PMA® ASSET MANAGEMENT

Semi-Annual

MARKET OUTLOOK

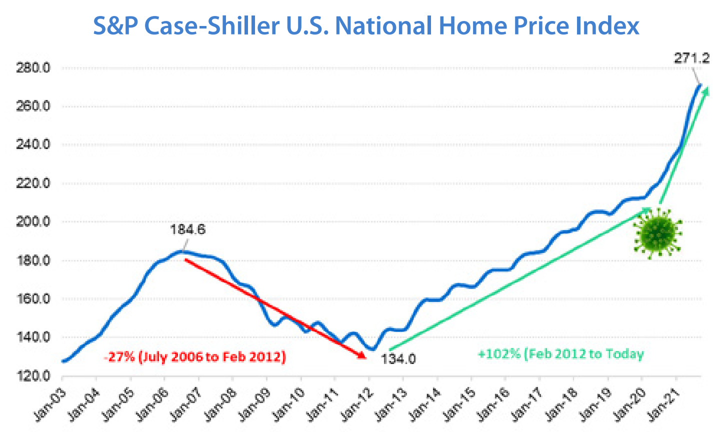
WINTER 2021-2022

EMBRACING UNCERTAINTY

It's been two years since COVID-19 was discovered in a small cluster of patients in Wuhan, Hubei Province, China. While that virus has turned into one of the most destructive pandemics in history, the global economy and markets have performed admirably despite the economic toll and horrible loss of life. As a COVID survivor, I can personally attest to the lasting effects of the virus both physically and mentally since contracting it in April of this year. Despite the over 263 million cases and 5.2 million deaths globally to date, current vaccination rates severely lag expectations and levels needed for global herd immunity, despite the compelling evidence of its efficacy. Globally, full vaccination stands at 43%, with those receiving one dose at 54%. Locally, 60% of the US is fully vaccinated as of December 8, 2021, while 72% have received at least one dose[1]. While we don't yet precisely know the transmissibility or severity of the Omicron variant, we would expect similar mutations going forward until we can improve global vaccination rates. Uncertainty is the only certainty in this regard and COVID will continue to play a significant role in economic and market outcomes in the year ahead.

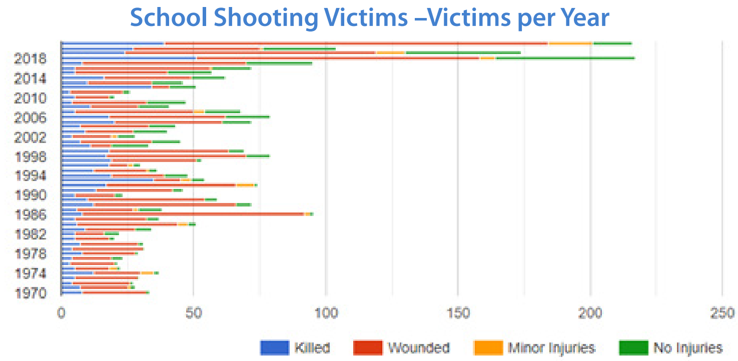
Importantly, the trauma that people are experiencing is more complicated than the pandemic alone. Evolving social unrest, increasing environmental disasters and political schadenfreude only add to the traumatic experience. Having experienced other traumatic events in my life, I consider myself modestly experienced in this regard so please accept the following analogy with levity. Pre-Covid, 60% of people generally experienced some sort of trauma during their lives. That number is certainly much higher over the past two years as COVID has been a traumatic event for many people. Of those persons that experience trauma, 10% ultimately develop some sort of post-traumatic stress disorder (PTSD). As you are likely aware, PTSD is mental health condition in which people may experience flashbacks, anxiety, nightmares, and repetitive intrusive thoughts about the traumatic incident. Trauma and/or PTSD is stressful and taxes people's ability to cope, and there are multiple stages of recovery. From my experience, it seems our collective psyche continues to linger somewhere in the denial stage of recovery. The denial stage is where people act out more regularly where we see sometimes divergent or extreme behaviors. Look no further than consumption patterns as a good example. From periodic hoarding of toilet paper to rapidly escalating property values (Figure 1), behaviors vary as people deal with increased uncertainty and fear. Given the impact of the pandemic, changing life priorities and other stressors, people's emotional fuel tanks are running low. Fight or flight behavior has become more commonplace and empathy and patience wanes. We certainly see it in the capital markets with significantly higher volatility across most markets the past year, but we also see evidence online, with the rise in crypto currency trading, increased school shootings (Figure 2), in the rise of Robin Hood and meme stock trading and sadly in on our daily rhetoric.

Figure 1



Source: Bloomberg, PMA Asset Management

Figure 2



Source: Center for Homeland Defense and Security (CHDS), https://www.chds.us/c/

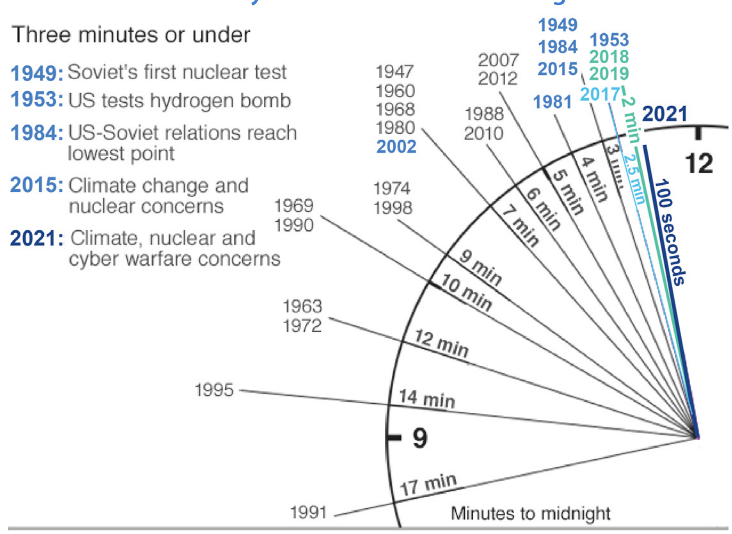
Unfortunately, we also see this increased uncertainty in our children's world view. Over the Thanksgiving Holiday, I asked my young adult children what they were most excited or worried about for the coming year. Surprisingly, one of my kids talked about her fear of a coming global Armageddon and the fact the global Doomsday Clock was at

[1]www.mayoclinic.org. Vaccine progress is updated daily. Data is compiled from the and historical data from The COVID Tracking Project. State population data is from the 2019 census estimates from the United States Census Bureau.

100 seconds to midnight (Figure 3). While I'd read about the clock in the past, my relative naivety required some research, at the very least for empathetic purposes and effective parenting. What I found was both enlightening and alarming. As a backdrop, the Doomsday Clock's origin can be traced back to 1947 and the international group of researchers called the "Chicago Atomic Scientists" who had participated in the Manhattan Project. Their work was inspired by the manifesto "Notice to the World" written by Albert Einstein and Bertrand Russell. Members of the board judge Midnight by discussing how close they think humanity is to the end of civilization. For her, the mishandling of the global health crisis, risks of severe climate change, cyber terrorism, and the rise of automation were sources of anxiety beyond the normal stressors of the pandemic and the pressures of college life. During my college years, my concerns were so different and relatively mundane in the 1980's. It's profound to think about the rapid change recent generations have had to endure so early in their lives. They find themselves in an increasingly expensive and fragile world. A world that we all hope is significantly further away from Armageddon than what the clock currently shows.

Figure 3

Doomsday Clock – Minutes to Midnight



The point is our collective psyches are still in a relatively vulnerable state. It typically takes seven years, albeit with good therapy, to successfully work through a traumatic event. We are effectively in year two of this recovery process. While stress, anxiety and fear are acutely prevalent at present, the markets and society at large persistently forge ahead. We can and do change, adjusting to survive and thrive despite the evolving challenges faced. Ultimately, this period will prove no different though we must acknowledge a much higher probability of divergent and extreme outcomes which will certainly impact markets and returns.

That said, it's been inspiring to see the economy and markets heal so rapidly. The retooling of the economy, sheltering in place, working from home, educating remotely all the while improving profitability and getting people back to work so quickly has been nothing short of incredible. GDP growth has been extraordinarily strong thus far in 2021 and is forecast to come in around 5.5% on the year overall. While we expect the economy to show robust growth once again in 2022, economic fundamentals will become more challenging in the second half of the year as the Fed tightens policy. Given virtually every asset class is at relatively rich valuation levels on a historical basis, we would expect large bouts of volatility in risk markets as policy and economic events unfold. Income, strategic asset allocation and liquidity preference will prove important to successfully navigating returns in the upcoming year in our view. PMA's forecast within the US is for 4% real GDP growth, 3% headline inflation, continued solid earnings growth and higher interest rates overall. Base case expected returns continue to favor equity returns of 7% versus modestly positive fixed income returns, albeit with higher uncertainty and a corresponding wider range of potential returns. While bond prices may be pressured lower with tighter policy expectations in the first half of the year, much of the tightening is already priced into the market. Fundamental credit strength and positive technical factors should support positive returns across most investment grade spread sectors. Equity returns will be supported by high single digit earnings growth, relatively stable multiples and continued strong demand.

Figure 4

	SPOT	DEC '22 PROJ	PROJ RETURNS	RANGE
US EQUITIES*	4538	4900	7.00%	-15% / +15%
INTL EQUITIES*	4406	4538	3.00%	-20% / +20%
US FIXED INCOME*	2368	2373	0.25%	-4% / +3%
FED FUNDS	0.08	0.58	0.25%	+0.20% / +0.50%
2YR UST	0.60	1.00	-0.12%	-1% / +1%
1OYR UST	1.36	1.75	-2.25%	-5% / +5%

(US EQUITIES = S&P500; INTL EQUITIES = FTSE GLOBAL EX US ALL CAP; US FIXED INCOME = BLOOMBERG US AGGREGATGE)

MARKET THEMES

Significant economic and policy tailwinds have not surprisingly caused divergent performance across the capital markets in 2021. US equities have enjoyed particularly strong returns as buoyant consumer demand helped corporate profits soar. Energy, real estate and financial sectors have led the way. Large cap stocks have once again outperformed small cap stocks year to date and ESG stocks continue to outperform as well. An uneven economic re-opening throughout most of the world has resulted in much lower performance for international and emerging market equities. Within international equity sectors, information technology and financial sectors have outperformed. Chinese equities are down over 20% on an absolute basis year to date due to continued regulatory crackdown and slower growth. Meanwhile, the prices have surged over 45% and 31% respectively across energy and raw commodities in the past year as supply chain issues and robust demand pushed price levels higher. Commodity and energy prices should ease as we move into 2022 and we already have seen natural gas prices correct 42% off their 52-week high. The US dollar has performed well versus

Figure 5

Asset Class *(returns data as of 12/3/21)*	QTD	YTD	12M
Fixed Income			
U.S. Treasury Bills	0.00	0.04	0.05
U.S. Investment Grade Bonds	0.60	-0.97	-0.60
U.S. Investment Grade Credit	0.92	-0.36	0.17
High Yield	-0.74	3.76	5.10
Equity			
S&P 500	5.63	22.43	25.53
Nasdaq	4.54	17.79	22.71
International Equities	-1.39	5.35	8.70
ESG Stocks	7.48	24.10	26.67
Commodities			
U.S. Dollar Index	2.00	6.87	5.96
Oil	-11.69	36.56	45.18
Raw Commodities	2.86	24.79	31.55
Gold	1.50	-6.06	-3.14

Source: Bloomberg, PMA Asset Management

other currencies which we expect to continue into 2022 largely supported by tighter Fed policy. It's been surprising to not see gold perform better this year despite higher inflation fears and a strong preference for safety. Many investors mistake gold as a hedge against inflation risk when it more accurately acts as a storage of wealth.

The fixed income market has experienced negative returns for just the first time since 2013. We forecast modestly positive returns for the US investment grade bond market in 2022 with a wider range of potential returns given pandemic uncertainty and its impact on the real economy and central bank policies. While most are aware of the amazing equity bull market we have experienced since the Great Recession, many investors may be surprised at the similarly amazing rally we've experienced in the US rates market as long US Treasuries have outperformed international equities on a cumulative basis over the past two decades. Despite the "rates are just too low to allocate to fixed income" environment, persistent deflationary forces and a volatile economic backdrop have helped US Treasury sector returns. Global investors continue to

Figure 6

Long Bonds vs. Non-US Stocks

Source: Bloomberg, PMA Asset Management

view US Treasuries as "the" liquid, safe asset class in an increasingly uncertain world. This isn't going to change in 2022 or anytime soon given the potential jump risks to the economy and markets.

Within the fixed income markets, fundamental credit strength underpins our positive outlook for the corporate sector in 2022. Strong sales and earnings growth will moderate next year but should remain solid on a relative basis versus history. Margins have remained relatively resilient despite higher inflationary pressures. Debt service coverage levels are robust and borrowing costs should remain extremely low as default levels decline. While corporate spreads are relatively tight to historical levels, roll down and sector selection will be important factors in generating positive excess returns over the coming year. Within the municipal market, fundamental credit profiles continue to improve supported by economic growth, strong tax receipts and ongoing federal aid. Funds from the American Rescue Plan Act (ARPA), the recent passage of the infrastructure bill and the eventual passing of some form of the Build Back Better Act should further support municipal credit fundamentals.

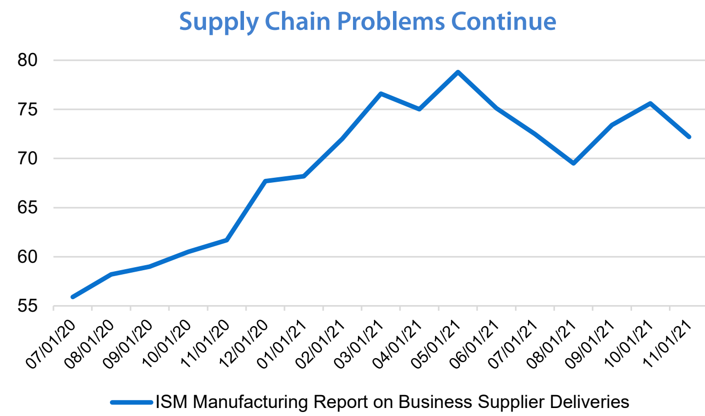
Carry will be king next year in the securitized market despite relatively tight option adjusted spreads versus other sectors. As the Fed begins to taper asset purchases, we are hopeful the increased supply of agency mortgage-backed securities will provide relative value opportunities for investment at better levels. The past year saw mortgage valuations at historically rich levels given the Fed's QE policies and demand from banks given their excess liquidity position. Agency commercial mortgage backed (Agency CMBS) spreads have widened from historically tight levels we saw late this summer and, in our view, increasingly present a compelling opportunity as strong multifamily credit fundamentals support performance potential. The asset back market's fundamentals should remain strong in 2022 as the economy continues to perform well, consumer credit is in solid shape and projected supply remains favorable despite tight spreads. While the Omicron variant has been a great reminder over the past few weeks how quickly sentiment can change, stable spreads, positive technicals and solid credit fundamental considerations ground our positive outlook within non-Treasury fixed income spread markets.

Within the equity markets, while valuations are still historically rich, positive earnings fundamentals, stable to improving margins and solid balance sheets support continued positive performance in the coming year. Labor supply challenges, supply chain concerns and higher input costs are the biggest risk to equity returns in our view. While large cap stocks are slightly better able to absorb higher costs and navigate supply chain issues, small cap valuations appear relatively attractive. Absolute valuations point to a risk of correction, which may well occur in 2022, but strong economic growth and low real yields anchor this risk in our view. We continue to favor the US versus international equities. Within international equities, we favor western Europe as their vaccinations have outpaced the US and fund flows are increasing. China is a particular source of concern for our team as regulatory issues are a red flag that can cause sizable volatility on relative performance. China growth appears to have slowed and will be a headwind for performance as well next year. We remain overweight equities in general across our balanced strategies and will continue to be highly selective in our relative positioning with ongoing tight risk controls versus our benchmarks. With the recent rally in interest rates, equities look relatively attractive from an income perspective as well, as we think carry will be important in the coming year. Equities have historically tended to outperform fixed income in periods of rising rates, which is our view once again for 2022.

CHIPS, SHIPS and FLIPS

Amongst a host of other important concerns, continued supply chain issues, chip shortages and increased risks of a dangerous wage/price spiral pressured the Fed to flip their position on monetary policy earlier than planned at their November meeting. As you can see in the most recent ISM manufacturing report on business supplier deliveries (Figure 7), the supply chain issues have improved somewhat from October to November, but a diffusion index reading of 72.2 remains a considerable source of concern for our team. And while commodity prices are starting to ease somewhat across many areas we research, labor slack has declined dramatically since our last outlook best reflected in the unemployment rate declining from 5.8% in May to the most recent reading for November of 4.2%. The Bloomberg consensus forecast is for a 3.8% unemployment rate in 4Q22 which might be high unless we can significantly increase the size of the labor force. Our fear is that wage inflation is going to be more persistent than the Fed's forecast and, as we know from experience, wages are sticky to the downside. While wage inflation is good for the population more generally despite the potential impact on profitability, continued labor issues may pressure the Fed to act more quickly and to a greater degree than our base case estimate. While we believe base line year over year inflation pressures will naturally lessen in time, continued supply chain bottlenecks, related

Figure 7



Source: Bloomberg, PMA Asset Management

product shortages and a shrinking labor pool will keep inflation levels elevated in 2022. Thus far, most companies we follow have increasingly used this opportunity to pass through the added costs in the form of price increases without seeing significant declines in demand. For corporate executive teams who haven't been able to push through those price increases to the consumer, margins have commensurately declined, and their stock prices have been punished severely.

Unfortunately, the Fed finds itself largely out of position again here this Winter, with a monetary policy that is looser than it should be, during a period where the labor market is tightening dramatically, and inflation pressures remain well above their long-term target. The Fed should have flipped this summer when the inflation waters were calmer. To supply perspective, the Fed began tapering in the last cycle when the unemployment rate was at 6.7% and inflation was well below their 2% long-term target. This will be a most interesting year. Embrace the uncertainty, invest with a purpose and, most importantly, stay invested!

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