PERKINS
CAPITAL
MANAGEMENT, INC.

December 15, 2021

Dear PCM Clients and Friends:

We hope this letter continues to find you and your family safe and healthy as 2021 comes to an end and we look forward to 2022.

The end of 2021 has rapidly come upon us here at PCM. When we look back at the past two COVID years it sometimes seems as if it has been a long time. Much has gone on. Yet, it is still less than two years and it was only one year ago that a vaccine was finished. Some days it has seemed as if it would never end. Now, as we look back at the past year it has passed so very fast. Where did it go? In our February letter we started the year with the comment that we were well into the start of the new year and "Wow! What a start it has been in the markets." Winter into summer was a very busy productive time in the markets. Since few companies have begun to travel to tell their story in person, we have continued to meet with companies remotely. Much of the work we do for you is meeting with company management teams to understand their business plans. This has shifted to "zoom" meetings. In our February letter we stated: "We are very fortunate to be investors for you, our clients, in a number of exceptional medical companies who clearly have very developed and, we believe, achievable plans to continue their significant growth." We continue to feel that way; though now in retrospect those early months of the year were a temporary valuation high in many growth stocks for the year. We were fortunate to do "trimming", some significant partial profit-taking, in many of these companies. We continue to feel that "Med Tech" is a long-term fertile investment territory for investors. There is much positive change, growth and innovation occurring in medicine and other technologies.

In the fall we were fortunate to get away, as we do each year, to enjoy the out-of-doors. We had a wonderful fall in Minnesota which for us started in mid-September and continued into mid-November. Winter has now arrived in Minnesota. This year the fall weather was so nice that many ducks stayed in Canada. No need to migrate south in October or November. We have included here a picture from the duck blind looking out into a lovely "blue bird" day. No ducks, but a nice beautiful fall day to enjoy!!

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INVESTMENT MANAGEMENT

THE MARKET SCOREBOARD

The S&P 500 continued to hit new all-time highs in the third quarter as investors looked past a resurgence of COVID-19 cases in the U.S. and instead focused on the positive combination of a resilient economic recovery, ongoing historic support from the Federal Reserve, and strong corporate earnings. Stocks moved steadily higher to start the third quarter as the U.S. economy continued its return to pre-pandemic levels of activity while corporate earnings remained solid. Second quarter earnings results, which were released in mid-to-late July and, in smaller companies, in August, were again stronger than expected. At the July FOMC meeting, Fed Chair Powell reiterated that, despite economic progress, it was not yet time for the Fed to begin to reduce Quantitative Easing (QE), thereby ensuring the economy and markets would continue to enjoy full Fed support until late 2021. Those factors helped investors look past an increase in COVID-19 cases as the S&P 500 hit a new all-time high in late July. The positive momentum in the markets continued in August, powered by positive corporate commentary, solid economic activity, and continued supportive Fed rhetoric. Then in August politics once again became a focus of the markets. The Senate passed a $3.5 trillion budget reconciliation bill that would be the framework for potential changes to tax rates, entitlements, and climate policy. Stocks were able to look past future policy risks and climb steadily higher throughout August with the S&P 500 ending August essentially at all-time highs. The market tone changed in September, however, as many of the positive factors that supported stocks earlier in the quarter began to fade. During September market volatility increased and the indexes corrected again reminding investors that the transition to a post-pandemic "new normal" would not be a smooth straight line. The indexes finished September with moderate losses with only the S&P 500 index having a positive return for the third quarter. The S&P 500 posted a total return of 0.58% for the 3rd quarter, following a 4.65% decline during the month of September. As can be seen in the indexes return table, the third quarter, in the end, was flat to down across the board.

Indexes	% Return YTD 2021	% Return Q3 2021	% Return Q2 2021	% Return Q1 2021
S&P 500 Total Return	15.92	0.58	8.55	6.17
NASDAQ Composite	12.11	-0.38	9.49	2.78
Wilshire 5000	13.67	-0.58	8.08	5.79
Dow Jones Industrial Average	10.58	-1.91	4.61	7.76
NYSE Composite	11.15	-2.48	6.11	7.41

By market capitalization, large-cap stocks outperformed small-cap stocks in the third quarter. In fact, small-cap stocks had a negative return for the quarter as rising COVID-19 cases, mixed economic data, and the prospects of eventually higher interest rates caused investors to favor large-cap stocks as the outlook for future economic growth became less certain.

From an investment-style standpoint, growth outperformed value in the third quarter, thanks to tech sector gains, although the degree of outperformance shrunk considerably during the final week of the quarter as tech shares declined.

On a sector level, performance was more mixed than the previous two quarters as 6 of the 11 S&P 500 sectors realized positive returns in the third quarter, with financials leading the way higher. For much of the third quarter, the tech sector outperformed, but as bond yields rose in late September, financial stocks rallied on the prospect of higher interest rates and overtook tech as the best performing sector in the quarter. Broadly, healthcare continued its 2021 correction which began during the first quarter; though several large-cap pharmaceutical stocks performed well, bolstered by strength following more COVID-19 vaccine mandates and booster shot approvals.

In sum, the market remained resilient in the third quarter, but the final few weeks of September served as a reminder to investors that markets will face the resolution of numerous macroeconomic unknowns in the fourth quarter and 2022. While the fundamentals of many industries and companies remain decidedly positive, an increase in market volatility should be expected. This set the stage for October and November, which have historically been volatile months for equities; with this year no exception. This year October, in terms of the averages, was back up to new highs after a weak September while November was back down again correcting October's gains and new index highs.

STOCK MARKET OBSERVATIONS

As we head into the end of 2021 there appears to be a good amount of "worry" in the market.

Though the market averages are just a couple percentages from their all-time highs, there has been a significant correction since March of this year in the stocks of growth companies who are important drivers of future U.S. economic growth, including SaaS software companies, biotech, and other high-tech medical growth company stocks. For most of the year, with some recent volatility along the way, the averages have held up well all year, flirting with and making new highs, while what has been described as a "stealth bear market" has continued in the market underneath the averages. At this time, the market is incredibly split with 50% of all stocks in their own private "bear markets" compared to "the averages." Even the Nasdaq, which is comprised of high-tech growth companies, is less than 3% from its all-time highs while only 35% of its composite members are above their 200-day moving average price. According to market analyst Susan Berge: "In the Nasdaq 64% of the gain in the Nasdaq averages this year are accounted for by five stocks: Microsoft, Google, Apple, Nvidia, and Tesla." She also commented that in mid-November when the Nasdaq reached new highs there were 1111 more stocks down than up that day. That day there were also 322 new lows which was twice as many as the 160 new highs. Last week, on a weekly basis there were 899 weekly new lows. In 2021 the market has been a "Tale of Two Tapes", like the title of Dicken's classic, *A Tale of Two Cities*.

Across the country we all want to move beyond the COVID crisis and put it behind us. At this time, it is clear that COVID and its effects are not behind us; nor will they be well into 2022. COVID will have lasting effects on how we all live and how we will do business - both as consumers and businesses - in the future. The markets have again sold off with worry over COVID's negative effects; yet, it is not all negative. There are both significant positive and negative effects to our individual COVID responses, businesses' learning how to profitably operate and grow in the near future and the continuing COVID response by our government, whose response was quick and immediate; yet, whose funding and its ramifications will continue on for some time. Beyond the Fed's immediate response, the direct economic stimulus payments and the forgiven loans; now the government's infrastructure and other projects, with multi-year life spans, will come. In the pre-Covid twelve months through March 2020, federal outlays were $4.6 trillion, or 21.4% of GDP. In the next twelve months, outlays soared to $7.6 trillion or 36.2% of GDP. Direct payments to citizens were $1 trillion dollars. There has been $4 trillion in Federal expenditures budgeted for future multi-year projects including the $1.2 trillion infrastructure bill. We now talk in trillions instead of hundred- billions. Outside of wartime, we know of no other time when the government has ramped up spending that much or that fast.

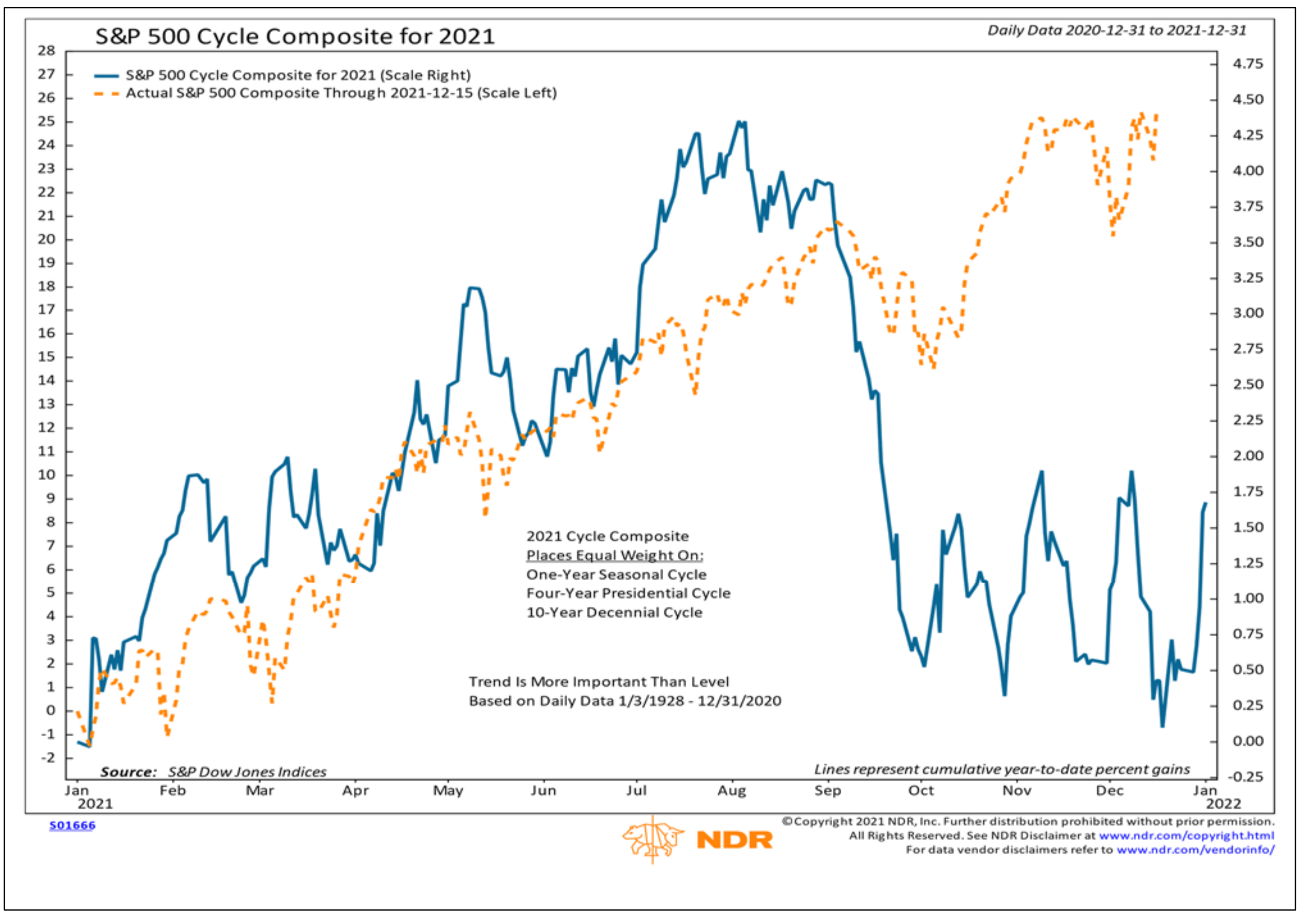
In our pre-COVID letters in 2019 and 2020 we wrote about the election cycle, our plow horse economy, the Fed continuing its decade-long accommodation or not, and how we did not expect a significant decline until the U.S. economy experienced a recession. COVID changed all that dialog and, also, didn't. We think that in 2022 these factors, rephrased a bit, will now come back to the forefront. We have the mid-term elections coming in 2022. Most companies were either able to or have learned to "plow through" COVID. Who grows and who suffers does matter to us as investors. Will the Fed continue its accommodative policies or not; and in what form?

Early in COVID we waited for the vaccine. At this time last year, we referred to Operation Warp Speed as "the current generation's Manhattan Project;" yet, here we are today, with a crisis of the unvaccinated, despite over 60% of our population vaccinated. The importance and the role of The Fed continues to stay in the forefront. Fed Chairman Powell continues in charge, adding stability. The stage has been set for several rate hikes in 2022. The Fed's job is to end the monetary pandemic response; returning to a still growth-oriented accommodative monetary policy while bringing the U.S. economy to a "soft landing" and reining in inflation. Fed watching in 2022 should be interesting. And all this in a mid-term election year. Fiscal policy has largely been set for now. Inflation says more is not needed. The budget deficit will be smaller than the previous two years but will still be very large this year. This is a short-term headwind for growth and a return to normalcy. More businesses should be getting back to normal.

Remember back early in October when the S&P 500 was in the midst of its first 5%+ pullback in over a year and the earnings season was about to start? The general tone in the market was that labor shortages, disrupted supply chains, and inflation were all causing havoc on the operating environment for companies and this would provide a dreadful upcoming earnings reporting period. This did not happen. The worst fears not only failed to materialize, but we have actually just wrapped up what has been one of the best earnings seasons since 2010 with corporate profits up 18%, much stronger than expected.

Could it be this simple? That earnings do matter? In early December, James Paulson, Chief Investment Strategist of *The Leuthold Group* wrote a piece titled with the question: "Maybe It's Just This Simple?". He went on to remind us through charts, data, and common sense that when earnings are increasing, "Yes, despite whatever extraneous problems are at play, the stock market usually finds its way through the storm and rises. Moreover, there is a consistent relationship between real EPS growth and stock prices. Earnings do drive the stock market." Paulson went on to show that except during one-quarter of the time when earnings are decreasing, the returns from the stock market have typically been strong. Consensus earnings for the S&P 500 earnings for 2022 is at $220 today, which is a modest but solid increase; putting fair value about 9% higher than today. We think Paulson was right to remind us that, in broad terms for individual companies and "the stock market," if there is growth and increasing earnings then despite volatility along the way and "extraneous problems" the markets usually rise.

In our May letter we included the Ned Davis Dow Jones Industrial Average Cycle for 2021. We have included the Ned Davis Research cycle work for many years because, though not perfect, it is often quite accurate in its form and has proven to be useful. So how did the cycle work out this year? If you look at the S&P 500 Composite below, fairly well through September, but then the blue composite line predicted a sideways up and down market into the end of the year; whereas, the S&P, like the Dow, recovered to its highs before going down again in November. I actually think the Composite for 2021 was overall very accurate this year. Perhaps the blue line is a more accurate depiction of the "average stock" this past quarter and year than the orange Actual S&P 500 Composite line.



In our January letter we will have a section which goes through in detail the components of the Ned Davis 2022 Composite which will include the yearly seasonal, the political, the effects of fiscal and monetary policy on the market's cycle, and the decennial pattern; as all of these are important and a good setup for the market in 2022 and beyond.

Though the cycles are interesting and have been predictive, earnings and liquidity are the two strongest drivers of stock prices. At this time, it appears the Fed will provide more than ample but decreasing liquidity. The momentum in the economy continues with corporate earnings very strong and expanding. We look forward to expanding on this and more in our 2022 Stock Market Observations in January.

As always, if you have any questions about your investment accounts or any of the specific investments in them, please give us a call. Or call in and ask to schedule a time for a more formal review or to have a longer updating talk at a specific time.

We wish you and your family a wonderful holiday and New Year with the very best for 2022!

Sincerely,

Richard C. Perkins, C.F.A.
President
Portfolio Manager

Daniel S. Perkins, C.F.A.
Chief Operating Officer
Portfolio Manager

RCP:DSP/jah

SVEN AND OLE

Sven applied for a fork lift operator post at GT Schjeldahl in Northfield. Ole also applied for the same job and since both applicants had similar qualifications, they were asked to take a test and were led to a quiet room with no interruptions by the manager. When the results were in, both men had scored 19 out of 20. The manager went to Sven and said, “Thank you for coming to the interview, but we’ve decided to give Ole the job.”

Sven asked “And vhy vould you be doing dat? Ve both got 19 questions correct.” The manager replied, “We have made our decision not on the correct answers, but on the question you got wrong.” “And yust how vould vne incorrect answer be better than another?” asked Sven.

The manager told him, “Simple; on question number 7, Ole wrote down, ‘I don't know.’ You put down, ‘Neither do I.’”

Sven says to Ole, “Close your curtains da next time you’re haffing sex vid Lena.
Da whole street vas vatching and laughing at you yesterday.”

Ole says: “Vell, the yoke’s on dem, because I vasn’t even home yesterday.”

Ole is driving a wagonload of wheat to town when he catches a wheel in the ditch and it overturns. Sven sees it and comes to investigate. “Hey Ole,” he calls out. “I’ll help ya turn da vagon back over, but I’m about to eat dinner. Vhy don’t ya forget bout it for a vhile and come and haff dinner vit me? Then ve’ll come back.” “Vell, thanks Sven.” Ole answers. “But I don’t tink Lena vould like me to. “Aw, come on.” Sven insists. “Vell, ok den”, Ole finally agrees. “But, Lena von’t like it.”

After a hearty dinner, Ole thanks his host. “I feel a lot better now, but I know Lena’s going to be real mad,” he says. “Don’t vorry about it, says Sven. “By the vay, vhere is she?”

Ole says, “Under da vagon.”

STANDARD PRICING

At the hospital, the relatives gathered in the waiting room, where their family member was gravely ill. The doctor came into the room looking tired and somber. “I’m afraid I’m the bearer of bad news,” he said as he looked at the worried faces. “I’m afraid the only hope left for your loved one at this time is a brain transplant. It’s an experimental procedure, semi-risky, and it is not covered by insurance.” The family members sat silent as they absorbed the news. After a length of time, someone asked, “Well, how much will a brain cost?” The doctor replied, I’m afraid it’s $5,000 for a male brain, $200 for a female brain.” The moment turned awkward. The men in the room tried not to smile, and avoiding eye contact with the women.

A man unable to control his curiosity, blurted out the question everyone wanted to ask, “Why is the male brain so much more?” The doctor smiled at the childish innocence and replied, “It’s standard pricing procedure. We have to mark down the price of the female brains, because they’ve been used.”

Did you know that "Dammit I'm Mad" spelled backwards is "Dammit I'm Mad"

Arguing with a women is like reading the Software License Agreement.

In the end, you ignore everything and click "I agree".

What did our parents do to kill boredom before the internet?

I asked my 26 brothers and sisters and they didn't know either.