

Third Quarter 2021 Investor Letter

Portfolio Comments

The third quarter was dominated by Covid's delta variant, which led to new/continued lockdowns in many countries around the world, restricted travel and goods movement and a slowing of economic growth worldwide, which led to lower employment gains and spending, in turn leading to poor September stock market performances. Continued bond buying from the Federal Reserve means that liquidity will buoy US stock and bond markets, although slowing growth estimates continue to concern investors about future profitability growth. This continued monetary stimulus, along with anticipated fiscal stimulus and the ongoing supply chain problems continue to underpin inflationary forces in the US and world manufacturing and logistics industries, pointing towards continued overweighting to investments that will protect / benefit during this inflationary time.

Kanos portfolios suffered along with the markets during the quarter (but have recovered strongly in October), helped by technology, energy and healthcare stocks but weighed down by metals (both precious and industrial) as investors took profits and wondered about reflation during the mid-summer delta variant spike. Inflation continued to affect the world's economies, with the US economy no exception, and investors withdrew to financials, healthcare and technology, although many of these stocks also lost value during the quarter. Market participants, unsure of how higher rates would interact with an eventual re-reopening and continued inflation effects, sold industrials and cyclicals, without regard to value.

The S&P 500, weighed by losses in September, rose only 0.6% during the quarter to 4,307.54, while the Dow Jones Industrial Average lost -1.5% to 33,843.92 (all reflect total returns), as stocks reflected the slowing growth in the US and world economies, due in part to the delta variant of Covid. September was the worst month for stocks since the March 2020 Covid low. Rising interest rates and slower growth prospects were the main drivers of stock returns during the quarter, with investors lightening up on reopening / cyclical companies. Winners were Financials (+2.7%), Utilities (+1.8%), Healthcare (+1.4%) and Technology (+1.3%). Laggards included Industrials (-4.2%), Materials (-3.5%) and Energy (-2.1%) despite continued stronger inflation readings. Higher yields and the US economy's manufacturing strength pushed up the US dollar while the yen, euro and most other currencies fell, buoyed by the Fed signaling tapering bond purchases by year end. US bonds ended the quarter unchanged, with the 10-year Treasury note ending the quarter at 1.528%. Commodities were where the action was during the quarter, as indicated by the Bloomberg Commodity Index having risen 6.6%. Energy led the way again, with natgas rising (+60.7%) during the quarter, coal soared, up (~50+%) and WTI crude gained modestly (+2.2%), although energy stocks lagged, as referenced above. Other rising commodities included: cotton (+28.3%), coffee (+21.7%), wheat (+8.0%), while precious metals, last quarter's winners, were lower: gold fell (-0.9%) to \$1,755/oz while silver fell (-15.7%). Corn (-25.5%), lean hogs (-14.8%) and soybeans (-13.4%), last quarter's winners, also



corrected. Cryptocurrencies bounced back during the quarter, gaining 24% while Ethereum gained 31%, though still down 25% from April's all-time highs.

Introduction

The financial markets are now wrestling with the question of whether the "big growth" phases of the economic reopenings around the world have peaked, and if so, has inflation peaked and is therefore truly 'transitory' or will markets maintain upward movements on ongoing growth in companies' earnings and peoples' continued purchases? The US financial markets are still hanging around near record levels (stock markets did manage to move up fractionally to incremental new highs lately) while interest rates have been climbing in October, nearing post-Covid highs on the prospect of the Fed beginning its taper of quantitative easing in November, as it has signaled over the past couple of months.

Economy

The US economy continues to grow, albeit at a slower pace than those quarters following many states' reopenings. Now that Federal emergency Covid payments have ended, employment has started to pick up, with weekly jobless claims falling to less than 300,000/week, the lowest since February 2020. In addition, the retreat of the delta variant over much of the US has led to more people eating out, traveling and purchasing retail, adding to economic activity and employment opportunities.

Impediments still include shortages and climbing prices for products and services seemingly in short supply at many places. These shortages are both domestic and international in cause and effect, which means businesses are having trouble getting goods and services to consumers in a timely manner, and consumers are not spending as much as they might due to absences or long wait-times for both products and services. Until these bottlenecks are worked through, the US (and world) cannot reach its full economic growth capacity. In addition, the inflationary forces caused by Covid effects and governmental actions mean everything is more expensive, putting a damper on purchasing power of both individuals and businesses.

The all-too-public infighting among leaders in Washington continue to push out the enacting of any further stimulus bills, although the coming (minor) election this November, and the looming much bigger election in November 2022, point toward some kind of compromise so that the Dems have something to point towards as many campaign for reelection. The infrastructure bill already passed in the Senate and the still-being-crafted social and climate bill won't boost government spending quickly, but the sheer numbers (\$1.2 trillion and \$1.5-2.0 trillion, respectively) mean that the passage of either or both bills will continue to infuse the US economy with plentiful US Government money, adding to inflationary forces and benefitting Democrats' pet projects/causes, while it is still uncertain if they will add to the nation's productive capacity.

All-in-all, the economy continues to recover but at a slower and slower pace, with impediments and delays keeping economic growth in check currently.



Equities

Despite the decelerating economy and the almost certainly concomitant deceleration of profits, the US equity markets have been resilient, and we expect it to continue to be so, at least through the fall and until the Fed starts the taper. Markets have been punishing for those companies missing their expected results, but so far in October, the markets are holding up with expectations tempered due to the abovementioned profit growth concerns. The fall/winter is also typically a supportive seasonal time for stock markets.

The continuation of Fed monetary policy, even in the face of the near certain Fed tapering of quantitative easing (that has been telegraphed by many Fed spokespeople), is still a massive stimulus for the stock market. Having near zero short-term rates and under 2% long-term rates is still very stimulative, and plenty of that stimulus continues to help push up equity prices, even if direct QE starts to lessen in the coming weeks. Passive investment through weekly flows into retirement savings accounts continues to be a boon to the stock market. In addition, the US consumer is still the engine of demand growth in the world, encouraging investment flows from overseas to continue to flow into US investments.

The taper of QE may indicate a sea change in thought among large investors, however. Tapering purchases IS tightening financial conditions, no matter how many people try to convince you it's not. Both short-term and long-term interest rates have been creeping up this fall as the Fed's taper becomes more and more certain, with timing pointing towards a November start. We don't know how investment flows will be affected by tapering and the possible shift in psychology, but a lower level of available liquidity may hit the speculative corner of markets first, possibly limiting purchasing power in the riskiest of investments (penny stocks, fads, etc.). The effects of ongoing inflation may also reinforce this effect in retail investors, where extra money or savings formerly used for investment (or speculation) must instead be spent on everyday items due to higher and rising prices. We will see if the taper / continued builds in inflation have these effects.

In spite of those concerns espoused above, we continue to be nearly fully invested, with a bent toward more safety and real asset-based companies. Commodities continue in their bullish price movements (see below), so our materials and commodity-based investments continue to be supported by bullish fundamentals, while our health care, technology and defense industry investments benefit from growing US and world economies.

Bonds

Bonds rallied during the third quarter as the delta variant put a dent in reopenings and economic growth, leading investors to buy bonds in the event world economies slid into stagnation. However, the receding of the latest Covid outbreak worldwide has led to further reopenings, increasing economic activity and helping build inflationary pressures. The combination of continued inflationary pressures and large government budget deficits (as well as continued large corporate borrowings) discourage us



from owning many fixed income assets. A large contingent of analysts and investment managers subscribe to theory that post-reopening economic activity will slip into the malaise that was in evidence pre-Covid (meaning demand growth will fall off, and economies will revert to slow growth/near recessionary conditions). They believe this will "solve" shortages and slow inflationary forces through the withdrawal of the strong demand growth seen since mid-2020. These investors continue to buy bonds, even in the face of near record US budget deficits (and thus record issuance of Treasuries), feeling like they will realize capital preservation when the economy and other financial markets show weakness as growth evaporates. We don't subscribe to this theory, mainly because we believe, in the case of slowing growth and falling markets, the US government will provide more fiscal stimulus, thus adding to the supply of bonds while the Fed will react to weakness with increased monetary stimulus, hurting the US dollar's value, both of which will further boost inflationary forces and hurt Treasury and US dollar values.

Thus, we will be at a very low allocation to bonds, both ST and LT, because we think we will see higher rates, and thus lower 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 <u>nominal</u> 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 supply builds from central bank monetary creation.

China's yuan has positive rates and is higher this year, but it is not an attractive investment due to China's eschewing the rule of law and managing national resources for its inhabitants, increasingly at the expense of foreign investors.

Energy

While many energy prices fell during July and part of August, prices of many energy products shot up during late August and September as market participants and planners realized almost universally low inventories in late summer meant that a cold winter could lead to higher prices or even possible shortages (which could lead to electricity blackouts).

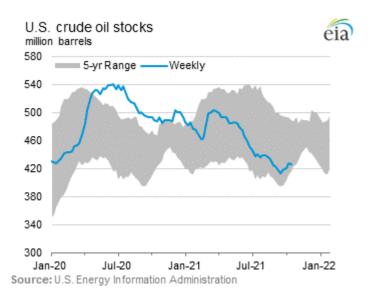
The year's energy crisis has been most evident in Europe, where a number of factors have combined to send prices for energy products and electricity to multi-decade highs. Beginning with low inventories for natural gas and coal this year, poor wind conditions (for wind power) combined with a hot summer and low gas exports from Russia has caused power generation costs to rise during the summer. With the UK and Germany resorting to using coal to supplement gas in generation, coal supplies have been virtually used up with winter looming.



Asian supplies are also very low for the pre-winter season, with coal supplies and inventories in China at multi-year lows, due to seasonal flooding in the major coal-producing region (Shanxi Province), lack of Australian imports (due to trade squabbling) and reduced coal usage earlier in the summer (due to pollution worries). To supplement supplies, China, Japan and other East Asian countries have been buying all the spot LNG cargoes available, tightening worldwide natural gas supplies. In fact, high coal and natgas prices worldwide have led utilities worldwide that are fuel oil-capable to burn crude oil-based fuel oil and even distillates (diesel) for emergency power generation fuel / inventories.

With these dynamics in mind, we can see why crude is in the \$80s/bbl for WTI and mid-\$80s/bbl for Brent. Many Western pundits and researchers believe that \$80 crude is the right balance price for supply and demand, but with more and more economies reopening to full freedom, we see demand as continuing to build and supply not always matching demand immediately, leading to possible upside pricing pressures, especially if the winter turns out to be colder than normal in Europe and North America. A winter wave of Covid cases (due to winter concentrating inside human interaction) could limit this somewhat, but inventories are so low that we believe cold weather would trump any Covid-related demand destruction.

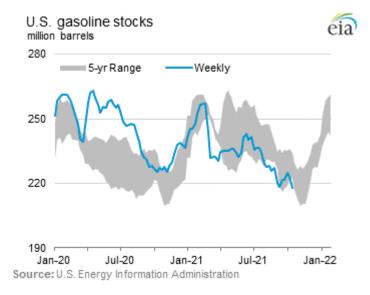
The US Energy Information Agency (EIA) supplies weekly energy statistics on their website, including excellent graphs indicating the amount of inventories of energy products in the US (which they label as 'stocks' or stockpiles). The following graphs show the current inventory situation in a number of energy products. In each graph, the grey portion shows the high and low weekly amounts in the last five years, with the blue line showing the current year's inventory levels. The US crude inventories are currently at the five-year low for stockpiles this time of year, also at the lowest level of the year, as indicated in the chart below.



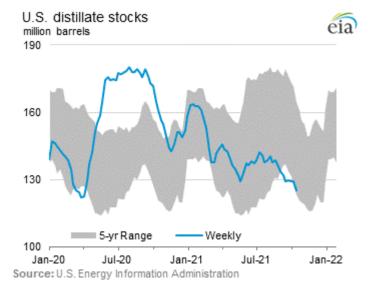
After a summer of extensive recreational travel, coupled with a rapid resumption of business activity back to a point near pre-pandemic levels, gasoline usage has left inventories at the lowest levels of the year, below the lowest level for this time of year in the last five years, as you can see from the chart



below. Hurricane activity, especially from Hurricane Ida in August, has restricted oil production, transportation and refining, from which the industry is still not fully recovered.

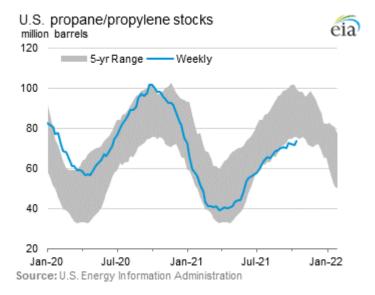


Distillate inventories, which represent oil products like diesel fuel (transportation and industrial uses), heating oil (winter home heating) and jet fuel (military, civilian and business aviation), are around five-year low levels for this time of year (as seen below in the chart), while inventories should be building to handle high winter usage:

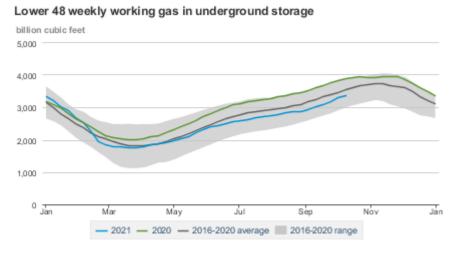


Propane, while used in far smaller amounts than the above products, is important for some industries that use it for feedstock and fuel, and remote residences around the USA that do not have natural gas service. As can be seen in the diagram below, inventories are lower for this time of year than at any time in the past five years; US propane prices have nearly doubled from the lows this year.





US natural gas prices are up over 50% this year, as inventories (see below) are low for this time of year and world natgas prices are so much higher than those in the US (currently \$20-30/MMBtu versus ~\$5/MMBtu in the US), meaning there is extreme demand for US exports of LNG to Asia (and Europe) as well as gas demand from Mexico.



While energy has been in the news a lot lately, leading to some exuberance among investors and traders, pushing up prices of energy products and equities prices, we still think there is the probability of volatility and the possibility of even higher prices during the winter.

Thus, we continue to hold our supermajors and infrastructure/midstream/MLP companies, and, as we said last quarter we would, we have added exploration & production company stocks to portfolios.



Commodities/Precious Metals

Many non-energy commodities eased in price during the third quarter due mostly to efforts by the Chinese government to limit further price increases by releasing government stocks into the market (and in some cases capping prices of products). However, during October, prices of many commodities have risen again due to supply/demand concerns, anticipation of further demand gains due to continued reopenings and increasing supply concerns and bottlenecks.

While agricultural conditions worldwide have improved from earlier this summer (leading to larger than earlier-anticipated supplies and thus lower prices), droughts in southern Brazil and California and the US West still leave wheat, coffee, cotton and some other soft commodities with supply concerns.

We are still bullish on most commodities, especially those facing supply concerns and continued future demand, including agriculturals (due to weather and famine) as well as copper, lithium and rare earth metals. All these are key components of next generation vehicles and electrical infrastructure, except agriculturals, which are needed for food.

We continue to own base metals mining companies, especially those that produce copper, iron ore, zinc, nickel and many others. We also own agricultural companies and ETFs that reflect physical grain prices. And we also own ETFs of companies in the lithium and rare-earth metals businesses.

We continue to overweight precious metals companies due to their attractive economics: metals can be produced with predictable costs while company managements have continued to limit exploration expenses while maximizing cash flow and boosting returns to shareholders at very attractive valuations.

Gold and silver were hurt by a rising US dollar during the third quarter, but rising interest rates during October, while inflation shows no sign of abating quickly, has led to more attractiveness to precious metals as fixed income alternatives (as bonds lose value as interest rates rise). In addition, two typical coincident indicators of gold values are moving bullishly: the CFTC's weekly Commitment of Traders (COT) reports have large Commercials/banks at near-high short positions on the US dollar, which is a pretty good indicator that the dollar should lose some value, which makes gold more attractive. In addition, another part of the COT report indicates very high Commercials long futures positions in the Swiss franc, which typically moves with gold due to similar influences on price. With these Commercials building their largest long position in more than two years, market forces look like they are almost all favorable for precious metals.

As we go to press, silver has broken its downtrend (see chart below from finviz.com). Healthy precious metals rallies typically see silver prices leading gold prices, so the price moves below are a good indicator of the beginning of the next bull market phase for precious metals.





Summary

Our portfolios are well positioned for the anticipated conditions we see ahead. Dividend-paying stocks with reasonable valuations are the backbone of portfolios, as uncertainty in the growth drivers for the US and world economies continue to affect stock markets worldwide. Shortages of products and Covidinduced inflation continues to affect individuals and companies, and we believe these are less transitory than many investment managers, pushing us to overweight attractively valued companies benefitting from those forces. In addition, the unattractiveness of holding bonds and cash in this environment prompt us to underweight them in portfolios. Finally, the risk in highly valued stocks (typically technology companies) continue to make us leery of owning too many of them, especially in the face of seeing companies not meeting expectations losing 10-25% of their values on days when subpar earnings and future outlooks are announced.



Kanos Quarterly Commentary

More Shortages? I Thought That Was Fixed!

Last quarter we opined about the dynamics of the energy business vis-à-vis the environmental movement and governmental actions to combat climate change. At the risk of appearing too focused, we are going to tackle a different aspect of government intervention: shortages.

Tad Rivelle, the Co-Chief Investment Officer at TCW Funds (a \$250 billion investment manager in Southern California), wrote his October 2021 monthly Trade Secrets commentary, titled "Back in the US...Back in the USSR (https://www.tcw.com/en/Insights/2021/2021-10-14-Trading-Secrets) about his reflections on current shortages experienced around the US (and world). I think a review of his thoughts in the article and the implications for us are very, very interesting.

He talks about how shortages in the Soviet Union were constantly occurring Why? "...the [Soviet central] planners were being asked to solve for the impossible. [They had] to set prices and production targets. But as every undergraduate student in economics knows, you cannot simultaneously fix both the price and the quantity of anything." He continues: "In contrast, free market economies seek efficiency by respecting individual preferences. When all is working as it should, the 'right' price is solved for, and shortages (or surpluses) are rapidly corrected."

Rivelle then gets to the major question to be answered in the article: "...why is our 'free market' economy experiencing shortages across a wide variety of good and services?" He mentions how building materials take forever to find, workers are in short supply in most industries and foreign made goods like shoes or appliances many times won't be available for weeks. "Conventional' explanations like Covid restrictions, Covid-caused supply chain issues and social pressures to decarbonize" are mentioned as reasons things take longer to arrive or are in shorter supply than before. But these types of things have happened in the past, he mentions, when we've had "bad harvests, labor strikes, political disruptions or trade embargoes...But reductions in supply should jack up prices thereby restraining demand and, eventually calling forth new sources of production [supply]." He ends the paragraph with: "But here we are, closing in on the two-year anniversary of the pandemic, and the shortages remain. Indeed, using the proxy [of container shipping congestion at LA], these shortages may be worsening."

Why? Rivelle starts giving us his thesis: "...there may be deeper reasons for the imbalances. Like what?" Perhaps the US economy has taken on some characteristics of a centrally planned economy. [emphasis ours]. He follows with: "fiscal and monetary policies implemented under COVID have dramatically kicked up the economic role of the state...Federal spending has gone into overdrive even as the Fed brought asset purchases to new levels."

Rivelle elaborates: "The demand side of the economy has been well fed by these policies, so much so that the supply side isn't – and can't – keep up." And then the meat of the argument: "Year-over-year conventional inflation metrics are running above 5%, even as the shortages suggest further upward price adjustments may be needed to balance supply and demand. Importantly, it isn't like the supply side isn't



expanding: oil may well be at \$80/barrel, still global output is expected to rise 4% in 2021. Employment continues to expand, yet millions of positions remain unfilled." [emphasis ours]

He talks about how the growth of the Fed balance sheet (doubling since 2019) and the Fed buying up to 120% of Treasury bond issuance keeps liquidity high and rates at zero, which all allows the US Government to surge in spending, but by fixing prices low, governmental spending is not "crowding out" private sector demand, while all this borrowing, both public and private, is being "accomplished without making credit more expensive." In other words, by essentially fixing interest rates (and near zero), the Fed and US Government have provided an environment that Rivelle describes as "a kind of macroeconomic driven central planning that has dissociated demand from supply [on a large scale]." [emphasis ours] He adds: "Both the quantity and pattern of spending throughout the economy has been realigned by political direction, even as the financing of this spending has been untethered from market constraints."

His take on interest rates not reflecting purely market forces: "Ongoing suppression of market rates by the Fed adds a further dimension to an increasingly uncoordinated economy...[e]ssentially, the traditional role of interest rates as the coordinating mechanism between, for instance, capital goods and consumption, has been disabled."

So, where does he see the future? "U.S. policy may move in a more market friendly direction in 2022...fiscal 'tapering' – supplemented by monetary tapering – may represent a partial backing away from this expanded governmental presence. Another possible direction is that a slowing economy is championed by the politicians as a reason to double-down on stimulus. Should [they] take us down that road...expect more of the same in terms of results: shortages, more inflation."

He finishes with this: "The upshot then, boils down to the basic market reality that 10-year Treasury securities at or around 1.5% do not represent fundamental "value" in a 5% trailing inflation environment...Policy has painted itself into a corner: adding more demand may not so much counteract an economic slowdown as it might add to inflation and promote a market protest in the form of higher rates. But, how might the economy re-coordinate itself unless it is given a chance to hold its breath and rebalance? [A] growth slowdown owing to moderating stimulus or, alternatively, a step further towards stagflation would seem to be the likeliest scenarios going into the new year."

We found this article fascinating because of the nuances to his argument: have we gotten to a point where our formerly "self-correcting market mechanisms" have been bent by governmental influences that they no longer provide signals for businesses to adjust to supply and demand?

Certainly, the Fed's pegging of interest rates to near zero percent interest rates, starting in 2003 when Fed Chair Greenspan lowered short-term interest rates to 1% and kept them there for many months, has clouded any signals short-term rates might provide. The advent of QE in 2009, and continuing for much of the time since, has obscured the financing signals that intermediate- and longer-term Treasury Notes (3-, 5- and 10-year durations) have provided in the past.



In addition, the 1990s/2000s emergence of corporate buybacks replacing capital expenditures as a major use of corporate cash has led to what many believe to be underinvestment in US plants and equipment. The government making buybacks legal and more tax friendly than dividends helped drive the explosion in buybacks. Corporate managers argue that buybacks are tax efficient and represent an investment in their entire company rather than expanding capacity in an uncertain manufacturing environment (oh, and that it boosts earnings per share, on which most management incentive pay plans are based; they forgot to mention that part of the argument).

But we are facing shortages of raw materials, transportation vehicles, employment, and manufactured goods – why? Rivelle's arguments point us to the inability for supply and demand to intersect at current prices. In the past, quantities would be adjusted based on the incentive of price – so shortages point toward further price hikes.

Many argue that this is really just a transportation problem. That compensation for truck drivers (and other transportation and logistics workers) must rise, attracting more people to fill positions that will help alleviate the bottlenecks. Again, this is just raising a different price, labor. However, whether it is just truck drivers or also other logistical workers, railroad workers, ships crews, etc. or not, these increased labor costs will be incorporated in costs and passed on to the ultimate consumers, further raising prices.

To return to Rivelle's most intriguing postulation, that governmental actions, whether political causes, regulatory expansion or law, have helped retard market signals enough to disrupt traditional supply and demand forces to fix shortages, do we believe it to be true? While it is impossible to definitively answer the question, the longer shortages and supply constraints linger, the more this theory seems to be at least partially correct. It is a shocking revelation, but governmental reactions are increasing, and shortages have not gotten better, and many appear to be getting worse.

Certainly, the hydrocarbon industry shows the effects of governmental and activist influences. US crude production is around 11.5 million barrels per day, down from pre-pandemic 13 million bbls/day, and the Biden Administration's executive orders/regulatory actions limiting drilling, limiting emissions, requiring much more extensive and lengthy climate studies for any non-renewable energy projects and their outward antipathy for pipelines retards any growth of US crude oil production back to the 13-million-barrel levels without much higher prices. As prices of crude have topped \$80/bbl, governmental officials are only now seemingly realizing the implications of their actions (they aren't admitting them, though).

We strongly believe that governmental, regulatory and activist interference in supply and demand of any products, absent danger and realistic pollution concerns, must be limited to allow better feedback so that US consumers and businesses can get the products and services they desire, obviously with price as a big determinant for their attractiveness, i.e., if they are too expensive, consumers won't buy. However, limiting price increases lead to shortages, and we are now seeing those shortages appear in so many venues: copper (used in building structures, in electric vehicles and charging, in electrical grid infrastructure and electrical engines and infrastructure), toilet paper (paper products are limited due to higher cost of lumber, Covid-affected lumber mills, transportation workers lured to higher paying jobs,



etc.) and even refrigerators (many produced offshore, limits on aluminum supplies for construction, constraints at loading ports, lack of trucking at US inbound ports). As one can see, limited amounts of raw materials, transportation and logistics and US employment in trucking all contribute to these shortages. It will be interesting to see if they dissipate quickly.

To sum up, we found this article very intriguing because the author has looked at lots of data and reached a somewhat shocking conclusion: that the US is really no longer free-market capitalism to the point that supply and demand signals are obscured (or obstructed) to the point that our economy is starting to have some of the same characteristics that plagued the Soviet Union's economy throughout its history and was a leading symptom that led to the downfall of the government.

We at Kanos believe that the effects of monetary policy, fiscal policy, corporate and environmental activism and just "bigger government" in all ways have contributed to the shortages of goods, inflation in costs (of seemingly everything) and disruptions in trade and logistics around the world. It is in great evidence here in the US, and we wrote the Commentary below from the facts of supply chain problems we have been reading about and seen first-hand, in some cases. After reading Ted Rivelle's article referenced above, we couldn't ignore it or put it off. However, having already written the supply chain commentary below, we decided to include both because they are timely and informational, in our minds. So here is the second Commentary:

Kanos Quarterly Commentary 2 - supply chains

You Cannot Legislate Plenty (or Even Adequate)

Last quarter we opined about the dynamics of the energy business vis-à-vis the environmental movement and governmental actions to combat climate change. Here, we are going to tackle a different aspect of the bull market in commodities: the consequences of the closing/re-opening of world economies and the inability for central planners around the world to deal with the dynamics of physical commodities. In our opinion, the bull market in commodities has been hastened by governments and governmental laws, restrictions and other activities.

As we all know, the Covid pandemic hit China in late 2019, spreading to the rest of the world rapidly during 2020. The unknown nature of the virus, its virility and its longevity led governments to try to limit the spread through limitations, quarantines and, in many cases, lockdowns. The effect on businesses worldwide was an uncertain future and inability to plan effectively for future output until the effects of the virus were revealed. As humans around the world adapted to dealing with the virus and its aftermath, businesses also adjusted operations as best they could, navigating the ability to staff and accommodating employees' concerns/situations around Covid exposure and disease responses, all while adhering to governmental restrictions, mandates and new rules.

As Covid affected both anticipated future demand and disrupted supply chains, supplies of many raw and manufactured goods were lower than pre-pandemic. Producing companies of all kinds were unsure



of demand in the future and wary of being caught with high inventories, in addition to having production capacity restricted by Covid labor and materials shortages. On the other hand, demand for goods, while strong for household and recreational goods during initial lockdowns, was weaker initially for industries subject to lockdowns, validating producers' caution. But as reopenings occurred starting in the summer of 2020, demand picked up for many raw materials and manufactured goods (think lumber, motor fuels and semiconductors) while supplies and supply chains remained constrained due to lack of sufficient labor, ongoing Covid constraints (both physical and regulatory) and due to lack of input materials. Demand built faster than supply in many cases, leading to drawdowns in inventories and shortages in many products.

The world now finds itself facing bottlenecks in many supply chains, leading to shortages of raw, intermediate and finished goods, as well as insufficient means of transportation and labor to get available goods to their appointed destinations. Why, and did it have to be this way?

The short answer is that you cannot address physical problems that cause both the demand and supply issues using executive orders, laws, governmental coercion or easier monetary policy (extra spending might help, but again, only over time), although these are the main means governments are using to try to solve these problems. We will start by looking at demand issues.

Demand

Governments around the world have been emboldened by this pandemic, using what many would claim are extralegal orders to try to limit the spread of Covid through mask and vaccine mandates, quarantines and lockdowns. These orders have often retarded the ability to operate businesses, decreasing output. When conditions permitted (or outrage over shortages led to action, in some cases), people have restarted their lives and businesses have restored production of goods and services as quickly as practicable. However, many physical production businesses don't restart at pre-pandemic capacities right away, "like flipping a switch," which many governments have assumed. We will highlight a number of instances that have happened in China that illustrate the point.

One instance of a demand issue is from China: the Chinese Communist Party (CCP) rules China in a dictatorial and highly centralized bureaucratic manner. Thus, a number of orders to industries occur with little feedback, meaning there are many opportunities for unanticipated consequences as well as uncertainties. The Chinese coal industry provides the country with a majority of the coal needed to power both China's industrial complex and heat the country during the winter. The CCP previously set limits on the amount of coal to be burned in order to help clear the skies somewhat of pollution for the 2022 Winter Olympics to be held in February 2022 in Beijing, as well as show they are making some effort toward their pledge of 2060 carbon neutrality. However, higher manufacturing orders post-pandemic from the western world have led to greater than anticipated power needs throughout China. Thus, centrally planned electricity needs of all of China were woefully underestimated, and now there is not enough power available to keep the businesses producing and cities lit. There have been rolling blackouts in both northern and southern China manufacturing areas, retarding production and efficiency as governmental central planning lacked the flexibility to react to changing conditions.



Another example of a demand issue is the toy industry's sourcing of virtually all its manufacturing in East Asia, mainly China and the problems demand for Christmas poses this year. In a normal year, toys are ordered during the summer, assembled during late summer/early fall, and shipped during the fall to arrive in October/November. This year, orders were placed during the summer, but Chinese manufacturing slowdowns and port closings due to Covid led manufacturers to backlog orders from toy companies. Many toys were produced late, have had to wait for transportation, and now either sit in China waiting to ship or sit on container ships waiting to unload, now weeks behind schedule for delivery to US stores. Governmental interference in China trying to limit Covid spread by shutting down factories where infections were discovered, and shutting down whole container ports due to Covid, have made the traditional toy planning and deliver season a calamity. Poor planning on the LA port side (as we shall examine more below) has made the unloading take longer also. Thus, Covid-induced governmental actions, poor staffing and logistics decisions at ports and a toy industry used to their yearly schedule but about to miss the primary demand season of the year, show how government action and poor planning has hurt industries with long supply lines.

Supply

There are supply issues around the world. Our first example is from China, where the government sets the price of coal from domestic coal mines, trying to match it with expected demand. As demand has outstripped supplies available (and coal inventories began at low levels due to lower recent production due to numerous Covid-associated mine shutdowns in the past 18 months), the government has called for mines to produce as much as possible but is unwilling to raise prices offered to coal miners in order to try to muffle the inflation of higher energy prices. The low price is a disincentive for miners, so less excess production than anticipated has been produced so far. Add in the recent massive rains and floods in the Shanxi region where many of the coal mines are located, and production (and transportation out of the region) have been reduced even further. Thus, China, which generates 65% of its power from coal plants (at least as of 2019 according to the IEA), is supply constrained with winter temperatures starting in October, which will require more use of coal for residential heating, further limiting supplies for electricity generation.

Why not use imported coal? China is in a trade war with Australia, the main source of their imported coal, and has had to look elsewhere [apparently, ships full of Australian coal lie off the China coast, and the CCP has become so desperate that they have unloaded some coal supplies off Australian ships recently]. So China has been importing coal from other suppliers around the world to supplement their maxed out domestic production. What has this caused? Reuters recently had an article describing India's persistent electricity shortages with deficits up to 15% due to a deficit of supplies for India's 135 coal plants, as many as 50% having as little as two days of inventory on hand! India is a traditional coal importer, and now with competition for coal supply from China, coal imports are not as commonplace and, thus, more expensive for both nations.

Europe's current energy situation is almost as bad. One German power plant ran out of coal in September and was forced to shut down; it was only running because wind power from North Sea windfarms had not produced enough power due to "lower than anticipated wind speeds." Meanwhile



Britain has seen gas supplies curtailed by lower production and maintenance to the point where coal plants were relied on for a large share of power generation. But coal supplies are low in Britain too, meaning current power generation may strip the country of coal inventories needed for winter heating and power fuel. These shortages are due to limited mining, competition for imports, and poor resource planning beforehand.

Thus, coal, a fuel we thought was being phased out and was a dying industry, is still being used worldwide and serves as a valuable fuel of last resort when current power grids find themselves short of baseload generation and more green-friendly fuels/facilities on which most utilities in the western world rely. In times past, coal has been plentiful, but governmental and activist denigration of the industry, Covid limitations on labor and transportation, and weather problems at mines have combined to show that supply of a plentiful source of fuel like coal can be difficult to procure.

In the case of petroleum supplies, we know climate change activism, coupled with ESG investing initiatives have challenged the use and development of more fossil fuel supplies. As David Einhorn, who runs the Greenlight hedge fund, said in his October 20, 2021 Third Quarter letter to his partners: "...politicians have decarbonized supply faster than they can decarbonize demand." While that is a little hyperbolic, it is generally true – trying to rid the world of hydrocarbons by replacing them with things that use hydrocarbons to be constructed and that aren't available in nearly the quantities needed to replace fossil fuel-powered vehicles is short-sighted and foolhardy. And yet, that is what has happened and continues to happen. We, as a civilization, simply cannot continue to try to replace our current hydrocarbon-based economy with new electric, non-carbon technologies that are not available in the numbers or nearly as efficient as our current infrastructure. We must continue to invest in currently installed hydrocarbon technologies until newer greener technologies can take up the burden of our advanced and ever advancing societies and economies.

Logistics

Logistics have been the overlooked factor in world trade pre-2021; almost everyone in business has assumed that supply and demand factors would push transportation industries to continue to build capacity. For the last many years, there have been more than enough ships, trains and trucks to haul goods produced in manufacturing areas around the world to market. Covid has changed this as demand variability caused canceled sailings and transportation contracts, followed by hurried bookings for extraordinary volumes as reopenings occurred starting in 2020 but culminating in 2021.

The classic example is in the USA where there are currently approximately 100 ships waiting to unload off the Los Angeles/Long Beach port in Southern California. Typically, there are up to 15-17 ships either unloading or waiting to unload in the area. Why the problems? According to Andrea Widburg in her article "Empty Christmas Stockings? Don't Blame Covid; Blame California" on Americanthinker.com, the problems are onshore where unloading and trucking are the bottlenecks. Not only is it hard to get additional truckers (trucking is booming and offering big incentives for new drivers but Federal law requires truckers to be 21 years old), California passed a new law in 2020 prohibiting California-domiciled trucks made before 2011 (truck engines before 2010) that have not been upgraded to new, more stringent California emission standards. This effectively bars all non-California trucks from



picking up port freight; trucking companies have improvised somewhat by using California trucks to haul port freight to the California border, where non-compliant trucks can pick it up and haul it nationwide. This isn't very efficient and requires new complex distribution centers across the border in Arizona and Nevada, thus not helping much. Second, the new AB-5 law in California effectively barred independent owner-operator truckers from the port trade (benefitting large, unionized truckers). The owner-operators were more flexible and had traditionally carried a large part of port containers unloaded in Long Beach; now union truckers and longshoremen doing the actual unloading adhere to union rules, making speeding up unloading even less likely. And the long wait times to get in and out of the ports make all trucking less efficient and profitable for trucking countries, further disincentivizing truckers. Thus, two new laws in California have effectively made the bottleneck (at the largest port in the US) semi-permanent and raised costs and lessened flexibility. As you probably know, President Biden and his team got together the leaders of the port, large trucking companies, railroads and large retailers and secured a pledge to try to work 24/7 to work off this problem. With Covid restrictions and other work rules in the way (some workers aren't required to work weekends, meaning the best that could happen is 24/5 anyway), this plan will do much less than it looks to speed up the process. In fact, the number of ships waiting continues to build presently as Christmas merchandise is virtually all in transit already. Again, government getting in the way with new laws, then Federal government orders trying to fix a tangled system, is not hurting the logistics, not helping.

Another example of how logistics logiams hurt supplies is the example of magnesium. S&P Global Platts last week published excerpts from a letter from magnesium producer Matalco saying that their supplies of magnesium were being limited in the last few weeks and that they may have availability concerns for their customers going forward. Why? Power generation concerns have led to blackouts and weekly shutdowns of giant metal smelters in China. One of the byproducts produced from smelting is magnesium, so less smelting means less magnesium produced. Aluminum products use magnesium as a strengthener, which allows aluminum to be crafted into aluminum billet products, which are then used to make automobile frames, engine blocks and panels. Thus, with limited magnesium production, now there will be limited aluminum available, leading to shortages or at least slowdowns in another facet of auto and aviation manufacturing. And if that weren't enough, a military coup d'etat occurred in the African country of Guinea in September, threatening the largest single supply source of bauxite in the world, which is the main raw material used in aluminum manufacture. Thus, a coup in one African country and power problems to a different Chinese set of manufacturers threaten the global manufacture of aluminum, a key component to conventional cars as well as many new technologies and green manufacturing due to its light weight and tensile strength.

Conclusion

Philosophies of progressive activists and global governments have dominated the planning, investing and future of both conventional hydrocarbon-based technologies and newer, greener technologies and machines, some in the latter category can be utilized today but many of which are still theoretical because these technologies have not realized economic efficiency at the present time.

We believe activists and governments must become more realistic in their influencing policy, economics, taxation/subsidies and opposition to continued use of conventional technologies until newer



technologies are ready to be deployed. To reiterate what David Einhorn, the hedge fund manager, wrote: "politician [et al] have decarbonized supply faster than they can decarbonize demand." This diminution of hydrocarbon technologies hits less fortunate people and less developed countries much harder than rich western and East Asian countries, so finding a better middle ground toward codevelopment of both old and new is a must if world economies are going to progress while continuing to limit undesirable byproducts.

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