

The Abernathy Group II

Family Office

2021 Outlook Q3 2021 Quarterly Market Review



2021 End of Year Outlook

Letter to The Abernathy Group Family Office members

Summary:

Below, you will find our anticipated outlooks for:

Interest Rates

Bond Market

Stock Market

The Cumulative understanding of each sector below will help investors gage risk and offer a framework to determine risk levels and an appropriate asset allocation.

The "Supporting Information" and narrative explaining our outlook for each sector of the capital markets will follow the 3 short summaries below.

It includes much of the data and logic which guides our stance regarding current risks and prospects for future returns.

For those interested in the reasoning behind our summaries, it begins on page 8.



Interest Rates:

The U.S. Federal Reserve will maintain it's incredibly accommodative stance of 0% - 0.25%, for at least the next 12 months. This means no change in **short-term** interest rates.

We do expect the U.S. Federal Reserve to begin tapering its purchases of U.S. Government bonds (\$80 billion) and mortgage-backed securities (\$40 billion) at some point in Q4 2021. The tapering is well publicized and is likely priced into the global markets. However, we do expect the reduction of U.S. Federal Reserve purchases (tapering) to gradually increase longer-term interest rates starting in Q4 2021 and continuing into 2022.

Our base-case for **Long-term** interest rates - as defined by the U.S. 10-year Treasury Note – will finish 2021 between 1.5%-2% yet will be significantly influenced by the outlook for the U.S. economy.

We expect the U.S. economy's growth rate to gradually fade in the 3^{rd} and 4^{th} quarters of 2021. We expect U.S. GDP will return to its long-term 1.5 – 2% growth rate in 2023. If this expectation is correct, interest rates (both short-term AND long-term) are most likely to remain range-bound at current levels.

All investors must remain mindful that interest rates are *significantly* below the inflation rate, thus guaranteeing bond investors a loss of purchasing power over the duration of their bond investment. Consequently, bond "investments" make little sense at current levels.

As we write this note, the U.S. Federal Reserve is firmly controlling short-term and long-term interest rates. The Federal Reserve's "control" destroys "price discovery", created by millions of intelligent investors voting with their dollars each and every day. This is a problem and has been since 2009. If the Federal Reserve was not controlling the U.S. interest rate market (which strongly affects the global interest rate market), interest rates would likely be higher, economic growth lower, and asset prices *much lower*.

The questions become A) how long will the U.S. Federal Reserve be able to control U.S. and global interest rates, and B) if the U.S. Federal Reserve loses control, what will the global markets determine the true interest rate for riskless securities to be?

Implications for Intelligent Investors: Interest rates will remain largely unchanged over the next 12 months, yet the bias will be FIRMLY to the upside. The U.S. 10-year note is likely to end 2021 closer to 2% than 1%. Investors will be reminded that *changes in the interest rate structure take 12 – 18 months to affect our U.S. economy, yet the stock and bond market will adjust in a matter of days*. Increased rates have historically caused *downturns* in the U.S. marketplace and could strengthen our dollar against many of the other currencies in the world. An *orderly increase* in the U.S. 10-year notes up to - or below 2% - will allow higher than historical equity prices to persist. Conversely, a *rapid increase* in rates or an increase above 2%, will cause a downward valuation in equity and most asset prices.

1) There is a difference between "investing assets", and "storing assets". *Investing assets* seeks to have investments that grow and produce an income while waiting for the growth. *Storing assets* seeks to ensure the asset values don't fluctuate (or fluctuate VERY little) as those assets are going to be needed to fund an anticipated expenditure in the near future. Remember – those are two very different goals.

2) https://en.wikipedia.org/wiki/The_Wisdom_of_Crowds



Bond Market:

We believe U.S. government bonds will move slightly lower over the remainder of 2021 as interest rates gradually increase (bond prices decrease, as interest rates increase). Our base-case belief is that *the Federal Reserve will begin to reduce its bond and mortgage buying over the next few months* and will likely finish by, or before, the end of 2022. The U.S. Federal Reserve's reduction of debt security purchases will likely create a headwind for bond prices, and a gradual increase in bond yields. *All investors must keep in mind that the stock market takes direction from the bond market, and the bond market takes direction from the U.S. economy.*

U.S. government and corporate bonds will *underperform* equities over the next 12 months. We believe the "bond" bull market, which began in the early 1980's, is largely over.

When an investor buys a bond today, <u>the expected return should be the coupon rate – no more</u>. Short-term "bills", long-term "notes", and long-term "bonds" are egregiously overvalued. Currently, all bills, notes and bonds offer a negative "real" yield (net of inflation), and make little sense to own, unless a significant negative event is expected.

However, if a negative global economic event takes place, U.S. bonds will likely outperform stocks to a significant degree *over the short-term*, as investors historically have flocked to U.S. government bonds for safety, and the U.S. bond market is the largest, safest, liquid market in the world.

Implications for Intelligent Investors: investors should keep bond investments to a minimum. If safety is mandated, bond duration should be <u>short.</u> We prefer lower rated bonds (offering higher coupons), and non-U.S. bonds over U.S. bonds. Our reasoning:

- Non-U.S. bonds offer higher interest rates than U.S. bonds, and their economies are collectively 6 months to one year behind the U.S. in dealing with the COVID crisis. The recovery period coming out of the crisis will be less robust, yet similar to the U.S. recovery.

- "Emerging Markets" are growing much faster than the U.S., and will continue to do so into the future.

- The U.S. dollar is likely to weaken relative to non-U.S. currencies, as the U.S. continues to devalue our U.S. dollar. This provides a tailwind for non-U.S. investments.)

Taxable accounts forced into owning U.S. bonds should consider owning municipal bonds (credit quality is outstanding) and/or, floating rate bonds (floating-rate bonds coupons increase as interest rates rise).

Bond investors should expect to earn the coupon on their bonds as their return objective.



Stock Market:

Today's Investors are living through one of the most aggressive monetary policy experiments the world has ever seen. This policy has inflated many *financial* asset prices to levels which make little sense to intelligent investors.

The Federal Reserve's interest rate control has pushed most investors into riskier assets. *Many investors do not understand the risks they are taking.* Active, speculative, "retail" trading has increased to record levels. Most speculative traders don't understand that asset valuations matter. Their speculative activity is largely focused on a convincing story of future profits to come, without regard to current prices. Once they make money on one or two speculative trades, they believe trading/speculating is easy. This creates a "confidence bubble" and most often leads to tragic results.

Our research shows U.S. equities to be significantly overvalued. When asset values become overvalued, lower than average returns, or negative returns, follow. Thus, investors counting on price appreciation for their equity market portfolio will most likely receive little return during the remainder of 2021 and 2022.

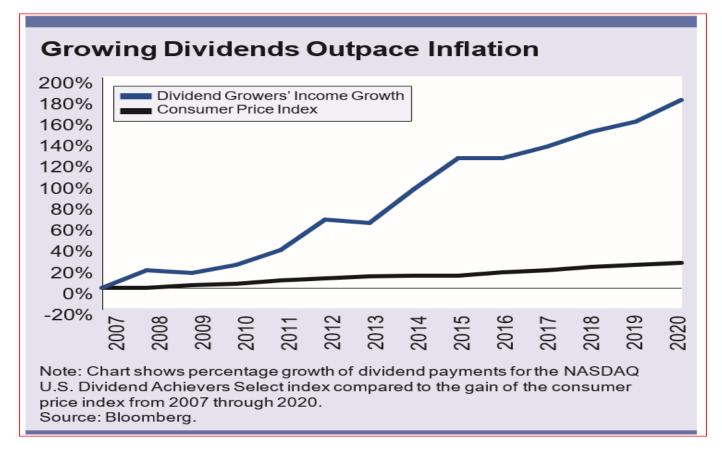
As outlined above in the "Interest Rate" Summary, interest rates will likely have a bias towards moving higher. This means equity values are likely to move lower.

Investment Strategy Must Change

The risk/reward offering today for equity investors counting on "price appreciation" is unattractive. Peak growth is behind us. Similarly overvalued periods confronted investors in 2000, and before that in 1969. During the 10 years following 2000, the overall market was down about 5% in total (and included 2 of the most vicious bear-markets on record), yet investors focused on dividends and income-generation generated a positive return of 15%. During the 10 years defining the 1969 downturn, stocks ended the decade with a negative 7.5% return. Yet investors embracing a dividend and income framework saw portfolios increase over 35% as dividends added over 40% during the downturn.

Dividends - Dividend payments are more certain, generally increase over time, and tend to outpace inflation. Investors should consider owning stocks which pay dividends and have the ability - and history - of *increasing* their dividends. See the 2007 – 2020 chart on the next page:





Broaden diversification – Add Non-U.S. equities: Both non-U.S. "Developed-Markets", and "Emerging-Markets" are less expensive than the U.S. markets, and are likely to grow faster than the U.S. Both markets also pay higher dividends. Additionally, both markets are 6 – 12 months behind the U.S. in the COVID battle. It is our strong opinion that the non-U.S. markets will prevail in the COVID battle, and their victory will stimulate country-specific pent-up demand, as it did in the U.S. Consequently, international investments are likely to deliver higher returns over the next 5+ years, with less risk, yet may be more volatile.

Implications for Intelligent Investors: Mitigating risks will be more important than ignoring risks and chasing returns. Market timing is a "fool's errand" as there are many *positive* factors supporting current valuations. There are several strategies which have historically delivered acceptable returns with less risk.

History shows that "value-based" companies tend to outperform "growth-based" companies by approximately 3%/year. "Small-companies" tend to outperform larger companies by over 2% per year. However, "value-based" companies have *underperformed* "growth-based" companies for almost 10 years, and smaller companies have underperformed large companies for the last 24 months by more than 15%.

As the U.S. economy continues to heal, we believe both "value-based" and "smaller" companies will outperform in "catch-up" fashion. Non-U.S. companies will outperform U.S. companies, as they are less expensive and pay higher dividends.



Consequently, investors should maintain their equity investments with a higher allocation to "value" vs "growth", "small" companies over large companies, and "international" markets over U.S. markets.

In the U.S. markets, investments should include dividend-paying equities, as they are likely to deliver more reliable returns with less risk. See the chart below which compares returns "with" dividends and "without" dividends during "up" and "down" markets.

Year	Market Milestone	Percent Change	Number of Years	Annualized Return, No Dividends	Annualized Return with Dividends
1877	Low	-	-	-	-
1906	High	456%	29.3	5.1%	10.1%
1921	Low	-69%	14.9	-7.5%	-2.0%
1929	High	396%	8.1	21.9%	28.4%
1932	Low	-81%	2.7	-44.9%	-41.2%
1937	High	266%	4.7	32.1%	38.7%
1949	Low	-54%	12.3	-6.2%	-0.8%
1968	High	413%	19.5	8.8%	13.3%
1982	Low	-63%	13.6	-7.0%	-3.0%
2000	High	666%	18.1	11.9%	15.3%
2009	Low	-59%	8.5	-9.8%	-8.1%
Now	-	347%	-	N/A	N/A

Based on inflation-adjusted S&P Composite monthly averages of daily closes.

The expectations for the next 5 years based on current valuations should be modest, and dividends will both cushion downturns and increase those periods where appreciation is modest.



Supporting Information

Stock market prices for many of the 500 largest companies in the U.S. are at the highest levels in history. Since the last meaningful downturn accompanied by a recession (the Great Financial Crisis of 2007-2009) the S&P index is up over 370%.

This means intelligent, and patient investors who turned off the television, stopped reading the newspaper pundits, and focused on family and other important activities, grew their money at a bit over 16% per year, when the average annual return over the last 90+ years is a bit over 10%.

This is widely known. What is less widely known, and gets less attention, is that stock market levels are at the highest valuation relative to earnings in history. The top 10 stocks in the S&P 500 make up over 25% of the S&P's value. It is this fact that creates more risk than most investors have embraced. Equally less well known

and often forgotten, is when periods of returns vastly exceed historical returns, lower returns, or negative returns follow.

To be blunt, intelligent, patient investors have been living through a "goldilocks" stock market. While our guess is that few investors would describe the last 10-years of our economy or stock market, as a "goldilocks-economy/market", a brief look backward offers a valuable perspective.

We exited the Great Financial Crisis (GFC) in 2009 with S&P 500 valued at less than 9 times earnings, with interest rates on the 10-year note over 5%. Today, the stock market sells at over 23 times earnings (an increase of greater than 150%), and the 10-year note yields 1.5% (an increase of > 300% in the 10-year U.S. treasury note). The combination of increasing earnings multiples, driven by significantly lower interest rates has supported a revaluation of the equity markets to levels rarely seen.

Since 2018, we have lived with a U.S. economy that grew at 1.5 – 2%/year, a global economy which grew slightly faster, and a U.S. Federal Reserve which held interest rates significantly below justifiable market rates. This created an in-yourface incentive to borrow low-cost money and *move into riskier assets*, as "risk-free" assets offered returns which were so small as to be negligible. The global capital markets have lived with a blessing - the "Federal Reserve Put" - an implicit assurance that the U.S. Federal Reserve would come to the rescue if financial conditions or meaningful distress warranted. Investors ignored risks and pursued returns at all costs.

More often than not, humans tend to overlook their blessings. Yet blessings become vividly clear in hindsight. We speak with analysts and consume hundreds of research reports by some of the best minds in finance, and few if any described the last 10 years as a "goldilocks" market. My guess is that as we welcome 2022, the description of "fiscal" and "monetary" handholding by the U.S. Federal Reserve over the last 10+ years will see this moniker attached often.

The "Goldilocks-economy" may be coming to an end. Here is how we see the <u>current</u> supportive backdrop for risk-assets (equities and noninvestment grade bonds) compared to the likely backdrop over the next few years.



Current "Macroeconomic Backdrop"

The U.S. economy is likely to grow at <u>over</u> 5% during 2021 (a record growth-rate, dating back to the Reagan era). Consumers are flush with cash and are spending it (consumer spending drives almost 70% of U.S. GDP). 2021 S&P 500 earnings will grow by over 20%. Interest rates are so low, companies are borrowing money to buy back their stock. Investors have been pushed into higher risk investment categories searching for returns. The U.S. Federal Reserve is buying \$120 Billion in securities each month (that is almost \$1.5 TRILLION per year - adding over 6% to our U.S. GDP). Housing prices are up over 20% year over year.

Speculative activity in the U.S. stock and bond markets is clearly excessive. Since 2020, over 20 million retail investors have opened "new" brokerage accounts (a record pace). Today, retail trading makes up over 20% of the trading volume (this is *double* the share of retail trading 10 years ago). Bitcoin and other speculative instruments (including "meme-stocks") are at, or near, record levels with trading volumes that defy logic and reason. As said, the top 10 stocks make up more than 25% of the S&P 500's value (concentration of highly valued stocks increases risk substantially).

"Macroeconomic Backdrop" as we enter 2022

The U.S. economy's growth-rate will decline on its way back to long-term, steady-state, growth rate of 1.5 – 2%. *Earnings of companies making up the S&P 500 will slow* to a single digit growth rate. Stimulus checks will slow or stop, and consumerspending will normalize to a sustainable rate. The U.S. Federal Reserve will reduce its security purchases, creating a tightening effect just as U.S. GDP <u>and</u> corporate earnings are slowing. 2022 Tax rates are likely to increase at both the corporate level, and at the personal level, thus adding an additional "drag" on liquidity.

As we move into 2022, these headwinds will become more evident. At best, we will move from a highly liquid, supportive U.S. Federal Reserve, a rapidly growing economy with corporate earnings at record levels, and investor sentiment at lofty levels, into a slowing U.S. GDP, slowing corporate earnings, less support from the U.S. Federal Reserve, and an end to the stimulus and unemployment insurance checks our citizenry has become addicted to.

All of this is taking place amidst a very highly valued equity market, an even more highly valued bond market, record retail investor activity, and documented speculation at record levels.

Risks vs Rewards

While the cocktail of "goldilocks" today, moving to "headwinds tomorrow" does NOT mean the stock market is going to crumble, it does mean that tomorrow's risks are higher than today's risks. It also means that tomorrow's volatility will likely increase. Remember, we don't know what the future brings, yet we do know the odds are stacked against long-term investors at current valuation levels. With the headwinds identified above and, in the discussion below, we consider intelligent hedges for those interested in reducing risk.

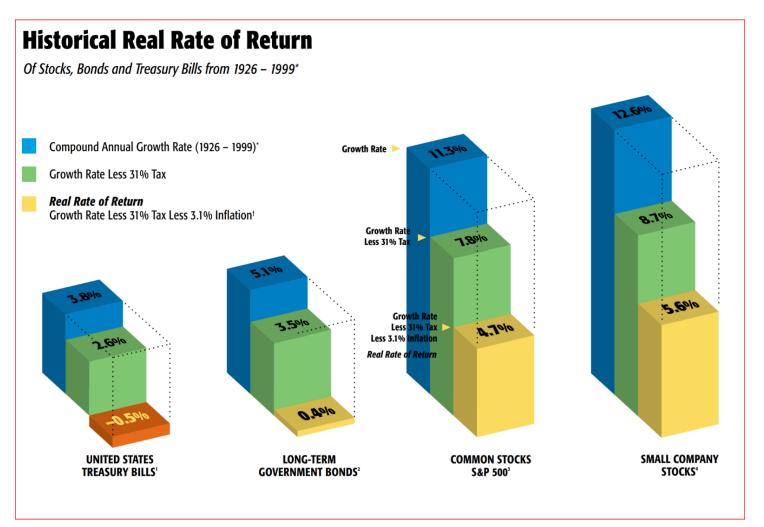
For those of you interested in the data, charts, and statistics supporting our current stance along with strategies for hedging investment risk, please feel free to continue reading below:



Intelligent Expectations -

A Brief History in One Chart

Historically, financial assets have offered investors the opportunity to participate in the success and growth of publicly traded assets, without any effort from the investor (absent some basic research). Historically, returns from the equity market have *averaged* approximately 11% (nominal) since 1926. Taxes have averaged a bit over 30%, and Inflation has averaged a slightly above 3% during that time, so "real" returns (net of inflation and taxes) have averaged 4-5%. See the chart below for a review of both bond and stock returns.



Growing your assets at 4-5% above inflation, after taxes, is a reasonable expectation for those investors who can master the emotional demands of a 5% + downturn every 7 months (about 2 times per year, lasting 2-3 months before full recovery), 10-20% every 1.5 years (lasting an average of 4 months before fully recovering), and bear markets, with downturns of 20–50%+ every 3.5 years, (lasting an average of 9 – 14 months to recovery).

Understanding the emotional distress which occurs when your investable assets decline in current value by 5% (little distress), to over 50% (significant distress), is the beginning "ante" or "cost" for all investors.



What may be less well understood, is that the yearly returns captured by investors is "seldomly" 11% "nominal" (the reality is that "annual" investment returns have been as high as 53% and as low as -43%, and in-fact, *have never been 11% "nominal*").

The most logical question at this point is how to participate in the + 53% years and largely avoid the -43% years.

Our research clearly illustrates that A) corporate earnings and B) bond yields, dictate returns. This brings us back to our prior dilemma. How do we participate in the significantly up years and avoid the significantly down years?

Asset Valuation Is Always the Starting Point

History shows, when assets are inexpensive (a low multiple of earnings), higher future returns are often realized, and when assets are expensive, lower (or often negative) returns follow. Simple math, right?

The answer is not in the math, or the financial costs. It is most often in the *emotional cost*.

Intelligent Investors must have the discipline to avoid investing when assets are valued at extremely high levels (unattractive valuations, yet lots of hype about the incredibly rosy future), and they must invest heavily when assets are at extremely low prices (attractive valuations, yet more hype and warnings about the end of the world to come).

This doesn't seem so hard. Yet statistics show *more than 95%* of professional investors and (most likely)

a higher percentage of retail investors, have been unable to follow those simple guidelines.

Why is it so hard? And how can Intelligent Investors avoid the temptation to buy when asset prices are soaring, and to sell when prices are at bargain levels?

Intelligent Expectations – Understanding History

Our experience tells us that having "intelligent expectations" for what lies ahead helps avoid emotional, knee-jerk decisions. Having written goals and investment guidelines (a well-constructed "game plan" or an Investment Policy Statement), may be the dominant difference between success and failure. A combination of "intelligent expectations" with a well-constructed written game plan often provide the discipline to avoid common mistakes during emotionally charged periods. All institutions have documented investment processes to avoid those emotional periods.

3) The majority of declines fall within the 5-10 percent range with an average recovery time of approximately one month, while declines between 10-20 percent have an average recovery period of approximately four months. Pullbacks within these ranges are not uncommon, occurring frequently during the normal market cycle. While they can be emotionally unnerving, they will not generally undermine a well-diversified portfolio and are not necessarily signals for panic. Even more severe pullbacks of 20-40 percent registered an average recovery period of only 14 months.



Intelligent expectations:

Here are some useful statistics to remember when the "talking heads" on TV and in the press are forecasting the a) end of the world, and b) growth, harmony, and good times will never end.

- 70 out of the last 95 years saw positive returns (74% of the time).
- 25 out of 95 years saw negative returns (26% of the time).
- 56 out of 95 years were double-digit gains (59% of the time) while only 12 out of 95 years were double-digit losses (13% of the time).
- 34 out of 95 years were gains of 20% or more (36% of the time), while only 6 out of 95 years were losses of 20% or worse (6% of the time).

Most intelligent investors will agree that your beginning valuation (the price paid for an investment), is a defining variable. As said above, when paying a high price for projected cash flow and earnings, future "returns" are likely to be lower than average. When paying a low price relative to cash flow and earnings, future returns are likely to be higher than average. In short, your investment dollar, divided by its earnings, will influence your investment return and accordingly, will tell you whether you are paying above or below the historical averages.

Over the last 100+ years *the average multiple of earnings* for a publicly traded asset has been in the range of 15-17 times earnings (which squares up well with our 10%+ "nominal" yield and our 6%+ "real" yield, as 16X earnings = 6%+ return on your investment dollar (before taxes)). The "actual" multiples of earnings have been in the range of 5 - 15X earnings in undervalued markets (thus investing at 5 - 15X earnings should produce a return of 6% or more), and 18 - 40X earnings in overvalued markets is likely to produce *less than 6%, or negative returns*).

Intelligent Investors often use asset valuation as a guide. This is NOT market timing. It is just intelligent investment discipline which stacks the odds in your favor.

Asset Values Today

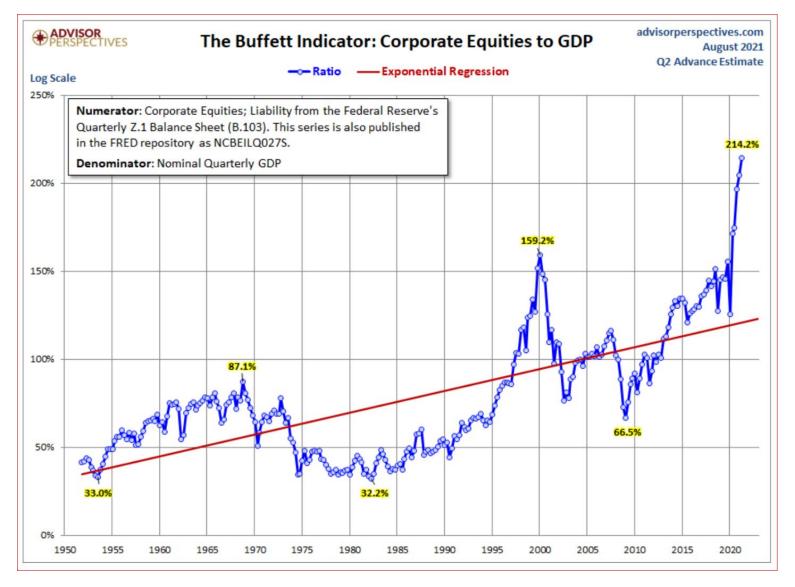
When we look for unbiased data to tell us how expensive / inexpensive publicly traded assets are, it is important to use data with enough history to make results statistically significant, <u>and</u> for the data to be backed by reason and logic. Below, we will show three independently calculated measures each offering statistically significant data, and which offer both reason and logic to explain their outcomes. (We have NOT chosen these indicators with any bias in mind. The fact that they roughly correlate, using completely different variables, likely offers a sounder inference as to what may lie ahead).

Buffett Indicator: Below, the indicator made notable by Warren Buffett, is perhaps the broadest indicator of publicly traded asset valuation available today. *There are challenges. As with all "broad" indicators, this one is no exception. The Buffett Indicator plots the "market capitalization" of the S&P 500 (numerator), to the U.S. GDP (denominator). Intelligent observation will indicate that "market capitalization" for all publicly traded companies <u>does not take into account corporate</u> debt which increases valuation.



A point to note: the "Average" relationship of S&P 500 valuation to the U.S. GDP is 0.88. Current relationship: the S&P 500 is 2.14 X U.S. GDP, meaning at some point either the U.S. GDP will have to more than double (highly unlikely), or the

S&P 500 market capitalization will be reduced by over 50%, to get back to its average relationship (more likely).



*Note – the amount of corporate debt on both the S&P 500 and the Wilshire 5,000 is at the highest levels in recorded history – which makes current market conditions *more highly priced* than the Buffett Indicator above



The next chart is from Yale School's Robert

Schiller: It is called the Schiller CAPE ratio (CAPE – Cyclically Adjusted Price to Earnings ratio.) The indicator compares "earnings received" over the *past 10 years* (divided by 10, to produce *annual equivalents*), with the current valuations of the S&P 500. Many believe this ratio to be more reliable because it deals with GAAP "reported" earnings and does not deal with *analyst's predictions of "future" earnings* (history shows analysts have a distinct bias to estimate "future" earnings which are higher, or significantly higher, than real results (thus rendering analysts estimates largely useless). *Note: The corporate debt is not counted in the CAPE Ratio. This indicator also *understates* the degree of overvaluation by a significant amount.

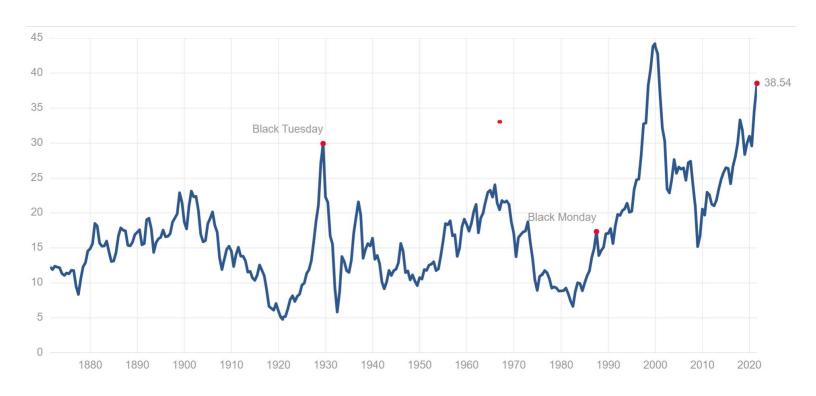
Over the last 125+ years, the following may be important to remember:

Shiller CAPE Ratio "*MEAN*": 16.84 X earnings; "*MEDIAN*": 15.85 X Earnings

Shiller CAPE Ratio "Minimum": 4.78 X Earnings (December 1920)

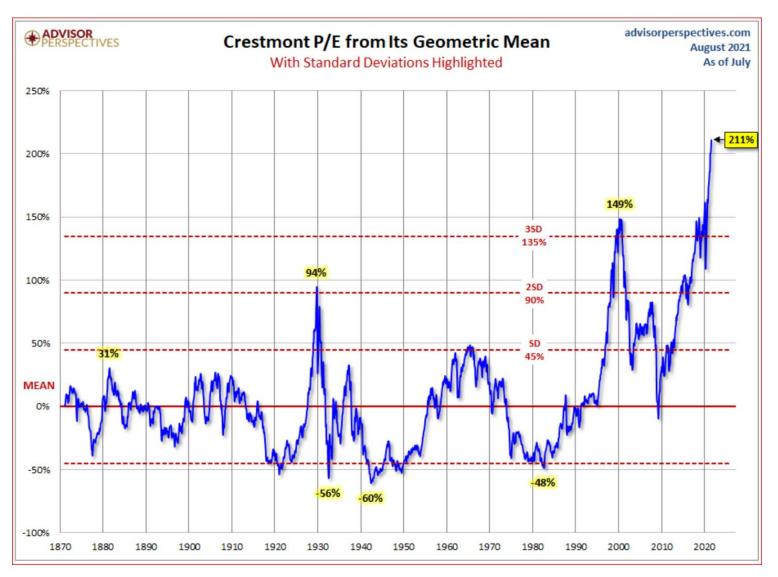
Shiller CAPE Ratio "Maximum": 44.19 X Earnings (December 1999)

Current CAPE Ratio: > 38 X Earnings





The Crestmont Geometric Mean: This ratio, again compares the earnings of the S&P 500 to the current market capitalization (it also understates the amount of debt on all publicly traded companies, which is at record highs). current valuations exceed any historical valuations dating back into the 1800's (the earliest data may not be as robust as more recent data, yet may be instructive for comparative reasons). In short, the current publicly traded markets are 3 standard deviations above the mean valuation.



The Crestmont Geometric Mean clearly shows

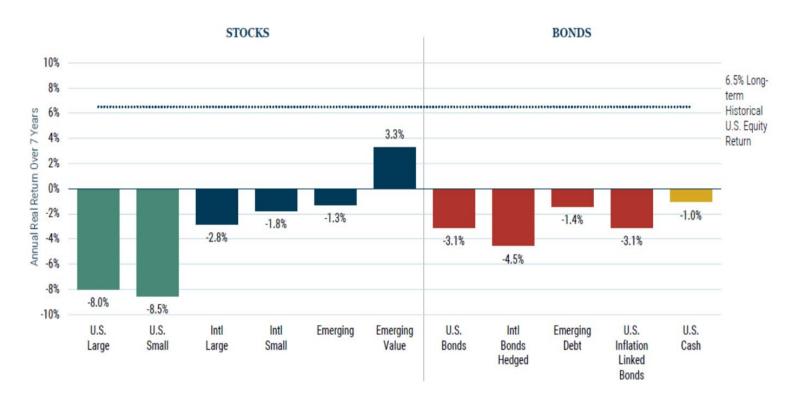
*It is important to note: All 3 independent measures of valuation above <u>DO NOT</u> offer any indication of the timing of a downturn, or the severity of a downturn. They do indicate that future returns will be more modest than historical averages, or negative, until the ratio of market value to GDP or earnings revert to normal levels. As said, this can happen either by GDP growing into a stagnant S&P 500 market cap (unlikely), or by earnings growing significantly over time (also unlikely, yet more possible) both bringing the averages back to the "mean" or "median". Our base-case expectation is for current valuations to decrease. This event, if we are correct, will start with a negative event, or a series of negative events, which cause the investing public to reevaluate future expectations.



**Worthy of remembering - when corrections take place, current prices often *overshoot the mean or median price* on the downside, until homeostasis occurs, typically when the correction exhausts itself.

Current Valuations Define Expectations for Future Returns

What do the above valuations tell us about future investment returns for publicly traded assets? There are many forecasts available, yet we have found the most unbiased and data centric to be those from GMO. We offer their most recent expectations for future returns below:



As of June 30, 2021

As you can see, expectations for future returns of publicly traded assets are mixed, yet all are below their average historical returns, and most are largely negative (this makes sense as current valuations are much higher than historical averages).

How does this get resolved? Either earnings will have to increase by almost 100% (unlikely over next 3 years, yet possible over the next 7 – 10 years) while the S&P prices stay the same (unlikely, yet possible), or, the S&P will have to be revalued down by almost 50% (this is more likely). We believe the most likely outcome is some of both above... meaning earnings will increase and current prices will come down, thus presenting a more normal investment backdrop.



What's Brings Valuations Back to Historical Averages?

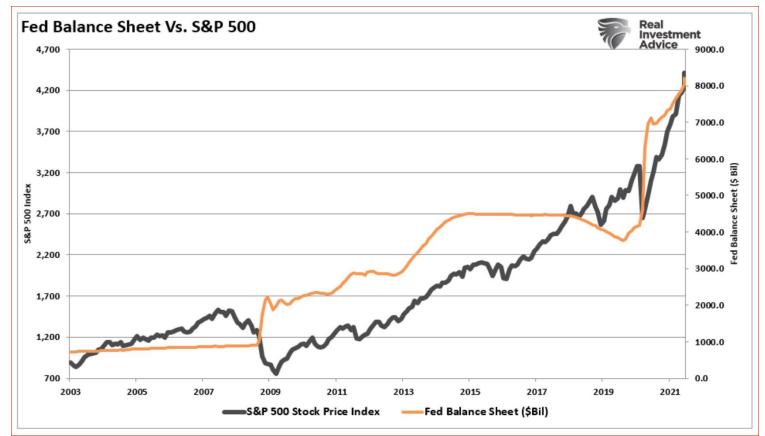
No one knows the answer. Yet history offers a panoply of potential and obvious catalysts.

The records show most downturns originate with a significant increase in interest rates. Additional candidates triggering downturns are speculative activities which distort asset values. Speculative activity is often supported by partially true narratives with sketchy data to support the speculative activity (think tulip bulbs as currency in the early 1600's, bitcoin and "meme-stocks" today). These speculative narratives unravel as the truth becomes painfully obvious.

Below, we offer examples which may be cause for alarm, as the U.S. Federal Reserve decreases its

bond buying (a precursor to raising interest rates), and documented speculative activity sets records.

The first example we offer is the ratio of the U.S. Federal Reserve's expansion relative to the stock market's valuation. As you can see below, as the U.S. Federal Reserve's balance sheet expands (the orange line), stock prices increase (the black line). On the right side of the chart below, you will notice the U.S. Federal Reserve's asset buying has slowed. It will "flatten" in the months to come. This may be cause for the investing public to reevaluate the prices paid for stock purchases, as it clearly did in 2018. Without the promise of the U.S. Federal Reserve constantly infusing ever-increasing amounts of liquidity into the U.S. economy, increasing asset prices become progressively more difficult.





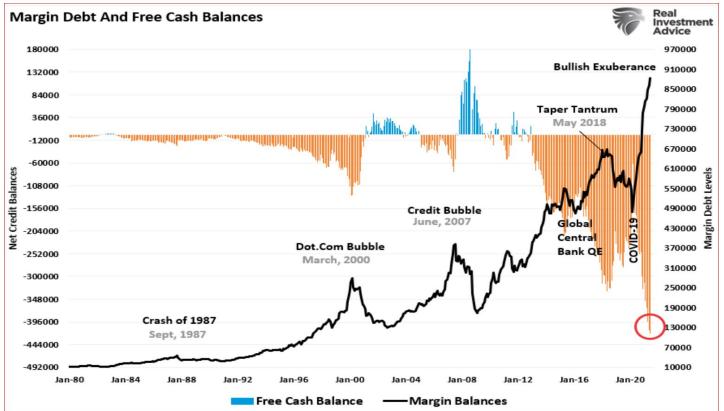
We mentioned earlier in the note the increase of retail investment trading, near record levels since the March 2020 economic shutdown. While we have our suspicions about the cause for this activity, there are many different individuals with many different reasons for their actions.

What we can cite is *speculative trading activity*, as defined by transactions which use "margin," or borrowed money, as a trading structure. Speculative activity in combination with leverage or borrowed money, is incredibly dangerous as risk is magnified. Today, that activity is at record levels.

As you can see from the chart below, speculative activity on margin (in orange lines below) *initially drives prices higher* (black lines), as traders increase their buying using borrowed funds.

Eventually, traders exhaust their ability to use leverage. They must cover their trading by returning the borrowed money. This could mean selling 2-3 times the number of securities purchased on "margin". In short, the leverage which created a buying frenzy, now creates a selling frenzy as investors begin to reassess activity which was most often based on the "greater fool" theory valuation doesn't matter - only the belief that some "greater fool" will pay more for the asset than was previously paid. *Leverage often creates losses which can easily <u>exceed</u> the original investor's capital.*

This chart clearly shows the correlation between increases in margin buying and increases in stock valuation (1995–2000; 2007–2008; and the mother of all margin-buying, 2020). With "margin" at current levels, the probability of a negative event instigating a significant selloff is meaningful. Remember the Great Financial Crisis of 2007-2009, was caused by a combination of leverage and fraud in an unrelated market (real estate), which bled into the stock and bond markets globally. A true financial disaster was barely averted.





Systemic Leverage

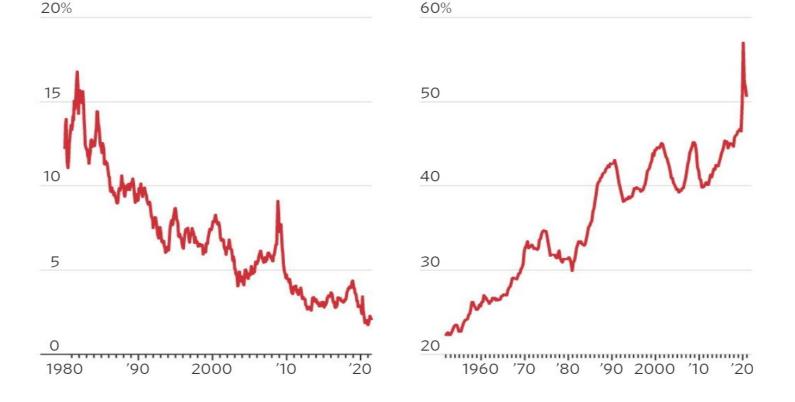
While individual investors have increased speculative activity on margin to levels never witnessed, corporate America has also quietly increased its leverage to significant levels. To casual investors, this increase in corporate debt may be uninteresting. Interest rates have consistently trended lower since 1981. This means corporate America's increasing debt has not been an

Average U.S. investment-grade corporate bond yield, monthly

overwhelming burden. As is often the case, all is well if nothing changes. However, most of us know that change is constant. From current levels interest rates are more likely to rise than to fall...

The 2 charts below show interest rates continuously moving lower since the early 1980's (on the left) and the amount of corporate debt increasing to levels which may prove to be unsustainable if interest rates rise to historically normal levels (on the right below).

U.S. corporate debt as percentage of GDP, quarterly

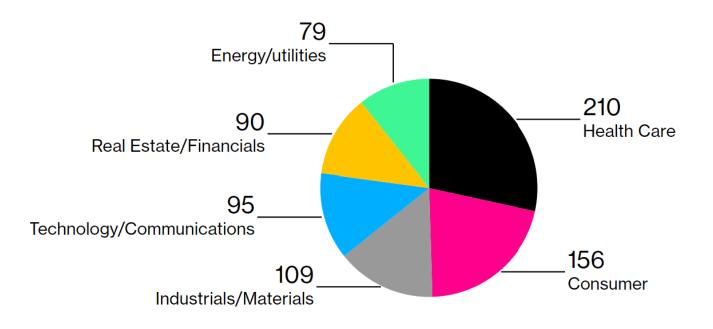


Our calculus tells us if interest rates revert to the mean of 4-5% for a 10-year note, a significant number of U.S. companies will be unable to repay their debt and its interest. The chart below clearly shows nearly 25% of the companies making up the Russell 3,000 have NOT earned enough to make their interest payments due in 2020 with interest rates at 1.5%! This is unsustainable and only currently exists because the U.S. Federal Reserve has manipulated the interest rate structure to levels which are significantly below "market".



Lisa Lee and Tom Contiliano at Bloomberg recently wrote "Almost a quarter of the index, or 739 companies, haven't earned enough to meet their interest payments. That compares with 513 firms at the end of last year. The \$1.98 trillion they collectively now owe, dwarfs the \$1.05 trillion of debt zombie firms reported before the pandemic." (Bloomberg)

Over 700 firms in the Russell 3000 face interest-coverage ratios below 1



Bloomberg

Note: Based on analysis of trailing 12-month operating income relative to interest expenses

The fact that the profit levels generated by almost 25% of any index of publicly owned, leading American companies is unable to meet their debt payments, is alarming at best, and at worst, a lurking tragedy.

Summary

Asset values for the stock market are expensive relative to a) historical comparisons, and more importantly b) current earnings expectations. Bond prices are worse, offering investors a guaranteed loss relative to inflation. Capital is more abundant than at any other time I can remember. Many investors are looking for any asset which will provide a return outpacing inflation. Risk is an afterthought. The amount of money desperately seeking a reasonable return has forced investors pay unreasonable prices, for "risk" assets. This has increased prices to unsustainable levels in both the public stock and bond markets, in private equity and in real estate.



What's Next?

During 2020, the U.S. experienced the sharpest drop in economic activity ever recorded. The U.S. lost over 20 million jobs in less than 2 months. Yet, less than one year later, the U.S. consumer is flush with cash, making this period one of the most notable periods in American economic history. The U.S. administration, along with the U.S. Federal Reserve issued over \$4 trillion in stimulus (for those interested, that is almost 20% of our U.S. GDP and exceeds WWII expenditures). At the same time, the U.S. Federal Reserve is likely standing by to come to the rescue if a significant negative event shocks our U.S. economy.

All investors face a litany of questions. Often, asking a series of questions provides valuable insights, even if the answers are unclear. Several questions are listed below as my conversations continue with all of the families we serve.

Will inflation force the U.S. Federal Reserve to increase interest rates, and derail our U.S. economy?

Will the changes in tax rates (corporate and/or private) upset the U.S. bull market?

Should investors take capital-gains during 2021 as opposed to 2022?

Will a geopolitically negative event - or events - ruin our goldilocks economy?

Will a downturn in corporate America's earnings bring lower public/private valuations?

The answers to these questions above will only be known in hindsight. However, a few observations are clear.

Public and private assets are expensive. Leverage is at record levels. Speculative activity is high. Investors should be "disciplined" and able to withstand increased volatility over the next few years. Rebalancing portfolios into "value-based" securities, and non-U.S. securities will likely lower risk, and increase returns, as both "value-based" securities and non-U.S. securities are less expensive.

The U.S. consumer is still flush with cash, and all indications are - they are willing and interested in spending it. There is a record level of liquidity in the U.S. economy, and the U.S. administration continues to contemplate additional stimulus checks. The institutions overseeing the U.S. economy's pension plans and endowments are also flush with cash. They must invest for growth, which further supports the U.S. public markets. These factors, and many more, suggest our U.S. economy may continue to grow, yet at a more moderate rate. The U.S. economy is NOT nearing a recession.

While much of the above information supports risks outweighing rewards for families of wealth, *none of the above information provides any indication that the time is "now" to sell your assets and go to cash.* Discipline will be an important attribute until the capital markets in the U.S. return to more normal valuation levels.



As always, we will look forward to speaking with you frequently. Please don't hesitate to call if you have questions which were not addressed in this letter.

Warmest regards,

Steven Abernathy

The Abernathy Group

Family Office



Quarterly Market Review

Third Quarter 2021

This report features world capital market performance and a timeline of events for the past quarter. It begins with a global overview, then features the returns of stock and bond asset classes in the US and international markets.

The report also illustrates the impact of globally diversified portfolios and features a quarterly topic.

Overview:

Market Summary

World Stock Market Performance

World Asset Classes

US Stocks

International Developed Stocks

Emerging Markets Stocks

Select Market Performance

Select Currency Performance vs. US Dollar

Real Estate Investment Trusts (REITs)

Commodities

Fixed Income

Global Fixed Income

Impact of Diversification

Quarterly Topic: The 50-Year Battle for a Better Way to Invest



Quarterly Market Summary

Index Returns

	US Stock Market	International Developed Stocks	Emerging Markets Stocks	Global Real Estate		US Bond Market	Global Bond Market ex US
3Q 2021		STO	CKS			BO	NDS
	-0.10%	-0.66%	-8.09%	-0.08%		0.05%	0.09%
Since Jan. 2001							
Avg. Quarterly Return	2.4%	1.7%	2.9%	2.5%	_	1.1%	1.1%
Best Quarter	22.0% 2020 Q2	25.9% 2009 Q2	34.7% 2009 Q2	32.3% 2009 Q3		4.6% 2001 Q3	4.6% 2008 Q4
Worst Quarter	-22.8% 2008 Q4	-23.3% 2020 Q1	-27.6% 2008 Q4	-36.1% 2008 Q4		-3.4% 2021 Q1	-2.7% 2015 Q2

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: US Stock Market (Russell 3000 Index), International Developed Stocks (MSCI World ex USA Index [net div.]), Emerging Markets (MSCI Emerging Markets Index [net div.]), Global Real Estate (S&P Global REIT Index [net div.]), US Bond Market (Bloomberg US Aggregate Bond Index), and Global Bond Market ex US (Bloomberg Global Aggregate ex-USD Bond Index [hedged to USD]). S&P data © 2021 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. MSCI data © MSCI 2021, all rights reserved. Bloomberg data provided by Bloomberg.



Long-Term Market Summary

Index Returns as of September 30, 2021

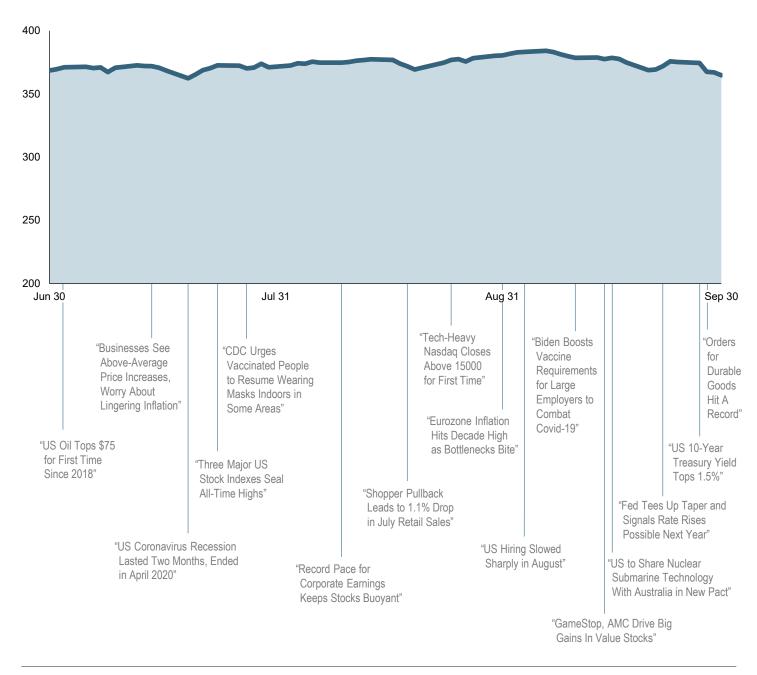
	US Stock Market	International Developed Stocks	Emerging Markets Stocks	Global Real Estate	US Bond Market	Global Bond Market ex US
1 Year		STO	CKS		BOI	NDS
	31.88%	26.50%	18.20%	31.61%	-0.90%	-0.54%
5 Years						
	16.85%	8.88%	9.23%	4.65%	2.94%	2.71%
10 Years						
	16.60%	7.88%	6.09%	8.70%	3.01%	3.87%

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World Stock Market Performance

MSCI All Country World Index with selected headlines from Q3 2021



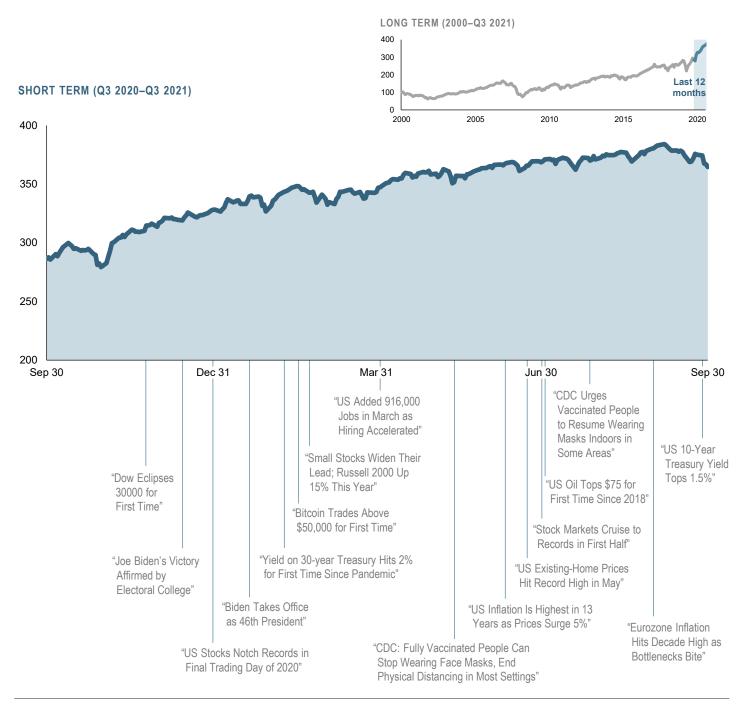
These headlines are not offered to explain market returns. Instead, they serve as a reminder that investors should view daily events from a long-term perspective and avoid making investment decisions based solely on the news.

Graph Source: MSCI ACWI Index [net div.]. MSCI data © MSCI 2021, all rights reserved. It is not possible to invest directly in an index. Performance does not reflect the expenses associated with management of an actual portfolio. Past performance is not a guarantee of future results.



World Stock Market Performance

MSCI All Country World Index with selected headlines from past 12 months



These headlines are not offered to explain market returns. Instead, they serve as a reminder that investors should view daily events from a long-term perspective and avoid making investment decisions based solely on the news.

Graph Source: MSCI ACWI Index [net div.]. MSCI data © MSCI 2021, all rights reserved.

It is not possible to invest directly in an index. Performance does not reflect the expenses associated with management of an actual portfolio. Past performance is not a guarantee of future results.



World Asset Classes

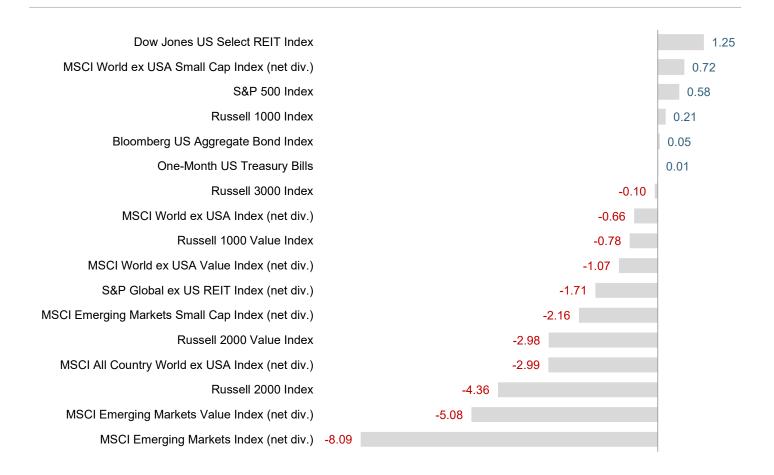
Third Quarter 2021 Index Returns (%)

Equity markets around the globe declined in the third quarter. Looking at broad market indices, US and non-US developed markets outperformed emerging markets.

Value performance was mixed in the US, with small value outperforming small growth but large value underperforming large growth. Value underperformed growth in non-US developed markets and outperformed in emerging markets.

Small caps underperformed large caps in the US but outperformed in non-US developed and emerging markets.

REIT indices outperformed equity market indices in the US and underperformed in non-US developed markets.



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US Stocks

Third Quarter 2021 Index Returns

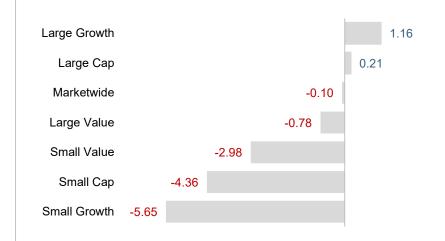
The US equity market was flat for the quarter and outperformed non-US developed markets and emerging markets.

Value underperformed growth in large cap stocks but outperformed growth in small cap stocks.

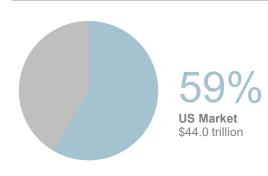
Small caps underperformed large caps.

REIT indices outperformed equity market indices.

Ranked Returns (%)



World Market Capitalization—US



Period Returns (%)

Asset Clas	s QTR	YTD	1 Year	3 Years*	5 Years*	10 Years*
Large Grov	wth 1.16	14.30	27.32	22.00	22.84	19.68
Large Cap	0.21	15.19	30.96	16.43	17.11	16.76
Marketwide	e -0.10	14.99	31.88	16.00	16.85	16.60
Large Valu	e -0.78	16.14	35.01	10.07	10.94	13.51
Small Valu	e -2.98	22.92	63.92	8.58	11.03	13.22
Small Cap	-4.36	12.41	47.68	10.54	13.45	14.63
Small Grov	vth -5.65	2.82	33.27	11.70	15.34	15.74

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: Marketwide (Russell 3000 Index), Large Cap (Russell 1000 Index), Large Cap Value (Russell 1000 Value Index), Large Cap Growth (Russell 1000 Growth Index), Small Cap (Russell 2000 Index), Small Cap Value (Russell 2000 Value Index), and Small Cap Growth (Russell 3000 Index), MSCI World ex USA IMI Index, and MSCI Emerging Markets IMI Index. Russell 3000 Index is used as the proxy for the US market. Dow Jones US Select REIT Index used as proxy for the US REIT market. Frank Russell Company is source and owner of trademarks, service marks, and copyrights related to Russell Indexes. MSCI data © MSCI 2021, all rights reserved.

* Annualized



International Developed Stocks

Third Quarter 2021 Index Returns

Developed markets outside the US declined less than 1% for the guarter and underperformed US equities but outperformed emerging markets.

Value underperformed growth.

Small caps outperformed large caps.



World Market Capitalization— **International Developed**



d Deturne (0/)

eriod Returns (%) * Annualiz								
Asset Class	QTR	YTD	1 Year	3 Years*	5 Years*	10 Years*		
Small Cap	0.72	10.71	30.14	9.50	10.33	10.03		
Growth	-0.25	6.99	20.50	11.93	11.21	9.64		
Large Cap	-0.66	9.19	26.50	7.87	8.88	7.88		
Value	-1.07	11.15	32.60	3.45	6.25	5.95		

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: Large Cap (MSCI World ex USA Index), Small Cap (MSCI World ex USA Small Cap Index), Value (MSCI World ex USA Value Index), and Growth (MSCI World ex USA Growth Index). All index returns are net of withholding tax on dividends. World Market Cap represented by Russell 3000 Index, MSCI World ex USA IMI Index, and MSCI Emerging Markets IMI Index. MSCI World ex USA IMI Index is used as the proxy for the International Developed market. MSCI data © MSCI 2021, all rights reserved. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes.



Emerging Markets Stocks

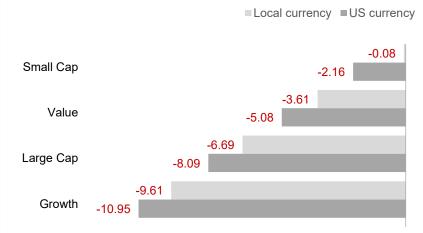
Third Quarter 2021 Index Returns

Emerging markets posted negative returns for the quarter, underperforming the US and non-US developed equity markets.

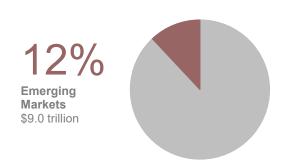
Value outperformed growth.

Small caps outperformed large caps.





World Market Capitalization— Emerging Markets



Period Returns (%)

enou ivetui	113 (70)			Annualizeu		
Asset Class	QTR	YTD	1 Year	3 Years*	5 Years*	10 Years*
Small Cap	-2.16	17.20	43.24	13.11	9.75	7.21
Value	-5.08	4.43	28.43	4.77	6.87	3.79
Large Cap	-8.09	-1.25	18.20	8.58	9.23	6.09
Growth	-10.95	-6.46	9.28	12.15	11.36	8.23

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: Large Cap (MSCI Emerging Markets Index), Small Cap (MSCI Emerging Markets Small Cap Index), Value (MSCI Emerging Markets Value Index), and Growth (MSCI Emerging Markets Growth Index). All index returns are net of withholding tax on dividends. World Market Cap represented by Russell 3000 Index, MSCI World ex USA IMI Index, and MSCI Emerging Markets IMI Index. MSCI Emerging Markets IMI Index used as the proxy for the emerging market portion of the market. MSCI data © MSCI 2021, all rights reserved. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes.

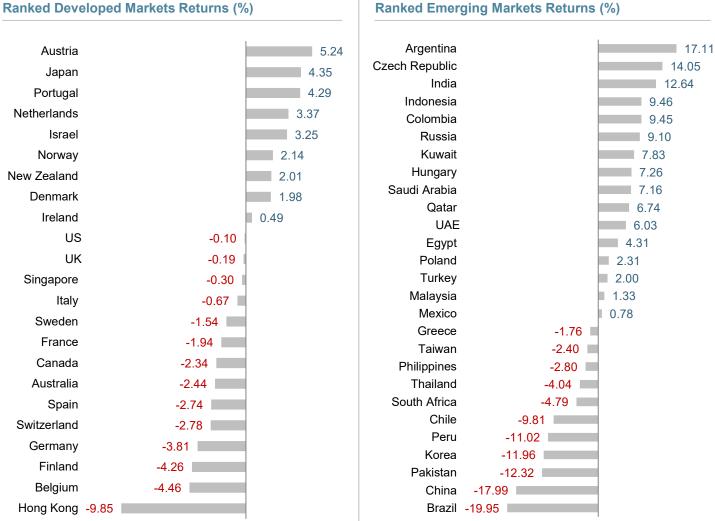
* Annualized



Select Market Performance

Third Quarter 2021 Index Returns

In US dollar terms, Austria and Japan recorded the highest country performance in developed markets, while Belgium and Hong Kong posted the lowest returns for the guarter. In emerging markets, Argentina and the Czech Republic recorded the highest country performance, while Brazil and China posted the lowest performance.



Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. MSCI Index returns are in USD net of dividend withholding taxes. Country returns are the country component indices of the MSCI All Country World ex USA IMI for all countries except the United States, where the Russell 3000 index is used instead. Frank Russell Company is the source and owner of the trademarks, service marks and copyrights related to the Russell Indexes. MSCI data © MSCI 2021, all rights reserved. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.

Ranked Developed Markets Returns (%)



Select Currency Performance vs. US Dollar

Third Quarter 2021

Ranked Developed Markets Returns (%)

In emerging and developed markets, most currencies depreciated vs. the US dollar.

Israeli New shekel (ILS) 1.00 Hong Kong dollar (HKD) -0.24 Japanese yen (JPY) -0.52 Swiss franc (CHF) -0.91 Singapore dollar (SGD) -0.99 New Zealand dollar (NZD) -1.27 Norwegian krone (NOK) -1.42 Swedish krona (SEK) -2.24 Canadian dollar (CAD) -2.25 Danish krone (DKK) -2.27 Euro (EUR) -2.27 British pound (GBP) -2.40 Australian dollar (AUD) -3.78

Ranked Emerging Markets Returns (%)

	1.31
	0.37
	0.14
	0.01
-0.01	
-0.01	
-0.10	
-0.16	
-0.84	
-1.64	
-2.04	
-2.21	
-3.06	
-3.09	
-4.14	
-4.30	
-4.50	
-4.89	
-5.09	
-5.28	
-7.31	
-7.43	
-7.91	
-10.35	
	-0.01 -0.10 -0.16 -0.84 -1.64 -2.04 -2.21 -3.06 -3.09 -4.14 -4.30 -4.50 -4.89 -5.09 -5.28 -7.31 -7.43 -7.91

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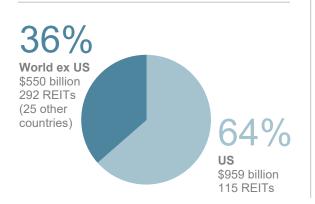
Real Estate Investment Trusts (REITs)

Third Quarter 2021 Index Returns

US real estate investment trusts outperformed non-US REITs during the quarter.



Total Value of REIT Stocks



eriod Returns (%)			
Asset Class	QTR	YTD	1 Year

(0/)

	OTD	VTD	4. \/	0. \/ *	F \/ *	40 \/*
Asset Class	QTR	Ϋ́́́́́́́́́Т	Trear	3 Years"	5 Years"	10 Years*
US REITS	1.25	24.48	40.56	8.32	5.68	10.53
Global ex US REITS	-1.71	7.80	24.01	4.52	3.28	6.81

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Number of REIT stocks and total value based on the two indices. All index returns are net of withholding tax on dividends. Total value of REIT stocks represented by Dow Jones US Select REIT Index and the S&P Global ex US REIT Index. Dow Jones US Select REIT Index used as proxy for the US market, and S&P Global ex US REIT Index used as proxy for the World ex US market. Dow Jones and S&P data © 2021 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved.

* Annualized



Commodities

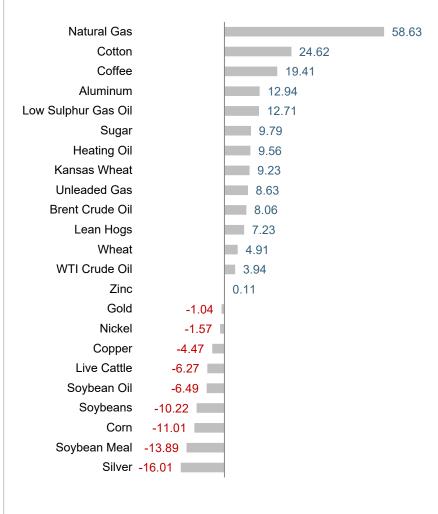
Third Quarter 2021 Index Returns

The Bloomberg Commodity Index Total Return returned 6.59% for the third quarter of 2021.

Natural Gas and Cotton were the best performers, gaining 58.63% and 24.62%, respectively.

Silver and Soybean Meal were the worst performers, declining 16.01% and 13.89%, respectively.

Ranked Returns (%)



Period Returns (%)

Asset Class	QTR	YTD	1 Year	3 Years*	5 Years*	10 Years*
Commodities	6.59	29.13	42.29	6.86	4.54	-2.66

Past performance is not a guarantee of future results. Index is not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Commodities returns represent the return of the Bloomberg Commodity Total Return Index. Individual commodities are sub-index values of the Bloomberg Commodity Total Return Index. Data provided by Bloomberg.

* Annualized



Fixed Income

Third Quarter 2021 Index Returns

Interest rates in the US Treasury fixed income market generally increased during the third quarter. The yield on the 5-year Treasury note rose 12 basis points (bps), ending at 1.00%. The yield on the 10-year Treasury note increased 8 bps to 1.54%. The 30-year Treasury Bond yield rose 1 bp to finish at 2.05%.

On the short end of the curve, the 1month Treasury bill yield increased 2 bps, ending at 0.07%, while the 1-year Treasury bill yield decreased 1 bp to 0.09%. The 2-year Treasury note yield increased 5 bps to 0.30%.

In terms of total returns, short-term corporate bonds returned 0.11%. Intermediate-term corporate bonds gained 0.08%.

The total return for short-term municipal bonds was 0.08%, while intermediate munis lost 0.04%. Revenue bonds performed in line with general obligation bonds for the quarter.

US Treasury Yield Curve (%) 4.00 3.00 9/30/2021 2.00 6/30/2021 9/30/2020 1.00 0.00 5 10 30 Yr Yr Yr Yr

Bond Yields across Issuers (%)



Period Returns (%)

renou keturns (70)					7	Annualized
Asset Class	QTR	YTD	1 Year	3 Years*	5 Years*	10 Years*
Bloomberg US TIPS Index	1.75	3.51	5.19	7.45	4.34	3.12
Bloomberg US High Yield Corporate Bond Index	0.89	4.53	11.28	6.91	6.52	7.42
Bloomberg US Government Bond Index Long	0.46	-7.40	-10.13	9.17	3.34	4.40
Bloomberg US Aggregate Bond Index	0.05	-1.55	-0.90	5.36	2.94	3.01
FTSE World Government Bond Index 1-5 Years (hedged to USD)	0.02	-0.28	-0.11	2.77	1.90	1.75
ICE BofA 1-Year US Treasury Note Index	0.02	0.11	0.17	1.88	1.46	0.89
ICE BofA US 3-Month Treasury Bill Index	0.01	0.04	0.07	1.18	1.16	0.63
Bloomberg Municipal Bond Index	-0.27	0.79	2.63	5.06	3.26	3.87
FTSE World Government Bond Index 1-5 Years	-1.00	-3.06	-0.93	2.18	0.98	-0.21

One basis point (bps) equals 0.01%. Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Yield curve data from Federal Reserve. State and local bonds are from the S&P National AMT-Free Municipal Bond Index. AAA-AA Corporates represent the ICE BofA US Corporates, AA-AAA rated. A-BBB Corporates represent the ICE BofA US Corporates, BBB-A rated. Bloomberg data provided by Bloomberg. US long-term bonds, bills, inflation, and fixed income factor data © Stocks, Bonds, Bills, and Inflation (SBBI) Yearbook™, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefield). FTSE fixed income indices © 2021 FTSE Fixed Income LLC, all rights reserved. ICE BofA index data © 2021 ICE Data Indices, LLC. S&P data © 2021 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved.

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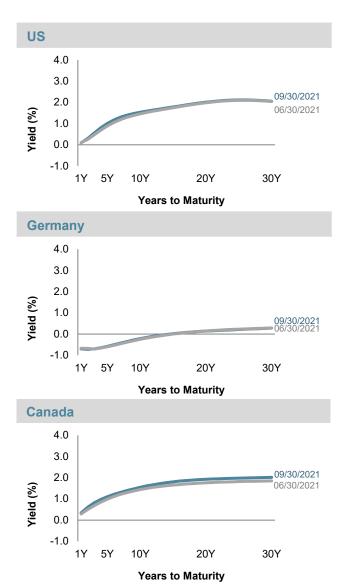
Global Fixed Income

Third Quarter 2021 Yield Curves

Government bond yields in the global developed markets generally increased for the quarter.

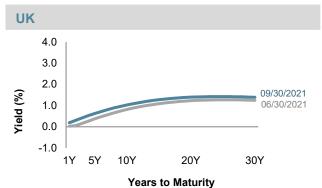
Term premiums were mixed in developed markets.

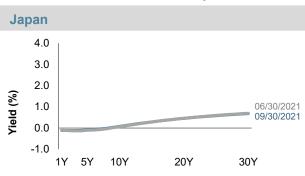
Short- and intermediate-term nominal interest rates were negative in Japan and Germany.



Changes in Yields (bps) since 6/30/2021

	1Y	5Y	10Y	20Y	30Y
US	-1.0	11.9	7.6	2.7	1.0
UK	16.7	25.2	21.6	16.6	14.4
Germany	-2.7	2.3	3.6	-0.8	0.2
Japan	-0.1	2.0	1.2	-0.3	-1.8
Canada	5.4	11.2	10.7	16.5	16.8
Australia	8.3	-0.6	-1.2	6.7	8.1





Years to Maturity



One basis point (bps) equals 0.01%. Source: ICE BofA government yield. ICE BofA index data © 2021 ICE Data Indices, LLC.



Impact of Diversification

Third Quarter 2021

These portfolios illustrate the performance of different global stock/bond mixes and highlight the benefits of diversification. Mixes with larger allocations to stocks are considered riskier but have higher expected returns over time.

Ranked Returns (%)

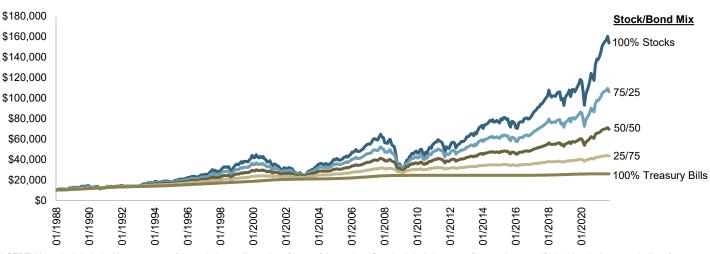


Period Returns (%)

* Annualized

	()					
Asset Class	YTD	1 Year	3 Years*	5 Years*	10 Years*	10-Year STDEV¹
100% Stocks	s 11.49	27.98	13.14	13.77	12.50	13.46
75/25	8.57	20.59	10.34	10.68	9.58	10.09
50/50	5.68	13.47	7.38	7.53	6.61	6.72
25/75	2.83	6.62	4.28	4.31	3.60	3.35
100% Treasu	ury Bills 0.02	0.04	1.05	1.05	0.55	0.23

Growth of Wealth: The Relationship between Risk and Return



1.STDEV (standard deviation) is a measure of the variation or dispersion of a set of data points. Standard deviations are often used to quantify the historical return volatility of a security or portfolio.

Diversification does not eliminate the risk of market loss. Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect expenses associated with the management of an actual portfolio. Asset allocations and the hypothetical index portfolio returns are for illustrative purposes only and do not represent actual performance. Global Stocks represented by MSCI All Country World Index (gross div.) and Treasury Bills represented by US One-Month Treasury Bills. Globally diversified allocations rebalanced monthly, no withdrawals. Data © MSCI 2021, all rights reserved. Treasury bills © Stocks, Bonds, Bills, and Inflation Yearbook™, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefield).