



Semi-Annual Update

January 2022



Michael Morgia, CIMA®
Managing Director,
Partner

First, Thank You

After many years and much hard work on the part of our employees, we are pleased to announce that we recently passed the **\$1 billion mark** for assets under management and advisory.

We would like to thank you, our clients, for trusting us with your financial well-being. We take that trust personally and will continue to put your interests ahead of all else. We will do our best to stay disciplined and careful with your hard-earned assets entrusted to our care.

Swimming Upstream

The year 2021 turned out to be a nice continuation of the incredible bull-market rebound in stocks that sprang from the wreckage of the COVID crash. Almost two years ago, at the nadir of the pandemic-sparked global stock market panic, the vast majority of observers thought any recovery would be a slow and painful process. Most prognosticators said it would be highly improbable to get a V-shaped market recovery after such an extreme drop (straight back up to the peak). I guess they were sort of correct – it wasn't V-shaped after all, but rather more like a checkmark shaped recovery! ✓

Other than the Thanksgiving scare from the Federal Reserve announcing a tapering of their money printing and then Omicron – 2021 was a very good year. (If you didn't get a chance to watch our video on Tapering, please visit our website.) Stocks did quite well. So did the cryptocurrencies Bitcoin and Ether. Oil too for that matter - prices were up considerably in 2021. And natural gas. Natural gas had an especially nice move, as did uranium. So, all in all... wait... did I mention copper? Wow did copper have a nice jump in price. Zinc as well. Don't even get me started on lithium's tripling in price. And I almost forgot to mention wheat, corn, soybeans, and eggs. Beef too.

Pretty much all food prices went up a lot. The year in general saw... oops ... I failed to mention home prices and building supplies – sorry. I guess I should also say that even artwork did very well indeed this past year.

Yeah... so most assets went up in 2021.

But when you look around, and **everything** is rising, it might be wise to ask yourself, if perhaps, just maybe, **you** are falling. Not **you** exactly, more like the measuring stick you are using to claim that everything is rising. That measuring stick is none other than the U.S. dollar.

When everything is going up – nothing is going up. When the dollar's value is dropping it just **appears** that everything is rising.

For the last 18 months, you may recall, we've been warning of inflation. We also said to expect rising prices, shortages, and diminished quality. Unfortunately, this has come to pass. A brief perusal of today's headlines proves our point.

On December 10, 2021, CNBC aired the news that the Consumer Price Index (CPI) had just reached 6.8%, the highest rate since 1982. The all-important "excluding food and energy" inflation rate came in a bit less at 4.9%, which was great news for people that don't like to eat anything or go anywhere. Monks across the country breathed a collective sigh of relief! Of course, they could have just been meditating - hard to tell.

A few days later on the 14th, producer price inflation came in at a startling 9.6%. Now, it's true that the U.S. is coming off some low numbers from the previous year. However, this broad-based inflation increase is worrisome. What is even more alarming, is what the inflation figures **would** be if the government still used the old methods for calculating the rate.

There are a couple sources that try to do that, one of which contends that if we use the pre-1990 methodology, the current CPI inflation rate would be closer to 10%. Using the methodology that was in effect before 1980, they show today's actual inflation to be closer to 15%! ¹ At first blush, this might seem extreme, until you speak to someone who's trying to build a house. 15% higher costs are not met with any kind of surprise these days. In some cases, as long as the expense increase is less than 20%, it is considered a win.

Recent additions to the financial lexicon - compliments of NPR ²

- **Shrinkflation:** Keeping the price the same but reducing the quantity.
- **Skimpflation:** Keeping the price the same but delivering fewer and lower quality services

Why is all of this so important to investors?

As financial advisors when we run financial plans for clients, a major factor in that calculus is the inflation rate. Inflation eats away at your purchasing power as you try to maintain your asset levels during retirement. Younger investors would need to work many more years just to save the same amount. A higher inflation rate can do more damage to your long-term retirement plan than a poor stock market. We recently ran a retirement analysis for a 55-year-old client that showed that exact danger.

When we changed the inflation rate assumption from the long run norm of 3.5% to the current rate of 6.8%, the amount available for monthly spending dropped in **half!** It would mean a dramatic downgrade in the client's lifestyle.

As we wrote in our last update, however, inflation might not pan out to be the disaster many are worried about. Some macroeconomic forecasters believe that the economy is too structurally weak to be worrying about higher inflation for any length of time. They think we will be lucky to avoid a recession, or worse, deflation. The bond market (which has always been quite good at predicting inflation) is also signaling "don't worry about inflation" - at least for now.

But sometimes inflation becomes disconnected from the economy – it can go **up** in spite of a poor business environment. Remember the stagnant economy of the 1970s? That was also accompanied by dramatic inflation. That's the real worry. Many times, throughout history, it has been governmental policy decisions that end up causing supply disruptions and thus rising prices.

Policy decisions such as: Printing money **at the same time** we are running massive budget deficits **at the same time** government decisions are impacting the supply chain? Now THAT is about as credible an inflation threat as we have seen in 50 years.

Honestly it might be better if this bill didn't pass 'cause we've spent so much money you know... If this was a company, we'd have a \$3 trillion dollar loss. So, I don't know if we should be adding to that loss, that seems pretty crazy. Something's gotta give. You can't just spend \$3 trillion dollars more than you earn every year and don't expect something bad to happen. So we're running this incredible deficit... something's gotta give. This can't keep going.

Elon Musk (currently the wealthiest person in the world) speaking about the Build Back Better spending plan.
Wall Street Journal Live Stream Dec 6, 2021

I know, said Congress ... let's propose a four-day work week! That will surely help with the nation's supply shortages. CBSnews.com reported in early December that Representative Mark Takano of California has proposed a bill that would shorten the national work week to 32 hours maximum, before overtime must be paid.

The Congressional Progressive Caucus recently endorsed the bill.³ What ??? Fighting a labor shortage with less supply of labor? That's so crazy it just might work. Yeah, no. No, it probably will not work.

Less workers, or fewer hours worked, could seriously exacerbate the inflation issue. The world is already starting to realize that the long fretted global population problem IS a true danger, but in the exact opposite way that everyone thought.

The overpopulation theory of the last 30 years is now being replaced with the worry that the world's demographics are increasingly at risk of underpopulation. China's one-child policy (mistake) was adjusted to a two-child policy in 2015, then a three-child policy last May and then finally all limits were removed. So much for central planning. Oh well, since it takes 20 years to "grow" a labor force, four of China's 5-year plans should do the trick.

Once again from Elon Musk's recent interview:

The fundamental constraint is labor - there are not enough people. I can't emphasize this enough, there are not enough people. I think one of the biggest risks to civilization is the low birth rate and the rapidly declining birth rate... and yet so many people, including smart people, think that there are too many people in the world and think that the population is growing out of control. It's completely the opposite, please look at the numbers. If people don't have more children, civilization is going to crumble - mark my words.

Ok, so that might be a bit dramatic, but we get the point. Damaging the ability of the country or the globe to produce goods and services will likely spark persistent inflation and lower the standard of living for everyone. And **that**? Well, **that** changes everything about how an investor should invest over the next decade.



Donuts and Quiche

Once upon a time there was a country that ate donuts. They ate donuts for breakfast. They ate donuts for lunch. They ate donuts for dinner. What about snacks you ask? Yes, they had donuts for snacks as well. In fact, there was no other food of any kind in all the land. One day Someone Smart said, “This can’t be healthy – let’s change our diet away from donuts and towards quiche, that has got to be much better.”

Someone Else added “We can even throw some extra spinach in to make it even healthier.”

“Sounds like a plan,” said a third.

They immediately set off on a grand undertaking to build quiche factories all over the country. They called it the “Build Snack Better” plan. Now, as you know, quiche is quite complicated to cook, and likewise, building thousands of quiche factories around the country is no simple matter. It was going to take about a decade to complete all the projects.

“But we really **must** get our citizenry off those junky donuts.. and fast!” said Someone.

“What if we just shut down the donut factories and push up the price of those donuts? That will incentivize everybody to change more quickly to quiche,” said Someone Else.

“Yes, but the quiche isn’t ready yet. The quiche factories are not built.” worried Another.

“We could ask the Saudis and the Russians to make our donuts for us in the meantime.” argued Someone.

“Good idea.” said Someone Else.

“So, we eat the same quantity of donuts while the quiche factories are being built? But we don’t make them ourselves?” worried a worrier.

“Yes!” they all said.

“But we don’t have the money to do that!” she worried again.

“So what? We’ll just borrow the money from China and Japan to buy the donuts from the Saudis and the Russians.”

“But they don’t want to lend us any more money! They don’t believe we’ll pay them back.”

“Of course, we’ll pay them back!”

“Yes, but they’re worried we will pay them back with freshly printed fiat (paper) money.”

“Well yeah... that’s the plan. Where else are we going to get more money?” Someone said incredulously.

So, the plan to borrow money to buy foreign donuts was put into action. But soon came the bad news:

“Bad news! They are not going for it. No one wants to loan our country any more money.” announced the official Bearer of Bad News.

The Worrier piped in again, “It’s getting bad out there. The donut manufacturers (Big Donut) know we’re

trying to put them out of business, so they've stopped investing any money in their donut production capacity. Production is spotty, shortages are cropping up, unemployment in the donut industry is accelerating, people are hungry, and prices are going through the roof!"

"Why can't we just make our own donuts until the quiche factories are completed?" worried another worrier.

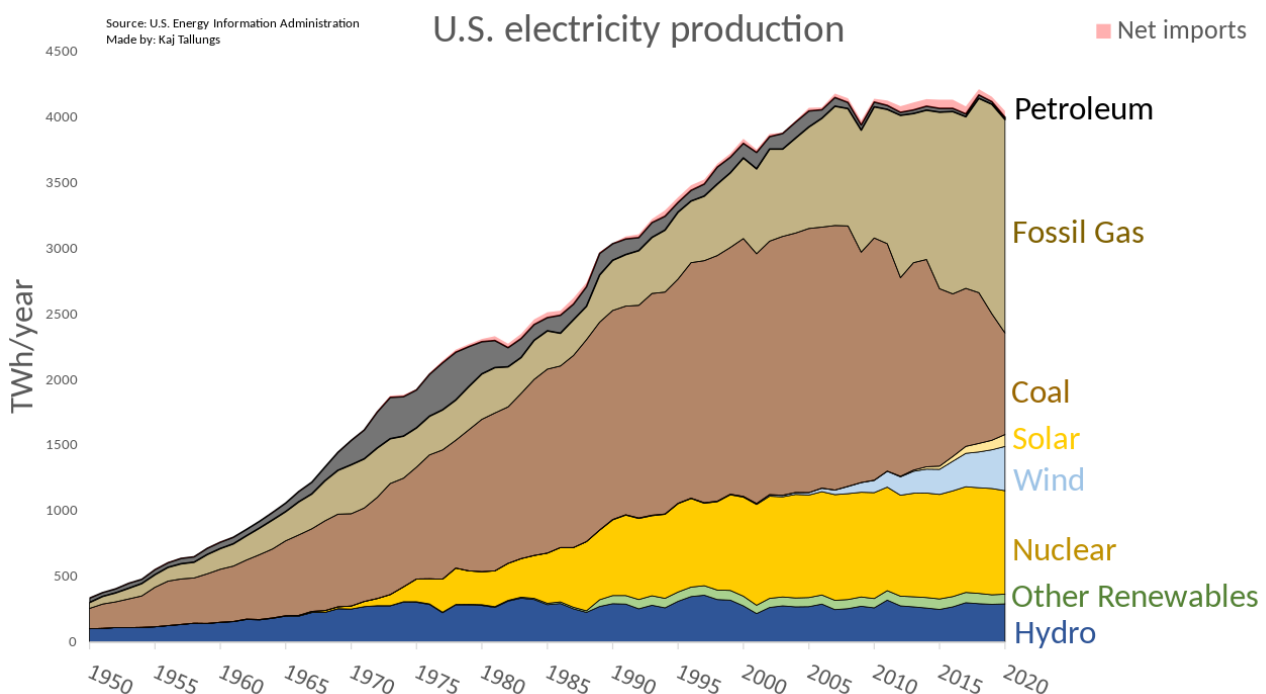
"Nah, let's just keep up the pressure on the donut industry and see what happens. As far as the money we need, forget about borrowing - we can simply print more money to pay for everything - what could possibly go wrong??"

It wasn't long after, that.....things went wrong.

The End

Ok, I apologize for the dripping sarcasm, but it seems that the current U.S. energy policy is not fairing much better than the (possible Pulitzer Prize winning) short story above. Our country seems to be following a similar plotline. There is little doubt that we need to clean up our energy "act," but that's going to take a lot more than a year or two. It will take a decade **if** we are lucky and **if** we stay solvent in the process. So, like in our donut story - it probably would be a better financial strategy to use the energy resources that we currently have, WHILE we build out our new electric world.

Hint: Using the same amount of energy while **buying** it instead of **making** it only damages our finances and bolsters our global competitors (Russia and China). It does nothing to reduce our carbon footprint. Furthermore, creating new money to fund our extra deficit spending simply robs U.S. savers by eroding the value of their savings. Exactly **how** we accomplish this electric transition will mean all the difference between sticky inflation vs. transitory inflation. Investors must pay very close attention over the next few years. Any way one looks at it, moving our entire electric utility infrastructure from coal and natural gas to greener alternatives is a complicated endeavor.



In the chart on the prior page, notice that fossil gas (natural gas), coal, and nuclear make up the lion's share of fuel sources that we use in order to generate today's electricity. Coal has been in steady decline for the last 15 years or so, yet still equates to more than **double** the electricity generated by wind and more than **seven** times the amount generated by solar. The amount of electricity generated by fossil gas (natural gas) is **far** larger than that. Look closely and you will notice that gas use is increasing (and increasing a lot) in the past twenty years. To believe that we are going to arrest that increase and **quickly** turn it into a decreasing amount is probably a pipe dream.

Even with tremendous technological improvements enacted to clean up the nation's coal-fired electric plants, it will never be a source that could be called "clean." It's hard to see a future for coal in the U.S. Of course, China powers 57% of its electrical plants by burning coal. The U.S. coal exports to China (and Asia in general) have increased considerably this past summer, mainly due to China's trade dispute with Australia. But it's highly doubtful that our country will be able to rely on increasing exports to replace declining domestic consumption.

So, for many reasons the future of the U.S. Coal industry is anything but bright.

The coal industry knows this of course. They have no illusions about the government's plan to eventually shut them down. What should they do? What would you do if you knew that your business's days were numbered? Would you spend a lot of money on capital improvements or quality enhancements? Or would you just "run out the clock" letting your infrastructure slowly fall into disrepair until coal demand exhausts itself?

If the industry doesn't develop any more capacity (no new mines) nor improve its ability to deliver its product to its end customers (the electric utilities) what do you imagine will happen to the coal **price** between now and the time that demand is extinguished? Hint: up... up should be your answer. Trust me on this one.

A recent Wall Street Journal article spells it out for us. Here are a few bullet points from the article: ⁴

- Coal piles at power plants have dwindled to their lowest point since the 1970s.
- The race to build up inventories ahead of the heating season has sent domestic thermal coal prices to their highest levels in more than a decade.
- Even at such high prices there isn't a lot of coal available on the spot market.
- Coal has lost market share to natural gas, wind farms, and solar installations over the past decade, drying up financing for speculative production.
- Supplies are so low that PJM Interconnection, which runs the electricity grid serving about one-fifth of all U.S. residents, has taken action to conserve coal for the coldest days this winter.
- [PJM Interconnection] will allow steam plants to shut down if they reach less than 10 days' worth of coal on hand. The trigger is normally 32 hours of coal supply.

Why don't we just pick up the speed of the windmill build-out you might ask? Even if the country committed to a rapid rollout of that infrastructure, the kind of undertaking needed to make that happen is not well appreciated or understood.

Back-of-the-Napkin Math:

The average wind turbine generates about 4.8 million kilowatt hours annually. It would take 208 turbines to produce 1 terawatt hour (TWh) of electricity. U.S. coal fired power plants currently generate about 773 TWhs per year, so it would take approximately 161,000 turbines to replace coal. It would be double that amount to replace natural gas (322,000 turbines).

A Princeton University project estimated that by 2050, if the U.S. attempted to use wind and solar to provide 98% of our electricity, the landmass needed to accommodate those facilities would be considerable.⁵ We would need the equivalent square miles of the entire state of Rhode Island and Delaware and Connecticut, plus Hawaii, New Jersey, New Hampshire, Vermont, Massachusetts, Maryland, and West Virginia, South Carolina, Maine, Indiana, Virginia, Kentucky, Ohio and Tennessee - then we would be close.



The renewable energy buildout is complex, necessary and will be **anything but cheap**.

In Glasgow at the U.N. Climate Change Conference in November of 2021, Treasury Secretary (and former Fed Chairperson) Janet Yellen said, “It’s a global transition for which we have an estimated price tag: some have put the global figure between \$100 and \$150 trillion over the next three decades.” That is a staggering sum, even in an era where our country is printing trillions of dollars every time it is “needed.” Remember that creating new money without a commensurate increase in real goods or services merely sucks the value out of existing dollars.

As we attempt to electrify the nation’s transportation system, greening the electrical grid is only one step. The U.S. auto fleet will need to be converted, charging station infrastructure will need to be built and a significant increase in battery production is mandatory. ALL this takes time and money – lots of money. It takes much **more** money if you try to rush it, i.e., waste the existing investments in the legacy auto fleet.

You can’t change this mass of transportation. You can’t change it in a year or two. It is changing. It should change, but in terms of just the math of replacing it, if we said we’re going to junk all the cars we have, you know, the economy would stop. We can’t produce them; we can’t replace them.

--Warren Buffet

Green is the New Black

Another potential fly in the ointment is the massive, required increase in mining to satisfy the exponentially increased need for the minerals in the production of electric vehicles (EV). It is estimated that EVs need six to seven **times** more minerals than standard vehicles.⁶ Many of these mineral resources are sourced from geographies that are less than friendly to the United States – e.g., China. Quite a few macroeconomic forecasters are warning that with tensions escalating, China could cut off U.S. supplies of rare earth minerals (not to mention pharmaceutical ingredients). Our country's need to onshore production and mining is one further possible source of inflationary pressure. Onshoring, however, is a net positive as it would bring a much-needed boost to quality U.S. jobs.

We have made quite a few investments for clients during the past two years in the copper, zinc, and rare earth minerals industries. The clean energy movement can't progress without these elements. This continues to be a sector we are watching very closely.

Another cost issue is the not-so-clean aspects of clean energy. Disposing of solar cells after their useful life expectancy is an expensive and potentially pollutive endeavor. The decommissioning of windmills after their 20-year lifespans could also be problematic. It's not so easy to dismantle a solvent and lubricant laden, carbon-fiber megalith, let alone dispose of one. I have an eerie vision of an electrical elephant graveyard of sorts. God forbid if the governments or entities erecting all the wind turbines run out of the necessary capital to take them down and replace them when that time comes.

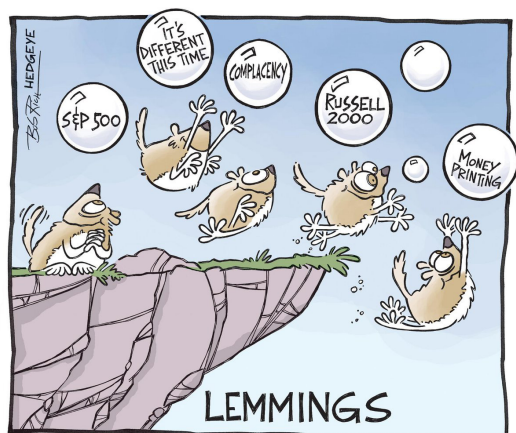
In our own backyard, Lowville's Maple Ridge Wind Farm is New York State's largest current installation. It has yet to be decommissioned. Fully operational in 2006, the 20-year window is closing quickly. We'll soon have some first-hand knowledge about the ease (or difficulties) of decommissioning turbines.

My point is that a lot of the inflation problem is more than simply the global money printing phenomenon – although that's a **major** part of it. The issue is also an energy supply phenomenon, which is a regulation phenomenon, which is a government phenomenon. But not all governments are incurring these costs – many of our rival nations are in fact benefitting monetarily from our policies. Our global competitors are taking full advantage of our declining use of domestic energy resources and production. They appreciate the higher prices and slackened competition.

As we enter the green energy era, we remain ironically dependent on fossil fuels in order to generate the electricity needed to power the revolution. One of the major questions we need to ask ourselves is how quickly we can **realistically** convert from coal, oil, and gas into renewables.

Can we do it without sending the prices of those commodities into the stratosphere or supplies down to dangerously low levels? Because I can tell you, if electric power gets shut down a few times during the winter months and the citizenry wakes up cold, fossil fuels might just get a second life. If we try to do this conversion too rapidly and we run low on resources and/or money, the environment is going to rank much lower on the national list of priorities – and that would be the real disaster.

We will be watching very closely from an investor's standpoint. We may need to hold onto our mining positions and energy positions a bit longer in order to hedge against possible glitches, delays, or failures in this grand plan. We will be careful not to overstay our welcome. As the world tries to print its way towards paying for this new electric vision, inflation could take its toll. The wealthy have ways to counter some of this inflation. The working middle class however, as usual, may get stuck paying for the country's donut bill.



Hunting Lemmings

True Story

When I was going to college back in the '80s in Syracuse, my classmates and I would, on **very** rare occasions, find ourselves out for a drink. On one such outing, a friend and I left one of the fine establishments on Marshall Square and proceeded to walk to his car to drive back to the dorms. We walked for quite some time through the not-so-pleasant Syracuse winter. We turned right on a few roads, and then left. More walking, more walking. Finally, I stopped, turned to my friend, and asked “*where the heck did you park!?*”

He looked at me as if I had just asked the most ridiculous question he had ever heard. His response was simply: “I was following you!”

In life as well as in the investment markets, it's the rare individual that really knows exactly where they are truly headed. Most are unknowingly just following one another - lemming like. Collectively they are following no one. Now you might think “I'm no lemming!” Yet, if you are following the lemmings - what's the difference? So much of investing today seems to be a form of follow the leader. And by leader, we don't mean “credentialed expert” such as Warren Buffet or the like (who have pretty much all been warning of too much speculation). We mean following a random person who merely **seems** to know what they're talking about. We mean following an exciting stock tip you heard two days ago from your neighbor's 23-year-old kid. In your defense, he is a computer whiz, or so he told you.

Much of this follow the leader mentality actually started from an intelligent place. Take the large technology stocks, for example. They started going up ten or so years ago, because they were great companies - they still are. Back then they were also very cheap - they are no longer. We could make the case that because they are such good businesses, that they deserve higher than normal prices. Although that line of reasoning is probably correct, the risks to these high stock prices, from any negative surprise, could be considerable. Of course, many people do not want to take their profits in those companies because they don't want to pay the taxes (ourselves included). But it's much more than that.

Many professional investors believe that there's no sense in fighting the lemming herd, so they just continue to go along for the ride. The higher the prices go, the more attention these stocks attract. The more attention these stocks attract - the more buyers come in. The more buyers come in, the more pressure on everyone else (who are attempting to keep up with the Joneses) to buy. Or at least to keep holding.

Back to our lemming analogy: There are many investors that are simply buying and holding because these stocks have been rising for 10 years and because nobody else, so far, has blinked (sold). What they know is a rising/winning stock price when they see one, and the technology darlings are hard to miss!



To some degree all of us act like lemmings during stock market cycles. And what about those of us who feel compelled to chase after these “lemmings,” hunting them, if you will? Well, they just might find themselves following those jubilant rodents right off the proverbial cliff. That's a scenario eerily similar to

the one that played out twenty-three years ago in 1999. The pressure to buy technology stocks of any sort became even greater and greater. No one wanted to miss out on the fun. Anyone who got cold feet, even a few months before the top, found themselves regretting their timidity as the tech bubble stretched into the stratosphere. Until it went pop. Indeed, few investors heard that pop. In fact, many thought the tech stocks were super bargains after they had fallen 25%.

As you may remember, they kept right on deflating on their way to an 80 to 90% crash over the following few years. Incredibly, it took almost two decades for the NASDAQ to recover back to its old high.

Please don't get us wrong, we are currently very happy with our large tech stocks and they have treated us quite well over the past decade. However, we would be remiss if we didn't start wondering how high is high enough? And...who is left to buy that doesn't already own?

Much of the worst speculation from 2021 happened in smaller, lesser quality tech companies. Many of these have already been beaten back down in dramatic fashion recently. Will that spill over into the broader technology space? We do not know, but there have been a couple of high-profile sales of at least two of the giant tech stocks by top insiders over the last few months. In one case the CEO sold half of his entire stake. Obviously, that could simply be a move of prudence and diversification after the tremendous gains of the last few years. Nevertheless, all investors need to stay vigilant.

Remember: When hunting lemmings...stop well before you come to the cliff.



For 2022

Ok, so that's a lot to digest. It really comes down to this: There are a few major risks that we see threatening investors over the next few years. They can be boiled down to the following:

We continue to have concerns about **inflation risk** and its broad impact on global economic recovery. That is, if our global **debt problem** doesn't hit first. We think that **energy price** risk has the potential to play a leading role in the inflation issue. If our country adopts an overly accelerated rush towards sustainable (green) solutions before the infrastructure is ready, our worries will increase. Finally, we fear that those rising prices for goods, combined with **valuation risk** (high stock prices) in large cap technology stocks, might cause some pain.

In general, we at Morgia Wealth Management like to consider ourselves optimists. Now you might be thinking: You DO know what optimist means right? Fair enough. Yes, we tend to focus on the things that might go wrong. That being said, at our core, we are true believers in the ingenuity of the citizenry. The world will eventually work through its problems, slower than we might like, but eventually progressing towards greater prosperity. That has been the story for the past decades. The good scenarios will take care of themselves, pulling the country up with them. It is the bad scenarios that get our attention and our contingency planning.

As always, we will remain disciplined and careful.

Sincerely,

Michael Morgia, CIMA[®]
Managing Director, Partner

Tony Morgia
Managing Director, Partner

P.J. Banazek, CFP[®]
Managing Director, Partner

The Morgia Team

Seated (left to right):

John Johnson, Nico Morgia,
Katrina Thompson, Shane Simser,
Zachary Buskey, and Joseph Cosmo.

Standing: (left to right):

Heather Clement, Frank Murphy, Tony
Morgia, Kiersten Guthro,
Michael Morgia, PJ Banazek,
and Andrea Fiorentino.



**At Morgia Wealth
Management
we do our best
to keep
you connected!**

Feel free to check out
our video library
at morgiawm.com
or our YouTube channel
or follow Morgia Wealth
Management on LinkedIn.



NEW! Scan the QR Code for a
direct link to our website:
morgiawm.com



@MorgiaWealthManagement



@MorgiaWealthManagement



@MorgiaWealthManagement

Morgia Wealth Management is a team of investment professionals registered with HighTower Securities, LLC, member FINRA and SIPC & HighTower Advisors, LLC a registered investment advisor with the SEC. All securities are offered through HighTower Securities, LLC and advisory services are offered through HighTower Advisors, LLC.

This is not an offer to buy or sell securities. No investment process is free of risk and there is no guarantee that the investment process described herein will be profitable. Past performance is not indicative of current or future performance and is not a guarantee. Before investing, consider the investment objectives, risk, charges and expenses. Diversification does not ensure against loss. Investors may lose all of their investments. The securities mentioned herein may not be suitable for all investors.

These materials are solely informational. In preparing these materials, we have relied upon and assumed without independent verification, the accuracy and completeness of all information available from public and internal sources. HighTower shall not in any way be liable for claims and make no expressed or implied representations or warranties as to their accuracy or completeness or for statements or errors contained in or omissions from them.

1. Walter J Williams, Shadowstats.com, 11/10/21
2. Greg Rosalsky, NPR, Meet Skimpflation: A reason inflation is worse than the government says it is, 10/26/21
3. Irina Ivanova, CBSNEWS.COM 12/8/21
4. Ryan Dezember, WSJ, America's Power Plants are Low on Coal 11/30/21
5. Princeton University, Net-Zero America: Potential Pathways, Infrastructure and Impacts, 10/29/21
6. IEA, Evolution of Energy Prices, 2020-2021
7. Image, Bob Rich, Hedgeye.com, Cartoon of the Day: Lemmings, 4/7/14
8. Image, Patrick O'Neill Riley, Encyclopedia Britannica, Inc.