Quarterly Economic Update

December 15, 2021

MACROECONOMIC COMMENTARY

Fiscal/Monetary Policy

By Michael McNair

Shortages and the Reverse Salient

The term reverse salient has military origins but is now more commonly used to describe any system in which a part holds back the progress of the entire system. An example is General Patton's 7th Army outrunning its fuel supply lines during the Allied advance through Western Europe. Patton had all of his necessary supplies in place for a rapid advance but was unable to proceed until his reverse salient, fuel supply, was relieved.

The explanation for global supply chain bottlenecks is focused on COVID-induced shutdowns. However, we argue that, over the past year, a supply shock caused by a thermal coal shortage has arguably been a more critical reverse salient leading to global supply chain bottlenecks, yet its existence has gone virtually unnoticed.

The economy is a complex adaptive system with feedback loops interlinking commodities, markets, supply chains, etc. As a result, cause and effect are difficult and sometimes impossible to ascertain. While not exactly a butterfly flapping its wings, it does take a bit of detective work to trace the links between a thermal coal shortage in South East Asia and your Amazon order that won't arrive until after Christmas. In this report, we will show how a power crisis created a supply shock that has cascaded through supply chains around the world.

We must note that the problem with making causality descriptions is that there is never a proper starting point – every explanation can go deeper, and every origin has a previous step that is no less important to the outcome. Despite these limitations, we are choosing the semi-liberalized power markets of East Asia as the starting point for our explanation of the reverse salient that has bottlenecked the global economy.

<u>How a Semi-liberalized Power Market Created the Conditions for a Global Energy Squeeze</u>

The fundamental problem is that China and India have marketized coal prices and regulated electricity prices. Power prices are not allowed to increase in response to rising coal prices, which squeeze the finances of the power companies.

Chinese and Indian mining conglomerates, such as Coal India, sell coal to generators, who burn it, and sell power to distributors who supply power to business and retail customers at rates set by regional governments, that are amongst the lowest in the world. The fixed prices squeeze the finances of distributors. They, in turn, often fail to pay generators, leaving them unable to pay Coal India. Coal India retaliates by restricting the generators to delivery-against-payment, limiting their ability to build adequate stocks of coal.

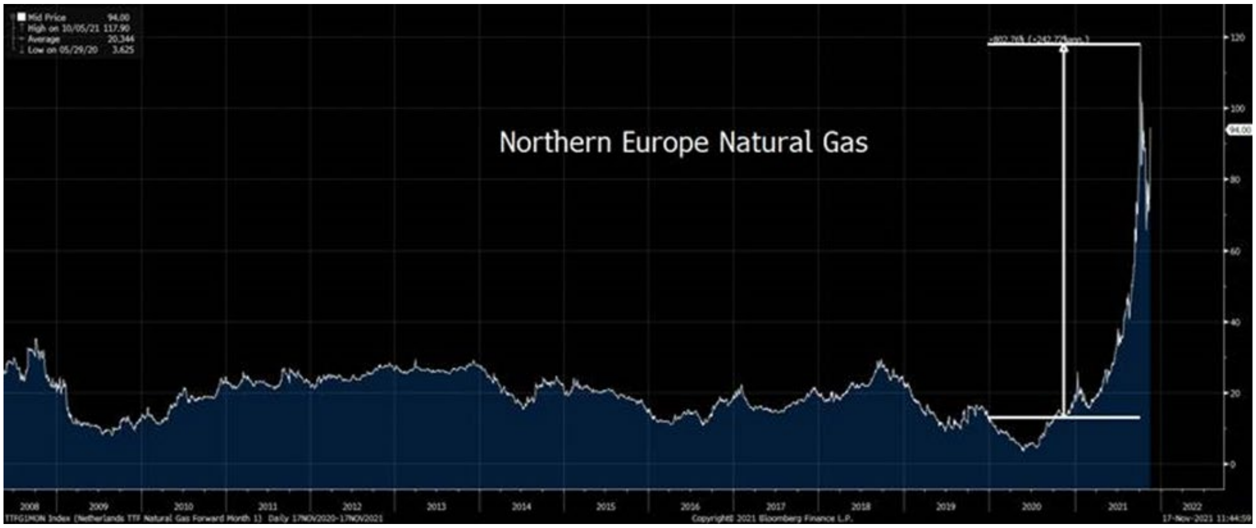
A confluence of factors caused the initial increase in coal prices. However, the incentive structure of the semi-liberalized power market is the cause of the dramatic surge in coal prices. Power producers in China and India resisted purchasing coal at higher prices because they could not pass on the costs via an increase in electricity prices – leading to severe destocking of coal inventory. By September of this year, coal inventories held by Chinese power producers dwindled to 7 days of cover. For context, Chinese power producers' coal inventories were equivalent to 28 days of cover in September of 2019. Eventually, authorities in Beijing became worried that their utilities were at risk of running out of coal during the winter heating season. As a result, regulators directed their power producers to procure coal and natural gas supplies regardless of costs. This inelastic demand resulted in a 390% (year over year) increase in Chinese thermal coal prices.

<u>From Coal to Natural Gas</u>

The surging price of coal was only the first domino. Coal and natural gas are the two most common sources of energy used in electricity generation. Their relative use in power generation will fluctuate based on their relative costs. The relative increase in price for one commodity will tend to decrease relative demand for that commodity, and vice versa. For example, an increase in the price of coal relative to natural gas will cause a relative shift away from burning coal and towards natural gas. The negative feedback loop in demand for the two commodities causes their prices to be correlated.

Over 70% of Chinese power production comes from coal, but shortages forced India and China to bid for LNG (liquified natural gas). LNG is a globally traded commodity that connects the natural gas markets around the world. China and India were previously absent from the global LNG market, but in 2021, China has overtaken Japan as the largest importer of LNG. As China and India imported more LNG it took critical supply away from countries dependent on LNG imports to satisfy marginal demand. As a result, price-insensitive buyers in East Asia tightened energy markets around the world and created a short squeeze as other power producers were left scrambling for supply. The short squeeze in the price of LNG is particularly felt in Europe, where 80% of gas is priced at spot vs. only 35% in East Asia.

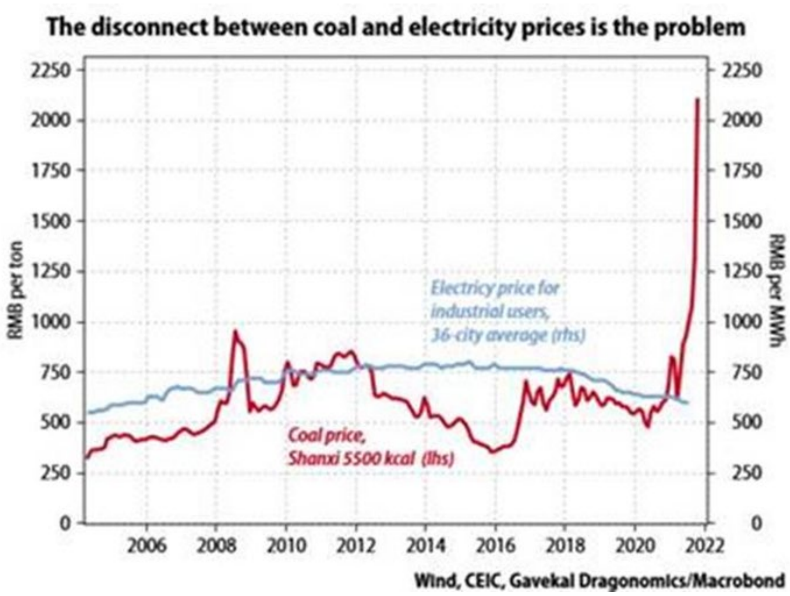
The price of natural gas increased 800% above pre-pandemic levels and 3100% higher than in March of 2020:



The knock-on effect that coal had on natural gas is just the start of the ripple effects that have cascaded through global supply chains.

Power Rationing

Chinese and Indian power producers cannot raise electricity prices in response to the parabolic spike in coal and natural gas prices because they have marketized coal prices and regulated power prices. As a result, power producers were losing money for every watt of electricity they produce and sell. The chart below shows the recent disconnect between the price of coal and electricity in China is unprecedented in magnitude.



We learn in Econ 101 that an increase in price causes a decrease in demand for a typical good or service. Therefore, when demand exceeds supply price will increase - reducing demand - to balance supply and demand. However, if prices are not allowed to increase, such as Chinese power prices, shortages will occur. Chinese and Indian power producers responded in a completely rational way by shutting down their plants and rationing power to energy-intensive industries – which, in turn, forced shutdowns of those industries. Some factories were only allowed to operate one day a week.

It is worth noting that power rationing has not been limited to South East Asia. The surging price of European electricity and natural gas has forced many energy-intensive European industrial manufacturers into temporary shutdowns.

Power rationing created a classic supply shock that has removed significant manufacturing supply in a wide range of industries. Inflation occurs when demand exceeds supply. Therefore, it is no wonder that a range of manufactured goods has experienced dramatic price increases.

China produces over 55% of the world's aluminum, but 2.9 million tons of energy-intensive Chinese aluminum capacity was curtailed due to power rationing. Aluminum prices were up nearly 75% (year over year) as of October of this year.

China accounts for 87% of global magnesium production, but the energy-intensive magnesium smelters were forced to run at 40% of capacity. By October, the price of Magnesium was up 420% (year over year).

China's authorities restricted the export of fertilizers, such as urea and phosphate, because they use large amounts of natural gas or coal in their production. In 2019 China exported 14.5 million metric tons of phosphate - for reference global phosphate production is 65 million metric tons per year. Phosphate prices have more than doubled this year, while urea is up 270%.

China produces 50% of the world's steel; yet, Chinese production in 2021 is 10% below the COVID disrupted 2020 levels. The US benchmark hot-rolled coil (HRC) steel price increased 230% and lead times hit a record 11 weeks in 2021 (it takes an average of 11 weeks for the mill to fulfill an order) vs. a typical 4.5 weeks.

The Visible Hand Distorts the Economy

Decades ago, the Hungarian economist, Janos Kornai, explained how partial or total liberalization in one area and control in another can create unpredictable failure points as unwinding central planning in complex systems is hard. The squeeze in Chinese power markets is a perfect illustration of how semi-liberalized systems fail. According to Kornai, the defining characteristic of socialism is shortages, while capitalism is characterized by surplus. If you want to understand the cause of shortages occurring around the world, it is the centrally planned economy sitting at the bottom of every global supply chain that is the most likely culprit.

In a market economy, prices allocate resources based on supply and demand. Imagine an economy that only produces two goods: steel and aluminum. Increasing power prices will raise the cost of production for manufactures. In this example, power prices increase because power demand exceeds supply, which will raise the cost of production for steel and aluminum so that they are unprofitable at current steel and aluminum prices. Steel and aluminum mills will respond by shutting down production – removing supply from the market - unless steel and aluminum prices increase to compensate for the higher power price. The relative price of steel and aluminum is determined by the relative supply and demand of the two commodities. If the aluminum market is tighter than steel, the price of aluminum will increase so that aluminum producers will be profitable at the higher power price. Therefore, aluminum producers will not shut down, and supply will not decrease. However, steel prices will not increase enough to compensate for the higher price of power; thus, steel production capacity will be removed from the market, which causes a decrease in demand for power. This intricate dance between steel and aluminum prices and production will continue until demand for power equals the current supply of power.

Over the past year, there has been an unprecedented disconnect between the regulated price of power in South East Asia and the true market price. Price is the mechanism that ensures the efficient allocation of resources. If the price is not set at the market-clearing level, then markets will not clear. The result has been widespread rationing, leading to shortages that have bottlenecked global supply chains.

A Supply Chain Bottleneck Case Study: Homebuilding

Commodity inflation is just the tip of the iceberg. We use the homebuilding industry to illustrate how supply disruptions at the bottom of the supply chain have a cascading effect, bottlenecking the entire supply chain.

Homebuilders have been unable to complete houses because of shortages of essential products such as truss plates. A truss plate is a simple manufactured product that connects wood to a truss; yet, it is an essential part needed to build a house. If builders can't source truss plates, they can't finish a job. If they can't finish a job, they can't get paid. If they can't get paid for their previous job, they can't start a new job. As a result, this seemingly insignificant part has bottlenecked the US housing market.

What is the cause of the truss plate shortage? According to MiTek, a leading truss plate supplier, "a worldwide steel shortage has impacted our production capacity. In 2021 steel producers severely curtailed tonnage allocations – and lead times jumped from the typical 8 weeks to 4 to 5 months. By way of example, MiTek has received just 55% of committed steel deliveries from our supplier base."

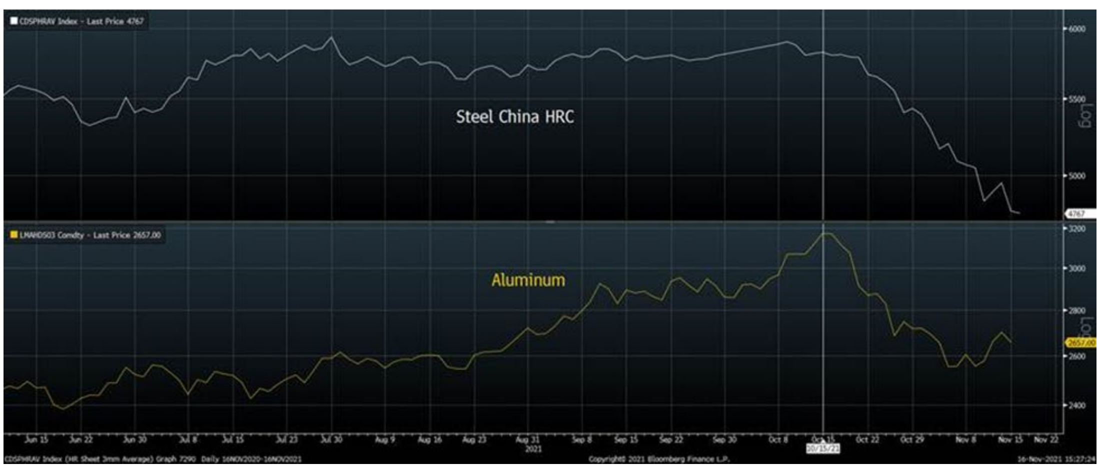
To summarize: a thermal coal shortage caused coal prices to spike. Unable to pass along the cost, East Asian power producers rationed electricity to energy-intensive industrial users, such as the 200mt of EAF steel mill capacity in the country. The significant reduction in steel supply during a time of booming demand resulted in a 230% increase in steel prices, increased lead times, and reduced allocation of steel by the mills (i.e., a shortage of steel). Two companies have 80% of the market share for truss plates. The inability of these companies to secure sufficient steel raw materials has reduced the production of truss plates. Finally, truss plates bottlenecked the housing market.

Housing is not unique. A similar process has played out across countless industries. Importantly, the cause is power rationing, not COVID-induced lockdowns.

A Turning Point

In October, the National Development and Reform Commission (NDRC), China's top economic planning agency, finally removed the cap on electricity prices and allowed prices to fluctuate based on market forces for industrial users. Chinese officials explicitly acknowledged the government price controls created market distortions that caused nationwide shortages. The NDRC's secretary-general stated that "such unreasonable interference must now be firmly stopped."

October 15th is the date of electricity price liberalization. It's not a coincidence that this coincides with the peak in Chinese industrial commodity prices:



Falling industrial commodity prices are an unintuitive result of rising power prices. However, Commodity prices declined because utilities stopped rationing power, which allowed industrial commodity production to increase.

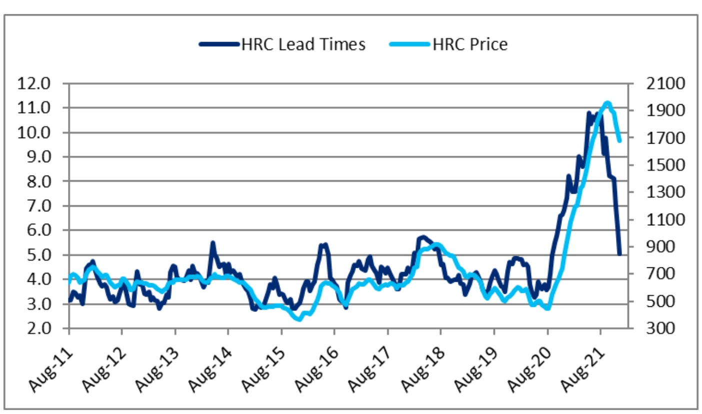
Industrial manufacturers are high fixed costs businesses; therefore, the unit costs are declining because increasing utilization more than makes up for higher electricity prices. Aluminum is off 20% from its high, while magnesium is -55% from its high:

Iron ore is down over 60%, palladium is down 30%, Chinese steel (HRC) is down 30%.

US steel prices are still elevated but likely to decline sharply in the near-term.

US steel lead times reached an all-time high of almost 11 weeks in 2021. However, lead times have recently collapsed to less than 4 weeks (vs an average of 4.5 weeks)

Steel lead times are leading indicator for price



Even agricultural commodities, such as corn and soybeans, are nearly 25% below their 2021 highs.

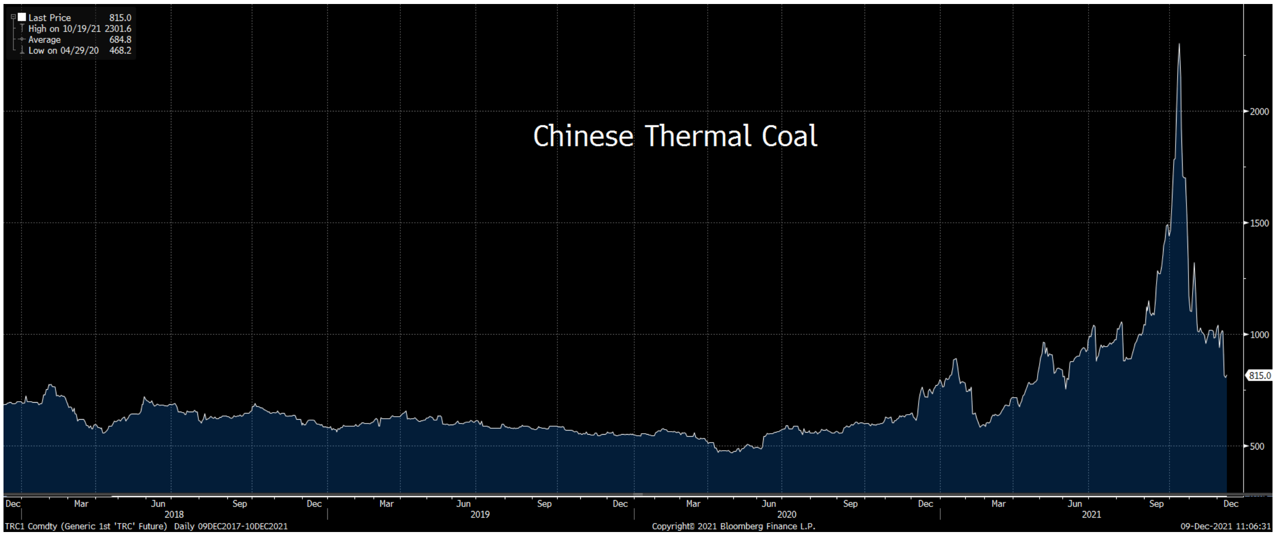
A Peak in Power Prices

In addition to the liberalization of electricity prices, the Chinese government ordered coal production to be ramped up, including speeding up the opening of new mines and reopening suspended ones.

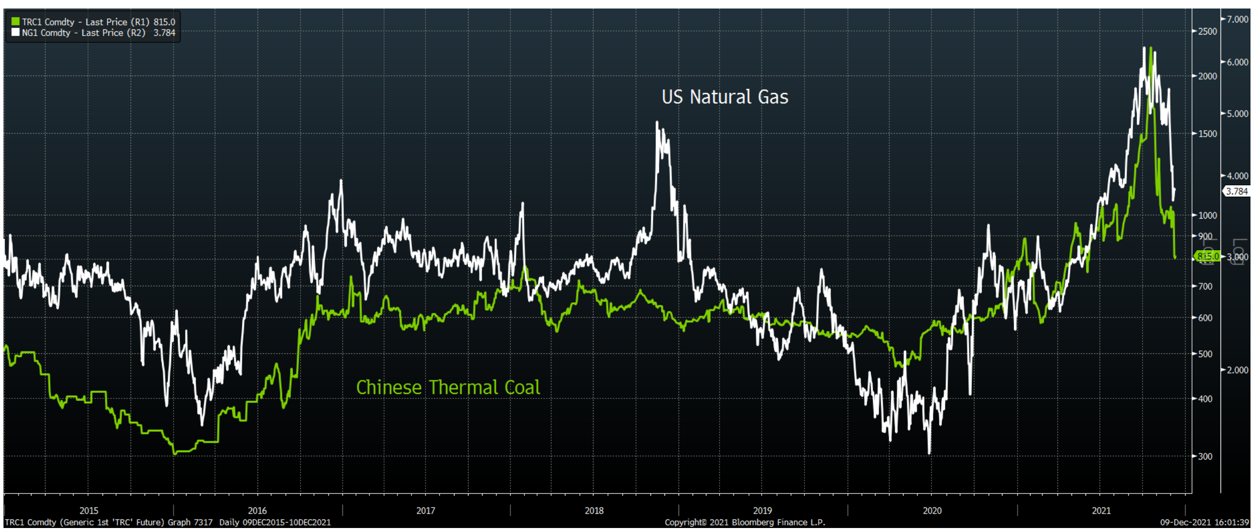
Despite an increase in coal consumption since the liberalization of the power market, Chinese thermal coal prices have continued to decline because Chinese coal production is increasing at an even faster rate than demand. According to analysts at Citi, coal stocks at 700 major power plants are up 300% since the end of September (now at 19 days of cover), and Chinese daily coal output is 11.5mt vs. 1.1mt in September – increasing to 12.5mt/d in December - and supply is running 2mt/day above coal demand.

Chinese thermal coal shortages are turning into a glut.

After a near 400% increase vs. 2020, prices are now down 65% from their peak:

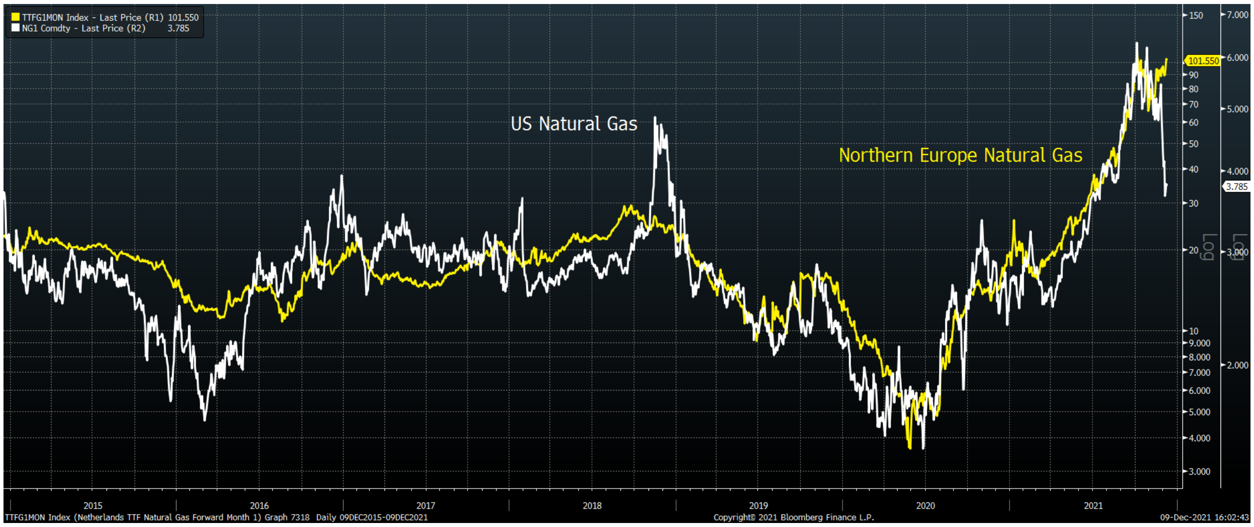


A surge in thermal coal supply is causing a decline in coal prices, leading to falling natural gas prices due to the negative demand feedback loop between the two commodities.



Over the short to medium-term, the supply side should provide a deflationary impulse for coal and natural gas. However, supply AND demand determine price. Therefore, it is important to note that demand for coal and natural gas is highly volatile during the winter heating months. Colder weather increases power demand for heating. A colder than expected winter could offset supply increases and drive prices higher. However, a warmer than expected winter is just as likely but will have the opposite impact on price. Weather is notoriously difficult to predict, but the near-term direction for supply drives the bias to the downside for near-term coal, natural gas, and power prices.

Local supply and demand dynamics can cause regional gas markets to diverge, but powerful feedback loops ensure disconnects are short-term. Northern European natural gas prices are likely to follow the path of US natural gas and thermal coal.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US Natural Gas
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2015 2016 2017 2018 2019 2020 2021
TTFG1MON Index (Netherlands TTF Natural Gas Forward Month 1) Graph 7318 Daily 09DEC2015-09DEC2021
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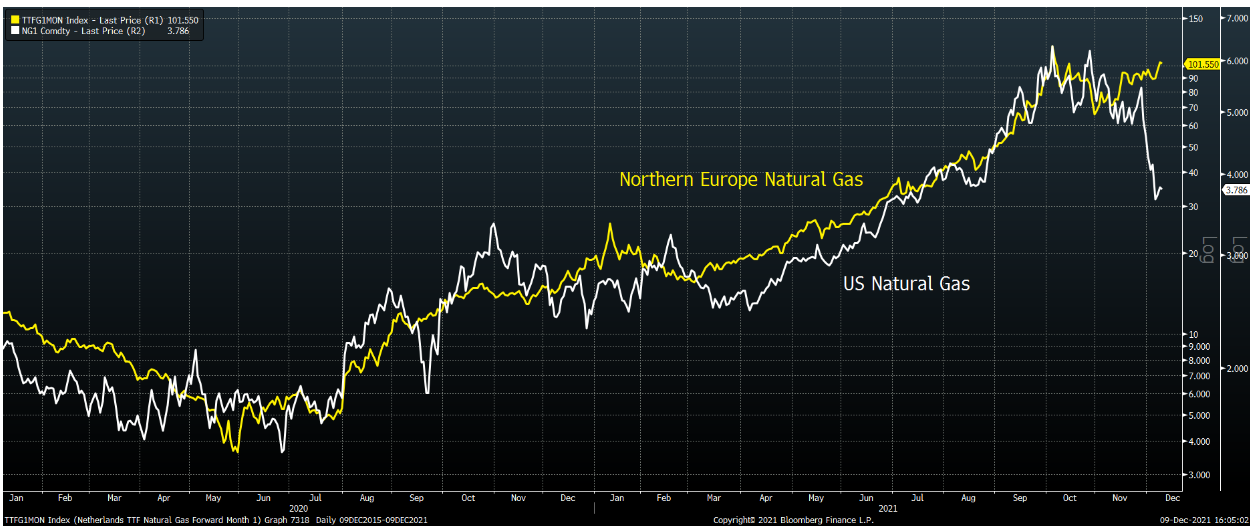
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Northern Europe Natural Gas
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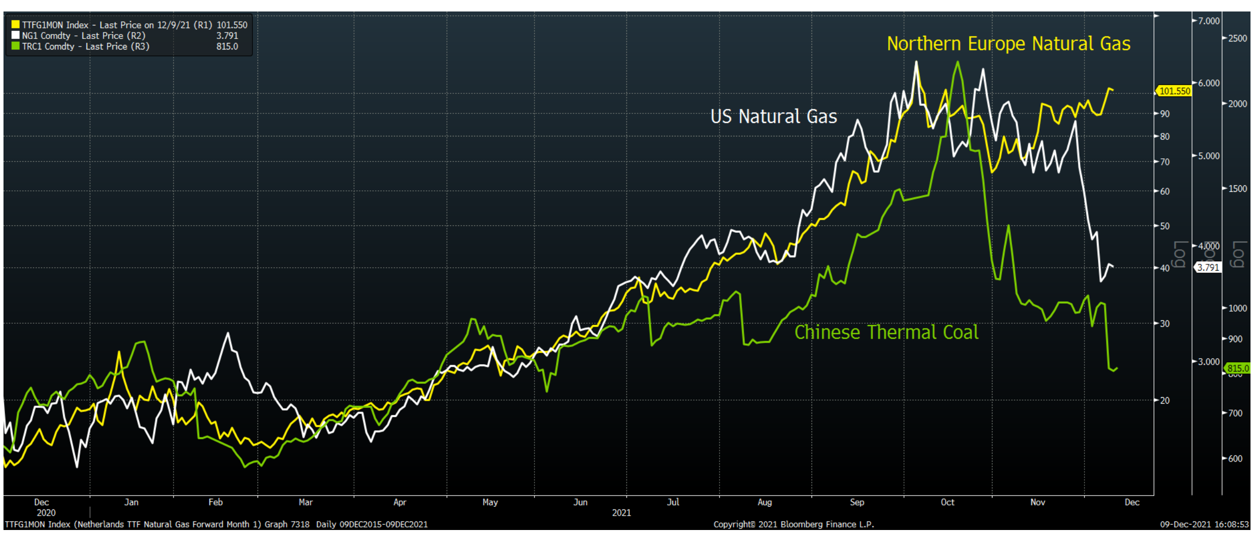
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NG1 Comdty - Last Price (R2) 3.791
TRC1 Comdty - Last Price (R3) 815.0
Northern Europe Natural Gas
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TTFG1MON Index (Netherlands TTF Natural Gas Forward Month 1) Graph 7318 Daily 09DEC2015-09DEC2021
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Summary

The semi-liberalized power markets in South East Asia created market distortions which caused severe destocking of coal inventories, which eventually created a short squeeze that sent the price of thermal coal soaring.

Higher coal prices created unprecedented demand in South East Asia for LNG, which caused a rise in global natural gas prices. Higher coal and natural gas prices increased power prices, which lead to inflation via an increase in the cost of production.

Economists are used to modeling the impact of rising energy prices on inflation. What is unique about the past year is that the energy crisis led to widespread power rationing in the manufacturing center of the world, parts of Europe, and many other places around the world. Power rationing removed a significant supply of materials critical in the production of downstream goods, leading to widespread shortages and contributing to inflation.

Power rationing has even contributed to the labor shortage in the US. Idled manufacturing capacity in South East Asian and surging power prices in Europe have created a shift in the distribution of manufacturing production back to the US. US steel mills are clamoring for new hires while trained Chinese steelworkers sit idle.

Conclusion

We are not claiming that the power shortage is the only variable responsible for shortages and rising inflation. Our point is that power rationing has played a significant role in supply chain shortages and inflation; yet, its impact is not understood. Thus, if we are right about the role that coal has played in creating a global bottleneck, then the easing of these conditions should catch investors and economists by surprise as inflation and shortages ease over the coming months (at least in the near-term). When a reverse salient is rectified people are always surprised by the rapid progress that follows.

Steel Price (white); Market Implied Inflation Expectations (yellow):

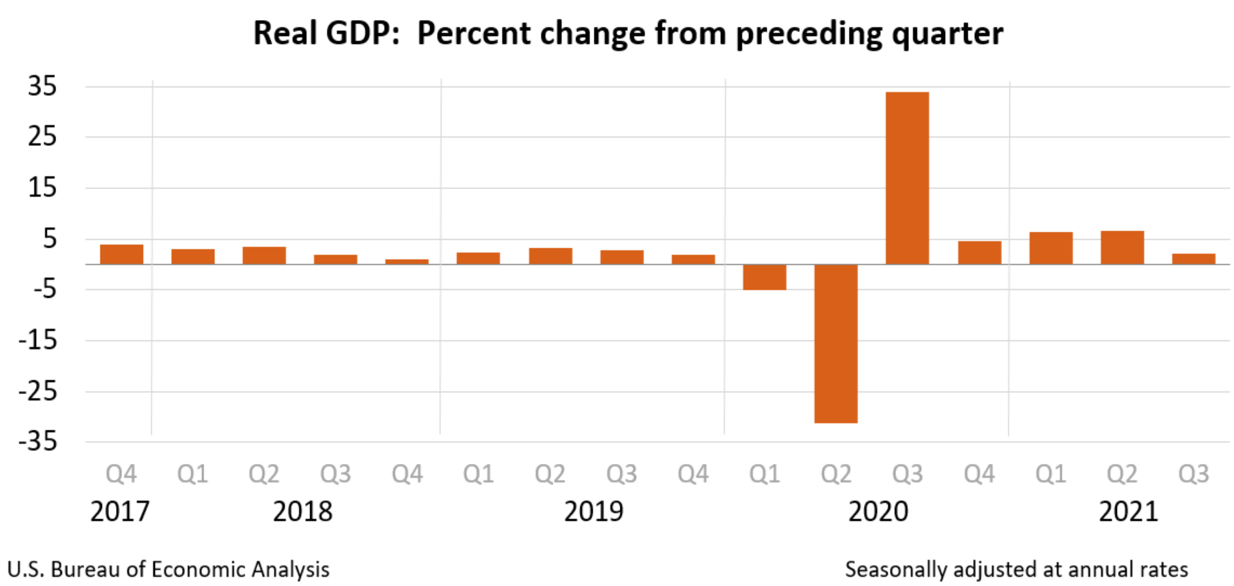
Aluminum Price (white); Market Implied Inflation Expectations (yellow):

Economic Outlook

By Bobby Long

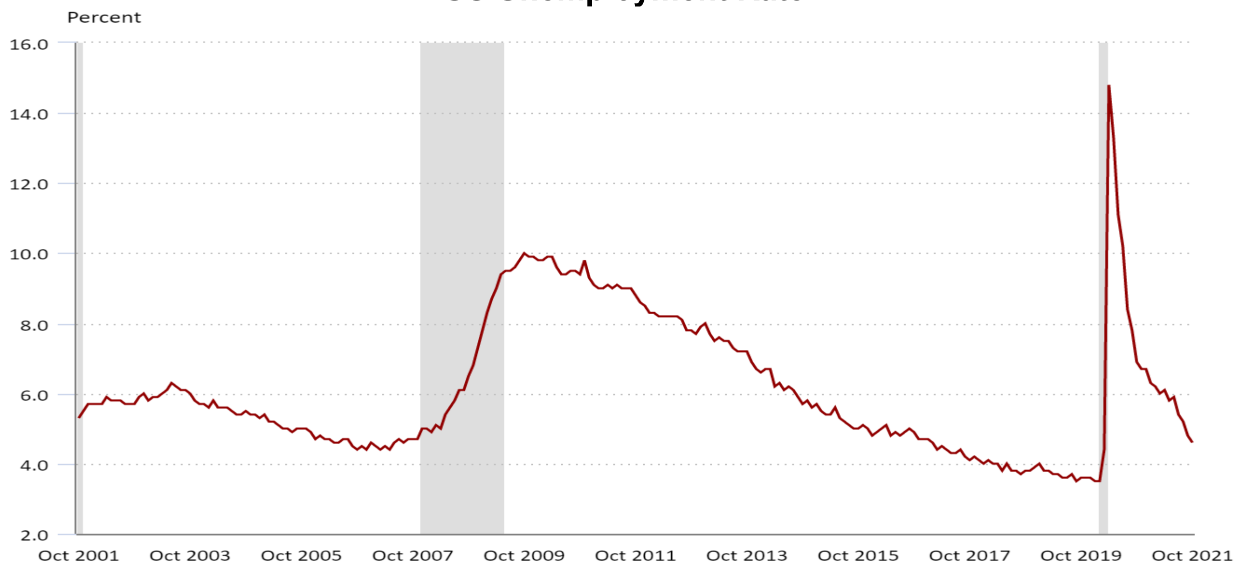
The US economy remains strong with underlying conditions generally supportive of continued economic growth. Monetary policy continues to be very accommodative and considering policy action generally works with a lag effect, this should remain a tailwind over the next year even as policy is tightened. Labor markets are healthy overall, with jobs widely available for those seeking employment. Consumers are still in pretty good shape also with asset prices having risen, savings still above longer-term averages, and wages increasing. Covid resurgences are a risk, but more likely represent a temporary dampening of activity with milder economic impacts versus previous outbreaks that were met with overly broad lockdowns and restrictions. Supply chain issues still persist, but remaining bottlenecks are more likely to ease than get worse at this point. Inflation is the clearest risk. The debate continues whether higher rates of inflation are transitory or more permanent, however most of the transitory camp will admit the higher inflation has been more persistent than previously believed.

GDP growth is still trending above average after a dip in the third quarter, where real GDP grew at a more modest 2.1% as stimulus spending slowed and supply chain disruptions weighed on activity. The rate was depressed by a large decline in autos and a more modest decline in residential investment. The decline in autos can be attributed to less inventory available due to well-known supply chain issues and consumers pulling back as prices have increased. While personal consumption expenditures on goods weakened some during the third quarter, personal consumption expenditures on services picked up as consumers shifted spending from goods toward services. Private inventory investment was also a positive contributor and will likely supply further growth over the next several quarters as inventory levels are brought back up. Consensus expectations are that fourth quarter real GDP growth will come in stronger, with the Federal Reserve Bank of Atlanta's GDPNow forecast at 9.7%.



Labor markets have strengthened as job losses from pandemic restrictions come back and activity normalizes. Leisure and hospitality employment have improved, but continue to lag as business and international travel are still below pre-pandemic levels. While many office workers have returned to office buildings, a large number continue to work from home or maintain a hybrid schedule which has held back employment for the businesses that serve these business districts. Some local economies also still maintain pandemic restrictions that have weighed on employment and made it difficult for small businesses to make hiring decisions. Overall, employment has been improving with the unemployment rate at 4.2% and continuing to fall.

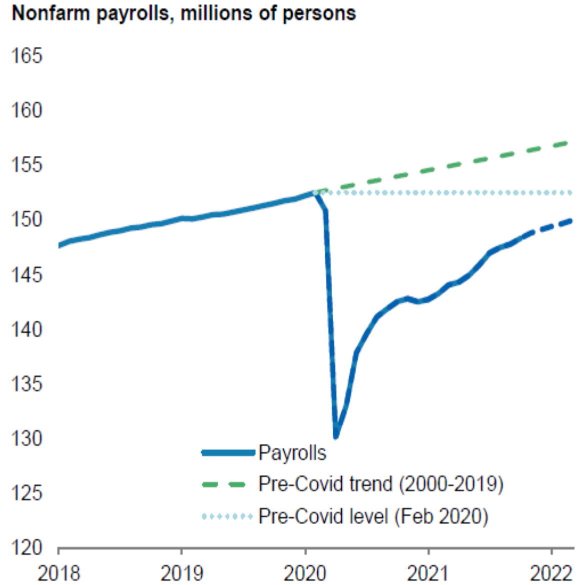
US Unemployment Rate



Source: Bureau of Labor Statistics

Nonfarm payrolls have shown positive gains but are still trending below pre-pandemic levels. Payrolls rebounded as restrictions were lifted, then showed strong gains in the first half of the year as activity resumed post vaccine availability and stimulus money flowed into the broader economy. The pace of payroll gains tapered some over the third quarter, but picked back up with stronger gains posted in October. November payrolls came in a little lighter than expected, but the overall employment report was more positive. This may just represent some lumpiness in payroll gains, but will be watched to ensure it is not the beginning of a weakening trend.

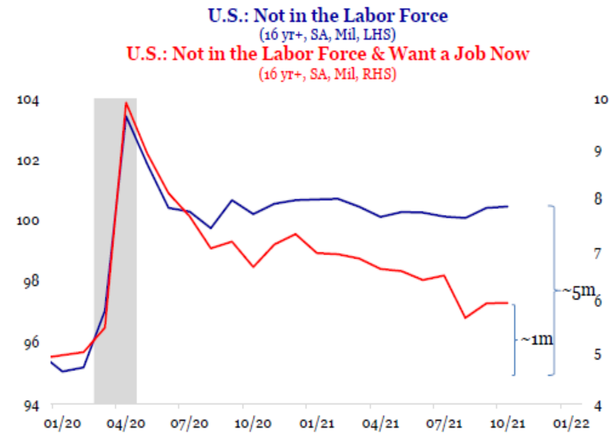
Nonfarm payrolls, millions of persons



Source: Bureau of Labor Statistics, Morgan Stanley

One question that lingers is why employment is still running below pre-pandemic levels when economic activity is healthy and labor markets relatively tight. There are pockets of activity that are still weak that were mentioned above, but businesses are broadly seeking workers and help wanted signs are everywhere. The lack of workers is largely due to low participation and low wages. A large number of workers fell out of the workforce during the pandemic and have not returned. There was a notable increase in retirements during the pandemic that may have permanently withdrawn these workers from the workforce prematurely. Others may have temporarily fallen out of the labor force, but could be drawn back in as stimulus payments end and more jobs become available.

These workers have been slower to return than anticipated and the participation rate has not improved, leading to a tight labor market in need of additional workers. The chart on the right shows that a large number of workers who left the labor force have not been looking to rejoin even as jobs have become available. The blue line has plateaued and indicates these workers may have been permanently removed from the labor force.



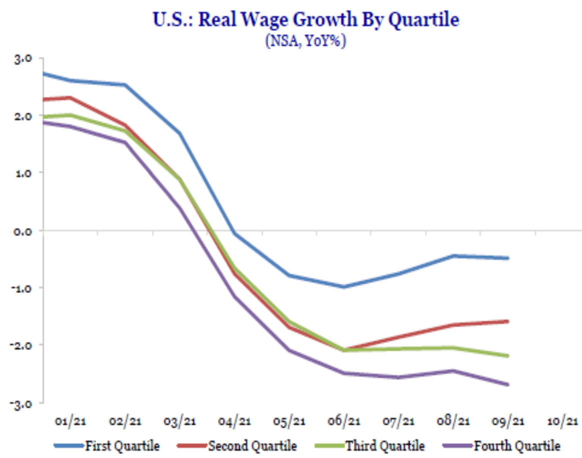
Source: Strategas Securities, LLC

Businesses are raising wages to attract workers. As the chart below shows, average hourly earnings are increasing across industries and look likely to remain at an elevated level even if the rate of growth moderates. Leisure and hospitality workers, where job losses were the highest, have seen average hourly earnings grow at double this rate. The job openings rate is relatively high and the job quit rate is at an all time high, signaling a tightness in labor markets that shifts power to workers and forces businesses to compete with higher wages.

Source: Bureau of Labor Statistics, Strategas Securities LLC

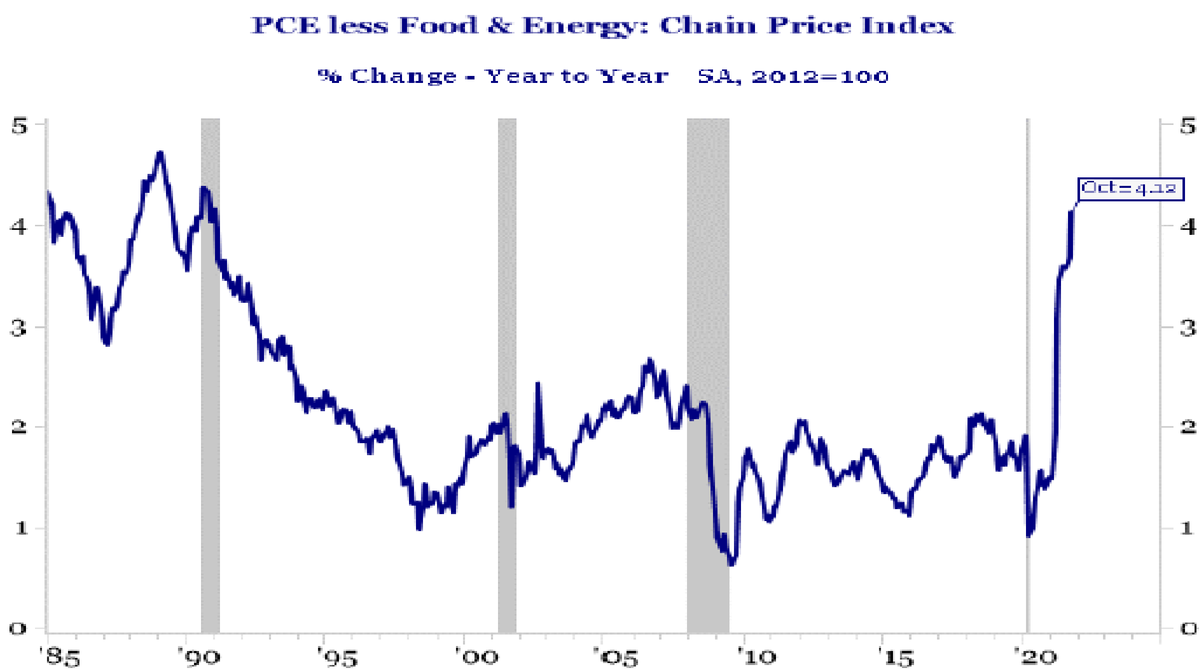
Higher wages can draw workers back into the labor market, but they may need to increase further to attract and retain workers. The pandemic has led many workers to reevaluate how they spend their time and consider the trade-offs they make as they seek a better balance between work, family, hobbies, income needs, etc. Many do not seem eager to return to the same jobs with the same demands without higher pay.

While wages have moved significantly higher in some industries, higher inflation for consumers have left most with negative real wage growth over the past year. The chart on the right shows the median wage growth minus all items CPI growth across income levels. All income levels have seen a decline in real wages since the beginning of the year. The bottom half of earners have seen the greatest nominal wage growth, but the largest declines in real wages.



Source: Atlanta Fed Wage Tracker, BLS CPI Data, Strategas

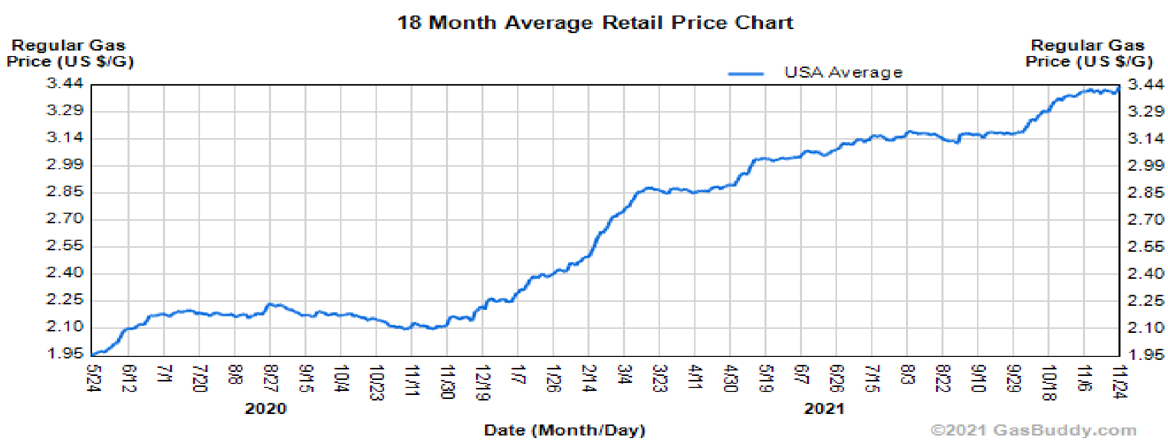
Higher inflation has not shown itself to be “transitory” yet and the risk that it becomes more problematic has increased. Most measures of inflation have moved sharply higher. The Personal Consumption Expenditures Price Index excluding Food and Energy is a widely accepted measure and the chart below shows how the recent increase compares to inflationary trends over the past few decades.



Source: Bureau of Economic Analysis, Strategas Securities LLC

Consumers are feeling inflation. As previously mentioned, real wages are not keeping up with inflation and inflationary pressures have been broadly felt across the economy. Businesses have been able to pass price increases on to consumers so far, but it is not going unnoticed. It was widely reported across news outlets recently that the Dollar Tree announced it was raising its baseline price for items from $1 to $1.25. Management noted merchandise cost increases, higher freight and distribution costs, higher general operating costs and the need to pay higher wages as a reason for the increase. Some may see the increase as "only a quarter," but that is a 25% increase. The Dollar Tree price increases are an example of inflation pressures impacting the lower end of consumer goods, but these price increases are being pushed to consumers across the spectrum from low to high end goods. Dollar Tree management did note that despite the increase, they would not be changing their name.

Economist generally like to use measures of inflation that exclude food and energy costs due to the short-term volatility of the two categories, but this is often where consumers feel the quickest impact and take notice. As economic activity has rebounded over the past year, oil demand has increased with supply constraints persisting, leading to higher gasoline prices at the pump. For those who spend their days bouncing between job sites, making supply runs, and hauling kids around to all their activities, the higher gas prices are a direct hit to wallets that is felt several times a week. The chart below shows how prices have risen 76% over the past 18 months.

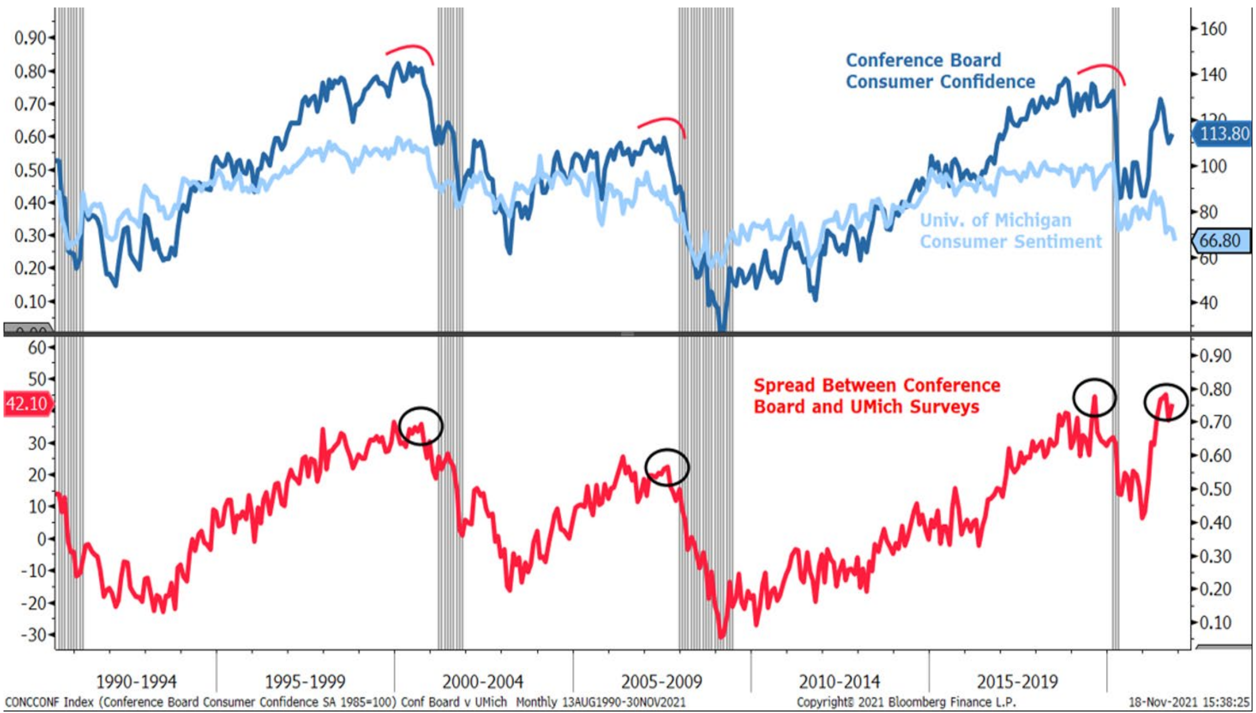


As we enter the holiday season and many were recently fortunate enough to gather with family for a Thanksgiving dinner, someone at the table probably made a comment on inflation, gasoline prices, or how much more the turkey cost this year. The chart on the right prices a traditional Thanksgiving dinner versus the prior year, with families paying 14% more to overindulge on turkey and dressing.

	2020	2021	$ Chg.	% Chg.
Turkey, 16lb	$19.39	$23.99	$4.60	24%
Pumpkin pie mix, 30oz	$3.39	$3.64	$0.25	7%
Whole milk, 1gal	$3.08	$3.30	$0.22	7%
Veggie tray, 1lb	$0.73	$0.82	$0.09	12%
Misc. ingredients	$3.09	$3.45	$0.36	12%
Rolls, 12	$2.66	$3.05	$0.39	15%
Pie shells (2)	$2.42	$2.91	$0.49	20%
Green peas, 1lb	$1.46	$1.54	$0.08	5%
Fresh cranberries, 12oz	$2.69	$2.98	$0.29	11%
Whipping cream, 1/2pt	$1.74	$1.78	$0.04	2%
Sweet potatoes, 3lbs	$3.44	$3.56	$0.12	3%
Cubed stuffing, 14oz	$2.81	$2.29	($0.52)	(19)%
"Classic" Thanksgiving	**$46.90**	**$53.31**	**$6.41**	**14%**
Ham, 4lb	$9.16	$10.87	$1.71	19%
Russett potatoes, 5lb	$2.55	$2.96	$0.41	16%
Green beans, 1lb	$1.50	$1.58	$0.08	5%
"Updated" Thanksgiving	**$60.11**	**$68.72**	**$8.61**	**14%**

Source: American Farm Bureau Federation, Wells Fargo

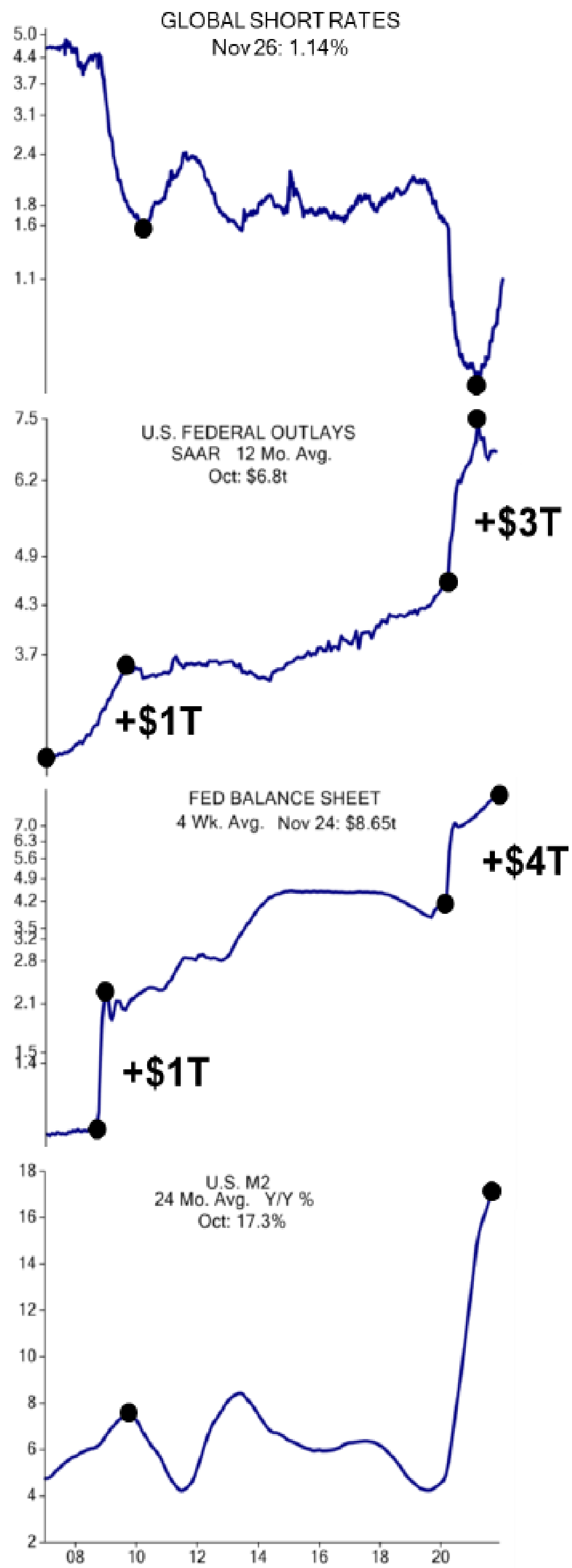
It is important to include energy and food costs in the inflation discussion for a variety of reasons, but largely because it impacts the daily spending habits for many consumers on what they consider some of their basic needs. It may be a more modest percentage of the consumers overall budget versus things like rent, which has also increased, but it is a significant portion of the budget for many individuals and families and they are frequently having to pay more. The increased costs are taking up a bigger percentage of their budgets on a weekly basis at the expense of savings and discretionary budgets. It is especially impactful to low and middle income wage earners, where these expenses make up a larger percentage of income. This may be negatively affecting consumer sentiment and the risk is it begins to discourage consumer spending. The chart below highlights a divergence in two widely followed consumer confidence surveys. Where the Conference Board survey has held up better, the University of Michigan survey has been especially weak.



Mike Wilson with Morgan Stanley points out that the divergence in the two surveys may be attributed to how they are conducted and could signal a risk to consumer spending. The Conference Board survey is much more dependent on labor market conditions which are healthy and mostly improving. The University of Michigan survey is more dependent on individual financial conditions and purchasing power. Many consumers, despite being employed and seeing wage growth, may be feeling poorer in the face of inflation with less discretionary spending and savings. Wilson states his view that "the weakness is mostly due to inflation and the fact that the bottom 50% of the income cohorts are having a harder time making do with current income levels if they don't have inflated assets to offset." The risk is "consumers stop buying due to high prices and/or lower confidence about one's financial standing, that ultimately affects company earnings which can lead to labor market weakness and/or layoffs."

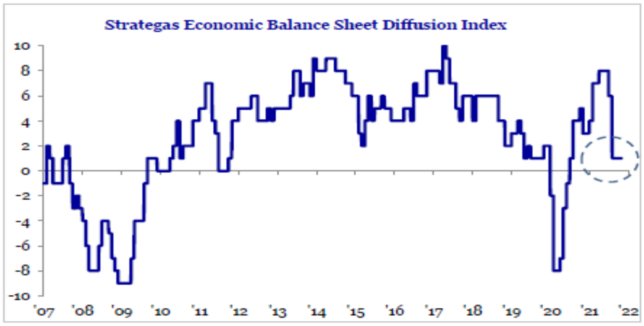
The debate on whether inflation is transitory or more persistent may depend on one's view of the source of inflation. The transitory camp points to supply chain disruptions creating shortages with a view that as these bottlenecks dissipate, inflationary pressures will ease. Inventories will be rebuilt as sales normalize to pre-stimulus levels and prices will fall with inflation stabilizing. Others worry higher inflation levels may be more persistent and harder to stabilize due to overly accommodative monetary stimulus and a surge in money supply. Both arguments are valid, and both are contributing to higher inflation. There is risk that supply chain disruptions linger longer than expected and shortages become more problematic. Businesses are already looking to hold higher inventory levels and manufacturing inputs, which means higher costs that could become more permanent.

The increase in money supply is a result of policy decisions that work with a lag, making it difficult to dampen inflationary pressures when inflation begins running too high. Ed Hyman with Evercore ISI stacked the charts to the right to show how policy decisions are fueling money supply, nominal GDP growth, and inflation. Global short rates were cut to almost nothing, federal outlays surged, and the Federal Reserve's balance sheet swelled with large scale asset purchases, all contributing to the surge in money supply. These are huge numbers that could make it difficult to slow inflationary pressures without disrupting economic activity.



Source: Evercore ISI

In an effort to provide a comprehensive measure of economic conditions, Don Rissmiller with Strategas Securities LLC has created the Economic Balance Sheet Diffusion Index below that attempts to quantify broad economic conditions as assets or liabilities to the overall strength of the economy. The index has fallen over the past few months, with assets slightly outweighing liabilities.



Assets	Neutral	Liabilities
Interest Rate Env	Trade Deficit	Wage Inflation
Manufacturing	Credit Environ	Price Inflation
Capex Eqp	Nonres Constr	Cons Conf
Employment	Cons Spending	Govt Deficit
Business Conf	Housing	

Economic:	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct '21
Assets	6	4	4	5	7	7	8	8	8	6	5	5	5
Liabilities	1	1	1	1	0	0	0	0	0	0	4	4	4
Net	5	3	3	4	7	7	8	8	8	6	1	1	1

Housing and consumer spending are a risk that would be negative should they slip from neutral to a liability. Housing is a large driver of economic activity that has been very supportive, but weakened some as home prices have risen and supply chain issues have affected building materials. Consumer sentiment measures on home buying conditions have moved sharply negative, indicating potential homebuyers may be stepping back in the face of higher prices. Consumer spending has been strong and many consumers still have excess savings available to spend, but inflation is having an impact on disposable incomes and sentiment may indicate they are becoming more cautious on spending. Business confidence should also be watched. Large businesses have been generating strong profits and have cash available for capital investment. They have been able to pass on higher costs to customers preserving margins for now, but if they lose this pricing power confidence could fall with capex spending behind it. Inventory restocking should benefit growth and a move to onshore more inventory and manufacturing capabilities is also a positive driver. The risk that higher inflation becomes more entrenched has increased. While not abandoning the view that higher levels of inflation will come down as pandemic-related supply and demand imbalances improve, Federal Reserve Chair Jerome Powell did recently admit that inflation has been more persistent and that the word “transitory” should be retired. The Federal Reserve will begin removing policy accommodation soon and the risk of Fed communication and policy errors has increased. New COVID-19 variants have had less of an economic impact as they have surfaced, but an uptick in new cases of the Omicron variant would be a drag on activity. Overall, underlying economic conditions can continue to support a healthy level of economic growth, but the risks to disrupt this have risen.

RSA PORTFOLIO STRATEGY

Interest Rates and Fixed Income Strategy

By Nick Prillaman

At our September meeting, inflation was a concern among investors as supply constraints put upwards pressure on prices while the Federal Reserve remained steadfast in their view that inflation was only transitory. The central bank appeared to be in no rush to start hiking interest rates but did indicate that tapering their bond purchases would probably begin later in the year. In this environment, longer-dated interest rates moved sideways as growth expectations declined which was aided in part by the increase in Covid-19 cases. Credit market spreads remained tight and were generally stable.

After our meeting mid-month, Treasury market moves increased dramatically from their steady state that had prevailed over the previous few weeks. The catalyst was the Fed's meeting on September 22nd where CredightSights said, "The Fed's updated projections were on net hawkish, showing more members expect a hike in 2022, three hikes in 2023, and 1.75% rate by the end of 2024. The Fed also prepared investors for an announcement on the start of tapering, which seems likely in November and broadly matches expectations on timing." The belly of the Treasury curve sold off earnestly from the meeting through the end of the month with the 5-year yield rising from 82 bps to 96 bps and the 7-year increasing from 1.11% to 1.285%. Other parts of the curve were negatively affected as well with the 2-year yield rising by 6 bps and the 30-year yield popping 20 bps higher. The increase in yields caused Treasuries to return -1.20% for the month which was much better than the -4.77% return for the S&P 500, per BofA Securities.

In spread products, the Bloomberg US MBS Fixed Rate OAS tightened from 33 bps to 27 bps while the Credit Suisse US Agency 3-5 Year Spread widened from -.90 bps to 2.40 bps. Both asset classes outperformed Treasuries largely due to their shorter duration profile. For corporate bonds, high grade spreads compressed by 4 bps and produced a total return of -1.06%. BofA Securities said Railroads produced the highest excess return of 96 bps while Metals and Mining was the worst at -1 bp. The high yield bond sector was the clear winner among broad asset classes as it was the only one to produce a positive return at 3 bps. The sector's short duration versus Treasuries was again the leading factor in the outperformance.

In October, BofA Securities said "economic activity rebounded after a slowdown in 3Q as the Covid-19 situation continued to improve. However, with a pick-up in growth, inflation concerns intensified." In mid-October, the Bureau of Labor Statistics said CPI for September rose 5.4% on a year-over-year basis while prices rose .4% on a month-over-month basis. Used car and trucks posted an eye-popping 24.4% year-over-year price growth though prices actually trended lower in August and September. On the same day as the CPI print, the Federal Reserve released the minutes from the late September meeting. The Fed saw inflation as transitory but did raise their inflation forecast. The major news from the release surrounded the taper which the Fed said “could start in mid-November or mid-December” and that it “could conclude around mid-2022.” With a more hawkish Fed and high inflation, Treasury market participants in the 2 to 3-year part of the curve took to selling as the 2-year yield rose by 22 bps and the 3-year increased almost 25 bps. Investor activity was much different on the long end of the curve as the 30-year Treasury yield actually fell by 11 bps which helped produce a much flatter Treasury curve.

The Bloomberg US MBS Fixed Rate OAS continued to tighten from the previous month falling 3 bps which was in contrast to agencies where the Credit Suisse US Agency 3-5 Year Spread rose by 6.5 bps. In the terms of investment grade bonds, BofA Securities said spreads were unchanged for the month even though a risk rally occurred in the stock market as the flattening of the Treasury curve weighed on credit spreads. The Bank further commented that the Food/Beverage/Bottling sector posted the highest excess return in high grade with 49 bps while Metals and Mining was once again in last with -42 bps in excess return. High yield bonds struggled with a -18 bps in total return as a selloff in the front end of the curve affected this sector.

Volatility came back to the fore in November as a myriad of factors drove markets. Inflation was one of these factors as CPI rose .9% in October and was higher than expected. On a year-over-year basis, prices increased a heady 6.2% which was the highest 12-month increase since November 1990 per the Bureau of Labor Statistics. In response to this news, the 2-year Treasury yield rose 9 bps in a single day. Another factor in the rise of volatility was the emergence of the Omicron Covid variant from South Africa which caused the S&P 500 to fall 2.3% and crude oil to plunge 13%. Eshe Nelson with *The New York Times* said this new variant “prompted another round of travel restrictions and reignited concerns about the economic toll imposed by the pandemic.” To close the month, Federal Reserve Chairman Jay Powell, in his testimony to the Senate Banking Committee on November 30th, shocked the markets with his exceedingly hawkish comments saying “At this point the economy is very strong and inflationary pressures are high and it is therefore appropriate in my view to consider wrapping up the taper of our asset purchases, which we actually announced at the November meeting, perhaps a few months sooner.” He further said, “I expect we will discuss that at our upcoming meeting.” Powell also indicated that he would cease to describe inflation as “transitory” by saying “I think it’s probably a good time to retire that word and try to explain more clearly what we mean.” Essentially, inflation is going to be around longer than anticipated, and policy needs to adjust to reflect that.

Across fixed income sectors, the Bloomberg US MBS Fixed Rate OAS widened by 10 bps while the Credit Suisse US Agency 3-5 Year Spread increased by 4.5 bps. BofA Securities said Treasuries posted a .89 bp return which outpaced agencies at 17 bps, high grade corporates at 9 bps, and high yield corporate bonds at -1.02%. Investment grade credit spreads increased 13 bps for the month and posted -105 bps of excess return. Automobiles were the leading sector among investment grade names with -47 bps of excess return while Railroads were the laggard at -174 bps of excess return. Credit Suisse said “heavy supply, elevated rates, volatility and eventually the discovery of a new Covid variant drove IG cash spreads to their worst month performance since March 2020 in November."

Markets started December in risk reduction mode as the Omicron variant, and the perceived aggressive taper timeline weighed on investor sentiment. This changed, however, as the variant looked to be more benign than previously anticipated, and in response, the S&P 500 surged 2.07%, and the yield on the 2-year Treasury rose 5.8 bps on December 7th.

From an activity and outlook perspective, we have made a couple adjustments in Treasuries to better position the portfolio. We swapped out of an August 2030 note and purchased the current 7-year Treasury. The trade allowed us to double our coupon, shorten duration by 1.75 years while only giving up around 7 bps in yield. Another transaction was the purchase of a 4.5-year bond to take advantage of the recent rise in interest rates and help reduce our underweight position in the sector. It also added an incremental amount of insurance in a very low rate environment. A third trade was the purchase of a 3.5-year security whose yield had basically doubled over the previous three months. The rationale underpinning this addition was the same as the 4.5-year Treasury. We are currently underweight the sector and short duration which seems appropriate given the opportunities in other sectors and current rate levels.

The outlook for the Treasury market appears volatile as the Federal Reserve tries to manage a complex inflation environment in the midst of an ongoing pandemic. As you can see in the chart of CPI below, inflation has been running very hot with year-over-year prices rising 6.2%. These price gains are a problem especially when the Fed's funds rate is zero, the 2-year Treasury is 70 bps, and the Fed is still buying $105 billion Treasuries and MBS per month. For comparison purposes, the last time CPI was this high was in 1990 when the 2-year Treasury was close to 8%.

Source: Bloomberg

The Federal Reserve began adjusting policy in November when it announced at its Nov. 3rd meeting that it would reduce its Treasury purchases by $10 billion and $5 billion for mortgages. The Central Bank also said that in December it would further reduce the Treasury purchases by an additional $10 billion and $5 billion more for MBS. This pace has now probably changed given Jay Powell's remarks to the Senate Banking Committee. Jeff Cox at CNBC.com said, "The initial tapering schedule would have seen bond purchases wrap up around June; if the committee chooses to accelerate, that could mean close earlier in the spring, giving the Fed leeway to raise interest rates anytime thereafter." If the pace does indeed change, the announcement should come from the Fed's December 15th meeting.

With tapering underway, Covid-19 will be the wild card for the future path of interest rates. If the virus ends up producing a significant wave of cases at some point in spite of current vaccines, economic growth should slow which will cause the Fed to take their time and raise rates farther in the future. In this instance, the Treasury curve will maintain its steepness. However, if Covid-19 wanes over time or we learn to effectively deal with outbreaks in a manner that doesn't harm the economy in a significant way, it would be rational that the funds rate will start being raised. This will cause the interest rate curve to further flatten as the market begins pricing an end to the economic cycle. From a chart perspective, it seems that the second scenario is the likely outcome as the 2-year continues to move in an uptrend as seen below.

Source: Bloomberg

On the opposite side of the curve, the 10-year Treasury looks to be range bound for the near term, so a further flattening appears to be the higher probability event over the medium term.

Source: Bloomberg

In the agency portfolio, we sold a December 2026 Federal Farm Credit note and purchased an April 2031 security. At the time of the trade, the yield curve was flattening, and the belly of the curve was underperforming, so we felt it was prudent to reduce our exposure to the 5-7 year area of the curve. We were able to pick up 50 bps in yield while also monetizing a small gain. The portfolio has one agency security maturing soon, and we plan on reinvesting the proceeds as front-end interest rates are looking more attractive given their recent rise while spreads have widened slightly. We are looking to buy a short to intermediate piece to add yield over Treasuries and keep our maturity weightings in line. With markets constantly in flux, the RSA will continue to make adjustments in the agency portfolio as opportunities arise.

For mortgages, we purchased a large block of Ginnie Mae 30yr 2.5s in September with an estimated yield of 1.618% and a modified duration of 4.46 years. With interest rates moving higher in conjunction with the rise in stock prices, we needed to add new money and reinvest prepayments to keep the broad fixed income weighting above 10%. Mortgages filled this need as they offered excellent liquidity as well as decent spreads. This rational underpinned our other mortgage trades as well. For October, we purchased another Ginnie Mae 30yr 2.5 pool which helped bring our duration closer to the Index. In November, we added three 30-year 2.0s, and this aided in reducing our underweight in 30yr 2.0s versus the Index. One pool was a Freddie Mac with Rocket Mortgage as the servicer and a maximum loan size of $150k. Another pool was a Freddie Mac with 90% of the loans being serviced by Rocket Mortgage and a maximum loan size of $200k. Both pools had an estimated yield of 1.84% These attributes for both pools should help them outperform in up and down interest rate environments. The third mortgage security was a generic Fannie Mae with an estimated yield of 1.89%. Finally for December, three 30-year Freddie Mac 2.0s with loan balance attributes and Rocket Mortgage as the servicer were added to the portfolio.

Mortgages look to be set for a period of turbulence. Ankur Mehta, a Citi MBS analyst, recently stated, “Chair Powell’s comments solidified our view that the Fed will accelerate taper and raised the possibility of a doubling of the notional versus our expectation of a 50% increase. We reduce our spread widening forecast for 2022 to 20bps to 30bps from current levels given the ~10bps spread widening recently.” The sector has clearly started to price in the taper given the recent spread widening, and if the Citi forecast proves correct, there is more to come. Another risk is that if the long end of the Treasury curve sells off due to the lack of Fed sponsorship, mortgages will suffer worse performance than other fixed income asset classes due to their negative convexity. These negative views are offset by the fact that mortgage-backed securities offer more yield than risk-free assets while having better liquidity than corporate bonds. The RSA will continue to reinvest prepayments and add money to space when needed. We will also look for opportunities to add pools with more favorable characteristics in the specified market at reasonable levels. The portfolio is underweight and short duration.

For the corporate bond sector, we purchased a small block of a new 7-year security by Lowe’s right before our previous meeting with a spread of 63 bps. We also added a December 2024 piece of Pricoa Global Funding which is a Prudential security. The note will provide 33 bps of spread in an environment where we see little need in taking risk further out the curve. Two Ecolab issues, a Baker Hughes bond, and a Ford note were acquired as well. Beyond purchasing bonds, we experienced a number of changes in the portfolio. For example, we had two 30-day par calls before maturity from Citigroup and Fifth Third Bank and three make-whole calls from Verizon, Thermo Fisher, and Ford as these issuers wanted to get rid of their high coupon debt that was issued around the Covid Crisis.

Our thinking for the corporate space is that there will be volatility in spreads. The investment grade and high yield space has started to see increased spread oscillations as evidenced in the below chart, and we see this continuing as the Fed becomes less accommodative. The range of spread changes should be tight however as robust liquidity, high credit quality, and minimal default risk put a cap on how high spreads can go. Corporate bonds offer the most yield relative to Treasuries, agencies, and mortgages, so we will continue to be a buyer as bonds come available. The portfolio is short duration and overweight the asset class.

IG cash spreads now wider on the year

Source: Credit Suisse

HY cash spreads now wider on the year

Source: Credit Suisse

Source: Credit Suisse

Domestic Equity Strategy

By Allan Carr

Despite a -4.65% return in September, the S&P 500 posted an impressive 30% return for our fiscal year. The new fiscal year started with a bang as the S&P was able to claw back the September losses and then some, posting a 7% return in October. While there was a lot of volatility in the bond market as inflation remaining elevated, it did not really spill over to the stock market. It was a slow and steady grind higher on the heels of an extremely strong 3Q earnings season, where upwards of 80% of S&P 500 companies beat estimates. Despite all the headlines of supply chain disruptions, semiconductor shortages, rising commodity prices, labor shortages,etc; Corporate America delivered with help from strong demand, unprecedented fiscal stimulus, and extremely robust margins (Exhibit 1).

Exhibit 1

November looked to be more of the same as we started the month with six straight positive trading sessions, each setting a new all time high. Volatility remained muted, and the S&P was up 2.1% for the month when markets closed for the Thanksgiving holiday. Then the 8 week respite from market volatility and angst came to an abrubt end with the news of the Omicron variant on the holiday. The stock market was only open for half a day on Friday, but it was a painful "risk off" session with the S&P down 2.3%, smallcap stocks down 3.7%, and oil down prices falling 13%.

The following Monday witnessed a relief rally of 1.3%, and markets were calm in early morning trading as we looked to close out November. The calmness did not last as investors were dealt a series of negative headlines. Regeneron and Moderna both hinted that their products may not be as effective against the new variant. Then Fed Chairman Powell poured gas on the fire when he took the microphone at his Senate Banking Committee testimony. After sticking to his guns longer than expected about inflation being "transitory," he reversed course and suggested it was time to retire that word. This about face did not sit well with an already jittery market, as the yield curved flattened significantly, and the S&P sold off just shy of 2%, closing November in the red.

The first day of December looked promising with the S&P up 1.9% in the morning session, only to see a violent intraday reversal when news of the first Omicron case in the U.S. was reported in California. The market ended up closing down 1.2%, more than a 3% intraday swing. The two day selloff was the worst two day period since October 2020.

We've said many times that markets do not like uncertainty, and they got served a healthy helping of it after the holiday. In the 7 weeks preceeding Thanksgiving, there was only one day the market moved more than 1%. In the eight trading days since the market has had an average absolute daily move in excess of 1.5%. Despite all the noise and uncertainty, the S&P 500 is less than 1% from the all time closing high in mid November.

In the short term, the market appears to be discounting worries of Omicron being a major event, but it could be several weeks at a minimum until more is known. If that turns out to be the case, some historicals point to a snapback that may already be underway. With the recent spike in volatility, often times it ends up being a healthy event. The market sometimes needs a good flushing out after a good run and complacency builds. Since the financial crisis, stocks have been quite resilient following these vol shocks (Exhibit 2, Credit Suisse).

Exhibit 2

Future Returns Based on VIX Levels

%	S&P 500		Russell 2000	
When VIX > 15	**Return**	**Annualized**	**Return**	**Annualized**
Subsequent 2 Months	2.9	18.6	3.5	22.8
Subsequent 3 Months	4.5	19.1	5.4	23.4
When VIX > 20				
Subsequent 2 Months	5.1	34.5	6.7	47.9
Subsequent 3 Months	7.5	33.5	10.3	47.8
When VIX > 25				
Subsequent 2 Months	6.4	44.9	8.4	62.6
Subsequent 3 Months	9.2	42.2	12.8	62.0

As mentioned earlier, November started out strong but ended with a thud in posting a negative return for the month. Since 1950, returns have been negative in November roughly 1 out of 3 times. In those instances, the performance in December has been strong, with positive returns of 2.7% on average. The three times that markets did not have positive December returns were when the market was already in a funk. In both 1969 and 1974, the S&P was in the later stages of a bear market, and we don't have to remind anyone what was happening in late 2007. (Exhibit 3, Strategas)

Exhibit 3

December S&P Performance Following Negative November

Calendar Year	November Performance	December Performance
1950	-0.1%	4.7%
1951	-0.3%	3.9%
1956	-1.1%	3.5%
1963	-1.1%	2.4%
1964	-0.5%	0.4%
1965	-0.9%	0.9%
1969	-3.5%	-1.9%
1971	-0.3%	8.6%
1973	-11.4%	1.7%
1974	-5.3%	-2.0%
1976	-0.8%	5.2%
1984	-1.5%	2.2%
1987	-8.5%	7.3%
1988	-1.9%	1.5%
1991	-4.4%	11.2%
1993	-1.3%	1.0%
1994	-4.0%	1.2%
2000	-8.0%	0.4%
2007	-4.4%	-0.9%
2008	-7.5%	0.8%
2010	-0.2%	6.5%
2011	-0.5%	0.9%
2021	-0.8%	--
	Average	*2.7%*
	% Positive	*86.4%*
	Historical Dec. Average	*1.5%*
	Historical Dec. % Positive	*74.6%*

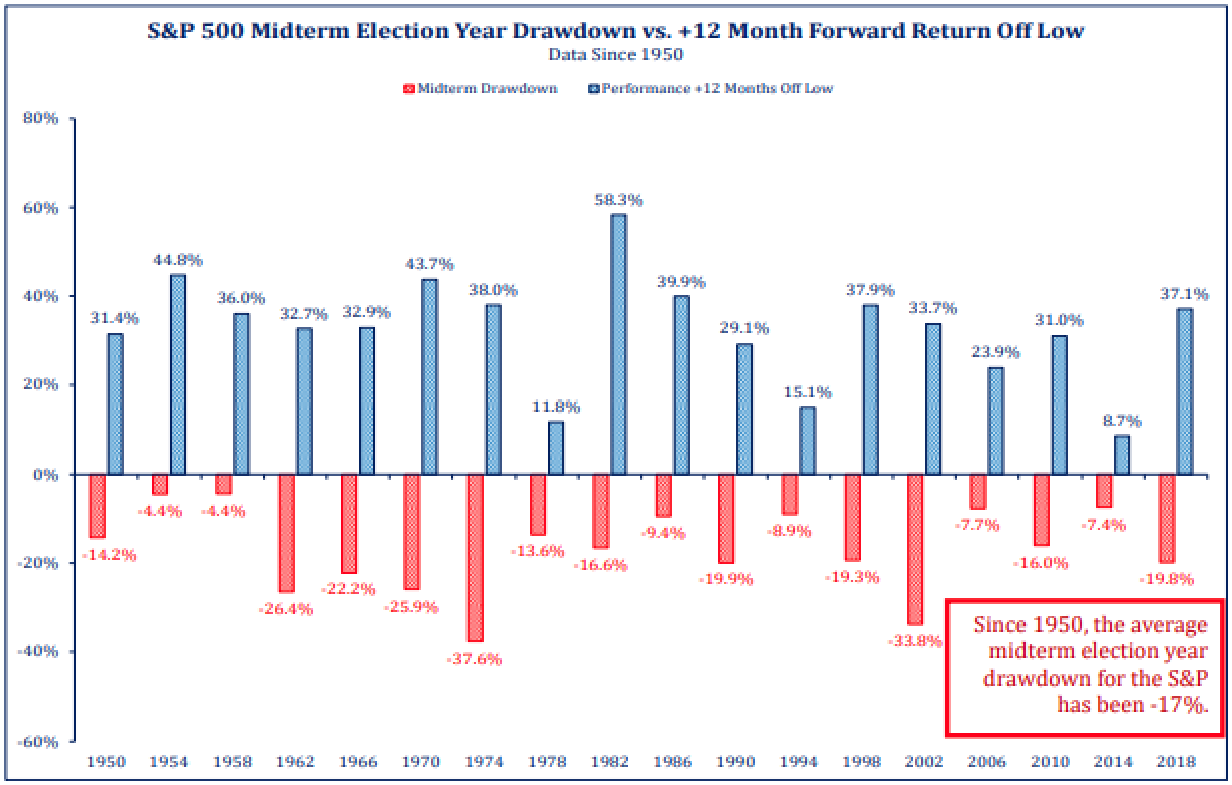
Looking out into 2022, the backdrop suggests returns will likely be harder to come by versus this year. A short list of key items on the wall of worry include:

- Fiscal tailwind disappates (11% of GDP 2021, 2-3% 2022)
- Fed flips to tightening, with markets pricing in at least 2 rate hikes
- Geopolitical uncertainty everywhere: China, Russia/Ukraine, Afghanistan, Iraq
- Midterm election year
- Signs of speculative activity: IPO, SPAC's, crypto, retail investing
- Tough EPS growth comparisons
- Margins likely have peaked
- Valuations are rich versus history

In regards to the Fed and rates, refer to the Fixed Income and Fiscal portions of this update for much more info. But to touch on it briefly from an equity perspective, it should not have come as a shock to hear Powell indicate inflation comments and that tapering would probably happen sooner. The bigger concern was this was the second "Powell Pivot" in recent years, which reignites credibility concerns, just as the Fed is set to navigate tapering and rate hikes in the coming year.

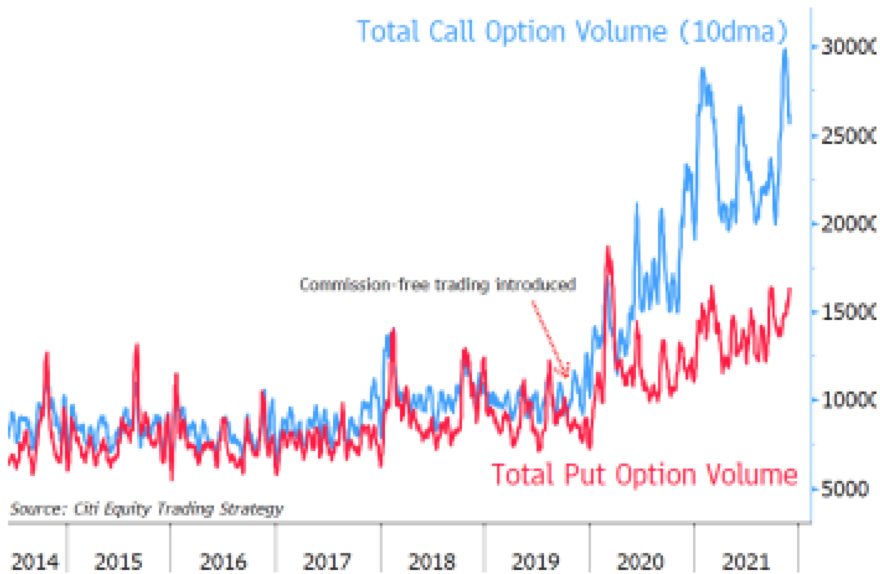
Midterm election years tend to be bumpy (Exhibit 4, Strategas), with New Jersey and Virginia elections last month suggesting that 2022 could be crazier than normal.

Exhibit 4



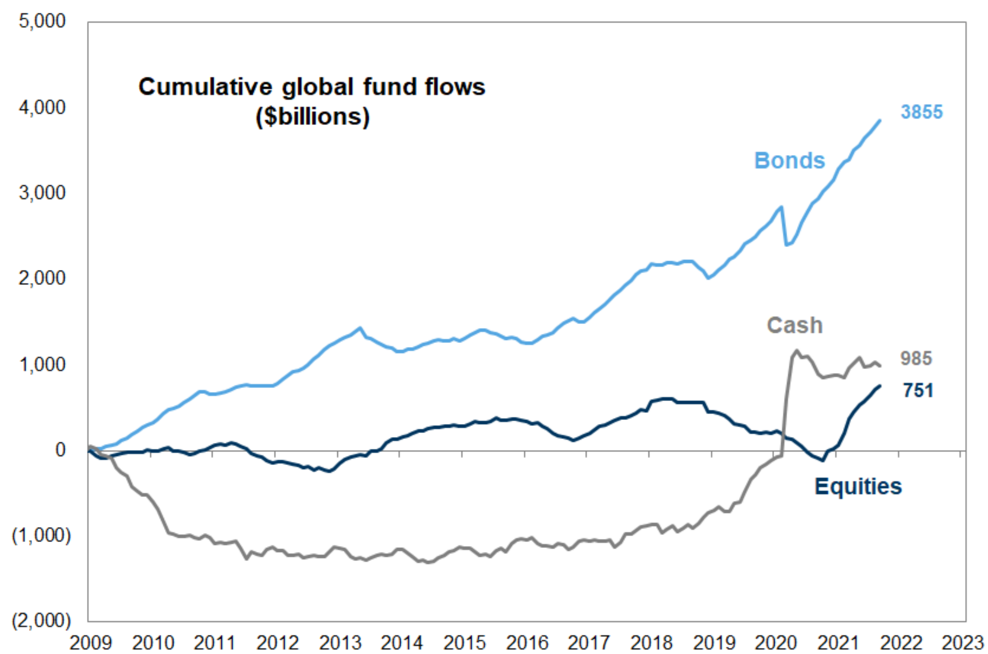
There are definitely pockets of speculative activity in the markets. We've witnessed violent moves up and down in speculative vehicles such as crypto, SPAC's, MEME stocks, options activity, and even some big index names such as Tesla and Nvidia. Encouragingly, it hasn't really fazed the broader indices. Technology and other factors, such as 24/7 crypto and no commission options trading (Exhibit 5, Citi) have changed where the more speculative retail activity is concentrated versus the "dot com" days.

Exhibit 5



It is something to keep an eye on, but it doesn't seem to be widespread or in areas that would make one worry about massive collateral damage (i.e. not on bank balance sheets like 2007). Headlines of "$1T in retail flows" are catchy, but like anything else need to be contextualized (Exhibit 6, Goldman).

Exhibit 6

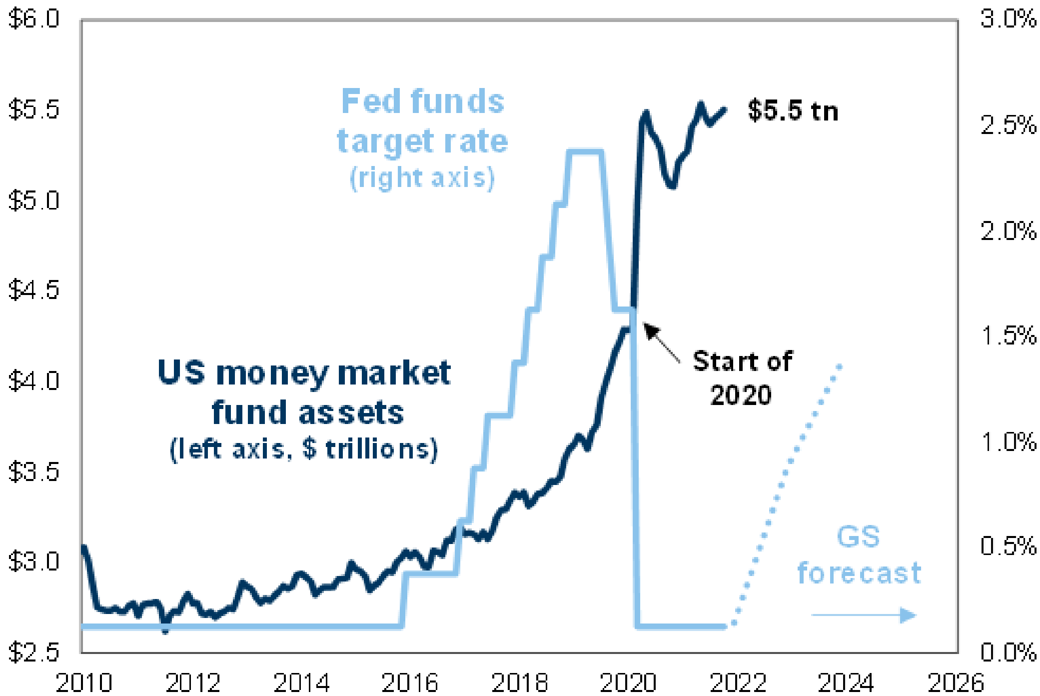


Given the wall of worry list above and how impressive the market has been, there is a growing contingent calling for a flat to down year in the S&P. Many in that group are using multiple contraction as the culprit and comparing 2022 to 2018, when the Fed was tightening, and the market ended up down 4.4%. That is absolutely a possibility given the obstacles the market faces, in addition to the always present threat of the unknown.

However, we would caution rolling the dice based on the market multiple alone, as it has historically not been a high percentage endeavor. We've said it a bunch of different ways over the years, but it's worth noting again: if you're not in a recession, stocks are usually a good place to be. Per Goldman Sachs, since 1945 stocks go up 84% of the time the economy is not in a recession. 2018 is the most recent example of it not being a sure thing, but betting against those odds hasn't paid out well over time.

We expect there to be fits and starts, but with rates expected to rise, it's likely that pullbacks in equities will be backstopped by the enormous amount of dry powder on the sidelines (Exhibit 7, Goldman).

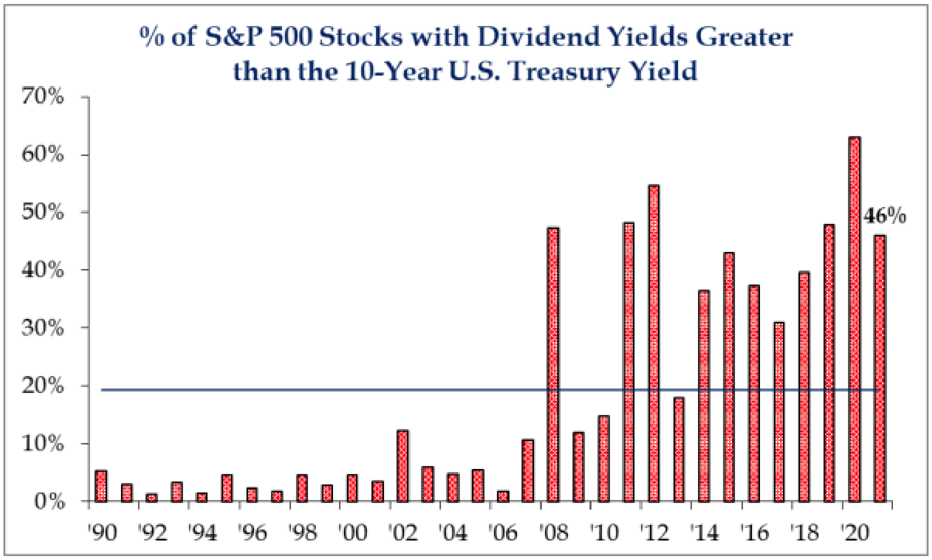
Exhibit 7



Additionally, after hunkering down due to uncertainties around the pandemic, corporations are expected to raise dividends and be more aggressive on share buybacks next year. Currently, nearly half of S&P 500 companies pay a dividend higher than the 10 year Treasury (Exhibit 8, Strategas).

Exhibit 8

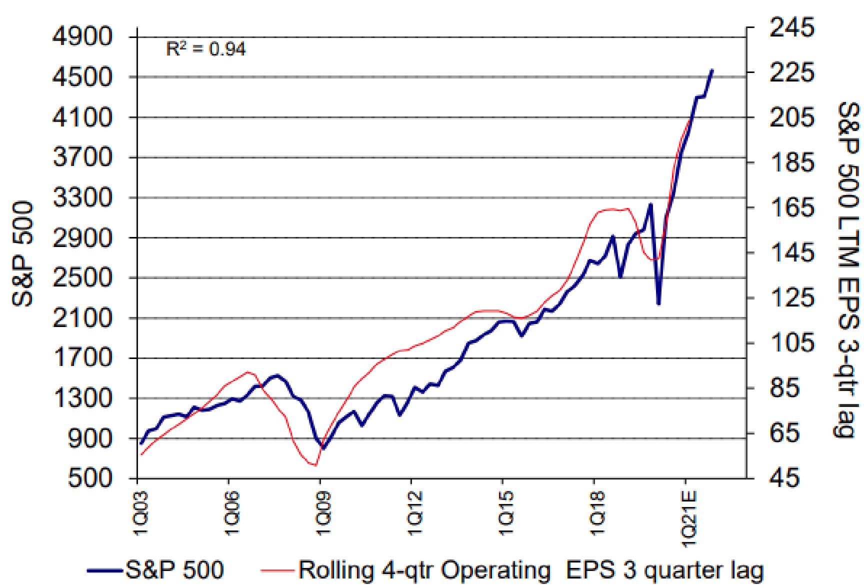
46% OF S&P 500 COMPANIES YIELD MORE THAN THE 10-YEAR TREASURY NOTE



Lastly, we frequently mention the strong correlation between the S&P and earnings (Exhibit 9, Citi).

Exhibit 9

Figure 1. S&P 500 versus S&P 500 EPS (Three-quarter Lag)



Source: Haver Analytics, Citi Research - US Equity Strategy

Estimates for 2022 EPS range from 6-10% growth. A stable, to even slightly lower multiple on that range of EPS growth plus dividends would result in a mid single to low double digit return. Refer to the Economic section of this for more detail, but the economy is doing quite well. Yes, growth rates will slow on tough compares, and the Fed will shift from ultra accomodative to tightening. But rates will still be very low and conducive to solid growth. With rate hikes on the horizon for fixed income instruments and hoards of cash looking to be deployed, equities may still be the best house on a bad block, which means the TINA (there is no alternative) trade is not necessarily over.

International Equity Strategy

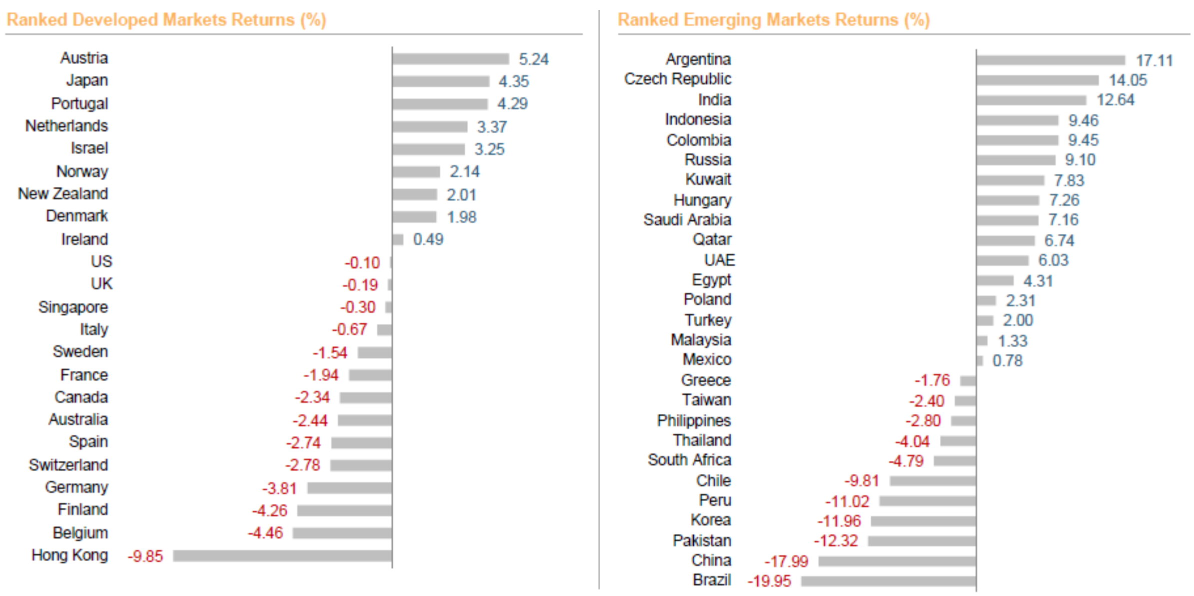
By Steve Lambdin

The global equity markets posted the first negative return in the last five quarters as a September sell-off proved too much to overcome in the third quarter. Fears of central banks tapering, continuing supply chain disruptions, inflation worries, rising interest rates, and a worsening financial crisis in China pushed investors out of global equities in the period. This was the case even as global economic data points continued to indicate an on-going recovery, and news on the COVID-19 front was generally favorable in many parts of the world. The European Central Bank (ECB) trimmed bond purchases in the quarter in response to higher inflation readings from the economic recovery in the region just as the U.S. Fed begins to debate a potential tapering in the coming months. This was not welcomed news for investors holding risk assets. Supply chain disruption remained the norm in many industries around the globe. Little progress was made in the quarter, and this has pushed many key commodity prices higher as a result. We saw significant increases in natural gas and aluminum in the period, creating a surge in power prices in Europe. Also, China's continued crackdown on the technology sector as well as the tense situation with property developer Evergrande Group, created a mountain of anxiety for most global investors. However, we did see a continuation of the economic recovery in most parts of the world as many regions are past mandated lockdowns from COVID-19. In addition, investors were pleasantly surprised with political leadership changes in Japan that led to strong equity market returns in September. Strong corporate earnings growth as well as an abundant supply of merger and acquisition (M&A) announcements around the world did help to keep market returns from being more negative. The cyclical recovery seemed to continue in the quarter, but with a lot more issues for investors to digest in the coming months. We will see what this does to equity market returns during this time.

	September 2021		3Q 2021		YTD 2021	
Equity index returns (%)	U.S. dollar	Local currency	U.S. dollar	Local currency	U.S. dollar	Local currency
S&P 500	–4.7	–4.7	0.6	0.6	15.9	15.9
MSCI ACWI	–4.1	–3.6	–1.1	–0.4	11.1	13.0
MSCI ACWI ex USA	–3.2	–1.8	–3.0	–1.3	5.9	10.1
MSCI World	–4.2	–3.7	–0.0	0.6	13.0	14.9
MSCI Emerging Markets IMI	–3.7	–2.5	–7.4	–5.9	0.7	2.9
MSCI EAFE	–2.9	–1.3	–0.4	1.3	8.3	14.2
MSCI Europe	–4.8	–3.0	–1.6	0.5	10.1	15.1
MSCI Pacific	0.7	2.0	1.6	2.8	5.5	12.9

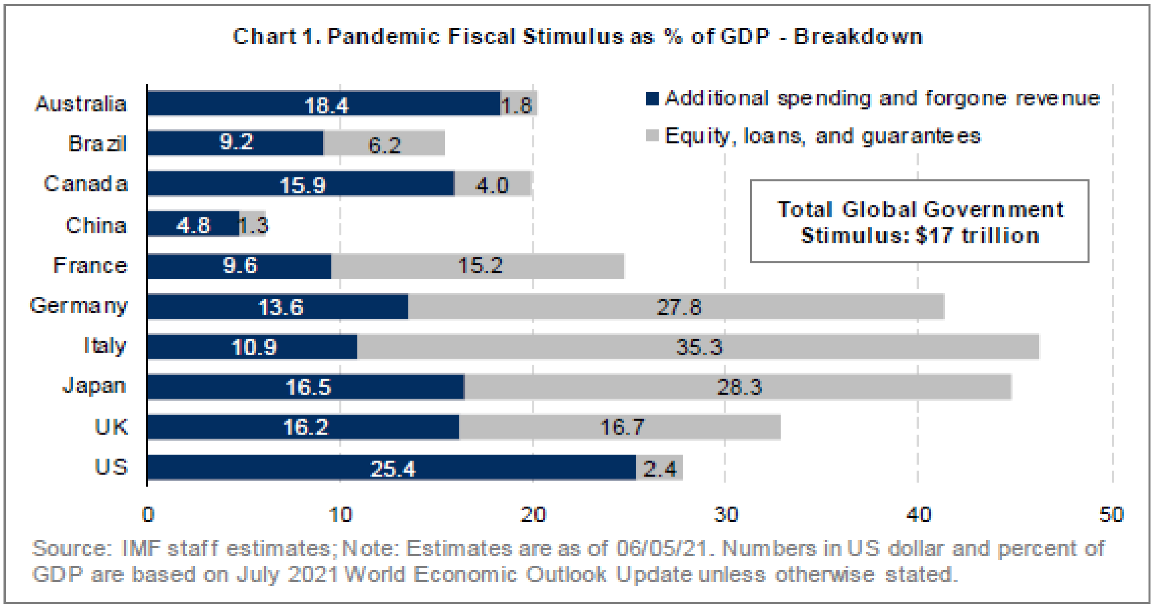
Source: RIMES; Capital Group

The MSCI EAFE Index (net dividend) and the MSCI Emerging Markets Index returned -.45% and -8.09% respectively during the third quarter of 2021 vs. +.58% for the S&P 500 Index. Investors still prefer U.S. stocks vs. global stocks as a proxy for riskier assets as risks seem to be more elevated outside of the U.S. The U.S. dollar rose in the quarter from the multitude of issues mentioned earlier, which hurt returns by -1.7% for unhedged U.S. investors in the MSCI EAFE Index. The Pacific region was much stronger than the European region this quarter as the Japanese equity market was surprisingly strong from news on the political front that investors warmly greeted. Six out of the eleven sectors of the MSCI EAFE Index had a negative return, led by materials, utilities, and communication services. Also, commodities were generally strong in the period as the Bloomberg Commodity Index rose +6.59% in the period, led by natural gas's rise of +59%. This will put pressure on winter heating bills for consumers and businesses if this holds.



Sources: Resource Consulting Group, MSCI

Quarter-to-date thru the end of November, most global equity markets have moved lower from fresh news of the Omicron variant of COVID-19. It's way too early to know how serious this variant will be and how much damage this will do to the economic recovery we have witnessed over the last year. Opinions on this are wide currently, but investors seem to favor U.S. equities over equities outside of the U.S. as this unfolds. Also, investors are extremely watchful to see what developments with the global central banks on the tapering front. Any surprises or abrupt changes in direction could lead to major moves in global equities very quickly. The MSCI EAFE Index and the MSCI Emerging Markets Index are down -2.2% and -3.1% respectively, while the S&P 500 Index leads the way rising +6.2%.

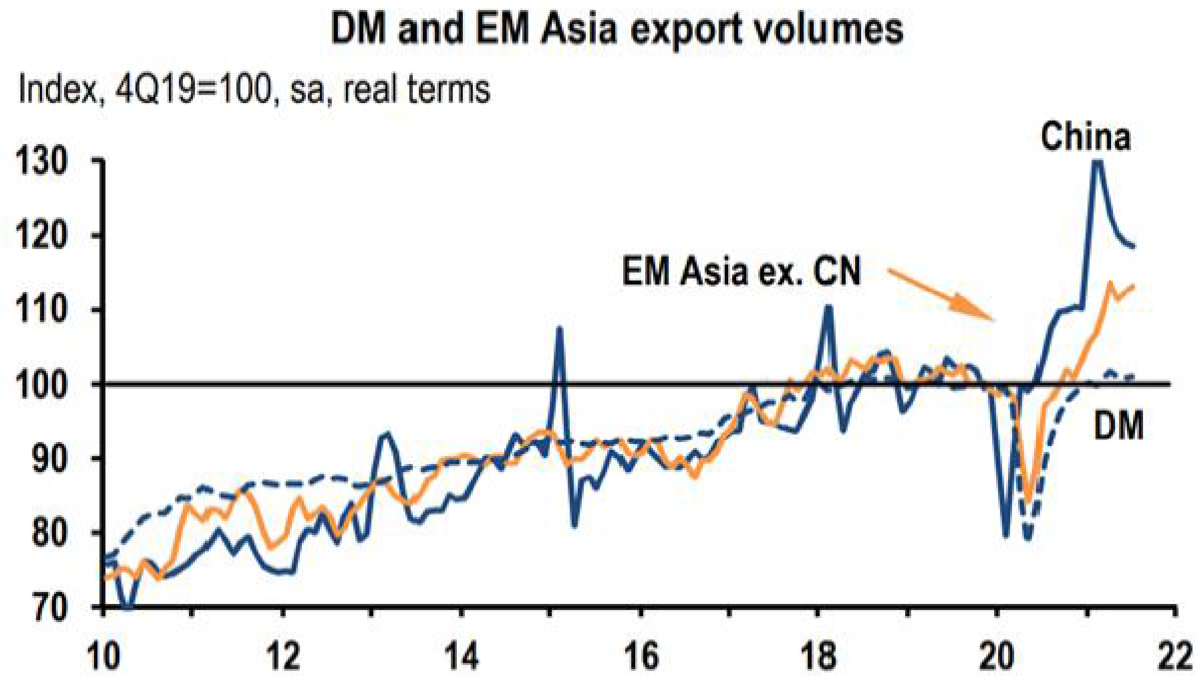


Source: IMF; Altrinsic Global Advisors 3Q 2021 Update

Asia Update

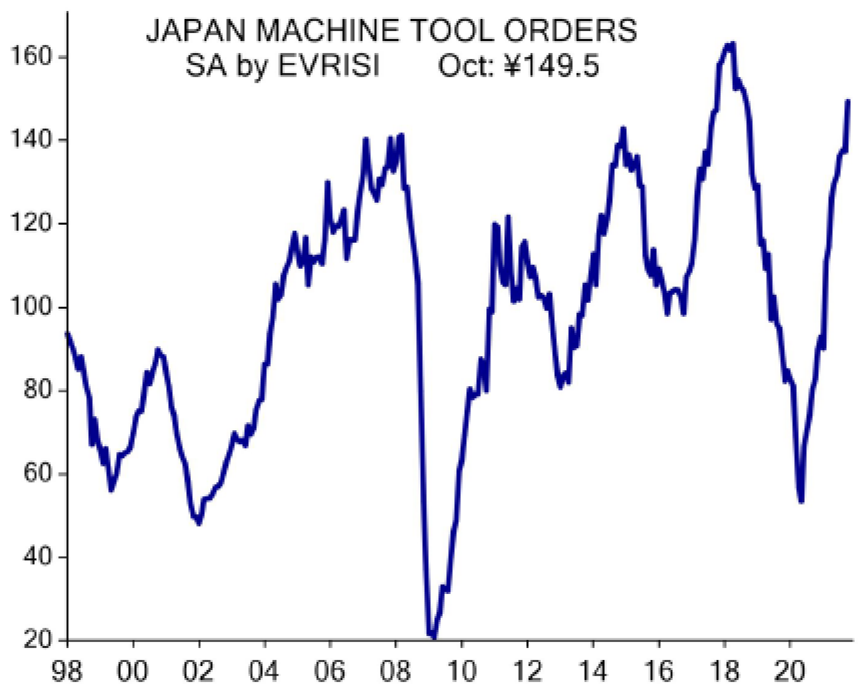
The Asia-Pacific region wound up being the best performing major region around the globe in the third quarter as Japanese stocks rallied on the heels of a surprise change in leadership and positive developments on the COVID-19 front. Prime Minister Suga announced his intention to resign which paved the way for Fumio Kishida to be elected the LDP party leader and Japan's next prime minister. Suga's approval rating fell to the lowest level since he took office, and the public virtually lost all confidence in his leadership. Investors welcomed the news which sent equity markets to a nice gain in September, and the prospects for continued fiscal and monetary stimulus actions seem very good. Also, we did see a relaxing of lockdowns in the period as the region made a lot of progress on COVID-19 as vaccination efforts had a lot of momentum. As a result, the Japanese equity market rose +4.35% in the third quarter and wound up being the best performing market in the Asian basin. On the other hand, the Chinese equity market posted the worst quarterly return since 2015 as continued government intervention in the technology sector coupled with a potential default of property giant Evergrande Group pushed investors out of the equity market. This also had a ripple effect in Hong Kong, as this market fell -9.8% in the period. Overall, the MSCI Pacific region rose +1.6% in the period, which we saw as decent when considering the issues in this part of the world.

The Chinese economy surprised investors to the downside as third quarter GDP rose +4.9% from the previous quarter, which was less than expected. Regulatory tightening with technology and internet-based companies, power shortages in several parts of the country, and the lingering effects of COVID-19 were just too much to overcome. Chinese officials were forced to slowdown lending to the real estate sector as the debt crisis at Evergrande Group took center stage. Officials want to take every measure necessary for this event not to end up as some type of contagion event. Unfortunately, this is leading to a slowdown in home sales as buyers prefer to wait on the sidelines as this crisis unfolds. Also, a power crunch developed in several parts of the country in the quarter as electricity supply has been limited due to a lack of coal supply heading into the critical winter months. We now expect the People's Bank of China (PBOC) to cut the required reserve ratio (RRR) for the second time this year to put even more liquidity into the financial system to support the economy. We believe this was done to help stabilize the economy heading into key party meetings early next year. Industrial production trended down throughout the third quarter as September production only rose +3.3% from a year earlier. The impact from power shortages was much more damaging to production than previously estimated, as consumption caps were put on the energy-intensive sectors in the quarter. Most expect this to remain a problem going forward, but to get better on the margin in the months ahead. Fixed asset growth continued to slow down in the quarter as the real estate sector was hurt by financial conditions of developers. On a bright note, exports remained stellar as September exports rose +28.1% from a year earlier. Demand was strong from Europe and the U.S. as these economies continued to re-open from COVID-19. Retail sales trended downward in the third quarter as September sales rose +4.4% from a year earlier and was the second slowest month of growth in 2021. Consumers traveled less within China in the quarter leading to less propensity to spend. So far, higher producer prices did not filter down to higher consumer prices as September CPI rose only +.7%, as food prices fell from a large drop in pork prices. Non-food prices rose more than food prices in the period. We expect to see CPI move higher in the coming months as higher producer prices begin to flow down to the consumer. As we move into early 2022, we expect the recent weakness in this economy to give way to a better growth outlook. This should be the case as European, and U.S. economies continue to expand, and supply chains move through the bottlenecks being experienced now. This is contingent on developments with the new Omicron COVID-19 variant, as this could lead to new lockdowns and isolation efforts. We are optimistic this will not be the case. In addition, investors need to monitor developments going forward with government action toward technology companies. Any changes on this front can move equity markets quickly.



Source: Todd Asset Management; JPM; CPB

The Japanese economy slipped back into negative territory as third quarter GDP fell -.7% or -3.0% from the previous year. Supply chain issues and rising commodity prices contributed to declines in consumption and capital spending. Lockdowns from the virus also led to decreased consumption as a large area of the country experienced some level of curtailment of social activity in the period. Vaccination levels did move higher throughout the quarter leading to a lifting of a public state of emergency in late September. Exports trended down during the third quarter as September exports were up +13% from a year earlier, only about half of August's totals. Automobile exports fell as a chip component shortage continued, and aerospace exports were weak from the continuing delays and issues with Boeing aircraft. We expect this to get better going forward as supply chain issues begin to clear in the first quarter of next year. Consistent with what we saw with other key economic statistics in the period, industrial production slid throughout the quarter, as September fell -5.4% from the month earlier. Many production facilities in manufacturing and electronics are currently running at half capacity due to supply constraints. Japan's leading economic index continued to struggle recently as September's reading of 100.9 was the lowest since February. We would expect this to move higher from these levels over the next few months as pent-up demand begins to feed into the economic picture. In a bit of a positive message, consumer confidence reached 39.2 in November, the highest level since May 2019. We believe most consumers are growing tired of the various restrictions and lockdowns and are looking to re-engage in the economy as these restrictions are lifted. The labor market continued to be tight in the quarter as the September jobless rate fell to 2.8%, while the jobs-to-applicant ratio rose to 1.16. While jobs are reasonably abundant now, the key will be if wage growth can accelerate and push some level of inflation into the economy. This could take some time. Heading into 2022, we believe the new prime minister will push even more stimulus actions over the next few months to support a weak outlook in this region. This coupled with a rebounding global economy, and a lifting of restrictions should be a good tailwind to get growth cranked back up here. We would be surprised if this economy does not post a decent level of growth in the coming quarter.

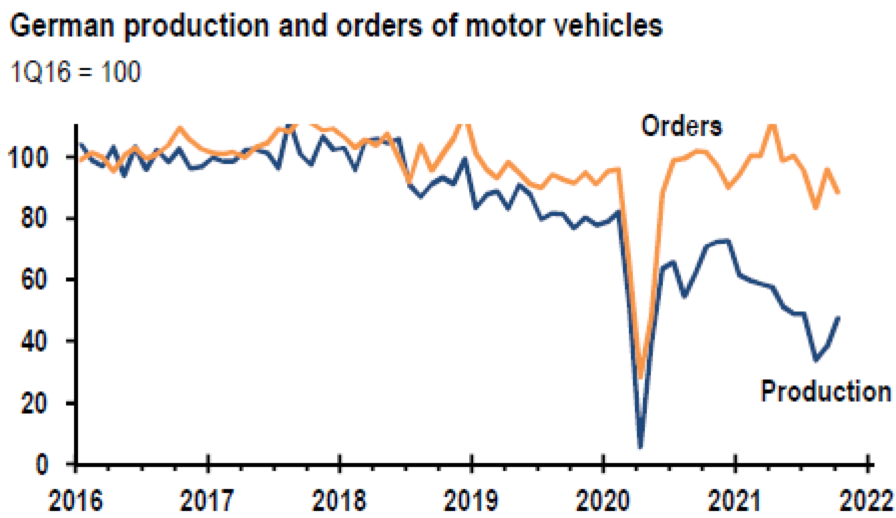


Sources: Evercore ISI

Europe Update

The eurozone economy continued to re-open as we moved through the third quarter as vaccination rates continued to move higher. It is estimated that 75% plus of the population has received at least some of the COVID-19 vaccine. With this progress, lockdown measures have been substantially reduced in most areas, and the region is trying to get back to full economic life. This region has a lot of catchup to do as the economy remains below pre-pandemic levels. We would expect to see this economy move past this level sometime in the fourth quarter. Investors have had plenty to digest throughout the quarter from rising inflation, a changing of rhetoric from the ECB, supply chain issues, and political uncertainty. This made investors a bit nervous and led to the MSCI European Index (ex. U.K.) falling -1.6% in the quarter and wound up being the worst performing major region in the world. As a result, the U.S. dollar rose against the Euro and hurt returns for unhedged investors by -2.6% in the period. The equity markets in Germany were amongst the weakest, falling -3.8% as the manufacturing base struggled with supply chain problems throughout the quarter.

The European economy expanded just a bit more than many expected as third quarter GDP rose +2.2% from the previous quarter or +3.7% from a year earlier. The region benefitted from higher consumption as COVID-19 restrictions were slowly lifted through the period. Travel and other consumer led activities increased substantially from the previous quarter. Workers began to report back to offices and factories increased production schedules to meet heavy demand from pent-up order books created during the pandemic. The economies in France and Italy led the way in growth in the period as many of the northern European economies cooled off after posting leading growth rates a few months back. The key German economy remained below average showing growth of only +1.7% from the previous quarter as supply chain issues hit this economy relatively harder than others in the region with its deep manufacturing base. Eurozone industrial production fell again in August and September as little progress was made on the production bottle necks that gripped the region. This has been slower to improve than our thoughts a few months back, but we still see improvements coming in the next few months. The economic confidence index struggled to hold the previous quarter's gain, as September fell to 117.6, as trouble in services and manufacturing were too much to overcome. The key to this data point pushing higher will be further progress on the re-opening of this economy. As expected, retail sales cooled off recently as August and September were reported up +1.0% and -.3% respectively. Consumers seemed edgy from month to month awaiting updates on the virus front. Inflation continued to move higher recently which has surprised investors, as core CPI rose +2.1% in October from prior year levels. Headline inflation, which excludes food and energy, was even higher in the month. Issues in the supply-chain are causing some level of price disruption as well as higher energy prices from a surge in commodity costs. The ECB still believes the bulk of this should be transitory in nature and not a permanent shift in prices above its stated goal of +2.0% or less. The October unemployment rate fell to 7.3%, which is the lowest level in 1 ½ years. Employment opportunities are becoming more plentiful as we move through the later stages of this pandemic. At this point, we expect to see a continuing modest recovery in the region. However, the new Omicron variant is the biggest wildcard in the marketplace now. Investors will remain watchful as developments on this front could take several different directions and create a lot of volatility in the equity markets.

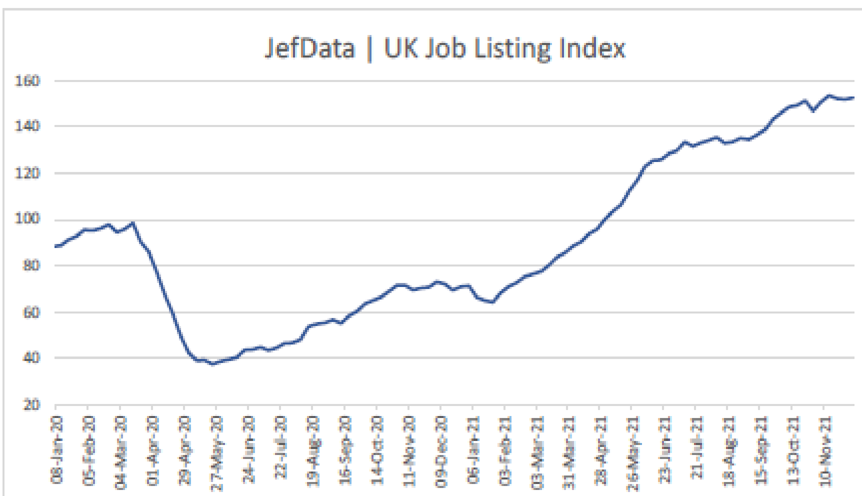


Source: Destatis: JP Morgan

The U.K. equity market posted its first loss in a year as investors focused on the problems presented by the pandemic to bring about this pause in momentum. The loss was slight as there was plenty of good news in the region to keep losses to a minimum. Small and midcap shares outperformed the large cap part of the market during the quarter. The energy sector fared better in the quarter as higher commodity prices led to better earnings. Also, M&A activity was brisk in the quarter as Meggitt PLC and Entain PLC both received takeover bids from U.S. companies. The MSCI U.K. Index fell -.30% in the third quarter, which was marginally better than returns in the broader MSCI European Index. GDP growth slowed down substantially in the period as third quarter GDP rose +1.3% from the previous quarter, or +6.6% from a year earlier. Household consumption was the strength in the quarter, while net trade detracted the most from growth as supply constraints were a persistent problem. As a result, GDP growth expectations have now been cut for 2021 as growth probably slows a bit further in the fourth quarter. Industrial production was weak throughout the third quarter as September fell -.4% from a month earlier. All sectors posted negative month over month results in September. After a rough third quarter, retail sales pushed ahead in October as sales grew +.8% from a month earlier. Consumers seem busy as social activities have been on the rise after the expiration of lockdowns and the Christmas shopping season kicks into high gear. In addition, job prospects seem healthy as most businesses are having a hard time filling open positions which should bode well for spending ahead. Core CPI has continued to rise recently as October's reading jumped to +3.4% from the year earlier period. Rising energy prices are presenting a big problem as some price caps have recently been relaxed as well as supply chain problems which are giving rise to hefty price increases. Unfortunately, it would not surprise us to see core CPI track even higher over the next couple of months. We now believe inflation will stay elevated well into 2022 before relaxing in the mid to later part of 2022. This could force the Bank of England (BOE) to raise interest rates faster than previously thought. At its early November meeting, the Monetary Policy Committee

(MPC) voted to maintain its main benchmark interest rate at .10% and keep its bond purchase target at 895 billion pounds. The MPC has changed its stance on inflation and now believes that inflation will stay above its 2% targeted level over the next year, and some modest tightening in policy may be necessary. We believe this lays the path to interest rate increases sometime over the next few months, and the BOE will the first major central bank to raise interest rates since the pandemic. Third quarter unemployment continued to surprise us and fell to 4.3%, which was the lowest level in over a year as the withdrawal of the government furlough program had limited disruption. The labor market has proved much stronger than what we had been expecting through the pandemic. As we head into 2022, we expect the economy in the U.K. to reach its pre-pandemic level sometime in late first quarter or early second quarter of 2022 if growth comes in as we expect.

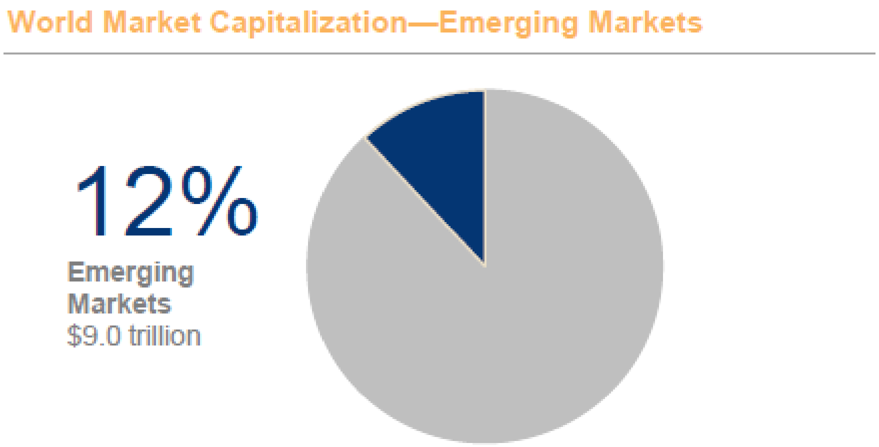
UK Job Listing Index



Sources: Jefferies; Indeed; ONS

<u>Emerging Markets</u>

Emerging market equities had a rough ride in the third quarter as the equity markets in Brazil, China, and Korea all experienced significant declines. Brazil fell nearly -20% as rising inflation, and interest rates as well as less progress on the COVID-19 front vs. many other countries around the world punished this market. Chinese equities fell -18% as continued government intervention in the technology sector coupled with weaker than expected economic readings created new levels of uncertainty with investors. In addition, fresh concerns surrounding the property sector put even further pressure on this equity market. The Korean equity market fell as DRAM chip prices collapsed and threatened earnings of these large technology companies. Overall, the MSCI Emerging Markets Index fell -8.1% in the third quarter of 2021, making it the worst performing equity asset class in the period. Looking out over the next few months, this region could continue to be weak until investors see more clarity regarding the many issues going on in China currently. We see this as key to this asset class since China is a large part of the emerging markets index.



Sources: MSCI; Resource Consulting Group

International Equity Activity/Strategy

As we wrap up 2021 and head into a new year, we see several "wildcards" which could set the direction of the global equity markets. First, the "800-lb" gorilla in the room is the direction of the global central banks. Thus far, the global equity markets have lived off an unprecedented heavy dose of monetary and fiscal actions over the last several years. We are now set to potentially change this direction as many of the central banks are beginning to wane off these stimulus actions which sets up the potential for rising interest rates later in 2022. How will the equity markets respond? This is the question investors will have to answer. Another potential problem is the new COVID-19 variant, Omicron. This could be a trouble spot if this variant sends parts of the global economy back into lockdowns and quarantines. This would derail the recovery we have seen thus far and delay any further recovery in the global economy most of us expect to see. We don't know how effective current vaccines ultimately are at this point and whether more need to be developed. Also, will inflation be transitory and stay contained enough not to derail a global economic recovery? At this point, we will go with what we see and say inflation stays manageable, and the global central banks continue with a well-managed tapering process. We should see supply chains begin to flow a bit better as we move into the spring of next year, which should be good for businesses to fill pent-up orders. M&A activity should remain healthy as balance sheets, and corporate cash flows are in good shape. If this proves to be the case, then equities remain a good place to be and can move higher vs. fixed income and extended real estate valuations.

We continue to be very active with our put/call writing strategy on the Emerging Markets as we position ourselves to add to this asset class on any significant weakness over the near term. Premiums remain very attractive in the current equity market and the very low-interest rate climate. Emerging market equities remain an asset class that looks attractive to us going forward over the long-term. Our current allocation to Emerging Market equities is approximately 3.40% of total assets and approximately 11.52% for MSCI EAFE equities across our TRS, ERS, and JRF portfolios. *(Credit is given to the following entities for charts provided: IMF, Altrinsic Global Advisors, Destatis, JP Morgan, MSCI, Todd Asset Management, CPB, Jefferies, Indeed, ONS, Evercore ISI, RIMES, Capital Group, Resource Consulting Group)*