems remain when cold weather reemerges in the autumn. Russian LNG exports from its Far East fields (Sakhalin Island JVs with Western oil majors) are limited and will dwindle as Western oil companies start their exit from all Russian operations, putting further strains on tight world LNG supplies. Very high natgas prices in Europe have attracted LNG cargoes from all over the world since March (many originally meant for Asian delivery), further tightening world gas supplies. These changes are all semi-permanent – things will not "go back to normal" even when the war ends, because we do not see the US/Western European sanctions on Russia being dropped even if hostilities cease; the Western countries look to punish Russia for its behavior, starving it of western goods and markets.

Oil Disruption

Russian crude oil exports, which are gradually being interrupted, could fall semi-permanently and be at reduced volumes for years, if wells are taken offline (due to lack of storage space for excess production) and Western oil service companies are no longer in Russia to restore production volumes. Many refineries around the world are configured for Russian Urals and Far Eastern blends – their removal from world trade will mean refineries will run at lower levels or at least less efficiently. In addition, Western political and social pressure has caused many users of Russian crude oil worldwide to "self-sanction" their purchases, meaning purchases which are technically still allowed are not made due to political or peer pressure. This means the amount of Russian crude oil could fall further unless replacement buyers, like China and India lately, can be found quickly to mop up excess Russian production.

Food Disruption

The war has put grain exports from Russia and Ukraine at risk, with the normally bountiful Ukrainian harvests that feed millions around the world at risk for harvesting as well as transportation for export. In addition, Russian grain exports are subject to sanctions, limiting their availability to Western countries too. Both Russia and Ukraine are also important sources of wheat for export: Russia is first in the world with 18% of international wheat exports while Ukraine is fifth and supplies 8% of world wheat supply. Ukraine is also the fourth largest international exporter of corn with 13% market share in 2020. Ukrainian wheat and corn production is estimated by some to be down 50% due to the war, so a big production deficit could radically affect Ukrainian food supplies as well as countries that rely on food imports. Russian grain is only available to countries ignoring the sanctions on Russia, meaning China, India and other Asian and African countries. However, another limiting factor on grain exports from the region is the problems with transportation through the Black Sea. Discussed below in more detail, the Black Sea is a war zone, thus insurance for ships is extremely expensive (or not available at all), limiting the ability to get harvested grain to end-users.

Wheat, corn and soybean prices were already high due to poor weather conditions around the world in 2020-2021, even before Russia's invasion of Ukraine. Both wheat and corn are nearly double the prices of 2020, and the shortage from Ukraine will almost certainly result in food crises in many countries, as the World Bank and Rockefeller Foundation have warned about in recent weeks. Large wheat importers include Egypt, Indonesia (two of the largest populations in the world), Turkey, China,

Nigeria and Italy (listed in order of size of 2019 past imports). Large corn importers include: China, Turkey, Iran and Israel (2019 export estimates).

Transportation Disruption

Another factor that will further curtail Russian and Ukrainian exports is the war's toll on the transportation systems of the Black Sea. The Black Sea is the major transit way for Russian and Ukrainian exports of both energy and grain. The sea's inclusion as a war zone (for possible targeting by combatants or the danger of seaborne mines) means insurance for ships is far more expensive (or unavailable at any price), so tanker loadings from Caspian pipelines that terminate at Black Sea ports might be curtailed, further curtailing Russian and Central Asian production. This issue also affects the large amounts of grain traditionally shipped out of Russian and Ukrainian ports to Turkey, Middle Eastern destinations, Africa (Egypt, Ethiopia) and Asian countries as far away as China and Indonesia.

Strategic Metals

Russia is also the producer of many strategic metals, including steel, nickel and aluminum; it is a top-five producer of all three. In addition, Russia is the largest producer of palladium, essential to the manufacture of catalytic converters in gasoline-powered cars, in which it has a 40% world market share. The US and western nations have not sanctioned metals explicitly, but, like energy, there appears to be some "self-sanctioning" being performed by western companies. Palladium has been in short supply because it is often transported by air freight, which has been banned after the war broke out. Russian aluminum production has been partially curtailed due to one of its sources of 'alumina' (a building block for finished aluminum) being shut down in Ukraine. As Bloomberg notes in its Feb. 28 article: "Russian Metal Exports Slide as Sanctions Hit Commodity Financing," the increasing problems with sourcing Russian metals involves: 1) financing, which is subject to some sanctions like SWIFT banking cutoffs, 2) computers / electronics / control systems, which are needed to run mines, smelters and refineries and are now banned for export by the West and, maybe most importantly 3) spare parts for machinery and vehicles from the West essential to maintaining operations of mining, smelter and refining installations of the Russian metals industries.

Conclusions

We have detailed big changes we see impacting the world caused by the war and the western world's response: 1) sanctions/financing, 2) European gas/LNG supplies, 3) Russian oil and maintaining production, 4) food disruptions and anticipated food shortages, 5) transportation problems and 6) strategic metals sourcing and difficulty receiving. All these contribute to problems in the rest of the world: higher costs, lack of supply and future hardship.

However, the biggest change we have observed since the war's outbreak is the new mindset promulgated by the Biden Administration and Western governments like the Boris Johnson's UK: Russia is THE ENEMY and must be stopped militarily, politically, economically and even socially and athletically. This feels like <u>total war minus the shooting</u>. We don't think that many ordinary westerners really comprehend what the unstated goal is: Weaken Russia to the point that it can no longer wage war. But this is total war, so the goal is not just neutering Russia militarily, it also includes politically, economically, and socially/athletically, something we haven't seen in decades. US Government officials

have not spoken with their Russian counterparts since hostilities began, and they have publicly stated that they are not interested in restarting a dialogue. Meanwhile, the US and NATO allies are openly supplying Ukraine with billions of dollars worth of sophisticated weapons which have already severely decimated the Russian military's offensives and ongoing effectiveness.

Since the breakup of the Soviet Union, Russia, and Putin in particular, has been paranoid that the US and the West was out to get Russia, to expand influence to Russian borders and relegate the once-great country to irrelevance. It looks like they were right: NATO, led by the US, has continued to expand its influence all the way to and into Ukraine, threatening to push right up to the Russian border in its heartland. The West's active supplying of superior quality war material into a war that looks like it could last months or even more than a year seems ominous to us. What will Russian leaders, whether it is Putin or someone else, do if Russia is not able to declare any major victory and the Russian economy is pushed into recession by sanctions and isolation? We hope cool heads will continue to prevail.

The world has definitely changed, and we are positioning investments in portfolios to reflect this new reality. Globalization is dead and the peace dividend from the Cold War is in the rearview mirror. The Covid and now wartime problems of sourcing, logistics and supply chain issues for business are not going back to pre-war efficiencies. We hope businesses and countries adapt to these new conditions relatively quickly with as little upset as possible.

Kanos Quarterly Commentary 2

The Fog of Peace

We recently listened to a fascinating podcast called Decouple which is produced by a medical doctor, Dr. Chris Keefer in the UK. In the March 2nd podcast, Dr. Keefer interviews Dr. John Constable, Director of the Renewable Energy Foundation in the UK, to discuss his recent writings on "The Fog of Peace Lifts on the Energy Transition."

Dr. Constable argues that his position and background as a renewable energy expert have positioned him to analyze the world's current energy situation. He believes the Russia-Ukraine War has "sped up" a number of energy transition steps, and he is now convinced that the world, the developed world most especially, cannot transition further to renewable energy and must embrace further development of fossil fuels and nuclear.

Why? Essentially, energy density, or the term he uses: "entropy of an energy source." Current renewable energy technologies deliver relatively low density energy on a periodic unscheduled basis that only adds to the delivery of energy during certain parts of the day (when the sun is out for solar, when the wind blows for wind), while the rest of the energy system has to be ready to deliver energy on demand on a moment's notice to replace these intermittent sources. Thus, renewables take away from the reliability of the system, according to Dr. Constable, and the addition of more renewable energy sources on an distribution system will eventually lead to a failure of power delivery, as the steady parts of

the systems, traditionally delivered by fossil fuels such as coal, oil, natural gas or even biomass or nuclear, can no longer balance the system made less stable by the intermittency of renewables.

His observations of European utilities this past winter and then around the outbreak of the war laid bare the problems that the West's (especially Germany's) devotion to shutting down all fossil fuel and nuclear generation capacity. The now unreliable Russian natural gas source has also shown that energy systems relying on political opponents (or at least allies that are only "friends-of-convenience") have more risk than Europeans were calculating. How could they have made such poor choices? His answer is that they were blinded by the "Fog of Peace."

His idea of the "Fog of Peace" is fascinating and originated the time the Cold War ending / the advent of the European Union / re-entrance of Eastern Europe/Eastern Asia into the world economy. After the Soviet Union broke up (early 1990s), the European Union crystalized (mid-1990s) and China entered the world's economy through its entrance into the World Trade Organization (WTO) in 2001, the world entered a time of plenty. A true peace dividend allowed the world to invest anywhere in the world, to source materials and labor at lower prices and most efficiently, which also relied on cheap energy. Cheap energy was a linchpin and was available from sources around the world, deliverable on demand. The renaissance of industry and trade evolved with "just in time" manufacturing processes (which drove down inventory and staffing costs) and constant cost improvement, allowing big companies from many different nations to efficiently deliver goods and services worldwide at competitive prices.

As the world enjoyed these fruits of industry, people grew rich and governments were able to spend even more than their tax receipts as finances were healthy and spending extra through borrowing did not hurt government services or overreach (at first). The former convenience and abundance of everything helped form the "Fog of Peace" that allowed leaders to assume the abundance would always be around. People in many western countries started to push their social and political agendas on business and industry, which could take some inefficiencies (extra costs and governmental & social restraints) and still make money, due to low interest rates, cheap energy and the lack of inflation (and the lack of labor cost pressures). Part of this inefficiency was the introduction of large scale renewable energy sources, which were not as efficient as older sources but could be added to efficient systems, which could accommodate them.

The "Fog of Peace" formed fully over the last fifteen years, when many politicians, governmental officials and even many business leaders forgot how western countries got to their wealth and efficiency, and the "fog" set in that never-ending wealth and efficiency could be maintained, even as less efficient energy systems, increasing governmental/regulatory reach into business, and higher costs started to sap the ability of businesses to deliver their products and services with the same pricing and efficiency of delivery.

Today's world looks very different than the world just a few years ago. We could start to see through the "fog of peace" as Covid stopping and starting of whole economies laid bare that energy was not "just in time" if multi-year planning for its production wasn't accomplished beforehand. Oil's negative price in April 2020 and the Biden Administration's outright demonizing of the oil & gas business starting on the day of President Biden's inauguration has sewn the seeds of higher oil & gas prices that we see today. The near catastrophic winter freeze situation in Texas during February 2021 and similar energy shortage situations seen around Europe for the past few months (pre-war) have also shown that energy

systems relying on larger shares of renewables can lose efficiency at very inconvenient times. Luckily, deaths were not widespread in either Texas last winter or Europe this past winter, but the intermittency issue of renewables must be on the front burner for energy delivery planning going forward.

In addition to energy, our "world of plenty" lost its planning and investment post the Financial Crisis of 2008-09, when demand dropped off for industrial goods, whether they were base metals, fertilizer or agricultural infrastructure, chemical and industrial products, or, as mentioned above, energy infrastructure for delivering fossil fuels (although the "shale revolution" in the US was built out, giving the US cheap and plentiful energy for the 'Teens). Covid lockdowns further contributed to uncertainty of demand, further complicating any further capital expenditures, as lockdowns, labor uncertainties and demand uncertainties limited corporate investment in commodities and raw materials worldwide.

Now, post-Covid, and with a war that has fractured the world in two, lays bare that the "peace fog of plenty" that the world got so used to during the 'Teens can no longer be maintained without planning, capital and time. Leaders around the world, both political and business, are now starting to realize that the materials and labor they thought were available instantaneously may not be available for months/years and may costs far more than planned. In addition, war has literally destroyed some sources of materials, products and facilities, driving up costs due to more difficult sourcing, uncertain supply chains, longer and more difficult transportation routes and a much longer period of shortages worldwide than any of us were expecting.

Bottom line: The Fog of Peace allowed the world to use up the peace dividend and our accumulated surpluses. Covid lockdowns, expanded social agendas, and the Russia-Ukraine War have laid bare the vulnerability of energy systems, manufacturing efficiencies and delivery on-demand of products worldwide we have all grown accustomed. Now, increased planning, capital expenditures, and regulatory/governmental flexibility will be required to start to rebuild our societies' ways of life, with energy efficiency as key to reestablishing growth and wealth-building.

This must be done with cheap, reliable energy that has been proven over almost 200 years to be provided by fuels that can add dense energy virtually on demand. This energy is most flexibly provided by crude oil products (transportation, heat, and industrial energy), coal (heat, power generation and industrial energy), natural gas (heat, power generation and industrial energy) and nuclear (constant electricity at low cost). Reliance on renewables for more than intermittent power has proven to be misguided as well as being expensive. Even as battery technology advances, the size, cost and relative inefficiency of battery-delivered power still points toward fossil fuels and nuclear as the clearly best solution for our world's future energy needs.

Constable ends the podcast with the warning that our increasingly complex and growing world civilization has been accomplished by continuing to evolve our energy delivery over history (from wood to coal to petroleum to nuclear…) more and more efficiently (lower entropy). Renewables are a higher entropy (less energy dense) source of power – their larger share of power delivery will almost certainly lead to a breakdown in power delivery to consumers, similar to what almost happened in Texas in 2021 and Europe in 2021-22 but worse. We cannot let that happen, and each country/region must plan for more efficient power delivery over time, meaning increasing lower entropy/higher density energy, or risk stalling our ability to further modernize.

One last point: this same "Fog of Peace" applies not only to energy, but also to other essential goods/materials. The US and Western world have found that many things we consider essential are being sourced / manufactured / assembled in China or sourced from Russia or other "less friendly" countries, putting these supplies in danger of being interrupted. The Fog of Peace obscured the strategic reason to have lots of essentials either sourced locally or from friendly countries; other countries could produce them for cheaper and consumers were the winners. Essential metals like palladium (Russia and South Africa), rare earth metals (almost all refined for industrial use in China) and many others are in danger of being in short supply for years due to reliance on potentially unfriendly sourcing. Manufacture of essential goods, most notably pharmaceuticals, are concentrated in China, and sourcing future supplies in the case of a Taiwan confrontation is a real concern. The Fog of Peace allowed the US and Western countries to ignore the strategic nature of locally sourced or manufactured goods/materials. Now, strategic worries must be heeded, these industries must be reshored to the US and the rest of North America over the next few years before the next crisis occurs.

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